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Measuring Tailor-Made Service as a Form of Service Quality; The Service Individualization Level of the Hungarian Hotel Industry.

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Measuring Tailor-Made Service as a Form of Service Quality;
The Service Idividualization Level of the Hungarian Hotel Industry

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Abstract

Tailor-made services are widely used to create a higher-quality guest experience. This process requires a strategic approach but is essential to remain competitive in a crowded and increasingly technology intensive market. The dissertation focuses on how tailor-made service affects companies and their relationships. The research aimed to investigate the current Hungarian hospitality industry's ability to provide tailor-made service then discussed different approaches to tailor-made services. It also analysed how tailor-made service appears in the Hungarian hospitality industry by creating a measurement system to measure the tailor-made service the level of hotels. Part of this process was exploring current measurement systems in depth. The current state of the hospitality industry in post-covid Hungary was mapped; hotels were grouped into clusters according to their capability to provide personalised service, while the tailor-made service indicators were categorised based on how well hotels performed in them. The results of the scores were compared based on the hotel's characteristics and their importance to the General Managers. Finally, the tailor-made service scores were compared based on the phases and stages conceptualised in the customer journey model. This research provides a fresh perspective into important aspects of understanding tailor-made service in the hotel industry. The dissertation is providing a new customer journey model and a new, gap-filling, tailor-made service quality measurement system for hotels. In addition, further research confirmed that Hungarian hotels perform significantly better in functional stage quality, which is manifested in terms of being polite, paying attention to guests, and offering personal service, than in technical stage quality, which is characterised by having a hotel application, employing Search Engine Optimization techniques, having an adaptive website.

Based on the findings, the technical stage quality improvement is the most vital managerial objective. The research adds to current academic and managerial literature by introducing a customer journey model and measurement system. The model can identify growth opportunities in hotel services, while it is also suitable tool to group, cluster hotels based on service ability metrics.

Kivonat

A személyre szabott szolgáltatásokat széles körben használják a magasabb színvonalú vendégélmény megteremtése érdekében. Ez a folyamat stratégiai megközelítést igényel, azonban elengedhetetlen a versenyképesség megőrzése is a zsúfolt és egyre inkább technológia-intenzív piacon. A disszertáció arra összpontosít, hogy a személyre szabott szolgáltatás hogyan hat a vállalatokra és azok kapcsolataira. A kutatás célja az volt, hogy megvizsgálja a jelenlegi magyar vendéglátóipar személyre szabott szolgáltatási képességét, majd áttekintette a személyre szabott szolgáltatások különböző megközelítéseit. Azt is elemezte, hogy a testre szabott szolgáltatás hogyan jelenik meg a magyar vendéglátóiparban azáltal, hogy egy mérőrendszert hozott létre a szállodák testre szabott szolgáltatási szintjének mérésére. Ennek a folyamatnak része volt a jelenlegi mérési rendszerek alapos feltárása. Feltérképezésre került a vendéglátóipar jelenlegi helyzete a covid utáni Magyarországon; a szállodákat klaszterekbe sorolták aszerint, hogy mennyire képesek személyre szabott szolgáltatást nyújtani, míg a személyre szabott szolgáltatási mutatókat aszerint kategorizálták, hogy a szállodák mennyire teljesítenek ezekben. A kapott eredményeket a szállodák jellemzői és a szállodaigazgatók szempontjából meghatározott fontosságuk alapján hasonlították össze. Végül a személyre szabott szolgáltatási pontszámokat az ügyfélút modellben megfogalmazott fázisok és színterek alapján hasonlították össze. Ez a kutatás új nézőpontot nyújt a szállodaiparban a személyre szabott szolgáltatás megértésének fontos aspektusaihoz. A disszertáció egy új ügyfélút-modellt és egy új, hiánypótló, személyre szabott szolgáltatásminőség-mérési rendszert kínál a szállodák és az akadémia számára. Emellett a további kutatás megerősítette, hogy a magyar szállodák szignifikánsan jobban teljesítenek a funkcionális színtéren, ami az udvariasságban, a vendégekre való odafigyelésben és a személyes kiszolgálásban nyilvánul meg, mint a technikai színtéren, amit a szállodai alkalmazás megléte, a keresőoptimalizálási technikák alkalmazása, és egy adaptív weboldal megléte jellemez.

Az eredmények alapján a technikai színtér minőségének javítása a legfontosabb vezetői célkitűzés. A kutatás a jelenlegi tudományos és menedzseri szakirodalomhoz járul hozzá egy ügyfélút modell és mérési rendszer bevezetésével. A modell képes azonosítani a szállodai szolgáltatások növekedési lehetőségeit, miközben egy jól illeszthető eszköz a szállodák csoportosítására, klaszterezésére is a szolgáltatási képesség mérőszámai alapján.

Auszug

Massgeschneiderte Dienstleistungen werden häufig eingesetzt, um ein qualitative hochwertigeres Gästeerlebnis zu ermöglichen. Dieser Prozess erfordert einen strategischen Ansatz, ist aber unerlässlich um in einem überfüllten und zunehmend technologieintensiven Markt wettbewerbsfähig bleiben zu können. Die Dissertation fokussiert darauf, wie sich massgeschneiderte Dienstleistung auf Unternehmen und ihre Beziehungen auswirkt. Die Forschung zielte darauf ab, die Fähigkeit des derzeitigen ungarischen Gastgewerbes zu untersuchen, massgeschneiderte Dienstleistungen anzubieten, und diskutierte dann verschiedene Ansätze für massgeschneiderte Dienstleistungen. Es wurde auch analyisiert, wie massgeschneiderte Dienstleistung in dem ungarischen Hotel- und Gastgewerbe erscheint, indem ein Messsystem geschaffen wurde um die massgeschneiderte Dienstleistung auf dem Niveau von Hotels zu messen. Ein Teil dieses Prozesses war die eingehende Untersuchung aktueller Messsysteme. Der aktuelle Stand des Gastgewerbes im Post-Covid Ungarn wurde abgebildet, Hotels wurden entsprechend ihrer Fähigkeit, personalisierte Dienstleistung anzubieten in Clustern aufgeteilt, während die massgeschneiderte Dienstleistungsindikatoren danach kategorisiert wurden, wie gut die Hotels in ihnen abgeschnitten haben. Die Ergebnisse der Bewertungen wurden anhand der Eigenschaften des Hotels und ihrer Bedeutung für die Hotelmanager verglichen. Anschliessend wurden die massgeschneiderten Dienstleistungspunkte basierend auf den im Customer-Journey Modell konzipierten Phasen und Etappen verglichen. Diese Forschung bietet eine aktuelle Perspektive auf wichtige Aspekte des Verständnisses von massgeschneiderten Dienstleistungen im Hotel- und Gastgewerbe. Die Dissertation stellt ein neues Customer-Journey-Modell und ein neues, lückenfüllendes, massgeschneidertes Messsystem für Dienstleistungsqualität für Hotels bereit. Darüber hinaus bestätigten weitere Untersuchungen, dass ungarische Hotels in der funktionalen Phasenqualität, die sich in Höflichkeit, Aufmerksamkeit für die Gäste und persönliche Dienstleistung manifestiert, deutlich besser abschneiden als in der technischen Phasenqualität. Diese zeichnet sich durch Hotelanwendung, Einsatz von Techniken zur Suchmaschinenoptimierung und eine anpassungsfähige Webseite aus.

Basierend auf den Erkenntnissen ist die Verbesserung der Qualität in der technischen Phase das wichtigste Managementziel. Die Forschung ergänzt die aktuelle akademische und geschäftsführende Literatur durch die Einführung eines Customer-Journey Modells und eines Messsystems. Das Modell kann Wachstumschancen bei Hoteldienstleistungen identifizieren, während es auch ein geeignetes Instrument ist, um Hotels auf die Grundlage von Dienstleistungfähigkeitsmassen in Gruppen und Clustern aufzuteilen.

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Finally, I would like to quote Cordozar Calvin Broadus, Jr. and "I want to thank me for believing in me, I want to thank me for doing all this hard work, I wanna thank me for having no days off. I wanna thank me for never quitting." (Ahlgrim, 2018)[1]

[1] Ahlgrim, C. (2018) Snoop Dogg thanked himself for his star on the Hollywood Walk of Fame, and fans are loving it, Insider. Insider. Available at: https://www.insider.com/snoop-dogg-hollywood-walk-of-fame-speech-photos-2018-11 .

Köszönetnyilvánítás

“Egy gyermek felneveléséhez egy egész falura van szükség” tartja az angol mondás, de úgy gondolom, hogy egy doktorjelölt felneveléséhez is legalább egy falu szükségeltetik.

2009-ben találkoztam először a témavezetőmmel, Dr. Gyurácz-Németh Petrával, aki igazi inspiráció volt, hogy elmerüljek a szállodák és a vendéglátás világában. Számtalan élményt és barátot szereztem ezen a rögös úton, amelyre Petra nélkül soha nem léptem volna, és hálás vagyok az inspirációért, amit kaptam. Már az egyetemi tanulmányaim alatt szerencsém volt témavezetőmnek, ami még fontosabb, mentoromnak nevezni, és kulcs szerepe volt abban, hogy továbbtanultam. Petra már megtapasztalata, milyen nehézkes tudok lenni, ha kihívásokkal teli feladatokról van szó, ennek ellenére fontosnak tartotta, hogy meggyőzőn arról, hogy a PhD megszerzése lenne a tökéletes következő kihívás számomra; és bár fájdalmas volt, visszatértem, hogy újabb általa ihletet kihívásoknak nézzek elébe. Hiszem, hogy képes kihozni a legmagasabb potenciált az emberekből, ha hagyják neki. A képessége, hogy egyszerre több szerepben is megállja a helyét, igazán inspiráló lehet bárki számára. Életem nélkülözhetetlen részévé vált, és igazán hálás vagyok, hogy időt szakított arra, hogy mentoráljon az elmúlt évtizedben. Biztos vagyok benne, hogy utunknak még sok állomása van.

Szeretnék köszönetet mondani azoknak, akik lektorálták vagy segítették a dolgozat szó szerinti elkészülését. Nélkülük még tovább tartott volna eljutni odáig, hogy megírjam ezeket a sorokat. Szeretnék köszönetet mondani Szabó Ádámnak, Horváth Gizellának, Orosz Milánnak, Pitjeng Margueritte Mokgaetjinek, Slapšinskaitė Ringailėnak, Sárdi Ritának, Selmeczi Juditnak, Sadh Sathawatteynek, Kandó Katának, Dr. Tóth-Nagy Georginának és Dr. Raffay – Danyi Ágnes Nórának a lektorálásban és a hibáim kijavításában. És persze a témavezetőmek, akinek többször is meg kellett ezt tennie.

Ezúton is szeretnék köszönetet mondani mindazon szállodaipari szakembereknek, akik időt szakítottak rám, és a jelenlegi gazdasági kihívásokkal teli időszak ellenére, válaszoltak kérdéseimre és megosztották velem szakértelmüket, vagy segítettek kérdőívem népszerűsítésében.

Ezúton is szeretnék köszönetet mondani a Minőségfejlesztési Központban dolgozó kollégáimnak, akik támogattak és biztattak, miközben igyekeztek tehermentesíteni a munkában, hogy a kutatásomra koncentrálhassak, és elviseltek a viharos időkben. Töretlen támogatásukért hálás vagyok.

Meg kell említenem a "falum" többi tagját, akik nélkül nagy valószínűséggel már rég feladtam volna. Szeretnék köszönetet mondani minden csodálatos barátomnak, akik állandó (online vagy valós) jelenlétükkel és bátorításukkal támogattak, vagy eltűrték életükből való távolmaradásomat, és szemrehányás helyett támogató, kedves emlékeztetőket küldtek. Csodálatos barátok vagytok, és kiváltság, hogy ismerhetlek titeket. Szeretném kiemelni Dr. Tomej Kristófot, Dr. Tóth-Nagy Georginát, Horváth Gizellát, Kandó Katát, Bosnyák-Simon Nikolettnek, Sztudva Zoltánt és Tóth Biankát, hogy mindig meghallgatták gondolataimat, és szeretetükről és támogatásukról biztosítottak (illetve az esetenkénti koffein adagot szolgáltatták, ami nagyban hozzájárult a kutatás elkészüléséhez). Külön szeretném megköszönni Georginának, hogy segített eleget tenni a munkán kívüli kötelezettségeimnek.

Hálás vagyok a sorsnak is, amiért csodálatos háziállatokat adott nekem, akik mindig jelen voltak, és pelyhes szeretetet és endorfint adtak nekem az írás során.

Szeretnék köszönetet mondani szüleimnek is, akik mindig támogattak abban, amit csinálni szerettem volna, és akik a védőhálót jelentik az életemben és lehetővé teszik számomra, hogy kiteljesítsem önmagam. Édesapám egész életében értünk dolgozott, így soha nem kellett igazán aggódnom a döntéseim miatt, és (bár él néha a kritikus megfigyelések lehetőségével) olyan szabadságot biztosít számomra, amelyet csak néhányan élhetnek meg. A tudat, hogy amennyiben elbukom ott vannak, hogy elkapjanak, lehetővé tette, hogy nekivágjak ennek az új kihívásnak, és a fiskális növekedés helyett a tudományos növekedésre koncentráljak.

Ezt a munkát édesanyámnak ajánlom, kősziklámnak az életemben, aki támogatott, szeretett, ápolt, nevelt és bátorított, hogy olyan legyek, amilyen ma vagyok, és aki biztos vagyok benne, ha lehetőséget kap rá, rövidebb időn belül képes lett volna elvégezni ezeket a tanulmányokat, miközben gondoskodik a családjáról is. Ő az a személy, aki mindig ott van, amikor szükségem van rá. Minden lépésnél ott volt, és "ismeri" az összes professzoromat és az összes tárgyam tartalmát. Édesanyámnak mindig van türelme, hogy részletesen meghallgassa a problémáimat, zseniális elméje, hogy megértse azokat az összetett témákat, amiket feldobok neki, és bölcsessége, hogy olyan megoldásokat kínáljon, amelyekre még nem gondoltam.

Végezetül szeretném idézni Cordozar Calvin Broadust, Jr.-t és "Szeretném megköszönni magamnak, hogy hittem bennem, szeretném megköszönni, hogy elvégeztem ezt a sok kemény munkát, szeretném megköszönni, hogy ha nem is volt szabadnapom, soha nem adtam fel." (Ahlgrim, 2018)[2]

[2] Ahlgrim, C. (2018) Snoop Dogg thanked himself for his star on the Hollywood Walk of Fame, and fans are loving it, Insider. Insider. Available at: https://www.insider.com/snoop-dogg-hollywood-walk-of-fame-speech-photos-2018-11 .

1. Introduction

This dissertation examines the impact of tailor-made service providing customer experiences tailored to the consumer's individual needs and preferences (Chellappa and Sin, 2005; Kokko and Moilanen, 1997; Peppers et al., 1999; Roberts, 2003; Tam and Ho, 2006), and their relationships in the Hungarian hotel industry. It explores the various approaches to tailor-made service and the necessary customer-company interactions. In today's competitive market, delivering contextual customer experiences is no longer a luxury but an expectation. Market professionals emphasize the importance of offering tailored services and engaging experiences to stay competitive (Gartner Research, 2022; Pandey, 2020; Salesforce, 2018; Shep, 2020). To thrive in a technology-driven marketplace, businesses must adopt a strategic and comprehensive approach to providing tailor-made services.

Using tailor-made service (such as personalization and customization) is a wildly used technique to create a higher quality guest experience (Imhoff et al., 2001; Kokko and Moilanen, 1997; Solomon et al., 1985). With technological innovations collecting big data become easier and more common. A tailor-made service is created by the service provider's adaptive behaviour and the customer's participation ((Blom, 2000; Roberts, 2003; Surprenant and Solomon, 1987a; Vargo and Lusch, 2004). It is important to tighten the relationship with the guest and create revenue opportunities by giving the guests experiences that they want, which can be more personalized and customized. According to market professionals, for example Forbes magazine, (Shep, 2020) customers today gravitate toward brands that feel like they listen to them, understand them, and pay attention to their specific wants and needs. Personalized customer service improves ROI significantly if implemented appropriately, since delivering a customized experience to the customers make them feel appreciated and valued.

Even though big data collection has become easily available, tailor-made service only works if the customer participates in the process; therefore, the customer and the service provider create the service experience together (Campos et al., 2018; Grönroos, 2011; Luo et al., 2019; Vargo et al., 2008; Vargo and Lusch, 2004, Somosi and Kolos, 2017). Tailor-made service is directed towards the person; and this will make tailor-made services different but hence difficult. In marketing and sales, the company will not be communicating with a large group of customers but with the individuals (Zhou et al., 2013). On the other hand, as each individual has a different level of willingness to share personal information with companies, a tailor-made service created from big data-based information can have a negative effect on the customer (Chellappa and Sin, 2005; Schoenbachler and Gordon, 2002). Other than that, because of miscommunication or misinformation, even if the customer participates in the service process, the tailor-made service can negatively affect the customer's satisfaction (Chellappa and Sin, 2005; Culnan and Armstrong, 1999; Goodwin, 1991).

Customers are willing to spend more for a great experience, emphasizing the importance of personalized service (Nidhi et al., 2021; Shep, 2020). Personalization helps build customer loyalty, satisfy individual needs, and reduce price sensitivity (Riecken, 2000). Higher customer satisfaction leads to lower customer acquisition costs and a positive reputation (Fornell, 1992). Service quality is positively linked to willingness to pay more and loyalty even with price increases (Zeithaml et al., 1990). Customer needs are the key factor in

determining the optimal quality level, making it difficult to universally define. (Bányai, 1995) Considering the hotel industry's resistance to change and other priorities, tailor-made service can be a valuable performance indicator with lower costs compared to renovations (Dow and Perotti, 2013; Okumus and Hemmington, 1998a, 1998b).

Although research proved that satisfaction leads to loyalty (for instance; Coelho and Henseler, 2012; de Ruyter et al., 1998; Dick and Basu, 1994; Fornell, 1992; Kuo et al., 2013; Ladhari et al., 2011; Oliver, 1999; Prentice et al., 2020; Santos Roldán et al., 2021), quality service leads to satisfaction, (Berry et al., 1988; Grönroos, 2001, 1984; Gustafsson et al., 2005; Oliver, 1997) and that quality service is judged by the customer (Gummesson, 1995; Parasuraman et al., 1988; Vargo and Lusch, 2004) there are only a few tailor-made quality measurement models. Therefore, developing such model to analyse the Hungarian hotel industry is beneficial for both from an academic and management perspective.

As the dissertation aims to create a measurement system with which the level of the tailor-made service can be measured, it must explore current measurement systems in depth. With the help of this newly created measurement system, the current state of the hotel industry in post-covid Hungary will be mapped, hotels will be grouped according to their capability to provide personalized service and development areas of the Hungarian hotel service will be identified.

1.1.The Goal of the Dissertation

As the dissertation will detail later, providing tailor-made service is a difficult task, given that it has big data need, the cooperation of guest and employee is necessary and is time-consuming. However, it can highly improve loyalty and satisfaction.

Developing measurement systems and attempting to measure service quality (SQ) was already a well-researched topic; however, measuring the level of individualization of service through the company's capabilities and willingness rather than the guests' is more difficult as the quality in the eye of the service receiver. Therefore, one of the goals of this dissertation is to research and establish if it is possible to create a system that measures the tailor-made service level of the hotels. For that, it is essential to prove that quality service should be considered as tailor-made service, and to prove that the currently available measurement systems are not satisfactory to measure the complex hospitality service. If we assume that creating such a measurement system is possible, it can be used to map the Hungarian hotel industry and their current level of service individualization. A managerial implication goal of the dissertation is to identify the key improvement areas in service personalization and customization.

Therefore, the dissertation will have the following objectives:

1. to create a new measurement system to define tailor-made service level in the Hungarian hotels.
   1.1. to measure the tailor-made level of the hotel service in Hungary.
      1.1.1. to identify what the common characteristics are in the case of hotels that score high on the tailor-made service scale.
      1.1.2. to identify what the common characteristics are in the case of hotels that score low on the tailor-made service scale.

1.2. to identify what phase of the guest encounter is most frequently tailor-made.
1.3. to identify development opportunities for the Hungarian hotel market.

1.2.The Structure of the Dissertation

The first part of this dissertation will be a collection and presentation of the theoretical background. The chapter will collect and synthesize previous research theories, models and show all the different aspects and research focus on the field.

The literature review research (Snyder, 2019) differentiates methodologies such as systematic, semi-systematic, integrative and narrative approaches (Toronto and Remington, 2020). Depending on the purpose of the literature review different techniques will be preferable based on the importance of the topic, how mature the topic is, or the paragraph's aim.

The first part of the literature review introduces service and service quality (SQ) definitions, research, and measurement systems throughout the past decades. It will demonstrate how SQ measurement models were created and conducted. After introducing and establishing the importance of SQ in hospitality service, the dissertation will detail the different approaches of tailor-made services, such as personalization, customization, and co-creation. It is important to stress that tailor-made service and tailor-made advertisement and marketing, such as personalized marketing or mass personalized marketing, can be viewed as two separate fields of research; however, due to the nature of hospitality service and guest interaction, hotel marketing activities will be part of the hotel service concept and will not be analysed separately, as the goal of this dissertation is to create a complex measurement system.

After establishing the SQ theory the Hungarian hotel industry will be introduced.

In order to create a new scoring system, firstly, the existing guest journey models need to be presented and compared. With the help of customer journey models, the development of a model that integrates the practicality of the field and the theoretical background of research are taking place. It is a necessary step to create a scoring model that can be understood and implemented by hotel professionals as they are an essential part of the measurement.

After establishing the theoretical background, the dissertation will present the research questions and hypotheses.

To create a tailor-made service measurement system firstly, the items used for measuring personalization in previous research must be synthesized, merged, and installed to the appropriate part of the guest journey model. Secondly, expert interviews take place to validate the importance of the selected items from the literature. Thirdly, following the introduction and analyses of the expert interviews, a second round of expert interviews will take place to validate the scoring model. After the final validation and creation of the scoring model, the dissertation presents the data collecting methods.

Following the qualitative research of model building, quantitative analyses will be used to answer the hypotheses.

Finally, the dissertation will be finished with a chapter of summery, including a discussion, summary of thesis and conclusion.

2. Theoretical Background

2.1.Service Quality

The following paragraphs will be detailing the important definitions, concepts, and research on the topic of service quality (SQ). Initially introducing the background of SQ research followed by a brief definition of service and service quality. The aim of this chapter is to introduce the various measurement systems implemented to measure SQ and to show how tailor-made services, such as personalisation and customization, emerged from SQ research.

2.1.1. Service

To be able to talk about service quality (SQ) it is essential to define what service is. The goal is to introduce how research within the SQ field has progressed over time (Snyder, 2019).

Rathmell (1966) defined service as a 'verb', emphasizing its nature as an act, while Solomon et al. (1985) defined service marketing as the marketing of activities and processes rather than objects. Lovelock (1991) and Zeithaml et al. (2017) also described services using terms like "process", "deeds", and "performance". This means the researchers all agreed that service is something that is done and not a thing that is. The shift in management focus from goods to services in the 1990s emphasized the transition from a producer perspective to a customer perspective (Gummesson, 1995). Grönroos (2001) and Vargo and Lusch (2004) also acknowledged the importance of the "process" in services, highlighting that services are unique as they are produced concurrently with consumer participation. This evolution of the service definition recognizes that services involve both the actions of the service provider and the active involvement of the consumer (Edvardsson, 2005; Grönroos, 2001; Gustafsson et al., 2005). As the concept of service was refined, the notion of a "tailor-made" experience emerged, and in 2005, Edvardsson et al. defined service as value co-creation. It meant that the value creation happens through the eyes of the customer. It is a key concept because of the interactive, processual, experiential nature of service (Edvardsson, 2005). Later Grönroos added to the definition that the "consumption and production of services are (…) partly simultaneous processes, and (…) the service provider at least partly enters the consumption sphere." (Grönroos, 2006, p. 319). In the co-creation of services, both the consumer and the provider play active roles, interacting with resources and each other to create value (Grönroos, 2006), this transforms services into open systems, involving both the consumer and service provider (Grönroos, 1984; Gummesson, 1979). Unlike physical goods, services are characterized by their openness, as customers participate as co-producers and are influenced by the process (Grönroos, 2006).

Lusch and Vargo (2004) expanded service definitions to include specialized competencies and the application of knowledge and skills. They emphasized service as the performance of deeds, processes, and actions. In contrast, Grönroos (2001) focused on consumer participation, while this perspective highlights the tools and means employed in service provision.

When measuring service quality (SQ), it is crucial to consider whether service is viewed as an individual occurrence or part of a comprehensive offering. Rathmell (1966) noted that most goods require supporting services, and most services require supporting goods. For example, a

hotel receptionist requires a hotel room to provide a service. Similarly, Gummesson (1995) stated that customers purchase offerings that provide services and create value, rather than buying goods or services directly. Similarly, Grönroos (2001) concluded that "a service firm has no products, only interactive processes." (Grönroos, 2001, p. 150).

Table 1. - Service definitions and Keywords

Scholar	Year	Keywords to define service
Rathmell	1966	act, verb,
Solomon et al.	1985	activities and processes
Lovelock	1991	process, deed and performance
Zeithalm et al.	2000	process, deed and performance
Grönroos	2001	unique process, producing with customer participation
Vargo and Lush	2004	application of specialized competencies, deeds, processes, and performances
Edvardsson et al.	2005	interactive, processual, experiential nature, value co-creation

(Source: Own Edit)

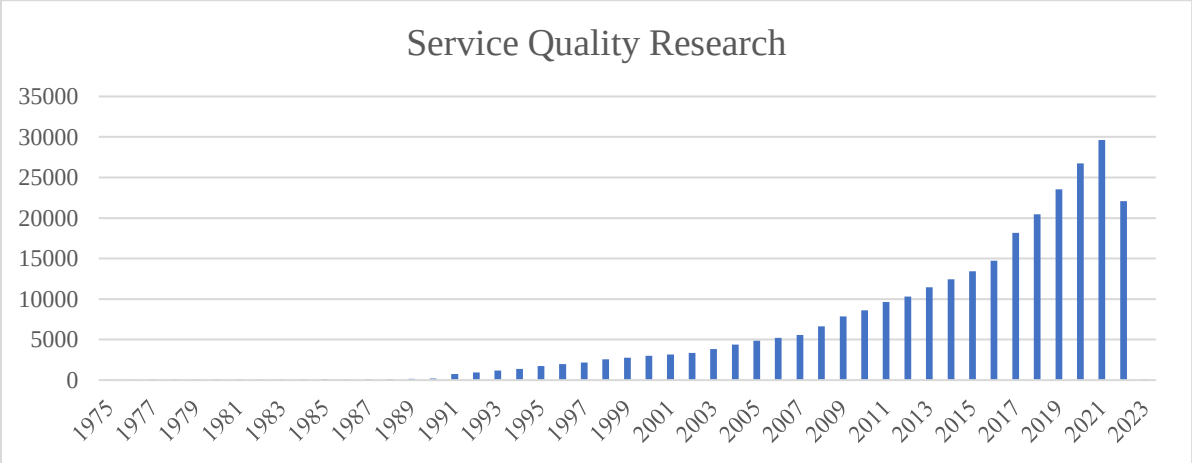
Conclusion of Service:

Defining service itself is difficult. When we talk about a service that can be personalized it is even more of a challenge. In **Table 1.**, we can see the different key - words researchers used throughout the years. The description of service gradually grew and became more complex, describing service in more detail. For good hotel service to be performed, a competent employee is needed with the right skills and knowledge for the tasks. A customer's willingness to participate in the value creation is also essential as the service provider needs to find the real needs of the customer. In case of hotel products, Grönroos' definition (2001, p.150) cannot be used on its own as, in the hotel service the physical property takes an important role. Without tools, infrastructure and proper competences, the hotel service providers would be unable to invite the guests in the service process let alone in the co-creating process. To be able to talk about service quality, we must consider if quality service could exist without tailoring. In case of tailor-made services, be it through personalization, customization or co-creation, skills, knowledge and experience are needed (Vargo and Lusch, 2004) but the participation of the guest is essential (Edvardsson, 2005; Grönroos, 2001), therefore, I can state that services that can be personalized are interactive processes where the service provider uses specialized competencies and resources so that with the participation of the guest they are able to create value, which can either be the final product or the addition to a physical good.

2.1.2. History of Service Quality Research

Defining service quality (SQ) is challenging, and quality research gained popularity in the late 70s through the 90s (Crosby, 1979; Garvin, 1983; Grönroos, 1984; Parasuraman et al., 1988; Takeuchi and Quelch, 1983; Zeithaml, 1988). SQ has become a significant differentiator and strategic advantage for service companies (Berry et al., 1988). The topic of SQ has seen exponential growth in publications since the early 2000s (**Figure 1.**) based on the Web of Science database. This paragraph employs bibliometric methods to analyse articles.

Figure 1. - Service Quality Research by Year



(Source: Own Edit)

Search for 'service quality' yielded 344,771 hits (as of November 3, 2022) using the code ALL = (service AND quality). This means that all the records that contains both words in their title, keywords or abstract will be found. Further refinement narrowed it down to 326,924 English language publications and 286,110 peer-reviewed articles.

As the purpose of this chapter is to introduce the pillars and origin of SQ research, and to have an understanding on how the focus of the topics have changed over time, old publications will not be excluded. The aim of the paragraph is to present the most popular topics of service quality, considering that the dissertation is being written on the theme of business and economics, the next step is to select the relevant research areas.

The most publications with these keywords can be found in Engineering (35,156) and also Health Care Sciences Services (34,590) (**Figure 2.**). Business Economics is only the 7th biggest topic in SQ. As the focus of this dissertation is tourism, specifically in hospitality, only SQ research done in the field of Business Economics (21,819) Social sciences (5,850), and Operations Research/Management Science (4,771) were considered.

Figure 2. - Service Quality Research by Field

(Source: Web of Science)

This means that there were 29,478 articles found on Web of Science Core Collection with the keywords 'Service Quality' within the focal research spectrum.

This chapter employs bibliometric analysis, which applies mathematical and statistical methods to analyze books, articles, and other forms of communication (Pritchard, 1969). VOSviewer software will be utilized as an analytical tool to identify key terms and create co-citation maps (van Eck and Waltman, 2020; Waltman and van Eck, 2013). The program is free access and takes a distance-based approach to construct a network/density visualisation map based on occurrence and co-occurrence data. Co-occurrence means the number of times a key term occurs with another key term in the same article title or keyword in the database (van Eck and Waltman, 2020), therefore it can give an accurate picture of what the focus of topics were throughout the decades.

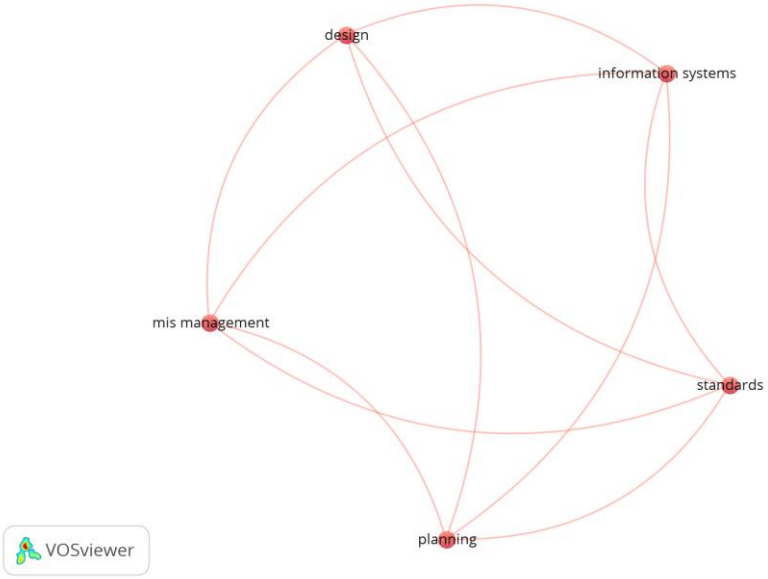
Data preparation has been done with the help of Web of Science. The article titles, their publication year, and full citation report were exported. A sum of 29,478 articles were collected and separated into different decades.

The second stage was the extraction of key terms, for this the VOSviewer program was used. The program follows a natural-language-processing algorithm to include terms in the analysis with a minimum occurrence chosen by the user (van Eck and Waltman, 2020).

2.1.2.1.SQ in the 1970s

After refining the dataset, only 17 articles from the 1970s were found on SQ in the Web of Science database. The common keywords identified were "miss management," "design," "information system," "planning," and "standard" (**Figure 3.**). Although quality is often linked to terms like goodness, luxury, luster, or weight, these are not accurate descriptions of the concept (Crosby, 1979). The figure shows that SQ is associated with "standard" and "design," aligning with Crosby's (1979) perspective that SQ means zero defects and getting it right the first time without errors.

Figure 3. - Co-occurrence Map of Service Quality Keywords of the '70s



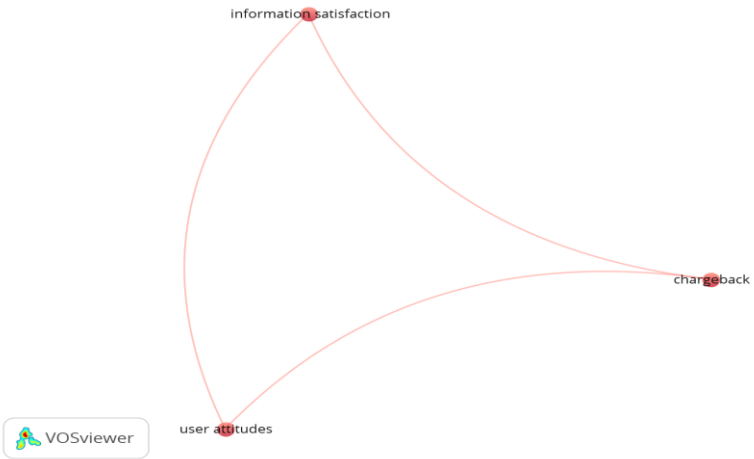
(Source: VOSviewer)

2.1.2.2.SQ in the 1980s

In the 1980s the interest grew, and 85 articles were found in our dataset. Using the same method, the co-occurrence map of these articles can be created. There are three key terms, "information satisfaction", "chargeback" and "user attitude" (**Figure 4.**).

We can see these topics occurring in this decade as the two schools; the North American (Parasuraman et al., 1988) and the Nordic European (Grönroos, 1984) also emerged from this time period where they started to focus on the consumers expectations, reaction and satisfaction.

Figure 4. - Co-occurrence Map of Service Quality Keywords of the '80s



(Source: VOSviewer)

In the 1980s, the definition of quality shifted from a strictly tangible perspective to encompassing conformance to requirements. Garvin (1983) introduced the concept of internal

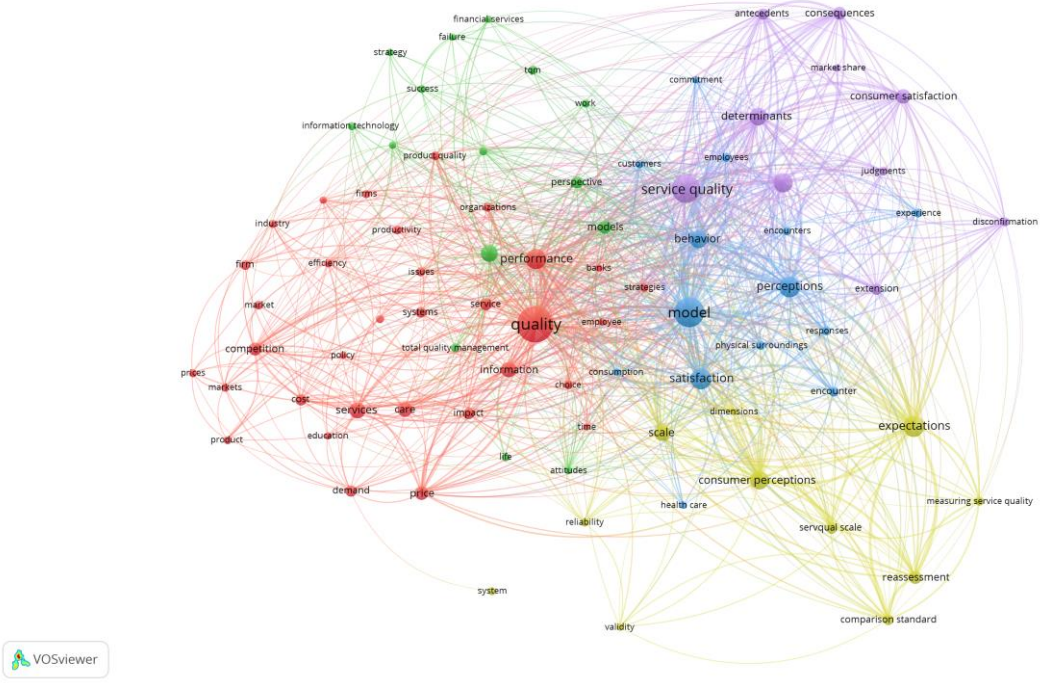
and external failures, distinguishing between issues occurring before and after product installation. Evaluating service quality (SQ) is more challenging for consumers compared to goods quality. Unlike tangible goods, services primarily rely on limited physical evidence such as the appearance of the service provider's surroundings (Parasuraman et al., 1988).

The comparison of consumer expectation with actual service performance was also a re-occurring topic (Churchill and Surprenant, 1982; Grönroos, 1984; Parasuraman et al., 1985; Smith and Houston, 1982). Hence, hereon quality is defined as conformance to customer specifications (Parasuraman et al., 1988) or, in other words, superiority or excellence. The perceived quality is defined by the product's overall excellence judged by the consumer (Grönroos, 1984; Parasuraman et al., 1988). The consumer evaluates the quality of the outcome of a given service, “the consumer compares his expectations with the service he perceives he has received” (Grönroos, 1984, p. 37). The result of this process will be the perceived quality of the service, therefore, "it is the customer's definition of quality, not managements, that counts." (Berry et al., 1988, p. 35). It makes providing and measuring quality difficult, as every individual has a different level of expectation.

2.1.2.3.SQ in the 1990s

The research interest grew significantly in the next decade (1990-1999), with a total of 1,432 articles available. This is a substantial increase compared to the previous two decades combined. Due to the larger dataset, a higher threshold of 10 was chosen to select relevant keywords.

Figure 5. - Co-occurrence Map of Service Quality Keywords of the '90s



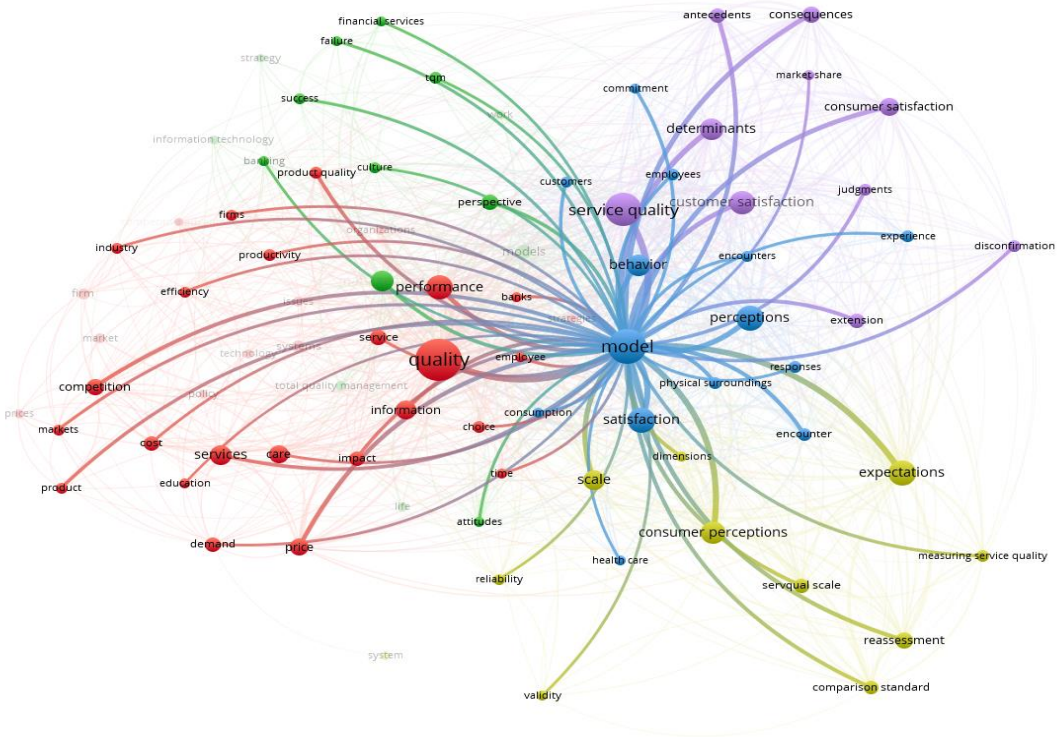
(Source: VOSviewer)

As a result, 86 keywords were retained after excluding general terms with limited information, (such as “empirical research,” “study,” “US,”). The relationship between key terms can be observed through their proximity in the visualization map, where closer proximity indicates a stronger relationship (van Eck and Waltman, 2020; Waltman and van Eck, 2013).

The key term "quality" appears 232 times with a link strength (the total number of links connecting a specific key term to its linked key terms) of 613, indicating a strong focus on performance quality in recent research. It is close to “performance” which has a total link strength of 267, indicating that many of the researches of this decade have been focusing on performance quality. The term "model" has a link strength of 579, suggesting that SQ models were prominent in the 1990s, encompassing “consumer perception”, “consumer satisfaction” and “performance” (**Figure 5.**).

The links show the connection between “model” and “scale”, implying that most models used “scales” for “measuring service quality” and for “reassessment”. Specific models like the “SERVQUAL scale” are also mentioned 22 times (**Figure 6.**).

Figure 6. - Co-occurrence Map of Service Quality Keywords of the '90s - Model



(Source: VOSviewer)

As seen on the co-occurrence map, SQ was studied from multiple angles in the 1990s.

Oliver (1993) suggests that satisfaction can result from various dimensions, quality-related or not, but negative experiences, regardless of the cause, will still lower customer satisfaction. He further defines satisfaction as the consumer's fulfilment response, indicating the

pleasurable level of consumption-related fulfilment provided by a product or service (Oliver, 1997). Therefore, satisfaction is the consumer's sense of the consumption outcomes.

"Customer satisfaction" has at least two different conceptualizations: transaction-specific and cumulative (Boulding et al., 1993).

- Transaction-specific perspective;

Customer satisfaction is viewed as a post-choice evaluation and judgment of a specific purchase occasion (Oliver, 1999, 1997, 1996, 1993, 1980). Therefore, it can show specific information about a particular product or service encounter.

- Cumulative satisfaction;

Cumulative or overall satisfaction is "based on the total purchase and consumption experience with a good or service over time" (Anderson et al., 1994, p. 54). It can indicate the firm's past, current and future performance (Fornell, 1992; Johnson and Fornell, 1991) and should motivate a firm's investment in customer satisfaction.

Fornell (1992) emphasizes the key benefits of high customer satisfaction, including increased loyalty and reduced-price sensitivity. Customer satisfaction can shield against competitor influence and reduce costs associated with failures and future transactions. It can also lower customer acquisition costs and enhance the company's reputation through positive word-of-mouth. Service quality, which positively impacts customer satisfaction, is also linked to profitability (Anderson et al., 1994). However, the relationship between SQ and profits is complex (Greising, 1994; Zahorik and Rust, 1992). Increasing market share may potentially lead to lower customer satisfaction due to changing market expectations (Anderson et al., 1994). Nonetheless, positive overall outcomes contribute to customers' overall satisfaction with the firm.

The impact of SQ on customer loyalty has been established in previous research (Zeithaml et al., 1996). Loyalty and satisfaction have an asymmetric relationship, where loyal customers are typically more satisfied, but satisfaction alone may not always lead to loyalty (Oliver, 1999). Oliver (1997) defines loyalty as a strong commitment to consistently repurchase or patronize a preferred product/service, even in the presence of situational influences and marketing efforts that may prompt switching behaviour. Jones and Sasser (1995) describe customer loyalty as a sense of attachment or affection towards a company's people, products, or services. Most studies on the relationship between SQ and service loyalty have been limited to specific industries (Oliver, 1999; Zahorik and Rust, 1992), which restricts the generalizability of their findings. However, Cronin and Taylor (1992) and Zeithaml et al. (1996) have reported differences in service providers. Dick and Basu (1994) suggest that changes in industry costs can impact customers' attitudes toward different services.

Cronin and Taylor (1992) focused only on repurchase intentions, while Boulding et al. (1993) examined repurchasing and willingness to recommend. Although Cronin and Taylor (1992) did not find a significant effect of SQ on repurchase intentions, Boulding et al. (1993) found that SQ influences both repurchase intentions and willingness to recommend. Similarly, Dabholkar and Thorpe (1994) found that customer satisfaction with a store positively

influences intentions to recommend the store to others. Zeithaml et al. (1990) found a positive relationship between SQ and price-indifferent loyalty, indicating a willingness to pay a higher price and remain loyal even with price increases. Cronin and Taylor (1992) and Fornell (1992) further highlight the varying elasticity levels across different service industries.In industries characterized by relatively low switching costs, customers will be less loyal, (de Ruyter et al., 1998) therefore loyalty cannot be achieved by many service providers because some services and products will disinterest customers (Oliver, 1999).

Zeithaml et al., (1996) found that a long-term relationship between the customer and the company will affect profitability because loyal customers are more likely to buy additional services than short-term customers, in addition to spreading positive word-of-mouth communication. Ultimate loyalty combines perceived product superiority, personal fortitude, social bonding, and synergistic effects (Oliver, 1999). It is also possible for the firm to charge a higher price because these customers value maintaining the relationship.

The physical surroundings have a significant impact on customer and employee behaviours (Bitner, 1992). These settings involve the simultaneous purchase and consumption of services, necessitating direct human contact and interaction (Bitner, 1992). Schneider (1990) emphasized the importance of differentiating the climate, referring to the shared perceptions of employees regarding practices, procedures, and behaviours that are rewarded and supported within a particular setting. Considering the effects of the physical environment on both customers and internal customers (employees) is crucial. Research has shown that environmental and atmospheric factors influence employee-consumer exchange activities (Auty and Long, 1999).

According to Bányai (1995) SQ can be viewed from two perspectives: experiential quality and trust (or functional) quality. Experiential quality focuses on the physical aspects of the service and the level of quality they represent. (Consists of objective and subjective components.) Trust (or functional) quality comes into play when the quality judgment is influenced by the level of trust in the service provider. This aspect is particularly important in services where the customer's personal involvement is crucial or where there is a high level of risk or lack of information. (Bányai, 1995)

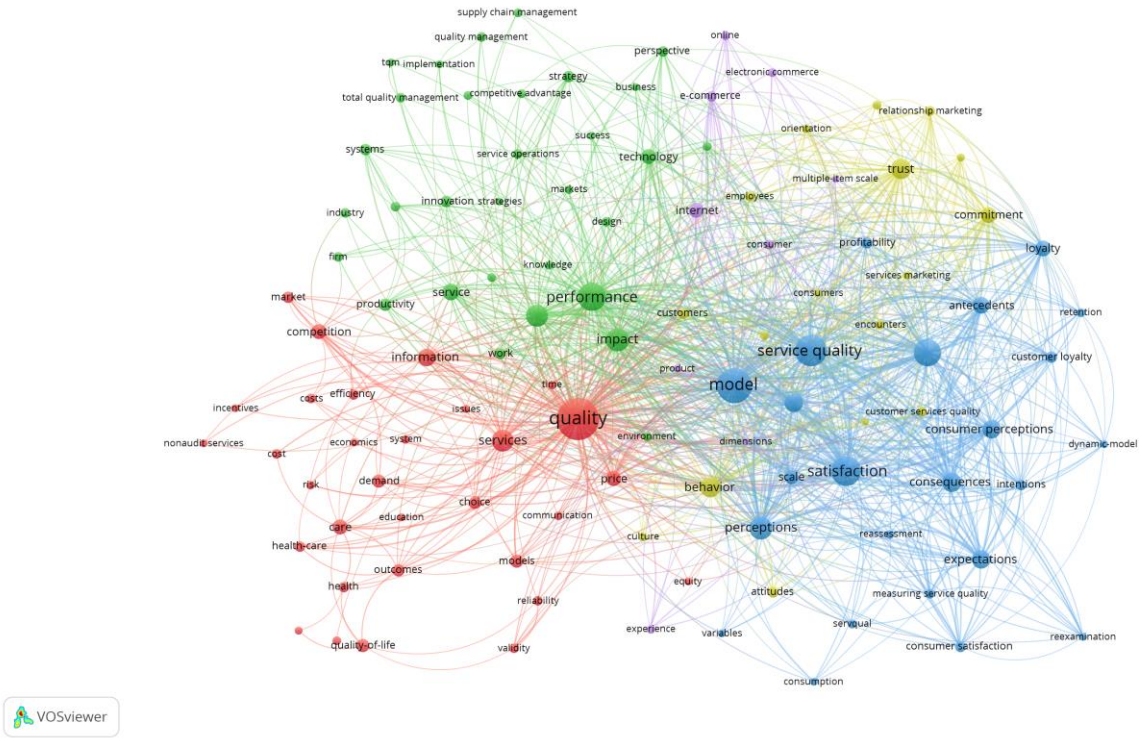
Researchers also began to test and further develop measurement models from the '80s, whereby the measurement of perceived SQ has attracted academic attention (Brown et al., 1993; Cronin and Taylor, 1992; Parasuraman et al., 1991, 1988; Teas, 1993). Measurement tools and procedures have been developed to measure SQ but mostly from the consumers' perspective (SERVQUAL (Parasuraman et al., 1988) and SERVPERF (Cronin and Taylor, 1992) and personalization started to appear in the dimensions of the measurement system. As customers may change their expectations on the whole service experience following a service encounter, therefore dynamic approaches had been proposed (Bolton and Drew, 1991; Boulding et al., 1993) to satisfy customers and gain perceived SQ.

Perception is a strong predictor of the SQ concept (Cronin and Taylor, 1992; Oliver, 1993; Teas, 1993). Hence, SQ is viewed as a performance concept as it depends on performance criteria (Zeithaml et al., 1993), which is determined primarily by the customer.

2.1.2.4. SQ in the 2000s

From the 2000s, there are a total of 3,810 articles, as the topic further grew exponentially. From the year 2015 there are more than 1,000 articles found on the website under the said topic per year. With 30 chosen as a threshold, and excluding general terms, 112 items remained. The goal was to get approximately a similar map in size as was created for the 90s.

Figure 7. - Co-occurrence Map of Service Quality Keywords of the '00s

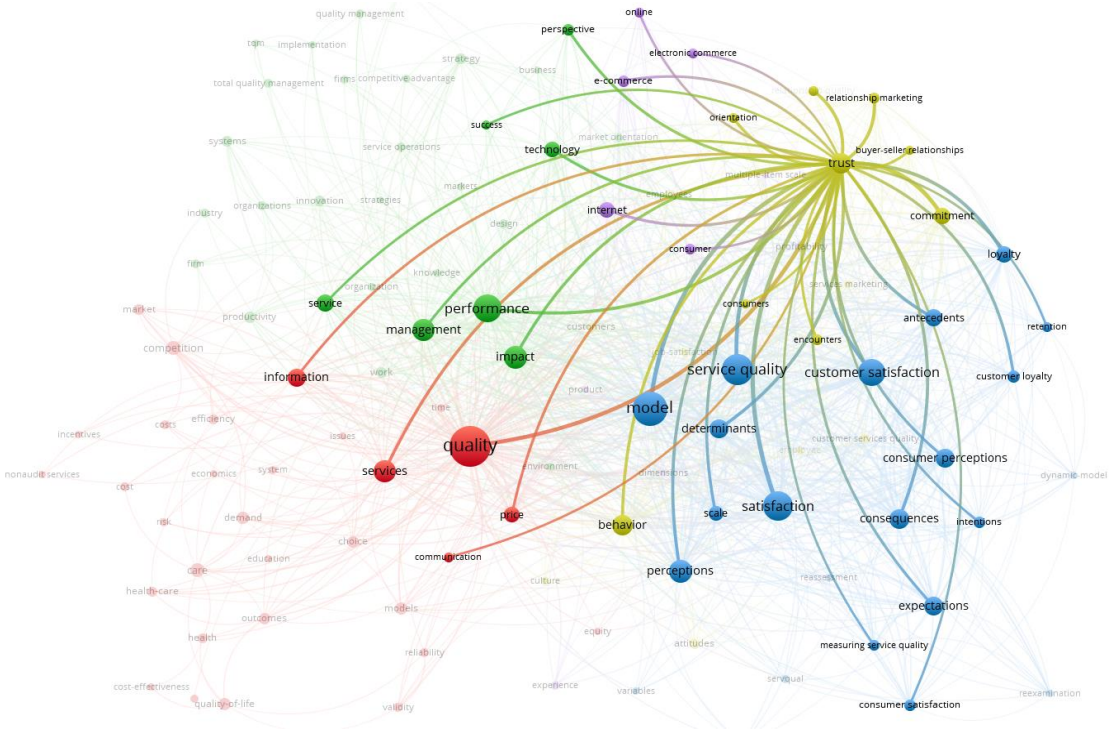


(Source: VOSviewer)

The network visualization map reveals consistent keywords from the 2000s, such as "model," "satisfaction," and "perception" (occurrences: 616, link strength: 2,800). However, there are also new or more prominent keywords in this decade. Keywords like "trust" (occurrence: 201, strength: 1,112), "internet" (occurrence: 116, total link strength: 470), and "e-commerce" indicate a shift in focus (**Figure 7.**). When focusing on the relationship and link origination from “trust”, we can see how the topics of “buyer-seller relationship”, “commitment”, “loyalty” and “internet” is linked, showing the new research perspectives of the decade (**Figure 8.**).

Because the terms’ distance in the visualisation map indicates how strong the relationship is (van Eck and Waltman, 2020; Waltman and van Eck, 2013), it is evident that “trust” and “e-commerce” (commercial transactions conducted electronically on the internet) similarly “trust” and “commitment” have become closely related topics.

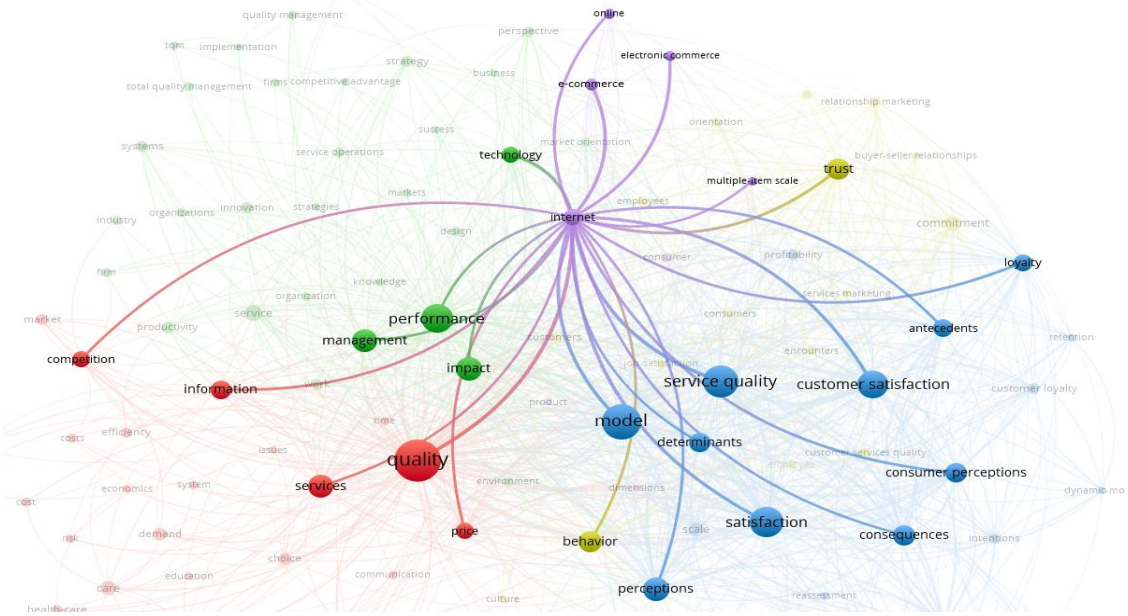
Figure 8. - Co-occurrence Map of Service Quality Keywords of the '00s - Trust



(Source: VOSviewer)

Putting the term "internet" in the focus it can be assumed that some researchers in this decade started to investigate the quality of service through the internet and started to focus on measuring this way of service. (**Figure 9.**)

Figure 9. - Co-occurrence Map of Service Quality Keywords of the '00 - Internet



(Source: VOSviewer)

In the 2000s, research focused on the complex relationship between customer satisfaction and service attributes, which was challenging due to the intangible nature of services (Hong and

Goo, 2004; Nguyen and Leblanc, 2002). It was found that the quality of service has an impact on customer satisfaction (Eskildsen et al., 2004).

Boshoff and Gray (2004) highlighted that satisfaction depends on the individual's perceptions of attributes, irrespective of whether it is a product or service. Thus, every consumer will express different levels of satisfaction when faced with the same service encounter or experience (Ueltschy et al., 2007). Businesses that prioritize customer experience have the potential to enhance customer satisfaction (Hetesi, 2002). Torres and Kline (2006) state that customer satisfaction implies customers being at ease but not excited, while delight leads to positive word-of-mouth referrals, customer retention, higher profitability, and a sustainable competitive advantage as it is difficult to imitate. The perception of quality does not just occur cognitively but has an emotional aspect (Ladhari, 2000). Quality service is a moving target; the guest's intentions will be impacted by their emotional satisfaction based on their perceived service quality; therefore, hotels should pay attention to the emotional aspect of satisfaction (Cameran et al., 2010). Companies must assess their operations and service practices to identify sources of long-term competitive advantage in a challenging business landscape. Adopting a marketing mindset and integrating it across the organization is crucial for survival. (Révész, 2002)

Gilmore and Pine (2002) turned from an employee-interaction focus and put emphasis on the infrastructure needed to create the experience. Of course, employees play an important part in bringing these experiences to life by identifying the needs and preferences of different customers and providing creative responses.

In the 2000s, information technology (IT) advancements rendered certain human-human interactions in service delivery obsolete (Bitner et al., 2000; Li et al., 2003). Services such as e-retail and online gaming replaced human interactions with technology. Additionally, there was a shift towards hybrid services, combining technology and human interactions for improved efficiency (Ganguli and Roy, 2010; Aldrich, 2000).

The emergence of E-service has led to the development of E-service quality (E-SQ). Researchers have built on existing models such as SERVQUAL and SERVPERF to measure E-service quality. E-S-QUAL (electronic service quality) and E-RecS-QUAL (electronic service recovery quality) are some of many examples of technology-related scales (Parasuraman et al., 2005) created in this decade. Additionally, technology-related dimensions have been identified, including efficiency, fulfilment, system availability, privacy, responsiveness, compensation, and contact. Other dimensions of e-quality include website appearance, ease of use, reliability, recovery quality, communication, security, and more. (Parasuraman et al., 2005; Collier and Bienstock, 2006; Joseph and Stone, 2003; Madu and Madu, 2002; Santos, 2003; van Riel et al., 2001).

Self-service technology has gained popularity in service delivery, impacting customer perceptions of SQ (Curran and Meuter, 2005; Dean, 2002). Different types of self-service, such as telephone, internet, or interactive kiosks, influence consumer perceptions of SQ (Curran and Meuter, 2005). Without human interaction, ease of use and enjoyment become key factors. Previous research highlighted the importance of avoiding service personnel in the

2000s, along with concerns about technology anxiety (Dabholkar and Bagozzi, 2002; Meuter et al., 2003, 2000). SQ measurement for technology-enabled services primarily focuses on consumer-technology interactions, with employee-customer interactions considered only in hybrid cases.

Ladhari (2008) after examined 18 different service settings found that SQ dimensions vary across different service settings and even within the same industry. This variation is influenced by customer groups and circumstances. The focus on technology-related SQ led to the introduction of scales like the Technology Readiness Index (Parasuraman, 2000).

A multi-industry study by Brady and Cronin (2001) shows that SQ consists of three dimensions.

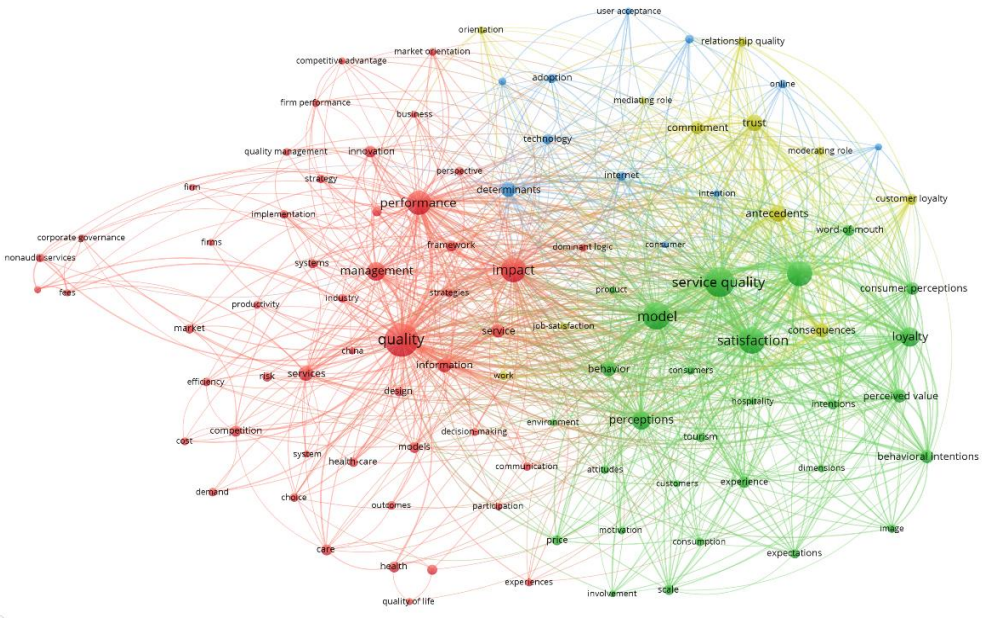
- Outcome (waiting time and tangibles),
- Employee interactions and,
- Environmental quality (ambient and social conditions and facility design).

Customer trust has gained significance in the era of E-SQ (electronic service quality) as it is crucial for service providers (Parasuraman et al., 1988, 1985). The emergence of e-service further emphasized the importance of trust. By educating customers about the service delivery process and behind-the-scenes aspects, companies can strengthen customer trust, thereby creating a valuable competitive advantage (Eisingerich and Bell, 2008).

2.1.2.5.SQ in the 2010s

SQ research produced 13,321 research in the field from 2010 – 2019. With 150 chosen as a threshold, and excluding general terms, such as “study,” “US,” and “framework”, 100 items remained. The goal remained to get approximately similar map in size.

Figure 10. - Co-occurrence Map of Service Quality Keywords of the '10

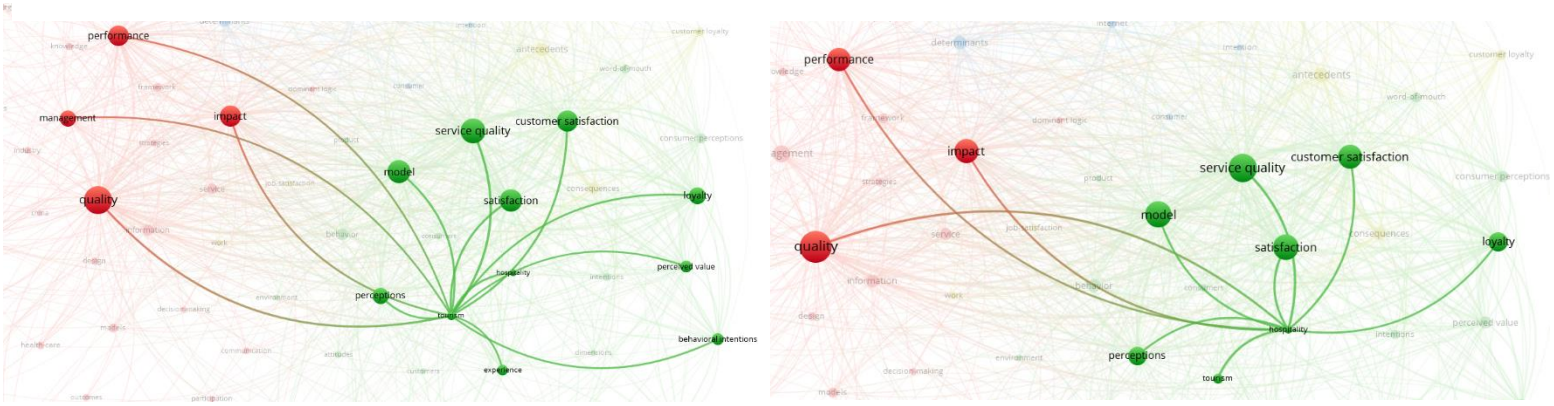


(Source: VOSviewer)

Keywords such as “quality”, “service quality”, “model” or “satisfaction” remained the central points of the co-occurrence map, but the size (and the importance) of ‘trust’ and ‘internet’ grew. There are more keywords that refer to technology, ‘internet’, ‘online’, ‘user acceptance’, ‘technology’ and they are all connected to the ‘customer satisfaction’ keyword. (**Figure 10.**)

Keywords such as ‘tourism’ (occurrence 281, total link strength 1,179) and ‘hospitality’ (occurrence 151, total link strength 712) appear for the first time on the co-occurrence map and while both ‘tourism’ and ‘hospitality” are connected to keywords with greater occurrence, they are not connected to “trust” or any of the IT keywords (**Figure 11.**).

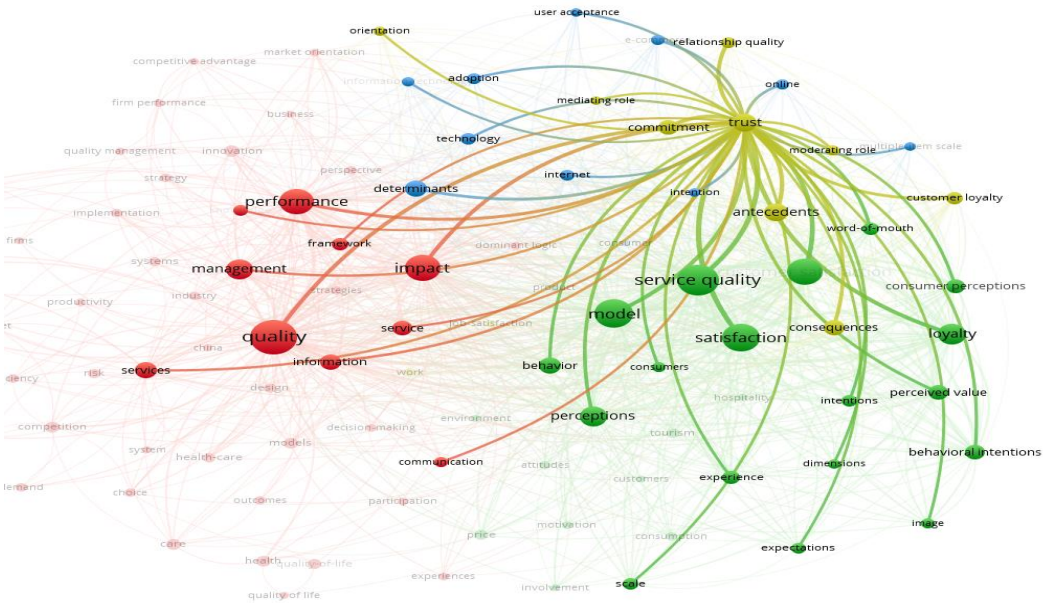
Figure 11. - Co-occurrence Map of Service Quality Keywords of the 10' - Tourism and Hospitality



(Source: VOSviewer)

‘Trust’ (occurrence 801, total link strength 4,350) continues to have a growing significance and sows a tight relationship with IT related keywords (**Figure 12.**).

Figure 12. - Co-occurrence Map of Service Quality Keywords of the '10 - Trust



(Source: VOSviewer)

‘Internet’ (occurrence 258, total link strength 1,161) became less interconnected, as from the 2010s the keyword ‘technology’ gained more attention.

In the 2010s, research on SQ expanded beyond traditional face-to-face interactions, thanks to technological advancements and social networks (Chung et al., 2020). Service providers embraced digital services and marketing channels to better cater to customers' needs (Calantone et al., 2018; Perrey and Spillecke, 2011). Customers increasingly sought efficient and convenient online services alongside offline options (Escobar, 2016).

Chatbots are a technology-based service concept that relies on a good customer-provider relationship for perceived credibility (Edwards et al., 2014; Yuan et al., 2016). To be perceived as credible, chatbots must accurately identify and address customer problems (Clokie and Fourie, 2016). Information quality is important for positive customer attitudes in both traditional and online service encounters (Jaiswal et al., 2010). However, the introduction of these technologies raises concerns about safety and ethical behaviour in e-commerce (Limbu et al., 2011). The human factor is one of the most important influences on consumer perception, which can be both developed and "switched off" (by developing information technologies). (Réthi és Kása, 2014)

Stromback (2013) views the service encounter as a service drama involving service personnel, customers, and the service space. The emergence of chatbots is altering this dynamic.

Due to the nature of Internet services, protecting customers' privacy and security is a more important factor than before, compared with other telecommunication services (Thaichon et al., 2014). Consumer satisfaction is significantly impacted by Internet SQ and attitudes towards online purchases (Zarei et al., 2019). The dimensions of SQ for online services have been redefined, focusing on measurement and operationalization in IT (Carlson and O’Cass, 2011; Ganguli and Roy, 2010). However, it does not matter how good the technological service is if the in-person service does not reach the level and vice versa. The sequence of service encounters also matter because "in-person service quality perception has a much stronger effect than e-service quality on customer metrics" (Wang et al., 2016). Perceived SQ is influenced by various reference points and impacts overall customer satisfaction and perceived value (Strombeck and Shu, 2014). Identifying service quality dimensions in hybrid contexts is crucial for enhancing customer satisfaction, loyalty, and commitment (Ganguli and Roy, 2010; Hetesi, 2017).

In the late 2010s, the focus shifted to COVID-19 and its impact on the use of robots in various industries such as hotels, retail stores, and airports (Grewal et al., 2018; Palvia and Vemuri, 2016). Despite rapid development, the application of robots in service is still in its early stages (Lechevalier et al., 2014).

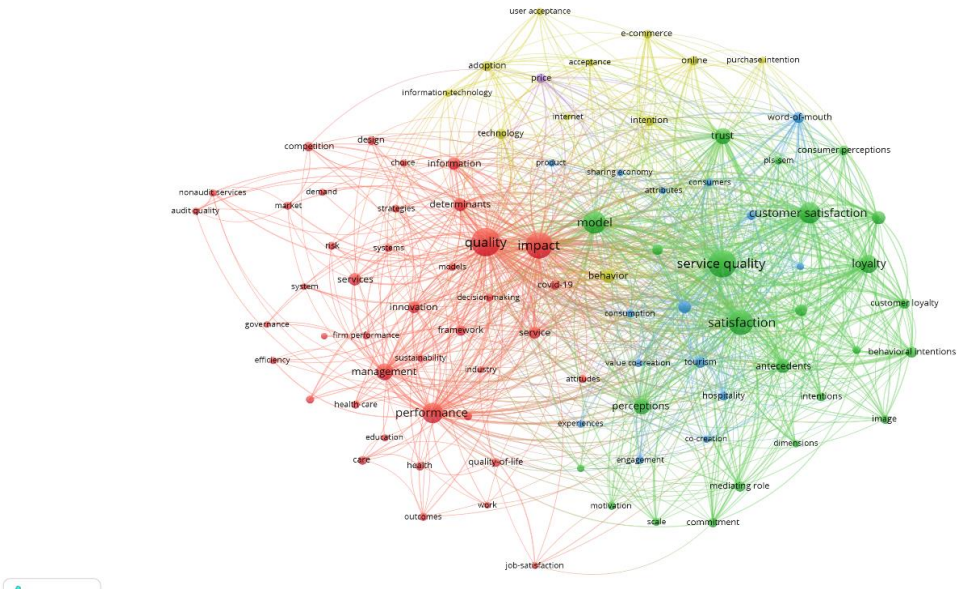
Artificial intelligence (A.I.) technology emerged as a significant topic in SQ research by the end of the decade. The use of A.I. service agents aim to enhance efficiency and personalization, thereby improving customers' perception of SQ (Huang and Rust, 2018). However, consumer research yields mixed findings, with A.I. usefulness being positive in credence services but negative in experience services where human employees are preferred (Elliott, 2022; Wirtz et al., 2018).

SQ and scale development research focused on high human touch and low-tech, as well as low human touch and high-tech paradigms (Verhagen et al., 2014). Different combinations of SQ dimensions have been explored, with responsiveness being a key dimension for both human and technology-based service agents (Brady and Cronin, 2001; Mittal and Lassar, 1996; Ladhari, 2010). However, security and privacy dimensions are more relevant for technology-based service agents (Huang et al., 2015; Lin and Hsieh, 2011).

2.1.2.6.SQ now

SQ research produced from 2020 – 2023 grew to 7,887 research, in the field just over these 2 years (and early availability). With 100 chosen as threshold, and excluding general terms, such as "study," "US," and "framework", 92 items remained.

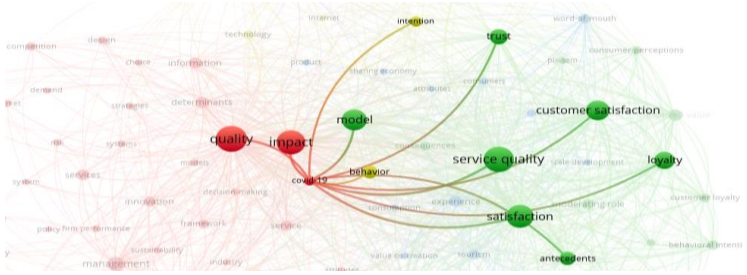
Figure 13. - Co-occurrence Map of Service Quality Keywords After 2020



(Source: VOSviewer)

Keywords such as "quality", "service quality", "model" or "satisfaction" of course remained the central points (**Figure 13.**). "Tourism" and "hospitality" one again appeared on the map, but the most recognisable change is the keyword "covid-19" (**Figure 14.**).

Figure 14. - Co-occurrence Map of Service Quality Keywords After 2020 - Covid 19

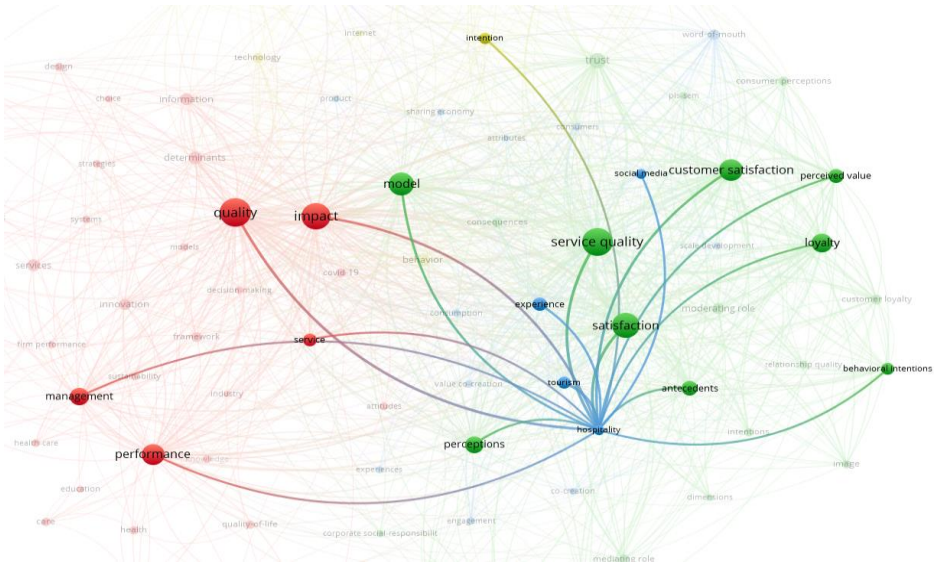


(Source: VOSviewer)

"Covid-19" appears in connection with "behaviour", "intention", "trust" and "loyalty", which seems to be the main research focus when it comes to the pandemic (**Figure 14.**).

"Hospitality" research regarding SQ became more connected throughout the map. (**Figure 15.**).

Figure 15. - Co-occurrence Map of Service Quality Keywords After 2020 - Hospitality



(Source: VOSviewer)

In the early 2020s, research primarily focused on the COVID-19 pandemic, technological advancements in AI, big data analytics, and robotics, and their impact on SQ. The pandemic has led to an increased use of robots in the service sector, with robots gaining trust and recognition as life-saving entities (Chiu et al., 2014; Lew, 2022; Matthews, 2020; O'Neill, 2020).

Although service providers and consumers adopted artificial intelligence service agents (AISA) for service, measurement of AISA-SQ only recently gained popularity (Noor et al., 2022). Noor et al., (2022) refines and validates a multidimensional AISAQUAL scale that provides a tool to examine the relationship between AISA-SQ and satisfaction, perceived value, and loyalty popularity (Noor et al., 2022). If AISA is capable of higher efficiency and personalization of service, it will be accepted (Huang and Rust, 2021).

In the service context like hotel service, although an AI provided service can be related to customer satisfaction, when AISA is combined with human employees, AI has a negative effect on the overall satisfaction (Noor et al., 2022; Prentice et al., 2020). Noor, Rao Hill and Troshani, (2022) there is a gap between customers' AISA service needs and expectations.

Conclusion on the History of Service Quality Research

SQ and SQ measurement has expanded throughout the past five decades, with definitions growing from zero defect (Crosby, 1979) to compliance with guest expectations and reaching the customers' perception of SQ (Grönroos, 1984; Berry et al., 1988; Parasuraman et al., 1988; Zeithaml et al., 1993; Anderson et al., 1994; Oliver, 1997).

Suppose quality is conformance to customer specifications (Parasuraman et al.,1988) because it will be judged by the consumer (Grönroos, 1984) regardless if it is the quality of a product or a service. In that case, the guest will decide if their experiences were pleasurable (Oliver, 1997) which means that only tailor-made services can provide high level perceived SQ.

As customers will judge the services based on the sum of all service encounter experiences (Bolton and Drew, 1991; Boulding et al., 1993) and the performance of the company is determined by the customer (Zeithaml et al., 1993), each costumers' needs have to be fulfilled. Satisfaction is based on the consumer's perceptions of service attributes, therefore, depending on the individual guest (Boshoff and Gray, 2004). Every consumer will express different levels of satisfaction even when faced with the same service (Ueltschy et al., 2007). Therefore, the service provided must match the guest's needs and perceptions. The criteria used to evaluate SQ differ even among customer groups and circumstances (Ladhari, 2008) so companies have to have a strategy to tailor their service. Companies must identify the needs and preferences of different customers and provide creative responses (Gilmore and Pine, 2002). Consumers' perception of technology-related SQ is also important as IT-SQ is essential to 21st-century service.

It may be that "in-person service quality perception has a much stronger effect than e-service quality on customer metrics" (Strombeck and Shu, 2014; Wang et al., 2016) but nowadays, all services include multiple stages of service (Strombeck and Shu, 2014) and can consist of separate phases of; technology only, hybrid and human encounters. If AISA is capable of higher efficiency and personalization of service, it will be accepted (Huang and Rust, 2021); therefore, the technological gadgets must be useful for the guests. The advancements in technology, including the rise of digital services and the use of chatbots and AI-based service agents, have further shaped the understanding of SQ. The COVID-19 pandemic has also had an impact on service delivery and the adoption of robotic and AI-based solutions. As research continues, there is a need to explore the multidimensional aspects of SQ in different service settings and industries, considering customer perceptions, expectations, and evolving technologies.

Based on the history of service quality research and definitions, it can be stated that service quality depends on the consumers' evaluation and perception of the experience. This will be a complex process as a service experience can consist of different stages, and can be separated into human, technological and hybrid encounters. As the experience and perception is unique to all guest, in this paper high level SQ will be viewed as a tailor-made service.

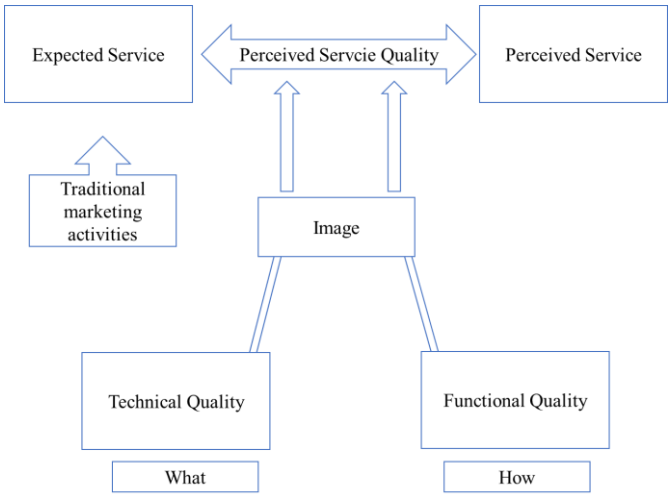
2.1.3. Service Quality Models

After defining service quality (SQ), the next step is to evaluate how to measure it. (1978), Grönroos (1982), Lehtinen and Lethinen (1982), and Parasuraman et al. (1985) have all emphasized the need for measuring SQ from different perspectives. This includes assessing both the actual service or products received by the customer and the way it is delivered. This approach recognizes that consumers are not only concerned with the outcome of the service but also value the process itself (Grönroos, 1982).

An early conceptualization of the SQ model was created by Grönroos (1984, 1982) (**Figure 16.**). His approach: if a firm wants to be successful, the business operator needs to understand the customers' perception of the service; therefore, it is essential to match the perceived

quality with the expected quality and keep this distance as small as possible to reach customers' satisfaction. He measured perceived SQ based on qualitative methods.

Figure 16. - Grönroos Service Quality Model



(Source: Grönroos, 1982, Own Edit)

Three SQ components were identified here:

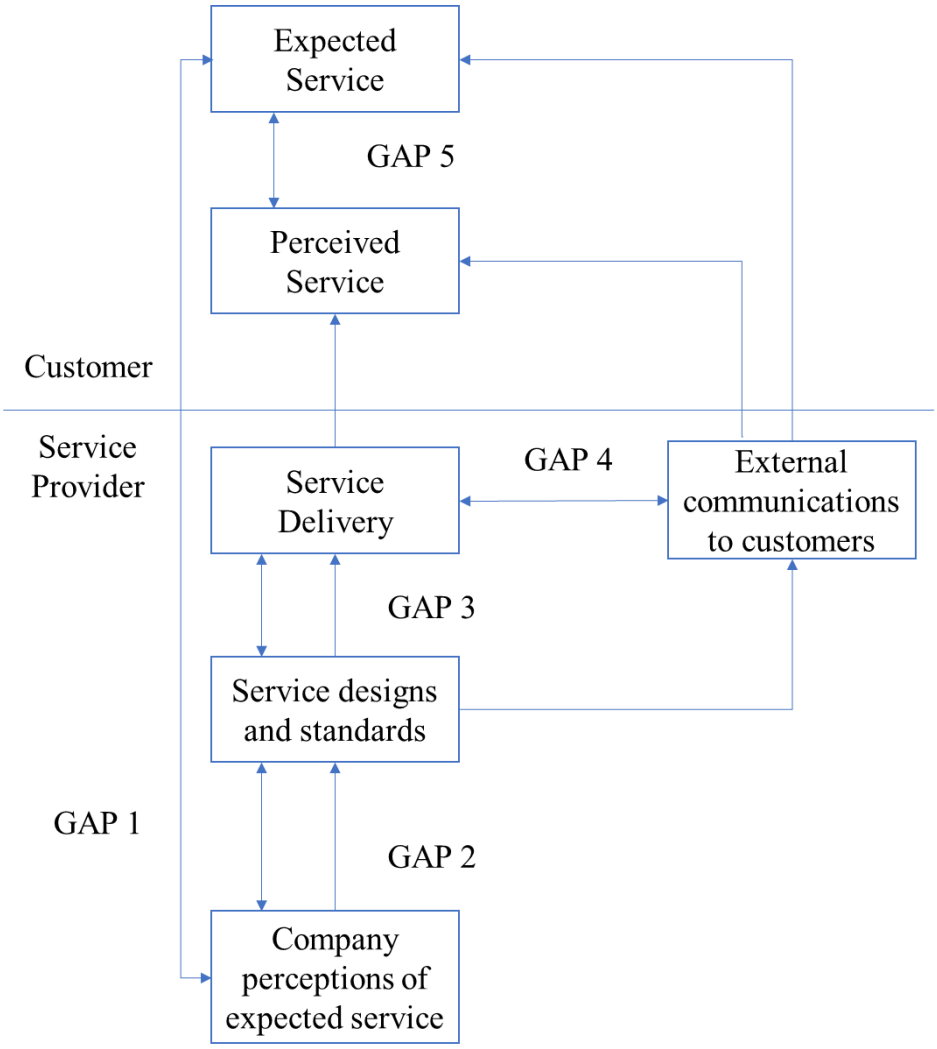
- technical quality,
- functional quality, and
- image.

The first factor, technical quality, is what customers receive from interaction with a service firm. The second component, functional quality, is how the consumer receives the technical outcome of the service - way this process will affect the customers' evaluation of SQ. The third SQ factor in this model is the corporate image: the customers' view of the corporation or brand. Their view of the firm influences the customers' expectations, resulting from how customers perceive firm services. Grönroos (1982) model is based on disconfirmation from product quality literature that puts perceived service against expected service.

Following the idea of disconfirmation, Parasuraman et al., (1985) developed the GAP SQ model (**Figure 17.**). The model is based on the differences between expectation and performance dimensions. It shows the critical insights gained from executive and focus group interviews about the SQ concept. The model differentiates the marketers' side (from GAP 1 to 4) and the costumers' side (GAP 5).

- GAP 1: Customer expectation-management perceptions gap, The Knowledge Gap.
- GAP 2: Management perception-service quality specifications gap, The Policy Gap.
- GAP 3: Service quality specifications-service delivery gap, The Delivery Gap.
- GAP 4: Service delivery-external communications gap, The Communications Gap.
- GAP 5: Expected service-perceived service gap, The Service Quality Gap.

Figure 17. - GAP model



(Source: Parasuraman et al., 1985, Own Edit)

After the gap modelling, SQ determinants were identified. When interpreting the quality, the consumers use these determinants that fall into ten key categories labelled "SQ determinants". This research was later refined, including the SERVQUAL model created in 1988 (Parasuraman et al., 1988). Consequently, the original ten SQ dimensions were merged into five dimensions: reliability, responsiveness, tangibles, assurance (communication, competence, credibility, courtesy, and security), and empathy (understanding and knowing the customer).

Parasuraman et al. (1991) revised the SERVQUAL model by replacing "should" with "would" and reducing the total number of items to 21. They identified four gaps in their research, expanding the SQ model for example E-S-QUAL model (Parasuraman, 2000). They were not the only ones who had built on the SERVQUAL model. The model emphasizes communication, control processes, and employee management. Other researchers, such as Cronin and Taylor (1992), built upon the SERVQUAL model, creating variations like the SERVPERF model and inspiring performance-based measures in SQ research. Although the basic models are used in quality management, since the 1990s there has been increasing

criticism of the statistical reliability of these methods. For example, one of the main weaknesses of the SERVQUAL gap model is that the variance in component scores limits the ability to estimate the SERVQUAL value (Veres, 2008)

The author collected some of the past decades' SQ models and highlighted their most useful aspects in correlation to present research which can in detail be found in **Appendix 1. – Appendix 4.**

Pre-2000s, three main models were commonly used to measure SQ **(Appendix 1.**): Grönrooos SQ model, Parasuraman et al. GAP model, and the SERVQUAL model. These models focused on dimensions and factors of service quality, including performance evaluation, customer expectations, and perceived experience. In the hospitality industry, SQ measurement adapted in the 1990s, with specific models for hotels detailed in a separate table while differentiating physical attributes and employee involvement appeared in various SQ models. Therefore, while creating a SQ measurement model, separating the technical and functional elements of SQ will be key. Considering the effects of the tangible aspects of service and how it is delivered will need to get the focus. Looking at SQ in regard to phases, (Oh, 1999) should also be considered for a more detailed evaluation.

Post-2000 models (**Appendix 2.**) primarily address technology-related concerns, but some still focus on non-technological aspects of SQ. These models emphasize intangible attributes and integrate multiple models from the 80s and 90s. Additionally, there are examples of various focal points in SQ, such as internal customer satisfaction (Frost and Kumar, 2000), underperformers (Soteriou and Stavrinides, 2000), and the involvement of both management and employees in the GAP model (Luk and Layton, 2002). The takeaway from these models is that they try to find a way to measure the intangibles, consider the employees and combine multiple models to create a measurement system.

In **Appendix 3**. some of the SQ measurement models that were modified for hospitality or hotel SQ measures in the past decades are presented. These models used the SERVQUAL model in a hotel setting, however some (Akan, 1995; Wong Ooi Mei et al., 1999) created additional dimensions. Employee behaviour, the hotel's physical appearance and product quality were added which are key elements of the hotel industry.

Post-2000, many SQ models emphasized technology (**Appendix 4.**), with the initial models by Berkley and Gupta (1994) and Dabholkar (1996) specifically addressing internet technology. These models recognized the need for separate measurement systems to account for the distinct online and in-person experiences. The satisfaction of customers using websites or mobile technology-supported channels relies on effective design and usability. Technological advancements will drive new service quality models, such as leveraging big data. (Somosi and Kolos, 2017)

Conclusion of Service Quality Models

Measurement models for perceived SQ have been developed, primarily from the consumers' perspective (Brown et al., 1993; Cronin and Taylor, 1992; Parasuraman et al., 1991, 1988), with personalization appearing in the dimensions of the measurement system. The models addressing hotels or hospitality service are more complex but still inadequate to measure hotel

service as a complex system of multiple service stages. Based on the examples presented above, the approach to create a good measurement model will;

- rely on multiple previous research,
- use items that can be measured on the Likert scale,
- consider the technical and functional aspects of service,
- differentiate phases of the service,
- tailored to the hospitality industry,
- consider both the technological and human aspects of the overall service.

Conclusion of Service Quality

The first chapter (2.1.) introduced service and service quality definitions and detailed how the research focus had changed throughout the past decades. The research also concluded its own stance on these definitions.

In this research, service in hospitality is considered as an interactive process that can be personalized and where the service provider uses specialized competencies and resources so that with the participation of the guest, they are able to create value, which can either be the final product or an addition to a physical good.

Quality is conformance to customer specifications and can be only judged by the consumer. As the guest will decide based on their perceptions, quality service will be tailor-made. This means that when looking for a measurement system to measure the Hungarian hotel SQ, theoretically, the tailor-made SQ should be measured as that is how the guest's needs and perceptions are matched.

After the introduction of SQ models, key elements were highlighted to consider, when creating a measurement system.

While creating an SQ measurement model, firstly separating the technical and functional elements will lay the foundation, followed by guest encounter phases which will be considered to give a more detailed result. The intangible aspects of service and employees both play a key role in SQ. In the 21st century, technological SQ cannot be omitted. Separating these aspects is key to establish a complex measurement system.

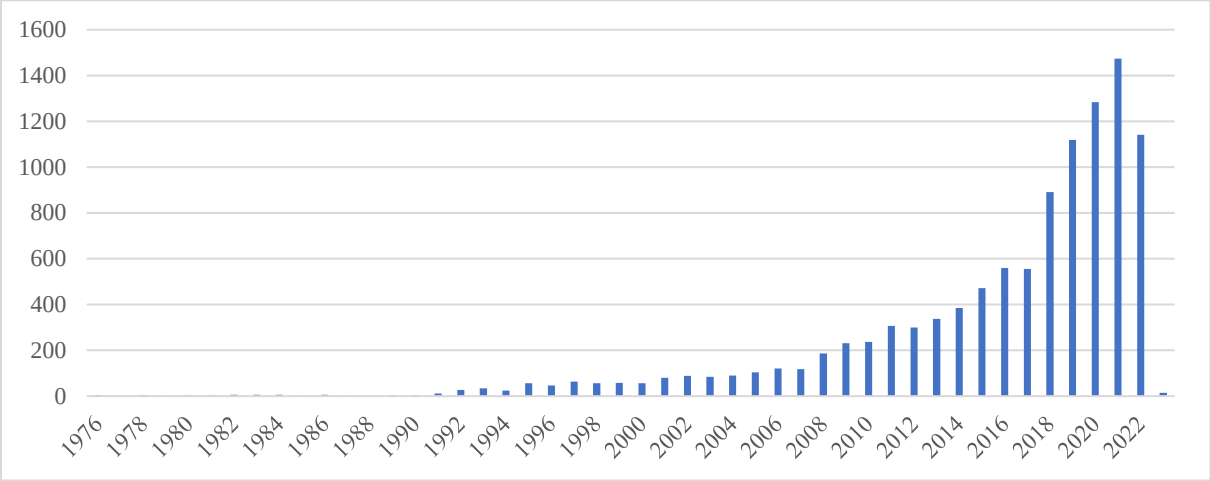
After introducing and defining service and service quality, the next chapter will concentrate on the different types of tailor-made services.

2.2. Tailor Made Service

Tailor-made service is not luxury of the few, (Szabó and Hámori, 2006) and it is more important than ever. More than 106,953 articles can be found in the database in service research where the authors focused on tailor made, personalized, customized, or co-created services. (ALL= ((((tailor) AND (made)) OR (personal*) OR (co-creation) OR (customi*)) AND (service))) Refining the dataset to Business Economics (8,186) and Social Science

(3,069) we note that the topic had already appeared in the 1970s, but it only become significant after the 1990s. The topic grew exponentially from the 2000s (**Figure 20.**).

Figure 18. - Publications in the Topic of Tailor-made, Personalized and Customized Service

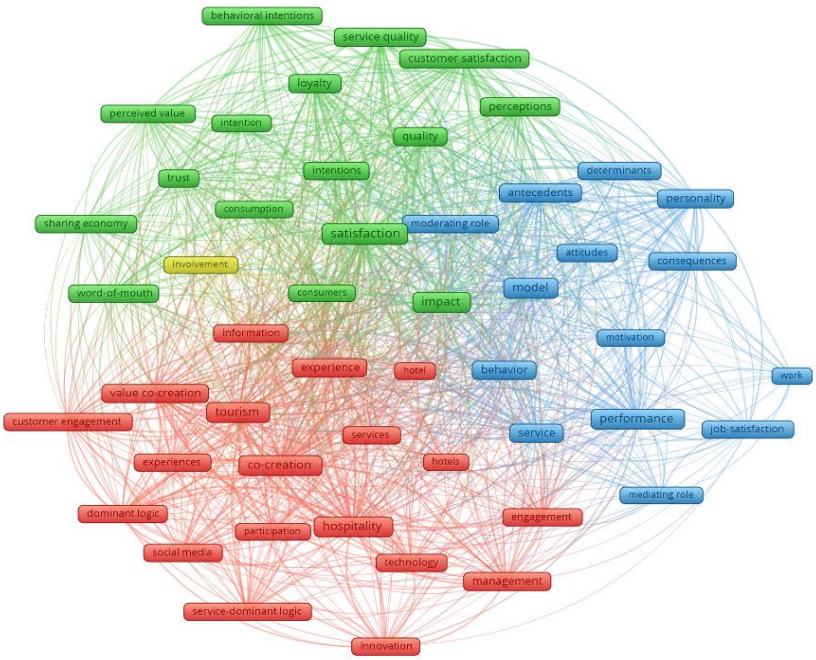


(Source: Own Edit)

Out of these papers 1,881 were also written in the theme of hotel or hospitality research. As with a bigger dataset there are more possible keywords, in this case a higher (than 2) threshold had to be selected. With 40 chosen as the threshold, 50 keywords remained.

Based on keyword co-occurrence analyses (**Figure 21.**), the research focused on 3 main topics, value co- creation with guests (red), the mediating role and performance of employees (blue), and the effect on sharing, loyalty and return intentions.

Figure 19. - Co-occurrence Analyses of Service Quality in Hospitality Research



(Source: VOSviewer)

In the following chapter, the dissertation will introduce the definitions of tailor-made services, personalization, customization, and co-creation focusing on their role in hospitality, including the differences and similarities between these definitions.

2.2.1. Personalization

Perfect personalization is the polar opposite of perfect standardization (Szabó and Hámori, 2006) therefore its distribution and development also has to be individualized. Personalization can be defined in various ways, but one of the most basic concepts is providing a "good service" (Surprenant and Solomon, 1987b). Researchers used terms like individualization (Totz and Riemer, 2001), segmentation (Smith, 1956), targeting, profiling, and one-to-one marketing (Peppers and Rogers, 1997). Smith (1956) defined market segmentation as viewing a heterogeneous market as several smaller homogeneous markets based on preferences, attributes, and desires while Peppers and Rogers (1997), said that one-to-one marketing is personalized marketing, where an enterprise knows its customers and treats them differently. Therefore, the roots of personalization are in relationship marketing and management (Crosby et al., 1990; Dwyer et al., 1987). Personalization can be anything from personal encounters where the service provider develops a deeper relationship with the customer (Kokko and Moilanen, 1997; Surprenant and Solomon, 1987) (to the above-mentioned personalized marketing. Personalization is more common in the case of services then products, (Szabó and Hámori, 2006). Personalization can use technology and customer information to create tailor-made advertising or open communication between businesses and individual customers (Szabó and Hámori, 2006). Both in human-to-human and human-technology interactions, the customer is greeted by name, and the service provider remembers what they purchased or browsed and suggests products accordingly (Lin et al., 2010). Service providers can use either previously provided information or information given in real time to fit the offers or advertisements according to the customers need (Vesanen, 2007)

There are two main ways of defining personalization.

One, when it is something done by the company (Allen et al., 2001; Cöner, 2003; Imhoff et al., 2001) while the second is when it is initiated by the customer (Roberts, 2003; Wind and Rangaswamy, 2001). In both cases the goal is to create a product or service that will fit the expectation of the guest better (Berry et al., 1988; Crosby, 1979; Grönroos, 1984; Parasuraman et al., 1988), lowers the cost or has some benefits, (Peppers et al., 1999) and creates an individual experience (Allen et al., 2001).

To meet diverse customer expectations, service providers need to differentiate their offerings. Personalization refers to any behaviour during the interaction that aims to contribute to the customer's individualization (Surprenant and Solomon, 1987).

Surprenant and Solomon (1987) propose two kinds of personalization in the service market - option personalization and process personalization.

- Option personalization (emphasizes the outcomes of service):

Firms can offer customers a range of service options to choose from, allowing for customization (Anderson et al., 1997; Bettencourt and Gwinner, 1996; Peppers et al., 1999).

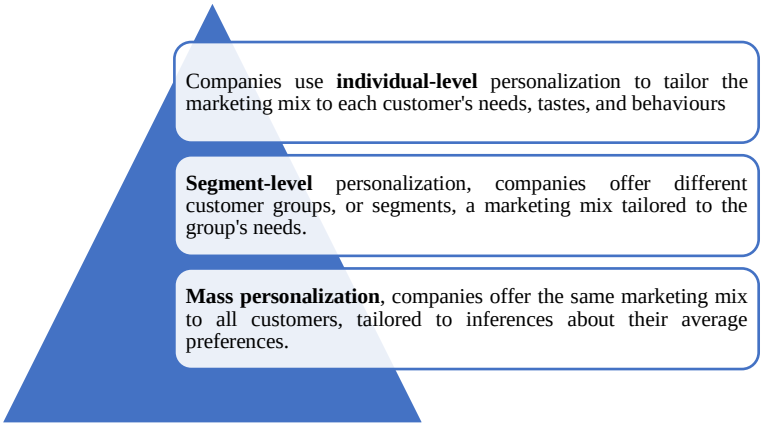
- Process personalization (process personalization focuses on service procedures):

It can be divided into programmed personalization, and customized personalization.

- Programmed personalization refers to the incorporation of personal elements into standardized actions (Surprenant and Solomon, 1987a). (Small talk and addressing customers by their name.)
- Customized personalization aims to provide customers with tailored service offerings (Surprenant and Solomon, 1987).

There are three main levels of personalization according to Zhang and Wedel, (2009); mass, segment, and individual-level personalization.

Figure 20. - Levels of Personalization



(Source: Zhang and Wedel, 2009)

Tam and Ho (2006) also differentiates three types of personalization in a technological setting.

- User-driven personalization refers to when users proactively indicate their desired web layout and content based on their interests and preferences (Bauer et al., 2005).
- Transaction-driven personalization, involves online merchants generating personalized layouts and content based on users' previous transactions (Novak et al., 2000).
- Context-driven personalization utilizes adaptive mechanisms to personalize content and layout in real-time, considering the context and inferred user objectives (Balabanovic and Shoham, 1997).

Consumers will compare their expectations with the received service and as in the 80s the concept that quality service can be achieved by satisfying the needs of the individual customer (Berry et al., 1988; Crosby, 1979; Grönroos, 1984; Parasuraman et al., 1988), researchers tried to define personalization since. Collection of personalization definitions are in **Appendix 5**. The key is, that personalization should not be done out of trend because personalization also has to be personalized. (Szabó and Hámori, 2006)

Conclusion of Personalization

Personalization in general has high information demand regardless of it being initiated by the company or the consumer. Personalization could be the part of technology-based service, personal encounter, or marketing. The common dominator is that personalization will use information to provide the right service or product to the right person. Adaptation is often initiated by companies, varying in the scope of personalization. Definitions of personalization have evolved from tailored behaviour in service to incorporating technology. Companies utilize consumer information to create customized services or products.

Personalization is resource-intensive and is initiated by the company.

2.2.2. Customization, Consumerization

Consumer desire for customized products led to market segmentation (Smith, 1956); customers with similar preferences were put into the same market segment, so companies could offer a customized product based on the average need of the segment.

From this, "two distinct strategies emerged:

(1) being a cost-efficient mass producer with limited or no variety, or

(2) offering highly customized and often expensive products resulting from a craftsmanship-like approach (Kaplan and Haenlein, 2006).

Davis (1987) coined the term "mass customization" to describe the production of customized products on a large scale. Traditional mass customization involves company-customer interaction during the design phase, combining cost leadership and differentiation strategies (Kaplan and Haenlein, 2006). With the advent of digitalization, e-mass customization has emerged, leveraging technologies like Web 2.0 to enable customer involvement in product design and configuration (Kotler, 1989). E-mass customization refers to the creation of customized products during the fabrication/assembly stage, with production costs and prices comparable to mass-produced products (Kaplan and Haenlein, 2006). **Appendix 6**. provides a collection of mass customization definitions.

While personalization fits a specific customer and tailors the product or service to that specific customer, a key element in mass – customization is that although, similarly, personalization is based on individual specifications and one – of – a - kind results, it has a manufacturing aspect with a high emphasis on scalability and costs.

Kotler (1989) and others highlight customization as a response to evolving customer demands for variety, features, and quality. Customization benefits customers by allowing them to adapt the marketing mix to their preferences (2008), satisfying multiple needs and enhancing the consumer experience (Fiore et al., 2004; Shostack, 1987; Simonson, 2005; Wang et al., 2010). This leads to increased perceived SQ, customer satisfaction, trust, and loyalty (Coelho and Henseler, 2012). Delighting customers through individualized attention and tailored solutions further contributes to the positive impact of customization (Wang et al., 2010). For detailed definitions of customization, refer to **Appendix 7.**

The difference from personalization is that customization occurs within predetermined boundaries; customers are presented with a specific set of options, and they can adjust to their preferences (Valenzuela et al., 2009) but be a result of employees' proactive contributions, such as offering helpful information and suggestions (Keh et al., 2013). The number of options determines the flexibility customers have to tailor their own marketing mix (Bleier et al., 2018; Valenzuela et al., 2009). Some examples of service customization in hospitality include allowing guests to have flexible check-in/out times, personalizing room decor, or having childcare options available. Customized options adapt the hotel's service offering to each individual guest's preferences (van Riel et al., 2001).

Implementing customization in a firm can be challenging due to operational limitations. For instance, flexible check-in/out policies may create labour scheduling issues (Victorino et al., 2005). Meeting customer needs involves designing customized attributes and unique service delivery methods. Quality entails a balance between standardization and customization in the service design and delivery process (Anderson et al., 1997; Gyurácz-Németh, 2014). Customization incurs higher costs, longer waiting times, and greater customer involvement compared to standardization, which are trade-offs for a better-fitting product (Wang et al., 2010).

In the context of e-service, personalization and customization play a significant role in influencing customers' behavioural intention, specifically their intention to return (Zo, 2003). Technological advancements enable firms to identify customer needs and tailor services accordingly (Zo, 2003). The customization of service is not solely dependent on the skills of employees but also on the effective utilization of technological tools (Bowen, 1997).

Conclusion of Customization

By leveraging guest history systems, hotels can provide customized services based on specific information, allowing customers to select from provided offers or receive tailored information based on their needs. Customization is more likely to be initiated by the customer, focusing on individual needs, while personalization utilizes customer information to offer services based on preferences.

2.2.3. Personalization vs. Customization

Researchers have yet to reach a consensus on the personalisation and customisation concept (Wind and Rangaswamy, 2001). According to some researchers, the concepts are different for instance, (Arora et al., 2008; Gilmore and Pine, 1997; Kumar and Stecke, 2007; Montgomery and Smith, 2008), while some use the two terms interchangeably (Miceli et al., 2007; Peppers and Rogers, 1997). Based on Peppers and Rogers (1997), personalisation is customising some feature of a product or service so that the customer enjoys more convenience, lower cost or some other benefit. Their definition washes together the two constructs, while Hanson (1999) and Imhofe et al., (2001) said that customisation is part of the personalisation concept.

Totz and Riemer (2001) said that personalisation could be initiated by the customer or by the firm, while Allen (2001), and Valenzuela et al. (2009), along with others, said that customisation is customer initiated.

Personalisation is a process where a system's functionality, content information, interface, or uniqueness increases, making it more relevant to the individual (Chellappa and Sin, 2005). Personalisation refers to tailoring a product or experience to match the individual consumer based on personal information. Therefore, personalisation depends on vendors' ability to acquire and process consumer information and on consumers' willingness to share information and use personalisation services. According to Arora et al. (2008), personalization refers to a firm's decision to tailor the marketing mix based on customer data, while customization occurs when customers actively specify elements of their marketing mix.

Personalisation in a technology-based environment, as described by Zo (2003), utilizes data mining techniques to uncover users' behavioural patterns, like the concept of process personalisation by Surprenant and Solomon (1987). In contrast, customisation allows users to modify a website's appearance, while personalisation involves delivering relevant content based on individual preferences. Personalised websites gather preference information implicitly through customer purchases or usage habits, as discussed by Ho (2006).

Bleier et al. (2018) compared customisation and personalisation opportunities. They differentiate customisation as something the consumer decides based on a predetermined marketing mix. Customisation is determined by consumer choices within a predetermined marketing mix, while personalisation is driven by the company's perception of a personalised marketing mix. This dissertation supports the differentiation of the concept that personalisation is the company's choice of the marketing mix for the consumer and customisation is when the consumer chooses from specific marketing mix elements.

Bleier et al. (2018) compared three pricing strategies: customised price (pay-what-you-want), name-your-own-price, and price personalisation (at a segment level). Customised price allows customers to pay any price they choose, while name-your-own-price requires customers to bid above a predetermined threshold. Price personalisation is commonly used in early-bird pricing and individual car insurance based on driving behavior.

Sunikka and Bragge (2012) also distinguished customization from personalization based on who initiated the process and the framework founded on user involvement. They say that when it is strictly in a web context, if the system initiates the tailoring, it will be personalization. However, when it comes to tangible products, it is all mass customizations.

Table 2. - Customization vs. Personalization

	Intangibles (web context, service)		**Tangibles (products)**
	Individual	Group	Individual and group
System initiated	One-to-one personalization	Mass personalization	Mass customization
User initiate	(Web) customization	Customization	

(Source: Sunikka and Bragge, 2012)

Conclusion of Personalization and Customization

Although definitions of customization and personalization overlap, this dissertation argues that the distinction between personalization and customization can also be made regarding tangible products.

For instance, in some restaurants, there is a set of options to choose from and with the customers' lead, a specific mix of ingredients will create a tangible product. While at the same time, a designer or tattoo artist can tailor a dress (or tattoo) with the individual customer in mind. Therefore, as many of the definitions pointed out, it is possible to distinguish if there is a set of options the customer can choose from, or if it will be the service provider who will use the information, they had gathered from the customer to create something fitting for that customer. Hence, while in the case of technology-based tailor-made functions, this dissertation agrees with Sunikka and Bragge (2012), tangible products or in-person encounters will build on Bleier et al. 2018's differentiation. Applying ethical theories to personalization and customization has led to conflicting conclusions. However, they are in line with Treiblmaier et al.,'s (2004) findings that customization is ethically less questionable than personalization, as it does not impose features on users but is entirely controlled by users. Customization allows website users to specify their own preferences explicitly (Nunes and Kambil, 2001) whereas in technology personalization, customers' needs and preferences and information are collected for user modelling (Sunikka and Bragge, 2012).

2.2.4. Co- Creation

Researchers have highlighted the significance of customer involvement in co-creating innovative services (Cooper and Edgett, 1996) and the shift towards more participative behaviour in tourism preferences (Campos et al., 2018). Customization and personalization play a crucial role in co-creating value (Zine et al., 2014), and firms can enhance the value of consumer-generated ideas by facilitating information exchange during co-creation (Kim and Slotegraaf, 2016). According to Zine et al. (2014), value creation occurs through customization, and a service execution plan allows for value co-creation through co-design, co-production, and co-delivery, leading to personalization. However, this conceptualization would mean that customization is a type of personalization. this would mean that while customising the service due to the active participation or both, customer and company personalization is reached, although the previous sub–chapter defined customization and personalization to be separate constructs.

In the concept of 'co-creation', both the company and customers actively participate in creating a unique service, with customers serving as co-creators (Vargo and Lusch, 2008). Consumer co-creation holds significant value, particularly in the process of new product development. Studies indicate that a higher level of dynamic interaction and personalization, or "co-creation," leads to more constructive product ideas (Kim and Slotegraaf, 2016). “Service is a labour-intensive activity, a process where the aim is to provide benefit for the customer to satisfy their needs by involving them in the service process itself." (Gyurácz-Németh, 2014, p. 31). In contrast to Lusch and Vargo (2006; Vargo et al., 2008; Vargo and Lusch, 2016), Grönroos (2011, 2008) argues that co-creation does not occur when customers actively participate in value creation. Instead, Grönroos (2011) suggests that co-creation happens when service providers have opportunities to co-create value with their customers, emphasizing the importance of background processes in service delivery. According to

Grönroos, value-in-use is solely created by the consumer, therefore excluding co-creation. Additional definitions of co-creation can be found in **Appendix 8.**

Campos et al. (2018) proved the importance of recognising active participation and interaction in co-creation experiences. The framework is built on the experience environment, or the experience scape, which integrates dimensions, such as physical aspects of the environment, social actors and participants, and organisational dynamics and features of service delivery. These dimensions will influence the way the tourist experiences the interaction. The on-site co-creation experience has the tourist at its centre; thus, the behaviours and psychological state of the customer will affect the outcome.

The co-creation process is a circular encounter, and this interaction is affected by many outside influences. Therefore, even the same guest with the same employee would not be able to create the same experience.

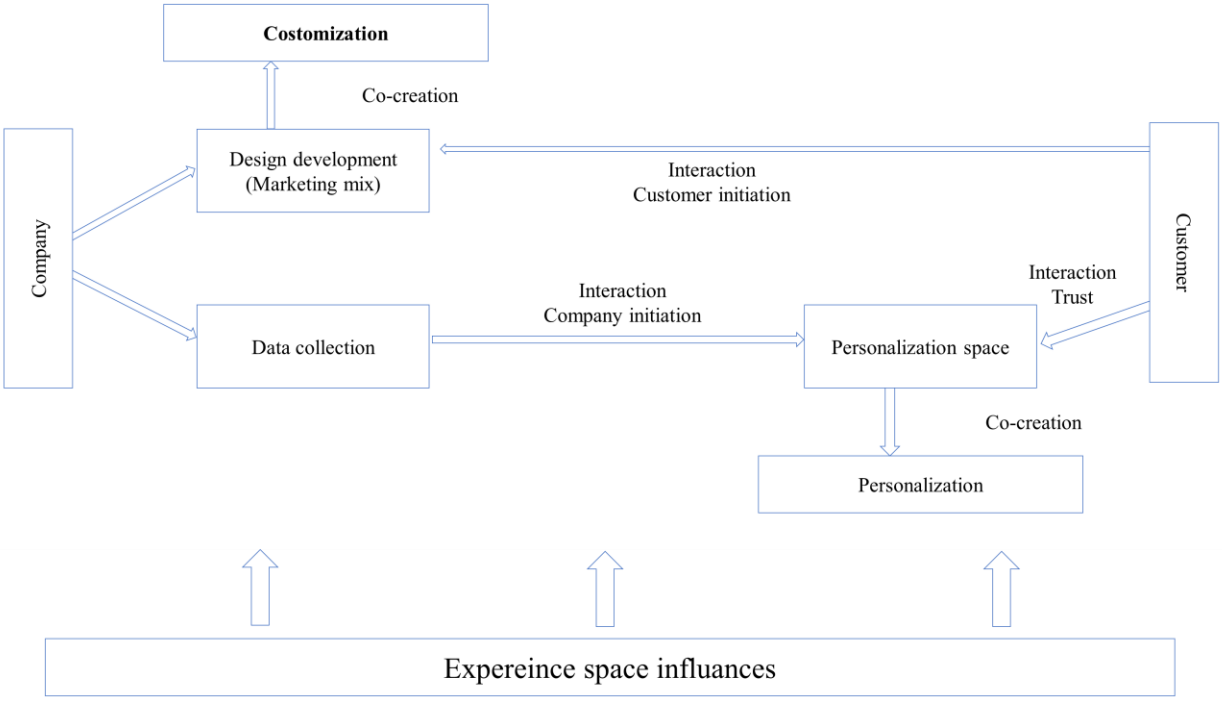
Conclusion of Co-creation

Co-creation is an essential part of creating tailor-made services and can be part of both the customization and the personalization process. Tailor-made services are impossible without co-creation. Although the author agrees with Grönroos (2011) that not the entire process can be co-created with the guest as there are many supportive functions and back-office phases that are needed to reach delivery, however the author argues that from the delivery process, co-creation (based on (Campos et al., 2018; Lusch and Vargo, 2006; Vargo and Lusch, 2016, 2008)) is not only possible but preferred.

Conclusion of Tailor-Made Service

Service companies often excel in identifying and segmenting customers but struggle to meet individual needs, opting for standardization due to cost considerations. However, this approach can lead to negative consumer attitudes that persist over time. It is crucial to recognize and bridge the communication gap between customer expectations and the service provided. (Réthi et al., 2014). The second chapter (**2.2.**) focused on tailor-made service and the different approaches to service individualization. In the case of personalization, the main initiator is the company. The company will collect data, (from a conversation though big data analysis) and will create the opportunity and space for personalization. The guest is important too in this process, as their trust and interaction are needed for the company to be able to offer an individualized service or product. Customization is also the tailoring of service, but here the hotel had already pre-determined variations of their offer. However, this is part of the back-office development process. Here the customer has a bigger role as they will have to choose from the presented options. Considering there are pre-determined options, the originality of co-creation is smaller compared to personalization, but, depending on the variety of the marketing mix, they can create their unique mix of offers (**Figure 23.**).

Figure 21. - Personalization and Customization Concept



(Source: Own Edit)

Further comparing the two (**Table 3.**), customization will need more investment prior to delivery, but will need less information about the individual guest than in the case of personalization.

Table 3. - Personalization vs. Customization Characteristics

	Customization	Personalization
Provider sphere investment	high	medium
Information collection	medium	high
Main initiator	customer	company
New value Co-creation	medium	high

(Source: Own Edit)

Co-creation will be part of both processes on different levels. In practice, customization is when a company prepares different options to choose from that they can offer to many customers, but personalization does not necessarily mean that it is not possible to have developed options in the provider spere. In this instance personalization will be when a company has many options to offer but will only offer a specific one to the customer that they predict would be most suitable for the individual.

When creating a measurement system both personalization and customization options must be considered, in personal, technical and hybrid situations as well.

3. Research Environment and Model Building

The first chapter introduced service and service quality (SQ) concepts and definitions to conceptualise why a tailor-made service is a quality service. Those services that can be personalised are interactive processes where the service provider uses specialised competencies and resources (such as data collection) so that with the participation of both guests and service providers, co-creation will be possible. Those services that can be customised use knowledge of the overall target group to create a proper marketing mix offer, and with the guest's cooperation, co-creates value.

In this section the research environment and the model building will be introduced.

3.1. The Hungarian Hotel Industry

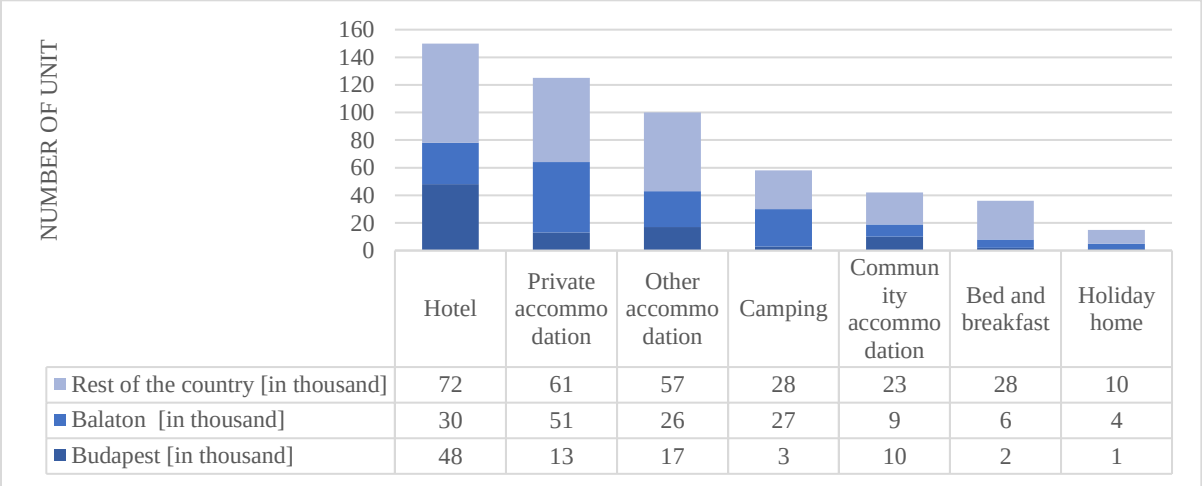
3.1.1. Tourism Sector in Hungary

Before the Covid - 19 epidemic, all segments of the tourism industry experienced steady and significant growth, but in 2020 this trend was broken, and the sector suffered a very significant decline (KSH,2022). Employment in the tourism sector decreased by 5.5% compared to the previous year. The share of tourism employment in the national economy dropped to 9.1%, 0.4 percentage points lower than in 2019. Gross fixed capital formation in tourism sectors amounted to 846 billion forints, a 10% decrease from 2019. Investment declined in various areas, particularly in restaurants (49%) and accommodation services (29%). In 2021, tourism showed signs of recovery, with increased investment in almost all sectors. The largest increase in fixed capital formation was seen in air passenger transport, followed by accommodation services and restaurants, which also experienced significant growth in investment compared to 2020. Total tourism expenditure reached 1,796 billion HUF, a 30% increase from the previous year but only 60% of the 2019 expenditure. The tourism sector contributed 5.6% to the gross output of the national economy, or 8.2% considering multiplier effects. Similarly, the share of tourism-related sectors in the overall value added was 5.6%, or 8.3% with the multiplier effect. However, domestic tourism consumption as a share of domestic supply decreased to 1.2% compared to 2.3% in 2019 (KSH, 2021).

3.1.2. Accommodation Services in Hungary

In 2022, there were 3,033 commercial accommodation units, 25 fewer than the previous year, while the number of available bed places slightly increased. (**Figure 24**.) Most tourist regions saw an increase in beds, except for Budapest-Central Danube Region, Northern Great Plain, and Southern Transdanubia. Balaton had the highest absolute increase, and the Central Transdanubia Region had the highest relative increase. Private and other accommodations represent over 40% of the total capacity, with hotels being the most significant commercial establishments. Lake Balaton and Budapest-Central Danube Region have the highest number of accommodation facilities.

Figure 22. - Number of Tourist Accommodation Places by Type of Accommodation, 31 July 2022

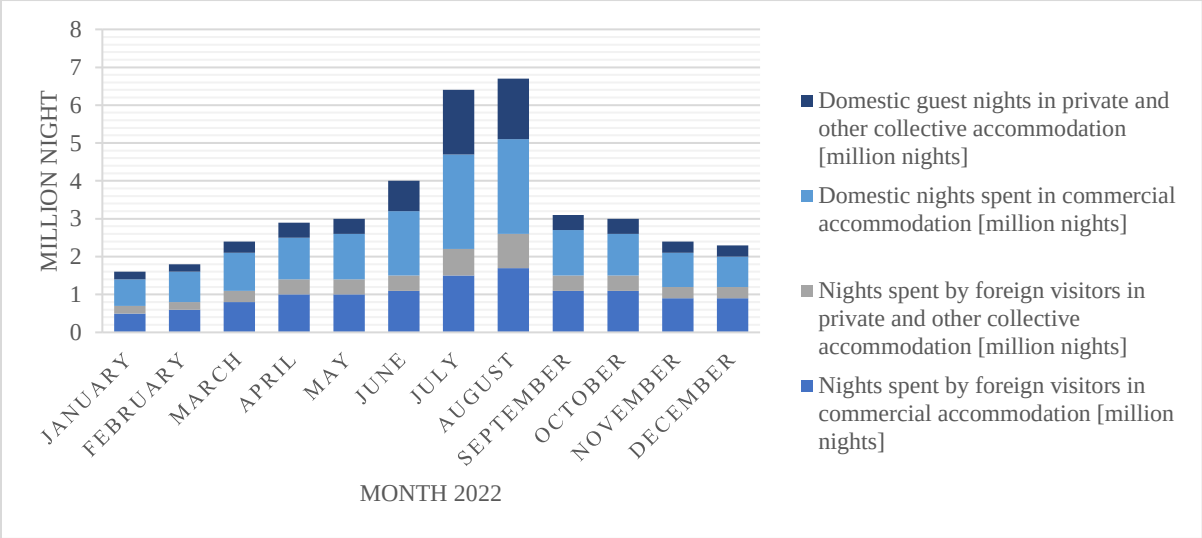


	Hotel	Private accommodation	Other accommodation	Camping	Community accommodation	Bed and breakfast	Holiday home
Rest of the country [in thousand]	72	61	57	28	23	28	10
Balaton [in thousand]	30	51	26	27	9	6	4
Budapest [in thousand]	48	13	17	3	10	2	1

(Source: KSH.hu, Own Edit)

In 2022, there were 15 million guests staying in tourist accommodations for nearly 40 million nights. Domestic guests accounted for 57% of the nights, and August was the busiest month.

Figure 23. - Number of Nights Spent Per-month in Tourist Accommodation, 2022



(Source: KSH.hu, Own Edit)

Overnight stays in commercial accommodations increased by 54% compared to 2021, driven by a recovery in foreign visitor arrivals post-pandemic. Commercial accommodations constituted 70% of total stays. All types of accommodations experienced a growth in turnover, with nearly 12 million nights spent in private and other collective accommodations, primarily by residents. Budapest attracted a higher proportion of foreign visitors. Around 35% of stays were in the Budapest-Central Danube Region, and an additional 21% were around Lake Balaton. (KSH, 2022)

According to the UNWTO Barometer (2022), international tourist arrivals in 2021, increased by around 4% but were still 72% below pre-pandemic levels. In the European Union, the

number of nights spent in commercial and non-business accommodation in 2022 was 1.5 times higher than the previous year but still 5.2% below 2019. Travel restrictions due to the pandemic significantly affected guest numbers in all Member States in 2020. Recovery began in the second half of 2021, and in 2022, domestic guest nights in the EU reached 2019 levels, while nights spent abroad were 12% lower. (UNWTO, 2022)

3.1.3. Hotel Service and Hospitality

„Hospitality" encompasses attraction, lodging, food service, leisure, and travel (Ottenbacher et al., 2009), adapting to consumer expectations and evolving over time. Its economic significance has grown significantly (Nagy, 2021). Hospitality also refers to how individuals interact with one another (Crick and Spencer, 2011). It involves meeting needs and striving for exceptional experiences (Sherman, 2007), ranging from engaging guests in conversation (Constanti and Gibbs, 2005; Guerrier and Adib, 2000) to ensuring their safety and comfort (King, 1995). Despite its complexity, hospitality offers opportunities to create memorable customer experiences (Pizam and Shani, 2009). The customer journey and personal service are crucial in the delivery process (Voss and Zomerdijk, 2007; Shostack, 1984). Hiring and training employees who excel in these demanding roles can be challenging, with high turnover rates (Chalkiti and Sigala, 2010; Formádi and Gyurácz-Németh, 2021; Kovács et al., 2021; Nagy, 2021; OGYOSZ, 2018; Ráti, 2022; Rodek and Fehérvári, 2022; Sectoral Policies Department, 2022; tourismhr.ca, 2022; turizmus.com, 2022), particularly post-COVID-19. Hospitality services require distinct approaches and differ from other service sectors (Crick and Spencer, 2011).

Hotel work specifically is complex and challenging as employees must display emotional, aesthetic, and other types of labour sustainably. Hotel employees interact with customers of different cultures. The difference in power distance (Hofstede and Hofstede, 2007) can affect the customers' quality perception, hence the need to be more multicultural (Crick and Spencer, 2011). SQ within the hospitality sector is hard to define, given its multidimensional nature (Pizam et al., 2016; Pizam and Shani, 2009). Guests serve as the ultimate judges of service quality, with individual stays and events both contributing to the hotel service scape (Kandampully and Hu, 2007). Guest satisfaction reflects how well a product or service meets their expectations (Pizam, 2008). Research has focused on aligning guest expectations with quality experiences and satisfaction (Crick and Spencer, 2011; Hu et al., 2009; Huang and Rust, 2021; Lai and Hitchcock, 2017; Saut and Bie, 2022), often relying on SERVQUAL. Regarding to the characteristics of hospitality and “good” hotel experience, there are many similarities to tailor-made service. Therefore, to correctly measure the hospitality aspect of a hotel's service quality, we must measure the level of tailor-made service. Service innovation influences hotel selection, especially in economy hotels and for leisure travellers, impacting amenities like childcare programs and in-room kitchenettes (Victorino et al., 2005).

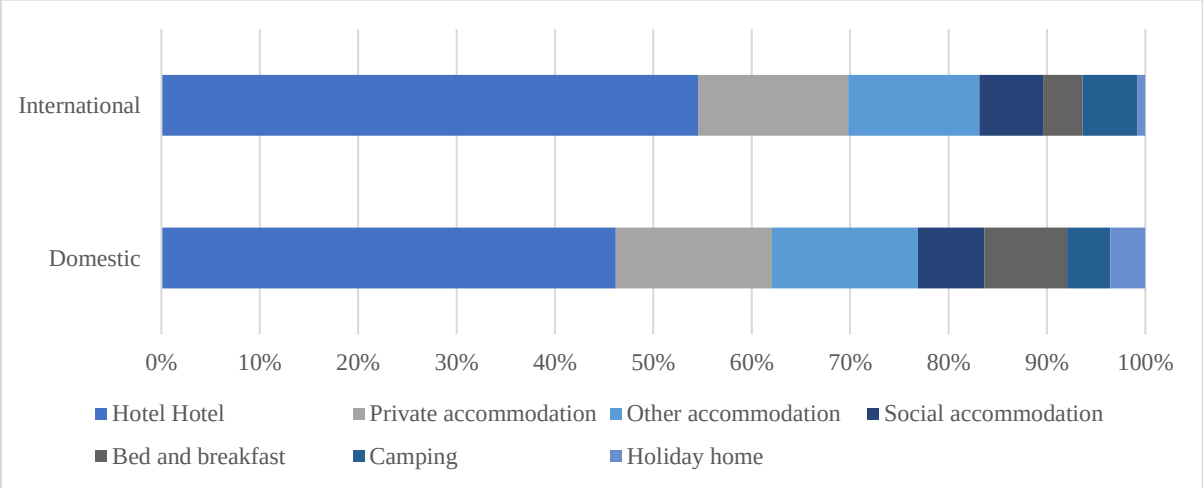
3.1.4. Hotels in Hungary

In Hungary, a hotel is an accommodation establishment that offers lodging, breakfast, and additional services. To be classified as a hotel, the establishment must have at least eleven utilized rooms, as defined by the 239/2009 (X. 20.) government regulation 14. ksh.hu, 2005; Wolters Kluwer Hungary kft., 2009).

By September 2022, national hotel nights increased by 77.4% compared to 2021 but decreased by 20.8% compared to 2019. In April 2022, 909 hotels were operating nationwide (903 by 2023 April) a significant decrease from April 2019 due to closures caused by the pandemic, seasonal hotels opening later than in previous years and differences in methodology as there is a shift from KSH to NTAK. (MSZESZ, 2022a)

In 2022, hotels remained the most popular choice for both domestic and foreign guests, (**Figure 26**.) accounting for most nights spent. Hotel guests increased by 75%, and nights spent in hotels rose by 66% compared to 2021.

Figure 24. - Distribution of Nights Spent in Tourist Accommodation by Type of Accommodation, 2022



(Source: KSH.hu Own Edit)

Over half of foreign guest nights were in hotels (KSH,2022).

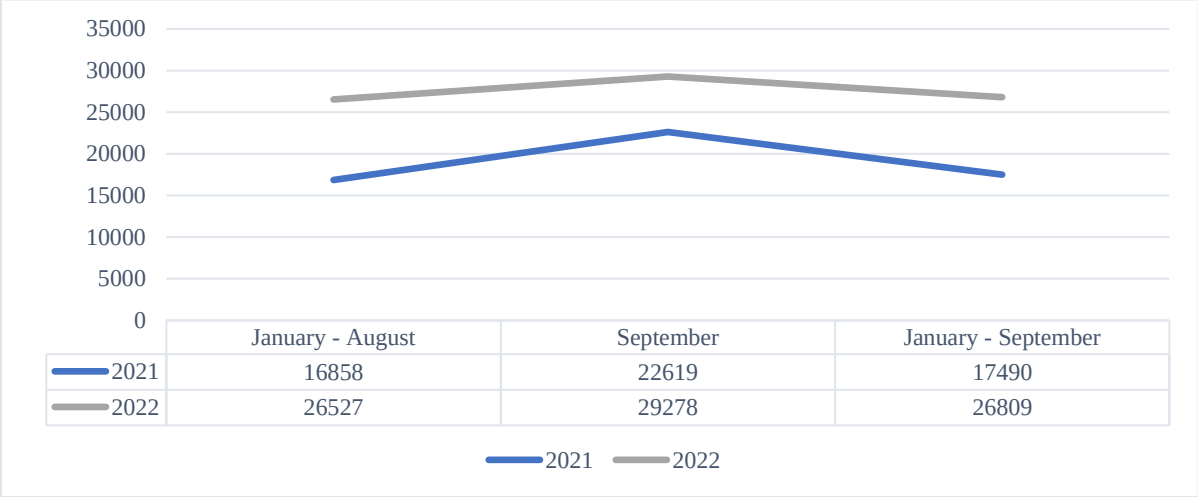
Different definitions of success exist, but it is crucial to identify various performance indicators (Nemeth et al., 2021). In the hospitality industry, the hotel sector employs indexes to assess performance in three main areas, such as Average Room Rate Cost, Occupancy, and Revenue per Available Room (Sirastava and Maitra, 2016). Some key KPI indicators include:

1. Average Room Rate (ARR): This metric represents the average revenue generated per occupied room within a specific timeframe, also known as the Average Daily Rate. Managers rely on this indicator to assess operational efficiency and potential for expansion.
2. Revenue per Available Room (RevPAR): This performance measure is calculated by dividing a hotel's total guestroom revenue by the number of available rooms and the duration of the measurement period. RevPAR provides insights into revenue generation efficiency.

These indicators, among others, play a significant role in assessing performance and driving success in the hotel industry.

Gross ARR overall grow from 2021 to 2022 (**Figure 27.**). Room occupancy rate in September 2022 was 53.4%, with a gross average room rate of 29,278 HUF.

Figure 25. - Gross Average Room Rate 2021 - 2022

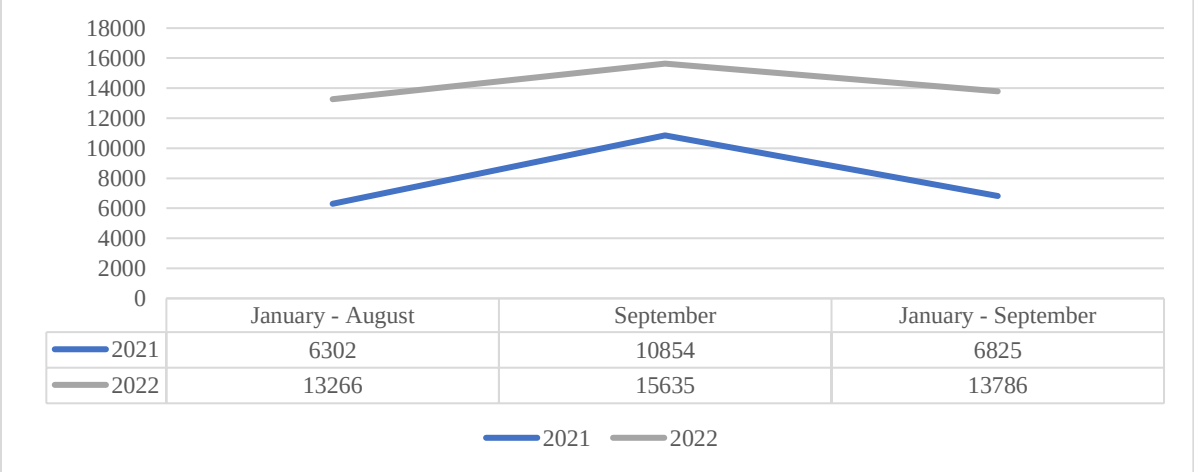


(Source: MERSZ,2022b)

In September, hotel occupancy in Budapest was 66%, up 21.7 percentage points from last year but down 18 percentage points from September 2019. The gross ARR was 38,262 HUF, a 32.8% increase from last year and a 10.8% increase from September 2019. (MSZESZ, 2022b). Occupancy rate in Budapest was 54.7% while the Gross ARR 32,103 HUF. In the Balaton Region the occupancy rate 44.7% with a Gross ARR 25,909 HUF (MSZESZ, 2022a; MSZESZ, 2022b).

Gross REVPAR and indices were 13,786 HUF respectively (**Figure 28**.). Room occupancy was higher than last year but lower than 2019, while ARR and REVPAR were higher in comparison to both 2019. (MSZESZ, 2022a).

Figure 26. - Gross REVPAR 2021 - 2022



(Source: MSZESZ, 2022b)

REVPAR in Budapest was 18,495 and 13,224 in Balaton Region (MSZESZ, 2022b).

In Budapest, hotel revenue in April was up 69% from last year and 18.2% from 2019. The Balaton Region saw a 45.7% year-on-year increase and a 54.5% increase from April 2019, with revenue totalling 7.5 billion HUF. Hotels outside the capital generated 26.6 billion HUF in April, a 31.7% increase from last year and a 42.1% increase from April 2019. (MSZESZ, 2022a). As of January 1, 2013, the Hungarian Central Statistical Office (KSH) released data on qualified accommodations according to the trademark system. The total number of hotels in Hungary, including those without an assigned star rating, is estimated to be approximately 855-955 based on KSH data (KSH,2023) from their website. While based on MSZESZ (2022a) recognises 909 hotels.

Table 4. - Commercial Accommodation Hungary

Year	Month	Number of operating units					
		Hotel	Pension	Community accommodation	Holiday home	Camping	Total
2022.	January	855	979	182	71	42	2 129
	February	848	960	184	73	38	2 103
	March	865	1 032	198	89	51	2 235
	April	893	1 114	219	115	109	2 450
	May	928	1 146	268	141	167	2 650
	June	945	1 183	307	193	216	2 844
	July	946	1 201	318	199	242	2 906
	August	948	1 192	320	205	235	2 900
	September	922	1 118	261	169	187	2 657
	October	885	1 042	208	119	93	2 347
	November	842	928	165	86	54	2 075
	December	826	884	155	79	47	1 991

(Source:ksh.hu)

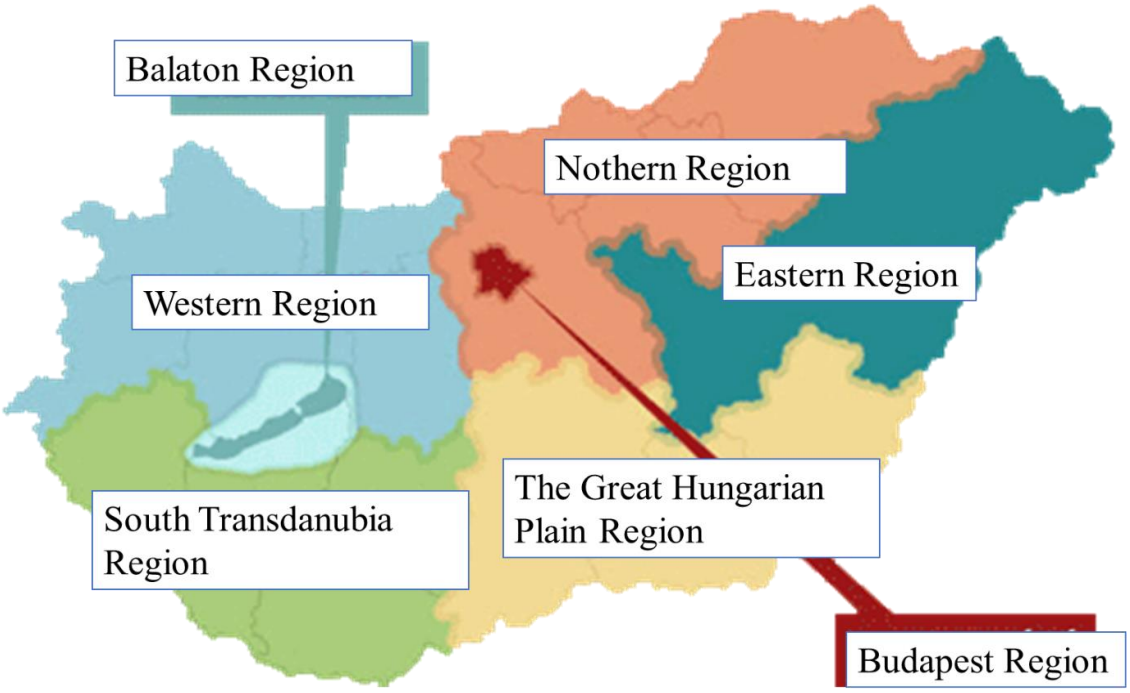
A comprehensive database of all "hotel" type accommodations is not openly available. The Hungarian Hotel and Restaurant Association (HHRA) is the most reliable source for such information, although not all "hotel" type accommodations are affiliated with the HHRA. To understand the star rating system in Hungary, it is necessary to clarify the star quality system used. Previously, the HotelStars Union system, which is applied in many European Union member states, including Hungary, was used for star ratings (https://www.hotelstars.eu/). However, starting from 2022, Hungary has implemented a new national system. It is important to note that in previous years, star ratings were not mandatory, resulting in some hotels not having an assigned star rating. As of January 1, 2022, the Hungarian Tourism Quality Certification Body (https://szallashelyminosites.hu/) initiated the process of assigning new star ratings to all Hungarian hotel establishments based on a uniform national quality system suitable for the 21st century. Legislation now requires all accommodation

establishments to obtain mandatory certification, even those that were not previously certified. Only certified accommodations are allowed to operate in the market. Criteria and procedures for certification differ based on accommodation type, and detailed information is available on the certification body's website. Accommodation providers must undergo professional preparation for mandatory certification. Since this process was not completed by the end of 2022, specific data on the number of hotels in each star rating category is unavailable. This process is also a potential limitation of the research in data collection.

3.1.5. The Hungarian Hotel and Restaurant Association

The Hungarian Hotel and Restaurant Association (HHRA) was founded in 1968 and is a prominent professional organization in the Hungarian tourism and hospitality industry. It currently has over 500 members, including more than 400 hotels with 36,000 rooms, seven hotel chains, 30 independent restaurants, 20 educational institutions, and over 100 associate members. The HHRA represents the interests of various types and categories of hotels and hospitality businesses throughout the country. It is divided into seven regions: Northern Region, Eastern Region, Great Hungarian Region, Budapest, Western Region, South Transdanubia Region, and Balaton Region. As of May 8, 2022, the HHRA had 458 members (and 468 hotel partners as of January 8, 2023).

Figure 27. - Hungarian Hotel and Restaurant Association



(Source:Own Edit)

Most hotels are in the Budapest region, where (other than the un-assigned) 4-stars is the most common star category. The least hotels are in the South Transdanubia region, where most hotels are also 4 stars, and this is also the highest-rated category **Table 5**.

Table 5. - Hotels Within the Regions

	Not Assigned	2	2 sup.	3	3 sup.	4	4 sup.	5	5 sup.	All
West Region	19	2	1	7	4	19	4	0	1	**57**
South Transdanubia Region	9	1	0	6	1	11	0	0	0	**29**
Balaton Region	18	1	0	18	9	21	10	2	0	**80**
Budapest Region	79	0	0	18	8	40	8	5	1	**159**
Northern Region	13	1	0	11	1	16	6	1	0	**49**
Eastern Region	18	3	0	14	2	7	2	1	0	**47**
The Great Hungarian Plain	17	0	0	4	1	11	3	0	0	**37**
All	**173**	**8**	**1**	**78**	**26**	**125**	**33**	**9**	**2**	**458**

(Source:Own Edit)

3.1.6. Challenges of Recent Years

Hotels have faced numerous challenges in the aftermath of the pandemic. The lack of guest turnover, both foreign and domestic, due to government restrictions and mandatory closures posed significant difficulties (MERSZ 2022a, KSH, 2022). Additionally, hotels had to address ongoing human resources issues, such as high turnover rates, which have already been extensively studied (Deery & Shaw, 1997) as it was a pre-existing issue of the industry. The pandemic further exacerbated these challenges, emphasizing the importance of crisis management (Abo-Murad & AL-Khrabsheh, 2019) and further employee turnover research (Vetráková et al., 2020).

One way to retain employees, is creating an employer brand, involving improved care for internal customers like external customer care. According to Vetráková et al. (2020) this includes developing an employer value proposition that encompasses the hotel's values, salaries, benefits, working environment, corporate culture, opportunities for personal growth and career advancement, and effective communication with employees and potential hires. However, the pandemic required a significant reduction in costs, which was achieved by restructuring jobs. Many of the Hungarian Hotels made staff reductions of over 20%. According to Grotte et al. (2021), the importance of internal communication has increased among the HR processes studied. Investing in hotel workers, including motivation, training, and additional benefits, is crucial for the sector's success, especially considering its labor-intensive nature (Németh et al., 2021), however this was rather difficult during the pandemic.

Hotels were not planning to freeze wages or reduce fringe benefits, but instead were implementing strategies such as annual leave or unpaid leave to manage human resource costs (Grotte et al., 2021). The revival of tourism poses challenges in finding and retaining skilled workers (Novekedes.hu, 2023). Guest behaviour during the Covid-19 pandemic was also impacted, but it is expected to be temporary, with no permanent changes in tourism consumption behaviour (Csóka et al., 2021, KSH,2022; MERSZ,2022; Novekedes.hu, 2023). According to MSZÉSZ (Novekedes.hu, 2023), domestic guest numbers are expected to

decrease in the first half of the year due to inflation. However, high occupancy rates like last year are anticipated for the summer season. Rising costs may lead to lower profit margin despite increased revenues, but state subsidies and exemptions can help mitigate this, although no all the hotels are entitled for the funds.

Hotel strategies post-pandemic vary based on quality classification and location. Experts note a greater distinction between cost-focused hotels and those emphasizing uniqueness in their competitive strategies compared to the pre-Covid era (Pajrok, 2023). Experts emphasize the importance of defining the break-even point and providing continuous quality service. Accommodation units in Pest County prioritize quality, while those in rural areas focus on overall cost-driven strategies. However, the belief that quality-driven strategies are exclusive to higher quality hotels is not true anymore. The differentiation strategy highlights the significance of location, capacity, and status, with an emphasis on larger capacity and independent status. The hotel industry in Hungary is predominantly characterized by competitive strategies based on quality and differentiation, aligning with international trends. (Pajrok, 2023).

Energy price unpredictability also adds to industry challenges. While some hotels have temporarily closed due to high energy costs, a permanent wave of closures is not expected according to MSZESZ. (Novekedes.hu, 2023)

Conclusion of the Hungarian Hotel Industry:

Tourism is still on the way of recovering to pre-2019 levels, but 2022 shows promising results. Part of the good statistical outputs in the higher room occupancy rate may be influenced by the temporary closure of rural hotels, reducing capacity compared to the previous year is that many of the accommodations operating before having closed.

According to Pajrok (2023) the COVID-19 pandemic has strengthened the prevalence of integrated competitive strategies based on differentiation and quality in the hotel industry. Experts confirm the importance of differentiation and quality strategies in a competitive environment, with some prioritizing "survival mode" due to pandemic conditions. The profitability factors in the industry have undergone changes, largely influenced by the pandemic (Németh et al., 2021). Therefore, employees need more focus in the future.

Based on the presented statistics and research, it can be inferred that while economic events influence consumer sentiment, the drastic decline caused by the pandemic seems to be gradually levelling off. However, the combined impact of inflation and the energy crisis will only become apparent later. As highlighted in Pajrok's (2023) study, quality as a strategy is no longer exclusive to high-end hotels. Focusing on quality and brand building can have positive effects not only on guests but also on internal customers. Increasing commitment and motivation, along with providing training, can be one way to reduce turnover. In the case of personalized services, employees must be motivated to exceed customer expectations. Investing in quality can yield positive results for all participants, including guest retention, employee retention, brand building, and differentiation, making it a suitable approach for developing tailor-made service quality strategies.

3.2. Customer Journey in Hotel Service

3.2.1. Customer Experience as a Chain of Service Encounters

Providing and measuring quality service is difficult, as every individual has a different level of expectation. Therefore, separating the technical and functional elements of SQ will be vital in creating an SQ measurement model. Both the effects of the tangible part of the service and how the service is delivered will need to be focalised.

Service processes can be viewed as chain activities as customers consider the entirety of service encounters within a process, rather than focusing solely on individual interactions (Danaher and Mattsson, 1994); therefore, to create a measurement system, the elements of such a service chain must be considered. Understanding how customers evaluate the service process and its impact on their judgments is crucial (Bitner et al., 2008). Each event or encounter must be assessed along unique attribute dimensions (Singh, 1991). The character of the process itself, rather than the actual outcome, plays a significant role in customers' overall evaluation (Brown and Swartz, 1989). Companies recognize that relationships are built through a series of customer encounters and therefore develop strategies to design and manage the entire process for a positive experience (Voorhees et al., 2017; Lemon and Verhoef, 2016). Customer judgments about a firm's quality are formed during these encounters, and each encounter contributes to overall satisfaction and loyalty (Bitner, 1990; Bitner and Wang, 2014; Bolton and Drew, 1991). These evaluations are influenced by the customer experience.

Service experience encompasses the cognitive, affective, and behavioural reactions associated with a specific service event (Padgett and Allen, 1997). Every service encounter generates an experience that influences customer perceptions of service quality, value, and brand image. These factors, in turn, impact customer preferences and loyalty (Haeckel et al., 2003). To provide valuable and memorable experiences, organizational departments must collaborate to create an integrated and exceptional customer experience.

Conclusion on Customer Experience as a Chain of Service Encounters

To develop an effective measurement model for service quality (SQ), it is crucial to separate the technical and functional elements and consider the impact of tangible aspects and service delivery. Understanding the holistic nature of service encounters within a process and evaluating each event along unique attribute dimensions is essential. By fostering collaboration among organizational departments, businesses can strive to deliver integrated and exceptional customer experiences. The customer journey model for hotels will be built as a chain of services.

3.2.2. Customer Journey

The customer journey concept has been applied in various fields, including design (Parker and Heapy, 2006), service management (Voss and Zomerdijk, 2007; Zomerdijk and Voss, 2011, 2010), communication (Segelström and Holmlid, 2009), management of public sector services (Parker and Heapy, 2006), and service innovation in consumer markets (Edelman and Singer, 2015).

Zomerdijk and Voss (2011, 2010) found that the customer journey perspective is widely employed in service management. It involves using customer blueprinting or customer

journey approaches to design services and improve the overall customer experience. This perspective is particularly favoured by design and consultancy firms, as well as experiential service providers. It treats a service as a multi-component journey with various touchpoints, rather than a single transaction or purchase experience.

Customer journey mapping, a research technique originating in the 1960s and 1970s, emerged as a response to consumer-oriented marketing (Crosier and Handford, 2012). Initially focused on the buying process, it traced customers' progression from need recognition to purchase and evaluation (Howard and Sheth, 1969). Today, customer journey mapping is widely recognized as a vital tool for government sectors and non-governmental service providers (Crosier and Handford, 2012).

The customer journey model originated from service blueprinting and service mapping by Shostack (1987), Kingman-Brundage (1989), Bitner (1993) and Bitner et al. (2008). Companies have developed techniques for mapping customer journeys, such as 'Moment Mapping ®' (Shaw and Ivens, 2002), the 'Brand Touchpoint Wheel' (Davis and Dunn, 2002), and many others. We must distinguish the various parts of the guest journey and how creating tailor-made services through personalization or customization can play a role.

As Services, unlike physical products, cannot be owned, characterized by their dynamic nature (Shostack, 1987), and are experienced in the moment and do not leave a physical possession, the service process therefore is a series of interconnected activities (Johne and Storey, 1998). Identifying the customer journey in the hotel setting is essential in creating a „good service". There are companies (https://www2.deloitte.com, www.theydo.io, www.delighted.com, and www.guesttouch.com) focusing on helping hotels identify their consumer journey steps in order to improve service quality (Reichheld and Jennings, 2022). Specifying these journeys

3.2.2.1.Service Encounter Phases

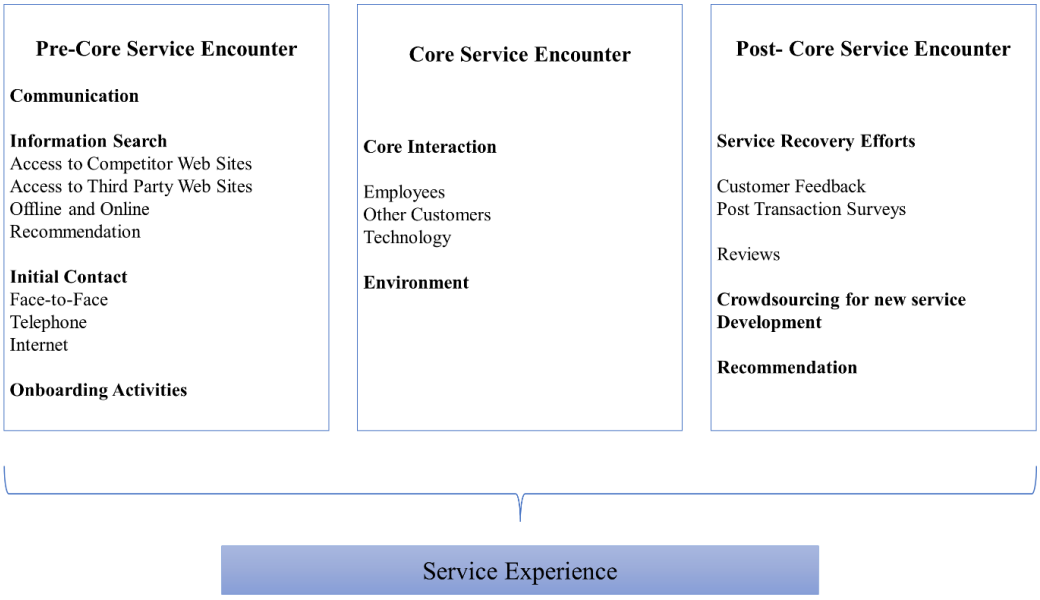
Voorhees et al. (2017) defined service encounter as "any interaction between the customer and the service provider relevant to a core service offering, including the interaction involving the provision of the core service offering itself." (p. 2). This definition is built on Bitner and Wang (2014), it includes the concept of pre-, post-, and core encounters or "moments of truth" that influence the overall customer outcomes. Encounters can happen face-to-face, online, telephonically, or through the mail (Bitner et al., 2000). Moments of truth are those critical encounters between customers and the company that impact the customers' impressions of the company (Beaujean et al., 2006; Bitner and Wang, 2014; Löfgren, 2005). When designing moments of truth, it is crucial to decide which service elements should be provided to the customer and which elements should be performed behind the scenes (Bitner et al., 2008; Chiu et al., 2014). Each service encounter is a specific element of customer impressions and satisfaction, but at the same time, these encounters have a cumulative effect, therefore, earlier service encounters will influence later encounters and the view of the overall service experience (Voorhees et al., 2017).

- Alderson (1965) differentiates "sort" and "transformation" service encounters, where the former involves resource delivery and the latter involves transactional processes.

- Grönroos (1998) views service consumption as a process, where the production process is perceived as part of the consumption experience.
- Moeller (2008), similarly to Alderson (1965), also identifies transformation phases in service consumption, including facilities, transformations, and usage.
- Edvardsson and Olson (1996) also divide the service into three dimensions: prerequisites for the service, which is the infrastructure in which the service happens (servicescape (Bitner, 1992)), and process and outcome.
- Court et al. (2009) outline awareness, familiarity, consideration, purchase, and loyalty.
- Lemon and Verhoef, (2016) discuss the pre-purchase, purchase, and post-purchase phases.

Figure 30. from Voorhees et al. (2017) provides a graphical overview of the relationships between various service encounters and the service experience. They define and distinguish pre-core, core, and post-core service encounters within a service experience.

Figure 28. - Service Phases



(Source: Voorhees et al., 2017)

Voorhees et al. (2017) argued that a narrowed focus on the "core service delivery" hinders the possibility of fully recognizing evolving customer needs. Therefore, a holistic service experience will span all potential service encounters (or touchpoints). "By taking a holistic view of the customer experience (pre-core-post), firms may be able to strengthen relationships with their most valuable customers and, in turn, increase customer retention, positive word-of-mouth and profitability." (Voorhees et al., 2017, p. 3).

Companies that prioritize the customer experience can attain greater overall perceived customer value, leading to increased profitability. Customer experience is a comprehensive concept that encompasses all aspects of the customer journey, leveraging synergistic design to create a cohesive and impactful experience (Kenesei and Seprődi, 2017). Godovykh and Tasci (2020) aimed to suggest the use of a combination of several measures to capture the totality of the tourism experience at pre-visit, onsite, and post-visit stages. Antecedents from brand-

related stimuli, consumer-related factors, and situational factors can impact experiences in all phases of consumption, including the pre-visit, on-site, and post-visit stages. This definition highlights the significance of measuring hotel experiences across different stages of the trip.

The pre-core and post-core service encounters serve to support the core service. According to Voorhees et al. (2017), the pre-core service encounter is the initial stage where customers engage with the company and can involve multiple encounters. It encompasses the customers' review of information, first contact with the company, and marks the beginning of the service experience. The pre-core encounter plays a crucial role in fostering customer loyalty (Bitner, 1995).

Pre-encounter

A pre-core encounter can be;

- seeking information from online reviews,
- addressing questions to frontline employees
- onboarding processes
- reviewing information on review sites.

Prior to purchase decision-making, research had a product focus (Moorthy et al., 1997; Punj and Staelin, 1983). Johnson et al. (2012) stress the importance of interdependency between companies and customers, and suggest examples of various strategies to influence decision-making in the pre-core process. Consumers' choices are made using some form of information technology (Murray et al., 2010). The pre-core encounter stage ends when the delivery of the primary service offer begins.

Core Service Encounter

The core service encounter period refers to the time when the customer's fundamental needs are met through the primary service provided by the company. It involves interactions between customers and employees, customers and technologies, and the service environment, which have been extensively studied (Bitner et al., 2000; Bitner, 1992).

Service firms have long utilized personalization techniques during face-to-face service encounters (Gwinner et al., 2005; Mittal and Lassar, 1996), which significantly impact customer satisfaction (Bitner and Hubbert, 1994) and perceived service quality (Parasuraman et al., 1991, 1988). Through adaptive skills, service providers can tailor their services to individual customers, encompassing interpersonal adaptive behaviour and service-offering adaptive behaviour (Surprenant and Solomon, 1987; Gwinner et al., 2005).

Interpersonal adaptive behaviour, the service provider can adjust their verbal and nonverbal behaviour to the context of the service interaction. For example, addressing customers by first name, engaging in small talk, displaying personal attention and warmth, and demonstrating a genuine desire to assist the customer (Goodwin, 1996; Surprenant and Solomon, 1987; Mittal and Lassar, 1996); displaying hospitality. In the case of service-offering adaptive behaviour, employees tailor or customize the service offering to a specific customer by providing options (Surprenant and Solomon, 1987).

Post-core Service

The post-core service encounter period refers to the time after the core service encounter when customers evaluate their experience. It is a crucial phase for companies to retain customers, foster loyalty, and enhance future service experiences (Voss and Zomerdijk, 2007).

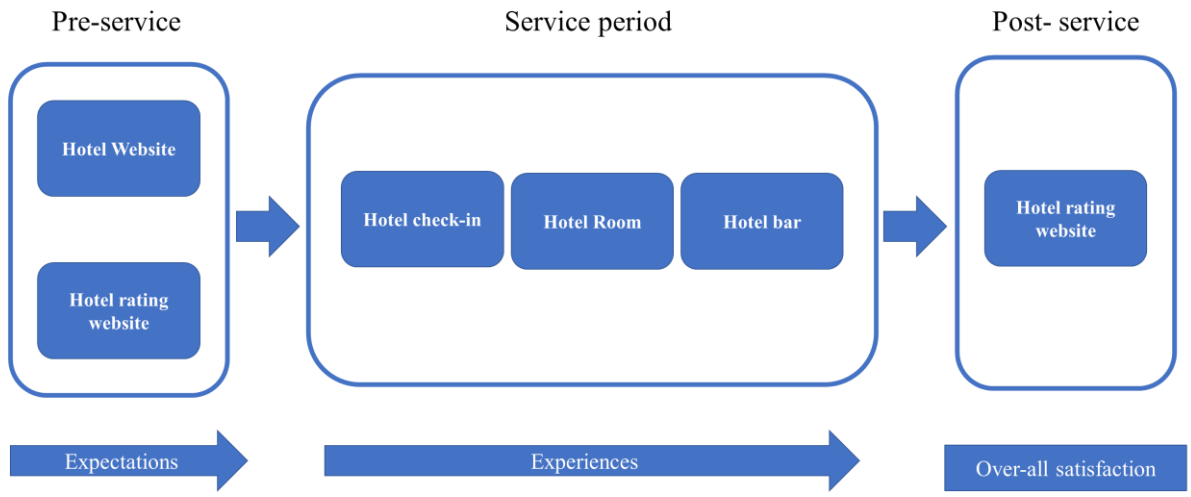
Post-core encounters include the following;

- Proactive firm activities (e.g., the receipt of a survey, a request for social media posting, etc.) (Voss and Zomerdijk, 2007).
- Any situations involving a complaint (Voss and Zomerdijk, 2007).
- Service recovery efforts (Dong et al., 2008; Smith and Bolton, 2002).
- A firm's actions to sustain a relationship with the customer over time (Voss and Zomerdijk, 2007).
- Relationship development (Morgan and Hunt, 1994).
- Customer provision of feedback (i.e., via post-transaction surveys) (Voss and Zomerdijk, 2007).
- Customer reviews and service recommendations (Voss and Zomerdijk, 2007).

If done properly and effectively, the actions of the post-core service period can cycle into future pre-core service encounters (Voss and Zomerdijk, 2007).

Stickhorn and Zehrer (2009) have also incorporated these three phases in their guest journey model (**Figure 31.**), but they divided them into smaller segments based on the place of activity.

Figure 29. - Customer Journey Model



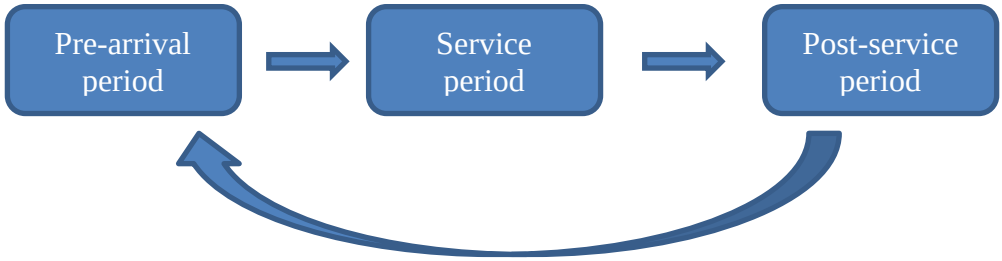
(Stickhorn and Zehrer, 2009)

The concept that customer experience is influenced by interactions with service providers before, during, and after the service encounter (Berry et al., 2002, 2006) has led to extensive research on the factors driving customer experience (Carreira et al., 2013; Verhoef et al., 2009) and its evolution throughout the service process (Baron and Harris, 2010; Walter et al., 2010).

Conclusion of Customer Journey

Various frameworks and methods (Bitner et al., 2008) and multi-level service design (Carreira et al., 2013), have been proposed to address the intertwined aspects of processual and experiential factors in services. However, the effective enhancement and management of customer experience across channels and interactions remain a key research priority (Ostrom et al., 2015). This research draws upon the works of Whittle and Foster (1991), Lemon and Verhoef (2016), Voorhees et al. (2017), Godovykh and Tasci (2020), and adopts a three-phase model for service encounters: pre-arrival, service, and post-service periods (**Figure 32.**) within the context of the customer journey in a hotel.

Figure 30. - Service Phases



(Source: Own Edit)

3.2.3. Service Blueprinting:

Service blueprinting is a valuable approach for understanding customer experience and evaluating service processes (Bitner, 2008). Introduced by Schostack (1984) and further developed by Kingman-Brundage (1989), service blueprinting offers a comprehensive and detailed analysis of service processes, going beyond the scope of the customer journey model.

It was initially introduced as a process control technique for services that offered several advantages:

- It was more precise than verbal definitions.
- It could help solve problems pre-emptively.
- It could identify failure points in a service operation.

A service blueprint can help a service developer to identify problems before they happen and to see other market opportunities. The blueprint can be used to develop new services and test the quality of services (Shostack, 1984).

Service blueprinting has evolved to become more customer-focused, incorporating concepts such as frontstage and backstage activities, tangible and intangible evidence, and the timing of each stage of the customer journey (Kingman-Brundage, 1989; Bitner et al., 2008; Lovelock et al., 2009; Palmer, 2008). Unlike traditional customer journey methods, service blueprinting highlights the hidden processes that customers are unaware of (Shostack, 1984). The addition of physical evidence has also led to the integration of visual, photographic, and video blueprints (Bitner, 1993).

Service management requires recognizing the customer's role in the process and improving service design (Gummesson and Kingman-Brundage, 1991; Shostack, 1984). Simply focusing on product excellence and procedural guidelines is insufficient. A service blueprint, incorporating the customer journey perspective and five components outlined by Bitner et al., 2008 (based on Zeithaml et al., 2006), helps identify alternate means of execution on the example of a one-night hotel stay.

There are five components of a typical service blueprint:

- Customer actions,
- Onstage/visible contact employee actions,
- Backstage/invisible contact employee actions,
- Support processes, and
- Physical evidence

3.2.3.1.Stages of Service Based on Service Blueprint

In previous chapters, service stages were discussed, including the early conceptualization of SQ models by Grönroos (1982, 1984). Grönroos differentiated three components of service quality: technical quality, functional quality, and image ('Service Quality Models').

- Technical quality, is what customers receive from interaction with a service firm.
- Functional quality, is how the consumer receives the technical outcome of the service.
- Image is the customers' view of the company or brand.

Kingman-Brundage (1989) distinguishes the concept of frontstage (onstage) and backstage activities and the addition of physical (tangible) and intangible evidence.

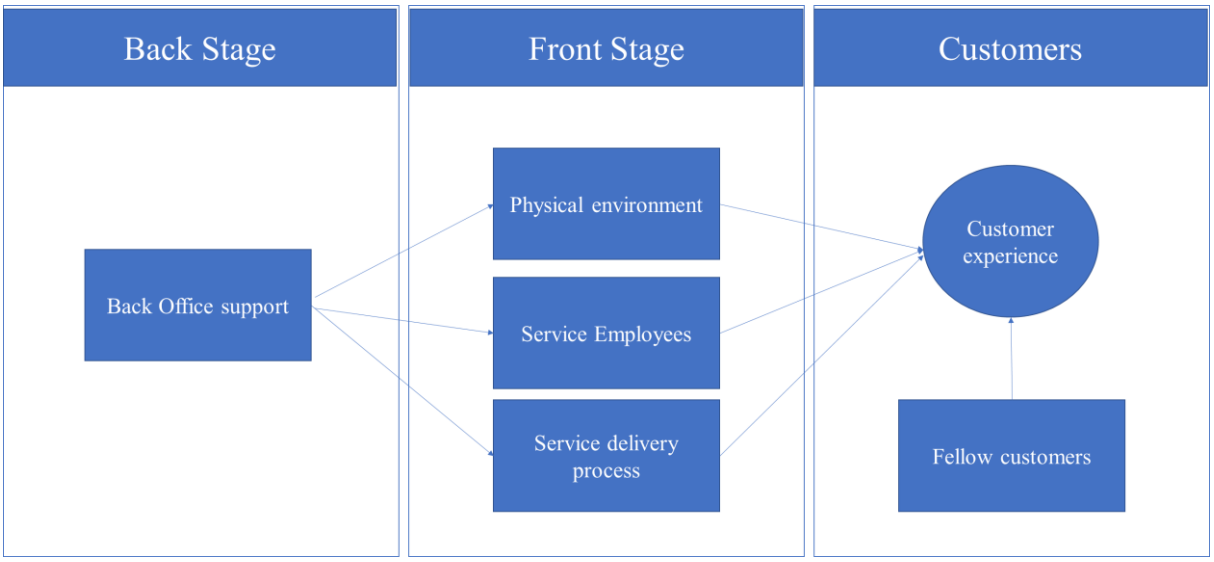
Edvardsson and Olson (2006) divided service into three dimensions where, besides process and outcome, they define prerequisites for the service phase, which is the infrastructure in which the service happens.

Biter (2008), based on (Zeithaml et al., 2006), distinguishes onstage/visible contact employee actions that are part of a "face-to-face" encounter between the frontline contact employees and customer.

Voss and Zomerdijk (2007) identified key design areas of service blueprinting (**Figure 33**.), which align with concepts discussed by Bitner (2008) and Bitner et al. (2008) while also encompassing additional aspects of the blueprint. These design areas were innovated upon by experiential service providers, design agencies, and consultancies in the field of experiential services, resulting in advancements in five distinct areas:

- Physical environment (‘stage’)
- Service employees (‘actors’)
- Service delivery process (‘script’)
- Fellow customers (‘audience’)
- Back office support (‘back stage’)” p.9.

Figure 31. - Stages of Service by Voss and Zomerdijk



(Source: Voss and Zomerdijk, 2007)

Voss and Zomerdijk (2007) describe the service delivery process as a 'script', encompassing a series of actions or events to provide the service. They also define the 'back stage' as the invisible actions of contact employees that are essential for service realization but remain hidden from guests. In line with backstage processes, "support processes" refer to activities necessary for service delivery without direct consumer interaction (Bitner, 2008).

The environment, including the physical setting or "stage," plays a crucial role in shaping customer perceptions and behavior in service experiences (Shostack, 1984; Mehrabian and Russell, 1974; Kotler, 1974; Turley and Milliman, 2000; Bitner, 1992; Voss and Zomerdijk, 2007).

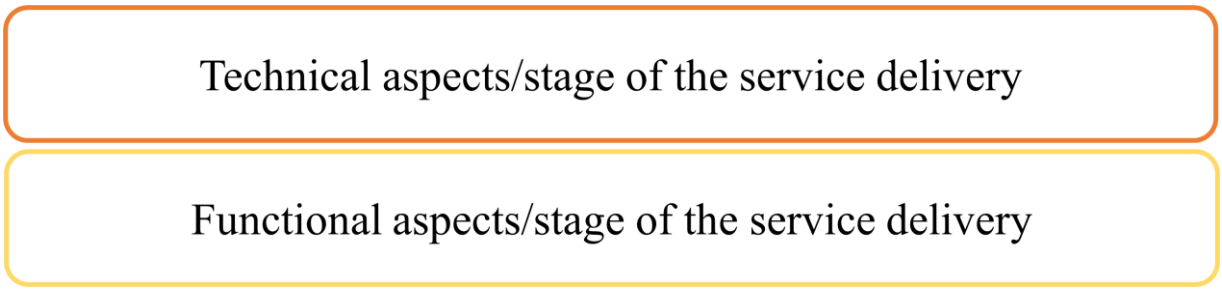
Conclusion of Service Blueprinting

Service blueprinting is a comprehensive technique that encompasses all stages and touchpoints of a service.

The concept blueprint provides a visualization of the customer service experience, focusing on the actions of hotel customers. It considers both onstage actions, performed by front desk employees and those involved in room service and restaurants, and backstage activities, such as food preparation and tray arrangement. The reservation and registration systems play a crucial role as support processes impacting the overall customer experience. Hotels have a lot of physical evidence or tangible aspects that customers are exposed to, which can affect their quality perceptions (Bitner, 1993).

In the hotel industry, the backstage and front stage concept, along with tangible elements and support processes, are vital considerations (Voss and Zomerdijk, 2007). This model, inspired by Grönroos (1982, 1984), Kingman-Brundage (1989), Edvardsson and Olson (2006), and Voss and Zomerdijk (2007), separates the tangible and functional aspects of the service, encompassing tangible elements and technologies as well as visible employee behaviours (**Figure 34**).

Figure 32. - Stages of Service



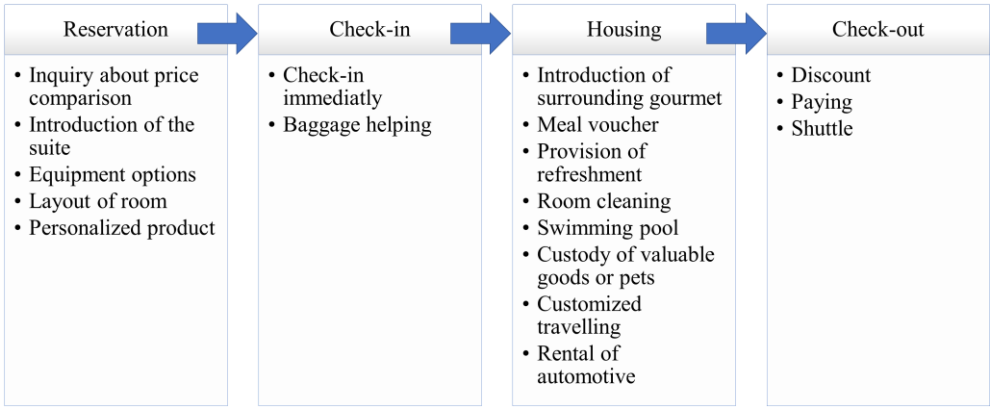
(Source: Own Edit)

3.2.4. Customer Journey Touchpoints

Most consumer journeys are divided into at least three main parts; before, during, and after purchase/service phase (Følstad and Kvale, 2018); however, in the hotel industry, the during service phase can further be divided by either basing on the activity itself (check-in, stay, participating in service, requiring help, check out, (Agarwal and Bajaj, 2021; Chiu et al., 2014; Reichheld and Jennings, 2022) or on the place of the activity (check-in, hotel room, hotel bar, in Stickdorn and Zehrer (2009, p. 8) in Følstad & Kvale, 2018)). Differences in substage grouping can exist, such as combining pre-arrival and check-in or placing check-out and feedback stages together (Agarwal and Bajaj, 2021). The common approach by service companies recognizes the booking phase and complaint handling but overlooks the post-service stage of the guest journey.

Chiu et al. (2014) have also considered the guest encounters starting with booing/ reservation and identified specific services that can be provided (**Figure 35.**). They considered the booking phase and the personal encounters during in-house but did not look before or beyond that.

Figure 33. - Touchpoints of Service Chiu et al.

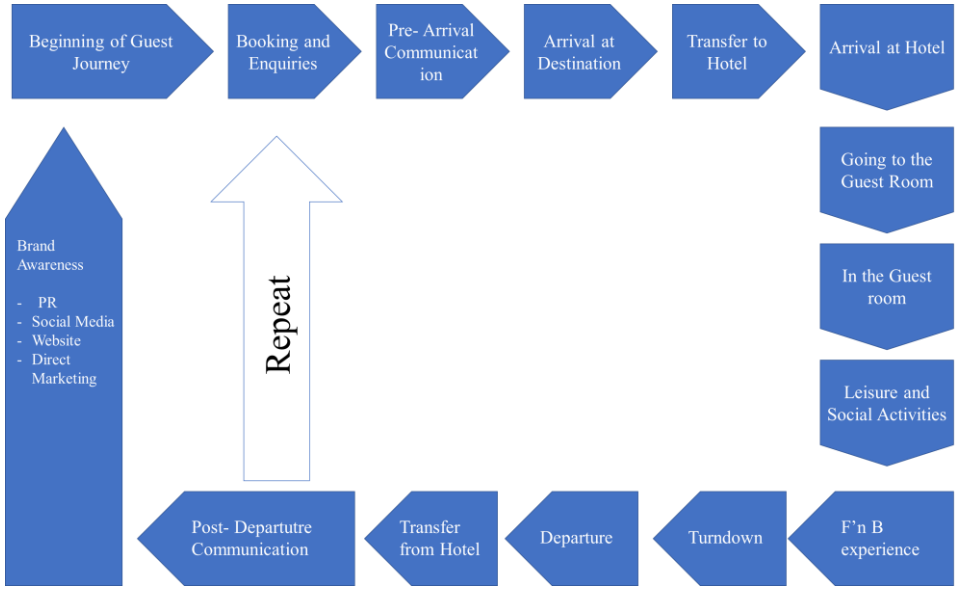


(Source: Chiu et al., 2014)

Research has explored how customer experience evolves during the service process (Baron and Harris, 2010; Walter et al., 2010) and what factors drive it (Carreira et al., 2013; Verhoef et al., 2009), building on the understanding that customer experience is shaped by interactions between the service provider and the customer (Berry et al., 2002, 2006). A customer journey

starts before the actual transaction and ends after the transaction is completed, aiming for the service to be recommended to others (Følstad and Kvale, 2018). "Journeys are often cyclical, with the end of one cycle leading to another." and "the total customer experience is the result of every element in this journey." (Voss and Zomerdijk, 2007, p.7). **Figure 36.**, where a customer journeys pre-booking phase is considered, is a typical example of a marketing agency using customer journey mapping (Medyasepti, 2020).

Figure 34. - Customer Journey by Medyasepti



(Source: Medyasepti, 2020)

Differentiating your business and its services is crucial for staying competitive. Effective branding, supported by appropriate campaigns, can help achieve this differentiation, along with customer marketing as an additional tool. However, it is important to emphasize that these tools require careful implementation, the support of a skilled professional team, and reliance on detailed and reliable consumer insights (Révész, 2002). Customer interactions with service providers play a vital role in shaping the overall customer experience. In the SERVQUAL model, three out of five dimensions focus on employee behaviour, such as responsiveness and willingness to assist customers promptly (Parasuraman et al., 1988). The presence of employees in the service process introduces a higher level of risk to service quality (Shostack, 1984).

Procedures in backstage will influence the front-stage performance. For example, most service organisations have many back-office employees that are vital to the customer experience yet generally do not interact with customers.

Another way researchers refer to service encounters is touchpoints. Touchpoints are a service provider's opportunity to facilitate the service encounter and create interactions with customers (Voorhees et al., 2017). For each touchpoint (**Table 6.**), the channel of the service can be identified and later, like Chiu et al. (2014), the potential customization and personalization strategies can be created. Medyasepti (2020) is also a great example from

Figure 36. as they have also used detailed touchpoints to measure guest satisfaction with the ambience.

Based on the literature presented, customer journey touchpoints in a hotel could be divided as follows.

Table 6. - Service Touchpoint in Hotels

Pre-Arrival/ Inspiration	Pre-Arrival/ Research	Pre-Arrival/ Booking	On property/ Check in	On property/ Stay	On property/ Check out	Post Stay/ Feedback	Post Stay/ Keeping in touch
PR WOM Radio TV Print Online Display Search Engine Newsletter	Website landing Meta Search Reviews Social media	Direct Mail Travel agency Call center Mobil App Website Chatbot	App Reception Hotel Staff	App Hotel Staff Face-to-face encounter Hotel devices	App Reception Hotel Staff	Social media Reviews	Loyalty Program Newsletter

(Source:Hahn, 2018; Ansari and Mela, 2003; Shen and Dwayne Ball, 2009)

Inspiration to travel; is a key factor in hotel bookings, influenced by various online and offline channels that provide compelling content marketing, PR, social media, and influencer marketing (Hahn, 2018; StayNtouch, 2019). that can capture the guests' imagination and motivate them to choose a certain property.

Research hotels: When the guest is searching for hotels or making reservations, information technology applications can be used to provide tailored service (Ansari and Mela, 2003; Shen and Dwayne Ball, 2009) to develop longer-term, more personal relationships with their valuable customers.

Potential customers typically rely on various channels, including friends, Google, Facebook, and online travel agencies (OTAs), to research hotel reviews and evaluations before making a booking decision (Hahn, 2018). The feedback and information obtained from these sources play a crucial role in shaping their choices. Hotels need to respond to guest reviews effectively (Evergreen). Moreover, if a hotel website fails to provide a satisfactory experience, potential guests may opt to book through OTAs instead (StayNtouch, 2019).

Booking: The Booking can happen on the hotel website (or corporate site), an OTA or via email/telephone. In each case, the booking process must be set up to be as easy as possible: a quality user experience and a responsive website, well-summarised content, and a simple, intuitive and quickest-possible process flow. And most important of all transparent and user-friendly price communication (Hahn, 2018; Chiu et al.,2014).

Check-in: After a guest arrives at the hotel, the front desk agent should complete the guest registration process. This is the first time for an actual face-to-face encounter. A service representative's behaviour during service encounters critically affects customer satisfaction and the perceived quality (Bitner, 1990; Bitner and Hubbert, 1994; Chiu et al., 2014; Parasuraman et al., 1991, 1988).

Stay: This phase is crucial in determining guest satisfaction, loyalty, and the likelihood of positive reviews and recommendations. Factors such as room cleanliness, good service, and effective complaint handling play a significant role (Hahn, 2018). Employees adapt their behavior to enhance the interpersonal interaction, such as addressing customers by their first name, engaging in small talk, and displaying personal attention and warmth (Bettencourt and Gwinner, 1996; Goodwin, 1996; Mittal and Lassar, 1996; Surprenant and Solomon, 1987c). Many hospitability gestures occur during this phase (**Chapter 3.1.3**).

Check out: It is crucial to persistently motivate the client to re-book and thank them for their loyalty or a possible next booking (Hahn, 2018).

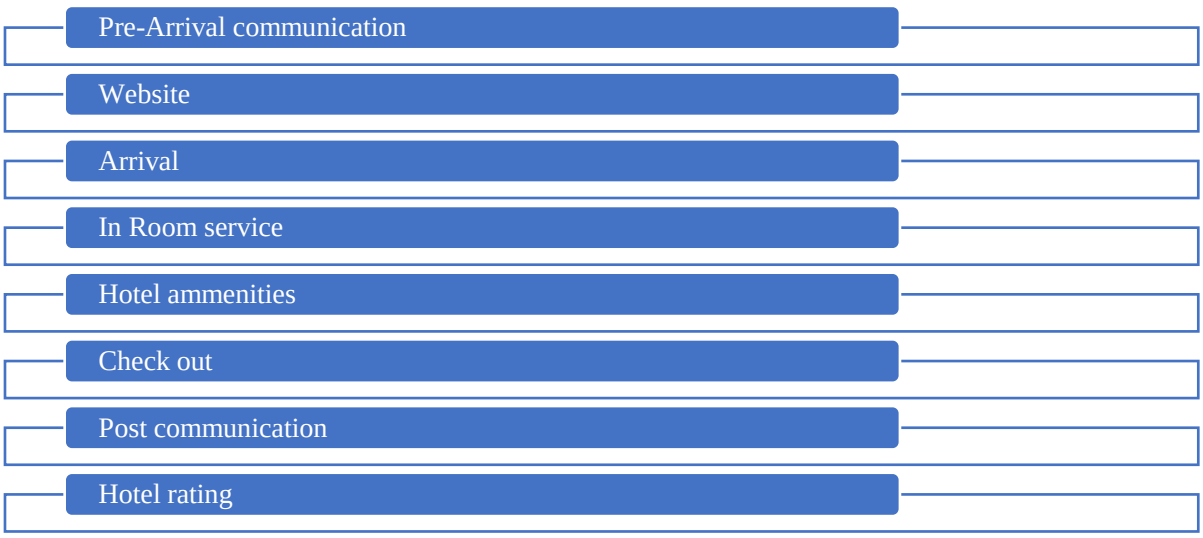
Feedback: User-generated online reviews, particularly on platforms like TripAdvisor, have a positive impact on hotel revenue growth (Neirotti et al., 2019). Hotels can leverage this feedback as a marketing tool to attract potential guests during their booking research.

Keeping in touch: The possible channels are first and foremost a newsletter and the brand's respective loyalty schemes; this is how the journey ends and starts again (Hahn, 2018).

Conclusion of Customer Journey Touchpoints

As a costumer journey is a chain of service encounters, the identification and separation of specific touchpoints must be done in case of every different service types. Considering the peculiarities of the hotel service, the touchpoints can be divided into the following categories in **Figure 37**.

Figure 35. - Hotel Service Touchpoints



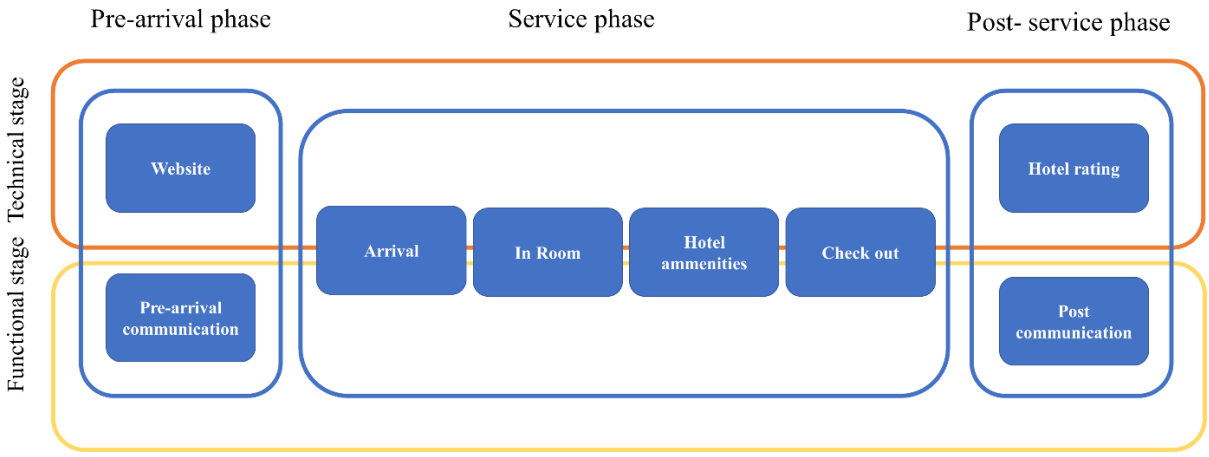
(Source: Own Edit)

Conclusion of Customer Journey in Hotel Service

As the chapter introduced, there are many ways to dive the guest's journey in the hotel service experience, and they all have their own value to showcase the different stages, phases, and touchpoints that the customer encounters. Based on the reviewed literature, it is important to simultaneously think about the different service phases, as service starts before the guest

would arrive to the hotel and continues after the guest has checked out. The customer experience starts when the customer decides to purchase a certain service and become aware of the company. Everything that takes place from awareness to arrival will be considered the pre-arrival phase. All encounters that happen after the customer arrives at the company will be considered the service period phase. After the customer has left the company and the service encounter stops, (the guest paid, left the hotel, and the service purchase interaction has ended) will be the post-service phase. The customer journey touchpoints can be placed into phases inspired by Stickhorn and Zehrer (2009). It is important to identify the specific touchpoints, as the service encounter happens in different ways in the specific touchpoints. It can be human to human, human to technological and hybrid encounter. By differentiating the potential touchpoints in the different phases' hotel managers have a more detail understanding of the company's strength and weaknesses. Another important element of the tailored customer journey model is the stages of service. Several aspects of hotels service are done behind the scenes, from room cleaning to the marketing activities or web page development. The tangible parts of service can be just as important as the gestures, acts of kindness or classical service elements. In the hotel environment, the state of the room or the surroundings have a massive effect on the customer.

Figure 36. - Customer Journey Model for Scoring Model



(Source: Own Edit)

During the service period, most touchpoints have a functional and technical aspect. Therefore, these will be in the middle of the model, while in the pre-arrival and post-service phases, the touchpoints can be separated based on whether they are in the functional or technical stages. Based on the combination of these different concepts, this research suggests the following model (**Figure 38.**). The newly built customer journey model will serve as the foundation for the research logic.

4. Research Objectives and Hypotheses

Following the literature review, this chapter introduces the research objectives and the hypotheses based on the literature, followed by the research methodology and methods adopted in the analysis.

4.1.Research Objectives

According to the previously discussed findings of the literature review, true service quality can be achieved only by tailor-made service.

Personalized services are interactive processes where the service provider uses specialized competencies and resources. Value is created with the guests' participation, which can either be the final product or the addition to a physical good. Quality is conformance to customer specifications and will be judged by the consumer. As the guest will decide if their experiences are pleasurable or not, therefore tailor-made services can provide a high level of perceived service quality.

Based on the previously drawn conclusions, the purpose of the study is:

1. to create a new measurement system to define tailor-made service level in Hungarian hotels.
   1.1. to measure the level of the tailor-made character of hotel services in Hungary.
      1.1.3. to identify what the common characteristics are in the case of hotels that score high on the tailor-made service scale.
      1.1.4. to identify what the common characteristics are in the case of hotels that score low on the tailor-made service scale.
   1.2. to identify what phase of the guest encounter is most frequently tailor-made.
   1.3. to identify development opportunities for the Hungarian hotel market.

Previous service quality measurements applied in the hospitality industry have mostly built on the SERVQUAL model (Akan, 1995; Akbaba, 2006; Getty and Thompson, 1995; Knutson et al., 1990; Webster and Hung, 1994; Wilkins et al., 2007) and often measured service quality from the guest's point of view (Akan, 1995; Akbaba. 2006; Albacete-Saez et al. 2007). On the other hand, the star rating systems (the national quality system, HotelStars) use service quality indicators and self-administered surveys, measuring quality from the hotel's perspective, and looks at industry standards (HotelStars, 2023; SzallashelyMinosites, 2023). Personalization and customization measurements were either just small additions to an existing model (Zeithaml et al., 2000) or only concentrated on one aspect of the customer's journey (Ariffin and Maghzi, 2012; Bettencourt and Gwinner, 1996; Blom and Monk, 2003; Xu et al., 2014). In-person service quality perception has a stronger effect than e-service quality (Stromback et al., 2013; Wang et al., 2016) therefore, it is important to measure the in-person aspects too. Nowadays, all services include multiple stages of service (Stromback et al., 2013) and can consist of separate phases of technology only, hybrid and human encounters. Therefore, it is important to explore the possibility of building a complex and comprehensive measurement system that can be used without the guests' involvement.

4.2.Research Questions

After reviewing the conceptual background and theories in the literature, the author formulated the following research questions.

Q1. Is it possible to create a measurement system that fits the ideal hotel guest journey model?

Q2. What indicators should be involved in creating a measurement system to determine/identify to what extent are hotel services tailor-made to reach SQ?

Q3. How tailored (personalized, customized) are the Hungarian hotel services?

Q4. Can the hotels be assigned to groups based on the tailored service scale scores?

Q5. What are the common characteristics of those hotels that belong to the same cluster?

Q6. Can the tailored service scale indicators be grouped according to indicators in which hotels perform well and/or poorly?

Q7. What are the common characteristics of those hotels that score high on the tailor-made service scale?

Q8. What is the importance of providing tailored services for hotel managers?

Q9. Is there a relationship between the value of the score on the tailored service scale and the importance of providing tailor-made services determined by the hotel manager?

Q10. Is there a difference in the level of tailor-made services in the different phases of guest encounter?

Q11. Is there a difference in the level of tailor-made services related to guest encounter stages?

4.3.Hypotheses

The hypotheses are built on the research questions.

Hypothesis 1 - Hungarian hotels can be grouped into different clusters according to their tailor-made services.

Tailor-made service has both human and financial recourse needs (Wang et al., 2010), but both customization and personalization can have elements that can be implied relatively low cost. Also, based on the stages of service and the phases of guest encounters, some hotels may emphasize certain aspects of personalization more than others. Therefore, the goal is to determine if hotels can be grouped based on personalization and customization indicators like they can based on star rating or type.

Hypothesis 2 - Tailor made service indicators can be grouped into different clusters based on the performance of the hotel.

While personalization has high information demand, it could be part of technology-based service, personal encounters, or marketing. The common dominator is that personalization will use the information to provide the right service or product to the right person. In the case of customization, the hotel already has pre-determined variations of its offer. Both personalization and customization can be part of any of the touchpoint's phases. By clustering the tailor-made service indicators, a clear picture could be provided of the overall strength and weaknesses of Hungarian hotels.

Hypothesis 3 - There is a relationship between the different characteristics of a hotel and its tailor-made service level.

H3a. There is a relationship between the size and the tailor-made service level of a hotel.
H3b. There is a relationship between the hotel type and the tailor-made service level of a hotel.
H3c. There is a relationship between the type of the hotel guest and the tailor-made service level.
H3d. There is relationship between the star rating of the hotel and tailor-made service level.
H3e. There is relationship between chain affiliation and the tailor-made service level of the hotel.

Personalisation and customization both have high information, time and human resources demand (Wang et al., 2010) in order to adapt the hotel's service offering to each guest's preferences (Valenzuela et al., 2009; van Riel et al., 2001). It can be the result of employees' proactive contributions, such as offering helpful information and suggestions (Keh et al., 2013).

For tailor-made service to happen, the employee and the guest need to meet, and the employees must have the opportunity to create individualised service. Depending on the hotel and the customer characteristics, the guest will spend different lengths of time in the hotel; therefore, in some cases, there will be more opportunities for personal encounters to occur. Resorts typically have longer stays, and guests spend more time in resorts and wellness hotels than in city hotels, where the guests stay for a shorter period and explore the city; therefore, there might be fewer encounter opportunities. (Győrffy, 2004; Jávor, 2009; Crick and Spencer, 2011)

Consumers' desire for customised products led to market segmentation (Smith, 1956); meaning that customers with similar preferences were put into the same market segment, therefore depending on the market segment the hotel targets as the primary target group, there could be differences in the need or desire for tailor-made service. Ladhari (2008, p. 78) commented that "the number and nature of the dimensions varied, depending on the service context; indeed, they varied even within the same service industry. Apparently, the criteria used to evaluate service quality differ among customer groups and circumstances."

Hospitality demands a lot from the employee (Constanti and Gibbs, 2005; Guerrier and Adib, 2000) to make the guest feel at home by assuring safety and comfort (King, 1995) will highly depend on the employee.

5-star and 5-star superior hotels usually have concierge and guest relation representatives, which means that depending on the star rating, there might be more human and financial resources available to be able to offer personalized service.

According to Lin et al. (2010), both in human-to-human interaction and human-technology interaction, the customer is greeted by name, and the service provider remembers what they purchased and suggests products accordingly. However, it might be more challenging to do so in a hotel with larger capacity.

Hypothesis 4 - There is a relationship between the level of tailor-made services and the importance of the tailor-made services determined by the hotel manager.

The General Manager decides on the hotel's strategy (Hayes et al., 2016; Jávor, 2009); therefore, if tailor-made services are important to the hotel manager, they should be able to influence the overall strategies of the hotel.

Hypothesis 5 - There is a difference in the tailor-made service level in the different guest encounter phases.

As it was detailed before, individualization of the service demands interaction between the hotel and the customer. The different stages have a varying amount of opportunities for encounters. Also, depending on the phase, it will need more strategic planning (marketing) or technological investment (website, data gathering) compared to others that mainly have human resource demands (hotel reception, small talks, acts of kindness). There should be a higher chance for value co-creation during the service phase than the pre-arrival or post-service phases.

Hypothesis 6 - There is a difference in the tailor-made service level in the different guest encounter stages.

The functional aspects of service delivery have a higher human resource demand, while the technological aspects have more financial demand. Both need investments, but the return time is different when buying a new website or application compared to training employees to provide better service. However, to be able to provide good tailor-made service on the functional level, the hotel needs good technical support (technical being marketing mix offerings available, pieces of training available, budget to offer something unique to the guest, etc.); personalization is mainly initiated by the company by collecting data. If this technological stage indicator is missing, the functional stage will have a harder job. But given the fact that it is hard to directly see the advantages of the technical stage aspects, there will be differences between the stages.

4.4. Research Concept

Research is one of the most important tasks: the large-scale structuring and analysis of formations and the appropriate presentation of the results (Mitev, 2019).

In the dissertation, both secondary and primary data were collected. In addition, the research has quantitative (questionnaires, cluster analysis, relationship studies) and qualitative (structured interview) aspects.

4.4.1. Secondary Research

Secondary data collection, during which different materials were processed, and new research results were achieved (Majoros, 2011; Tomcsányi, 2000) started with the analysis of data related to:

- service quality
- service quality models
- tailor-made service
- guest journey
- encounters
- and the building of the new guest journey model.

Websites like the web of science, science direct, and google scholar were used to find relevant sources. Furthermore, as part of building the scoring model, secondary data was used to collect and identify potential items to use in the tailor-made service measurement.

To identify the hotel pool, or in other words, the population that can be included in the research, the HHRA database was used.

4.4.2. Primary research

After reviewing the literature, the primary research and preparing the indicator list on which the scoring system will be based, interviews will be conducted with experts. First, based on the customer journey model created in the literature, the indicators are going to be grouped, and each group will be presented to experts of that touchpoint. During the interview, the focus will be on the most important factors of tailor-made service and how they appear in theory and practice. This can help to refine the questionnaire based on the hotel professionals' recommendations. After the elimination of indicators and the addition of indicators proposed by the experts, a second round of interviews will take place with general managers to measure if the indicators are, on the one hand, understandable for the general manager and, and on the other hand, if the interviewees find it important. The goal is to make sure that there is a clear understanding of concepts. Then, based on the literature and the preliminary interviews, the specific scoring model can be presented which serves as a starting point for the final questionnaire. The questionnaire will be filled out by the hotel managers who are members of the HHRA.

Table 7. - Research Questions, Hypotheses and Methods

Research question	Hypotheses	Methods
Q1. Is it possible to create a measurement system that fits the ideal hotel guest journey model? **Q2. What indicators should be involved in the process of creating a measurement system to determine/ identify how tailor-made hotel services are in order to reach SQ?**		Creating a system that measures the tailor-made service level of the hotels.
Q3. How tailored-made (personalized, customized) are Hungarian hotel services?		GAP
Q4. Can the hotels be assigned to groups based on the tailored service scale scores? **Q5. What are the common characteristics of those hotels who got into the same cluster?**	H1. Hungarian hotels can be grouped into different clusters according to their tailor-made services.	Bi-cluster
Q6. Can the tailored service scale indicators be grouped according to indicators in which hotels perform well and/or poorly?	H2. Tailor made service indicators can be grouped into different clusters based on the performance of the hotel.	Bi-cluster
Q7. What are the common characteristics of those hotels that score high on the tailor-made service measurement? **Q8. What are the common characteristics of those hotels that score low on the tailor-made service measurement?**	H3. There is a relationship between the different characteristics of a hotel and its tailor-made service level. H3a. There is a relationship between the size and the tailor-made service level of a hotel. H3b. There is a relationship between the hotel type and the tailor-made service level of a hotel. H3c. There is a relationship between the type of the hotel and the tailor-made service level. H3d. There is relationship between the star rating of the hotel and tailor-made service level. H3e. There is relationship between chain affiliation and the tailor-made service level of the hotel.	ANOVA

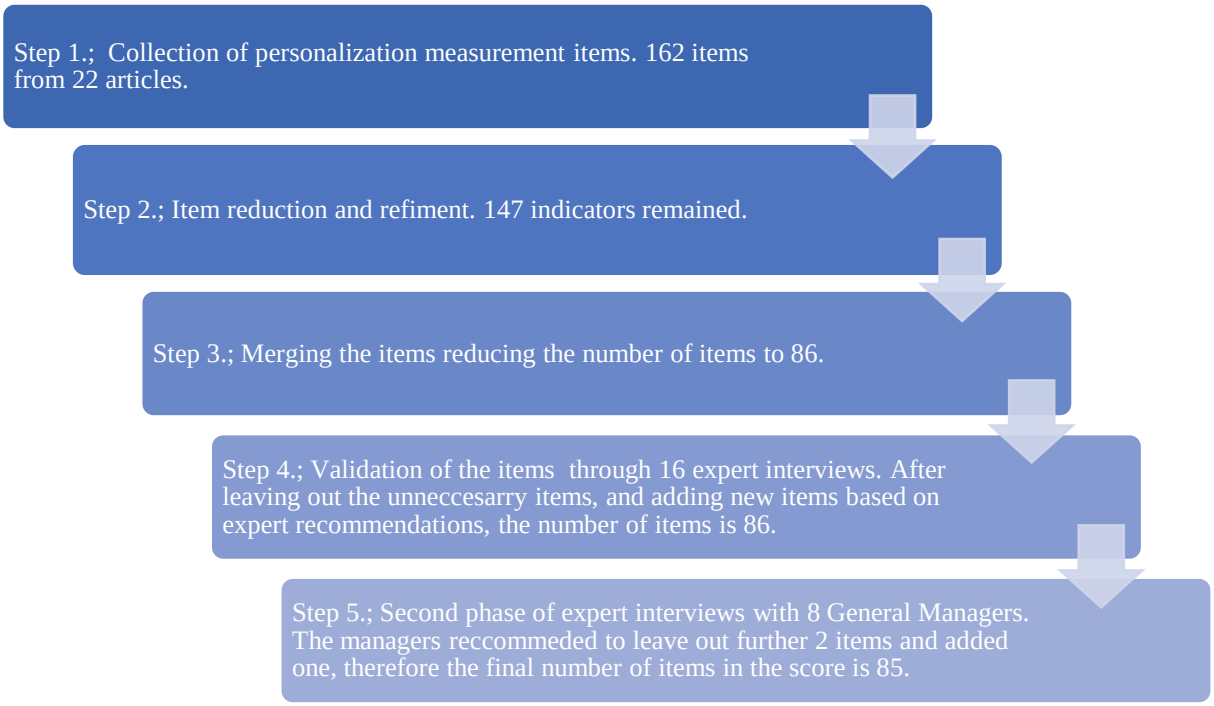
Q9. What is the importance of providing tailored service for hotel managers? **Q10. Is there a relationship between the value of score on the tailored service scale and the importance of providing tailor-made service determined by the hotel manager?**	H4. There is a relationship between the level of tailor-made services and the importance of the tailor-made services determined by the hotel manager.	Spearman
Q11. Is there a difference in the level of tailor-made services in the different phases of guest encounter?	H5. There is a difference in the tailor-made service level in the guest encounter phases.	Paired t-test
Q12. Is there a difference in the level to which guest encounter stages are tailor-made? Is there a difference in the level of tailor-made services related to guest encounter stages?	H6. There is a difference in the tailor-made service level in the guest encounter stages.	Paired t-test

(Sourve:Own Edit)

5. Building the Scoring Model

This study aimed to conceptualize the measurement of tailor-made service. For this process, the scale development procedures developed and employed by, among others, Churchill, (1979) Parasuraman et al., (1985), Chi et al., (2020), Elgaraihy (2013) were used to create the hotel tailor-made service measurement model (**Figure 39.**).

Figure 37. - Building the Scoring Model



(Source: Own Editing)

The rigorous scale development procedures entailed both qualitative and quantitative research.

5.1. First Step of Building the Scoring Model

The first step was the collection of personalization measurement items. Following the literature review, 162 items were collected from 22 articles. The full list of items can be found in detail in **Appendix 10**. The 22 articles were focusing on various sectors, but 10 of them were concluded in a hotel environment (**Table 8.**).

Table 8. - Literature of Score Building Items

Author	Research focus	Research Context
(Parasuraman et al., 1988)	"A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality"	Retail
(Mittal and Lassar, 1996)	SERQUAL-P (has a personalization scale, encounter)	Retail
(Bettencourt and Gwinner, 1996)	Personal encounter	Fortune 500 company front line employee
(Blom, 2000)	Interface personalization	Mobile phone and e-commerce webpage

(Blom and Monk, 2003)	System personalization	Web portal
(Chellappa and Sin, 2005)	Web personalization	Online Vendors
(Gwinner et al., 2005)	Personal Encounter	Hotel employee
(Ball et al., 2006)	Personal encounter	Bank
(Tam and Ho, 2006)	Ability	Display of the offers on website
(Ekinci et al., 2008)	Service quality and overall attitude toward the firm	Hotel
(Pijls and Groen, 2012)	Personal Encounter	Hotel
(Ariffin and Maghzi, 2012)	Personal encounter	Hotel
(Elgaraihy, 2013)	Personal Encounter	Hospitality
(Ariffin, 2013)	Personal encounters	Hotel
(van der Heijden, 2004 in Ho et al., 2014)	Perceived Usefulness -	using the personalization agent, Books and Song
(Bhattacherjee and Premkumar 2004 Ho et al., 2014)	Attitude Valence - The direction and extremity of an attitude	Using the personalization agent, Books and Song
(Berger and Mitchell 1989 in Ho et al., 2014)	Attitude Confidence	Confidence in the offer made personalization agent
(Xu et al., 2014)	Website personalization	Recommendation agent
(Nyheim et al., 2015)	Perceived personalization - smartphone advertising	Restaurant
(Mody et al., 2017)	Hotel/Airbnb communication and recommendation system	Hotel / Airbnb
(Ozturk et al., 2017)	Online recommendation	Online booking system
(Aydin, 2018)	Advertisement	Social Media
(Morosan and DeFranco, 2019)	Hotel application personalization level	Hotel
(Kapeš et al., 2022)	Personal encounter – problem handling	Hotel

(Source:Own Editing)

5.2. Second Step of Building the Scoring Model

The second step contains item reduction and refinement. Indicators were divided based on touchpoints, phases, and stages. First, they were analysed if the item could be applicable for either category (based on the customer journey model) and were left out in case of duplications (some of their items were identical (Mody et al., 2017; Nyheim et al., 2015)). This meant that a total of 147 indicators remained. Some of the items can be assigned to a specific touchpoint, however, certain behaviour and service offerings can happen during the entire stay, or during the whole guest journey. If the item describes a key "moment of truth" but it could fit the entire customer journey, it was assigned either to the technical or the functional stage. Of course, if an item is assigned to a touchpoint, it will also be assigned to a phase and a stage. If an item is assigned to a phase but not a touchpoint it will still be part of a stage. The items were always placed in the most specific possible level of the model.

5.3. Third Step of Building the Scoring Model

The next step focused on scale purification. After assigning the 147 items they were checked for similarity in meaning and got merged. (**Appendix 11. – 21.)**

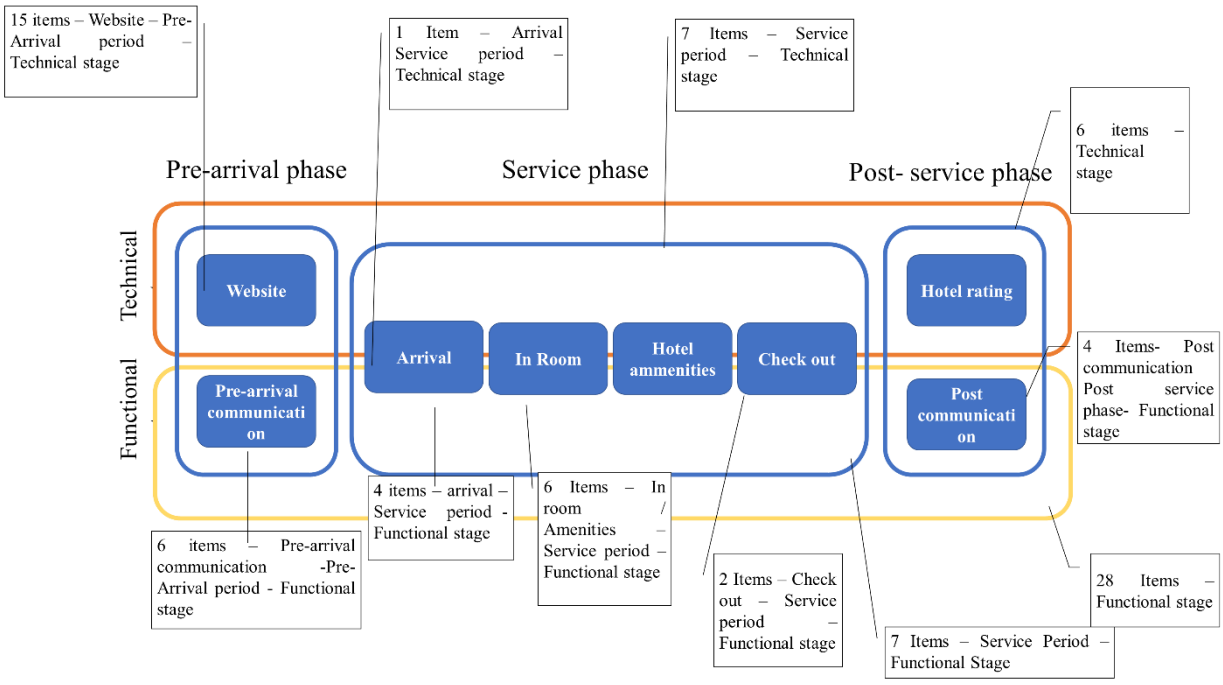
Table 9. - Indicator Numbers after Step Three

Touchpoint	Original number of items	After purification
Website	25	15
Pre-arrival communication	11	6
Arrival	7	5
In-room service and hotel amenities	10	6
Check out	3	2
Post communication	5	4
Stay period	22	14
Functional stage	53	28
Technical stage	11	6
Sum:	147	86

(Source: Own Editing)

The Pre-arrival phase has 21 items in total, the Service phase has 27 items in total, and the post-service phase has 10 items (**Table 9**.). The specific items can be found in **Appendix 32.**

Figure 38. - Distribution of Items



(Source: Own Editing)

5.4. Fourth Step of Building the Scoring Model

The fourth step in creating the scale involved validating the items through expert interviews. Expert interviews, a qualitative method used in political and social research since the 1990s (Döringer, 2021; Van Audenhove and Donders, 2019), aim to gather data and explore specific topics by tapping into the expertise of individuals (Meuser and Nagel, 2009). Wheeler (2019) highlights the value of expert interviews for learning and developing new strategies. Qualitative interviewing focuses on understanding experiences and perspectives (Edwards and Holland, 2013).

Key features of expert interviews include:

- Respondents being subject-matter experts.
- Emphasis on the respondent's knowledge rather than their personal background.
- Pragmatic approach using guidelines and selective data evaluation (Monke, 2021).

Meuser and Nagel (2009) and Hönke et al. (2008) distinguish between different types of expert knowledge. Experts possess implicit knowledge gained within their specific field and have privileged access to information. Their institutional context shapes this knowledge, which is applied in expert interviews to address specific problems. Operational knowledge pertains to implementing innovations and top management, while contextual knowledge focuses on problem structuring and evaluation.

The items were grouped into five different interview outlines based on service touchpoints, periods, and stages. Two outlines focused on service stages, with one covering the technical stage (29 items) and the other the functional parts (57 items), ensuring no overlap between them. The remaining outlines were organized by service periods: pre-arrival, service, and post-service phases.

The third outline combined pre-arrival and post-service phase items (25 items), as these phases are commonly overseen by marketing professionals, excluding the technical stage items. Another outline included items specific to the service period or touchpoints within it (27 items), encompassing both technical and functional stages without overlapping with other outlines based on phases. A specialized interview outline was dedicated to the post-stay period, featuring 7 items. The specific content of the outlines can be found in items in the **Appendix 33-41**. The interviews were concluded both in person and online, utilizing Zoom and Google Meet. Purposive sampling was employed, reaching out to individuals experienced in the specified stage or phase of the customer journey, including existing professional contacts, cold calling, and recommendations.

The interviews were conducted over four weeks, from June 27th to July 17th, 2022. Questionnaire lengths varied due to the inclusion of items ranging from 7 to 57, resulting in interview durations spanning 15 to 59 minutes (**Table 10**).

Table 10. - Participants of the First Round of Interviews

Name	Position	Background	Phase	Duration
Ákos Gyenes	RESnWEB/Everguest – Hospitality Consultant and Trainer	10 years in Accor, Ramada. Since 2011 RESnWEB net hotel booking Ltd. for independent hotels.	Technical stage	59:20
Gergely Csernák	Senior Account manager at Bit Soft	20 years of experience in hotel Front Office in various positions in Hungary and in. 2 years in hotel software developing.	Technical stage	53:11
Gábor Dencs	Co-founder and CEO at Bonomi	History of working in the marketing and advertising industry (approx. 20 years), in Digital Strategy, Digital Production, Marketing Management and Media Communication	Technical stage	27:36
Dorottya Bánfi	Senior Customer Coach at SabeeApp	International Economics studies with a focus on hotels for research partners Four Seasons and Hilton. At SabeeApp (hotel property management software) for 2 years.	Technical stage	29:43
Alexandra Balázs	Lobby Ambassador at Matild Palace, a Luxury Collection Hotel	6 years in hospitality. Budapest Marriott, small hotels by the Lake Balaton and Veszprém, Abacus Wellness and Business. Ritz Carlton Budapest Guest Relations.	Functional stage	53:45
Anonym	Front Office Manager in a small luxury hotel in urban settings	Student work in 3 and 5-star hotels (1 year) 2 years in Tourism Destination Management office 4 years in 5-star hotel reception followed by work as a sales manager in a 4-star hotel. Has currently been a hotel manager for 2 and a half years.	Functional stage	45:30
Jelger Schotten	Facility coordination by HEYDAY, Facility Management	20 years of service experience, bartender in clubs in Amsterdam, Opera, Airport Hotels Receptionist, Australia and Indonesia Reception and then concierge. Art'otel Amsterdam and W Amsterdam Concierge till 2019. Facility Manager.	Functional stage	55:47
Lilla Balassa	Online Marketing Manager - Aquilo Hotel Panorama, Tihany	Social Media Manager from 2014, entrepreneur, Social media manager trainer since 2018.	Pre-arrival period and Post-service	34:54

			period	
Dr. Fanny Liska	Marketing Manager, Electrostatics, Adjunct Professor, University of Pannonia, Marketing Specialist, Love Szalon Budapest.	Working in Marketing since 2016, has worked with restaurants, hotels and other accommodations. Specialized in service marketing and mass personalization.	Pre-arrival period and Post-service period	36:55
Ádám Nagy	Manager Csesznek, Ferráta Vendégház	Front Office and Marketing functions. 2013-2022	Pre-arrival period and Post-service period	38:51
Eszter Tüttő	Hotel Manager at Hotel Historia**** and Hotel Historia Malomkert	Reception 2010 – 2014, General manager 2014 – 2016, Sales and marketing manager - 2022	Pre-arrival period and Post-service period	15:05
Hajnalka Bújna	Quality Officer, Quality Centre, University of Pannonia	Receptionist 2006 - Front desk manager, 2009 - Front office manager, 2010 – 2011 July	Stay period	41:40
Enikő Kutai	Reception Manager, Montague on the Gardens Hotel	Reception Villa Medici Hotel and Restaurant, 2010, Since 2016, Receptionist – Team Leader – Night Manager -Duty Manager – Reception manager. In Management position since 2018 (The Cavendish London and Montague on the Gardens Hotel)	Stay period	43:52
Kitti Molich	Flight attendant WizzAir	From 2015. Receptionist at Hungest Hotel Sun Resort, Montenegro till 2016. In 2018 In the USA in F&B and Housekeeping. From 2019 Párisi Udvar 5-star hotel from receptionist to Front office Supervisor till 2022 May	Stay period	35:43
Frigyes Vörös	Reception Manager, Villa Medici Hotel and Restaurant	From 2016 in Dual Education reception intern, From 2020 receptionist, 2021 – Front Office Manager.	Stay period	31:32
Kitti Gondos	Reputation Manager at Everguest	10 – 12 years in the hospitality industry. From Reception to Rooms Division Manager. At Everguest for 1.5 years	Post-service period	18:52

(Source: Own Editing)

From the total of 86 items, the interviewees were asked to either take out, comment, or add tailor-made service measuring characteristics. The Full list of items can be seen **in Appendix 33- 41.**

Interviewees were requested to eliminate items from the list if they were deemed unnecessary for measuring the level of tailor-made service based on their experience. In **Table 11.**, certain items were assessed from multiple perspectives, considering both phases and stages. Items that were unanimously deemed unnecessary were automatically removed, unless one interviewee considered it extremely important. The table uses green for indicators marked as highly important, red for suggested removal, and brown for uncertain opinions on whether to keep or remove the indicator from the scoring system. At least two interviewee had to suggest the removal of an item for it to be omitted. After comparing the results, 11 indicators were omitted; I2, I3, I12, I19, I25, I26, I28, I41, I42, I48, and I52. The list of items automatically got reduced to 75. The other items were either removed by one interviewee or were marked as important by and another interviewee, therefore, the detailed elaboration on the exclusion process will be discussed in the next sub-chapters.

Table 11. - Result of the First Interviews

Interviewee ID	Technical 1	Technical 2	Technical 3	Technical 4	Pre-Arrival/ Post-Stay 1	Pre-Arrival/ Post-Stay 2	Pre-Arrival/ Post-Stay 3	Pre-Arrival/ Post-Stay 4	Post - Stay	Functional 1	Functional 2	Functional 3	Stay-Period 1	Stay Period 2	Stay Period 3	Stay Period 4
I1	I1	I1	I1	I1	I1	I1	I1	I1								
I2	I2	I2	I2	I2	I2	I2	I2	I2								
I3	I3	I3	I3	I3	I3	I3	I3	I3								
I4	I4	I4	I4	I4	I4	I4	I4	I4								
I5	I5	I5	I5	I5	I5	I5	I5	I5								
I6	I6	I6	I6	I6	I6	I6	I6	I6								
I7	I7	I7	I7	I7	I7	I7	I7	I7								
I8	I8	I8	I8	I8	I8	I8	I8	I8								
I9	I9	I9	I9	I9	I9	I9	I9	I9								
I10	I10	I10	I10	I10	I10	I10	I10	I10								
I11	I11	I11	I11	I11	I11	I11	I11	I11								
I12	I12	I12	I12	I12	I12	I12	I12	I12								
I13	I13	I13	I13	I13	I13	I13	I13	I13								
I14	I14	I14	I14	I14	I14	I14	I14	I14								
I15	I15	I15	I15	I15	I15	I15	I15	I15								
I16	I16	I16	I16	I16									I16	I16	I16	I16
I17	I17	I17	I17	I17									I17	I17	I17	I17
I18	I18	I18	I18	I18									I18	I18	I18	I18
I19	I19	I19	I19	I19									I19	I19	I19	I19
I20	I20	I20	I20	I20									I20	I20	I20	I20
I21	I21	I21	I21	I21									I21	I21	I21	I21
I22	I22	I22	I22	I22									I22	I22	I22	I22

Interviewee	Technical 1	Technical 2	Technical 3	Technical 4	Pre-Arrival/ Post-Stay 1	Pre-Arrival/ Post-Stay 2	Pre-Arrival/ Post-Stay 3	Pre-Arrival/ Post-Stay 4	Post - Stay	Functional 1	Functional 2	Functional 3	Stay-Period 1	Stay Period 2	Stay Period 3	Stay Period 4
I23	I23	I23	I23	I23									I23	I23	I23	I23
I24	I24	I24	I24	I24												
I25	I25	I25	I25	I25												
I26	I26	I26	I26	I26												
I27	I27	I27	I27	I27												
I28	I28	I28	I28	I28												
I29	I29	I29	I29	I29												
I30					I30	I30	I30	I30		I30	I30	I30				
I31					I31	I31	I31	I31		I31	I31	I31				
I32					I32	I32	I32	I32		I32	I32	I32				
I33					I33	I33	I33	I33	I33	I33	I33	I33				
I34					I34	I34	I34	I34	I34	I34	I34	I34				
I35					I35	I35	I35	I35	I35	I35	I35	I35				
I36					I36	I36	I36	I36	I36	I36	I36	I36				
I37					I37	I37	I37	I37	I37	I37	I37	I37				
I38					I38	I38	I38	I38	I38	I38	I38	I38				
I39					I39	I39	I39	I39	I39	I39	I39	I39				
I40										I40	I40	I40	I40	I40	I40	I40
I41										I41	I41	I41	I41	I41	I41	I41
I42										I42	I42	I42	I42	I42	I42	I42
I43										I43	I43	I43	I43	I43	I43	I43
I44										I44	I44	I44	I44	I44	I44	I44
I45										I45	I45	I45	I45	I45	I45	I45
I46										I46	I46	I46	I46	I46	I46	I46
I47										I47	I47	I47	I47	I47	I47	I47
I48										I48	I48	I48	I48	I48	I48	I48
I49										I49	I49	I49	I49	I49	I49	I49
I50										I50	I50	I50	I50	I50	I50	I50
I51										I51	I51	I51	I51	I51	I51	I51
I52										I52	I52	I52	I52	I52	I52	I52
I53										I53	I53	I53	I53	I53	I53	I53
I54										I54	I54	I54	I54	I54	I54	I54
I55										I55	I55	I55	I55	I55	I55	I55
I56										I56	I56	I56	I56	I56	I56	I56

Interviewee	Technical 1	Technical 2	Technical 3	Technical 4	Pre-Arrival/ Post-Stay 1	Pre-Arrival/ Post-Stay 2	Pre-Arrival/ Post-Stay 3	Pre-Arrival/ Post-Stay 4	Post - Stay	Functional 1	Functional 2	Functional 3	Stay-Period 1	Stay Period 2	Stay Period 3	Stay Period 4
I57										I57	I57	I57	I57	I57	I57	I57
I58										I58	I58	I58	I58	I58	I58	I58
I59										I59	I59	I59				
I60										I60	I60	I60				
I61										I61	I61	I61				
I62										I62	I62	I62				
I63										I63	I63	I63				
I64										I64	I64	I64				
I65										I65	I65	I65				
I66										I66	I66	I66				
I67										I67	I67	I67				
I68										I68	I68	I68				
I69										I69	I69	I69				
I70										I70	I70	I70				
I71										I71	I71	I71				
I72										I72	I72	I72				
I73										I73	I73	I73				
I74										I74	I74	I74				
I75										I75	I75	I75				
I76										I76	I76	I76				
I77										I77	I77	I77				
I78										I78	I78	I78				
I79										I79	I79	I79				
I80										I80	I80	I80				
I81										I81	I81	I81				
I82										I82	I82	I82				
I83										I83	I83	I83				
I84										I84	I84	I84				
I85										I85	I85	I85				
I86										I86	I86	I86				

(Source: Own Editing)

The experts were asked to mention any additional "items" / suggestions that are needed to be considered to measure personalization. The suggestions that were mentioned most often were about employee training, employee encouragement, newsletters and proactivity. These

suggestions will be presented in detail in the following part, where the items will be looked at by stage and phase, and those items that were suggested to be removed by only one expert will be examined.

5.4.1. Technological Stage:

There were 4 experts included in the purification of the items regarding the technological stage of service and included items from I1 – I 29 (**Appendix 33.**).
The experts had some comments regarding the items, which will be considered in a further stage of the research.

- I1 (Our website has features that are personalized for users' preferences) – The hotel should consider the segment and tailor the website accordingly; additional explanation needed.
- I7 (We have a hotel App) - Depends on segment and whether it offers extra features; usually box solutions.
- **I10** (The website acquires the guests' personal preferences and offers services and products that are tailor-made for the guest.) - Can be part of Pre-arrival or Post-service phase; suggested to add questions about newsletters and database to item list. This item can be omitted.
- I14 (Our hotel makes sure that we provide information and products according to our guests' preferences.) was deemed removable by Expert 4 but another interviewee found it to be important. This question also appears in the Pre-arrival phase questionnaire, therefore will not be removed.
- I15 (We aim to advertise our hotel in a way that it feels personalized for our potential guests, even based on previous searches or interests.) - Important for remarketing according to one expert.
- I16 (We place a greeting card with a hand-written message and the guest's name in the room.) - Deemed removable by one expert, but appears in Service phase questionnaire where it was not eliminated, so will not be removed as it is more related to the front office.
- I17 (It is possible for the guest to ask for minor changes regarding the room during their stay.) - Only valid for functional mistakes according to Expert 2.
  I21 (The guest can choose what kind of pillow they want.) - Deemed removable by one expert, but as it appears in Service phase questionnaire and related to front office work, it will not be removed.
- **I24** (Our hotel offers personalized products and services that our customers could not find in another hotel.) - Deemed unnecessary by two experts, so it will be removed.
- I27 (Our hotel application is similar to what most customers use in their everyday lives.) was removed by Expert 4 but not by the other three experts therefore this will stay on the list.

Experts agreed to remove I2, I3, I12, I19, I25, I26 and I28 from the 29 items (**Appendix 34.**).
The following remarks and comments were made by the interviewees during the interview in **Table 12**.

Table 12. - Technology Interviews - Suggestions

Interviewee	Suggestion
Technology 1.	Micro segmented newsletter with different content.
	Post Stay communication– small present for children.
	Can the app do different functions from the website?
	Language “knowledge” if the guest circle is varied.
	Chat bot.
Technology 2.	Are there enough employees to provide personalized services?
	Language knowledge.
	Micro segmented newsletter.

(Source: Own Edit)

Based on the suggestions, the following indicators can be included:

- I87 The hotel does micro-segmentation.
- I88 The hotel sends out segment-based newsletters.

Furthermore, based on the suggestions of the interviewees; I4 can be divided into I4a and I4b.

- I4a The website has a Chat service operated by a chatbot.
- I4b The website has a Chat service operated by an employee.

5.4.2. Functional Stage

There were 3 experts included in the purification of the items regarding the functional stage of service. This stage included items from I30-86. (**Appendix 35.**) With 57 items, this category had the most items to consider.

- I38 (Our hotel / employee gives an individual response to all guest reviews and comments.) - Expert 2 suggested removal, but other experts did not agree, so it will remain.
- **I41** (Guests are walked to the guestroom after check-in.) - Experts had differing opinions, but since it was also marked for deletion in the Stay phase questionnaire, it will be removed from the list.
- I49 (We make sure that all aspects of the room are in good condition and suitable for the guest.) – It was marked by Expert 1 as removable with the suggestions that it should be basic service, however at this stage it will not be removed yet.
- **I58** (The employee has to know the name and / or nationality of the guest.) – Expert 2 deleted it, while others mentioned its usefulness but guest needs are more important. It will be removed.
- I74 (Our employee / hotel recommends products on the basis of preferences of similar-minded consumers.) - It will be kept with minor revision as suggested by experts.
- I82 (Our employees are polite with all guests.) and

- I83 (Our employee aims to treat the guest as a friend rather than a customer.) - They were marked for deletion but did not reach the minimum threshold (2 mentions) for removal.

Based on the criteria mentioned in 3.3.4, I41, I42, I48 and I53 were automatically disqualified and I58 was deleted after discussion. Considering the revisions and suggestions 5 items have been deleted from the list, shrinking it to 52. (**Appendix 36.**)

Table 13. - Functional Interviews - Suggestions

Interviewee	Suggestion
Functional 1.	Is there a financial frame for personalization?
	Are there some small merch items that can be placed in the room or can be given to guests when needed?
Functional 2.	Listening to the guest, as sometimes complaints are not what they are really about.
	Training employees to the standards of service
	Knowledge of the city/ area given by the hotel
Functional 3.	Is there any hotel training for the employees?
	Is it also commitment for the managers?
	Are good performing employees rewarded?

(Source: Own Edit)

Considering the suggestions (**Table 13.**) of the experts the following items will be added:

- I89 The hotel has specific gifts or budget to use when the employee finds a guest should get a gift (birthday, honeymoon special occasion, etc.)
- I90 There are employee trainings for the employee so they can provide the level of quality service the hotel aims to provide.
- I91 Providing personalized service is encouraged by reward.

5.4.3. Pre-arrival and Post-service Phases

In case of the Pre-Arrival and Post-service phases 4 experts were included in the purification process. These phases included items from I1-I15 and I30 to I39 including 24 items in this questionnaire (**Appendix 37.**).

During the previous purification chapters I2, I3, and I12 have already been removed.

- I13 (Our hotel makes sure that we appear as a personalized search result through search engine optimization) - Experts suggested adding that it includes the usage of Google Ads for clarity.
- I14 (Our hotel makes sure that we provide information and products according to our guests' preferences) – It refers to content marketing.
- I30 (Communication by our hotel brand provides our customers with product and service recommendations that are tailor-made for them.) – It is considered during the

design of the communication site.

As 4 items were already removed the list contains 21 items (**Appendix 38.**)

Table 14. - Pre-arrival and Post-service Interviews - Suggestions

Interviewee	Suggestion
Pre-arrival period and Post-service period 1.	Are guest data stored and updated regulary?
Pre-arrival period and Post-service period 2.	Does the hotel provide training to the employee so they can provide good service?
	Is there an employee or external company who is monitoring the statistics?
Pre-arrival period and Post-service period 3.	Is there a person to teach the chatbot?
	Guest satisfaction survey after stay.
Pre-arrival period and Post-service period 4.	Is there a team to big data?
	Option to give preferences.
	Newsletters for micro-segments.
	Supporting content.

(Source: Own Editing)

Based on the suggestions (**Table 14.**), the following items can be added:

- I92 We store and update guest data frequently.
- I93 We have an employee or an external company to analyse our guest data and previous statistics.
- I94 We send out a guest satisfaction survey after the guest checks out.

5.4.4. Post-service Phase

One expert was asked in detail about the post-service phase as a specialized area of the customer journey. From I33 to I39 included 7 items. (**Table 15.**) None of the indicators was removed, however, some additional indicators were suggested. The expert had the following suggestions and remarks.

Table 15. - Post- Service Interview - Suggestions

Interviewee	Suggestion
Post – Service period	Hotel being proactive and sending out “Medallia etc” reviews.
	As arrival should be personalized guests should have a personalized checkout, to encourage feedback.
	Email after checking out.
	Asking for review.
	Answering to review.

	Personalized answers.

(Source: Own Editing)

I37 was rephrased as "We are proactive in encouraging feedback, the guest is invited to interact with us."

Based on the suggestions of this expert, for I94 "We send out a guest satisfaction survey after the guest checked out", was completed with the following comment: for instance Medallia." was specified.

5.4.5. Service Phase

In the case of Stay phase 4 experts were asked about the items. These phases included items from I16-I23 and I40 to I58 including 27 items in this questionnaire (**Appendix 40.**).

I19, I41, I42, I48, I52 and I53 have previously been excluded.

- I16 (We place a greeting card with a hand-written message and the guest's name in the room) - Modified based on feedback from experts who indicated that cards are only placed in VIP rooms.
- I45 (We pay attention to the special requirements of our guests while staying in a hotel.) - Additional question raised regarding whether this behaviour is encouraged by management or not.
- I46 (We respond immediately to all guest requests.) - Feedback varied, with one expert mentioning the need for reasonable response limits, while another suggested deletion. However, as the deletion suggestion came from a single expert, it did not meet the threshold for removal.

The other items have not reached the threshold to be deleted as there was only one expert who wanted to delete them. The final list includes 21 items (**Appendix 41.**). Recommendation to add items are in **Table 16**.

Table 16. - Service Period Interviews - Suggestions

Interviewee	Suggestion
Service-period 1.	Is there employee training?
	Is there a reward system for the employee?
	Is there a chance to ask for a completely empty minibar?
	Do the employees take the initiative and are proactive in getting to know the guests?
	Language knowledge of the sum of the employee.
	Is there a function on the TV that writes a welcome message with the guest's name?
	Knowledge of the city/ area given by the hotel.
Service -period 2.	Important to hire staff that are interested in service.
	How is the work environment?
	Is there encouragement from the hotel to provide tailored service?
	Is the management open to supporting (financially, time for time etc.) the staff when they are doing an exemplary job?
	Is there service training?
	Knowledge of the city/ area given by the hotel.

Service -period 3.	Recognizing when a guest needs more personal communication.
Service -period 4.	Guest can request/choose to have his/her favourite newspaper delivered in the room.
	Guest will see their names on the television automatically with a welcome message once they get to the room.
	Guest preferences and relevant Guest Experience Management information are collected and updated continuously in an internal system (with different methods) to have an up-to-date list about any guests' preferences -> easier to prepare for the arrival and make the stay more personalized.
	Fast/express check-in is enabled for multiple returning guests (no need to show ID/passport again, only if those data changed since the last stay) as well as express check-out.

(Source: Own Editing)

As training and reward systems were mentioned additionally both in the functional interviews and here I54, I55 and I56 got the additional comment that "the behaviour is encouraged and rewarded".

Employee training and rewarding, just like data collection were already added previously.

- I95 Our employees are proactive and take the initiative to get to know the guests better.
- I96 We have and use the function on the TV to display the guest's name and welcome the guest into the room.
- I97 We aim to choose an employee who is motivated in guest service.
- I98 Fast check-out and check-in are granted for regulars.

After removing items from the list, the list shrank however with the additional suggested Items we have 88 items in total (**Appendix 42.**).

5.5.Fifth Step of Building the Scoring Model

In the second phase of interviews, interviewee selection criteria included either a minimum of 10 years of hospitality experience or current employment as a general manager. General managers possess a comprehensive understanding of the entire hotel process. Two interviewees from the first round, Ákos Gyenes and Kitti Gondos, were invited to participate in the second phase due to their extensive and diverse hotel experience (**Table 17.**). Ákos Gyenes has 10 years of managerial experience in Accor, Ramada, and as the founder of RESnWEB net hotel booking kft. He also works with hotels as a coach. Kitti Gondos has 10-12 years of experience in the hospitality industry and worked as a Rooms Division Manager. The remaining interviewees currently serve as general managers. Detailed background in **Appendix 43.**

Table 17. - Participants of the Second Round of Interviews

Name	Position	Duration
Horváth Tibor	Park Inn Zalakaros**** - General Manager	54:36

Sívó Roland	Aquaworld Resort Budapest**** - General Manager	42:45
Juhász Gábor	Tihany Aquilo Hotel Panoráma*** - General Manager	01:07:19
Csere András	Caramell Premium Resort Superior**** - General Manager	53:38
Németh Marietta	Lotus Therme Hotel & Spa***** - Operation Manager	37:38
Parádi Ádám	Danubius Hotel Marina and Danubius Hotel Annabella - General Manager	43:35
Fazekas Eufrozina	Keszthely Hotel Helikon****superior - General Manager	45:58
Kovács Krisztina	Bonvital Wellness & Gastro Hotel****superior - General Manager	41:16

(Source: Own Editing)

In the second round of interviews (**Table 17.**), indicators were presented and discussed with General Managers in both in-person and online sessions using Zoom and Google Meet. Purposive sampling was employed, reaching out to General Managers with established relationships, as well as through cold calling and recommendations from previous interviews. The second round had multiple objectives:

1. Seeking feedback from General Managers to ensure their understanding of the indicators aligned with the intended meaning based on the literature.
2. Gathering recommendations for removing or adding additional items.
3. Seeking suggestions for a question order more suited to the practical mindset of managers rather than a purely scientific survey structure.

The criteria to leave out an indicator remained the same. If two or more experts agreed that the indicator is not important to measure the tailor-made service level, the item was omitted.

Twelve indicators were mentioned during the interviews, but I5, I16a, I16b, I40, I49, I53, I59, I73, I75 and I85 were only suggested once, therefore these indicators were not removed. I80 was mentioned by two experts and I83 was suggested by three experts to be left out. Hence, I80 and I83 were left out.

- I80 - Our employee takes time (and has time) to get to know the guest personally.
- I83 - Our employee aims to treat the guest as a friend rather than a customer.

The interviews recommended adding a final indicator for the booking engine's customization capability, which was subsequently included in the scale. Participants were also asked to determine whether certain items should be assigned to the functional or technical stage.

- I99- The booking engine has functions that allow users to customize their bookings (according to their preferences) when booking a room. (For example, what kind of pillow do you want, what kind of massage do you want, other services.)]

Table 18. - Indicator Number after Step Five

Touchpoint	Original number of Items based on Literature	After purification	After the two rounds of expert interviews
Technical stage – Pre-Arrival phase - Website	25	15	11
Functional Stage - Pre-Arrival phase - prearrival communication	11	6	8
Arrival	7	3	4
In Room service and Hotel amenities	17	15	15
Check out	3	2	2
Functional Stage – Post-Service phase - Post communication	5	4	5
Stay period	15	7	4
Functional stage only	53	28	30
Technical stage only	11	6	8
Total	147	86	85

(Source: Own Edit)

In the final scale 19 items are specifically Pre-arrival phase, 22 Service phase, 5 post- service phases (**Table 18.**) while looking at the stages, 26 items focus on the technical stage of service, while 59 focuses on the functional part of service (**Table 19.**).

Table 19. - Final Indicator List

Place of Item	Indicator ID	Indicator
Technical, Pre-Arrival, Website	I1	Our website has features that personalized for the users' preferences (for instance based on segments they can choose to browse between offers to their specific needs or interests.)
Technical, Pre-Arrival, Website	I11	Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.
Technical, Pre-Arrival, Website	I13	Our hotel makes sure that we appear as a personalized search result through search engine optimization.
Technical, Pre-Arrival, Website	I4a	The website has a Chat service operated by a chatbot.
Technical, Pre-Arrival, Website	I4b	The website has a Chat service operated by an employee.
Technical, Pre-	I5	The website has features for the visually impaired.

Arrival, Website		
Technical, Pre-Arrival, Website	I6	Our website automorphically fits the device (e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.
Technical, Pre-Arrival, Website	I7	We have a hotel App
Technical, Pre-Arrival, Website	I8	The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.
Technical, Pre-Arrival, Website	I9	The website acquires the specific needs of the guest and shows service recommendations based on their personal needs.
Technical, Pre-Arrival, Website	I99	The booking engine has functions that allow users to customize their bookings (according to their preferences) when booking a room. (For example, what kind of pillow do you want, what kind of massage do you want, other services.)
Technical, Arrival	I96	We have and use the function on the TV to display the guest's name and welcome the guest into the room.
Technical Stage - Service Period	I17	It is possible for the guest to ask for minor changes regarding the room during their stay.
Technical Stage - Service Period	I18	The guest can choose a specific temperature they want their room to be. (And the hotel will even set the room to that temperature)
Technical Stage - Service Period	I20	The guest can choose the style and the type of the bedding
Technical Stage - Service Period	I21	The guest can choose what kind of pillow they want.
Technical Stage - Service Period	I22	The guest can choose to have no alcohol in their minibar
Technical Stage - Service Period	I23	We put the favourite drink of the guest in the room even if that is not the brand the hotel normally works with
Technical	I27	Our hotel application is similar to what most customers use in their everyday lives.
Technical	I29	The hotel app can provide the guest with personalized services, products, or information tailored to their specific hotel stay
Technical	I87	The hotel does micro-segmentation.
Technical	I88	We have an employee or an outsider company to analyze our guest data and previous statistics.
Technical	I89	The hotel has specific gifts or budget to use when the employee thinks a guest should get a gift (birthday, honeymoon special occasion, etc.)
Technical	I91	Providing personalized service is encouraged and rewarded.
Technical	I92	The hotel sends out segment-based newsletters.
Technical	I93	We store and update guest data frequently (even before the check-in

		or after the check-out) that we use during re-marketing campaigns.
Service Perioud – Functional Stage	I52	The hotel staff helps with the luggage
Service Perioud – Functional Stage	I54	We encourage the employees to display personal warmth in their behaviour.
Service Perioud – Functional Stage	I55	We encourage the employees to be approachable.
Service Perioud – Functional Stage	I56	We encourage the employees to make eye contact with the guest during a conversation.
Service Perioud – Functional Stage	I57	We are doing everything to understand the special requirements of the guest while staying at the hotel.
Functional, Pre-arrival, communication	I14	Our hotel makes sure that we provide information and products according to our guests' preferences.
Functional, Pre-arrival, communication	I15	We aim to advertise our hotel in a way that feels personalized for our potential guests, even based on previous searches or interests.
Functional, Pre-arrival, communication	I30	Communication by our hotel brand provides our customers with product and service recommendations that are tailor-made for them.
Functional, Pre-arrival, communication	I31	We recommend products and services that are personalized to our customer's interests based on our communication with that customer. (Before their arrival at the hotel).
Functional, Pre-arrival, communication	I32	We recommend products and services that are personalized to our customer's interests based on the basis of preferences of similar-minded consumers. (Before their arrival at the hotel).
Functional, Pre-arrival, communication	I33	We aim to use personalized communication so our brand can make the guest feel that they are a unique customer.
Functional, Pre-arrival, communication	I34	We aim to give personalized recommendations in a timely way.
Functional, Pre-arrival, communication	I35	We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc).
Functional, Arrival	I16a	We place introduction greeting card with a printed message and guests name in the room.
Functional, Arrival	I16b	We place introduction greeting card with a hand-written message and guests name in the room.
Functional, Service phase,checkout	I50	We give a warm "goodbye" after checking out at the counter.
Functional,	I51	Based on a previous conversation with the guest we are recommending

Service phase,checkout		them with activities for the last day.
Functional, Service phase, In - room	I43	We place different welcome gifts in the guestroom (of VIP guest).
Functional, Service phase, In - room	I44	The hotel operates working hours to be appropriate to all its customers.
Functional, Service phase, In - room	I45	We pay attention to the special requirements of our guests while staying in a hotel.
Functional, Service phase, In - room	I46	We respond immediately to all guest requests.
Functional, Service phase, In - room	I47	We make sure, that there are appropriate meals for all guest (religion, allergies, dietary restrictions).
Functional, Service phase, In - room	I49	We make sure that all aspects of the room are in good condition and suitable for the guest.
Functional, Service phase, Arrival	I40	We aim to provide an authentic warm welcome to the guest
Functional, Post-service, Post communication	I36	Our hotel adjusts the response to the specific problem of the guest.
Functional, Post-service, Post communication	I37	We are proactive in encouraging feedback, the guest is invited to interact with us.
Functional, Post-service, Post communication	I38	Our hotel / employee knows or aims to find exactly to whose review it responds
Functional, Post-service, Post communication	I39	Our hotel / employee gives an individual response to all guest reviews and comments.
Functional, Post-service, Post communication	I94	We send out guest satisfaction surveys after the guest checked out. For instance, Medallia.
Functional	I59	Our employee changes their behaviour to suit the needs of the guest.
Functional	I60	Our employee changes their behaviour to suit the needs of the situation.
Functional	I61	The employee is empathetic towards the guest when they have a problem.

Functional	I62	The employee responds immediately to guest requests.
Functional	I63	When our employee promise to do something by a certain time, they do so.
Functional	I64	We make sure that our information is accurate and update our records frequently. (During the stay)
Functional	I65	Our employee is talented and displays a natural expertise in case of all requests.
Functional	I66	Our employee is efficient.
Functional	I67	Our employee aims to exceed guest expectations
Functional	I68	Our employee / hotel personalizes goods and services that are based on information that the guest has voluntarily given out (such as age range, salary range, Zip Code) but cannot identify them as an individual.
Functional	I69	Our employee / hotel personalizes goods and services that are based on information that the guest gave voluntarily and can identify them as an individual (such as name, shipping address, card information).
Functional	I70	Our employee can customize the service offering to the needs of the customer. (Example: food allergies etc)
Functional	I71	Our employee / hotel makes sure to take the time and understand the specific demands
Functional	I72	During the stay Our employee / hotel offers customers products and services that satisfy their specific needs
Functional	I73	Our employee / hotel anticipates what the guest wants before they ask.
Functional	I74	Our employee / hotel recommends products on the basis of the preferences of similar-minded consumers.
Functional	I75	We make sure that the hospitable behaviour from our employees seems to be motivated by genuine needs to please and care for their guests as an extension of their characteristics.
Functional	I76	Our hotel / employee considers the best interest of the guest our / their top priority.
Functional	I77	Our hotel / our employee aims to make the guest feel like an important person.
Functional	I78	Our employee always tries to be helpful in solving guests' problems, even coming up with unique solutions.
Functional	I79	Our employee aims to give guests individual attention while they are in the hotel.
Functional	I81	The hotel employee treats guests with full respect.
Functional	I82	Our employees are polite with all guests.
Functional	I84	Our employee is friendly with all guests.
Functional	I85	It is important that the guest feels that building a good relationship rather than making money seemed to be the most important drive of the

		hotel.
Functional	I86	We allow / encourage our employee to move to a familiar (informal) talk with the guest who needs that
Functional	I90	There are employee trainings for the employee so they can provide the level of quality service the hotel aims to provide
Functional	I95	Our employees are proactive and take the initiative to get to know the guest better.
Functional	I97	We aim to choose employees who are motivated in guest service.
Functional	I98	Fast check-out and check-in are granted for regulars.

(Source: Own Edit)

Looking at the coefficient of variation (CV) - which provides a standardized measure of dispersion, allowing for comparison of the relative variability - when combined into stages and phases, their importance showed homogeneity within a 10% range. Both the Pre-arrival and Post-service phases had approximately 10% homogeneity, with a median of 8 and a mode of 10, indicating general agreement among respondents (**Table 20**.).

Table 20. - CV of the Phases

	CV%	Median	Modus
Pre-arrival phase	11.05	8	10
Service-phase	8.14	9.5	10
Post-service phase	11.76	10	10

(Source: Own Edit)

When looking at the stages, both the technological and functional stage (**Table 21.**), are below 10%.

Table 21. - CV of the Stages

	CV%	Median	Modus
Technological stage	8.4	8	10
Functional stage	9.67	9.5	10

(Source: Own Edit)

These results suggest that all together the experts agreed in the importance of concepts, such as focusing on technological stage items, or focusing on the service phase, but they disagreed in the in specific scores.

5.6. Value of the Scale

Veres (2008) agreeing with the Kano model suggest that certain "must" attributes that have to be fulfilled should be measured on a binary scale. For instance, air passengers expect the service provider to prevent a plane crash. Therefore, the tailor-made service scale consists of two types of values. Indicators related to the technical stage are tangible elements, such as a website or hotel application. These either present or not and will be measured on a 0-1 scale. There are 26 items in the technical stage, totalling a value of 26.

The functional stage items can be measured on a five-point Likert-type scale, commonly used in service quality (Bouranta et al., 2009) and hotel research, (for example: (Ariffin, 2013; Babakus and Mangold, 1992; Hayes, 1992; Lalicic and Weismayer, 2017; Yadegaridehkordi et al., 2018)) This scale was chosen for clarity (Babakus and Mangold, 1992; Hayes, 1992), and according to Prentice et al., (1998), it is more appropriate scale for European surveys. A five-point Likert-type scale was used in Babakus and Mangold (1992). It helps increase response rates and reduce respondents' frustration (Krosnick 1996). General managers, as experts in hotel service evaluation, find the five-point scale appropriate. Indicators related to the functional phase involve actions performed for guests, allowing for a degree of implementation. If a hotel does not utilize the suggested service technique, it is rated as 0, while the highest degree of implementation is rated as 5 based on self-evaluation.

However, since some indicators may not be present in the hotel even in the functional stage, the scale ranges from 0 - 'not implemented at all' to 5 - 'implemented in every situation'. With a total of 59 indicators in the functional stage, hotels can score a maximum of 295 points.

Therefore, a hotels' tailor-made service score can be anywhere from 0 – 321.

Conclusion of Building the Scoring Model

In this subsection, the complete process of scale development was presented. The scale development started with literature search process and meticulous refinement, followed by detailed evaluation of hotel professionals, who have provided valuable insights.

Following the tedious analyses of each indicators a second round of professional interviewees ensured that the scale is professionally accurate. The newly developed scale aims to include all the important aspects of the research till this point. It is built using the new tailored customer journey model and includes personalization, customization, and co-creation elements. The scoring model includes both the tangible and intangible parts of service and considers both human and technological aspects of tailor-made service.

This scale, endorsed by hotel and service professionals, is not only suitable for measuring the overall level of service personalization but also allows for separate evaluation of service stages and phases.

6. Quantitative Research

This chapter introduces the process of collecting the data and its analyses. First, the population will be defined, and then the questionnaire structure will be introduced.

Quantitative research, in contrast to qualitative research, deals with numerical data or can be converted into numbers (Sheard, 2018). After creating the measurement scale, the next step is distributing it among hotels. First, the scale was incorporated into a questionnaire with questions about the hotels' characteristics and then sent to the HHRA hotel members. With the questionnaire, the General Managers' self-assessment of their services was collected in a structured and standardised way (Majoros, 2011; Mitev, 2019).

6.1. Data Collection

To distribute the questionnaire, a group of hotels needed to be selected for analysis. The Hungarian Hotels and Restaurant Association (HHRA) served as the database and population for Hungarian hotels, consisting of 458 hotel members introduced in **Chapter 3.1.5.**

The questionnaire was transformed into an online survey using LimeSurvey and distributed via email. The HHRA played a crucial role in endorsing and distributing the survey, which was sent out on October 3, 2022. Reminder emails were sent weekly using the HHRA database. Regional presidents and vice presidents, such as those from the East, Great Hungarian Plain, South Transdanubia, and Budapest region, personally forwarded the survey to their regional members. Additionally, MORGENS Design Kft, TouchgameTable, and Previo Kft hotel software shared the survey with their HHRA member clients. Personal invitations were extended to regional meetings by the West- and the Balaton region president, allowing for in-person engagement with hotel General Managers. Direct connections were made with the director of the Danubius hotel group and Accent hotels.

Phone calls were made to all registered hotel members in the North, East, West, and South-Transdanubia regions listed on the HHRA website. The survey was last sent out on November 15, 2022.

6.2. Questionnaire:

The questionnaire can be divided into two main parts:

General questions regarding the hotel characteristics: the size, the type, guest type and other hotel characteristics. This questionnaire section consists of closed questions, including multiple-choice and scale-based questions. It also includes four open questions regarding hotel representative information, hotel size, and postcode. The closed questions primarily consist of simpler yes/no questions and ranking questions. Three questions assess the importance of tailor-made service for the hotel or hotel manager using a 7-point Likert scale. The choice of a 7-point scale is based on the original Likert scale developed by Rensis Likert in 1932.

Tailor-made service scale: this part of the questionnaire aims to measure the extent to which the guest journey touchpoints are tailor-made. The previously presented measurement system was imported into the survey.

The tailor-made service scale as presented in the previous subsection, has two measurement options a 0-1 and a 0-5 scale or implementing it into the, yes/no and a 0-5 scale. The demographic questions of the questionnaire survey can be seen in **Appendix 44**.

6.3. Sample Description

After cleaning the data, 105 hotels remained in the sample, which, according to the HHRA feedback, is within the range of the "member hotels' willingness to respond" (90-120 fillings) to surveys done by the HHRA. As the Quality rating is under evaluation (as mentioned in **Chapter 3.1.4.**), the collected data can only be compared to the dataset from October 2022. Based on the data, 22.93% of the HHRA members participated in the survey.

Table 22. - Participants by HHRA Regions

	Not assigned	2	2 sup.	3	3 sup.	4	4 sup.	5	5 sup.	All	%
Western Region	**2**	**1**		**2**	**2**	**11**	**2**		**1**	**21**	**36.84**
South Transdanubia Region			1	2		1	1			**4**	**13.79**
Northern Region	**1**			5	4	13	5	1		**29**	**36.25**
Eastern Region				2		4	4	3	1	**14**	**8.81**
Great Hungarian plain		1		3	1	8	1			**14**	**28.57**
Balaton Region	**1**	3		6	1	1	1			**13**	**27.66**
Budapest Region				1	1	8				**10**	**27.03**
All	**4**	**5**	**1**	**21**	**9**	**46**	**14**	**4**	**2**	**105**	**22.93**
%	**2.31**	**62.50**	**100**	**26.92**	**34.62**	**36.80**	**42.42**	**44.44**	**100**	**22.93**	

(Source: Own Edit)

Most HHRA hotels are in Budapest and its surroundings, with 131 hotels in the city and 28 in the surrounding areas. The response rate from this region was the lowest at 8.81% (**Table 22.**). Most hotels, 166 in total, are located in Western Hungary, with a survey completion rate of 32.53%. The eastern region of Hungary had a completion rate of 27.81% (**Table 23**.).

Table 23. - Participants by Greater Regions

	All hotels	Participation hotels	% of participants
West region	166	54	32.53%
Budapest region	159	14	8.81%
East region	133	37	27.81%

(Source: Own Edit)

According to Finn et al. (2000), the response rate can be accepted between 10 - 40% in the case of surveys, and as the cumulative results (N=105) are close to 23% therefore, acceptable.

Table 24. - Hotel Chain Membership

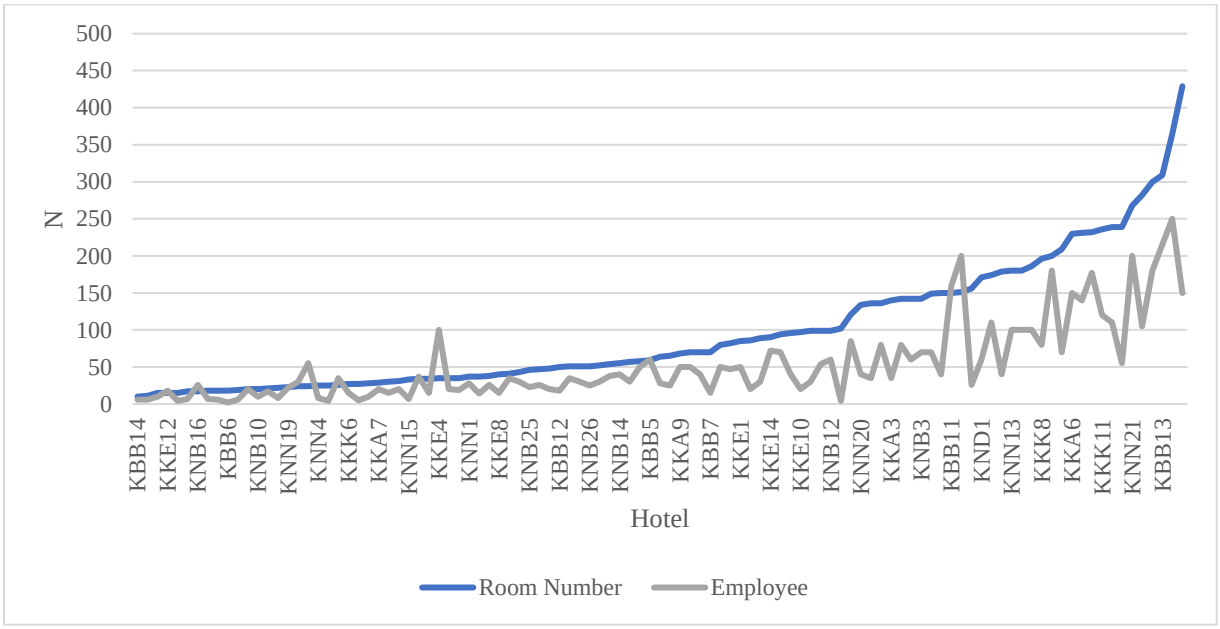
		Region							Total
		Great Hungarian Plain	Balaton	Budapest	South Transdanubia	North	East	West	
Hotel Chain Member	Yes	4	3	10	0	5	4	5	31
	No	6	26	4	4	9	9	16	74
Total		10	29	14	4	14	13	21	105

(Source: Own Edit)

Among the participants, 31 hotels are part of a hotel chain, most of them from the Budapest region, which has significantly more chain members then the other regions (**Table 24**; p=.003)

The hotel size is between 10 – 429 while the employees working in the establishments (in grey on **Figure 41.**) are from 2 - 250 persons.

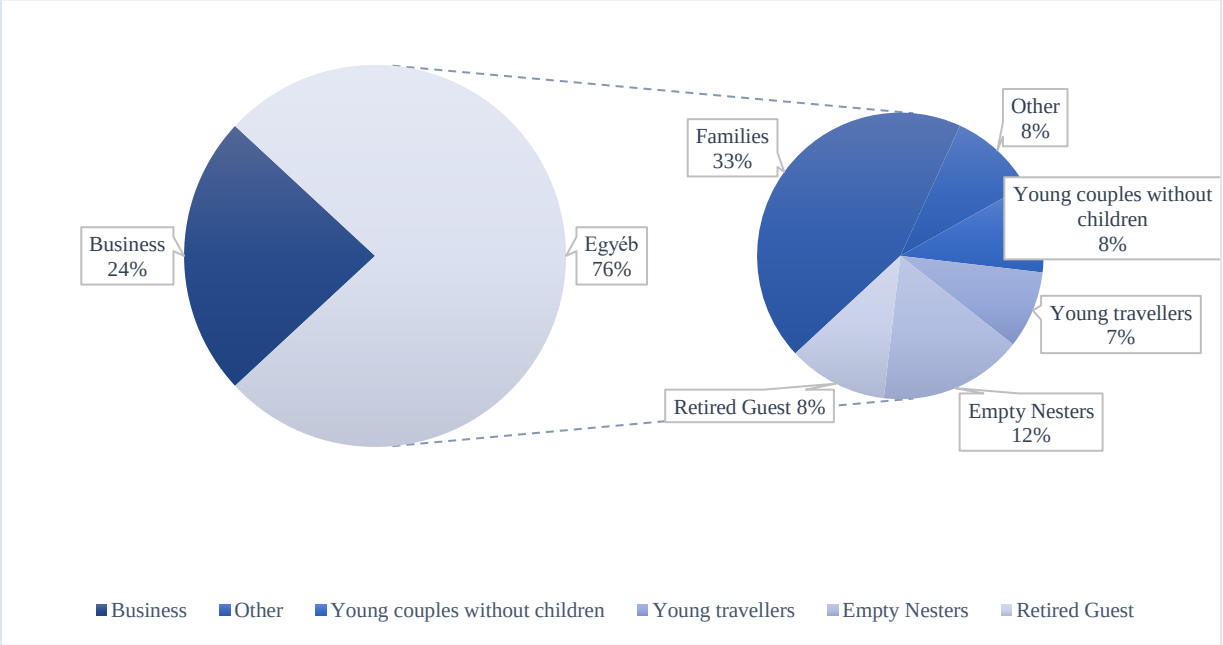
Figure 39. - Room and Employee Numbers



(Source: Own Edit)

Most hotels target leisure guests (76%), and the most common leisure guests as primary target group are families. More hotels have families as their primary target group (33%) then business guests (24%). Young people 7%, young couples without children and retired guests are around 8-8%, and empty nesters representing 12% of all (**Figure 42.**).

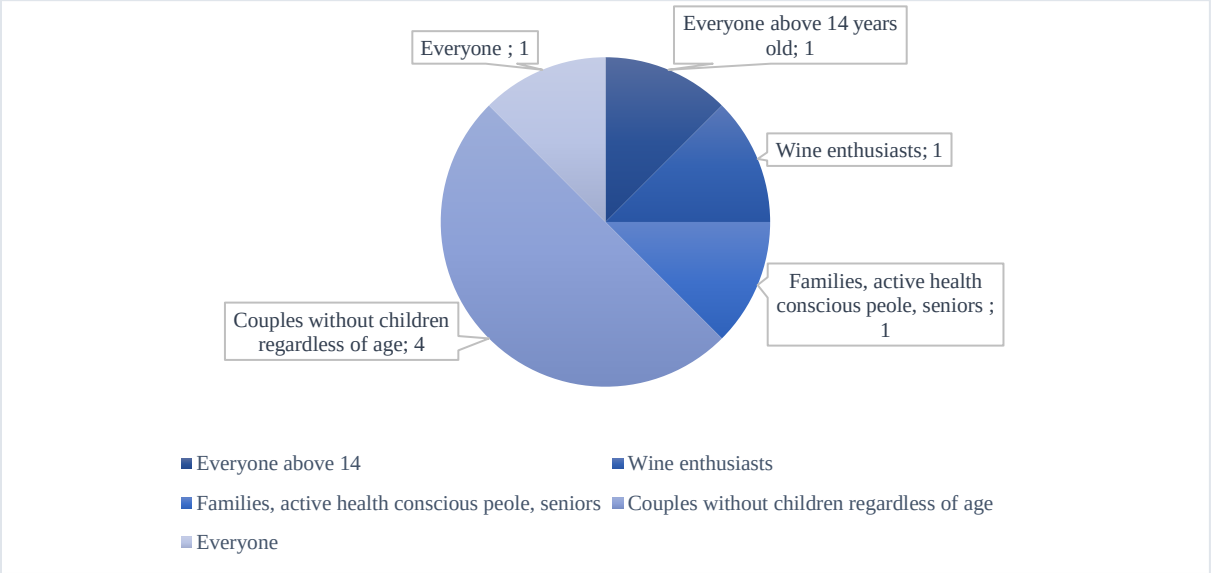
Figure 40. - Target Groups



(Source: Own Edit)

8% of the participants selected "other" as their target group, with the most common specification being couples without children, regardless of age. (**Figure 43.**) When combining all hotels catering to couples without children, they represent 24% of the population. As a result, the most prevalent target groups are families, businesses, and couples of all ages.

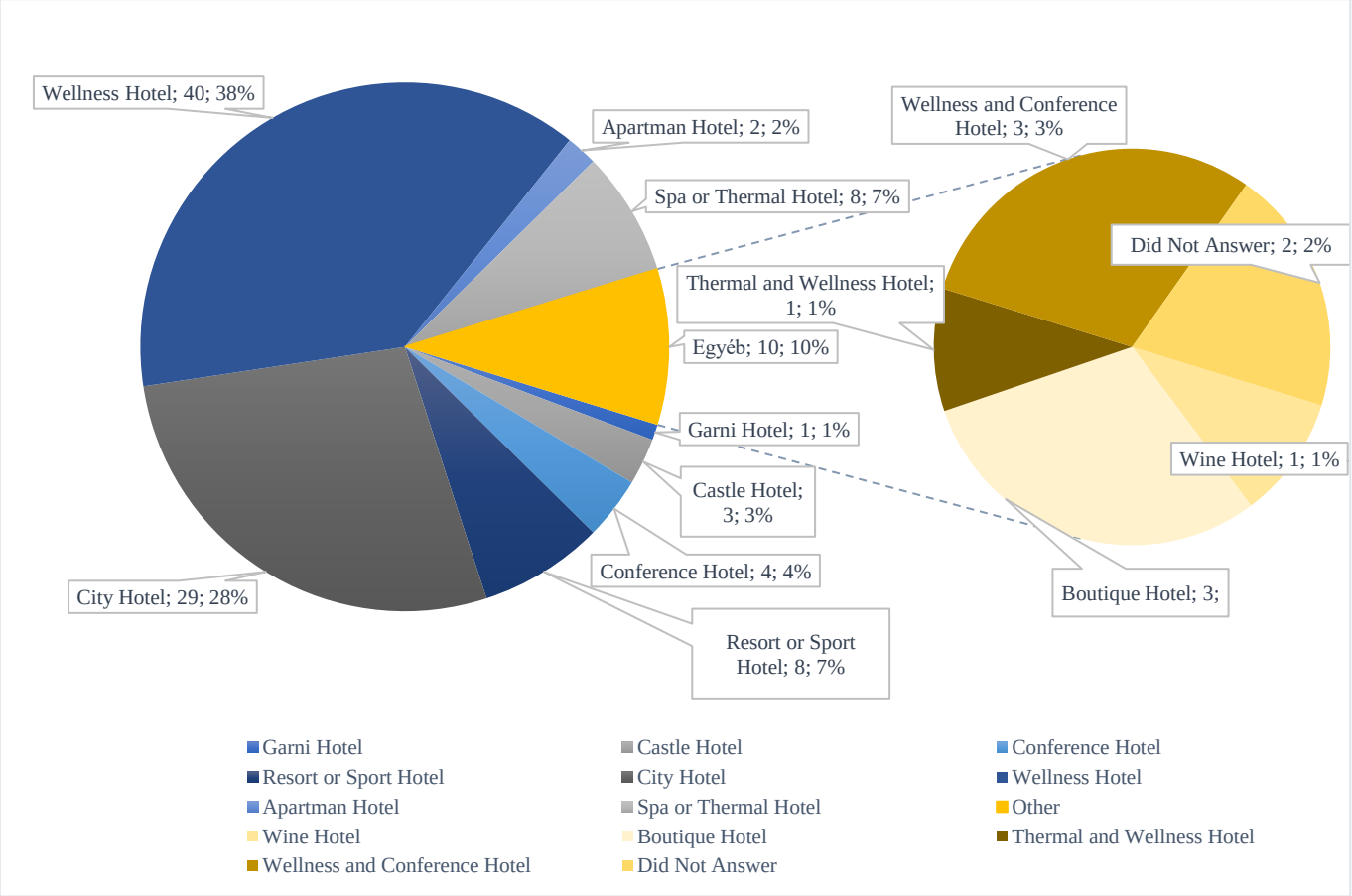
Figure 41. - Target Group - Other



(Source: Own Edit)

Most of the participants are wellness (38%) and city hotels (28%) (**Figure 44.**).

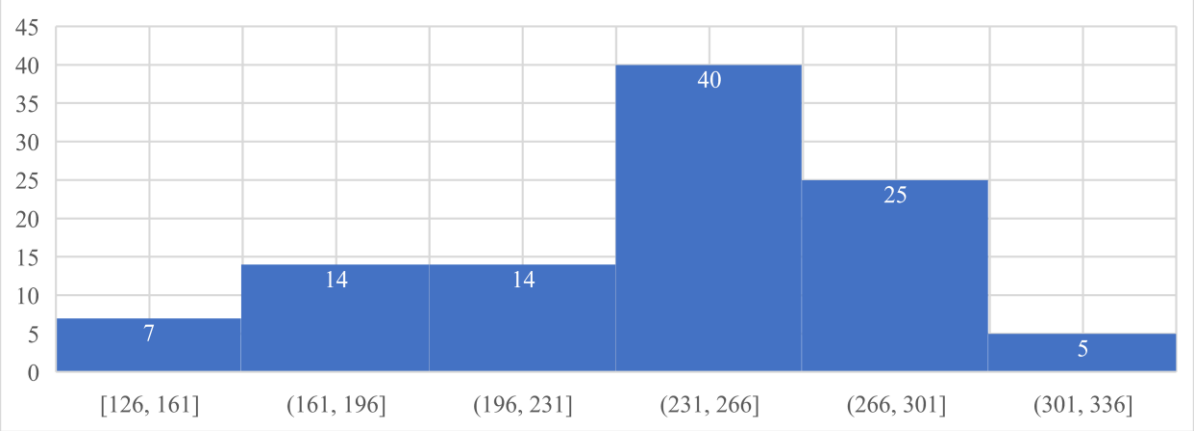
Figure 42. - Hotel Types



(Source: Own Edit)

The total score for the tailor-made survey is 321, and the hotels participating in the survey reached between 126 – 321. Only one hotel has reached the maximum possible score. 23 hotels scored under 200 and only 5 cored above 300 (**Figure 45.**).

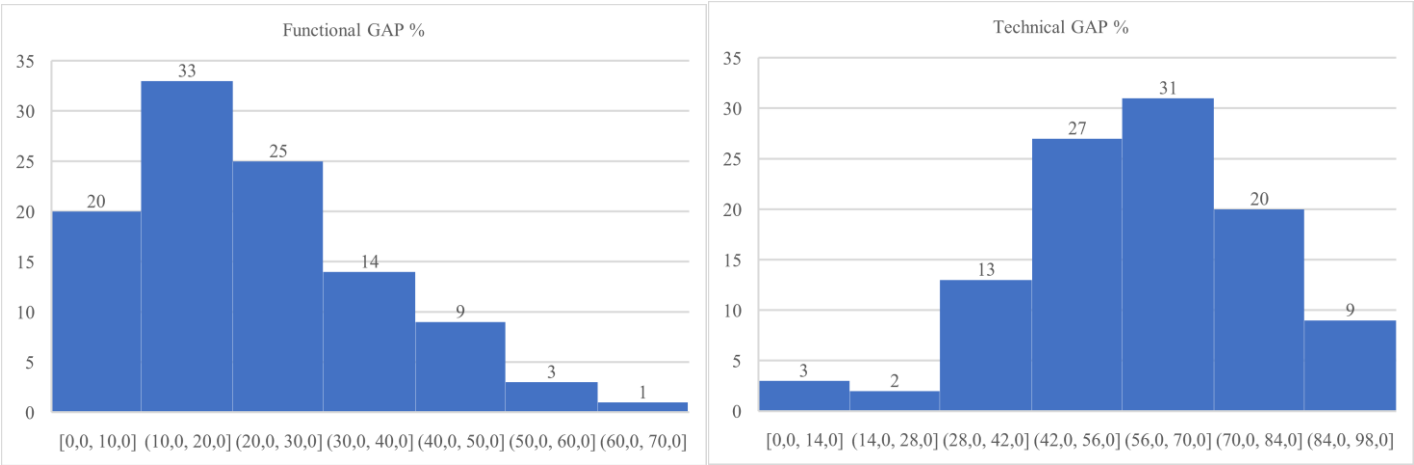
Figure 43. - Distribution of the Hotel Tailor-made Service Scores



(Source: Own Edit)

Technical stage measures up to a maximum of 26 points while the functional stage is 295. The size of the GAP expressed in percentage is smaller in case of the functional Items score that in the Technical Items score (**Figure 46.**).

Figure 44. - Functional and Technical GAP



(Source: Own Edit)

Therefore, most hotels scored higher in the functional sub-score that in the technical-sub score.

6.4. Analysis of the Hypotheses

6.4.1. Hypothesis 1 and Hypothesis 2

(Hypothesis 1) - Hungarian hotels can be grouped in different clusters according to the tailor-made service.

and

(Hypothesis 2) - Tailor-made service indicators can be grouped into different clusters based on the performance of the hotel.

6.4.1.1. Testing Hypothesis 1 and 2

To test hypothesis 1 and hypothesis 2, bi-cluster analysis was utilized, a novel data mining technique in social sciences (Kosztyán et al., 2019a). Bi-clustering allows for simultaneous clustering of both rows and columns. While bi-clustering algorithms have been used in social, business, and economic studies (Banász et al., 2023; Kosztyán et al., 2019b), their application in hotel and service quality research is relatively new. Bi-clustering is variance based; according to Kosztyán et al., (2019a), two types can be differentiated;

- BIC1: Bi-clusters with constant values (in rows and/or columns) - reorder the matrix's rows and columns to bring similar ones closer and identify bi-clusters with constant values.
- BIC2: Bi-clusters with similar values (on rows and/or columns) - algorithms focus on finding bi-clusters with similar values in rows and columns (Kosztyán et al., 2019a).

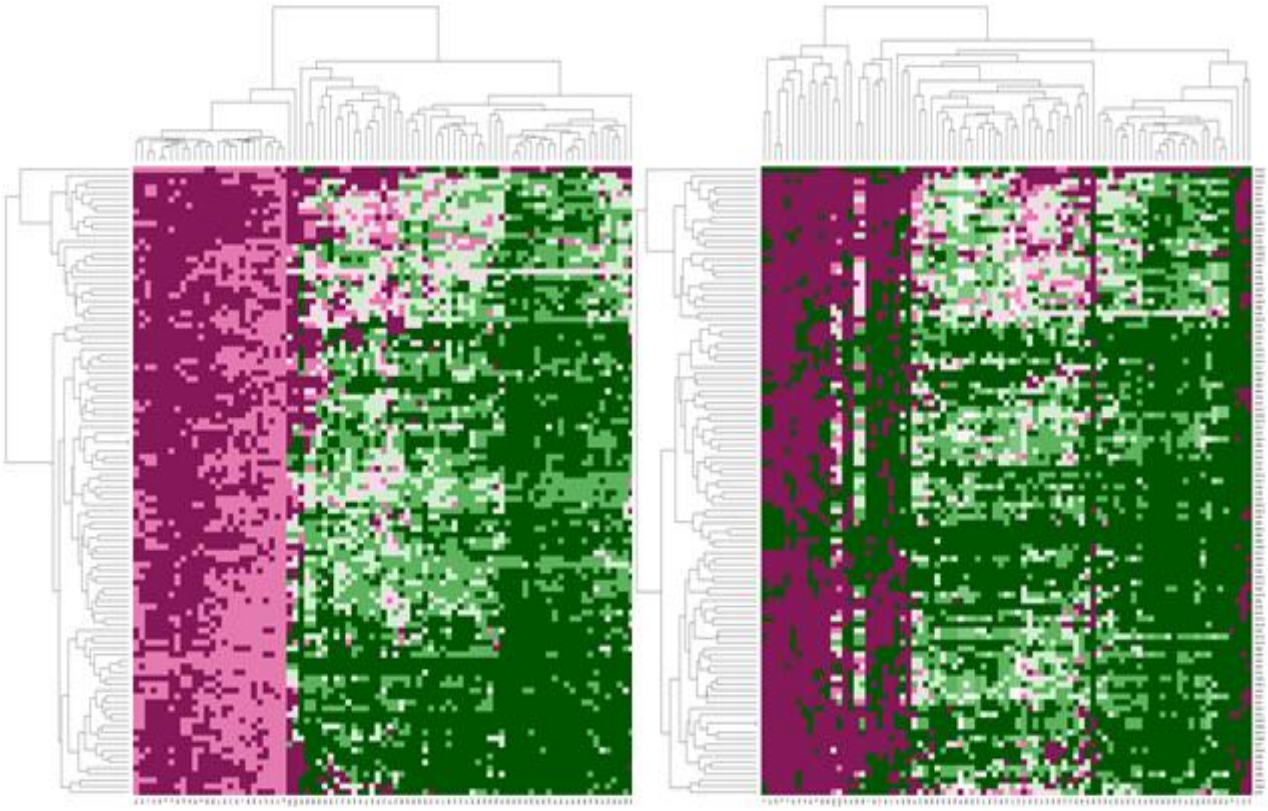
By employing bi-cluster analysis, this research aims to identify leagues of hotels and tailor-made service indicators simultaneously. The method will identify three leagues: upper league A, middle league B and lower league C.

For this purpose, two bi-clustering methods are necessary, the iterative Bi-clustering of Genes (iBBiG) (Kosztyán et al., 2019a.) where the algorithm produces bi-clusters, where the cells exceed the threshold (i.e., median), and Bi-clustering Analysis and Results Exploration (BicARE) where a bi-cluster is created to identify a middle league of overlapping respondents.

The analysis used R software and R Studio. The original data was seriated, and a heat map was plotted (**Figure 47.**) to identify possible bi-clusters. Green cells represent higher scores for tailor-made service indicators, while red cells represent lower scores. Data normalization was performed due to different scales. The normalized heat map showed two distinct blocks: the right block represents top-performing hotels with high tailor-made service scores, while the red block represents lower-performing hotels.

After concluding that there is a possibility to cluster the data, the top and the low leagues must be analysed separately by applying the iBBiG method to the original normalized data.

Figure 45. - Bi-cluster Heat Map Before (left) and After (right) Normalizing.



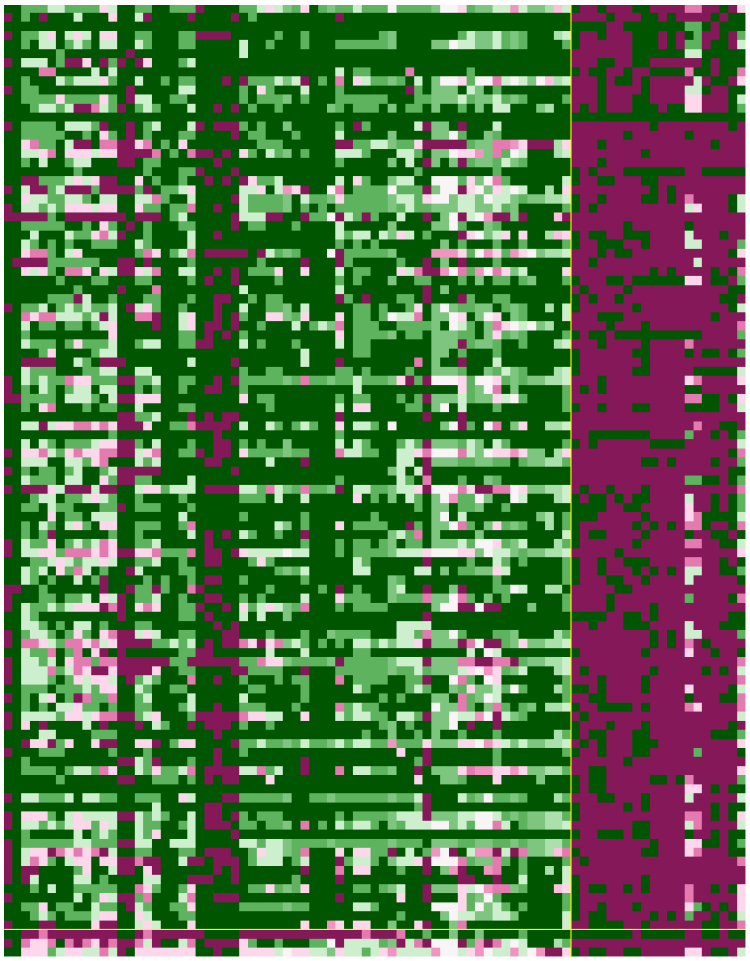
(Source: R-Studio Output)

6.4.1.2. Determining the Top League – League A

The top leagues consist of hotels and indicators that received high scores from the respondents. The iBBiG organization handles the data simultaneously. After identifying a significant bi-cluster in the top league, comprising 102 hotels and 65 tailor-made service indicators, an F-test is conducted to confirm its significance. Both the row and column effects are found to be significant, indicating the importance of both hotels and tailor-made service indicators. In this league, indicators scoring above the median of 0.5 were selected (**Appendix 45.** provides detailed results and coding). After examining the top Leagues Hotels, mean, median and Variance it can be determined that most of the hotels belong to the top League as the hotels in the top league have higher means and medians and have lower variances. (**Appendix 47**.) The same analyses can be performed for the tailor-made service indicators. Most tailor-made service indicators are in the top league but there are a greater number of indicators that are outside of the top league. (**Appendix 48.**)

Figure 48. shows the heat map of the results of iBBiG on normalized data for the top league of 102 hotels and 65 tailor-made service indicators. The top leagues can be seen in the upper left corner (with a yellow border). To check the stability of the top league, bi-cluster bootstrap is performed, and in all cases, the *bootstrapPvalueRow* and the *bootstrapPvalueCol* are lower than 0.01, therefore the bi-clusters are stable.

Figure 46. - Heatmap of Normalized Data – Top League τ=0.5



(Source: R Studio Output)

The next step is calculating and comparing the results of partial rankings based on the top league's tailor-made service indicators and hotels. Spearman's rank correlation results show a strong positive relationship between the two rankings.

Top league Hotel bi-cluster 0.5 threshold

P- value < 2.2e-16 rho = 0.9982842

Top league tailor-Made service bi-cluster 0.5 threshold

P-value = 1.505e-15 rho = 0.9834092

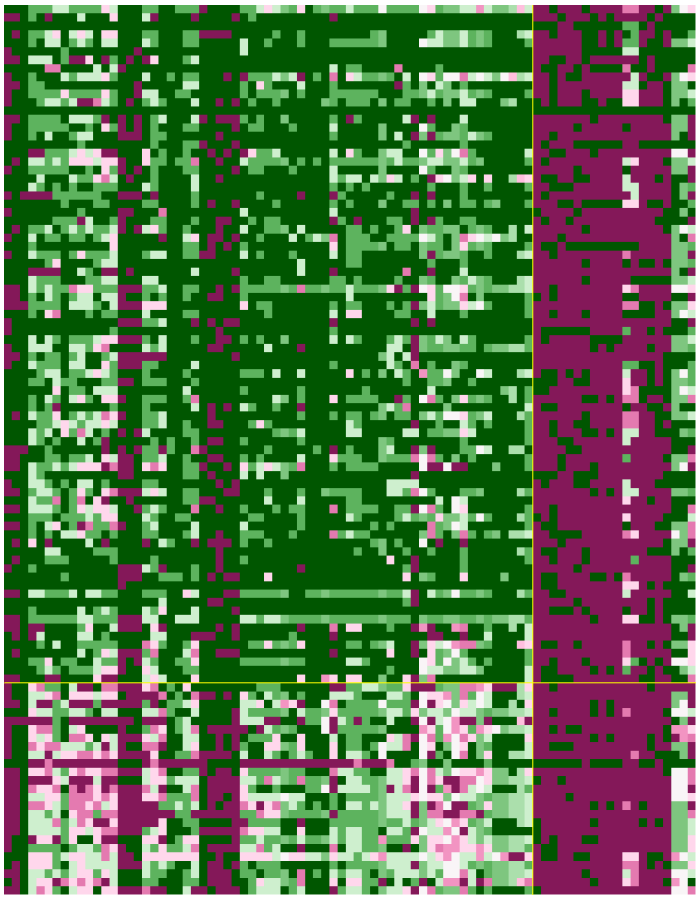
Therefore, it can be concluded that the bi-cluster is relevant as there is a high correlation between the league and the original data.

As there are 102 hotels in the top league, applying the same method, the analysis was performed again with a τ=0.75 threshold. When applying stricter selection criteria, 80 Rows and 65 columns can be identified. (The detailed analyses can be found in **Appendix 46.**) As can be seen in **Appendix 49**, the means, medians, variances, and median absolute deviations

(MAD) shows that when the cut-off point is higher, there is a greater difference in the value of median and mode.

Comparing the heatmap of the top league when the criteria is τ=0,75 compared to τ=0,5, we can see a smaller cluster on the left corner.

Figure 47. - Heatmap of Normalized Data – Top League τ=0.75



(Source: R-Studio Output)

The bi-cluster is stable with the stricter criteria as the b*ootstrapPvalueRow* and the *bootstrapPvalueCol* are lower than 0.01. Spearman's rank correlation results show a strong positive relationship between the two rankings.

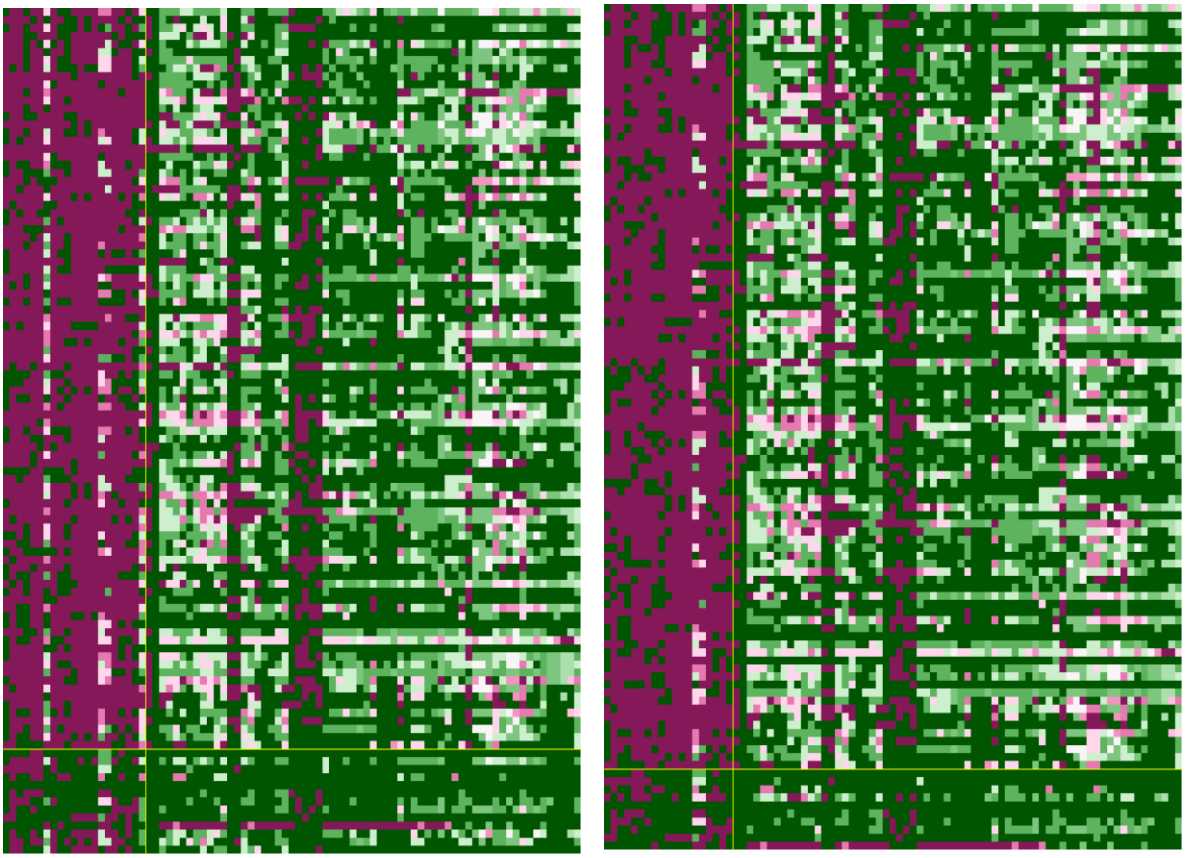
Therefore, it can be concluded that the bi-cluster on τ=0.75 threshold is relevant as there is a high correlation between the league and the original data.

6.4.1.3. Determining the Lower League – League C

Using a reverse data matrix, the process was repeated to identify the lower league. This league consists of hotels with low scores on the indicators and tailor-made service indicators. Applying the iBBiG method on the reversed normalized data, 92 hotels and 21 tailor-made indicators were identified with a threshold of τ=0.5, and 95 hotels and 19 tailor-made indicators with a threshold of τ=0.75. In both cases, the F test shows that the row and column effects are significant; therefore, they can be part of the lower league.

The bi-cluster is stable with both thresholds as the bootstrapPvalueRow, and the bootstrapPvalueCol are p<0.01 in both threshold levels. Spearman's rank correlation results show a strong positive relationship between the two rankings. **Figure 50.** visually shows the difference between the results based on the two thresholds.

Figure 48. - Heat Map of the Lower League on τ=0.5 (left) and τ=0.75 (right)



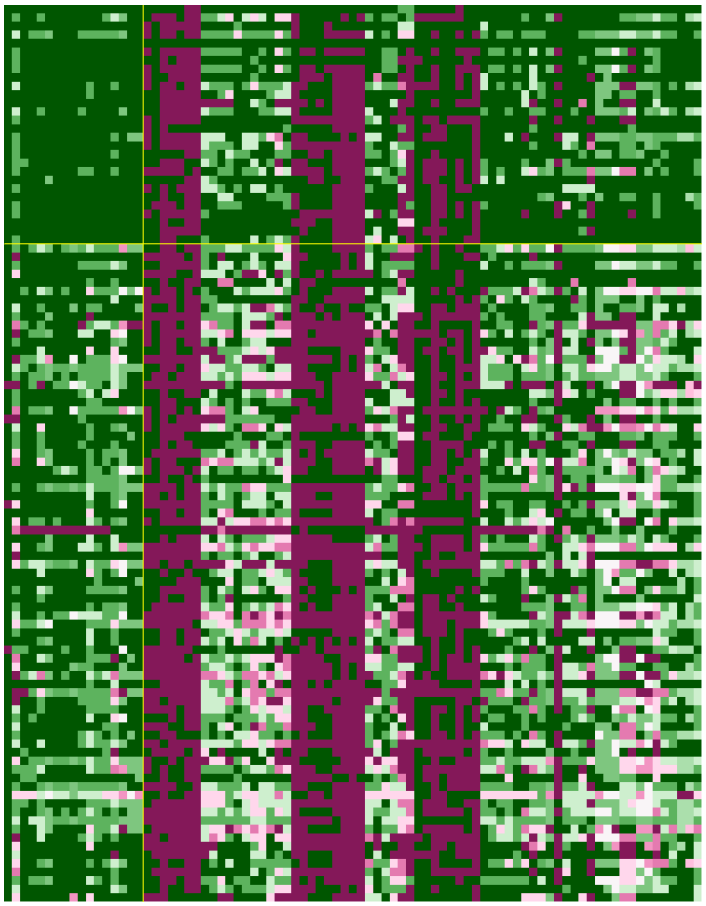
(Source: R-Studio Output)

Therefore, it can be concluded that the bi-clusters on both thresholds (τ=0.5; τ=0.75) are relevant as there is a high correlation between the league and the original data.

6.4.1.4. Determining the Middle League – League B

The final analysis is finding the middle league. The BiCARE method is capable of two things. One is identifying the middle field of hotels that do well according to certain indicators while do not perform well in others, or two, they perform moderately in all indicators. If it is the second case, BiCARE will find the hotels that perform similarly, therefore they all perform well and poorly in the same indicators. Regardless, the goal is to find the smallest, most homogenous cluster. The first bi-cluster that the BiCARE algorithm found is a completely homogenous group of 34 hotels and 13 tailor-made service indicators, but after performing the F-test, the rows and columns were not significantly correlating. Therefore, measurement was repeated till the smallest, most homogenous bi-clusters were found that are still significant. Therefore, the B league was identified to contain 28 hotels and 17 tailor-made service indicators (**Figure 51.**).

Figure 49. - Heat Map of the Middle League



(Source: R-Studio Output)

After performing the F test, both for the row and column effects are significant; therefore the B league bi-cluster is stable with the higher threshold (τ=0.75) as the b*ootstrapPvalueRow*, and the *bootstrapPvalueCol* are $p<0.01$ in both threshold levels. Spearman's rank correlation results show a strong positive relationship between the two rankings, the comparison of the leagues can be considered.

6.4.1.5. Analysis of the Leagues and the Overlap of the Leagues.

After identifying and confirming that the three leagues (A, C, and B) are relevant, the next step is to find the overlaps.

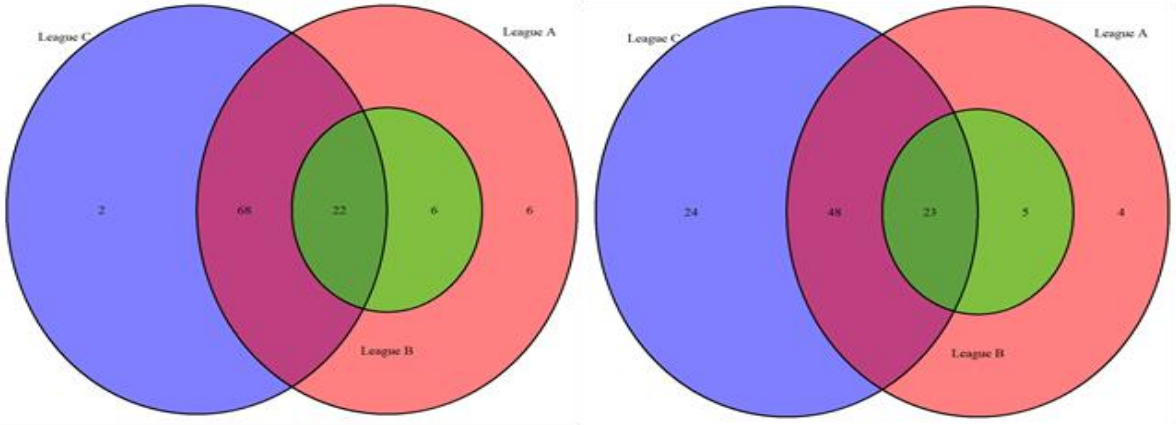
I. Cluster of Hotels

After identifying and confirming that the three leagues (A, C, and B) are relevant, the next step is to find the overlaps.

in **Figure 52.** the red circle contains hotels in the upper league (League A), and the blue circle are those hotels in the lower league (League C). The green circle indicates the middle league's (League B) respondents. The middle league (B) is fully overlapping with the top league (A) and just partially with the lower league (C). **Figure 52.** shows how the size of the submatrix changes as the threshold value gets higher.

Not all hotels assigned to top league perform well in all tailor-made service indicators as there are overlaps with the middle (B) and lower leagues (C). In the same way, it can be said that not all of the hotels in the lower league (C) fall short of the τ threshold of 0.5 or 0.75 in terms of all their tailor-made service indicators. Bi-clustering procedures allow each submatrix to overlap each other. According to Kosztyán et al., (2019) increasing the threshold value τ or the α-value the overlap can be eliminated, but at the same time, the overlapping submatrices show how individual hotels perform in terms of certain tailor-made service indicators, and in which indicators they perform well.

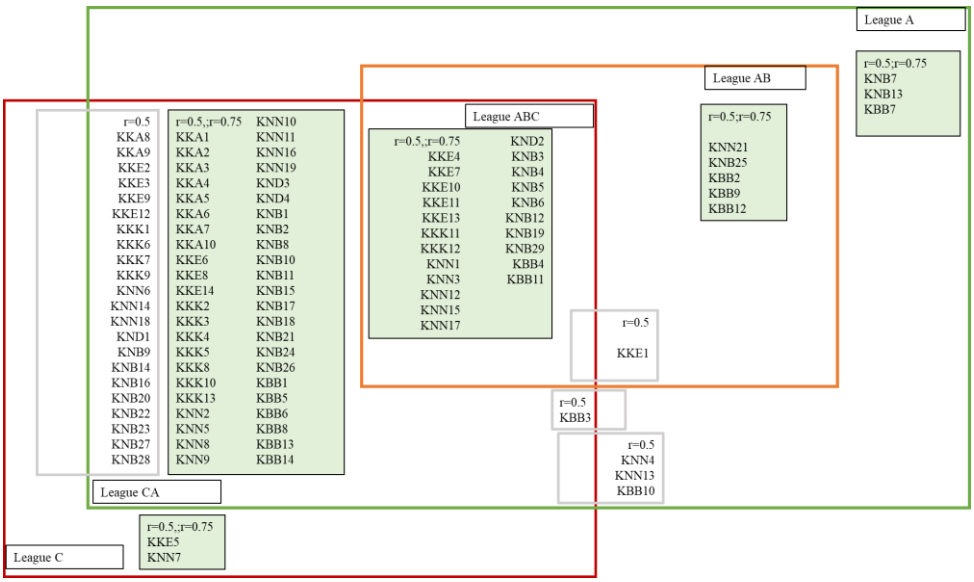
Figure 50. - Venn Diagram of Hotels on τ=0.5 (left) and τ=0.75 (right)



(Source: R-Studio Output)

In this case, when comparing the τ threshold of τ=0.5 and τ=0.75 we can see (**Figure 53**.) that the overlaps were not eliminated, but the distribution of hotels changed. When using the τ=0.75 threshold, more of the participating hotels get assigned to the lower leagues or League C without overlapping qualities. If we look at **Figure 53.** we can see that there are hotels that belong to the same bi-cluster, regardless of the threshold.

Figure 51. - Clusters of Indicators and Hotels Under Both Thresholds



(Source: Own Edit)

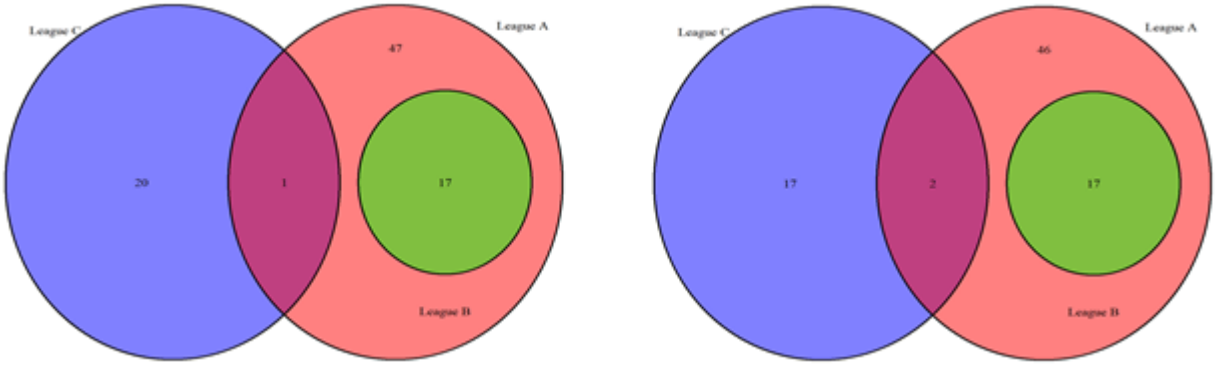
However, hotels marked with grey frames would fall into another category if only the τ=0.75 threshold were considered. Three hotels belong to the top league (A) considering both thresholds. These three are the absolute top. Two of these hotels mainly target leisure guests and one focuses on the business segment. Two of them are in the Balaton region and one is in the Budapest region. The star categories are 5, 4 superior and 4. There are 2 hotels which are in the lower league (C) with both thresholds. The main target groups are leisure guests and business, one of them can be found in the Western region and one is in the Eastern region. The star categories are 4 and 3.

II. The Cluster of Tailor-made Service Indicators

To see the similarities of tailor-made services the indicators also must be analysed.

The Venn diagram of the indicators (**Figure 54.**) seems to be more consistent than the hotel Venn diagram at first. On the left, with τ threshold of 0.5, there are 47 tailor-made service indicators in the top league and 20 of them fall into the lower league with a threshold of 0.5 and 17 with τ = 0.75.

Figure 52. - Venn Diagram of Tailor-made Service Indicators on τ=0.5 (left) and τ=0.75(right)



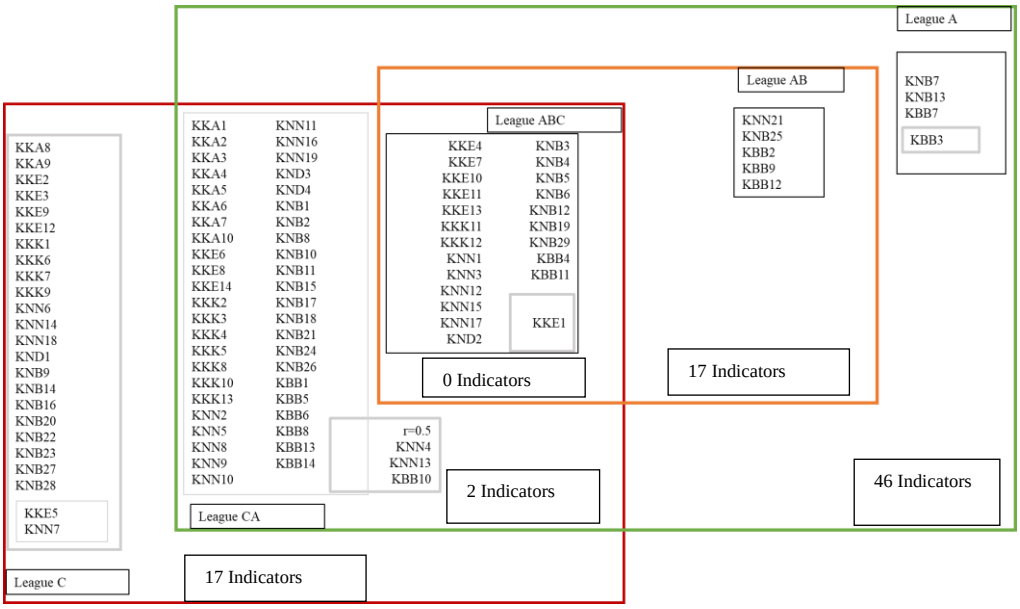
(Source: R-Studio Output)

Three indicators, I65, I66 and I69 cannot be significantly assigned under the stricter threshold. The difference between the league members in the case of indicators is minor. Detailed data can be found in **Appendix 52**.

III. Members of the Clusters

As the indicators placement relative to the leagues is extremely similar in both thresholds, I will introduce the members of the leagues in detail based on the stricter τ = 0.75 threshold. With the tailor-made service indicators assigned; the cluster will look as demonstrated in **Figure 55**.

Figure 53. - Clusters of Indicators and Hotels τ = 0.75



(Source: Own Edit)

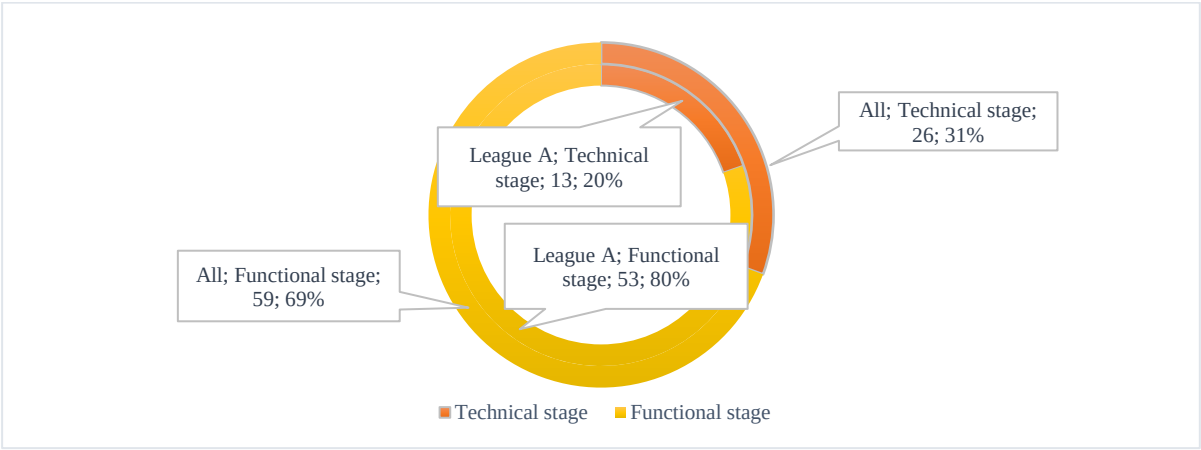
6.4.1.6. League A – The Top League

There are 80 hotels and 65 indicators in this League represented by the green frame, but 76 hotels overlap with the middle (orange) and the lower league (red) which means that they perform well in most indicators but there are certain indicators where they perform poorly, similar to the members of lower league (C).

I. Indicators of League A – The Top League

While 89.83% of all Functional stage indicators fall into this league, only 50% of the technical stage indicators (**Figure 56.**) are in League A, showing that the technical conditions of tailor-made service are less present in the Hungarian hotels. (The ratio of technical stage indicators is 20% in the top league while and functional stage indictors 80%. Looking at the ratio of all indicators, 69% is Functional stage while 31% is Technical stage indicator.)

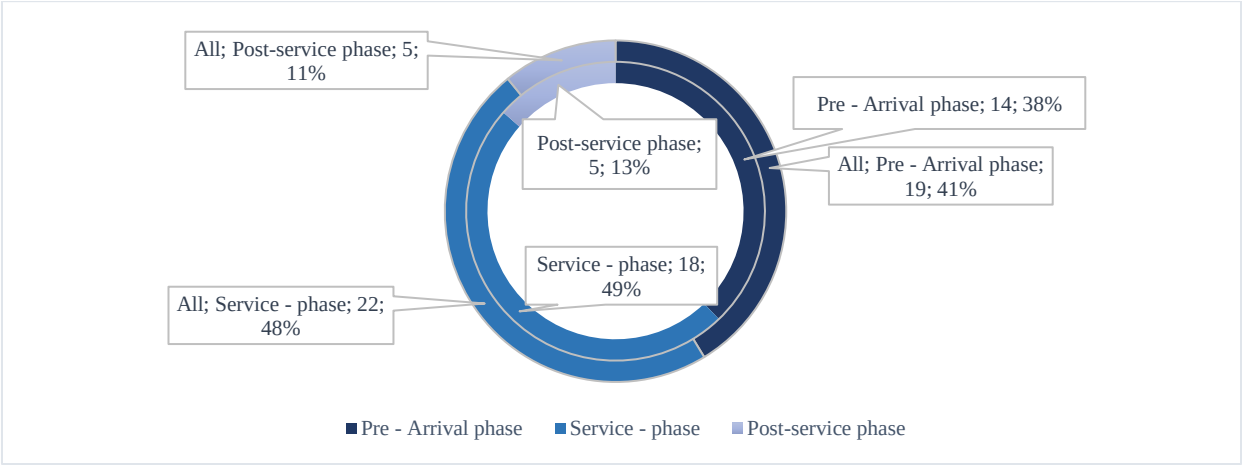
Figure 54. - Proportion of Indicators Represented Based on Stages - Top League



(Source: Own Edit)

Those indicators that can be linked to a specific phase, (and are assigned to the top league) represent 73.68% of the Pre-arrival phase indicators, 81.81% of the Service phase indicators and 100% of post-service phase indicators (**Figure 57.**). Looking at the ratio of all indicators in the phases, 38% pre-arrival, 48% service phase and 11% post service phase is 41-49-13% in the top league. Those indicators, which were only assigned to stages, were also present in the league. Functional stage indicators, which can be applied to the entire guest journey, appear with 83.33%, while technical indicators only present with 37.5%. Therefore, we can conclude that the indicators in which hotels perform well are mostly functional indicators (Detailed list can be found in **Appendix 50.**) Also, the results of the bi-clustering show that all hotels perform well in communicating with the guest after the guest left the hotel.

Figure 55. - Proportion of Indicators Represented Based on Phases - Top League



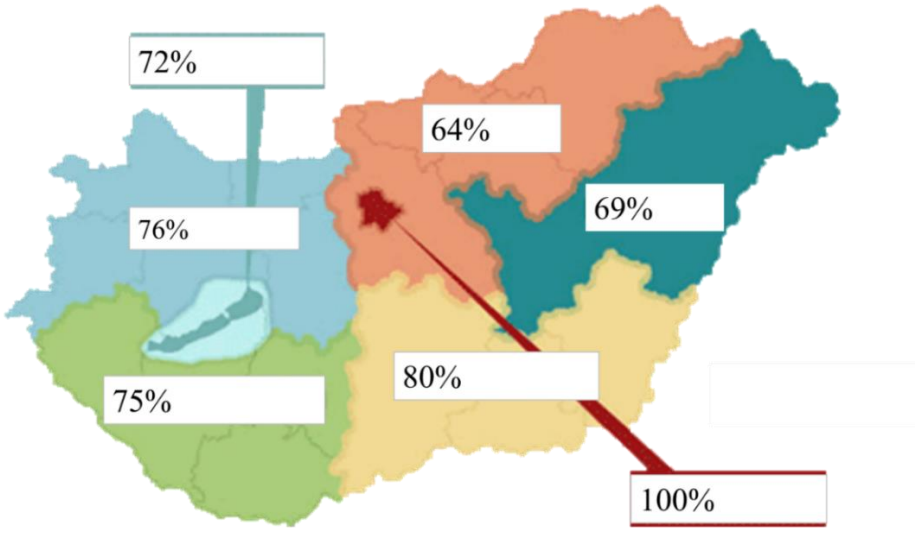
(Source: Own Edit)

The indicators mostly focus on the behaviour towards the guest and the acts of kindness, (politeness, warm goodbye, etc.) regarding guest service or supporting activities (like having a budget to give small gifts, segment-based newsletters, pillow menu etc.), even on encouraging the employees provide tailor-made guest service. The indicators of the top league also include indicators on the Technological stage, that indicate technologically advanced guest services such as mobile apps, and data mining websites.

II. Hotels of League A - The Top League

The League includes all participants from the Budapest region, 80% of the participants from the Hungarian Great Plain region (**Figure 58.**). The least participants are from the Northern region with 64%. This means that all hotels in Budapest perform above the threshold in these 60 indicators detailed above.

Figure 56. - Percentage of Hotels by Region - Top League



(Source: Own Edit)

It can be concluded that 100% of the 4-star superior, 5-star and 5-star superior hotels are in this group, while only 76.08% of the 4-star hotels (**Table 25.**). Hotels with a 3-star superior rating, are represented by 88.88%, therefore with a higher percentage than 4-star hotels.

Table 25. - Number of Hotels by Region - Top League

Star rating	No rating	2	2 sup.	3	3 sup.	4	4 sup.	5	5 sup.
Sum of all participants	4	5	1	21	9	46	14	4	2
League A	0	3	0	11	8	35	14	4	2
% in League A	0	60	0	52.38	88.89	76.09	100	100	100

(Source: Own Edit)

The target group is leisure travellers in 58 cases which is 73% of all hotels with leisure guests and 88% targets business (22 hotels), out of which 16 have leisure travellers (*families as a*

Figure 57. - Target Group - Top League

	All	Leagues A	
Business	25	25	88%
Families	35	35	66%
Other	8	8	75%
Young couples without children	8	8	75%
Young travellers	7	7	100%
Empty Nesters	13	13	77%
Retired Guest	9	9	67%

(Source: Own Edit)

secondary target group or couples without children, retired travellers) as the secondary target group **(Figure 59)**. The most common guest target is families.

Hotels with an international focus are more represented by proportion, as 91.42% of hotels with international guests are in the top league (32 hotels) and only 68.57% of the hotels with a domestic focus (48 hotels). Most of the hotels (72) have individual bookings which is 76.59% of all hotels with mostly individual bookings, and only 8 focuses mainly on groups (72.72% of all hotels who target groups). 6 out of these 8 hotels targets business travellers and the remaining two also has conference and events as their secondary focus. Most of the hotels (32) in this group, which is 80% of all the wellness hotels, are represented in the data. There are 26 city hotels which is the 89.65% of all city hotels. **Figure 60.** shows, the other hotel types represented in the top league. All hotels are open throughout the year.

Figure 58. - Hotel Type - Top League

	All	League A	
Garni Hotel	1	0	0%
Castle Hotel	3	3	100 %
Conference Hotel	4	3	75%
Resort or Sport Hotel	8	5	62.5%
Apartment Hotel	2	2	100%
Spa or Thermal Hotel	8	7	87.5%
Other	10	9	90%

(Source: Own Edit)

The members of this League find tailor-made service important as 63 hotels manager gave an average of 6 or above importance to tailor-made service on a 1-7 scale.

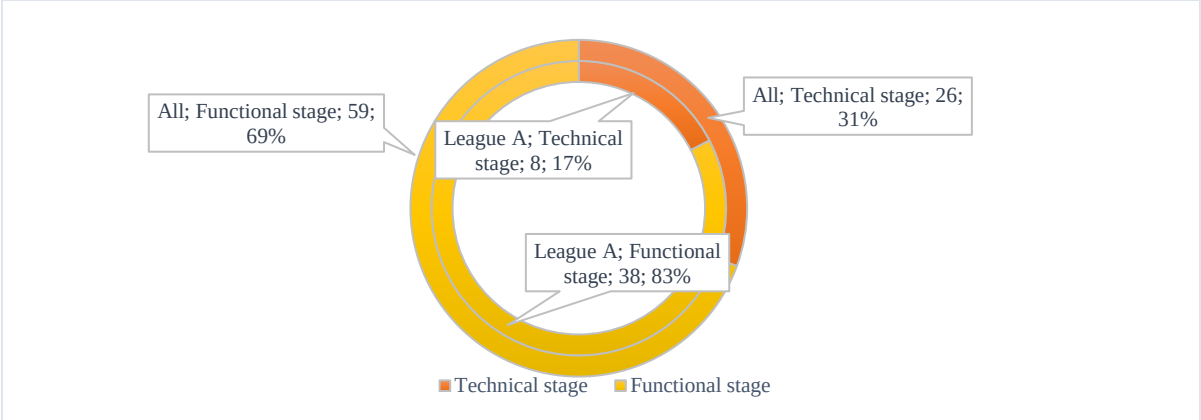
Conclusion of Top League

This greater group is connected by the capability of performing well in functional indicators, communicating with their guests' Pre- and Post-service and performing acts of kindness. There is an emphasis on supporting activities, and on encouraging the employees to provide tailor-made guest services. The indicators of the top league also include most indicators in the technological stage and indicate technologically advanced guest service. In proportion, the top league mostly contains hotels 4-star superior and above, targeting business guests and international guests. What is interesting about the proportion of hotel type is that long-stay hotels like resorts and spas where the guest spends more time, (other than the two Apartment hotels) did not represent 100% of the league despite what the literature (Crick and Spencer, 2011) suggesting otherwise.

6.4.1.7. Sub - League A*****

Only 4 hotel belongs to purely to League A without overlapping with the other major leagues (B and C), 3 of which was already introduced, as they fall into League A, based on both thresholds. Comparing the 4 hotels, leisure guests are the main target group for 3 of the hotels and the secondary target group for the fourth one. Even though international travellers are only the main guest target (based on origin) for 33.33% of the participating hotels, 3 league members have mostly international travellers. Three of them have mostly individual guests which is more common in the sample. 2 of them are wellness and 2 of them are city hotels. Regarding the star rating, they are 3, 4, 4 superior and 5-star hotels, 2 from Budapest and 2 from the Balaton region. Although these 4 hotels are different, there are 46 indicators they scored high in. In proportion, most of the indicators are from the functional stage (83%).

Figure 59. - Proportion of Indicators Represented Based on Stages - Sub Leagues A***



(Source: Own Edit)

They all scored high in 8 technical indicators shown in **Appendix 53.**, all regarding the customization of the room; choosing from a pillow menu, specifications of the minibar, gifts that can be given to the guest so they can feel more special, and micro-segmentation during marketing.

The 38 functional indicators they all score high in are mostly regarding the in-room touchpoint, 7 out of the 8 Pre-arrival communication indicators and 4 out of 5 Post-service communication. Therefore, it can be stated, that the League A***** puts more emphasis on communication with the guest. They also score high on communication indicators regarding style and attitude towards the guests. Like in case of the technical indicators, 8 items concern room service and amenities, (therefore 14/15 in this category). They are similar in providing customized options for the room and using personalization to surprise the guest (I89- The hotel has specific gifts or budget to use when the employee thinks a guest should get a gift (birthday, honeymoon special occasion, etc.).

Conclusion of Sub - League A*****

As these hotels have no overlapping indicators of the lower league and perform at least average and excellent in all 85 tailor-made service indicators, these hotels are the Leaders of Customization – Communication – Personalization.

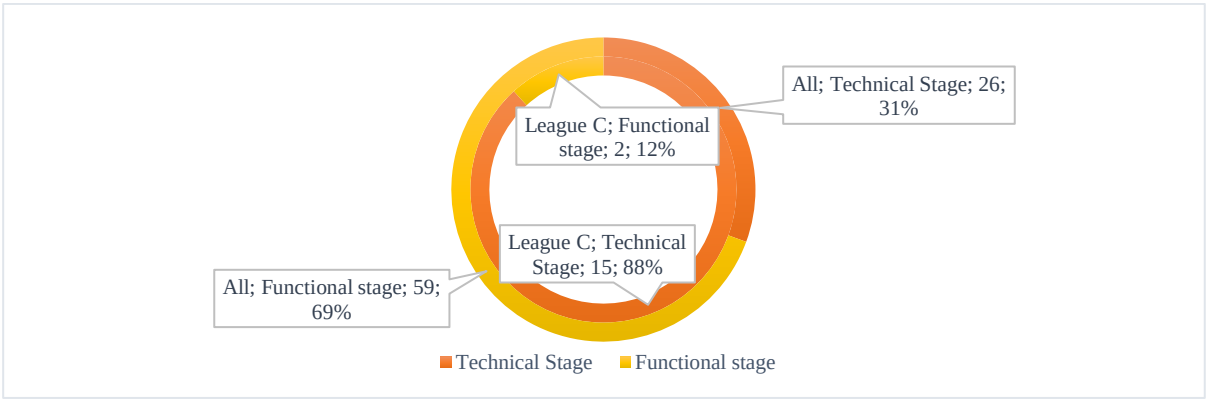
6.4.1.8. League C – Lower League

95 hotels fall into the lower league or League C represented by the red frame on **Figure 55.** which is bigger that League A. This means that more hotels are performing under the given threshold than above it in these indicators. The lower league was created by a reverse data matrix which means that the members of this league perform poorly in the tailor-made service indicators in the league. This league also contains all the hotels that are not part of the League A*****. There are 19 indicators in this league and only 2 of them are shared with some of the members of the top league.

I. Indicators of League C

While 57.69% of the technical stage indicators fall into this league, only 3.38% of the functional stage indicators are in the lower league, showing that most hotels perform poorly in almost 60% of the technical stage of tailor-made services (**Figure 62**).

Figure 60. - Proportion of Indicators Represented Based on Stages - Lower League



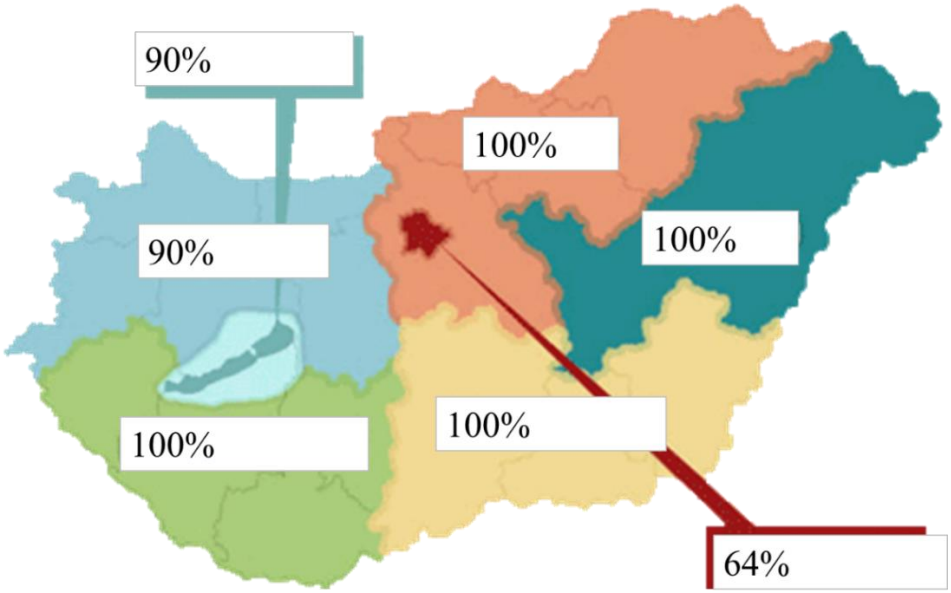
(Source: Own Edit)

Those indicators that can be linked to a specific phase can be identified in League C, Pre-arrival phase 42.10%, and Service phase 22.72%. None of the Post- service phase indicators are in the lower league. From those indicators, that were only assigned to stages only the technical indicators were in the lower league (5%). This confirms the assumption the author partially concluded in the previous paragraph, that indicators which hotels perform poorly in are mainly the technical indicators. Results show that the hotels in this league perform poorly when it comes to website development and technological devices. They do not put emphasis on the technical aspects of tailor-made service either. Furthermore, they do not score high on encouragement. (**Appendix 51.)**

II. Hotels of League C

The league includes all participants from the Northern, Eastern, Hungarian Great Plain, and Southern Transdanubia Region (**Figure 63.**) which means that in the above-mentioned 19 indicators, the majority of these members perform poorly.

Figure 61. - Percentage of Hotels by Region - Lower League



(Source: Own Edit)

We can also conclude that 100% of the unassigned, 2-star and 3-star superior hotels are in this group, while only 25 of the 5-star and 50% of the 5-star superior participants seem to perform poorly in the case of League C indicators (**Table 26.**). Hotels with a 3-star rating are represented by 95.24%, therefore with a higher percentage than 4-star and 4-star superior hotels (93.48 and 85.71%).

Table 26. - Number of Hotels by Region - Lower League

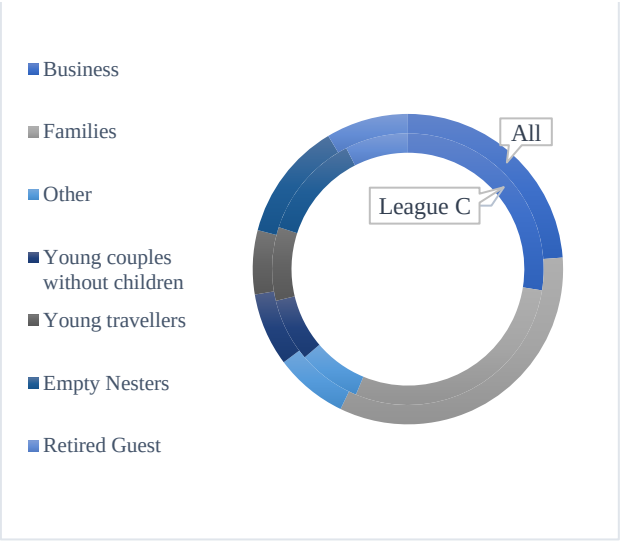
Star rating	No rating	2	2 sup.	3	3 sup.	4	4 sup.	5	5 sup.
Sum of all participants	4	5	1	21	9	46	14	4	2
League C	4	5		20	9	43	12	1	1
% in League C	100	100	0	95.24	100	93.48	85.71	25	50

(Source: Own Edit)

The members of this league mostly target families (34, which is 97% of all hotels with this target group) or business (24, which is 96% of all hotels with business guests as the target group).10 of the hotels who have business guests as their main target group has families as a secondary target group (**Figure 64.**).

Figure 62. - Target Group - Lower League

	All	Leagues C	
Business	25	24	96%
Families	35	33	94%
Other	8	8	100%
Young couples without children	8	6	75%
Young travellers	7	5	71%
Empty Nesters	13	11	85%
Retired Guest	9	8	89%

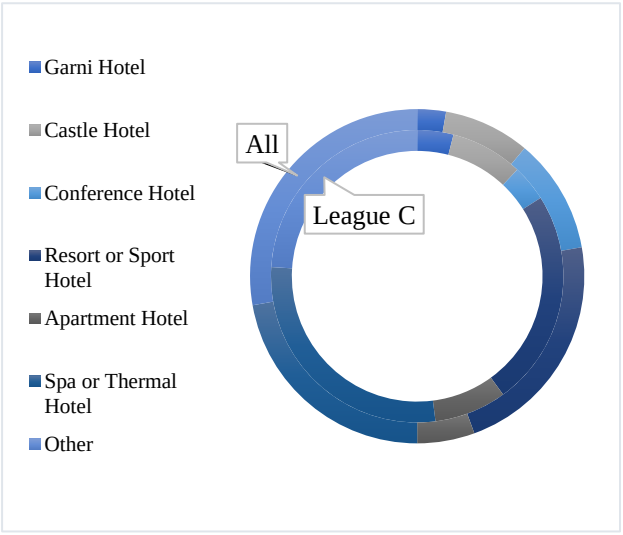


(Source: Own Edit)

Most guests based on origin are domestic guests, (in the case of 67 hotels which is 95.71% of all hotels with domestic guests). 85 hotels receive mostly individual guests which is 90.42% but 90.9% of the hotels with groups also fall into the lower league in these 19 indicators. All wellness hotels (40) and almost all (28 out of 29) city hotels are in this league (**Figure 65.**).

Figure 63. - Hotel Type - Lower League

	All	League C	
Garni Hotel	1	1	100%
Castle Hotel	3	2	66.7 %
Conference Hotel	4	1	25%
Resort or Sport Hotel	8	6	75%
Apartment Hotel	2	2	100%
Spa or Thermal Hotel	8	7	87.5%
Other	10	6	60%



(Source: Own Edit)

Some members of this league find tailor-made service important as 59 hotel managers rated the importance of tailor-made service on average of 6 or above on a 1-7 scale, but 9 hotels gave 4 or lower, or in other words, reportedly do not find it important.

Conclusion of League C

90.5% of the hotels in the research perform poorly in the technical indicators, which means that website development and technological devices are not a priority to most. They also do

not emphasize the technical aspects; like most hotels will not offer customization of the room. These kinds of customization have high human resource requirements, which is a difficult issue currently in Hungary. They do not score high on encouragement and reward of individualized service either.

6.4.1.9.1. Sub - League C*

Only 24 hotel belongs exclusively to League C, 2 of which were already introduced, as they fall into the lower league, based on both thresholds. Comparing the 24 hotels, leisure guest is the main target group for 21 of the hotels and in the case of 3 hotels (12% of all business hotel in the secondary target group is also families for one of the other 3 as seen on **Figure 65.**

Figure 64. - Target Group - C* Sub-league

	All	Leagues C*	
Business	25	3	12%
Families	35	13	37%
Other	8	1	13%
Young couples without children	8	2	25%
Empty Nesters	13	3	23%
Retired Guests	9	2	22%

(Source: Own Edit)

Only 2 league members have international travellers, and 22 of them have individual guests. The league has 12 wellness hotels which is 30% of all wellness hotels in the sample (**Figure 67.**) and 6 city hotels (20.6% of the sample).

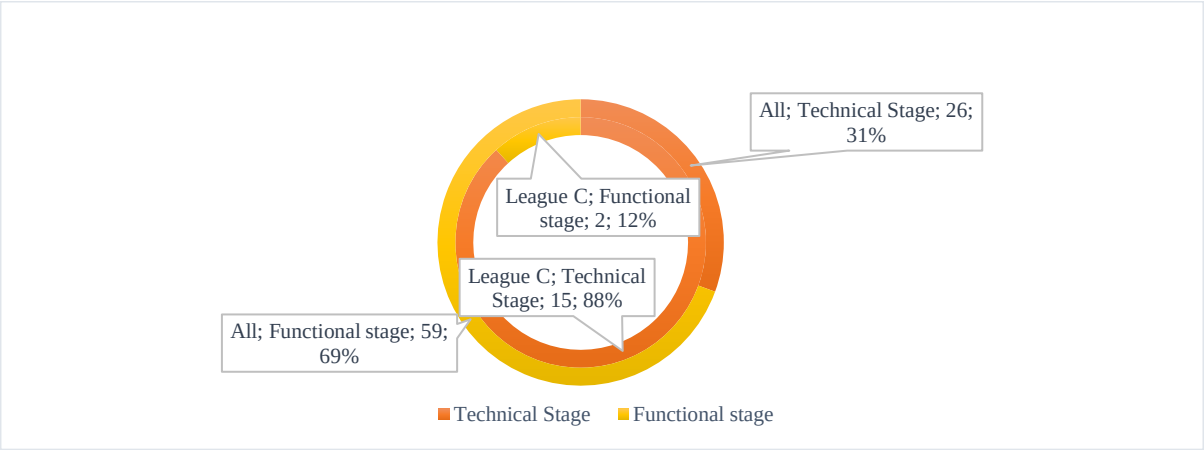
Figure 65. - Hotel Type - C* Sub-league

	All	League C*	
Garni Hotel	1	1	100%
Resort or Sport Hotel	8	2	25 %
Spa or Thermal Hotel	8	1	12.5%
Other	10	1	10%

(Source: Own Edit)

The 17 indicators assigned to this league, in which they all scored low, are the same indicators as those in League C, except for I1 and I93 (**Appendix 51.**) which did not fall into this league. Proportionally, there are more items from the technical stage (**Figure 68.**) than from the functional stage.

Figure 66. - Proportion of Indicators Represented Based on Stages - Sub - League C*



(Source: Own Edit)

Conclusion of Sub - League C*

There are more hotels in this sub-league than in the league of Leaders (A *****), but fewer indicators are assigned. These hotels avoid most technical aspects of individualized service and offer no changes regarding the room. They are the true conservatives of service offering and based on the results are not collecting guest data for marketing purposes.

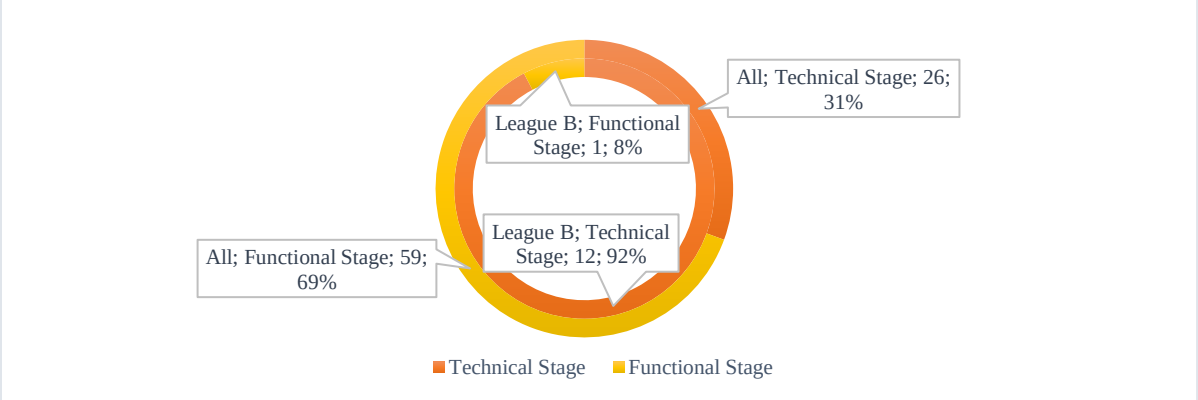
6.4.1.9.League B – Middle League

The middle league, also known as League B, consists of hotels that either perform well in certain indicators but poorly in others or have similar performance across all indicators. **Figure 51.** shows that the tailor-made service indicators in League B are highly performed, as indicated by the green marks for all hotels and indicators. Additionally, **Figure 55.** none of the tailor-made service indicators overlap with the lower league (C). The matrix of the league contains the fewest hotels from the three base leagues (A, C and B). This is the most heterogenous group with 28 hotels and 17 tailor-made service indicators and is represented within the orange frame **Figure 55.**

I. Indicators of League B

Out of the 17 tailor-made service indicators, 16 are functional and only 1, I6 is technical. (Our website is automorphically fits to the device (e.g. computer, mobile phone etc.), browser (e.g.

Figure 67. - Proportion of Indicators Represented Based on Stages - Middle League



(Source: Own Edit)

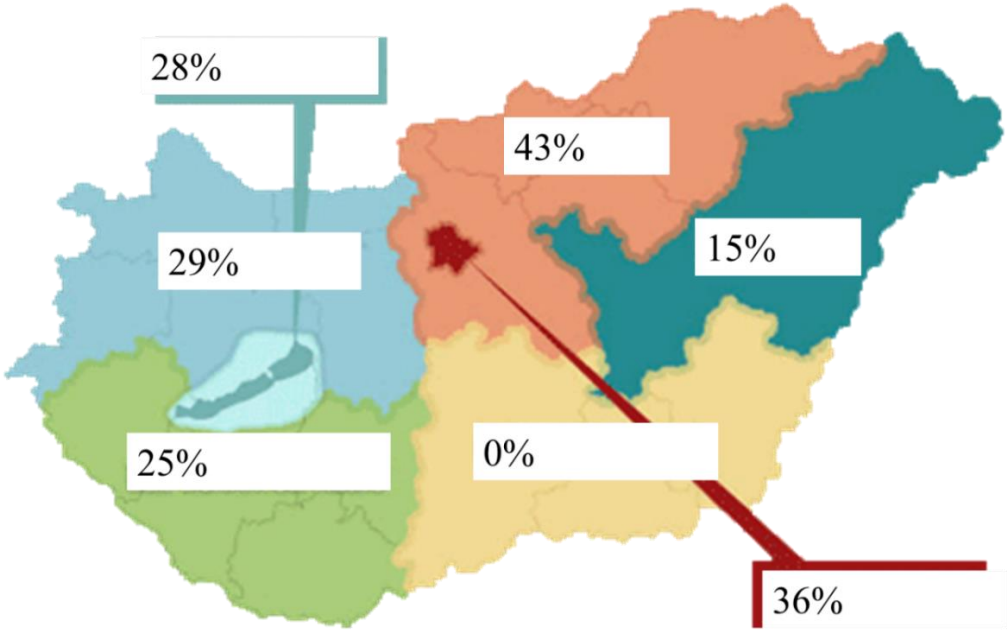
Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.) (**Figure 69.**). The middle league completely overlaps the top league and the tailor-made service indicators are also part of the indicators of the AB section League.

The functional stage indicators of the middle league focus on encouragement from the management towards the employee to perform in a certain way (personal warmth, keeping eye contact, being approachable) which are the core behaviours of hospitality, and on indicators of employee behaviour (being helpful, trying to customize, being polite, treating guest with respect). As the indicators of this group are more about acts of kindness than tangible goods, or "things" hotels use to satisfy guests and create individualized experiences, they can be performed without big expenditure. Without these fundamental behaviours, it is impossible to provide good service let alone tailor-made service. These indicators are all linked to performing encouraging hospitality (**Appendix 54.)**

II. Hotels of League B

No members of this league were from the South Great Plain region and although the top league had the least participants from the Northern region (**Figure 70.**), they are proportionally represented the most in the middle league.

Figure 68. - Percentage of Hotels by Region - Middle League



(Source: Own Edit)

Most hotels of League B in proportion are 5 – star and 5 – star superior hotels. The hotels which have no rating assigned yet, reported to be on a 2 and 5 – star quality level (**Table 27.**).

Table 27. - Number of Hotels by Region - Middle League

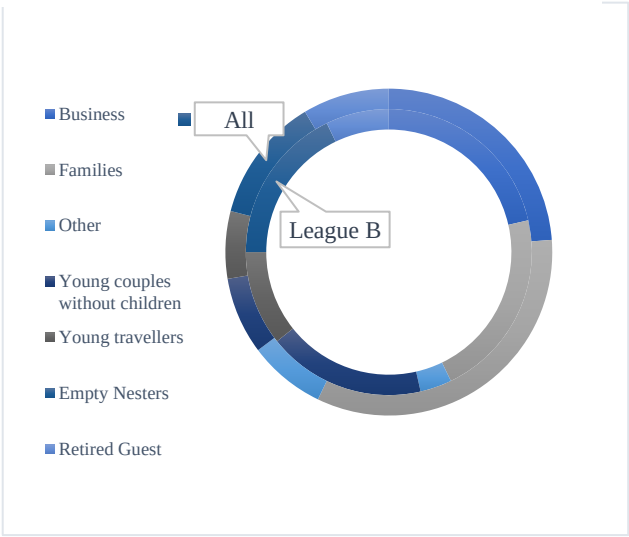
Star rating	No rating	2	2 sup.	3	3 sup.	4	4 sup.	5	5 sup.
Sum of all participants	**4**	**5**	**1**	**21**	**9**	**46**	**14**	**4**	**2**
League B	2	1		2	1	12	5	3	1
% in League B	50	20	0	9.52	11.11	26.09	35.71	75	50

(Source: Own Edit)

22 of the 28 hotels focuses on leisure guests (**Figure 70.**) in proportion mostly to young couples without children) and all 6 of the hotels with business as their primary target group has families as their secondary target group.

Figure 69. - Target Group - Middle League

	All	Leagues B	
Business	25	6	24%
Families	35	6	17%
Other	8	1	13%
Young couples without children	8	5	63%
Young travellers	7	3	43%
Empty Nesters	13	5	38%
Retired Guests	9	2	22%



(Source: Own Edit)

In proportion to the sample, 42.85% of all hotels with international guests (15) are in the middle league, and 13 of them focus on domestic guests which is 18.57% of all hotels in the sample with this target audience (**72. Figure**). Individual guests are the main audience for 26 and although most of the hotels are wellness (12) or city hotels (10), in proportion it is important to mention, that all apartment hotels (2) are in this league.

Figure 70. - Type of Hotel - Middle League

	All	League B	
Resort or Sport Hotel	8	1	12.5%
Apartment Hotel	2	2	100 %
Spa or Thermal Hotel	8	2	25%
City Hotel	29	10	34.5%
Wellness Hotel	40	12	30%

(Source: Own Edit)

Conclusion of League B

The middle league comprises hotels that demonstrate both strong performance in indicators of the top league and weak performance in the lower league. These hotels excel in hospitality and emphasize the importance of individualized service. However, they perform at an average or subpar level in areas such as customizing the room or utilizing technological gadgets like a hotel application.

6.4.1.10. League AB Sub - League

League AB only contains 5 hotels and 17 indicators (that are identical of the indicators of the middle league). Three of them are in Budapest, one in the Balaton and one in the Western region. These five hotels have the same strength and do not perform poorly (as they are not in overlap with League C) Three of them target young couples, 1 families and 1 empty nesters. Two are for domestic (wellness hotels) and 3 for international guests mainly (city hotels). All of these hotels are 4-star and above (one 4-star, one 4-star superior, two 5-star and a 5-star superior). They all gave 7 to all the questions about the importance of tailor-made services therefore tailor-made service is important to them, and it is shown in the indicators. These hotels excel in fostering an encouraging hospitality environment, as reflected in the indicators related to managerial encouragement and employee behaviour within League B.

Conclusion of AB League:

As the members of this league are performing well in encouraging the employee to individualise service and be hospitable, they are the champions of hospitality.

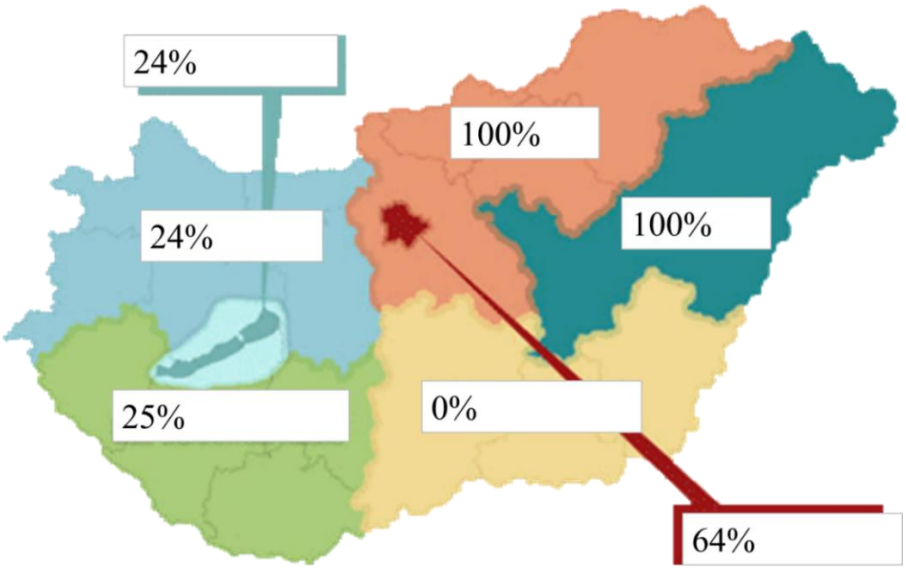
6.4.1.11. League ABC – Sub league

League ABC is the intersection of A, C and B leagues. It contains 23 hotels, but no indicators dedicated specifically to this league. These hotels are present in all 3 leagues therefore they are the true middle league. They perform well in respect to the top and middle league indicators and poorly in all the lower league indicators. This sub-league shows how big the gap is between the few outstanding performers and the underperformers (in terms of tailor-made services).

I. Hotel of Sub-league ABC

All hotels from the Eastern and the Northern region fall into this sub-league, but no hotels from the Hungarian Great Plain are represented as seen in **Figure 73.**

Figure 71. - Percentage of Hotels by Region - ABC League



(Source: Own Edit)

Given the greater number of 4-star hotels in Hungary (**Table 28.**), most members of the league are 4-star but in proportion, it is only 23.91% of all 4-star hotels are present in this sub-league.

Table 28. - Number of Hotels by Region - ABC League

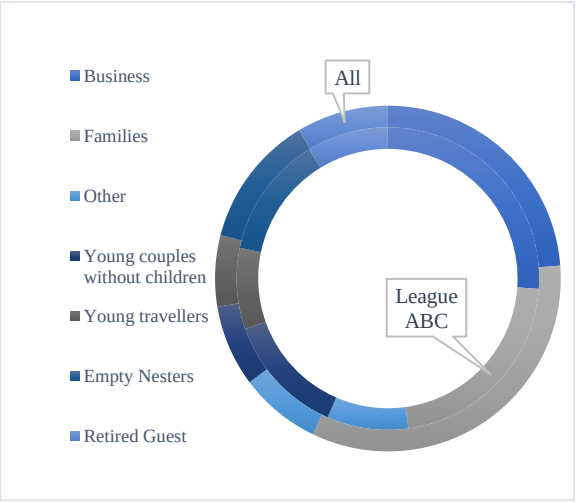
Star rating	No rating	2	2 sup.	3	3 sup.	4	4 sup.	5	5 sup.
Sum of all participants	4	5	1	21	9	46	14	4	2
League ABC	2	1		2	1	11	5	1	
% in League ABC	50	20	0	9.52	11.11	23.91	35.71	25	0

(Source: Own Edit)

Members of this league have mostly leisure guests, as **Figure 74.** Shows, in proportion most

Figure 72. - Target Group - League ABC

	All	League ABC	
Business	25	6	24%
Families	35	5	14%
Other	8	2	25%
Young couples without children	8	3	38%
Young travellers	7	2	29%
Empty Nesters	13	3	23%
Retired Guests	9	2	22%



(Source: Own Editing)

of these hotels target young couples without children.

Half of the hotels of this league welcome domestic guests (which is 17.14% of all domestic focused hotels) therefore in proportion, 31.24% of all hotels with international guest were assigned to this league, and 21 out of 23 hotels focuses on individual guests. When looking at the type of hotels, five hotel types are represented in this group (**Figure 75.**)

Figure 73. - Hotel Type - League ABC

	All	League ABC	
Castle Hotel	3	1	33.3%
Resort or Sport Hotel	8	1	12.5%
City Hotel	29	7	24.1%
Wellness Hotel	40	10	25%
Apartment Hotel	2	2	100%
Spa or Thermal Hotel	8	2	25.5%

(Source: Own Editing)

Conclusion of League ABC

As the league has no indicators of its own that they would be outstanding in, they are the real midfielders of Hungarian tailor-made hotel services.

6.4.1.12. League CA – Sub league

The CA sub-league has 48 hotel members and 2 indicators. This is the biggest sub-league and includes the most hotels. They perform poorly in the indicators of the lower leagues, perform well in the indicators of the top league and they perform average in the indicators of the middle league.

I. Indicators of Sub-League CA

The two technical indicators of this sub-league are from the lower league indicators bi-cluster. These hotels are connected by the fact that they do better in these two indicators than the rest of the hotels in the lower league (**Table 29.)**.

Table 29. - Indicators of Sub - League CA

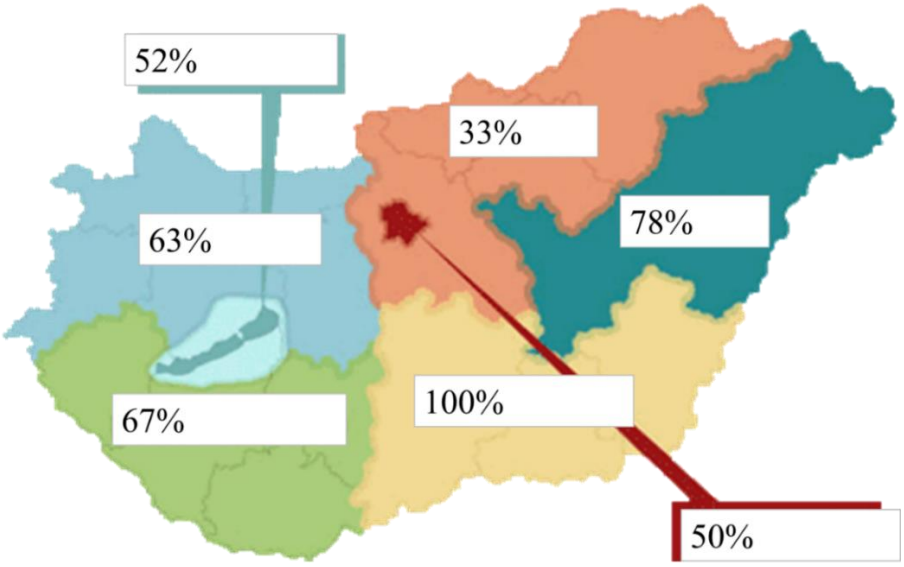
Indicator ID	Indicator	Indicator Placement
I1	Our website has features that are personalized for the users' preferences (for instance based on segments they can choose to browse between offers to their specific needs or interests.)	Technical stage – pre-arrival stage
I93	We store and update guest data frequently (even before the check-in or after the check-out) that we use during re-marketing campaigns.	Technical stage

(Source: Own Editing)

II. Hotels of the Sub-League CA

All of the hotels from the Hungarian Great Plain region are in this sub-group, meaning that only 33% of the Northern region got into this league (**Figure 76.**).

Figure 74. - Percentage of Hotels by Region - League CA



(Source: Own Editing)

In proportion, most members of the sub-league are 3-star superior hotels, and mostly the middle categories 3-star, 3-star superior, 4-star and 4-star superior appear in the sub-league (**Table 30**).

Table 30. - Number of Hotels by Region - League CA

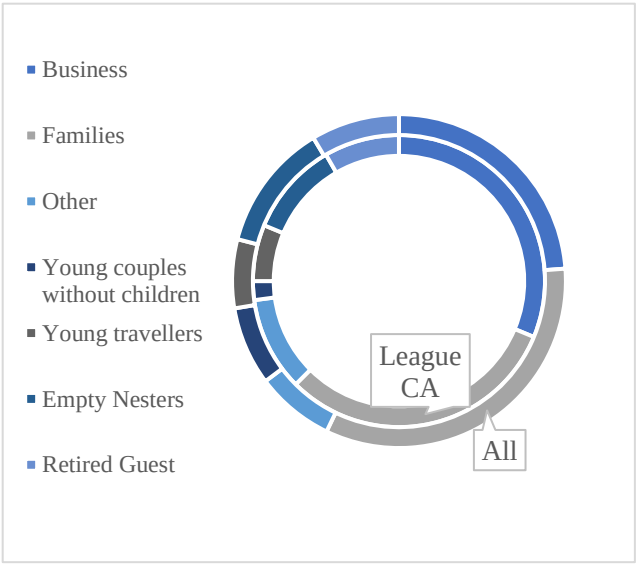
	No rating	2	2 sup.	3	3 sup.	4	4 sup.	5	5 sup.
Sum of all participants	4	5	1	21	9	46	14	4	2
League CA	1	2		8	7	22	7		1
% in League CA	25	40	0	38.10	77.78	47.83	50	0	50

(Source: Own Editing)

In proportion, and contrast to the other sub-leagues, many of the business guest focused hotels are in this CA sub-league, and 33, or 47.14% of all focuses on domestic guests and 15 (which is 42.86% of all hotels with international guest) focuses on international travellers (**Figure 77.**).

Figure 75. - Target Group - League CA

	All	League CA	
Business	25	15	60%
Families	35	15	43%
Other	8	5	63%
Young couples without children	8	1	13%
Young travellers	7	3	43%
Empty Nesters	13	5	38%
Retired Guests	9	4	44%



(Source: Own Editing)

All conference hotels and most spa and thermal hotels are in this sub-league but given the nature of the sample in case of numbers, most hotels are wellness and city hotels (**Figure 78.**)

Figure 76. - Hotel Type - League CA

	All	League CA	
Conference Hotel	4	4	100%
Resort or Sport Hotel	8	4	50 %
City Hotel	29	14	48.3%
Wellness Hotel	40	17	42.5%
Spa or Thermal Hotel	8	5	62.5%
Other	10	6	60%

(Source: Own Editing)

Conclusion of League CA

Members of this league although perform poorly in the indicators of the lower leagues, they perform well in the indicators of the top league and perform average in the indicators of the middle league.

They are connected as they perform above average in data collection and re-marketing, and they have website features that enable them to collect data. This means that they do better in these indicators than the rest of the hotels in the lower league, in other words, they made steps towards transition to the top league, and hence they are the up-and-comers of the hotel industry when it comes to tailor-made services.

Conclusion of Hypothesis 1 and Hypothesis 2

In this subsection, bi-cluster analyses was used to determine if it is possible to group Hungarian hotels into different clusters based on the level to which their service are tailor-made (Hypothesis 1). Due to the nature of bi-clustering, I have also tested simultaneously, if the tailor-made service indicators could be grouped in different clusters based on which indicators hotels perform well and poorly. (Hypothesis 2)

I have introduced bi-clustering and determined that it is possible to create statistically significant clusters of hotels and tailor-made service indicators which supports my Hypothesis.

The hotels and the tailor-made service indicators had been assigned to 3 greater leagues, marked as League A or top league, League C or lower league and League B or middle league.

The top league (League A) has 80 hotels and 65 indicators; almost 90% of functional stage indicators and 51% of technical stage indicators are here, meaning that 80 out of 105 hotels perform well above average when it comes to the post-service phase, and do well at the service-phase, especially in acts of kindness, guest service, and have supporting activities and infrastructure that is necessary to offer personalized and customized service. All hotels in the Budapest region are positioned in the top league or one of the sub-leagues of the top league.

The lower league (League C) has 95 hotels and 19 indicators, which means that more hotels are performing poorly in these 19 indicators than hotels that are at least average in them. The lower league is characterised by technical stage indicators containing supporting activities and technological conditions that can be crucial in customized or personalized services such as the websites' data collecting abilities or micro-segmentation of the target group.

This means that 90.5% of all participants perform poorly and the remaining 9.5% at best average in these indicators. This implies a serious gap between the A***** performers and the rest of the Hungarian hotel industry.

Because of the overlap with other main leagues, there are hotels that perform well in the 65 indicators in the top league but will struggle with these 19 indicators in the lower league. Therefore, respondents from all regions are included in these lower leagues; however, only 64% of hotels from Budapest are included. Unfortunately, proportionally the least response is from the Budapest region therefore if more hotels had participated from this region this result might be different.

The final greater league that was identified is the middle league, which represents those that are especially bad in the lower league indicators and good in the top league indicators. As this group is the most homogenous league, all 28 hotels perform well in the 17 tailor-made service indicators assigned to these hotels, which means that other than performing well in the previously mentioned indicators, they are also great in encouraging the employee to perform individualized services and be truly hospitable. They all perform outstandingly in encouraging and providing hospitality.

Looking at the leagues from the tailor-made indicator standpoint, the top league indicators focus on the functional aspects of tailor-made services and include all necessary supporting activities for individualized service.

The lower league contains most technical aspects and supporting indicators, which would require planning and investment in customization and personalization.

The middle league indicators focus on hospitality and encouragement, both of which are essential parts of great service.

The greater leagues could be divided into sub-leagues based on how they overlapped.

League A***** are the Leaders of Customization – Communication – Personalization (**Table 31.**). There are only 4 hotels in this league that perform well in 46 indicators and average in the remaining 39 indicators, as they have no overlap with the lower league. The indicators focus on acts of kindness, guest service, and individual service-supporting activities. They are the Leaders of all activities.

League C* are the conservatives of service and although they do perform well in certain aspects, they avoid most technical aspects of individualized service and offer no changes regarding the room. They are conservatives as they do not invest in technology or segmented marketing.

Table 31. - Collection of Hotel Clusters

Name in Bi-cluster	Name of Bi-cluster	Members and indicators	Target group	Target group by origin
League A*****	**Leaders** of tailor-made service	4 hotels 46 indicators	Leisure guests	International guests
League C*	The **Conservatives** of service	24 hotels 17 indicators	Leisure guests	Domestic guests
League AB	The **Champions** of hospitality	5 hotels 17 indicators	Leisure guests	International 3, domestic guest 2
League ABC	The real **Midfielders**	23 hotels 0 indicators	Leisure guests	International guests
League CA	**Up-and - comers**	48 hotels, 2 indicators	Business guests	Similar proportion.

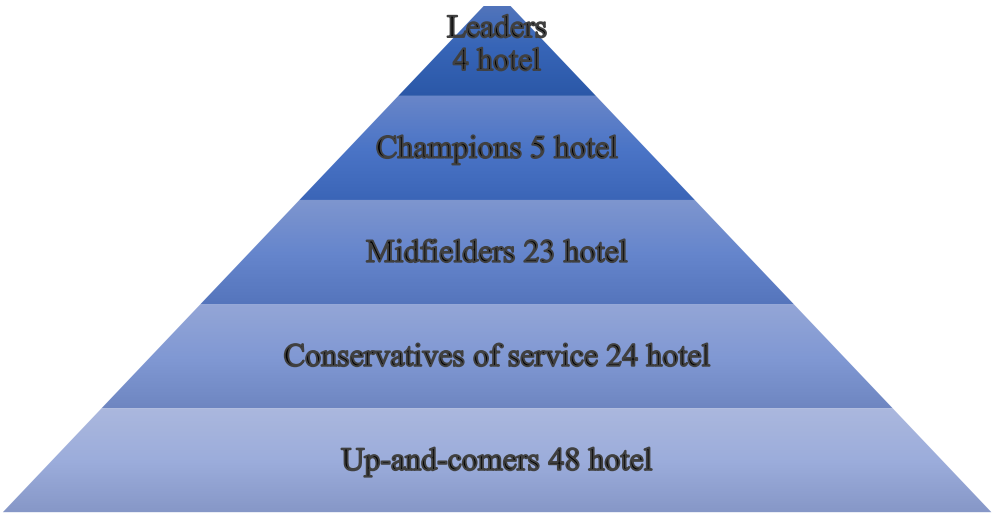
(Source: Own Editing)

League AB hotels are the Champions of hospitality as they emphasized encouraging employees to be there for the guest and excel in hospitality.

League ABC are the real Midfielders. They performed well on average in hospitality and have a tendency and need for individualized services, however they avoid most technical aspects of service and lack customized service offerings.

League CA the Up-and-comers are the group who separated themselves from the conservatives and started some activities to collect guest data and do proper segmentation. These activities, if continued, shall help them to be able to offer more individualized service.

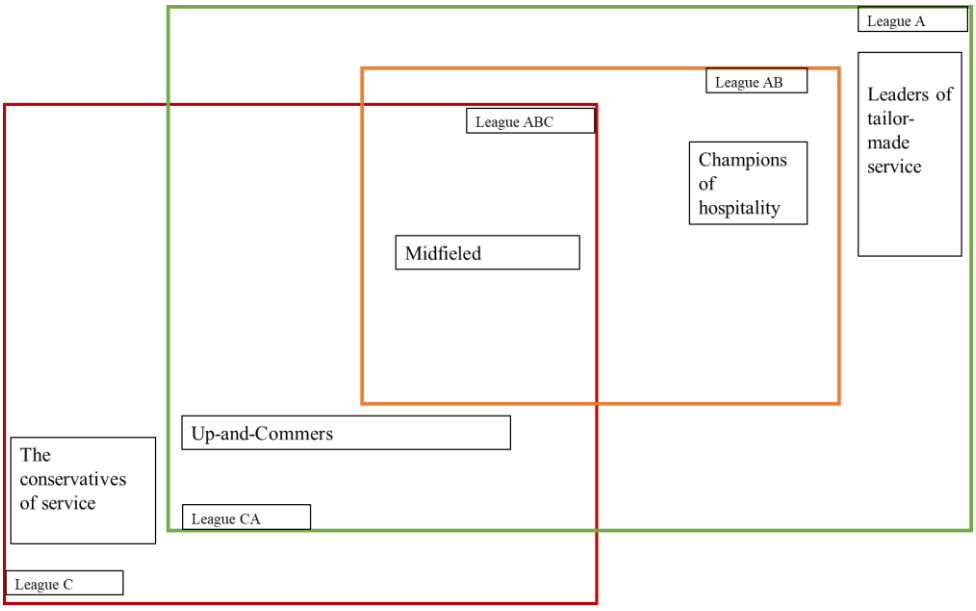
Figure 77. - Hierarchy of Hotel Clusters



(Source: Own Editing)

Tailor-made service evolution of the Hungarian hospitality industry is currently built as the pyramid in **Figure 79.** depicts. Leaders and Champions are the smallest groups while the Conservatives and Up-and-comers are the majority. Midfielders as shown in **Figure 80.**, represent the middle of the pyramid.

Figure 78. - Final Cluster Placement



(Source: Own Editing)

Thesis 1

It was determined that Hungarian hotels can be grouped into five different clusters (Leaders, Champions, Midfielders, Conservatives and Up-and-comers) according to the level to which they can provide tailor made services. The smallest group is the Leaders of tailor-made service with 4 hotels, followed by the Champions of hospitality with 5 hotels. The real Midfielders consist of 23 hotels and are closely followed by the Conservatives of service with a cluster of 24 hotels. The fifth cluster identified is the Up-and-comers, in which cluster 48 hotels can be found.

Thesis 2

It was concluded that tailor-made service indicators can be grouped into four different clusters (Leaders, Champions, Conservatives and Up-and-comers) based on the performance of the hotel. The top league indicators focus on the functional aspects of tailor-made services and include all necessary supporting activities for individualized service while the lower league contains most technical aspects and supporting indicators. The middle league indicators focus on hospitality and encouragement. The fourth indicator cluster has 2 indicators concerning data collection and re-marketing which are necessary functions in the endeavour in service individualization.

6.4.2. Hypothesis 3

There is a relationship between the different characteristics of a hotel and its tailor-made service level.

The hypothesis aims to determine if specific hotel characteristics such as size, star rating, target group or hotel type will affect the level to which the services are tailor-made.

To test this hypothesis, three kinds of methods were deemed necessary. On one hand, Pearson correlation is be used in the case of room numbers (scale) and the level of tailor – made service score (scale), for H3a**.** The Pearson correlation coefficient (*r)* is between –1 and 1. It measures both the strength and direction of the relationship between two variables.
On the other hand, to compare the score results (scale) with the type of hotel, star rating and target group categorical variables (which are nominal), variance analysis is needed for H3b., H3c., H3d. ANOVA (one-way analysis of variance) is used to identify if there are statistically significant differences between the means of the independent groups. (Sajtos and Mitev, 2007; Sajtos et al., 2007) If the data are non-parametric, then Kruskal – Wallis test is performed. Finally, to determine if there is a relationship between chain membership and tailor-made service, t-test is used, for H3e.

6.4.2.1. Size of the Hotel – H3a.

This sub-hypothesis was set up to test a relationship between the number of rooms of the hotel and their score on the tailor-made service scale. To investigate this relationship, correlation analysis has been chosen. The value of the correlation coefficient can be between +/-1.00 and 0.00, where the negative value means a negative correlation. (Molnár, 2015; Sajtos et al., 2007).
The room number varies from 10 - 429, while the score can be between 0 - 321.

The Pearson correlation in **Table 32.** shows that there was no statistically significant correlation between the size of the hotel and the tailor-made service score. (p=0.711)

Table 32. - Size of Hotel Pearson Correlation Tailor-Made Service Scores

Correlations			
		Sumscore	Room Nr.
Sumscore	Pearson Correlation	1	-,037
	Sig. (2-tailed)		,711
	N	105	105
Room Nr.	Pearson Correlation	-,037	1
	Sig. (2-tailed)	,711	
	N	105	105

(Source: SPSS Output)

The room numbers and the sub-scores for the functional score (0-295) and technical score (0-26) were also compared but showed no statistically significant correlation between the variables. Functional score p=0.791 wile technical score p=0.288.

Therefore, it can be concluded that (H3a.) there is no relationship between the size of the hotel and the level to which services are tailor-made, therefore the hypothesis can be rejected.

6.4.2.2. Type of the Hotel – H3b.

This sub-hypothesis was directed to investigate the relationship between the hotel type and their score on the tailor-made service scale. To investigate this relationship, one-way ANOVA has been chosen, the test of Homogeneity of Variances was met. Most hotels are reportedly wellness hotels. Depending on the hotel type, the length of the stay will be different; hence, there are more touchpoints with the customer.

Table 33. - ANOVA of Hotel Types

ANOVA					
Sumscore					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	16220,556	8	2027,569	1,133	,348
Within Groups	171761,692	96	1789,184		
Total	187982,248	104			

(Source: SPSS Output)

The results showed p > 0.05 (**Table 33.**) therefore it can be concluded that there is no relationship between the type of the hotel and the level to which services are tailor-made, therefore the hypothesis (H3b.) is rejected.

6.4.2.3. Guest Type – H3c.

This sub-hypothesis aims to find a relationship between the hotel guest type and their score on the tailor-made service scale. To investigate this relationship, variance analyses has been chosen, but the test of Homogeneity of Variances was not met. Therefore, the nonparametric analysis of Kruskal-Wallis test was performed.

Table 34. - Kruskal - Wallis Test

Test Statistics[a,b]	
	Sumscore
Chi-square	9,847
df	5
Asymp. Sig.	,080
a. Kruskal Wallis Test	
b. Grouping Variable: Target Group	

(Source: SPSS Output)

As the p value is greater than .05 (**Table 34.**), it can be concluded that (H3c.) there is no relationship between the hotel's guest type and the level to which service is tailor-made, therefore the hypothesis can be rejected.

6.4.2.4. Hotel Star Rating – H3d.

This sub-hypothesis aims to find a relationship between the hotel's star rating and their score on the tailor-made service scale. To investigate this relationship, variance analyses has been chosen, and the test of Homogeneity of Variances was met. The ANOVA analysis showed a p < .05 significance (**Table 35.**).

Table 35. - ANOVA of Star Rating

ANOVA					
Sumscore					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25499,011	6	4249,835	2,563	,024
Within Groups	162483,236	98	1657,992		
Total	187982,248	104			

(Source: SPSS Output)

Therefore, it can be stated that (H3d.) there is a relationship between the hotel's star rating and the level to which services are tailor-made.

To find out where is a stronger relationship, and to determine which specific groups are different from each other, post-hoc test was performed. Tukey's Honest Significant Difference test was selected.

The output (**Appendix 55**.) shows no significant difference between the different star-rating scores except between 3 and 4-star hotels, (Mean Difference **36,935* p=0,012**) where 3-star hotels score significantly higher than 4-star hotels, therefore the hypothesis is confirmed.

6.4.2.5. Chain Membership – H3e.

To determine if there is a relationship between chain membership and the score on the tailor-made service scale, t-test is performed. The t-test is used to see how significant the differences between group means are.

As T**able 36.** Independent Samples Test shows Sig. (2-tailed) is p<0.05, which signifies that there is a statistically significant difference between the two groups.

Table 36. - Independent Samples Test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Sumscore	Equal variances assumed	,422	,517	-2,561	103	,012	-22,693	8,862	-40,269	-5,117
	Equal variances not assumed			-2,554	56,014	,013	-22,693	8,885	-40,492	-4,893

(Source: SPSS Output)

The analysis found that chain members have a higher score, (255,35 +/- 41.6) compared to non-chain members (232,66 +/- 41.35) t_{103}=-2.56, p=0.012. Therefore, this hypothesis can be accepted.

Conclusion of Hypothesis 3.

When analysing if there is a relationship between the different characteristics and the level to which the services are tailor-made, it was found that there is no relationship between the size of the hotel and the score on tailor-made service. That is a surprising result given the literature suggesting that individualised service demands more attention on the guest; therefore, a smaller establishment should have an advantage in this area. On the other hand, a big establishment may have more intricate quality management, therefore they are more likely to need quality management representative or department. This could mean extra investment, but

at the same time it could imply that there is a more refined strategy in place in hotels with quality management.

Similarly to size, the type of the hotel or the type of the guest had no significant relationship with the tailor-made service score either, even though the literature around the subject pointed out that individualised service requires more interaction with the guest (hence more touchpoints). This would mean that a hotel where guests are staying for a longer period of time, such as a resort, should provide more opportunities for the staff to get to know the guest and provide individualised service compared to a city hotel where guests spend a short time in-house.

The star rating of the hotel had significant relationship with the tailor-made service score in the case of 3-star and 4-star hotels. Although 4-star hotels have higher quality, as having more service offerings, they scored significantly lower than the 3-star hotels of the sample.

Chain membership showed a significant difference, with chain members scoring significantly higher than non-chain members. It could be explained by the fact the chain members often share resources such as the marketing department and therefore have more opportunities to invest in supporting elements of individualized service. When it comes to the functional stage elements, chain hotels could have added benefit from standardization practices. As part of standardization, they pay more attention to individualization this also appears in the standards (Gyurácz-Németh, 2014), as they work with professional management, global rules, and good practices, which can have a ripple effect here as well.

Findings of Hypothesis 3.

Based on the analyses presented in the previous subsection the findings are as follows:

Finding 3a

The Pearson Correlation analysis confirmed that there is no relationship between the size of the hotel and the level to which services are tailor-made as the significance level is p=0.711.

Finding 3b

Based on the results of one-way ANOVA where the significance level is p=0,348, it can be concluded that there is no relationship between the type of hotel and the level to which services are tailor-made.

Finding 3c

No relationship was found between the hotel's guest type and the level to which services are tailor-made as the significance level of the Kruskal – Wallis Test is p=0,080.

Thesis 3d and 3e

Based on the analyses presented in the previous the following theses can be formulated:

Thesis 3d

It was proven that there is a relationship between the hotel's star rating and the level to which services are tailor-made. The post-hoc analysis showed that 3-star hotels score significantly higher than 4-star hotels on the tailor-made service score.

Thesis 3e

Independent Samples Test determined that there is a relationship between chain membership and the level to which services are tailor-made as $p<0.05$. The analysis found that chain members have a higher score, (255,35 +/- 41.6) compared to non-chain members (232,66 +/- 41.35) $t103=-2.56$, $p=0.012$.

6.4.3. Hypothesis 4

There is a relationship between the level of tailor-made services and the importance of the tailor-made services determined by the hotel manager.

General Managers are the main decision makers in the hotel strategy (Győrffy, 2004; Hayes et al., 2016; Jávor, 2009), therefore, their attitude is key when deciding on a more tailor-made service strategy.

The survey contains three questions regarding the importance of tailor-made services (based on Ariffin, 2008; 2013, Chellappa and Sin; 2005, Oztuk; 2017):

- How important is it to you to provide tailor-made service to your guests?
- How important is it to your hotel that in your hotel's communication, you make the guest feel like they are special customers?
- How important is it to you to modify the hotel service supply based on the guest's individual needs?

The managers were asked to answer the above questions and rate their responses on a 1-7 Likert scale. First, the internal consistency was analysed to assess if the three indicators were related. For that, Cronbach's alpha was used. In case of an acceptable alpha, the indicators can be coded into a value of importance. Finally, the relationship between the value of the score on the tailor-made service scale and the importance of providing tailor-made service determined by the hotel manager can be determined using Pearson rank correlation.

Reliability analyses shows that the alpha level is .853, which indicates a high level of internal consistency (Cronbach's Alpha in SPSS Statistics). The hotel managers on average gave tailor-made services a 6 out of 7 in importance. The median is also 6 out of 7.

Pearson rank correlation in **Table 37.** shows $p > .005$, therefore I can conclude that there is no relationship between tailor-made service scale and the importance of providing tailor-made service, therefore the hypothesis can be rejected.

Table 37. - Pearsons Rank Correlation Tailor-Made Services and the Importance of the Tailor-Made Services Determined by the Hotel Manager

Correlations			
		Sumscore	TailorredMean
SumScore	Pearson Correlation	1	-,020
	Sig. (2-tailed)		,837
	N	105	105
Importance of tailor-made service	Pearson Correlation	-,020	1
	Sig. (2-tailed)	,837	
	N	105	105

(*Source: SPSS Output)*

Conclusion of Hypothesis 4

Although General Managers agree that tailor-made services are important, there is no significant relationship between the level of importance indicated by them in a survey and the hotel scores. This can be explained by a lack of both financial and human resources, especially after the Covid-19 pandemic and considering the current economic situation. As the human factor has been especially troubling in the past years, it is possible, that the General Managers are not able to convene their expectation of desired service outcome.

Finding of Hypothesis 4

Based on Pearsons Rank Correlation it can be concluded that there is no relationship between the value of score on the tailor-made service scale and the importance of providing tailor made services determined by the Hotel Manager as the significance level is p=0.837.

6.4.4. Hypothesis 5.

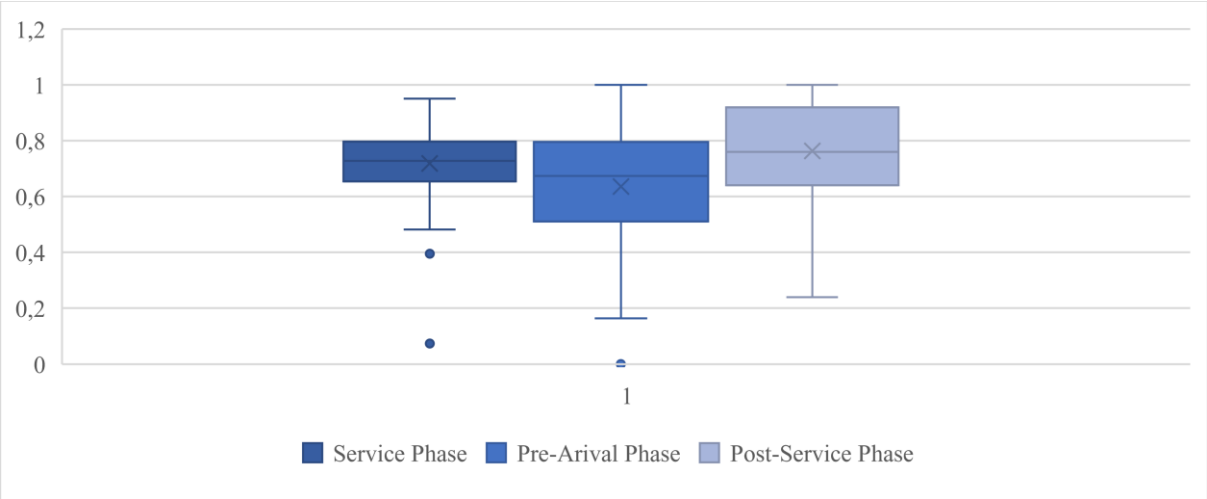
There is a difference in the tailor-made service level in the guest encounter phases.

Although there are many tailor-made service indicators that can be applied to the entire service process, some indicators are specific to one specific phase in the Customer Journey model. The aim is to measure if there is a statistically significant difference between these phases.

To measure whether there is a difference in the level of are tailor-made services in the encounter phases, first the 3 phases must be comparable. As each has a different number of indicators, they had to be normalized (0-1).

As it can be seen from the boxplot (**Figure 81.**), the centre of the sores are relatively close to each other, but there is some difference between the distribution in the phases, hence further statistical analyses is needed.

Figure 79. - Scores of the Guest Journey Phases - Normalized



(Source: SPSS Output)

After the score rates of the phases had been brought to a comparable scale, paired sample *t*-test was chosen to identify if there was a significant difference between the phases regarding the level of tailor-made service.
Paired sample *t*-test is a statistical procedure to determine if the mean difference between two sets of observations is zero. Paired sample *t*-test are used when dependent samples are connected. The H0 is that the pairwise difference is equal (H0: μd = 0) (Goulden, 1959).

Paired Samples Correlations in **Table 38.** show the bivariate Pearson correlation coefficient for each pair of variables entered which shows moderate relationship between the phases. (r=0.41-0.7 -moderated (Molnár, 2015; Sajtos and Mitev, 2007).

Table 38. - Paired Samples Correlations

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Service_Phase & Pre_Arival_Phase	105	,672	,000
Pair 2	Service_Phase & Post_Service_Phase	105	,565	,000
Pair 3	Pre_Arival & Post_Service_Phase	105	,602	,000

(Source: SPSS Output)

The average difference between the two variables were the greatest between the pre-arrival and the post-service phase (-0.1272)

- There was a significant average difference between the service phase and pre-arrival phase (t_{104}=5.392; p=.000), which means that on average, the service phase scores were 0.082 points higher (on the normalized scale) than the pre-arrival phase scores.
- There was also a significant average difference between the service phase and the post-service phase (t_{104}=-3.113; p=.002), which means that on average, the service

phase scores were 0.0447 points lower (on the normalized scale) than the post-service phase scores.

- Finally, there was a significant average difference between the pre-arrival and the post-service phase (t_{104}=-7.444; p=.000), which means that on average, the pre-arrival phase scores were 0.1272 points lower (on the normalized scale) than the post-service phase scores.

Based on these results, the author can confirm that hotels performed best on the post-service scale and they scored lowest of the pre-arrival phase, therefore the hypothesis can be accepted.

Conclusion of Hypothesis 5.
Hungarian hotels perform best in the post-service phase, followed by the service and pre-arrival phases. This was partially proven during the bi-cluster analysis as none of the post-service indicators was placed in the lower leagues.

This could mean that although many hotels put low emphasis on the marketing aspects and data collecting, they intend to create returning guests by proactively communicating with their guests after the service ended.

Thesis 5.
Based on Paired sample t-test, it was proven that there is a statistically significant difference in the level to which guest encounter phase are tailor made. Hungarian hotels perform best in the post-service phase tailor-made service indicators, (as service phase and the post-service phase is t_{104}=-3.113; p=.002 and the pre-arrival and the post-service phase t_{104}=-7.444; p=.000) and lowest in the pre-arrival phase tailor-made service indicators (as service phase and pre-arrival phase t_{104}=5.392; p=.000).

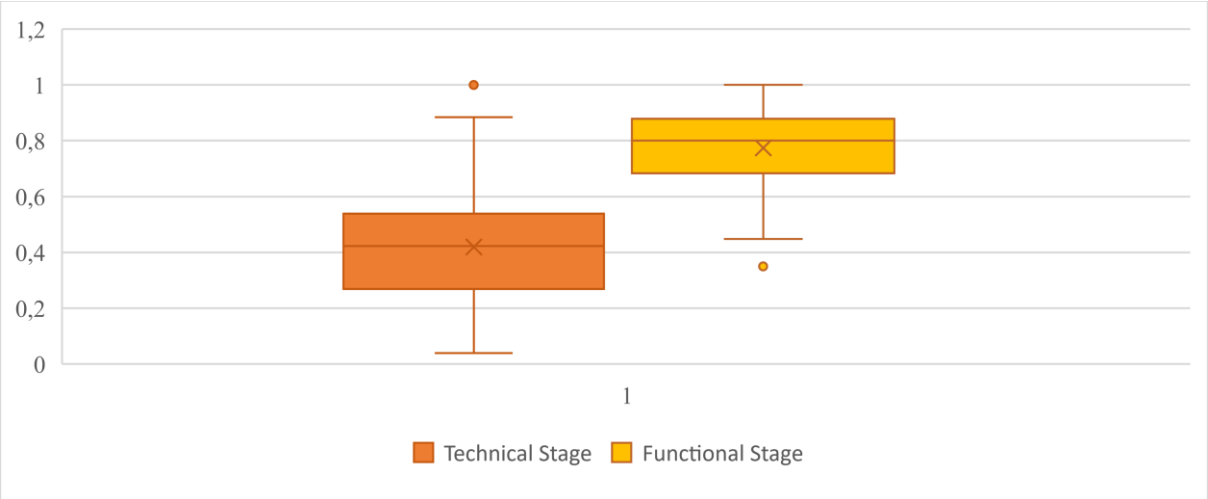
6.4.5. Hypothesis 6

There is a difference in the tailor-made service level in the guest encounter stages.

The tailor-made service indicators play on two stages, the technical and the functional stage. By normalizing the sores of the two sun-scales, it is possible to compare them.

To measure whether there is a difference in the level to which guest encounter stages are tailor-made, first, the 2 phases must be comparable. As each has a different number of indicators, they had to be normalized (0-1).
It can be seen from the boxplot (**Figure 82.**) that the centre of the functional stage scores is much higher than the centre of the technical stage scores, but to analyse if it is statistically significant, paired t-test is performed.

Figure 80. - Scores of the Technical and the Functional Stage - Normalized



(Source: Own Editing)

Paired Samples Correlations in **Table 32.** show the bivariate Pearson correlation coefficient for each pair of variables entered, which shows moderate relationship between the phases. (r=0.41-0.7 -moderated (Molnár, 2015; Sajtos and Mitev, 2007).

Table 39. - Paired Samples Correlations of the Tailor-Made Service Stages

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Technical_Stage & Functional_Stage	105	,466	,000

(Source: Own Editing)

There is a significant average difference between the technical stage and the functional stage (t_{104}=-21.148; p=.000) which means that on average the technical stage scores were 0.3554 point lower (on the normalized scale) than the functional stage scores (**Table 40.**).

Table 40. - Paired Sample Test Technical and Functional Stage

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Technical_Stage - Functional_Stage	-,3554157	,1722103	,0168060	-,3887426	-,3220887	-21,148	104	,000

(Source: SPSS Output)

Based on this analysis, it can be concluded that hotels performed better on the functional tailor-made service scale indicators, therefore the hypothesis can be accepted.

Also, it is important to mention that at Hypothesis 3a in **37. Figure**, although there is no significant relationship between the number of rooms and the score in functional or technical stage scores, but there is a p=.000, r=.466** medium relationship, which indicates that although hotels in general perform better in the functional elements of tailor-made service, those who perform well in the functional stage, will also perform better on the technical stage.

Conclusion of Hypothesis 6

Technical stage indicators have higher investment needs, as the website, and hotel application development is a great financial burden. Other aspects of the technical stage, like offering a pillow menu, or individualized offers for the minibar, have on the one hand financial aspects (as those items must be purchased and stored) and on the other hand human resource aspects as the customization must be done by an employee. Data collection, maintenance, and usage to create precise segments have high human resource need (number and competence). On the other hand, functional stage indicators are more focused on the things that are performed by employee which means that most hotels aim to provide great service with the resources they have. The results show that performing well on one stage will indicate that the hotel will perform well on the other stage too.

Thesis 6.

Based on paired t-test it can be concluded that there is a statistically significant difference in the level of tailor-made services in the different guest encounter stages. Hungarian hotels as the significance level is p=0.000. Hungarian hotels perform best on the functional stage as the technical stage scores are 0.3554 point lower in average.

Conclusion of the Analysis of the Hypotheses

Dividing the hotels and the tailor-made service indicators into clusters showed a clear difference between the levels to which service is tailor-made. The hierarchy of Hungarian hotels shows that a considerable part of the industry is in the middle or lower leagues, as there are more hotels assigned to the "Midfielders" and the "Up-and-comers" than to the "Champions" and "Leaders". This means that only a few hotels are on the top of the tailor-made service scale. Contrary to the fact that most hotels are performing as "Midfielders" or lower in the clusters of tailor-made services, most of the indicators are situated in the top league, which means that indicators concentrating functional stage indicators such as acts of kindness and classical hospitality service, focusing on guest service are important to almost all players. On the other hand, the active personalisation and customisation of service and the encouragement of employees are, on average, less important in the Hungarian hotel field. After analysing the results, the findings show that the Hungarian hotel industry needs to emphasise the technical aspects of service. While hotels generally scored well on the functional scale, they scored low on the technical score. Later in the analysis, this difference is proven statistically significant.

While personalisation/customisation research in the hospitality industry puts emphasis on the technical aspects of service, in the case of the Hungarian hotel industry, it was shown that there is a low emphasis on the technical quality of service.

Literature suggests that tailor-made service requires a high number of human resources and data. This would indicate that the more time the guest spends in the hotel, the more chance the hotel and the customer have, to co-create value. However, the findings of the H3. showed no statistically significant difference between the size of the hotel, the type of hotel or the type of guest. Therefore, the length of stay or the specific needs of different target groups have not affected the level of tailor-made service in the Hungarian hotel industry. This indicates that the extent to which hotel employees and guests have the chance to "encounter" did not affect the score the hotel reached. Furthermore, while the star rating system indicates the level of quality, this research showed that the only difference was between the 3 and 4-star hotels regarding individualised service. Interestingly, 3-star hotels perform better in service individualisation than 4-star hotels.

At the same time, the results show that chain membership affected the level of individualisation of service. Although the literature suggests that to individualise service, the hotel employee must spend more time and effort to get to know the guest, and chain members, based on the results of this research, yield higher scores on the tailor-made service scale than individual hotels. In addition, chain members emphasise standardisation which also affects their standard to tailor service, and they usually share resources with their chain members, which could explain the results as to why they perform better on the overall tailor-made service scale.

Although General Managers are the main decision-makers of the hotel and hotel strategy, the results could not prove a relationship between the importance of service personalisation and customisation for the General Manager and its presence in the hotel service.

The research also looked at the different guest encounter phases and compared them based on the level of tailor-made service scores. The study showed that although based on the literature, the service phase should be the best performer, as this is the phase when the most encounters happen; therefore, the most chances for tailoring service occur, in the Hungarian hotel industry, the post-service phase performs the highest. Furthermore, the scores of the post-service phase were all in the top league cluster and showed significantly higher results in all cases. Altogether, the Hungarian hotels performed the worst in the pre-arrival phase, which also relies heavily on technology.

Finally, the research compares the technical stage and the functional stage indicators and found a statistically significant difference which shows that Hungarian hotels, in general, perform better in tailor-made items of the functional stage.

7. Evaluation of the Results of the Research

The following chapter will summarize the study by presenting the key research findings in relation with the research aims and questions. After discussing the value and contribution it will also review the limitations and propose opportunities for future research.

7.1.Summary of the Research

The main goal of the dissertation was to analyse the capability of the current Hungarian hospitality industry to provide tailor-made service. This research provides new insights into important aspects of our understanding of tailor-made service in the Hungarian hotel industry.

The literature shows that service quality and its measurement have evolved over the past five decades. Research focused on consumer expectations, reactions, and satisfaction. Quality evolved from zero defect to meeting customer expectations and perceptions. Measuring and providing quality is challenging due to individual variations in expectations. Customer satisfaction is influenced by various dimensions, and negative experiences can decrease satisfaction. SQ has been linked to customer loyalty and profitability, and the physical surroundings significantly impact customer and employee behaviours. Perception plays a significant role in the concept of SQ. In the 2000s, research explored the relationship between service quality and customer satisfaction, highlighting the importance of matching service to individual guest needs. Technological advancements, including self-service technology, have influenced customer perceptions of SQ and our understanding of SQ expended beyond face-to-face interactions. The COVID-19 pandemic has accelerated the adoption of robotic and AI-based solutions in service delivery. It is important to explore the multidimensional aspects of SQ in different industries and consider evolving technologies and customer expectations. This research views high-level SQ as tailor-made service. Service companies often struggle to meet individual customer needs due to cost considerations, resulting in standardized approaches. Personalization involves the company initiating the tailoring process based on collected data, while customization offers pre-determined variations of service for customers to choose from. Co-creation plays a role in both processes. Customization requires more upfront investment, but less individual guest information compared to personalization. Therefore, it was concluded that a measurement system should consider both personalization and customization options in different service situations.

After the introduction of the current state of the Hungarian hotel industry, the research aimed to develop a customer journey model specific to it. This model not only focuses on the service phase but the pre-arrival and post-service phases and emphasizes, which are neglected in some customer journey models and the difference between tangible and non-tangible elements of service. Creating a new customer journey model was necessary due to the complexity of service and the need for generalizability across multiple establishments. This step is considered a significant scientific advancement and serves as the foundation for the development of a new measurement mode.

After the finalisation of the scoring system, the scale was fitted in a questionnaire and the form of an online survey distributed among the members of the Hungarian Hotels and Restaurants Association.

To fulfil the objectives of the dissertation, the data was analysed using the measurement model to assess the level of tailor-made hotel service in Hungary. The study aimed to identify the most frequently tailor-made phase and stage of the guest encounter and uncover potential development opportunities for the Hungarian hotel market.

The analysis of hotels and tailor-made service indicators revealed a clear distinction in the level of service tailoring. Most Hungarian hotels fall into the middle or lower leagues, indicating that only a few hotels excel in tailor-made service. While functional stage indicators are important to all players, active personalization, customization, and employee encouragement receive less emphasis. The study highlights the need for Hungarian hotels to prioritize the technical aspects of service, as they scored lower in this area. The length of stay and specific guest needs did not significantly impact the level of tailor-made service. This result contradicting existing literature. Those hotels where guest spends more time at, should have more chances for "moments of truth". Interestingly, 3-star hotels outperformed 4-star hotels in service individualization.

Chain members scored significantly higher than non-chain members. It could be explained by the fact the chain members often share resources such as the marketing department and therefore have more opportunities to invest in supporting elements of individualized service. Also, standardization contradictory it may seem, supports service tailoring.

The importance of service personalization to the General manager did not correlate with its presence in hotel service. If individualizing service is important to the General manager, it should be reflected in the results of the hotel's performance, but my research showed no significance. This could be because there are no available resources that the General manager know of, or they currently had bigger challenges.

In terms of guest encounter phases, the post-service phase performed the highest, while the pre-arrival phase scored the lowest, relying heavily on technology. Literature shows that personalization and customization techniques happen mostly during face-to-face service encounters, therefore in the Service Phase. However, the research shows Hungarian Hotels score highest in the Post-service Phase. As overall, Hungarian hotels performed better in functional stage tailor-made items compared to technical stage indicators it could also explain why the pre-arrival phase scored the lowest.

7.2.Collection of Theses

Thesis 1.

It was determined that Hungarian hotels can be grouped into five different clusters (Leaders, Champions, Midfielders, Conservatives and Up-and-comers) according to the level to which they can provide tailor made services. The smallest group is the Leaders of tailor-made service with 4 hotels, followed by the Champions of hospitality with 5 hotels. The real Midfielders consist of 23 hotels and are closely followed by the Conservatives of service with a cluster of 24 hotels. The fifth cluster identified is the Up-and-comers, in which cluster 48 hotels can be found.

Thesis 2.

It was concluded that tailor-made service indicators can be grouped into four different clusters (Leaders, Champions, Conservatives and Up-and-comers) based on the performance of the hotel. The top league indicators focus on the functional aspects of tailor-made services and include all necessary supporting activities for individualized service while the lower league contains most technical aspects and supporting indicators. The middle league indicators focus on hospitality and encouragement. The fourth indicator cluster has 2 indicators concerning data collection and re-marketing which are necessary functions in the endeavour in service individualization.

Thesis 3d.

It was proven that there is a relationship between the hotel's star rating and the level to which services are tailor-made. The post-hoc analysis showed that 3-star hotels score significantly higher than 4-star hotels on the tailor-made service score.

Thesis 3e.

Independent Samples Test determined that there is a relationship between chain membership and the level to which services are tailor-made as $p<0.05$. The analysis found that chain members have a higher score, (255,35 +/- 41.6) compared to non-chain members (232,66 +/- 41.35) t103=-2.56, p=0.012.

Thesis 5.

Based on Paired sample t-test, it was proven that there is a statistically significant difference in the level to which guest encounter phase are tailor made. Hungarian hotels perform best in the post-service phase tailor-made service indicators, (as service phase and the post-service phase is t_{104}=-3.113; p=.002 and the pre-arrival and the post-service phase t_{104}=-7.444; p=.000) and lowest in the pre-arrival phase tailor-made service indicators (as service phase and pre-arrival phase t_{104}=5.392; p=.000).

Thesis 6.

Based on paired t-test it can be concluded that there is a statistically significant difference in the level of tailor-made services in the different guest encounter stages. Hungarian hotels as the significance level is p=0.000. Hungarian hotels perform best on the functional stage as the technical stage scores are 0.3554 point lower in average.

7.3.Collection of Findings

Finding 3a.

The Pearson Correlation analysis confirmed that there is no relationship between the size of the hotel and the level to which services are tailor-made as the significance level is p=0.711.

Finding 3b.

Based on the results of one-way ANOVA where the significance level is p=0,348, it can be concluded that there is no relationship between the type of hotel and the level to which services are tailor-made.

Finding 3c.

No relationship was found between the hotel's guest type and the level to which services are tailor-made as the significance level of the Kruskal – Wallis Test is p=0,080.

Finding 4.

Based on Pearsons Rank Correlation it can be concluded that there is no relationship between the value of score on the tailor-made service scale and the importance of providing tailor made services determined by the Hotel Manager as the significance level is p=0.837.

7.4.The Novelty of the Research

The following aspects of the study are novelty.

Given the complexity and multidimensionality of hotel service a new customer journey model that considers multiple aspects of service was needed. Hence one of the novelties is that;

1. Conceptualizing a new customer journey model for the hotel industry that considers multiple aspects of service.

Service quality research is varied but they rarely considering all aspects of hotel service while on the other hand personalization and customization measurements are often to focused on one aspect. Therefore, the second novelty is that;

2. Creating a new tailor-made service quality measurement system for hotels that fills gaps in existing research and testing it.

Bi-cluster analyses were used, a new technique in social sciences. As few publications use bi-clustering algorithms the analyses presented a new perspective on grouping methods. The bi-clustering analyses novelty is that while finding the best performers it also grouped the indicators, they performed best in. Therefore the third novelty is;

3. Using bi-cluster analyses, a new technique in social sciences, to provide a fresh perspective on grouping methods and identifying best performers.

The novelty od the resulty is that they provide an overview of the Hungarian hotel industry from a service individualization perspective. Mainly the novelties follows;

4. Providing an overview of the Hungarian hotel industry's capability to provide tailor-made service and examining the characteristics of clustered hotels.
5. Identifying strengths and weaknesses of Hungarian hotels in providing tailor-made service through grouping indicators.
6. Finding the relationship between hotel characteristics and the level of tailor-made service, contradicting existing literature and extending knowledge.
7. Presenting and analysing differences in the tailor-made level across service encounter stages and highlighting statistically significant differences.
8. Presenting and analysing differences in the tailor-made level across service encounter phases and highlighting statistically significant differences.

9. Offering an overview of the Hungarian hotel industry from a service individualization perspective.
10. Providing a new understanding of the strengths and weaknesses of the Hungarian hotel industry in providing service.

7.5.Practical Implications

Based on the data and analysis presented in the research, Hungarian hotels should prioritize improving the technical aspects of quality. This does not automatically mean investing in expensive AI. or technology. They need to approach this improvement in a well-thought-out and targeted manner. My suggestion would be for hotels to consider their main target group and the characteristics of their property, and then focus on the area that holds the most value for their specific situation.

One overall improvement strategy that I would recommend, regardless of the hotel's properties, is micro-segmentation and proper data collection. This strategy partially focuses on the pre-arrival phase but extends throughout the guest's journey in the hotel. By implementing proper micro-segmentation, the hotel can create better-customized offers to enhance consumption. Additionally, with the proper collection of data on returning guests, the hotel will be able to enhance personalization and provide a more tailored experience.

A well-thought-out strategy and carefully designed customizable service offers can also alleviate the challenges of providing service with a constantly changing workforce. Furthermore, maintaining a comprehensive dataset can assist new employees in staying informed about returning guests.

A crucial aspect of tailor-made service is employee interaction. Employee turnover poses a significant challenge in the industry, making it difficult for hotels to select from a large pool of applicants. However, having authority in one's own job can be an attractive factor when choosing a workplace. One effective technique to motivate employee is providing employee training. In this case it could help employees understand how to deliver personalized service or how to utilize the dataset (mentioned above), which can have a motivational impact. Incentivizing individualized service would also motivate personnel to strive for outstanding service. As the financial situation in hotels is challenging, these incentives could be more varied than just cash payments, for instance additional days off.

Finally, tailor-made service is not only done at the front stage, therefore making sure, that all employees should understand the impact of their work and should be motivated to try and provide individualized service.

7.6. Conclusion

The research aimed to answer the question, how Hungarian hotels performed in tailor-made service, and how current Hungarian industry is performing. After the detailed evaluation of literature and the building of a new customer journey model, a new gap filling scoring model was created using qualitative methods in two rounds of expert interviews, including in total of 24 interviewees.

The results of the qualitative research can be found in **Table 41**.

Table 41. - Qualitative Research Results

Research question	Methods	Conclusion
Q1. - Is it possible to create a measurement system that fits the ideal hotel guest journey model? **Q2. - What indicators should be involved in the process of creating a measurement system to determine / identify how tailor-made hotel services are in order to reach SQ?**	System building, Experts interviews.	Based on the research it is possible to develop a measurement system to measure the level to which service is tailor-made in hotels.
Q3. - How tailored-made (personalized, customized) are the Hungarian hotel services?	GAP	There is a bigger gap between the maximum score and the archived scores in case of the Technical scale items than in the Functional scale items.

The scoring system then was added to an online survey and was distributed among the HHRA members. The quantitative analysis of the data and the result of the hypotheses are summarised in **Table 42**.

Table 42. - Summary of the Research

Research question	Hypotheses	Methods	Hypothesis fulfilled	Thesis / finding
Q4. - Can the hotels be assigned to groups based on the tailored service scale scores? **Q5. - What are the common characteristics of those hotels who got into the same cluster?**	H1. - Hungarian hotels can be grouped in different clusters according to the tailor-made service.	Bi-cluster	✓	Thesis 1. - It was determined that Hungarian hotels can be grouped in different clusters according to the level to which service is tailor-made.
Q6. - Can the tailored service scale indicators be groped based on which indicators hotels perform well and poorly?	H2. - Tailor made service indicators can be grouped into different clusters based on the performance of the hotel.	Bi-cluster	✓	Thesis 2. - It was concluded that tailor-made service indicators can be grouped in different clusters based on in which indicators hotels perform well and poorly.
Q7. - What are the common characteristics of those hotels that score high on the tailor-made service measurement? **Q8. - What are the common characteristics of those hotels that score low on the tailor-made service measurement?**	H3. - There is a relationship between the different characteristics of a hotel and its tailor-made service level. H3a. - There is a relationship between the size and the tailor- made service level of a hotel. H3b. - There is a relationship between the hotel type and the tailor-made service level of a hotel. H3c. - There is a relationship between the hotel's guest type and tailor-made service level of a hotel. H3d. - There is relationship between the star rating of the hotel and tailor-made service level. H3e. - There is relationship between chain affiliation and the tailor-made service level of the hotel.	ANOVA	✗ ✗ ✗ ✓ ✓	Finding 3a. - It has been confirmed that there is no relationship between the size of the hotel and the level to which service is tailor-made. Finding 3b. - It has been concluded that there is no relationship between the type of hotel and the level to which service is tailor-made. Finding 3c. - Based on the results, there is no relationship between the hotel's guest type and the level to which service is tailor-made. Thesis 3d. - It was proven that there is a relationship between the hotel's star rating and the level to which service is tailor-made. The post-hoc analysis showed that 3-star hotels score significantly higher than 4-star hotels on the tailor-made service score. Thesis 3e. - It was determined that there is a relationship between chain membership and the level to which service is tailor-made.

Q9. - What is the importance of providing tailored service for hotel managers? **Q10. - Is there a relationship between the value of score on the tailored service scale and the importance of providing tailor made service determined by the Hotel Manager**.	H4. - There is a relationship between the level of tailor-made services and the importance of the tailor-made services determined by the hotel manager.	Pearson Rank Correlation		Finding 4. - There is no relationship between the value of score on the tailor-made service scale and the importance of providing tailor made service determined by the Hotel Manager.
Q11. - Is there a difference in the level to which guest encounter phase are tailor made?	H5. - There is a difference in the tailor-made service level of the guest encounter phases.	Paired *t*-test		Thesis 5. - It was proven that there is a statistically significant difference in the level to which guest encounter phase are tailor made. Hungarian hotels perform best in the post-service phase tailor-made service indicators and lowest in the pre-arrival phase tailor-made service indicators.
Q11. Is there a difference in the level to which guest encounter stages are tailor made?	H6. - There is a difference in the tailor-made service level of the guest encounter stages.	Paired *t*-test		Thesis 6. - It was proven that there is a statistically significant difference in the level to which guest encounter stages are tailor-made Hungarian hotels. Hungarian hotels perform best on the functional stage.

(Source: Own Edit)

7.6.1. Limitation

One of the biggest limitations of the research was the lack of a unified database for all Hungarian accommodations. Since the evaluations for the new star rating system were not yet concluded, it was challenging to find up-to-date data on all current Hungarian hotels. Additionally, focusing on HHRA members posed difficulties as the number of hotels in certain star categories was changing on a weekly basis. Furthermore, due to the economic situation, inflation, high gas prices, and a lack of employees that threatened the operation of companies, many HHRA members were either in the process of closing down during the research period or prioritizing efforts to keep their companies afloat, which limited their participation in the research.

In conclusion, due to the nature of the industry it is hard to get representative sample.

7.6.2. Further Research

The preparation of this measurement system was done by qualitative interviews. Following the research, a post interview could be implemented to analyse how hotel leaders interpret these results and if they agree with it.

As mentioned, the measurement system could be applied to other service areas, but it should be tailored to the service. The modifications should follow the same logic and interviews with experts on the field would be needed.

One other direction of the research could be to create a measurement system paired with the tailor-made service measurement system detailed in this dissertation, that could be filled out by the hotel guest, to measure what the guest experience from the service and compare it with the self-evaluation score of the hotel. This direction would concentrate on hotels individually and could give more important data to the hotel to where to improve.

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Appendix

List of Appendix

Appendix 1. - Service Quality Models Before the 2000s

Author	Year	Name	Remarks
Grönroos	(1984)	SQ Model – Technical and functional quality mode	Distinction of technical and functional quality.
Parasuraman et al.,	(1985)	GAP Model	Dimensions distinguish tangible aspects and abstract phrases like competence. The model uses factors.
Haywood-Farmer	(1988)	SQ Attributes	Based on Parasuraman et al. (1985). Physical facilities, people's behaviour. The model uses factors.
Parasuraman et al.,	(1988)	SERVQUAL	Based on Parasuraman et al. (1985). Usage of items. Creation of the scale.
Brogowiczet al.,	(1990)	Synthesised model of SQ	Based on Grönroos (1984) model and GAP (1985) model. Distinction of technical and functional quality. Relevance of marketing in SQ.
Cronin and Taylor	(1992)	SERVPERF Performance only model	Based on Parasuraman et al. (1988) Performance is a good indicator a SQ.
Mattsson	(1992)	Ideal value model of SQ	Based Cronin and Taylor (1992) and focuses on value. Customer expectation has desired attributes. Comparing the ideal standard to the experience.
Teas	(1993)	Evaluated performance and normed quality model	Parasuraman et al. (1988) Evaluation of performance.
Oliver	(1993)	Satisfaction – SQ model	SQ is only measured through perception.

Lovelock	(1994)	Extended GAP model	Based on Parasuraman et al (1985) Importance of service delivery.
Berkley and Gupta	(1994)	IT alignment model	IT is an essential part of SQ.
Dabholkar	(1996)	Attribute and overall affect model	Effects of the technology based self- service. Technology is evaluated based on different traits.
Dabholkaret al.,	(1996)	Retail Service Quality Scale (RSQS)	Based on Parasuraman et al. (1988) and Cronin and Taylor (1992) Using subdimensions for more detailed results. Not only the service process and reliability but the physical aspects are considered.
Spreng and Mackoy	(1996)	Model of perceived SQ and satisfaction	Based on Oliver (1993) Increase understanding of perceived SQ.
Philip and Hazlett	(1997)	PCP Model or hierarchical structural model	Adopted Webster and Hung's (1994) and Parasuraman et al (1988) scales. Differentiated the incidental extras from the service process.
Sweeney	(1997)	Retail SQ and perceived value model	Based on Zeithaml (1988) and Grönroos (1984). Functional and technical service is differentiated. Willingness to buy and the value for money in measured.
Oh	(1999)	SQ, customer value and customer satisfaction model	The importance to analyse the guest encounter phases separately. Focusing on the post – purchase phase only.

(Source: Own Edit)

Appendix 2. - Service Quality Models After 2000s

Author	**Year**	**Name**	**Remarks**
Soteriou and Stavrinides	(2000)	Internal SQ DEA model	Finding the under-performers and suggesting ways for improvement to ensure the quality of service.
Caruana, et al.,	(2000)	SQ and satisfaction and value	Based on Parasuraman et al. (1988) and Oliver (1980), and

			Taylor and Baker (1994). Inclusion of multiple models.
Frost and Kumar	(2000)	INTSERVQUAL - Internal SQ model	Based on Parasuraman et al (1985) Satisfaction of internal consumers have to be considered for SQ.
Dabholkaret al.,	(2000)	Antecedents and mediator model	Comprehensive model.
Brady and Cronin	(2001)	SQ Model	Based on Dabholkar et al. (1996), Parasuraman et al (1988), Grönroos (1984) and Rust and Oliver (1994). The three subdimensions for each dimension; interaction quality, physical service environment quality, and outcome quality affect SQ. Multidimensional and multilevel SQ measurement.
Tsaur et al.,	(2002)	Fuzzy Multiple Criteria Decision-Makin	Based on, Saaty (1980). Parasuraman *et al*. (1985). Trying to measure the intangible attributes.
Luk and Layton	(2002)	The extended GAP model	Based on Parasuraman et al (1985). Employees and manager can have different view of SQ and also customer expectation.
Kuo et al.	(2013)	SQ on customer loyalty	Based on Parasuraman et al. (1988), DeWitt et al. (2008), Ryu et al. (2008) and Chang et al. (2009). The technique of including multiple models whilst modifying them.

(Source: Own Edit)

Appendix 3. - Service Quality Models in Hospitality

Author	**Year**	**Name**	**Remarks**
Knutson et al.,	(1990)	LODGSERV	Based on Parasuraman et al. (1988) SERVQUAL can be

			specialized to the hotel experience. Identifying where the hotel is exceeding meeting of failing expectations.
Getty and Thompson	(1995)	LODGQUAL	Based on Parasuraman et al (1988). Tailoring scale to the specific industry.
Webster and Hung	(1994)	Adapted SERVQUAL	Based on Parasuraman et al (1988). Look at SQ from the consumers point of view. Shows where immediate corrective action should be taken.
Akan	(1995)	Dimensions of SQ	Based on Parasuraman et al (1988). Adjusting for hotels means that additional dimensions have to be considered. Focusing not only on the service process but the employee and the hotel's physical traits.
Wong Ooi Mei et al.,	(1999)	HOLSERV	Based on Parasuraman et al (1988). Employees, tangibles and reliability key dimensions. Employees have an important role and cannot be omitted.
Akbaba	(2006)	SERVQUAL model apply in an international environment.	Based on Parasuraman et al. (1988) and Mei et al. (1999) Dimension "understanding and caring"
Wilkins et al.,	(2007)	SQ in the Luxury hotel sector	Based on Parasuraman et al. (1988) Important to highlight physical product, service experience and quality and food and beverage.
Albacete-Sáez et al.,	(2007)	SQ of Rural Establishment	Based on Parasuraman et al. (1988) Perceptions minus

			expectations.

(Source: Own Edit)

Appendix 4. - Service Quality Models After 2000s - IT

Author	Year	Name	Remarks
Broderick and Vachirapornpuk	(2002)	Internet banking model	Service setting attributes. The level of customer participation.
Zhu et al.,	(2002)	IT-based model	Based on Parasuraman et al. (1988, 1991) The IT-SQ and in person SQ connections.
Santos	(2003)	Model of e-SQ	The design and usability of online surfaces such as a website has to be hight SQ.
Chen et al.	(2017)	e-SERVAR	Based on Parasuraman et al. (1988) SERVQUAL. System quality variability element. Reducing quality variability in e-service.
Zeithaml et al.	(2000)	e-SQ	Based on Parasuraman et al. (1988) Dimensions to evaluate e-SQ. Personalization in e-SQ.
Loiacono	(2002, 2007)	WebQual	Based on Parasuraman et al. (1988) Separate focused on the website quality.
Parasuraman et al.,	(2005)	E-S-QUAL and E-RecS-QUAL	Based on Parasuraman et al. (1988) Differentiation of routine and non-routine consumer experience.
Huang et al.,	(2015)	M-S-QUAL	Based on Parasuraman et al. (1988) Service through mobile devices must be considered separate for other e-services.
He et al.	(2017)	TeleServQ	Customisation aspects considered.
Noor et al.,	(2022)	AISAQUAL	Enjoyment as dimension of AISA.

(Source: Own Edit)

Appendix 5. - Personalization Definitions

Author	Year	Personalization	Remarks
Surprenant and Solomon	(1987)	"Good service" often is translated as more personalized service. (...) Any behaviour occurring in the interaction intended to contribute to the individuation of a customer.	Encounter. Human-to-human.
Mittal and Lassar	(1996)	"We define personalization as the social content of interaction between service employees and their customers. Thus, "personalization" concerns the manner in which service employees relate to customers as people - cold and impersonal at the one end to warm and personal at the other" p (96)	Encounter. Human-to-human.
Kokko and Moilanen,	(1997)	Changing the qualities of a service so that it fit into the customers' personal values. Includes personally planned details into service processes.	Encounter. Human-to-human.
Peppers and Rogers	(1997)	Personalization is customizing some feature of a product or service so that the customer enjoys more convenience, lower cost or some other benefit. Personalization can be initiated by the customer or by the firm.	Encounter. Human-to-human. Initiated by both.
Peppers et al.	(1999)	Personalization is customizing some features of a product or service so that the customer enjoys more convenience, lower cost, or some other benefit.	Encounter. Human-to-human.
Hanson	(1999)	"A specialized form of product differentiation, in which a solution is tailored for a specific individual." p (450)	Product differentiation.
Gilmore and Pine	(2000)	Personalization (or individualization which are used synonymously) in general means matching one object's nature with one subject's needs (i.e., customize products, services, content, communications to the needs of single customers or customer groups).	Can target a single customer or a group.
Riecken	(2000)	Personalization is about building customer loyalty by building meaningful one-to-one relationships. This is done by understanding the needs of each individual and with knowledge and efficiency satisfy a goal and addresses each individual need in a given context	Encounter. Human-to-human.
Blom	(2000)	Personalization is a process that changes the functionality, interface, information content, or distinctiveness of a system to	Technology based.

		increase its personal relevance to the individual	
Riemer and Totz	(2001)	The individualization of product or service attributes and parameters to customer-specific needs to increase customer satisfaction. (p.2)	Individualization of product or service.
Allen et al.	(2001)	Company-driven individualization of customer web experience. p (32-33)	Technology Company driven.
Imhoff et al.	(2001)	"Personalization is the ability of a company to recognize and treat its customers as individuals through personal messaging, targeted banner ads, special offers on bills, or other personal transactions." p (467)	Both technology based and personal encounters. Company driven.
Wind and Rangaswamy	(2001)	Personalization can be initiated by the customer (e.g. customizing the look and contents of a web page) or by the firm (e.g. individualized offering, greeting customer by name etc.). (p.15)	Initiated by both.
Fink et al.,	(2002)	One-to-one relationships with customers; direct access to personally relevant news, seamlessly integrating user preferences into the existing infrastructure, collecting information about user interests.	Both technology based and personal encounters. Company driven.
Chiasson et al.,	(2002)	Personalization of information in order to customize interactions with end-users and reduce interaction complexity.	Technology based. Importance of information.
Kalyanam and McIntyre,	(2002)	One of the instruments of e-marketing mix, aspect of segmentation.	Marketing.
Billsus et al.	(2002)	Personalization as a result of adaptive technologies.	Technology based.
Cöner	(2003)	Personalization is performed by the company and is based on a match of categorized content to profiled users.	Technology based. Initiated by company. Importance of information.
Roberts	(2003)	"The process of preparing individualized communication for a specific person, based on stated or implied preferences." (p.462)	Encounter. Human to human. Importance of information.
Blom and Monk	(2003)	Personalization is a process that changes the functionality, interface, information content, or distinctiveness of a system to increase its personal relevance to the individual	Technology based. Importance of information.
Chellappa and Sin	(2005)	Personalization can be defined as the ability to proactively tailor products and	Initiated by company.

		product purchasing experiences to the tastes of individual consumers based upon their personal and preference information. Therefore, personalization is critically dependent on two factors: 1. vendors' ability to acquire and process consumer information, and 2. consumers' willingness to share information and use personalization services	Importance of information.
Ho and Tam	(2006)	Delivering "the right content to the right person in the right format at the right time" (p. 96).	Company driven. Importance of information.
Serino et al.	(2005)	''Use of information about a particular user that provides tailored or personalized services for the user'' (p. 1).	Technology based. Importance of information.
Ho	(2006)	In customization, a web site provides choices for the users to modify a website's look and feel (user-driven process). Relevant content based on the preferences of groups of users is provided in adaptation. Personalization is a process of providing relevant content based on individual user preferences, and personalized web sites obtain preference information implicitly by tracking customer purchases or usage habits.	Technology based. Importance of information. Company driven.
Tam and Ho	(2006)	There are three types of personalization: user-driven personalization when the user specifies in advance the desired web layout and content that matches their interests and preferences with the tools and options provided. In transaction-driven personalization, an online merchant generates the personalized layout and content (based on previous transaction). Context-driven personalization employs an adaptive mechanism to personalize content and layout for each individual user based on the context and inference of users' processing objectives in real time (e.g., product inspection versus random browsing)	Technology based. Initiated by both.
Kumar and Stecke	(2007)	Mass personalization is a limiting case of mass customization. Mass personalization aims at a market segment of one while the latter mass customization at a market segment of few.	Company driven.
Arora et al.	(2008)	Personalization is a firm's decision on the marketing mix suitable for the individual that is based on previously collected	Company driven. Importance of information.

		customer data.	
Montgomery and Smith	(2008)	Personalization is automated by the marketer on behalf of the customer as opposed to customization that a customer requests on their own behalf (...). Personalization is the adaptation of products and services by the producer for the consumer using information that has been inferred from the consumer's behaviour or transactions.	Company driven.
Lee and Cranage	(2011)	Personalization refers to individualizing products, services, and contents according to customer interests and preferences.	Initiated by the company.

(Source: Own Edit)

Appendix 6. - Mass Customization Definitions

Author	Year	Definition	Remarks
Davis	(1994)	''But mass customization is not restricted to products and services. It also applies to customers and markets'' (p. 180)	Also applied to marketing.
Ettlie and Ward	(1997)	''Mass customization—providing products that are created to the customers' specifications.'' (p. 56)	Individualized on a large scale.
von Hippel	(1998)	''Mass customization generally refers to the manufacturing of one-of-a-kind, 'custom' products . . . One can also logically extend the concept of mass customization to the production of customized services.'' (p. 631–2)	One-of-a-kind manufacturing.
Åhlström and Westbrook	(1999)	''Mass customization is a term first coined to describe a trend towards the production and distribution of individually customized goods and services for a mass market.'' (p. 262)	Customized production.
Gilmore and Pine	(2000)	Mass customization is the individualization of products (and services) at the cost of one-size fits all.	Individualized on a large scale.
Zipkin	(2001)	''Mass customization is the capability . . . to offer individually tailored products or services on a large scale.'' (p. 81)	Individualized on a large scale.
Duray	(2002)	''. . . offering unique products in a mass-produced, low-cost, high volume production environment.'' (p. 314)	Individualized on a large scale.

(Source: Own Edit)

Appendix 7. - Customization Definitions

Author	Year	Definition	Remarks
Pine et al.	(1995)	''Customization means manufacturing a product or delivering a service in response to a particular customer's needs, and mass customization means doing it in a cost-effective way.'' (p. 105)	A response to consumer needs.

Anderson et al.	(1997)	The degree to which the firm's offering is tailored to meet heterogeneous customers' needs.	Company offers from a selection based on needs.
Peppers et al.	(1999)	Based on the interaction, treating a particular customer differently.	Based on the consumer.
Glazer	(1999)	Customization is flexible manufacturing and operations. It can be strategies based on flexible marketing.	Flexible manufacturing.
Hanson	(1999)	"The combining of individual-level information and flexible product design" (p. 445)	Flexible design.
Allen et al.	(2001)	"Customer-driven individualization of customer web experience" (pp. 57-58)	Customer driven.
Imhoff et al.	(2001)	"Customization includes individualization of features, e.g. web site content, by customers" (p. 374)	Customer driven.
Wind and Rangaswamy	(2001)	Customization, initiated by the customer. "... a business strategy to recast a company's marketing and customer interfaces to be buyer-centric" (p. 14)	Customer driven.
Sundbo	(2002)	Customization of services as the opposite of service standardization.	Customization opposite to standardization.
Cöner	(2003)	Customization is performed by the user.	Customer driven.
Roberts	(2003)	"The process of producing a product, service, or communication to the exact specifications/desires of the purchaser or recipient" (p. 459)	Based on needs.
Ansari and Mela	(2003)	Customization of communications by means of clickstream data.	Technology based.
Arora et al.	(2008)	Customization allows customers to (partly) adapt the marketing mix to their individual preferences.	Based on customer.
Valenzuela et al.	(2009)	Customization is a process by which consumers adapt offerings to their own preferences.	Based on customer.

(Source: Own Edit)

Appendix 8. - Co-creation Definitions

Author	**Year**	**Co-creation**	**Remarks**
Mossberg	(2008)	"The tourist as co-creator of the experience environment." (p. 63)	Focus on customer. Environment.
Li and Petrick	(2008)	"The customer as co-creator of value and co-producer of experience." (p. 240)	Focus on customer. Value. Experience.
Lichrou et al.	(2008)	"Tourists are co-creators of places through narratives" (p. 31)	Focus on customer. Environment.
Zouni and Kouremenos	(2008)	"It involves both the marketer and the customer interacting in all aspects of the design, production, and consumption of a service" (p. 292)	Interaction between company and customer.
Morgan et al.	(2009)	"The customer as an active participant and creator of experiences through interaction rather than a passive consumer" (p. 205)	Focus on customer. Interaction between company and customer. Experience.

Samuelsen	(2010)	"The consumers involvement in the creation of the experience product (as co-producers or co- creators)" (p. 3)	Focus on customer. Experience.
Salvado	(2011)	"The tourism co-creation experience results from the interaction of an individual at a specific place and time and within the context of a specific act." (p. 101)	Focus on customer. Interaction between company and customer. Experience
Wang et al.	(2011)	"Activities in which both the service provider and customer collaborate in the customer's consuming and experiencing particular services." (p. 135)	Interaction between company and customer. Experience.
Sandra and Björk	(2012)	"Firms and tourists are interconnected, inter –dependent and interact to co-create experiences over time." (p. 3)	Interaction between company and customer. Experience.
Tajzadeh-Namin	(2012)	"The personalized experience that is unique to each individual customer/ tourist." (p. 203)	Personalization. Focus on customer. Experience.
Lugosi and Walls	(2013)	"Tourists are co-producers and actively build their own consumption experiences through the interaction between the environment, organizations, employees, locals and other consumers." (p. 53)	Focus on customer. Interaction between company and customer. Experience.
Räikkönen and Honkanen	(2013)	"Co-creation experiences are the basis of value derived from interactions between customers and companies." (p. 109)	Interaction between company and customer. Value.
Bertella	(2014)	"The active role played by tourists in creating and giving meaning to an experience that touches them deeply." (pp. 115–116)	Focus on customer. Experience

(Source: Own Edit)

Appendix 9. - Literature of Items

Author	
Chellappa and Sin, 2005	Web personalization
PER1	I value Web pages that are personalized for the device (e.g. computer, palm, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that I use.
PER2	I value Web sites that are personalized for my usage experience preferences
PER3	I valueWeb sites that acquire my personal preferences and personalize the services and products themselves
PER4	I value goods and services that are personalized based on information that is collected automatically (such as IP address, pages viewed, access time) but cannot identify me as an individual.
PER5	I value goods and services that are personalized on information that I have voluntarily given out (such as age range, salary range, Zip Code) but cannot identify me an individual. as
PER6	I value goods and services that are personalized on information I have voluntarily given out and can identify me as an individual (such as name, shipping address,

	card information). credit
Mittal and Lassar, 1996	SERQUAL-P
9.	Everyone at is polite and courteous.'
10.	The employees display personal warmth in their behavior
11.	All the persons working at are friendly and pleasant
12.	The employees take the time to know you personally
Nyheim et al., 2015	**Perceived personalization**
1	Personalized advertising on this application makes purchasing recommendations that match my needs
2	I think that personalized advertising on this application enables me to order products that are tailor-made for me
3	Overall, personalized advertising on this application is tailored to my situation
4	Personalized advertising on this application makes me feel that I am a unique customer
5	I believe that personalized advertising on this application is customized to my needs
Modym and Lehto 2017	
1	Personalized communication by the hotel barand/airbnb maes me feel that I am a uniqe customer
2	I belive that communication by the hotel brand is customized to my needs
3	Communication with the hotel brand provides me with product and service recommedations that are tailormade for me
(Ball, Coelho and Vilares, 2006)	
y41	"My bank" offers me products and services that satisfy my specific needs
y42:	"My bank" offers products and services that I could not find in another bank
y43:	If I changed from banks I wouldn't obtain products and services as personalized as I have now
(Ozturk et al., 2017)	
1	When I searched for a hotel, MHB provided recommendations close to where I was.
2	When I searched for a hotel room, MHB provided personalized search results.
3	I feel that MHB provided me with information and products according to my preferences.
4	Overall, I feel that my personal needs have been met when using MHB.
Ho and Bodoff 2014	based on Nyheim et al. (2015) *Personalization*
	Personalized communication by the hotel brand/Airbnb makes me feel that I am a unique customer
	I believe that communication by the hotel brand/Airbnb is customized to my needs
	Communication by the hotel brand/Airbnb provides me with product and service recommendations that are tailormade for me
Ho and Bodoff 2014	based on van der Heijden, 2004) Study 1: The lab study
PU1	I could decide more quickly which book I wanted to select than in the past.
PU2	I could better decide which book I wanted to select than in the past.
PU3	I was better informed about relevant books.
PU4	I could decide more quickly whether I wanted to explore a particular book or not.
PU5	I could better decide whether I wanted to select a particular book or not.
	Study 2: The field study
	By using the personalization agent,
PU1	I could decide more quickly which song I wanted to select than in the past.
PU2	I could better decide which song I wanted to select than in the past.
PU3	I was better informed about new songs.

PU4	I could decide more quickly whether I wanted to explore a particular song or not.
PU5	I could better decide whether I wanted to select a particular song or not.
Ho and Bodoff 2014	Attitude Valence based on (Bhattacherjee and Premkumar 2004)
Valence1.	Using the personalization agent in my book selection is a (bad … good) idea.
Valence2.	Using the personalization agent in my book selection will be (unpleasant … pleasant).
Valence3.	Overall, I (dislike … like) the idea of using the personalization agent in my book selection.
	Study 2: The field study
Valence1.	Using the personalization agent in my song selection is a (bad … good) idea.
Valence2.	Using the personalization agent in my song selection will be (unpleasant … pleasant).
Valence3.	Overall, I (dislike … like) the idea of using the personalization agent in my song selection.
Ho and Bodoff 2014	Tam and Ho 2006
	The book recommendations shown at the bottom of the window are personalized to my needs
	The book recommendations displayed at the bottom of the window match my needs
	The book recommendations are personalized to me
Ho and Bodoff 2014	Berger and Mitchell 1989
Conf1	How confident are you in the estimation of the goodness of personalized items
Conf 2	How precise is your estimation of the goodness of personalized items?
Jan Blom 2000	
	Function 1 Making te interface suitable for visually impaired
	Function 2 Receiving information of the area of interest
	Function 3 Recommended products of the basis of preferences of similar-minded consumers
Morosan, and deFranco, 2016	
	The hotel app can provide me with personalizes services, products, or information tailored to my specific hotel stay
	The hotel app can provide me with more relevant services, products, or information tailored to my preferences or personal interests,
	The hotel app can provide me with the kind of personalized services, products or information that i might like.
Xu, et al.	
	the level of personalization at the website was about right not too much or too little
	the website understood my specific needs during the laptop selection task
	the website had features that were personalized for me
	what control panel style do you prefer
	what exterior color do you prefer
	human based services on the website like chat service
Ariffin 2013	
1	Hotel staff knew my name and/or nationality
2	The hotel staff treated me with full respect
3	The hotel staff made eye contact with me during conversation
4	the hotel made me feel like an important person
5	the hotel staff gave me authentic smiles all the time
6	the hotel stuff tried to be helpful in solving my problem
7	I was given a warm welcome at the door step

8	The hotel ensured the security of all guests
9	The hotel staff walked with me to the guest room upon check-in
10	The hotel presented me with an unexpected welcoming token of gift
11	The hotel staff helped me with my luggage (if any)
12	the hotel understood my special requirements while staying the hotel
13	Buliding good relationship rather than making money seemed to be the most important drive of the hotel
14	i was given warm "good bye" after checking out at the counter
15	I was entertained with the service provided by the hotel
16	I was treated as a friend rather than a customer
17	The hotel staff ensured that my meals had been taken care of
18	The hospitable behaviour seemed to be rendered as a natural extentionof their characters regardless of any control and incentive systems
19	the hospitable behaviour seemed to be motivated by genuin needs to please and care for their guests and not to deliberately impress the guest
20	The hotell ensured that all aspects of the room were in good conditions
21	I felt as if i was at home while staying at the hotel
22	the hotel staff ensured that the room was comfortable for me
Battancout and Gwinner 1995	
	personalization or friendliness
	conversation, which moves from formal to familiar
	being friendly with costumers
	small talk
Blom and Monk, 2003 2014	"Theory of personalization of appearance"
1.	Ease of use
2.	Being able to change the aesthetics of the design to my preferences
3.	Being able to recognize my copy of the product or system
4.	Being able to reflect my personal identity
5.	Being able to reflect my membership of some group
6.	Feeling familiar with the system or product
7.	The system of product feels personal
8.	Feeling in control of the system or product
9.	A feeling of ownership of the system or product
10.	Being fed up with the appearance of the product or system and wanting to repersonalize it
11.	Having fun with the product or system
12.	Making me happy
13.	Being emotionally attached to the system or product
14.	Being able to accommodate my current emotional state
Pijls & Schreiber 2012	"Capturing the guest experience in hotels…" - affectvive experrience interaction with hotel staff
	the contact with the employees exceeds my expectation
	I perceive the contact with the employees as being pleasant
	the employees seem reliable to me
	the employees make me feel at ease
	the employees are empathetic towards me
	the employees seem approachable to me
Gwinner et al. 2005	"Service Customaziation Through Employee Adaptiveness"

	If I work hard I can adapt my behavior to the needs of the customer
	If I put forth the effort I can customize the service offering to the needs of the customer
	If I work hard I can personalize the service for the customer
	If put forth the effort I am able to change my behavior to suit the needs of the situation
	I have the skills necessary to adapt to meet customer needs
Elgaraihy 2013	"Developing and Validating a Hospitality Service Quality Scalein Saudi Arabia"
6	Staff members responded immediately to my requests
7	Room service was done immediately
8	The hotel operates working hours to be appropriate to all its customers
9	The hotel has staff members who give you individual attention
10	The hotel considers your best interest at the top of its priorities
11	staff members of the hotel understand your specific demands
12	The hotel has staff members who are efficient
Parasuraman et al. 1988	"A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality"
E5	When these firms promise to do something by a certain time, they should do so
E6	When customers have problems, these firms should be sympathetic and reassuring
E8	They should provide their services at the time they promise to do so
E9	They should keep their records accurately
E10	They shouldn't be expected to tell customers exactly when services will be performed
E11	It is not realistic for customers to expect prompt service from employees of these firms
E12	Their employees don't always have to be willing to help customers
E13	It is okay if they are too busy to respond to customer requests promptly
E16	Their employees should be polite
Aydin 2018	"Role of Personalization in Shaping Attitudes Towards Social Media Ads"
	I feel that facebook advertisements are tailored to me (Ünal et al., 2011; Xu et al ., 2008)
	I feel that contents in Facebook advertisements are personalized (Ünal et al., 2011; Xu et al ., 2008)
	I feel that Facebook advertising is personalized for my usage (Ünal et al., 2011; Xu et al ., 2008)
	I feel that Facebook advertising is delivered to me in a timely way (Ünal et al., 2011; Xu et al ., 2008)
(Kapeš et al., 2022)	The hotel adjusted the response to the specific problem of the guest.
	In the response, the hotel partially restated the problem.
	The guest is invited to interact with the hotel.
	The hotel knows exactly to whose review it responds.

(Source: Own Edit)

Appendix 10. - Technical Stage, Pre-arrival phase, Website - Fusion

Nr.	Author	Indicator from Literature	Key focus		Transformed Indicator	Score
1	Chellappa and Sin, 2005	I value Web sites that are personalized for my usage experience preferences	Website	1;2	Our website has features that personalized for the users' preferences	0-1

2	Jingjun Xu, Izak Benbast Ronald Cenfetelli research note …	The website had features that were personalized for me	Website	x	x	x
3	Jingjun Xu, Izak Benbast Ronald Cenfetelli research note …	what control panel style do you prefer	Website	3	Control panel style can be customized by user	0-1
4	Jingjun Xu, Izak Benbast Ronald Cenfetelli research note …	what exterior color do you prefer	Website	4	Exterior color can be customized by user	0-1
5	Jingjun Xu, Izak Benbast Ronald Cenfetelli research note …	human based services on the website like chat service	Website	5	The website has a Chat service	0-2
6	Jan Blom 2000	Making the interface suitable for visually impaired	Website	6	The website has feature for the visually impaired	0-1
7	_(Chellappa and Sin, 2005)	I value Web pages that are personalized for the device (e.g. computer, palm, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that I use.	Website	7	Our website is automorphically fits to the e.g. computer, palm, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.	0-1
8	cristian Morosan, agnes deFranco 2016 adapted from Li, Sarathy and xu 2011; (Piccoli et al., 2022)	Research done assuming there is a hotel Application	Hotel App	8	We have a hotel App	0-1
9	Jan Blom 2000	Receiving information of the area of interest	Personalized recommendations	9;10;11;12	The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.	0-1
10	cristian Morosan, agnes deFranco 2016 "modeling guests' intention to use …)adapted from Li, Sarathy and xu 2011	The hotel app can provide me with more relevant services, products, or information tailored to my preferences or personal interests,	Personalized recommendations	x	x	x
11	(Ozturk et al., 2017)	Overall, I feel that my personal needs have been met when using MHB.	Personalized recommendations	xx	xx	xxx
12	cristian Morosan, agnes deFranco 2016	The hotel app can provide me with the kind of personalized services,	Personalized recommendations	x	x	x

	"modeling guests' intention to use …)adapted from Li, Sarathy and xu 2011	products or information that i might like.				
13	Tam and Ho 2006	The book recommendations shown at the bottom of the window are personalized to my needs	Personalized recommendations	13; 14; 15;16	The website aquires the specific needs of the guest and shows service recommendations based on their personal needs	0-1
14	Jingjun Xu, Izak Benbast Ronald Cenfetelli research note …	the website understood my specific needs during the laptop selection task	Website function	x	x	
15	(Nyheim et al., 2015)	Personalized advertising on this application makes purchasing recommendations that match my needs	Advertising	x		
16	(Nyheim et al., 2015) in Modym suess and Lehto 2017	I believe that personalized advertising on this application is customized to my needs	Advertising			
17	Chellappa and Sin, 2005	I value Web sites that acquire my personal preferences and personalize the services and products themselves	Website function	17; 18	The Web site acquires the guests' personal preferences and offers services and products that are tailor-made for the guest	0-1
18	(Nyheim et al., 2015)	I think that personalized advertising on this application enables me to order products that are tailor-made for me	Advertising	x	x	
19	Jingjun Xu, Izak Benbast Ronald Cenfetelli research note …	the level of personalization at the website was about right not too much or too little	personalization level		N/A	
20	(Chellappa and Sin, 2005)	I value goods and services that are personalized based on information that is collected automatically (such as IP address, pages viewed, access time) but cannot identify me as an individual.	Website function	20	Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.	0-1
21	(Ozturk et al., 2017)	When I searched for a hotel, MHB provided recommendations close to where I was.	Personalized recommendations	21	Our hotel uses Search engine optimalization to appear for searching accommodation nearby	0-1
22	(Ozturk et al., 2017)	When I searched for a hotel room, MHB	Personalized recommendations	22	Our hotel makes sure that we appear as a	0-1

		provided personalized search results.			personalized search result through search engine optimalization	
23	(Ozturk et al., 2017)	I feel that MHB provided me with information and products according to my preferences.	Personalized recommendations	23	Our hotel makes sure that we provide information and products according to our guests preferences.	
24	Gökhan Aydin 2018	I feel that facebook advertisements are tailored to me (Ünal et al., 2011; Xu et al ., 2008)	Perceived personalization	24,15	We aim to advertise our hotel in a way that it feels personalized for our potential guests, even based on the previous searches or interests.	0-1
25	Gökhan Aydin 2018	I feel that contents in Facebook advertisements are personalized (Ünal et al., 2011; Xu et al ., 2008)	Perceived personalization	x		

(Source: Own Edit)

Appendix 11. - Functional Stage, Pre-arrival phase, Pre-arrival communication - Fusion

	Author	**Indicator**	**Key focus**		**Transformed Indicator**	**Score**
1	(Ozturk et al., 2017)	Communication by the hotel brand/Airbnb provides me with product and service recommendations that are tailormade for me	Advertising	1	Communication by our hotel brand provides our customers with product and service recommendations that are tailormade for them	0-5
2	Ho and Bodoff 2014	The book recommendations are personalized to me	Perceived personalization	2	We recommend products and services that are are personalized to our customer's interest based on our communication with that customer	0-5
3	Jan Blom 2000	Function 3 Recommending products of the basis of preferences of similar-minded consumers	Advertising	3	We recommend products and services that are personalized to our customer's interest based on of the basis of preferences of similar-minded consumers	0-5

4	(Ozturk et al., 2017)	Personalized communication by the hotel brand/Airbnb makes me feel that I am a unique customer	communication	4, 5	We aim to use personalized communication so our brand can make the guest feel that they are a unique customer	0-5
5	(Nyheim et al., 2015) in Modym suess and Lehto 2017	Personalized advertising on this application makes me feel that I am a unique customer	communication	x		
6	Gökhan Aydin 2018	I feel that Facebook advertising is delivered to me in a timely way (Ünal et al., 2011; Xu et al ., 2008)	Advertising	x	We aim to give personalized recommendation in a timely way.	0-5
7	Perceived Usefulness (Van der Heijden 2004)	PU1: I could decide more quickly which song I wanted to select than in the past.	decision making	NA		
8	Perceived Usefulness (Van der Heijden 2004)	PU2: I could better decide which song I wanted to select than in the past.	decision making	NA		
9	Based on previous	x	x		We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc)	0-5
9	Ho and Bodoff 2018 Attitude Valence (Bhattacherjee and Premkumar 2004)	Valence1. Using the personalization agent in my song selection is a (bad … good) idea.	decision making	x	x	
10	Ho and Bodoff 2018 Attitude Valence (Bhattacherjee and Premkumar 2004)	Valence2. Using the personalization agent in my song selection will be (unpleasant … pleasant).	decision making	x	x	
11	Ho and Bodoff 2018 Attitude Valence (Bhattacherjee and Premkumar 2004)	Valence3. Overall, I (dislike … like) the idea of using the personalization agent in my song selection.	decision making	x	x	

(Source: Own Edit)

Appendix 12. - Functional Stage, Service Phase, Arrival - Fusion

	Author	**Indicator**	**Key focus**		**Transformed Indicator**	**Score**
1	Affrin and Maghzi 2012	Given a warm welcome at the doorstep	Welcome	1,2	We aim to provide an authentic warm	0-5

	from Lashley (2008)				welcome to the guest	
2	Ariffin 2013	I was given a warm welcome at the doorstep	Welcome	x	x	
3	Ariffin 2013	The hotel staff walked with me to the guest room upon check-in	Help	3,4	Guest are walked to the guestroom after check -in	0-5
4	Affrin and Maghzi 2012 – In depth interview	Walked to the hotel room by the staff upon check in	help	x	x	
5	Ariffin 2013	The hotel presented me with an unexpected welcoming token of gift	Gifting	5	We place different welcome gifts in the guestroom (to all guest)	0-5
6	Affrin and Maghzi 2012 from King (1995)	Presented with an unexpected welcoming token or gift	Gifting	6	We place different welcome gifts in the guestroom (of VIP guest)	0-5

(Source: Own Edit)

Appendix 13. - Technical Stage, Service Phase, Arrival – Fusion

1	(Shih et al., 2019)	Greetings from Emily, name introduction greeting card with a hand-written message	Welcome	1	We place introduction greeting card with a hand-written message and guests name in the room	0-1

(Source: Own Edit)

Appendix 14. - Functional Stage, Service Phase, In Room and Hotel Amenities - Fusion

	Author	**Indicator**	**Key focus**		**Transformed Indicator**	**Score**
1	Wael Hassan El-garaihy 2013	The hotel operates working hours to be appropriate to all its customers	convenience	1	The hotel operates working hours to be appropriate to all its customers	0-5
2	Affrin and Maghzi 2012 from Martin (1986)	Understanding my special requirements while staying in a hotel	Requirements	2	We pay attention to the special requirements of our guests while staying in a hotel	0-5
3	Wael Hassan El-garaihy 2013	Staff members responded immediately to my requests	immediate response	3, 4	We respond immediately to all guest requests	0-5
4	Wael Hassan El-garaihy 2013	Room service was done immediately	immediate response	x		
5	Affrin and Maghzi 2012 from Lashley et al.	Ensured that my meals had been taken care of	meals	5,6	We make sure, that there are appropriate meals for all	0-5

	(2005)				guest (religion, allergies, dietary restrictions)	
6	Ariffin 2013	The hotel staff ensured that my meals had been taken care of	meals	x	x	
7	Affrin and Maghzi 2012 from Lashley (2008)	Ensured that the room was comfortable for me (and my companions)	room	7,8	We make sure that the chosen room is comfortable for the guest	0-5
8	Ariffin 2013	The hotel staff ensured that the room was comfortable for me	room	x		
9	Affrin and Maghzi 2012 from Lashley (2008)	Ensured all aspects of the room was in good condition	room	9,10	We make sure that all aspects of the room is in good condition and suitable for the guest	0-5
10	Ariffin 2013	The hotel ensured that all aspects of the room were in good conditions	room	x		

(Source: Own Edit)

Appendix 15. - Functional Stage, Service Phase, Check-out - Fusion

	Author	Indicator	Key focus	Transformed Indicator	Score
1	Affrin and Maghzi 2012	Given warm “good bye” after checking out at the counter	Goodbye	We give a warm “good bye” after checking out at the counter	0-5
2	Ariffin 2013	i was given warm "good bye" after checking out at the counter			
3	Interview (Dutch)		check out	Based on previous conversation with the guest we are recommending them with activities for the last day	0-5

(Source: Own Edit)

Appendix 16. - Functional Stage, Service Phase - Fusion

	Author	Indicator	Key focus		Transformed Indicator	Score
1	Ariffin 2013	The hotel staff helped me with my luggage (if any)	Help	1,2	The hotel staff helps with the luggage	0-5
2	Affrin and Maghzi 2012 from Indepth interviews	The hotel staff helped me with my luggage (if any)	Help	x		
3	Affrin and Maghzi 2012 from Grandey et al. (2005)	The hotel staff gave me authentic smiles all the time	Staff behavior	3, 4	Our staff gives authentic smiles all the time	0-5
4	Ariffin 2013	the hotel staff gave me autherntic smiles all the	Staff behavior	x		

		time				
5	(Mittal and Lassar, 1996)	The employees display personal warmth in their behavior.	Staff behavior	5	We encourage the employees to display personal warmth in their behavior.	0 -5
6	Pijls & Schreiber 2014	affectvive experrience interaction with hotel staff…..the employees seem approachable to me	Staff behavior	6	We encourage the employees to be approachable	0-5
7	Ariffin 2013 from in depth interviews	The hotel staff made eye contact with me during conversation	Staff behavior	7,8	We encourage the employees to make eye contact with the guest during conversation	0-5
8	Affrin and Maghzi 2012	The hotel staff made eye contact with me during conversations Indepth interviews	Staff behavior	x	x	
9	Ariffin 2013	the hotel understood my special requirements while staying the hotel	requirements	9	We are doing everything to understand the special requirements of the guest while staying the hotel	0-5
10	Affrin and Maghzi 2012	The hotel staff knew my name and/or nationality	Staff knowledge	10, 11	The employee has to know the name and / or nationality of the guest	0-5
11	Ariffin 2013	Hotel staff knew my name and/or nationality	Staff knowledge	x		
12	Ariffin 2013	The hotel ensured the security of all guests	Security	NA		
13	Affrin and Maghzi 2012 from Telfer (2000)	Ensured the security of all guests	Security	NA		
14	Affrin and Maghzi 2012 from Hepple et al. (1990)	Felt as if I was at home while staying at the hotel	Feeling	NA		
15	Ariffin 2013	I felt as if i was at home while staying at the hotel	Feeling	NA		

(Source: Own Edit)

Appendix 17. - Technical Stage, Service Phase - Fusion

	Author	Indicator	Key focus		Transformed Indicator	Score
1	(Piccoli et al., 2022)	Customize the stay	Room	1	It is possible for the guest to ask for minor changes regarding the	0-1

					room during their stay	
2	(Piccoli et al., 2022)	Temperature		2	The guest can choose a specific temperature they want their room to be	0-1
3	(Piccoli et al., 2022)	Bed		3	The guest can choose what kind of bed/Matras they want in their room	0-2
4	(Piccoli et al., 2022)	Bedding		4	The guest can choose the style and the type of the beddig	0-1
5	(Piccoli et al., 2022)	Pillow		5	The guest can choose what kind of pillow they want.	0-1
6	Duch intervi	minibar no alcohol		6	The guest can choose to have no alcohol in their minibar	0-1
7	Dutch interview	"regular guest will get their favorite drinks in the room even if that is not the brand the hotel normally works with)"		7	We put the favorite drink of the guest in the room even if that is not the brand the hotel normally works with	0-2

(Source: Own Edit)

Appendix 18. - Functional Stage, Post-service Phase - Fusion

	Author	**Indicator**	**Key focus**		**Transformed Indicator**	**Score**
1	(Kapeš et al., 2022)	The hotel adjusted the response to the specific problem of the guest.	specific problem	1, 2	Our hotel hotel adjusts the response to the specific problem of the guest.	0-5
2	(Kapeš et al., 2022)	In the response, the hotel partially restated the problem.	restated	x		
3	(Kapeš et al., 2022)	The guest is invited to interact with the hotel.	interaction	3	The guest is invited to interact with us.	0-5
4	(Kapeš et al., 2022)	The hotel knows exactly to whose review it responds.	knowledge	4	Our hotel / employee knows exactly to whose review it	0-5

					responds	
5	(Shin et al., 2019)	The studies find that online reviewers (previous guests) are more empowered when they receive a personalized response and when they have positive service experiences.		5	Our hotel / employee gives an individual response to all guest reviews and comments.	0-5

(Source: Own Edit)

Appendix 19. - Functional Stage - Fusion

	Author	Indicator	Key focus		Transformed Indicator	Score
1	Gwinner & Bitner & Brown & Kumar 2010	If I work hard, I can adapt my behavior to the needs of the customer	adapting behavior	1, 2	Our employee changes their behavior to suit the needs of the guest	0-5
2	Gwinner & Bitner & Brown & Kumar 2010	I have the skills necessary to adapt to meet customer needs	adapting behavior	x	x	
3	Blom and Monk, 2003 2028	Being able to accommodate my current emotional state	adapting behavior	3, 4	Our employee changes their behavior to suit the needs of the situation	0-5
4	Gwinner & Bitner & Brown & Kumar	If put forth the effort I am able to change my behavior to suit the needs of the situation	adapting behavior	x		
5	Pijls & Schreiber	the employees are empathetic towards me	Empathy	5, 6	The employee is empathetic towards the guest when they have a problem	0-5
6	Parasuraman & Zeithaml	When customers have problems, these firms should be sympathetic and reassuring	Empathy	x		
7	Wael Hassan El-garaihy 2013	Staff members responded immediately to my requests	Responding on time	7,8,9	The employee responds immediately to guest requests	0-5
8	Parasuraman & Zeithaml	It is not realistic for customers to expect prompt service from employees of these firms	Responding on time	x		
9	Parasuraman & Zeithaml	It is okay if they are too busy to respond to customer requests promptly	Responding on time	x		
10	Parasuraman & Zeithaml	When these firms promise to do something by a certain time, they should do so	Providing service on time	10, 11, 12	When our employee promise to do something by a certain time, they do so	0-5
11	Parasuraman & Zeithaml	They should provide their services at the time	Providing service on	x		

		they promise to do so	time			
12	Parasuraman & Zeithaml	They shouldn't be expected to tell customers exactly when services will be performed	Providing service on time	x		
13	Parasuraman & Zeithaml 1992	They should keep their records accurately	Accuracy	13	We make sure that our information is accurate and update our records frequently	0-5
14	Service quality (Ekinci, 2001).	Staff were talented and displayed a natural expertise.	Professionalism	14,15	Our employee is talented and displays a natural expertise in case of all requests.	0-5
15	Pijls & Schreiber 2017	The employees seem reliable to me	Professionalism	x		
16	Wael Hassan El-garaihy 2013	The hotel has staff members who are efficient	Professionalism	16	Our employee is efficient.	0-5
17	Pijls & Schreiber 2015	The contact with the employees exceeds my expectation	Professionalism	17	Our employee aims to exceed guest expectation	
18	Chellappa and Sin, 2005	I value goods and services that are personalized on information that I have voluntarily given out (such as age range, salary range, Zip Code) but cannot identify me an individual.	Personalized service	18, 21	Our employee / hotel personalizes goods and services that are based on information that the guest has voluntarily given out (such as age range, salary range, Zip Code) but cannot identify them as an individual.	0-5
19	Chellappa and Sin, 2005	I value goods and services that are personalized on information I have voluntarily given out and can identify me as an individual (such as name, shipping address, card information).	Personalized service	19, 21	Our employee personalizes goods and services that based on information that the guest gave voluntarily and can identify them as an individual (such as name, shipping address, card information).	0-5
20	Gwinner & Bitner	If I put forth the effort, I	Personalized	20	Our employee	0-5

	& Brown & Kumar 2007	can customize the service offering to the needs of the customer	service		can customize the service offering to the needs of the customer. (example: food allergies etc)	
21	Gwinner & Bitner & Brown & Kumar 2008	If I work hard, I can personalize the service for the customer	Personalized service	x		
22	Wael Hassan El-garaihy 2013	staff members of the hotel understand your specific demands	Personalized service	22	Our employee / hotel makes sure to take the time and understand the specific demands	0-5
23	Ball, Coelho and Vilares, 2006	"My bank" offers me products and services that satisfy my specific needs	Personalized service	23	Our employee / hotel offers customers products and services that satisfy they specific needs	0-5
24	Service quality Ekinci, 2001	Staff seemed to anticipate what I wanted.	Personalized service	24	Our employee / hotel anticipates what the guest wants before they ask.	0-5
25	Jan Blom 2002	Recommending products of the basis of preferences of similar-mindend consumers	Personalized service	25	Our employee / hotel recommends products of the basis of preferences of similar-minded consumers	0-5
26	Affrin and Maghzi 2012 from Heal (1990)	The hospitable behavior seemed to be rendered as a natural extension of their characters regardless of any control and incentive systems	Employee behavior	26,27,28, 29	We make sure that the hospitable behavior from our employee seems to be motivated by genuine needs to please and care for their guests as an extension of their characteristic	
27	Affrin and Maghzi 2012 from Solnet (2006)	The hospitable behavior seemed to be motivated by genuine needs to please and care for their guests and not to deliberately impress the guests	Employee behavior	x		
28	Ariffin 2013	The hospitable behavior seemed to be rendered as a natural extension of their characters	Employee behavior	x		

		regardless of any control and incentive systems				
29	Ariffin 2013	the hospitable behaviour seemed to be motivated by genuin needs to please and care for their guests and not to deliberately impress the guest	Employee behavior	x		
30	Wael Hassan El-garaihy 2013	The hotel considers your best interest at the top of its priorities	Important person	30	Our hotel / employee considers the best interest of the guest our / their top priority	0-5
31	Ariffin 2013	the hotel made me feel like an important person	Important person	31, 32	Our hotel / our employee aims to make the guest feel like an important person	0-5
32	Affrin and Maghzi 2012 from Nouwen (1975)	The hotel made me feel like an important person	Important person	x		
33	Service quality (Ekinci, 2001).	Staff were helpful and friendly.	Help	33,34,35,36	Our employee always tries to be helpful in solving guests' problems, even coming up with unique solutions	0-5
34	Ariffin 2013	the hotel stuff tried to be helpful in solving my problem	Help	x		
35	Affrin and Maghzi 2012 2028	The hotel staff tried to be helpful in solving my problems	Help	x		
36	Parasuraman & Zeithaml 1995	Their employees don't always have to be willing to help customers	Help	x		
37	Wael Hassan El-garaihy 2013	The hotel has staff members who give you individual attention	Attention	37	Our employee amis to give guests individual attention	0-5
38	(Mittal and Lassar, 1996)	The employees take the time to know you personally	Attention	38, 39	Our employee takes time (and ahs time) to get to know the guest personally	0-5
39	Service quality (Ekinci,.	Staff listened to me	Attention	x		
40	Ariffin 2013 from Gober and Tannehill (1984), Tschohl (1980)	The hotel staff treated me with full respect	Respect	40, 41	The hotel employee treats guest with full respect	0-5
41	Affrin and Maghzi 2012	The hotel staff treated me with full respect	Respect	x		

42	Parasuraman & Zeithaml	Their employees should be polite	Politeness	42, 43, 44	Our employees are polite with all guests	0-5
43	(Mittal and Lassar,)	Everyone at is polite and courteous.'	Politeness	x		
44	Pijls & Schreiber	I perceive the contact with the employees as being pleasant	Politeness	x		
45	Ariffin 2013	I was treated as a friend rather than a customer	Friendly	45, 46	Our employee aims to treat the guest as a friend rather than a customer.	0-5
46	Affrin and Maghzi 2012 from Lashley (2008)	Treated as a friend rather than a customer	Friendly	x		
47	(Mittal and Lassar,)	All the persons working at are friendly and pleasant.	Friendly	47, 48, 49	Our employee are friendly with all guests	0-5
48	Pijls & Schreiber	the employees make me feel at ease	Employee behavior	x		
49	Battancout and Gwinner	being friendly with costumers				
50	Ariffin 2013 2	Building good relationship rather than making money seemed to be the most important drive of the hotel	Employee behavior	50, 51	It is important that the guest feels that Building good relationship rather than making money seemed to be the most important drive of the hotel	0-5
51	Affrin and Maghzi 2012	Building good relationship rather than making money seemed to be the most important drive of the hotel	Employee behavior	x		
52	Battancout and Gwinner	conversation, which moves from formal to familiar	Small talk	52, 53	We allow / encourage our employee to move to a familiars (informal) talk with the guest who needs that	0-5
53	Battancout and Gwinner	small talk	small talk	x		

(Source: Own Edit)

Appendix 20. - Technical Stage - Fusion

	Author	Indicator	Key focus		Transformed Indicator	Score
1	Ball, Coelho and Vilares, 2006	"My bank" offers products and services that I could not find in	Products	1, 2	Our hotel offers personalized products and	0-1

		another bank			services that our customers could not find in another hotel.	
2	Ball, Coelho and Vilares, 2006	If I changed from banks I wouldn't obtain products and services as personalized as I have now	Products	x		
3	Blom and Monk, 2003	Being able to reflect my personal identity	Personal touch	3, 4	There is opportunity for the guest to reflect their personal identity and belonging on the service and products we provide them	0-1
4	Blom and Monk, 2003	Being able to reflect my membership of some group	Personal touch	x		
5	Blom and Monk, 2003	Being fed up with the appearance of the product or system and wanting to re personalize it	Personal touch	5,6	When a guest is fed up with the appearance of the product or system we provide them the option that they can re personalize it	0-2
6	Blom and Monk, 2003	The system of product feels personal	Familiarity	x		
7	Blom and Monk, 2003	Feeling familiar with the system or product	Familiarity	7	Our hotel application is similar to what most customers use in their everyday lives.	0-1
8	Blom and Monk, 2003	Having fun with the product or system	Fun	8	The system/ product is created in a way that it is fun for the guest to use	0-1
9	Cristian Morosan, Agnes deFranco 2016 "modeling guests' intention to use …) adapted from Li, Sarathy and xu 2011	The hotel app can provide me with personalized services, products, or information tailored to my specific hotel stay	Personalized recommendations	9,10,11	The hotel app can provide the guest with personalized services, products, or information tailored to their specific hotel stay	0-1
10	(Nyheim et al., 2015)	Overall, personalized advertising on this application is tailored to my situation	Advertising	x		
11	Gökhan Aydin 2018	I feel that Facebook advertising is personalized for my usage (Ünal et al., 2011; Xu et al ., 2008)	Percived personalization	x		

(Source: Own Edit)

Appendix 21. - Technical Stage, Pre-arrival Phase, Website - after Fusion

Transformed Indicator	Score
Our website has features that personalized for the users' preferences	0-1
Control panel style can be customized by user	0-1
Exterior color can be customized by user	0-1
The website has a Chat service	0-2
The website has feature for the visually impaired	0-1
Our website is automorphically fits to the e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.	0-1
We have a hotel App	0-1
The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.	0-1
The website acquires the specific needs of the guest and shows service recommendations based on their personal needs	0-1
The Web site acquires the guests' personal preferences and offers services and products that are tailor-made for the guest	0-1
Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.	0-1
Our hotel uses Search engine optimalization to appear for searching accommodation nearby	0-1
Our hotel makes sure that we appear as a personalized search result through search engine optimalization	0-1
Our hotel makes sure that we provide information and products according to our guests' preferences.	0-1
We aim to advertise our hotel in a way that it feels personalized for our potential guests, even based on the previous searches or interests.	0-1

(Source: Own Edit)

Appendix 22. - Functional Stage, Pre-arrival Phase, Pre-arrival communication - after Fusion

Transformed Indicator	Score
Communication by our hotel brand provides our customers with product and service recommendations that are tailormade for them	0-5
We recommend products and services that are personalized to our customer's interest based on our communication with that customer	0-5
We recommend products and services that are personalized to our customer's interest based on of the basis of preferences of similar-minded consumers	0-5
We aim to use personalized communication so our brand can make the guest feel that they are a unique customer	0-5
We aim to give personalized recommendation in a timely way.	0-5
We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc)	0-5

(Source: Own Edit)

Appendix 23. - Functional Stage, Servcie Phase, Arrival - after Fusion

Transformed Indicator	**Score**
We aim to provide an authentic warm welcome to the guest	0-5
Guests are walked to the guestroom after check -in	0-5
We place different welcome gifts in the guestroom (to all guest)	0-5
We place different welcome gifts in the guestroom (of VIP guest)	0-5

(Source: Own Edit)

Appendix 24. - Technical Stage, Servcie Phase, Arrival - after Fusion

Transformed Indicator	Score

We place introduction greeting card with a hand-written message and guests name in the room	0-4

(Source: Own Edit)

Appendix 25. - Functional Stage, Service Phase -after Fusion

Transformed Indicator	Score
The hotel operates working hours to be appropriate to all its customers	0-5
We pay attention to the special requirements of our guests while staying in a hotel	0-5
We respond immediately to all guest requests	0-5
We make sure, that there are appropriate meals for all guest (religion, allergies, dietary restrictions)	0-5
We make sure that the chosen room is comfortable for the guest	0-5
We make sure that all aspects of the room are in good condition and suitable for the guest	0-5

(Source: Own Edit)

Appendix 26. - Functional Stage, Service Phase, Check-out -after Fusion

Transformed Indicator	Score
We give a warm “good bye” after checking out at the counter	0-5
Based on previous conversation with the guest we are recommending them with activities for the last day	0-5

(Source: Own Edit)

Appendix 27. - Functional Stage, Service Phase - after Fusion

Transformed Indicator	Score
The hotel staff helps with the luggage	0-5
Our staff gives authentic smiles all the time	0-5
We encourage the employees to display personal warmth in their behavior.	0 -5
We encourage the employees to be approachable	0-5
We encourage the employees to make eye contact with the guest during conversation	0-5
We are doing everything to understand the special requirements of the guest while staying the hotel	0-5
The employee has to know the name and / or nationality of the guest	0-5

(Source: Own Edit)

Appendix 28. - Technical Stage, Service Phase - after Fusion

Transformed Indicator	Score
It is possible for the guest to ask for minor changes regarding the room during their stay	0-1
The guest can choose a specific temperature they want their room to be	0-1
The guest can choose what kind of bed/Matras they want in their room	0-2
The guest can choose the style and the type of the bedding	0-1
The guest can choose what kind of pillow they want.	0-1
The guest can choose to have no alcohol in their minibar	0-1
We put the favorite drink of the guest in the room even if that is not the brand the hotel normally works with	0-2

(Source: Own Edit)

Appendix 29. - Functional Stage, Post-service phase, Post-communication - after Fusion

Transformed Indicator	Score

Our hotel hotel adjusts the response to the specific problem of the guest.	0-5
The guest is invited to interact with us.	0-5
Our hotel / employee knows exactly to whose review it responds	0-5
Our hotel / employee gives an individual response to all guest reviews and comments.	0-5

(Source: Own Edit)

Appendix 30. - Functional Stage - after Fusion

Transformed Indicator	Score
Our employee changes their behavior to suit the needs of the guest	0-5
Our employee changes their behavior to suit the needs of the situation	0-5
The employee is empathetic towards the guest when they have a problem	0-5
The employee responds immediately to guest requests	0-5
When our employee promise to do something by a certain time, they do so	0-5
We make sure that our information is accurate and update our records frequently	0-5
Our employee is talented and displays a natural expertise in case of all requests.	0-5
Our employee is efficient.	0-5
Our employee aims to exceed guest expectation	0-5
Our employee / hotel personalizes goods and services that are based on information that the guest has voluntarily given out (such as age range, salary range, Zip Code) but cannot identify them as an individual.	0-5
Our employee personalizes goods and services that based on information that the guest gave voluntarily and can identify them as an individual (such as name, shipping address, card information).	0-5
Our employee can customize the service offering to the needs of the customer. (example: food allergies etc)	0-5
Our employee / hotel makes sure to take the time and understand the specific demands	0-5
Our employee / hotel offers customers products and services that satisfy they specific needs	0-5
Our employee / hotel anticipates what the guest wants before they ask.	0-5
Our employee / hotel recommends products of the basis of preferences of similar-minded consumers	0-5
We make sure that the hospitable behavior from our employee seems to be motivated by genuine needs to please and care for their guests as an extension of their characteristic	0-5
Our hotel / employee considers the best interest of the guest our / their top priority	0-5
Our hotel / our employee aims to make the guest feel like an important person	0-5
Our employee always tries to be helpful in solving guests' problems, even coming up with unique solutions	0-5
Our employee aims to give guests individual attention	0-5
Our employee takes time (and has time) to get to know the guest personally	0-5
The hotel employee treats guest with full respect	0-5
Our employees are polite with all guests	0-5
Our employee aims to treat the guest as a friend rather than a customer.	0-5
Our employee is friendly with all guests	0-5
It is important that the guest feels that building good relationship rather than making money seemed to be the most important drive of the hotel	0-5
We allow / encourage our employee to move to a familiar (informal) talk with the guest who needs that	0-5

(Source: Own Edit)

Appendix 31. - Technical Stage - after Fusion

Transformed Indicator	Score
Our hotel offers personalized products and services that our customers could not find in another hotel.	0-1
There is opportunity for the guest to reflect their personal identity and belonging on the service and products we provide them	0-1
When a guest is fed up with the appearance of the product or system we provide them the option that they can re personalize it	0-2
Our hotel application is similar to what most customers use in their everyday lives.	0-1
The system/ product is created in a way that it is fun for the guest to use	0-1
The hotel app can provide the guest with personalized services, products, or information tailored to their specific hotel stay	0-1

(Source: Own Edit)

Appendix 32. - List of All Items Before the First Interview

Item ID	Statement	Placement
I1	Our website has features that are personalized for the users' preferences	Pre-arrival. Website
I2	Control panel style can be customized by user.	
I3	Exterior colour can be customized by user.	
I4	The website has a Chat service	
I5	The website has features for the visually impaired.	
I6	Our website automorphically fits the e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.	
I7	We have a hotel App.	
I8	The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.	
I9	The website acquires the specific needs of the guest and shows service recommendations based on their personal needs.	
I10	The Web site acquires the guests' personal preferences and offers services and products that are tailor-made for the guest.	
I11	Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.	
I12	Our hotel uses Search engine optimization to appear for searching accommodation nearby.	
I13	Our hotel makes sure that we appear as a personalized search result through search engine optimization.	
I14	Our hotel makes sure that we provide information and products according to our guests' preferences.	
I15	We aim to advertise our hotel in a way that feels personalized for our potential guests, even based on previous searches or interests.	

I16	We place a greeting card with a hand-written message and the guest's name in the room.	Arrival – technical
I17	It is possible for the guest to ask for minor changes regarding the room during their stay.	Service Period – Technical Stage
I18	The guest can choose a specific temperature they want their room to be.	
I19	The guest can choose what kind of bed/Matras they want in their room.	
I20	The guest can choose the style and the type of the bedding.	
I21	The guest can choose what kind of pillow they want.	
I22	The guest can choose to have no alcohol in their minibar.	
I23	We put the favourite drink of the guest in the room even if that is not the brand the hotel normally works with.	
I24	Our hotel offers personalized products and services that our customers could not find in another hotel.	Technical
I25	There is an opportunity for the guest to reflect their identity and belonging on the service and products we provide them.	
I26	When a guest is fed up with the appearance of the product or system, we provide them with the option that they can re-personalize it.	
I27	Our hotel application is similar to what most customers use in their everyday lives.	
I28	The system/ product is created in a way that is fun for the guest to use.	
I29	The hotel app can provide the guest with personalized services, products, or information tailored to their specific hotel stay.	
I30	Communication by our hotel brand provides our customers with product and service recommendations that are tailormade for them.	Pre-arrival communication
I31	We recommend products and services that are personalized to our customer's interest based on our communication with that customer.	
I32	We recommend products and services that are personalized to our customer's interest based on of the basis of preferences of similar-minded consumers.	
I33	We aim to use personalized communication so our brand can make the guest feel that they are a unique customer.	
I34	We aim to give personalized recommendation in a timely way.	
I35	We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc).	
I36	Our hotel adjusts the response to the specific.	Post communication – Post-stay
I37	The guest is invited to interact with us.	
I38	Our hotel / employee knows exactly to whose review it responds.	
I39	Our hotel / employee gives an individual response to all guest reviews and comments.	
I40	We aim to provide an authentic warm welcome to the guest.	- Arrival Service phase
I41	Guests are walked to the guestroom after check -in.	

I42	We place different welcome gifts in the guestroom (to all guest).	
I43	We place different welcome gifts in the guestroom (of VIP guest).	
I44	The hotel operates working hours to be appropriate to all its customers.	In - room
I45	We pay attention to the special requirements of our guests while staying in a hotel.	
I46	We respond immediately to all guest requests.	
I47	We make sure, that there are appropriate meals for all guest (religion, allergies, dietary restrictions).	
I48	We make sure that the chosen room is comfortable for the guest.	
I49	We make sure that all aspects of the room is in good condition and suitable for the guest.	
I50	We give a warm "good bye" after checking out at the counter.	Checkout
I51	Based on previous conversation with the guest we are recommending them with activities for the last day.	
I52	The hotel staff helps with the luggage.	Service Perioud – Functional Stage
I53	Our staff gives authentic smiles all the time.	
I54	We encourage the employees to display personal warmth in their behaviour.	
I55	We encourage the employees to be approachable.	
I56	We encourage the employees to make eye contact with the guest during conversation.	
I57	We are doing everything to understand the special requirements of the guest while staying at the hotel.	
I58	The employee has to know the name and / or nationality of the guest.	
I59	Our employee changes their behaviour to suit the needs of the guest.	Functional
I60	Our employee changes their behaviour to suit the needs of the situation.	
I61	The employee is empathetic towards the guest when they have a problem.	
I62	The employee responds immediately to guest requests.	
I63	When our employee promise to do something by a certain time, they do so.	
I64	We make sure that our information is accurate and update our records frequently.	
I65	Our employee is talented and displays a natural expertise in case of all requests.	
I66	Our employee is efficient.	
I67	Our employee aims to exceed the guest's expectations.	
I68	Our employee / hotel personalizes goods and services that are based on information that the guest has voluntarily given out (such as age range, salary range, Zip Code) but cannot identify them as an individual.	
I69	Our employee personalizes goods and services that based on information that the guest gave voluntarily and can identify them as an individual (such as name, shipping address, and card information).	

I70	Our employee can customize the service offering to the needs of the customer. (example: food allergies etc)	
I71	Our employee / hotel makes sure to take the time and understand the specific demands.	
I72	Our employee / hotel offers customers products and services that satisfy their specific needs.	
I73	Our employee / hotel anticipates what the guest wants before they ask.	
I74	Our employee / hotel recommends products on the basis of the preferences of similar-minded consumers.	
I75	We make sure that the hospitable behaviour from our employees seems to be motivated by genuine needs to please and care for their guests as an extension of their characteristics.	
I76	Our hotel / employee considers the best interest of the guest our / their top priority.	
I77	Our hotel / our employee aims to make the guest feel like an important person.	
I78	Our employee always tries to help solve guests' problems, even coming up with unique solutions.	
I79	Our employee aims to give guests individual attention.	
I80	Our employee takes time (and has time) to get to know the guest personally.	
I81	The hotel employee treats guest with full respect.	
I82	Our employees are polite with all guests.	
I83	Our employee aims to treat the guest as a friend rather than a customer.	
I84	Our employee is friendly with all guests.	
I85	It is important that the guest feels that building a good relationship rather than making money seemed to be the most important drive of the hotel.	
I86	We allow / encourage our employee to move to a familiar (informal) talk with the guest who needs that.	

(Source: Own Edit)

Appendix 33. - First Interview Technical Stage - Experts

	Technical Stage Expert One	**Technical Stage Expert Two**	**Technical Stage Expert Three**	**Technical Stage Expert Four**
Our website has features that is personalised for the users' preferences.	I1	I1	I1	I1
Control panel style can be customized by user.	I2	I2	I2	I2
Exterior colour can be customized by user.	I3	I3	I3	I3

The website has a Chat service.	I4	I4	I4	I4
The website has features for the visually impaired.	I5	I5	I5	I5
Our website automorphically fits the e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating systems (e.g. Windows, Unix) that the guest uses.	I6	I6	I6	I6
We have a hotel App .	I7	I7	I7	I7
The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.	I8	I8	I8	I8
The website acquires the specific needs of the guest and shows service recommendations based on their personal needs.	I9	I9	I9	I9
The Web site acquires the guests' personal preferences and offers services and products that are tailor-made for the guest.	I10	I10	I10	I10
Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.	I11	I11	I11	I11
Our hotel uses Search engine optimization to appear for searching accommodation nearby.	I12	I12	I12	I12
Our hotel makes sure that we appear as a personalized search result through search engine optimization.	I13	I13	I13	I13
Our hotel makes sure that we provide information and products according to our guests' preferences.	I14	I14	I14	I14
We aim to advertise our hotel in a way that it feels personalized for our potential guests, even based on previous searches or interests.	I15	I15	I15	I15
We place a greeting card with a hand-written message and the guest's name in the room.	I16	I16	I16	I16
It is possible for the guest to ask for minor changes regarding the room during their stay.	I17	I17	I17	I17
The guest can choose a specific temperature they want their room to be.	I18	I18	I18	I18
The guest can choose what kind of bed/Matras they want in their room.	I19	I19	I19	I19
The guest can choose the style and the type of the bedding.	I20	I20	I20	I20
The guest can choose what kind of pillow they want.	I21	I21	I21	I21
The guest can choose to have no alcohol in their minibar.	I22	I22	I22	I22

We put the favourite drink of the guest in the room even if that is not the brand the hotel normally works with.	I23	I23	I23	I23
Our hotel offers personalized products and services that our customers could not find in another hotel.	I24	I24	I24	I24
There is an opportunity for the guest to reflect their identity and belonging on the service and products we provide them.	I25	I25	I25	I25
When a guest is fed up with the appearance of the product or system, we provide them with the option that they can re-personalize it.	I26	I26	I26	I26
Our hotel application is similar to what most customers use in their everyday lives.	I27	I27	I27	I27
The system/ product is created in a way that is fun for the guest to use.	I28	I28	I28	I28
The hotel app can provide the guest with personalized services, products, or information tailored to their specific hotel stay.	I29	I29	I29	I29

(Source: Own Edit)

Appendix 34. - Technical Stage after First Interview

Indicator ID	Indicator
I1	Our website has features that personalized for the users' preferences (for example, on the webpage they can choose what segment they belong to, and they can choose an option on the website to browse offers only based on their specific needs or interests.).
I4	The website has a Chat service.
I5	The website has features for the visually impaired.
I6	Our website automorphically fits the e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.
I7	We have a hotel App.
I8	The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.
I9	The website acquires the specific needs of the guest and shows service recommendations based on their personal needs.
I11	Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.
I13	Our hotel makes sure that we appear as a personalized search result through search engine optimization.
I14	Our hotel makes sure that we provide information and products according to our guests' preferences.
I15	We aim to advertise our hotel in a way that feels personalized for our potential guests, even based on previous searches or interests.
I16	We place a greeting card with a hand-written message and the guest's name in the room.

I17	It is possible for the guest to ask for minor changes regarding the room during their stay.
I18	The guest can choose a specific temperature they want their room to be.
I20	The guest can choose the style and the type of the bedding.
I21	The guest can choose what kind of pillow they want.
I22	The guest can choose to have no alcohol in their minibar.
I23	We put the favourite drink of the guest in the room even if that is not the brand the hotel normally works with.
I27	Our hotel application is similar to what most customers use in their everyday lives.
I29	The hotel app can provide the guest with personalized services, products, or information tailored to their specific hotel stay.

(Source: Own Edit)

Appendix 35. - First Interview Functional Stage - Experts

	Functional stage Expert One	Functional stage Expert Two	Functional stage Expert Three
Communication by our hotel brand provides our customers with product and service recommendations that are tailormade for them.	I30	I30	I30
We recommend products and services that are personalized to our customer's interests based on our communication with that customer.	I31	I31	I31
We recommend products and services that are personalized to our customer's interest based on of the basis of preferences of similar-minded consumers.	I32	I32	I32
We aim to use personalized communication so our brand can make the guest feel that they are a unique customer.	I33	I33	I33
We aim to give personalized recommendation in a timely way.	I34	I34	I34
We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc).	I35	I35	I35
The guest is invited to interact with us.	I36	I36	I36
Our hotel / employee knows exactly to whose review it responds.	I37	I37	I37
Our hotel / employee gives an individual response to all guest reviews and comments.	I38	I38	I38
Our employee changes their behaviour to suit the needs of the guest.	I39	I39	I39
We aim to provide an authentic warm welcome to the guest.	I40	I40	I40
Guests are walked to the guestroom after check-in.	I41	I41	I41
We place different welcome gifts in the guestroom (to all guest).	I42	I42	I42
We place different welcome gifts in the guestroom (of VIP guest).	I43	I43	I43

The hotel operates working hours to be appropriate to all its customers.	I44	I44	I44
We pay attention to the special requirements of our guests while staying in a hotel.	I45	I45	I45
We respond immediately to all guest requests.	I46	I46	I46
We make sure, that there are appropriate meals for all guests (religion, allergies, dietary restrictions).	I47	I47	I47
We make sure that the chosen room is comfortable for the guest.	I48	I48	I48
We make sure that all aspects of the room are in good condition and suitable for the guest.	I49	I49	I49
We give a warm “goodbye ” after checking out at the counter	I50	I50	I50
Based on previous conversations with the guest we are recommending them with activities for the last day.	I51	I51	I51
The hotel staff helps with the luggage.	I52	I52	I52
Our staff gives authentic smiles all the time.	I53	I53	I53
We encourage the employees to display personal warmth in their behaviour.	I54	I54	I54
We encourage the employees to be approachable.	I55	I55	I55
We encourage the employees to make eye contact with the guest during conversation.	I56	I56	I56
We are doing everything to understand the special requirements of the guest while staying at the hotel.	I57	I57	I57
The employee has to know the name and / or nationality of the guest.	I58	I58	I58
Our employee changes their behaviour to suit the needs of the guest.	I59	I59	I59
Our employee changes their behaviour to suit the needs of the situation.	I60	I60	I60
The employee is empathetic towards the guest when they have a problem.	I61	I61	I61
The employee responds immediately to guest requests.	I62	I62	I62
When our employee promise to do something by a certain time, they do so.	I63	I63	I63
We make sure that our information is accurate and update our records frequently.	I64	I64	I64
Our employee is talented and displays a natural expertise in case of all requests.	I65	I65	I65
Our employee is efficient.	I66	I66	I66
Our employee aims to exceed guest expectations.	I67	I67	I67
Our employee / hotel personalizes goods and services that are based on information that the guest has voluntarily given out (such as age range,	I68	I68	I68

salary range, Zip Code) but cannot identify them as an individual.			
Our employee personalizes goods and services that based on information that the guest gave voluntarily and can identify them as an individual (such as name, shipping address, card information).	I69	I69	I69
Our employee can customize the service offering to the needs of the customer. (example: food allergies etc)	I70	I70	I70
Our employee / hotel makes sure to take the time and understand the specific demands.	I71	I71	I71
Our employee / hotel offers customers products and services that satisfy their specific needs.	I72	I72	I72
Our employee / hotel anticipates what the guest wants before they ask.	I73	I73	I73
Our employee / hotel recommends products on the basis of preferences of similar-minded consumers.	I74	I74	I74
We make sure that the hospitable behaviour from our employee seems to be motivated by genuine needs to please and care for their guests as an extension of their characteristic.	I75	I75	I75
Our hotel / employee considers the best interest of the guest our / their top priority.	I76	I76	I76
Our hotel / our employee aims to make the guest feel like an important person.	I77	I77	I77
Our employee always tries to be helpful in solving guests' problems, even coming up with unique solutions.	I78	I78	I78
Our employee aims to give guests individual attention.	I79	I79	I79
Our employee takes time (and has time) to get to know the guest personally.	I80	I80	I80
The hotel employee treats guest with full respect.	I81	I81	I81
Our employees are polite with all guests.	I82	I82	I82
Our employee aims to treat the guest as a friend rather than a customer.	I83	I83	I83
Our employee is friendly with all guests.	I84	I84	I84
It is important that the guest feels that building a good relationship rather than making money seemed to be the most important drive of the hotel.	I85	I85	I85
We allow / encourage our employee to move to a familiar (informal) talk with the guest who needs that.	I86	I86	I86

(Source: Own Edit)

Appendix 36. - Functional Stage after First Interview

Indicator ID	Indicator
I30	Communication by our hotel brand provides our customers with product and service recommendations that are tailormade for them.

I31	We recommend products and services that are personalized to our customer's interest based on our communication with that customer.
I32	We recommend products and services that are personalized to our customer's interest based on of the basis of preferences of similar-minded consumers.
I33	We aim to use personalized communication so our brand can make the guest feel that they are a unique customer.
I34	We aim to give personalized recommendation in a timely way.
I35	We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc).
I36	Our hotel adjusts the response to the specific problem of the guest.
I37	The guest is invited to interact with us.
I38	Our hotel / employee knows exactly to whose review it responds.
I39	Our hotel / employee gives an individual response to all guest reviews and comments.
I40	We aim to provide an authentic warm welcome to the guest
I43	We place different welcome gifts in the guestroom (for VIP guests).
I44	The hotel operates working hours to be appropriate to all its customers.
I45	We pay attention to the special requirements of our guests while staying in a hotel.
I46	We respond immediately to all guest requests.
I47	We make sure, that there are appropriate meals for all guest (religion, allergies, dietary restrictions).
I49	We make sure that all aspects of the room are in good condition and suitable for the guest.
I50	We give a warm "goodbye " after checking out at the counter.
I51	Based on previous conversations with the guest we are recommending them with activities for the last day.
I54	We encourage the employees to display personal warmth in their behaviour.
I55	We encourage the employees to be approachable.
I56	We encourage the employees to make eye contact with the guest during conversation.
I57	We are doing everything to understand the special requirements of the guest while staying at the hotel.
I59	Our employee changes their behaviour to suit the needs of the guest.
I60	Our employee changes their behaviour to suit the needs of the situation.
I61	The employee is empathetic towards the guest when they have a problem.
I62	The employee responds immediately to guest requests.
I63	When our employee promise to do something by a certain time, they do so.
I64	We make sure that our information is accurate and update our records frequently.
I65	Our employee is talented and displays a natural expertise in case of all requests.
I66	Our employee is efficient.

I67	Our employee aims to exceed guest expectations.
I68	Our employee / hotel personalizes goods and services that are based on information that the guest has voluntarily given out (such as age range, salary range, Zip Code) but cannot identify them as an individual.
I69	Our employee / hotel personalizes goods and services that based on information that the guest gave voluntarily and can identify them as an individual (such as name, shipping address, card information).
I70	Our employee / hotel can customize the service offering to the needs of the customer. (example: food allergies etc).
I71	Our employee / hotel makes sure to take the time and understand the specific demands.
I72	Our employee / hotel offers customers products and services that satisfy they specific needs.
I73	Our employee / hotel anticipates what the guest wants before they ask.
I74	Our employee / hotel recommends products on the basis of the preferences of similar-minded consumers.
I75	We make sure that the hospitable behaviour from our employee seems to be motivated by genuine needs to please and care for their guests as an extension of their characteristic.
I76	Our hotel / employee considers the best interest of the guest our / their top priority.
I77	Our hotel / our employee aims to make the guest feel like an important person.
I78	Our employee always tries to be helpful in solving guests' problems, even coming up with unique solutions.
I79	Our employee aims to give guests individual attention.
I80	Our employee takes time (and has time) to get to know the guest personally.
I81	The hotel employee treats guest with full respect.
I82	Our employees are polite with all guests.
I83	Our employee aims to treat the guest as a friend rather than a customer.
I84	Our employee is friendly with all guests.
I85	It is important that the guest feels that building a good relationship rather than making money seemed to be the most important drive of the hotel.
I86	We allow / encourage our employee to move to a familiar (informal) talk with the guest who needs that.

(Source: Own Edit)

Appendix 37. - First Interview Marketing - Experts

	Markering Expert 1	Markering Expert 2	Markering Expert 3	Markering Expert 4
Our website has features that personalized for the users' preferences.	I1	I1	I1	I1
Control panel style can be customized by the user.	I2	I2	I2	I2
Exterior colour can be customized by the user.	I3	I3	I3	I3
The website has a Chat service.	I4	I4	I4	I4

The website has features for the visually impaired.	I5	I5	I5	I5
Our website automorphically fits the e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating systems (e.g. Windows, Unix) that the guest uses.	I6	I6	I6	I6
We have a hotel App.	I7	I7	I7	I7
The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.	I8	I8	I8	I8
The website acquires the specific needs of the guest and shows service recommendations based on their personal needs.	I9	I9	I9	I9
The Web site acquires the guests' personal preferences and offers services and products that are tailor-made for the guest.	I10	I10	I10	I10
Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.	I11	I11	I11	I11
Our hotel uses Search engine optimization to appear for searching accommodation nearby.	I12	I12	I12	I12
Our hotel makes sure that we appear as a personalized search result through search engine optimization.	I13	I13	I13	I13
Our hotel makes sure that we provide information and products according to our guests' preferences.	I14	I14	I14	I14
We aim to advertise our hotel in a way that feels personalized for our potential guests, even based on previous searches or interests.	I15	I15	I15	I15
Communication by our hotel brand provides our customers with product and service recommendations that are tailormade for them.	I30	I30	I30	I30
We recommend products and services that are personalized to our customer's interest based on our communication with that customer. (During booking/Before arrival).	I31	I31	I31	I31
We recommend products and services that are personalized to our customer's interests based on the basis of preferences of similar-minded consumers. (During booking/Before arrival).	I32	I32	I32	I32
We aim to use personalized communication so our brand can make the guest feel that they are a unique customer.	I33	I33	I33	I33
We aim to give personalized recommendations in a	I34	I34	I34	I34

timely way.				
We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc)	I35	I35	I35	I35
Our hotel adjusts the response to the specific problem of the guest.	I36	I36	I36	I36
The guest is invited to interact with us.	I37	I37	I37	I37
Our hotel / employee knows exactly to whose review it responds	I38	I38	I38	I38
Our hotel / employee gives an individual response to all guest reviews and comments.	I39	I39	I39	I39

(Source: Own Edit)

Appendix 38. – Marketing after First Interview

Indicator ID	Indicator
I1	Our website has features that are personalized for the users' preferences (for instance based on segments they can choose to browse between offers to their specific needs or interests.)
I4	The website has a Chat service
I5	The website has features for the visually impaired
I6	Our website automorphically fits the (e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.
I7	We have a hotel App.
I8	The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.
I9	The website acquires the specific needs of the guest and shows service recommendations based on their personal needs.
I11	Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.
I13	Our hotel makes sure that we appear as a personalized search result through search engine optimalization (we use google ads).
I14	Our hotel makes sure that we provide information and products according to our guests' preferences. (we use content marketing)
I15	We aim to advertise our hotel in a way that feels personalized for our potential guests, even based on previous searches or interests.
I30	Communication by our hotel brand provides our customers with product and service recommendations that are tailor-made for them
I31	We recommend products and services that are personalized to our customer's interest based on our communication with that customer. (During booking/Before arrival)
I32	We recommend products and services that are personalised to our customer's interests based on the basis of preferences of similar-minded consumers. (During booking/Before arrival)

I33	We aim to use personalized communication so our brand can make the guest feel that they are a unique customer
I34	We aim to give personalized recommendations in a timely way.
I35	We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc)
I36	Our hotel adjusts the response to the specific problem of the guest.
I37	The guest is invited to interact with us.
I38	Our hotel / employee knows exactly to whose review it responds
I39	Our hotel / employee gives an individual response to all guest reviews and comments.

(Source: Own Edit)

Appendix 39. - Post-service Phase after First Interview

Indicator ID	Indicator
I33	We aim to use personalised communication so our brand can make the guest feel that they are a unique customer
I34	We aim to give personalised recommendations in a timely way.
I35	We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc)
I36	Our hotel adjusts the response to the specific problem of the guest.
I37	The guest is invited to interact with us.
I38	Our hotel / employee knows exactly to whose review it responds
I39	Our hotel / employee gives an individual response to all guest reviews and comments.

(Source: Own Edit)

Appendix 40. - First Interview Service Phase - Experts

	Service Phase Expert One	Service Phase Expert Two	Service Phase Expert Three	Service Phase Expert Four
We place an greeting card with a hand-written message and the guest's name in the room	I16	I16	I16	I16
It is possible for the guest to ask for minor changes regarding the room during their stay	I17	I17	I17	I17
The guest can choose a specific temperature they want their room to be	I18	I18	I18	I18
The guest can choose what kind of bed/Matras they want in their room	I19	I19	I19	I19
The guest can choose the style and the type of the bedding	I20	I20	I20	I20
The guest can choose what kind of pillow they want.	I21	I21	I21	I21
The guest can choose to have no alcohol in their minibar	I22	I22	I22	I22

We put the favorite drink of the guest in the room even if that is not the brand the hotel normally works with	I23	I23	I23	I23
We place introduction greeting card with a hand-written message and guests name in the room	I40	I40	I40	I40
Guests are walked to the guestroom after check -in	I41	I41	I41	I41
We place different welcome gifts in the guestroom (to all guest)	I42	I42	I42	I42
We place different welcome gifts in the guestroom (of VIP guest)	I43	I43	I43	I43
The hotel operates working hours to be appropriate to all its customers	I44	I44	I44	I44
We pay attention to the special requirements of our guests while staying in a hotel	I45	I45	I45	I45
We respond immediately to all guest requests	I46	I46	I46	I46
We make sure, that there are appropriate meals for all guest (religion, allergies, dietary restrictions)	I47	I47	I47	I47
We make sure that the chosen room is comfortable for the guest	I48	I48	I48	I48
We make sure that all aspects of the room is in good condition and suitable for the guest	I49	I49	I49	I49
We give a warm “good bye” after checking out at the counter	I50	I50	I50	I50
Based on previous conversation with the guest we are recommending them with activities for the last day	I51	I51	I51	I51
The hotel staff helps with the luggage	I52	I52	I52	I52
Our staff gives authentic smiles all the time	I53	I53	I53	I53
We encourage the employees to display personal warmth in their behaviour.	I54	I54	I54	I54
We encourage the employees to be approachable	I55	I55	I55	I55
We encourage the employees to make eye contact with the guest during conversation	I56	I56	I56	I56
We are doing everything to understand the special requirements of the guest while staying at the hotel	I57	I57	I57	I57
The employee has to know the name and / or nationality of the guest	I58	I58	I58	I58

(Source: Own Edit)

Appendix 41. - Service Phase after First Interview

Indicator ID	Indicator
I16	We place a greeting card with a hand-written message and the guest’s name in the VIP the room.
I17	It is possible for the guest to ask for minor changes regarding the room during their stay.

I18	The guest can choose a specific temperature they want their room to be.
I20	The guest can choose the style and the type of the bedding.
I21	The guest can choose what kind of pillow they want.
I22	The guest can choose to have no alcohol in their minibar.
I23	We put the favourite drink of the guest in the room even if that is not the brand the hotel normally works with.
I40	We aim to provide an authentic warm welcome to the guest.
I43	We place different welcome gifts in the guestroom (of VIP guest).
I44	The hotel operates working hours to be appropriate to all its customers.
I45	We pay attention to the special requirements of our guests while staying in a hotel.
I46	We respond immediately to all guest requests.
I47	We make sure, that there are appropriate meals for all guest (religion, allergies, dietary restrictions).
I49	We make sure that all aspects of the room are in good condition and suitable for the guest.
I50	We give a warm “goodbye” after checking out at the counter.
I51	Based on a previous conversation with the guest we are recommending them with activities for the last day.
I54	We encourage the employees to display personal warmth in their behaviour.
I55	We encourage the employees to be approachable.
I56	We encourage the employees to make eye contact with the guest during conversation.
I57	We are doing everything to understand the special requirements of the guest while staying at the hotel.
I58	The employee has to know the name and / or nationality of the guest.

(Source: Own Edit)

Appendix 42. - Score Indicators after First Interview

Indicator ID	Indicator
I1	Our website has features that personalized for the users' preferences (for example, on the webpage they can choose what segment they belong to, and they can choose an option on the website to browse offers only based on their specific needs or interests.).
I5	The website has features for the visually impaired.
I6	Our website automorphically fits the e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.
I7	We have a hotel App.
I8	The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.
I9	The website acquires the specific needs of the guest and shows service recommendations based on their personal needs.

I11	Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.
I13	Our hotel makes sure that we appear as a personalized search result through search engine optimization.
I14	Our hotel makes sure that we provide information and products according to our guests' preferences.
I15	We aim to advertise our hotel in a way that it feels personalized for our potential guests, even based on the previous searches or interests.
I17	It is possible for the guest to ask for minor changes regarding the room during their stay.
I18	The guest can choose a specific temperature they want their room to be.
I20	The guest can choose the style and the type of the bedding.
I21	The guest can choose what kind of pillow they want.
I22	The guest can choose to have no alcohol in their minibar.
I23	We put the favourite drink of the guest in the room even if that is not the brand the hotel normally works with.
I27	Our hotel application is similar to what most customers use in their everyday lives.
I29	The hotel app can provide the guest with personalized services, products, or information tailored to their specific hotel stay.
I30	Communication by our hotel brand provides our customers with product and service recommendations that are tailormade for them.
I31	We recommend products and services that are personalized to our customer's interest based on our communication with that customer. (During booking/Before arrival)
I32	We recommend products and services that are personalized to our customer's interest based on of the basis of preferences of similar-minded consumers. (During booking/Before arrival)
I33	We aim to use personalized communication so our brand can make the guest feel that they are a unique customer
I34	We aim to give personalized recommendations in a timely way.
I35	We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc).
I36	Our hotel adjusts the response to the specific problem of the guest.
I37	We are proactive in encouraging feedback, guest is invited to interact with us.
I38	Our hotel / employee knows exactly to whose review it responds.
I39	Our hotel / employee gives an individual response to all guest reviews and comments.
I40	We aim to provide an authentic warm welcome to the guest.
I43	We place different welcome gifts in the guestroom (of VIP guest).
I44	The hotel operates working hours to be appropriate to all its customers.
I45	We pay attention to the special requirements of our guests while staying in a hotel.
I46	We respond immediately to all guest requests.
I47	We make sure, that there are appropriate meals for all guest (religion, allergies, dietary restrictions).

I49	We make sure that all aspects of the room is in good condition and suitable for the guest.
I50	We give a warm “goodbye” after checking out at the counter.
I51	Based on a previous conversation with the guest we are recommending them with activities for the last day.
I52	The hotel staff helps with the luggage.
I53	Our staff gives authentic smiles all the time.
I54	We encourage the employees to display personal warmth in their behaviour.
I55	We encourage the employees to be approachable.
I56	We encourage the employees to make eye contact with the guest during conversation.
I57	We are doing everything to understand the special requirements of the guest while staying at the hotel.
I58	The employee has to know the name and / or nationality of the guest.
I59	Our employee changes their behaviour to suit the needs of the guest.
I60	Our employee changes their behaviour to suit the needs of the situation.
I61	The employee is empathetic towards the guest when they have a problem.
I62	The employee responds immediately to guest requests.
I63	When our employee promise to do something by a certain time, they do so.
I64	We make sure that our information is accurate and update our records frequently.
I65	Our employee is talented and displays a natural expertise in case of all requests.
I66	Our employee is efficient.
I67	Our employee aims to exceed guest expectations.
I68	Our employee / hotel personalizes goods and services that are based on information that the guest has voluntarily given out (such as age range, salary range, Zip Code) but cannot identify them as an individual.
I69	Our employee / hotel personalizes goods and services that based on information that the guest gave voluntarily and can identify them as an individual (such as name, shipping address, card information).
I70	Our employee can customize the service offering to the needs of the customer. (example: food allergies etc).
I71	Our employee / hotel makes sure to take the time and understand the specific demands.
I72	Our employee / hotel offers customers products and services that satisfy their specific needs.
I73	Our employee / hotel anticipates what the guest wants before they ask.
I74	Our employee / hotel recommends products on the basis of the preferences of similar-minded consumers.
I75	We make sure that the hospitable behaviour from our employees seems to be motivated by genuine needs to please and care for their guests as an extension of their characteristics.
I76	Our hotel / employee considers the best interest of the guest our / their top priority.
I77	Our hotel / our employee aims to make the guest feel like an important person.

I78	Our employee always tries to be helpful in solving guests' problems, even coming up with unique solutions.
I79	Our employee aims to give guests individual attention.
I80	Our employee takes time (and has time) to get to know the guest personally.
I81	The hotel employee treats guest with full respect.
I82	Our employees are polite with all guests.
I83	Our employee aims to treat the guest as a friend rather than a customer.
I84	Our employee is friendly with all guests.
I85	It is important that the guest feels that building a good relationship rather than making money seemed to be the most important drive of the hotel.
I86	We allow / encourage our employee to move to a familiar (informal) talk with the guest who needs that.
I87	The hotel does micro-segmentation.
I88	The hotel sends out segment-based newsletters.
4a	The website has a Chat service operated by chatbot.
4b	The website has a Chat service operated by an employee.
I16a	We place a greeting card with a printed message and the guest's name in the room.
I16b	We place introduction greeting card with a hand-written message and guests name in the room.
I89	The hotel has specific gifts or budget to use when the employee finds a guest should get a gift (birthday, honeymoon special occasion, etc.).
I90	There are employee trainings for the employees so they can provide the level of quality service the hotel aims to provide.
I91	Providing personalized service is encouraged by reward.
I92	We store and update guest data frequently.
I93	We have employees or an outsider company to analyse our guest data and previous statistics.
I94	We send out a guest satisfaction survey after the guest checked out. For instance Medallia.
I95	our employees are proactive and take the initiative to get to know the guest better.
I96	We have and use the function on the TV to display the guest's name and welcome the guest into the room.
I97	We aim to choose employees who are motivated in guest service.
I98	Fast check-out and check-in are granted for regulars.

(Source: Own Edit)

Appendix 43. - Background of the General Managers

Name	Position	Background
Horváth Tibor	Park Inn Zalakaros**** General Manager	He started in the hospitality industry in 1995. Was part of the opening of a new hotel and has worked for a short time in a travel agency. Since 2001 he has worked strictly in hotels as a restaurant manager, spa manager, and sales and

		marketing manager pre-opening to a Ramada in Balatonalmádi. He was the sales manager in a Hungest hotel in Austria and then he become a hotel manager in the chain. he is in Park Inn Zalakaros since 2017 as General manager.
Sívó Roland	Aquaworld Resort Budapest**** General Manager	Studied agricultural economics in Gödöllő while gaining experience in housekeeping and F&B departments. Pursued tourism studies at Budapest Business School, working in guest houses and interning abroad. Started as a receptionist and progressed to front office manager at a five-star golf hotel in Gödöllő (3 years). Served as front office manager during the pre-opening phase of Velence Resort and Spa. Worked as sales and marketing manager in an online hotel booking system company for 3 years. Became General Manager of Hotel Castello Siklós and later returned to Velence Resort & Spa as general manager for 5 years. Currently, works as a general manager at Aquaworld Resort Budapest and lectures at Kodolányi János University.
Juhász Gábor	Tihany Aquilo Hotel Panoráma*** General Manager	He worked in 2006 in London in the hospitality industry and he has been the General manager of Tihany Aquilo Hotel Panoráma for 16 years.
Csere András	Caramell Premium Resort Superior**** General Manager	Ha had worked in restaurants since he was 14 till 2001. He went to college in 2004 where he studied hospitality, and he worked as a hotel manager since 2011. Since 2016 he is working in Caramell Premium Resort Superior.
Németh Marietta	Lotus Therme Hotel & Spa***** Operation Manager	Started her traineeship in 2009. She has a master's in tourism management. In the past 10 years she has worked in 2 hotels as General manager assistant and operational manager. She has worked in the past 5 years in Lotus Therme Hotel & Spa***** as Operational Manager.
Parádi Ádám	Danubius Hotel Marina and Danubius Hotel Annabella General Manager	In 2007 he had worked in the Hilton Vienna as a trainee, and then he worked in Housekeeping and FnB. In the following years, he worked in the training program of the Danubius Hotel group and gained experience in every department. He then returned to the Hilton chain in FnB. He changed to marketing and then worked in Danubius Hotel Gellért as an operational, marketing and project manager. Since 2011 he has worked in Danubius Hotel Marina as General manager and since 2019 ha is also the General manager of Danubius Hotel Annabella.
Fazekas Eufrozina	Keszthely Hotel Helikon****superior General Manager	During high school she had worked in FnB bar and kitchen and as a housemaid. After studying at university, she started to work at the reception, 10 years ago. She became a front office manager in 2015, she worked 5 years in the ETO hotel **** Győr, and she started working in 2021 in Keszthely Hotel Helikon****superior as general manager.
Kovács Krisztina	Bonvital Wellness & Gastro Hotel****superior General Manager	She had worked in Bükk Radisson SAS from 2007. Before that, she had worked in tourism but not in hospitality. After Radison SAS in 2014 she worked in Spirit Hotel Thermal Spa*****superior in Sárvár as Sales and Marketing manager. Currently, she is working in Hévíz Bon Vitál **** as General Manager, since 2018.

(Source: Own Edit)

Appendix 44. - Survey Questionnaire Part without the Scoring System

Szállodai szolgáltatások személyre szabásának mérése

Kérem, jelölje meg, hogy az Önök szállodájában megtalálhatóak-e az alábbi elemek.

Weboldalunk olyan funkciókkal rendelkezik, amelyek a felhasználók preferenciáinak megfelelően személyre szabottak. (Például az alapján, hogy milyen szegmenshez tartoznak, választhatnak a weboldalon arra vonatkozóan, hogy az ajánlatok között csak az adott igényeiknek vagy érdeklődési körüknek megfelelően böngésznek.	Igen, megtalálható	Nem, nincs ilyen.
A foglalási motor rendelkezik olyan funkciókkal, amelyek segítségével a felhasználók már a szoba foglalásánál (preferenciáinak megfelelően) személyre	Igen, megtalálható	Nem, nincs ilyen.

szabhatják foglalásukat. (Például, milyen párnát kér, milyen masszázst kér, egyéb szolgáltatások.)		
A weboldal a látássérültek számára is használható.	Igen, megtalálható	Nem, nincs ilyen.
Weboldalunk illeszkedik a vendég által használt eszközhöz (pl. számítógéphez, mobiltelefonhoz stb.), böngészőhöz (pl. Netscape, Internet Explorer, Mozzilla) és operációs rendszerhez (pl. Windows, Unix).	Igen, megtalálható	Nem, nincs ilyen.
A weboldal összegyűjti a vendég specifikus igényeit, és a személyes igényei alapján jeleníti meg a szolgáltatási ajánlásokat.	Igen, megtalálható	Nem, nincs ilyen.
Weboldalunk automatikusan adatokat gyűjt, ami alapján ugyan beazonosítani nem tudja a vendéget, (például IP-címet, megtekintett oldalakat, hozzáférési időt), de ezek alapján tud kínálni termékeket vagy szolgáltatásokat.	Igen, megtalálható	Nem, nincs ilyen.
A weboldal rendelkezik egy Chat szolgáltatással, amelyet chatbot üzemeltet.	Igen, megtalálható	Nem, nincs ilyen.
A weboldalnak van egy chat szolgáltatása, amelyet egy alkalmazott üzemeltet.	Igen, megtalálható	Nem, nincs ilyen.

Kérem, jelölje meg, hogy jelenleg az Önök szállodájára mennyire igazak az alábbi kijelentések. Kérem jelölje meg a 0-t ha egyáltalán nem foglalkoznak ezzel (akár mert nem fontos vagy mert nincs kapacitás), 5-t ha az esetek túlnyomó többségében figyelnek erre, és így járnak el.

A szállodamárkánk kommunikációja személyre szabott termék- és szolgáltatásajánlásokat nyújt ügyfeleinknek.
Célunk a személyre szabott kommunikáció használata, hogy márkánk a különlegességérzését keltse a vendégben.
Célunk, hogy kommunikációs stílusunkat (akár telefonon, akár írott csatornákon) a vendég típusa és jellemzői (életkor, nem, érdeklődés stb.) alapján módosítsuk.
Lehetővé tesszük / ösztönözzük alkalmazottunkat, hogy informális / bizalmas stílusban beszéljen a vendéggel, amennyiben úgy érzi a vendégnek erre van szüksége.
Minden vendégkérésre azonnal válaszolunk (email, telefon stb.).
Az adott ügyféllel folytatott kommunikációnk alapján olyan termékeket és szolgáltatásokat ajánlunk, amelyek ügyfeleink érdeklődésének megfelelően személyre szabottak. (Még mielőtt megérkeznének a szállodába.)
Már mielőtt megérkezne a hotelbe, még a foglalás során olyan termékeket és szolgáltatásokat ajánlunk ügyfeleinknek, melyek a hasonló gondolkodású fogyasztók preferenciái alapján személyre szabottak.
Célunk, hogy személyre szabott ajánlásainkat időben megtegyük (tehát még foglalás során).
Szállodánk a vendég egyedi problémáját figyelembe véve módosítja az általános reakcióját és egyénileg reagál (tehát nem standardot követ).
A vendéggel folytatott korábbi beszélgetéseket figyelembe véve teszünk program/tevékenység ajánlatot az utolsó napra. (Amikor a vendég távozott a szobából, de még nem kezdni meg hazautazását.)
Alkalmazottunk / szállodánk a hasonló gondolkodású fogyasztók preferenciáinak alapján ajánl termékeket.

Kérem, jelölje meg, hogy az Önök szállodájában megtalálhatóak-e az alábbi elemek.

A szálloda mikrószegmentációt is végez.	Igen, megtalálható	Nem, nincs ilyen.
A szálloda szegmentációs alapon küld ki hírleveleket és új ajánlatokat.	Igen, megtalálható	Nem, nincs ilyen.
Van alkalmazottunk vagy külső céges partnerünk, aki a vendégek adaival és a statisztikák elemzésével foglalkozik.	Igen, megtalálható	Nem, nincs ilyen.
Szállodánk gondoskodik arról, hogy személyre szabott keresési eredményként jelenjünk meg a keresőmotorok optimalizálásával. (SEO)	Igen, megtalálható	Nem, nincs ilyen.
Tároljuk és gyakran frissítjük a vendégek adatait, (már az érkezést megelőzően és a távozást követően is) melyeket re-marketing kampányok során fel is használunk.	Igen, megtalálható	Nem, nincs ilyen.

Kérem, jelölje meg, hogy az Önök szállodájában megtalálható-e az alábbi elem.

Van (egy) szállodai alkalmazásunk (Applikációnk).	Igen, megtalálható	Nem, nincs ilyen.

Kérem, jelölje meg, hogy az Önök szállodájában megtalálhatóak-e az alábbi elemek.

Csak akkor válaszolj erre a kérdésre, ha az alábbi feltételek teljesülnek: A válasz 'Igen, megtalálható' kérdéshez ' [G02Q24]' (Kérem, jelölje meg, hogy az Önök szállodájában megtalálható-e az alábbi elem. (Van (egy) szállodai alkalmazásunk (Applikációnk).))

A szállodai alkalmazás képes olyan személyre szabott szolgáltatásokat, vagy információkat nyújtani a vendégnek, amelyek az ő preferenciájához vagy személyes érdeklődési köréhez igazodik. (Már érkezés elött, vagy visszatérő vendég esetén a múltbeli tapasztalatok alapján.)	Igen, megtalálható	Nem, nincs ilyen.
Szállodai alkalmazásunk hasonló ahhoz, amit a legtöbb ügyfél mindennapi életében is használ.	Igen, megtalálható	Nem, nincs ilyen.
A szállodai alkalmazás képes személyre szabott szolgáltatásokat, termékeket vagy egyéni információkat nyújtani a vendégnek, amik az adott szállodai tartózkodásra szabottak.	Igen, megtalálható	Nem, nincs ilyen.

Kérem, jelölje meg, hogy jelenleg az Önök szállodájára mennyire igazak az alábbi kijelentések. Kérem jelölje meg a 0-t ha egyáltalán nem foglalkoznak ezzel (akár mert nem fontos vagy mert nincs kapacitás), 5-t ha az esetek túlnyomó többségében figyelnek erre, és így járnak el.

Szállodánk gondoskodik arról, hogy az információkat és termékeket vendégeink preferenciáinak megfelelően nyújtson.
Célunk, hogy szállodánkat úgy reklámozzuk, hogy az személyre szabott legyen potenciális vendégeink számára, akár a korábbi online keresései vagy érdeklődési köre alapján.
Különböző üdvözlő ajándékokat helyezünk el a vendégszobában (VIP vendégek számára).
Gondoskodunk arról, hogy a szoba minden eleme jó állapotban és a vendég fogadására alkalmas állapotban legyen.

Kérem, jelölje meg, hogy jelenleg az Önök szállodájára mennyire igazak az alábbi kijelentések. Kérem jelölje meg a 0-t ha egyáltalán nem foglalkoznak ezzel (akár mert nem fontos vagy mert nincs kapacitás), 5-t ha az esetek túlnyomó többségében figyelnek erre, és így járnak el.

Célunk, hogy hiteles, meleg fogadtatásban részesítsük a vendégeket.
A szálloda egységeinek nyitvatartása úgy kerül meghatározásra, hogy az minden ügyfélnek megfeleljen.
A szálloda személyzete segít a poggyásszal.
A szobában üdvözlőlapot helyezünk el nyomtatott üzenettel és a vendégek nevével.
A szobában üdvözlőlapot helyezünk el kézzel írt üzenettel és a vendégek nevével.

Kérem, jelölje meg, hogy az Önök szállodájában megtalálhatóak-e az alábbi elemek.

A vendégnek van lehetősége az itt tartózkodása alatt kisebb változtatásokat kérni a szobával kapcsolatban (ágy áttolása, könnyen mozdítható asztal kivétele, stb.).	Igen, megtalálható	Nem, nincs ilyen.
A vendég kiválaszthatja azt a hőmérsékletet, amelyet szeretne a szobájában (és ezt akár a szálloda előre be is állítja neki).	Igen, megtalálható	Nem, nincs ilyen.
A vendég kiválaszthatja az ágynemű stílusát vagy típusát.	Igen, megtalálható	Nem, nincs ilyen.
A vendég kiválaszthatja, hogy milyen párnát szeretne.	Igen, megtalálható	Nem, nincs ilyen.
A vendég dönthet úgy, hogy ne tegyenek alkoholt a minibárjában.	Igen, megtalálható	Nem, nincs ilyen.
A vendég kedvenc italát akkor is a szobába tesszük, ha nem ez az a márka, amellyel a	Igen,	Nem, nincs

szálloda általában dolgozik.	megtalálható	ilyen.
A szállodának vannak konkrét ajándékai vagy költségkerete, amelyeket akkor használ fel, ha az alkalmazott (recepció, guest relations stb.) a vendégnek ajándékot adna (születésnap, nászút különleges alkalom stb.).	Igen, megtalálható	Nem, nincs ilyen.
Rendelkezünk és használjuk is a TV-n található funkciót, melynek segítésével megjeleníthető a vendég neve, és üdvözölhetjük a vendéget a szobában.	Igen, megtalálható	Nem, nincs ilyen.

Kérem, jelölje meg, hogy jelenleg az Önök szállodájára mennyire igazak az alábbi kijelentések. Kérem jelölje meg a 0-t ha egyáltalán nem foglalkoznak ezzel (akár mert nem fontos vagy mert nincs kapacitás), 5-t ha az esetek túlnyomó többségében figyelnek erre, és így járnak el.

Gondoskodunk arról, hogy adataink pontosak legyenek, és gyakran frissítjük nyilvántartásainkat (a vendégről a vendég tartózkodása alatt).
A szállodában való tartózkodás során odafigyelünk vendégeink különleges igényeire.
Gondoskodunk arról, hogy minden vendég számára megfelelő ételek álljanak rendelkezésre (vallás, allergia, étrendi korlátozások).
Meleg, szívélyes "búcsúban" részesítünk minden vendéget a recepción, miután kijelentkezett a szobából.
Mindent megteszünk annak érdekében, hogy megértsük a vendég különleges igényeit a szállodai tartózkodása alatt.
Az alkalmazott azonnal válaszol a vendégek tartózkodása során felmerült kéréseire.
Amikor alkalmazottunk megígéri, hogy egy bizonyos időpontig megtesz valamit, akkor ezt teljesíti.
Gyors kijelentkezés és bejelentkezés biztosított a törzsvendégek számára.

Kérem, jelölje meg, hogy jelenleg az Önök szállodájára mennyire igazak az alábbi kijelentések. Kérem jelölje meg a 0-t ha egyáltalán nem foglalkoznak ezzel (akár mert nem fontos vagy mert nincs kapacitás), 5-t ha az esetek túlnyomó többségében figyelnek erre, és így járnak el.

Arra biztatjuk az alkalmazottakat, hogy viselkedésükben szívélyességet, jóindulatot tanúsítsanak.
Arra ösztönözzük az alkalmazottakat, hogy legyenek elérhetőek a vendégek számára.
Arra biztatjuk az alkalmazottakat, hogy beszélgetés közben tartsanak szemkontaktust a vendéggel.
A munkavállaló számára munkavállalói képzések állnak rendelkezésre, hogy olyan szintű minőségi szolgáltatást tudjon nyújtani, amelyet a szálloda megkíván.
Célunk, hogy olyan alkalmazottat válasszunk a felvételi eljárás során, aki motivált a vendégszolgálatban.
Alkalmazottiank a vendég igényeinek megfelelően változtatják viselkedésüket.
Alkalmazottaink a helyzet igényeinek megfelelően változtatják viselkedésüket.
A munkavállalóink empatikusak a vendéggel szemben, amikor a vendégnek problémája van.
Alkalmazottaink mindig igyekeznek segíteni a vendégek problémáinak megoldásában, még egyedi megoldásokkal is előállva.
Szállodánk / alkalmazottaink a vendég érdekeit tartják a legfontosabbnak.

Kérem, jelölje meg, hogy az Önök szállodájában megtalálható-e az alábbi elem.

Ösztönözzük és jutalmazzuk a személyre szabott szolgáltatásnyújtást.	Igen, megtalálható	Nem, nincs ilyen.

Kérem, jelölje meg, hogy jelenleg az Önök szállodájára mennyire igazak az alábbi kijelentések. Kérem jelölje meg a 0-t ha egyáltalán nem foglalkoznak ezzel (akár mert nem fontos vagy mert nincs kapacitás), 5-t ha az esetek túlnyomó többségében figyelnek erre, és így járnak el.

Proaktívan ösztönözzük a visszajelzéseket, a vendégeket arra kérjük, hogy lépjenek kapcsolatba velünk.
Szállodánk / alkalmazottunk pontosan tudja, vagy arra törekszik, hogy megtalálja, kinek a véleményére válaszol.
Szállodánk / alkalmazottunk egyéni választ ad minden vendégértékelésre és megjegyzésre.
A vendégelégedettség felmérését a vendég kijelentkezése után küldjük ki. Például Medallia.

Kérem, jelölje meg, hogy jelenleg az Önök szállodájára mennyire igazak az alábbi kijelentések. Kérem jelölje meg a 0-t ha egyáltalán nem foglalkoznak ezzel (akár mert nem fontos vagy mert nincs kapacitás), 5-t ha az esetek túlnyomó többségében figyelnek erre, és így járnak el.

Alkalmazottaink tehetségesek és szakértelemmel kezelnek minden kérést.
Alkalmazottaink hatékonyak.
Alkalmazottaink célja, hogy felülmúlják a vendégek elvárásait.
Alkalmazottaink / szállodánk személyre szabja azokat az termékeket és szolgáltatásokat, amelyek a vendég által önként megadott információkon alapulnak (például korosztály, irányítószám), de nem lehet a vendéget, mint személyt beazonosítani.
Alkalmazottaink / szállodánk személyre szabja termékeket az árukat és szolgáltatásokat a vendég által önkéntesen megadott olyan információk alapján, amik beazonosításra is alkalmasak lehetnek, (például név, szállítási cím, kártyaadatok).
Alkalmazottaink az ügyfél igényeinek megfelelően testre szabhatják a szolgáltatási kínálatot (például: ételallergiák alapján módosítanak a menü elemeken stb.).
Alkalmazottainak / szállodánk gondoskodik arról, hogy időt szánjon és megértse a vendég konkrét igényeit.
Alkalmazottaink / szállodánk olyan termékeket és szolgáltatásokat kínál ügyfeleinknek a szállodában tartózkodás során, amelyek megfelelnek az adott vendég egyedi igényeinek.
Alkalmazottunk / szállodánk előre látja, hogy mit akar a vendég, még mielőtt a vendég kérné.
Gondoskodunk arról, hogy alkalmazottainak vendégszerető viselkedése olyannak érződjön, amit valódi igények motiválnak, az, hogy kedveskedjenek és gondoskodjanak vendégeikről, személyiségük kiterjesztéseként érződjön és ne feladatként.
Alkalmazottaink/ szállodánk célja, hogy a vendég fontos embernek érezze magát.
Alkalmazottaink célja, hogy egyéni figyelmet szenteljenek a vendégeknek a szállodai tartózkodás során.
A szálloda alkalmazottjai teljes tisztelettel bánnak a vendéggel.
Munkatársaink udvariasak minden vendéggel.
Alkalmazottaink barátságosak minden vendéggel.
Fontos, hogy a vendég úgy érezze, hogy a jó kapcsolat kiépítése a szálloda legfontosabb hajtóereje és nem a pénzkeresés.
Alkalmazottaink proaktívak és kezdeményezik a vendég jobb megismerését.

Szálloda adatok.

A következő kérdések a szálloda tulajdonságaira vonatkoznak. Ennek célja, hogy a kutatás végén feltárhassuk, milyen tulajdonságokkal rendelkeznek azok a szállodák, amik a személyre szabott szolgáltatások különböző fázisain hasonló szinten helyezkednek el.

A kérdőívben megadott válaszok a GDPR és a kutatási anonimitás szabályainak megfelelően kerülnek kezelésre. A kutatómunka során a szálloda nem kerül megnevezésre.

Tagja a Magyar Szállodák és Éttermek Szövetségének? (Kérem, jelölje be a megfelelő választ!)

Kérem, csak egyet válasszon az alábbiak közül:

- Igen
- Nem

Az alábbiak közül mi a szálloda elsődleges célcsoportja?

- Üzleti utazók
- Szabadidős utazók

Kérem jelölje be, az alábbiak közül mi a szálloda elsődleges célcsoportja!

Csak akkor válaszolj erre a kérdésre, ha az alábbi feltételek teljesülnek:A válasz 'Szabadidős utazók ' kérdéshez ' [G01Q02]' (Az alábbiak közül mi a szálloda elsődleges célcsoportja?)

Kérem, csak egyet válasszon az alábbiak közül:

- Fiatalok.
- Fiatal gyermektelen párok.
- Családok.
- Már gyermektelen párok.
- Nyugdíjasok.
- Egyéb

Van a szállodának másodlagos célcsoportja?

- Igen

- Nem

Az alábbiak közül mi a szálloda másodlagos célcsoportja?

Csak akkor válaszolj erre a kérdésre, ha az alábbi feltételek teljesülnek:A válasz 'Igen' kérdéshez ' [G01Q04]' (Van a szállodának másodlagos célcsoportja?)

Kérem, csak egyet válasszon az alábbiak közül:

- Üzleti utazók.
- Szabadidős utazók.
- Egyéb

Kérem jelölje be, az alábbiak közül mi a szálloda másodlagos célcsoportja!

Csak akkor válaszolj erre a kérdésre, ha az alábbi feltételek teljesülnek: A válasz ' Szabadidős utazók.

' kérdéshez ' [G01Q05]' (Az alábbiak közül mi a szálloda másodlagos célcsoportja?)

Kérem, csak egyet válasszon az alábbiak közül:

- Fiatalok.
- Fiatal gyermektelen párok.
- Családok.
- Már gyermektelen párok.
- Nyugdíjasok.
- Egyéb

Honnan érkezik a szálloda elsődleges célcsoportja? *

Kérem, csak egyet válasszon az alábbiak közül:

- Belföldi turisták
- Külföldi turisták

Melyik jellemzőbb inkább a vendégkörükre?

Kérem, csak egyet válasszon az alábbiak közül:

- Egyéni utazók
- Csoportos utazók

Mi a szálloda üzemeltetés szerinti besorolása?

Kérem, csak egyet válasszon az alábbiak közül:

- Városi szálloda
- Üdülő vagy sport szálloda
- Fürdő vagy gyógy szálloda
- Konferencia szálloda
- Repülőtéri vagy tranzit szálloda
- Wellness szálloda
- Apartment szálloda
- Garni szálloda
- Kastélyszálloda
- Egyéb

Mióta dolgozik ebben a pozícióban?

Kérem, csak egyet válasszon az alábbiak közül:

1990	1997	2004	2011	2018
1991	1998	2005	2012	2019
1992	1999	2006	2013	2020
1993	2000	2007	2014	2021
1994	2001	2008	2015	2022
1995	2002	2009	2016	Egyéb
1996	2003	2010	2017	

Tagja a szálloda szállodaláncnak?

- Igen

- Nem

Hány csillagos a szálloda?

Kérem, csak egyet válasszon az alábbiak közül:

- 2
- 2 superior
- 3
- 3 superior
- 4
- 4 superior
- 5
- 5 superior
- Nincs besorolva.

Amennyiben még nincs besorolva, milyen csillag kategóriát céloz meg?

Csak akkor válaszolj erre a kérdésre, ha az alábbi feltételek teljesülnek:A válasz 'Nincs besorolva.' kérdéshez ' [G01Q13]' (Hány csillagos a szálloda?)

Kérem, csak egyet válasszon az alábbiak közül:

- 2
- 2 superior
- 3
- 3 superior
- 4
- 4 superior
- 5
- 5 superior

Van az Önök szállodájában Guest Relation pozíció?

Kérem, csak egyet válasszon az alábbiak közül:

- Igen
- Nem

Van az Önök szállodájában Concierge pozíció?

Kérem, csak egyet válasszon az alábbiak közül:

- Igen
- Nem

Kérem, adja meg üzemeltetési idő szerinti besorolásukat, egy átlagos év esetébe.

Kérem, csak egyet válasszon az alábbiak közül:

- Egész évben üzemelő
- Szezonális
- Egyéb

A 2022-es energia válság eltérő lehet a szokásostól.

Kérem, adja meg a szálloda irányító számát.

Kérem, adja meg a szálloda szobaszámát.

Kérem, adja meg, hogy átlagosan hány alkalmazott dolgozik a szállodában.

Mi az Ön pozíciója?

Kérem, jelölje be a megfelelő számot annak függvényében, hogy szállodájuk mennyire tartja fontosnak az alábbiakat. Amennyiben egyáltalán nem tartja fontosnak, válassza az 1 míg, ha nagyon fontosnak tartja válassza a 7 számot.

Kérem, az összes felsorolt elemnél jelölje be a megfelelő választ:

Az Önök szállodája, mennyire tartja fontosnak, hogy személyre szabott szolgáltatást nyújtson a vendégeknek
Az Önök szállodája, mennyire tartja fontosnak, kommunikációjában éreztesse a vendéggel, hogy különleges ügyfél?
Az Önök szállodája, mennyire tartja fontosnak, hogy kínálatát úgy alakítsa, hogy az megfeleljen a vendég egyéni igényeinek?

Köszönöm a kérdőív kitöltését!

Köszönöm, hogy részt vett a kutatásban! Amennyiben szeretné megkapni az eredményeket, kérem, itt adja meg elérhetőségét:

Appendix 45. - R-Studio Output Threshold 0.5

```
library(seriation) #For seriate a matrix

library(biclust) #General biclustering functions

library(BiocManager)

library(iBBiG) #iBBiG biclustering

library(BicARE) #BicARE biclustering

library(BcDiag) #Diagnostics of biclusters

#Additional statistic packages

library(ggplot2)

library(factoextra) #Additional distance functions

library(corrgram) #Correlation diagram

library(futile.logger)

library(VennDiagram) #VennDiagram

library(rJava)

library(venneuler) #VennDiagram


#For formatted and interactive tables and figures

library(knitr) #Formatted tables, figures


#For manipulating Excel files

library(readxl) #Read Excel file

library(xlsx) #Write Excel file

normalize <- function(x) {

return ((x - min(x)) / (max(x) - min(x)))

}

NA2mean <- function(x) replace(x, is.na(x), mean(x, na.rm = TRUE))

bicare2biclust <- function(x){

    if(class(x)=="Biclust"){

        return(x)

    } else if(class(x)=="biclustering"){

        Parameters <-
list(numberofbicluster=x$param[1,2],residuthreshold=x$param[2,2],genesinitialprobability=x$param[3,2],samplesinitialprobability=x$param[4,2],numberofit
erations=x$param[5,2],date=x$param[6,2])

        RowxNumber <- t(x$bicRow==1)

        NumberxCol <- x$bicCol==1

        Number <- as.numeric(dim(RowxNumber)[2])

        info <- list()

        return(new("Biclust",Parameters=Parameters,RowxNumber=RowxNumber,NumberxCol=NumberxCol,Number=Number,info=info))

    }

}

DATA<-read_excel("phdbiclust.xlsx")

DATA[is.na(DATA)] <- 0

ALL<-DATA[,-1]

rownames(ALL)<-as.matrix(DATA[,1])

remove(DATA)

orig_mtx<-as.matrix(ALL)

orig_mtx[is.na(orig_mtx)]<-0


mtx<-orig_mtx

RESPONDENT<-ALL


for (i in 1:ncol(mtx)){

  mtx[,i]<-normalize(mtx[,i])
```

```
}
for (i in 1:ncol(RESPONDENT)){
  RESPONDENT[,i]<-normalize(RESPONDENT[,i])
}
RESPONDENT[is.na(RESPONDENT)] <- 0
mtx[is.na(mtx)] <- 0

weights<-matrix(1/ncol(RESPONDENT),1,ncol(RESPONDENT))
colnames(weights)<-colnames(RESPONDENT)
BR<-rowSums(RESPONDENT*weights)/max(rowSums(RESPONDENT*weights))
RANK_RESPONDENT<-as.matrix(rank(-BR))
rownames(RESPONDENT)<-rownames(mtx)
rownames(ALL)<-rownames(mtx)
rownames(RANK_RESPONDENT)<-rownames(RESPONDENT)
ORIG_SER <- c(seriate(get_dist(orig_mtx,"euclidean"),method="HC_COMPLETE"),seriate(get_dist(t(orig_mtx),"spearman"),method="HC_COMPLETE"))
ORIG_ORDERED<-orig_mtx[get_order(ORIG_SER,dim=1),get_order(ORIG_SER,dim=2)]
rownames(ORIG_ORDERED) <- rownames(mtx[get_order(ORIG_SER,dim=1),get_order(ORIG_SER,dim=2)])
hmap(as.matrix(ORIG_ORDERED),col=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),showdist="both")
```

Seriation of normalized data

```
ALL_SER <- c(seriate(get_dist(mtx,"euclidean"),method="HC_COMPLETE"),seriate(get_dist(t(mtx),"spearman"),method="HC_COMPLETE"))
ALL_ORDERED<-mtx[get_order(ALL_SER,dim=1),get_order(ALL_SER,dim=2)]
rownames(ALL_ORDERED) <- rownames(mtx[get_order(ALL_SER,dim=1),get_order(ALL_SER,dim=2)])
```

Estimating the number of bi-clusters

```
hmap(as.matrix(ALL_ORDERED),col=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),showdist="both")
```

Applying iBBiG on normalized data

```
res <- iBBiG(binaryMatrix=binarize(mtx,threshold = 0.5),nModules = 1,alpha=0.3,pop_size = 100,mutation = 0.3,stagnation = 50,selection_pressure =
1.2,max_sp = 15,success_ratio = 0.8)
## Module:  1 ... done
summary(res)
Obs.FStat <- NULL
for (i in c(1:res@Number)){
  Obs.FStat[[i]] <- computeObservedFstat(x=mtx,bicResult=res,number=i)
}
kable(Obs.FStat,caption = "**Table 2** The results of row and column effects for the top league")
exploreBic(dset=mtx,bres=res,mname='biclust',pfor='all',gby='genes',bnum=1)
exploreBic(dset=mtx,bres=res,mname='biclust',pfor='all',gby='conditions',bnum=1)
```

Heat maps of the top league

```
drawHeatmap(x=mtx,bicResult=res,number=1,beamercolor = TRUE,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE))
drawHeatmap(x=mtx,bicResult=res,local=FALSE,number=1,beamercolor = TRUE,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE))
```

Checking stability of the top league bi-cluster

```
Bootstrap <- diagnoseColRow(x=as.matrix(ALL),bicResult=res,number=1,
  nResamplings=100,replace=TRUE)
Bootstrap
```

Calculating partial rankings

```
C<-biclust::bicluster(mtx,res,number=1)

B<-as.data.frame(C[[1]])

selectedweight<-weights[,colnames(B)]

cols <- colnames(B)

sw<-weights[,cols]

BR<-rowSums(B[,cols]*sw)/max(rowSums(B[,cols]*sw))

B$Overall_Score<-BR

B$Rank<-rank(-B$Overall_Score)

kable(B,caption = "**Table 2** League A1 by iBBiG",digits = 2)

cor(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")

cor.test(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")

weightst<-matrix(1/nrow(mtx),1,nrow(mtx))

colnames(weightst)<-rownames(mtx)

tRESP <- as.data.frame(mtx)

BRt<-colSums(tRESP*weightst)/max(colSums(tRESP*weightst))

RANK_RESPt<-as.matrix(rank(-BRt))

Bt<-as.data.frame(t(C[[1]]))

swt<-weightst[,colnames(Bt)]

colst <- colnames(Bt)

swt<-weightst[,colst]

BRt<-rowSums(Bt[,colst]*swt)/max(rowSums(Bt[,colst]*swt))

Bt$Overall_Score<-BRt

Bt$Rank<-rank(-Bt$Overall_Score)

cor.test(Bt$Rank,as.matrix(RANK_RESPt[rownames(Bt),]),method="spearman")
```

Applying iBBiG on reversed normalized data

```
rmtx <- 1-mtx

rres <- iBBiG(binaryMatrix=binarize(rmtx,threshold = 0.5),nModules = 1,alpha=0.3,pop size = 100,mutation = 0.08,stagnation = 50,selection pressure = 1.2,max_sp = 15,success_ratio = 0.8)

summary(rres)

Obs.FStat <- NULL

for (i in c(1:rres@Number)){

  Obs.FStat[[i]] <- computeObservedFstat(x=rmtx,bicResult=rres,number=i)

  }

kable(Obs.FStat,caption = "**Table 3** The results of row and column effects of the reversed data for the two bi-clusters")

exploreBic(dset=mtx,bres=rres,mname='biclust',pfor='all',gby='genes',bnum=1)

exploreBic(dset=mtx,bres=rres,mname='biclust',pfor='all',gby='conditions',bnum=1)
```

Heat maps of the lower league

```
drawHeatmap(x=mtx,bicResult=rres,number=1,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),beamercolor = TRUE)
```

```
drawHeatmap(x=mtx,bicResult=rres,local=FALSE,number=1,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),beamercolor = TRUE)
```

Checking stability of the lower league bi-cluster

```
Bootstrap <- diagnoseColRow(x=as.matrix(ALL),bicResult=rres,number=1,

  nResamplings=100,replace=TRUE)

Bootstrap
```

Calculating partial rankings

```
C<-biclust::bicluster(mtx,rres,number=1)
```

```
B<-as.data.frame(C[[1]])
selectedweight<-weights[,colnames(B)]
cols <- colnames(B)
sw<-weights[,cols]
BR<-rowSums(B[,cols]*sw)/max(rowSums(B[,cols]*sw))
B$Overall_Score<-BR
B$Rank<-rank(-B$Overall_Score)
kable(B,caption = "**Table xx** League C1 by iBBiG",digits = 2)
cor(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")
cor.test(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")
weightst<-matrix(1/nrow(mtx),1,nrow(mtx))
colnames(weightst)<-rownames(mtx)
tRESP <- as.data.frame(mtx)
BRt<-colSums(tRESP*weightst)/max(colSums(tRESP*weightst))
RANK_RESPt<-as.matrix(rank(-BRt))
Bt<-as.data.frame(t(C[[1]]))
swt<-weightst[,colnames(Bt)]
colst <- colnames(Bt)
swt<-weightst[,colst]
BRt<-rowSums(Bt[,colst]*swt)/max(rowSums(Bt[,colst]*swt))
Bt$Overall_Score<-BRt
Bt$Rank<-rank(-Bt$Overall_Score)
cor.test(Bt$Rank,as.matrix(RANK_RESPt[rownames(Bt),]),method="spearman").
```

Applying BicARE on normalized data

```
BICARE_res <- FLOC(Data=ExpressionSet(mtx),k=1,pGene=1,pSample=1,r=1e-16,N=28,M=17,t=10000,blocGene=NULL,blocSample=NULL)
bres <- bicare2biclust(BICARE_res)
summary(bres)
```

Calculating F-tests of the middle league bi-cluster

```
RObs.FStat <- NULL
for (i in c(1:bres@Number)){
  RObs.FStat[[i]] <- computeObservedFstat(x=mtx,bicResult=bres,number=i)
}
kable(RObs.FStat,caption = "**Table 5** The results of row and column effects of the middle league")
exploreBic(dset=mtx,bres=bres,mname='biclust',pfor='all',gby='genes',bnum=1)
exploreBic(dset=mtx,bres=bres,mname='biclust',pfor='all',gby='conditions',bnum=1)
```

Heat maps of the middle league

```
drawHeatmap(x=mtx,bicResult=bres,number=1,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),beamercolor = TRUE)
drawHeatmap(x=mtx,bicResult=bres,local=FALSE,number=1,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),beamercolor = TRUE)
```

Checking stability of the middle league bi-cluster

```
Bootstrap <- diagnoseColRow(x=as.matrix(ALL),bicResult=bres,number=1,
  nResamplings=100,replace=TRUE)
Bootstrap
```

Calculating partial rankings

```
C<-biclust::bicluster(mtx,bres,number=1)
B<-as.data.frame(C[[1]])
```

```
selectedweight<-weights[,colnames(B)]

cols <- colnames(B)

sw<-weights[,cols]

BR<-rowSums(B[,cols]*sw)/max(rowSums(B[,cols]*sw))

B$Overall_Score<-BR

B$Rank<-rank(-B$Overall_Score)

kable(B,caption = "**Table 6** League B1 by iBBiG",digits = 2)

cor(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")

cor.test(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")

weightst<-matrix(1/nrow(mtx),1,nrow(mtx))

colnames(weightst)<-rownames(mtx)

tRESP <- as.data.frame(mtx)

BRt<-colSums(tRESP*weightst)/max(colSums(tRESP*weightst))

RANK_RESPt<-as.matrix(rank(-BRt))

Bt<-as.data.frame(t(C[[1]]))

swt<-weightst[,colnames(Bt)]

colst <- colnames(Bt)

swt<-weightst[,colst]

BRt<-rowSums(Bt[,colst]*swt)/max(rowSums(Bt[,colst]*swt))

Bt$Overall_Score<-BRt

Bt$Rank<-rank(-Bt$Overall_Score)

cor.test(Bt$Rank,as.matrix(RANK_RESPt[rownames(Bt),]),method="spearman")
```

Venn diagram of indicators for first leagues

```
T<-biclust::bicluster(orig_mtx,res,number = 1)

League_A<-T[[1]]

R<-biclust::bicluster(orig_mtx,rres,number = 1)

League_C<-R[[1]]

B<-biclust::bicluster(orig_mtx,bres,number = 1)

League_B<-B[[1]]

draw.triple.venn(area1=nrow(as.matrix(colnames(League_A))),area2=nrow(as.matrix(colnames(League_B))),area3=nrow(as.matrix(colnames(League_C))),n12=nrow
(as.matrix(intersect(colnames(League_A),colnames(League_B)))),n13=nrow(as.matrix(intersect(colnames(League_A),colnames(League_C)))),n23=nrow(as.matrix(
intersect(colnames(League_B),colnames(League_C)))),n123=nrow(as.matrix(intersect(intersect(colnames(League_A),colnames(League_B)),colnames(League_C))))
,fill=c("red","green","blue"),category=c("League A","League B","League C"),main="Venn Diagram of indicators")
```

```
## (polygon[GRID.polygon.17], polygon[GRID.polygon.18], polygon[GRID.polygon.19], polygon[GRID.polygon.20], polygon[GRID.polygon.21],
polygon[GRID.polygon.22], text[GRID.text.23], text[GRID.text.24], text[GRID.text.25], text[GRID.text.26], text[GRID.text.27], text[GRID.text.28],
text[GRID.text.29])
```

Venn diagram of respondents for first leagues

```
draw.triple.venn(area1=nrow(as.matrix(rownames(League_A))),area2=nrow(as.matrix(rownames(League_B))),area3=nrow(as.matrix(rownames(League_C))),n12=nrow
(as.matrix(intersect(rownames(League_A),rownames(League_B)))),n13=nrow(as.matrix(intersect(rownames(League_A),rownames(League_C)))),n23=nrow(as.matrix(
intersect(rownames(League_B),rownames(League_C)))),n123=nrow(as.matrix(intersect(intersect(rownames(League_A),rownames(League_B)),rownames(League_C))))
,fill=c("red","green","blue"),category=c("League A","League B","League C"),main="Venn Diagram of respondents")
```

```
## (polygon[GRID.polygon.30], polygon[GRID.polygon.31], polygon[GRID.polygon.32], polygon[GRID.polygon.33], polygon[GRID.polygon.34],
polygon[GRID.polygon.35], text[GRID.text.36], text[GRID.text.37], text[GRID.text.38], text[GRID.text.39], text[GRID.text.40], text[GRID.text.41],
text[GRID.text.42], text[GRID.text.43])
```

Write results to DataFrame

```
RESULT<-ALL

RESULT$League_A<-0

RESULT$League_B<-0

RESULT$League_C<-0

rownames(RESULT)<-rownames(ALL)

RESULT[rownames(League_A),"League_A"]<-1

rownames(RESULT)<-rownames(ALL)

RESULT[rownames(League_B),"League_B"]<-1

rownames(RESULT)<-rownames(ALL)
```

```
RESULT[rownames(League_C),"League_C"]<-1
rownames(RESULT)<-rownames(ALL)
RESULT[nrow(RESULT)+1,]<-0
RESULT[nrow(RESULT)+1,]<-0
RESULT[nrow(RESULT)+1,]<-0
rownames(RESULT)<-c(rownames(ALL),"League_A","League_B","League_C")
RESULT["League_A",colnames(League_A)]<-1
rownames(RESULT)<-c(rownames(ALL),"League_A","League_B","League_C")
RESULT["League_B",colnames(League_B)]<-1
rownames(RESULT)<-c(rownames(ALL),"League_A","League_B","League_C")
RESULT["League_C",colnames(League_C)]<-1
rownames(RESULT)<-c(rownames(ALL),"League_A","League_B","League_C")
names(dimnames(RESULT)) <- c("RESPONDENT", "")
```

Export the results to an Excel file

```
write.xlsx(RESULT,"RESPONDENT_BICRES_50Bsig.xlsx")
```

(Source: R-Studio Output)

Appendix 46. - R-Studio output threshold 0.75

```
library(seriation) #For seriate a matrix
library(biclust) #General biclustering functions
library(BiocManager)
library(iBBiG) #iBBiG biclustering
library(BicARE) #BicARE biclustering
library(BcDiag) #Diagnostics of biclusters
#Additional statistic packages
library(ggplot2)
library(factoextra) #Additional distance functions
library(corrgram) #Correlation diagram
library(futile.logger)
library(VennDiagram) #VennDiagram
library(rJava)
library(venneuler) #VennDiagram


#For formatted and interactive tables and figures
library(knitr) #Formatted tables, figures
#For manipulating Excel files
library(readxl) #Read Excel file
library(xlsx) #Write Excel file
normalize <- function(x) {
return ((x - min(x)) / (max(x) - min(x)))
}
NA2mean <- function(x) replace(x, is.na(x), mean(x, na.rm = TRUE))
bicare2biclust <- function(x){
    if(class(x)=="Biclust"){
        return(x)
    } else if(class(x)=="biclustering"){
        Parameters                                                                                                   <-
list(numberofbicluster=x$param[1,2],residuthreshold=x$param[2,2],genesinitialprobability=x$param[3,2],samplesinitialprobability=x$param[4,2],numberofit
erations=x$param[5,2],date=x$param[6,2])
        RowxNumber <- t(x$bicRow==1)
        NumberxCol <- x$bicCol==1
        Number <- as.numeric(dim(RowxNumber)[2])
```

```
        info <- list()
        return(new("Biclust",Parameters=Parameters,RowxNumber=RowxNumber,NumberxCol=NumberxCol,Number=Number,info=info))
    }
}
DATA<-read_excel("phdbiclust.xlsx")
DATA[is.na(DATA)] <- 0
ALL<-DATA[,-1]
rownames(ALL)<-as.matrix(DATA[,1])
remove(DATA)
orig_mtx<-as.matrix(ALL)
orig_mtx[is.na(orig_mtx)]<-0
mtx<-orig_mtx
RESPONDENT<-ALL
for (i in 1:ncol(mtx)){
  mtx[,i]<-normalize(mtx[,i])
}
for (i in 1:ncol(RESPONDENT)){
  RESPONDENT[,i]<-normalize(RESPONDENT[,i])
}
RESPONDENT[is.na(RESPONDENT)] <- 0
mtx[is.na(mtx)] <- 0
weights<-matrix(1/ncol(RESPONDENT),1,ncol(RESPONDENT))
colnames(weights)<-colnames(RESPONDENT)
BR<-rowSums(RESPONDENT*weights)/max(rowSums(RESPONDENT*weights))
RANK_RESPONDENT<-as.matrix(rank(-BR))
rownames(RESPONDENT)<-rownames(mtx)
rownames(ALL)<-rownames(mtx)
rownames(RANK_RESPONDENT)<-rownames(RESPONDENT)
ORIG_SER <- c(seriate(get_dist(orig_mtx,"euclidean"),method="HC_COMPLETE"),seriate(get_dist(t(orig_mtx),"spearman"),method="HC_COMPLETE"))
ORIG_ORDERED<-orig_mtx[get_order(ORIG_SER,dim=1),get_order(ORIG_SER,dim=2)]
rownames(ORIG_ORDERED) <- rownames(mtx[get_order(ORIG_SER,dim=1),get_order(ORIG_SER,dim=2)])
hmap(as.matrix(ORIG_ORDERED),col=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),showdist="both")
```

Seriation of normalized data

```
ALL_SER <- c(seriate(get_dist(mtx,"euclidean"),method="HC_COMPLETE"),seriate(get_dist(t(mtx),"spearman"),method="HC_COMPLETE"))
ALL_ORDERED<-mtx[get_order(ALL_SER,dim=1),get_order(ALL_SER,dim=2)]
rownames(ALL_ORDERED) <- rownames(mtx[get_order(ALL_SER,dim=1),get_order(ALL_SER,dim=2)])
```

Estimating the number of bi-clusters

```
hmap(as.matrix(ALL_ORDERED),col=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),showdist="both")
```

Applying iBBiG on normalized data

```
res <- iBBiG(binaryMatrix=binarize(mtx,threshold = 0.75),nModules = 1,alpha=0.3,pop_size = 100,mutation = 0.3,stagnation = 50,selection_pressure = 1.2,max_sp = 15,success_ratio = 0.8)
summary(res)
Obs.FStat <- NULL
for (i in c(1:res@Number)){
  Obs.FStat[[i]] <- computeObservedFstat(x=mtx,bicResult=res,number=i)
}
kable(Obs.FStat,caption = "**Table 1** The results of row and column effects for two bi-clusters")
res <- iBBiG(binaryMatrix=binarize(mtx,threshold = 0.75),nModules = 1,alpha=0.3,pop_size = 100,mutation = 0.3,stagnation = 50,selection_pressure = 1.2,max_sp = 15,success_ratio = 0.8)
```

```
summary(res)

Obs.FStat <- NULL

for (i in c(1:res@Number)){

  Obs.FStat[[i]] <- computeObservedFstat(x=mtx,bicResult=res,number=i)

}

kable(Obs.FStat,caption = "**Table 2** The results of row and column effects for the top league")

exploreBic(dset=mtx,bres=res,mname='biclust',pfor='all',gby='genes',bnum=1)

exploreBic(dset=mtx,bres=res,mname='biclust',pfor='all',gby='conditions',bnum=1)
```

Heat maps of the top league

```
drawHeatmap(x=mtx,bicResult=res,number=1,beamercolor = TRUE,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE))

drawHeatmap(x=mtx,bicResult=res,local=FALSE,number=1,beamercolor = TRUE,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE))
```

Checking stability of the top league bi-cluster

```
Bootstrap <- diagnoseColRow(x=as.matrix(ALL),bicResult=res,number=1,

  nResamplings=100,replace=TRUE)

Bootstrap
```

Calculating partial rankings

```
C<-biclust::bicluster(mtx,res,number=1)

B<-as.data.frame(C[[1]])

selectedweight<-weights[,colnames(B)]

cols <- colnames(B)

sw<-weights[,cols]

BR<-rowSums(B[,cols]*sw)/max(rowSums(B[,cols]*sw))

B$Overall_Score<-BR

B$Rank<-rank(-B$Overall_Score)

kable(B,caption = "**Table 2** League A1 by iBBiG",digits = 2)

cor(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")

cor.test(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")

weightst<-matrix(1/nrow(mtx),1,nrow(mtx))

colnames(weightst)<-rownames(mtx)

tRESP <- as.data.frame(mtx)

BRt<-colSums(tRESP*weightst)/max(colSums(tRESP*weightst))

RANK_RESPt<-as.matrix(rank(-BRt))

Bt<-as.data.frame(t(C[[1]]))

swt<-weightst[,colnames(Bt)]

colst <- colnames(Bt)

swt<-weightst[,colst]

BRt<-rowSums(Bt[,colst]*swt)/max(rowSums(Bt[,colst]*swt))

Bt$Overall_Score<-BRt

Bt$Rank<-rank(-Bt$Overall_Score)

cor.test(Bt$Rank,as.matrix(RANK_RESPt[rownames(Bt),]),method="spearman")
```

Applying iBBiG on reversed normalized data

```
rmtx <- 1-mtx

rres <- iBBiG(binaryMatrix=binarize(rmtx,threshold = 0.75),nModules = 1,alpha=0.3,pop_size = 100,mutation = 0.08,stagnation = 50,selection_pressure =
1.2,max_sp = 15,success_ratio = 0.8)

summary(rres)

Obs.FStat <- NULL

for (i in c(1:rres@Number)){
```

```
  Obs.FStat[[i]] <- computeObservedFstat(x=rmtx,bicResult=rres,number=i)
  }
kable(Obs.FStat,caption = "**Table 3** The results of row and column effects of the reversed data for the two bi-clusters")
exploreBic(dset=mtx,bres=rres,mname='biclust',pfor='all',gby='genes',bnum=1)
exploreBic(dset=mtx,bres=rres,mname='biclust',pfor='all',gby='conditions',bnum=1)
```

Heat maps of the lower league

```
drawHeatmap(x=mtx,bicResult=rres,number=1,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),beamercolor = TRUE)
drawHeatmap(x=mtx,bicResult=rres,local=FALSE,number=1,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),beamercolor = TRUE)
```

Checking stability of the lower league bi-cluster

```
Bootstrap <- diagnoseColRow(x=as.matrix(ALL),bicResult=rres,number=1,
  nResamplings=100,replace=TRUE)
Bootstrap
```

Calculating partial rankings

```
C<-biclust::bicluster(mtx,rres,number=1)
B<-as.data.frame(C[[1]])
selectedweight<-weights[,colnames(B)]
cols <- colnames(B)
sw<-weights[,cols]
BR<-rowSums(B[,cols]*sw)/max(rowSums(B[,cols]*sw))
B$Overall_Score<-BR
B$Rank<-rank(-B$Overall_Score)
kable(B,caption = "**Table xx** League C1 by iBBiG",digits = 2)
cor(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")
cor.test(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")
weightst<-matrix(1/nrow(mtx),1,nrow(mtx))
colnames(weightst)<-rownames(mtx)
tRESP <- as.data.frame(mtx)
BRt<-colSums(tRESP*weightst)/max(colSums(tRESP*weightst))
RANK_RESPt<-as.matrix(rank(-BRt))
Bt<-as.data.frame(t(C[[1]]))
swt<-weightst[,colnames(Bt)]
colst <- colnames(Bt)
swt<-weightst[,colst]
BRt<-rowSums(Bt[,colst]*swt)/max(rowSums(Bt[,colst]*swt))
Bt$Overall_Score<-BRt
Bt$Rank<-rank(-Bt$Overall_Score)
cor.test(Bt$Rank,as.matrix(RANK_RESPt[rownames(Bt),]),method="spearman")
```

Applying BicARE on normalized data

```
BICARE_res <- FLOC(Data=ExpressionSet(mtx),k=1,pGene=1,pSample=1,r=1e-16,N=28,M=17,t=10000,blocGene=NULL,blocSample=NULL)
bres <- bicare2biclust(BICARE_res)
summary(bres)
```

Calculating F-tests of the middle league bi-cluster

```
RObs.FStat <- NULL
for (i in c(1:bres@Number)){
```

```
  RObs.FStat[[i]] <- computeObservedFstat(x=mtx,bicResult=bres,number=i)
}
kable(RObs.FStat,caption = "**Table 5** The results of row and column effects of the middle league")
exploreBic(dset=mtx,bres=bres,mname='biclust',pfor='all',gby='genes',bnum=1)
exploreBic(dset=mtx,bres=bres,mname='biclust',pfor='all',gby='conditions',bnum=1)
```

Heat maps of the middle league

```
drawHeatmap(x=mtx,bicResult=bres,number=1,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),beamercolor = TRUE)
drawHeatmap(x=mtx,bicResult=bres,local=FALSE,number=1,paleta=colorspace::diverging_hcl(100, "Red-Green",rev = FALSE),beamercolor = TRUE)
```

Checking stability of the middle league bi-cluster

```
Bootstrap <- diagnoseColRow(x=as.matrix(ALL),bicResult=bres,number=1,
  nResamplings=100,replace=TRUE)
Bootstrap
```

Calculating partial rankings

```
C<-biclust::bicluster(mtx,bres,number=1)
B<-as.data.frame(C[[1]])
selectedweight<-weights[,colnames(B)]
cols <- colnames(B)
sw<-weights[,cols]
BR<-rowSums(B[,cols]*sw)/max(rowSums(B[,cols]*sw))
B$Overall_Score<-BR
B$Rank<-rank(-B$Overall_Score)
kable(B,caption = "**Table 6** League B1 by iBBiG",digits = 2)
cor(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")
cor.test(B$Rank,as.matrix(RANK_RESPONDENT[rownames(B),]),method="spearman")
weightst<-matrix(1/nrow(mtx),1,nrow(mtx))
colnames(weightst)<-rownames(mtx)
tRESP <- as.data.frame(mtx)
BRt<-colSums(tRESP*weightst)/max(colSums(tRESP*weightst))
RANK_RESPt<-as.matrix(rank(-BRt))

Bt<-as.data.frame(t(C[[1]]))
swt<-weightst[,colnames(Bt)]
colst <- colnames(Bt)
swt<-weightst[,colst]
BRt<-rowSums(Bt[,colst]*swt)/max(rowSums(Bt[,colst]*swt))
Bt$Overall_Score<-BRt
Bt$Rank<-rank(-Bt$Overall_Score)
cor.test(Bt$Rank,as.matrix(RANK_RESPt[rownames(Bt),]),method="spearman")
```

Specifying overlaps - Venn diagram of indicators for first leagues

```
T<-biclust::bicluster(orig_mtx,res,number = 1)
League_A<-T[[1]]
R<-biclust::bicluster(orig_mtx,rres,number = 1)
League_C<-R[[1]]
B<-biclust::bicluster(orig_mtx,bres,number = 1)
League_B<-B[[1]]
draw.triple.venn(area1=nrow(as.matrix(colnames(League_A))),area2=nrow(as.matrix(colnames(League_B))),area3=nrow(as.matrix(colnames(League_C))),n12=nrow
(as.matrix(intersect(colnames(League_A),colnames(League_B)))),n13=nrow(as.matrix(intersect(colnames(League_A),colnames(League_C)))),n23=nrow(as.matrix(
```

```
intersect(colnames(League_B),colnames(League_C))),n123=nrow(as.matrix(intersect(intersect(colnames(League_A),colnames(League_B)),colnames(League_C))))
,fill=c("red","green","blue"),category=c("League A","League B","League C"),main="Venn Diagram of indicators")
```

```
##     (polygon[GRID.polygon.17],     polygon[GRID.polygon.18],     polygon[GRID.polygon.19],     polygon[GRID.polygon.20],     polygon[GRID.polygon.21],
polygon[GRID.polygon.22],  text[GRID.text.23],  text[GRID.text.24],  text[GRID.text.25],  text[GRID.text.26],  text[GRID.text.27],  text[GRID.text.28],
text[GRID.text.29])
```

Venn diagram of respondents for first leagues

```
draw.triple.venn(area1=nrow(as.matrix(rownames(League_A))),area2=nrow(as.matrix(rownames(League_B))),area3=nrow(as.matrix(rownames(League_C))),n12=nrow
(as.matrix(intersect(rownames(League A),rownames(League B)))),n13=nrow(as.matrix(intersect(rownames(League A),rownames(League C)))),n23=nrow(as.matrix(
intersect(rownames(League B),rownames(League C)))),n123=nrow(as.matrix(intersect(intersect(rownames(League A),rownames(League B)),rownames(League C))))
,fill=c("red","green","blue"),category=c("League A","League B","League C"),main="Venn Diagram of respondents")
```

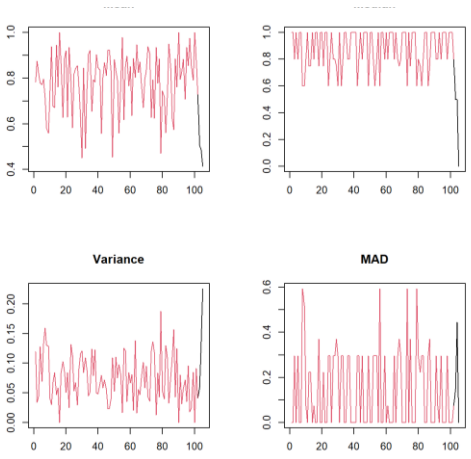
```
##     (polygon[GRID.polygon.30],     polygon[GRID.polygon.31],     polygon[GRID.polygon.32],     polygon[GRID.polygon.33],     polygon[GRID.polygon.34],
polygon[GRID.polygon.35],  text[GRID.text.36],  text[GRID.text.37],  text[GRID.text.38],  text[GRID.text.39],  text[GRID.text.40],  text[GRID.text.41],
text[GRID.text.42], text[GRID.text.43])
```

Write results to DataFrame

```
RESULT<-ALL

RESULT$League_A<-0

RESULT$League_B<-0

RESULT$League_C<-0

rownames(RESULT)<-rownames(ALL)

RESULT[rownames(League_A),"League_A"]<-1

rownames(RESULT)<-rownames(ALL)

RESULT[rownames(League_B),"League_B"]<-1

rownames(RESULT)<-rownames(ALL)

RESULT[rownames(League_C),"League_C"]<-1

rownames(RESULT)<-rownames(ALL)

RESULT[nrow(RESULT)+1,]<-0

RESULT[nrow(RESULT)+1,]<-0

RESULT[nrow(RESULT)+1,]<-0

rownames(RESULT)<-c(rownames(ALL),"League_A","League_B","League_C")

RESULT["League_A",colnames(League_A)]<-1

rownames(RESULT)<-c(rownames(ALL),"League_A","League_B","League_C")

RESULT["League_B",colnames(League_B)]<-1

rownames(RESULT)<-c(rownames(ALL),"League_A","League_B","League_C")

RESULT["League_C",colnames(League_C)]<-1

rownames(RESULT)<-c(rownames(ALL),"League_A","League_B","League_C")

names(dimnames(RESULT)) <- c("RESPONDENT", "")

write.xlsx(RESULT,"RESPONDENT_BICRES_75Bsig.xlsx")
```

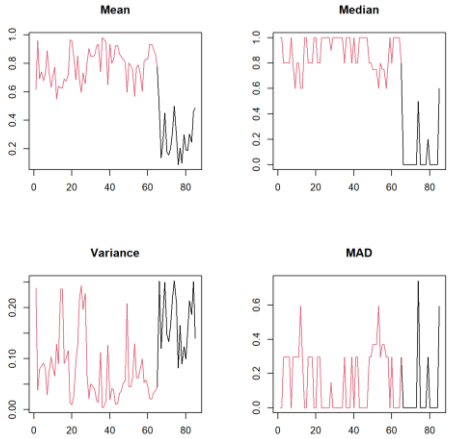
(Source: R-Studio Output)

Appendix 47. - Top Leagues Hotels, Mean, Median, Variance, MAD on τ=0.5



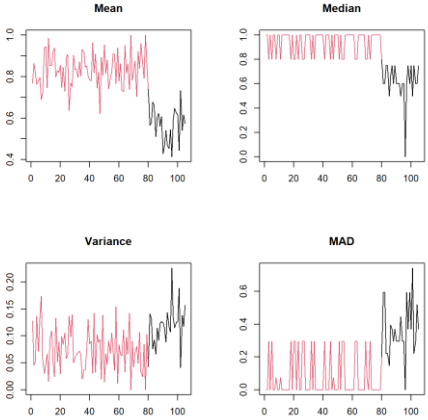
(Source: R-Studio Output)

Appendix 48. - Tailor-made Service Indicators Mean, Median, Variance, MAD on τ=0.5



(Source: R-Studio Output)

Appendix 49. - Top Leagues Hotels, Mean, Median, Variance, MAD on τ=0.75



(Source: R-Studio Output)

Appendix 50. - Indicators of the Top League

Indicator ID	Indicator	Placement of the Indicator
I17	It is possible for the guest to ask for minor changes regarding the room during their stay.	Technical Stage - Service Period – In Room
I18	The guest can choose a specific temperature they want their room to be. (And the hotel will even set the room to that temperature)	Technical Stage- Service Period - In Room
I21	The guest can choose what kind of pillow they want.	Technical Stage - Service Period - In Room
I22	The guest can choose to have no alcohol in their minibar	Technical Stage - Service Period - In Room
I89	The hotel has specific gifts or budget to use when the employee thinks a guest should get a gift (birthday, honeymoon special occasion, etc.)	Technical
I92	The hotel sends out segment-based newsletters.	Technical

I13	Our hotel makes sure that we appear as personalized search results through search engine optimalization.	Technical, Pre-Arrival, Website
I99	The booking engine has functions that allow users to customize their bookings (according to their preferences) when booking a room. (For example, what kind of pillow do you want, what kind of massage do you want, and other services.)	Technical, Pre-Arrival, Website

(Source: Own Edit)

Appendix 51. - Indicators of the Lower League

Indicator ID	Indicator	Placement of the Indicator
I16a	We place introduction greeting card with a printed message and guests name in the room	Functional, Arrival
I16b	We place introduction greeting card with a hand-written message and guests name in the room	Functional, Arrival
I87	The hotel does micro-segmentation.	Technical
I88	We have employee or outsider company to analyze our guest data and previous statistics.	Technical
I7	We have a hotel App	Technical
I27	Our hotel application is similar to what most customers use in their everyday lives.	Technical
I29	The hotel app can provide the guest with personalized services, products, or information tailored to their specific hotel stay	Technical
I93	We store and update guest data frequently (even before the check in or after the check-out) that we use during re-marketing campaigns.	Technical
I20	The guest can choose the style and the type of the bedding	Technical Stage - Service Period
I23	We put the favourite drink of the guest in the room even if that is not the brand the hotel normally works with	Technical Stage - Service Period
I96	We have and use the function on the TV to display guest name and welcome the guest in the room.	Technical, Arrival
I1	Our website has features that personalized for the users' preferences (for instance based on segments they can choose to brows between offers to their specific needs or interests.)	Technical, Pre-Arrival, Website
I5	The website has feature for the visually impaired.	Technical, Pre-Arrival, Website
I9	The website acquires the specific needs of the guest and shows service recommendations based on their personal needs.	Technical, Pre-Arrival, Website
I11	Our website automatically collects data (such as IP address, pages viewed, access time) but cannot identify the guest as an individual and offers goods or services based on that.	Technical, Pre-Arrival, Website
I4a	The website has a Chat service operated by chatbot.	Technical, Pre-Arrival, Website
I4b	The website has a Chat service operated by an employee.	Technical, Pre-Arrival, Website
I8	The hotel app can provide the guest with personalized services, products, or information tailored to their preferences or personal interests.	Technical, Pre-Arrival, Website
I91	Providing personalized service is encouraged and reward.	Technical, Pre-Arrival, Website

(Source: Own Edit)

Appendix 52. - Indicator clusters on r=0.5 and r=0.75

A - r=0.5	**A - r=0.75**	AB - r=0.5	**AB - r=0.75**	CA - r=0.5	**CA - r=0.75**	C - r=0.5	**C - r=0.75**

I99	I47	I99	I64	I6	I61	I6	I61	I51		I1		I1	I8	I5	I27
I30	I50	I30	I45	I15	I78	I15	I78			I93		I5	I27	I9	I29
I33	I63	I33	I47	I49	I70	I49	I70					I9	I29	I11	I16a
I35	I98	I35	I50	I40	I77	I40	I77					I11	I16a	4a	I16b
I86	I90	I86	I63	I57	I81	I57	I81					4a	I16b	4b	I20
I46	I60	I46	I98	I62	I82	I62	I82					4b	I20	I87	I23
I31	I76	I31	I90	I54		I54						I87	I23	I88	I96
I32	I37	I32	I60	I55		I55						I88	I96	I7	I91
I34	I38	I34	I76	I56		I56						I93	I91	I8	
I36	I39	I36	I37	I97		I97						I7	I69		
I74	I94	I51	I38	I59		I59									
I13	I65	I74	I39										Does not fit either of the leagues with threshold		
I92	I66	I13	I94												
I14	I67	I92	I67												
I43	I68	I14	I68										I65	I66	I69
I44	I71	I43	I71												
I52	I72	I44	I72												
I17	I73	I52	I73												
I18	I75	I17	I75												
I21	I79	I18	I79												
I22	I84	I21	I84												
I89	I85	I22	I85												
I64	I95	I89	I95												
I45															

(Source: Own Edit)

Appendix 53. - League A***** Indicators

Indicator ID	Indicator	Placement
I14	Our hotel makes sure that we provide information and products according to our guests' preferences.	Functional, Pre-arrival, communication
I30	Communication by our hotel brand provides our customers with product and service recommendations that are tailormade for them	Functional, Pre-arrival, communication
I31	We recommend products and services that are personalized to our customer's interest based on our communication with that customer. (Before their arrival to the hotel)	Functional, Pre-arrival, communication
I32	We recommend products and services that are personalized to our customer's interest based on of the basis of preferences of similar-minded consumers. (Before their arrival to the hotel)	Functional, Pre-arrival, communication
I33	We aim to use personalized communication so our brand can make the guest feel that they are a unique customer	Functional, Pre-arrival, communication
I34	We aim to give personalized recommendation in a timely way.	Functional, Pre-arrival, communication
I35	We aim to adjust our communication style (either on phone on in written channels) based on the guest type and characteristics (age, gender, interest, etc)	Functional, Pre-arrival, communication
I50	We give a warm "good bye" after checking out at the counter	Functional, Service

		phase,checkout
I51	Based on previous conversation with the guest we are recommending them with activities for the last day	Functional, Service phase,checkout
I43	We place different welcome gifts in the guestroom (of VIP guest)	Functional, Service phase, In - room
I44	The hotel operates working hours to be appropriate to all its customers.	Functional, Service phase, In - room
I45	We pay attention to the special requirements of our guests while staying in a hotel	Functional, Service phase, In - room
I46	We respond immediately to all guest requests	Functional, Service phase, In - room
I47	We make sure, that there are appropriate meals for all guest (religion, allergies, dietary restrictions)	Functional, Service phase, In - room
I36	Our hotel adjusts the response to the specific problem of the guest.	Functional, Post stay, Post communication
I37	We are proactive in encouraging feedback, guest is invited to interact with us.	Functional, Post stay, Post communication
I38	Our hotel / employee knows or aims to find exactly to whose review it responds	Functional, Post stay, Post communication
I39	Our hotel / employee gives an individual response to all guest reviews and comments.	Functional, Post stay, Post communication
I52	The hotel staff helps with the luggage	Functional Stage - Service Perioud
I60	Our employee changes their behavior to suit the needs of the situation	Functional
I63	When our employee promise to do something by a certain time, they do so	Functional
I64	We make sure that our information is accurate and update our records frequently. (during the stay)	Functional
I67	Our employee aims to exceed guest expectation	Functional
I68	Our employee / hotel personalizes goods and services that are based on information that the guest has voluntarily given out (such as age range, salary range, Zip Code) but cannot identify them as an individual.	Functional
I72	During the stay Our employee / hotel offers customers products and services that satisfy they specific needs	Functional
I74	Our employee / hotel recommends products of the basis of preferences of similar-minded consumers.	Functional
I76	Our hotel / employee considers the best interest of the guest our / their top priority	Functional
I84	Our employee is friendly with all guests.	Functional
I86	We allow / encourage our employee to move to a familiar (informal) talk with the guest who needs that	Functional
I94	We send out guest satisfactory survey after the guest checked out. For instance Medallia.	Functional
I98	Fast check out and check in is granted for regulars.	Functional

I71	Our employee / hotel makes sure to take the time and understand the specific demands	Functional
I73	Our employee / hotel anticipates what the guest wants before they ask.	Functional
I75	We make sure that the hospitable behaviour from our employee seems to be motivated by genuine needs to please and care for their guests as an extension of their characteristic	Functional
I79	Our employee aims to give guests individual attention while they are in the hotel.	Functional
I85	It is important that the guest feels that building good relationship rather than making money seemed to be the most important drive of the hotel.	Functional
I90	There are employee trainings for the employee so they can provide the level of quality service the hotel aims to provide	Functional
I95	Our employees are proactive and take the initiative to get to know the guest better.	Functional

(Source: Own Edit)

Appendix 54. - Middle League Indicators

Indicator ID	Indicator	Placement
I6	Our website is automorphically fits to the device (e.g. computer, mobile phone etc.), browser (e.g. Netscape, Internet explorer) and operating system (e.g. Windows, Unix) that the guest uses.	Technical, Pre-Arravial, Website
I57	We are doing everything to understand the special requirements of the guest while staying the hotel	Service Perioud – Functional Stage
I54	We encourage the employees to display personal warmth in their behaviour.	Service Perioud – Functional Stage
I55	We encourage the employees to be approachable.	Service Perioud – Functional Stage
I56	We encourage the employees to make eye contact with the guest during conversation.	Service Perioud – Functional Stage
I15	We aim to advertise our hotel in a way that it feels personalized for our potential guests, even based on the previous searches or interests.	Functional, Pre-arrival, communication
I49	We make sure that all aspects of the room are in good condition and suitable for the guest.	Functional, Service phase, In - room
I40	We aim to provide an authentic warm welcome to the guest	Functional, Service phase, Arrival
I62	The employee responds immediately to guest requests	Functional
I97	We aim to choose employee who are motivated in guest service.	Functional
I59	Our employee changes their behaviour to suit the needs of the guest	Functional
I61	The employee is empathetic towards the guest when they have a problem	Functional
I78	Our employee always tries to help solve guests' problems, even coming up with unique solutions	Functional
I70	Our employee can customize the service offering to the needs of the customer. (example: food allergies etc)	Functional
I77	Our hotel / our employee aims to make the guest feel like an important person	Functional

I81	The hotel employee treats guests with full respect.	Functional
I82	Our employees are polite with all guests.	Functional

(Source: Own Edit)

Appendix 55. - Multiple Comparison Star Rating

Multiple Comparisons								
Dependent Variable:Sumscore								
	(I) Star-Rating		(J) Star-Rating		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval
								Lower Bound / Upper Bound
Tukey HSD		3		2	9,118	20,173	,999	-51,61 / 69,85
				4	**36,935***	10,519	**,012**	5,27 / 68,60
				5	48,518	20,173	,208	-12,21 / 109,25
				3 Sup.	18,218	15,529	,903	-28,53 / 64,97
				4 Sup.	20,532	13,921	,759	-21,38 / 62,44
				5 Sup	10,818	30,073	1,000	-79,71 / 101,35
		4		2	-27,817	19,154	,772	-85,48 / 29,85
				3	**-36,935***	10,519	**,012**	-68,60 / -5,27
				5	11,583	19,154	,997	-46,08 / 69,25
				3 Sup.	-18,717	14,180	,841	-61,41 / 23,97
				4 Sup.	-16,403	12,398	,840	-53,73 / 20,92
				5 Sup	-26,117	29,399	,974	-114,62 / 62,39
*. The mean difference is significant at the 0.05 level.								

(Source: SPSS Output)

Appendix 56. - Size of Hotel Pearson Correlation Tailor-made Service Scores Based on Stages

Correlations				
		Room Nr.	Functional All	Technical All
Room Nr.	Pearson Correlation	1	-,026	-,105
	Sig. (2-tailed)		,791	,288
	N	105	105	105
Functional All	Pearson Correlation	-,026	1	,466**
	Sig. (2-tailed)	,791		,000
	N	105	105	105
Technical All	Pearson Correlation	-,105	,466**	1
	Sig. (2-tailed)	,288	,000	
	N	105	105	105

(Source: SPSS Output)

Appendix 57. - Hypothesis 6 Paired Samples Test

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Service_Phase & Pre_Arrival_Phase	,08257	,15692	,01531	,05220	,11293	5,392	104	,000
Pair 2	Service_Phase & Post_Service_Phase	-,04470	,14715	,01436	-,07318	-,01623	-3,113	104	,002
Pair 3	Pre_Arrival Phase & Post_Service_Phase	-,12727	,17519	,01710	-,16117	-,09337	-7,444	104	,000

(Source: SPSS Output)