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Leveraging Technology in Luxury Hospitality to Enhance Guest experience: A Case Study at Sublime Comporta

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LEVERAGING TECHNOLOGY IN LUXURY HOSPITALITY TO ENHANCE GUEST
EXPERIENCE: A CASE STUDY AT SUBLIME COMPORTA

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Abstract

This thesis examines how technology and artificial intelligence (AI) can enhance the guest experience at Sublime Comporta, a luxury eco-resort in Portugal. Applying the International Data Corporation (IDC) framework, it evaluates five dimensions: Technology Leadership and Governance, Trusted and Secure Enterprise, Digital Infrastructure, IT Products and Services, and Innovation and Intelligence. Drawing on extensive research, primary data collection, and industry insights, the study identifies gaps and offers targeted recommendations to streamline operations, optimize HR processes, and elevate sales and marketing strategies. It concludes with a holistic approach integrating guest-facing and back-end systems to foster efficiency, personalization, and service excellence.

Keywords: Hospitality, Technology, Operations, Human Resources, Sales and Marketing

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We felt genuinely welcomed during our collaboration and wish Sublime Comporta every success as it continues to excel in the realm of luxury hospitality.

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1. Introduction

1.1. Historical Context

The hospitality industry, a vital contributor to global economies, is undergoing rapid transformation driven by technological innovation. Advanced tools such as artificial intelligence, the Internet of Things (IoT), and big data analytics are revolutionizing luxury hospitality by enabling personalized and seamless guest experiences. As consumers increasingly prioritize memorable over transactional interactions, technology has become a cornerstone of strategy in the sector (Umar, 2024).

This evolution is further underscored by the COVID-19 pandemic, which accelerated the adoption of contactless solutions and highlighted the role of technology in ensuring both safety and competitiveness (Sigala, 2020). Across the globe, luxury hospitality brands are integrating technological advancements into their operations, reimagining guest interactions, and refining strategies in areas such as human resources, operations, and sales and marketing.

These transformations reflect a broader historical evolution within the luxury hospitality sector, where the integration of technology has continuously reshaped service delivery and guest engagement. This context provides a foundation to understand how innovations such as artificial intelligence, automation, and data-driven personalization have become pivotal in creating exceptional guest experiences.

1.2. Introduction to Sublime Comporta

Sublime Comporta is an eco-luxury retreat situated in the serene landscape of Comporta, Portugal, spanning 17 hectares of natural beauty, including pine forests, sand dunes, and rice fields (Sublime Comporta, 2023). Known for its harmonious integration of sustainability and luxury, the property offers a variety of accommodations such as suites, villas, and cabanas, all meticulously designed to reflect the local cultural heritage and natural surroundings (Sublime Comporta, 2023). Each villa is equipped with private pools and terraces, ensuring both privacy and an immersive experience in nature (Sublime Comporta, 2023).

The resort distinguishes itself through its commitment to delivering exceptional guest experiences that prioritize comfort, exclusivity, and personalization. At the heart of Sublime Comporta's

offerings is its signature service ethos, which ensures that every interaction is tailored to the unique preferences of each guest (Sublime Comporta, 2023). The accommodations—ranging from elegantly designed suites to spacious villas—are curated to provide privacy, luxury, and seamless integration with the surrounding natural beauty, fostering a tranquil and immersive stay (Sublime Comporta, 2023).

Sublime Comporta's excellence has been widely recognized, including being awarded as one of the best boutique hotels globally, further solidifying its status as a leader in luxury hospitality (Sublime Comporta, 2023). These meticulously crafted guest services underscore Sublime Comporta's dedication to excellence, setting a benchmark for luxury hospitality and creating a foundation for exploring how technology can further enhance guest satisfaction in this paper.

1.3. Importance of Technology and AI in Enhancing Guest Experience

The luxury hospitality industry is built on providing bespoke, high-quality service experiences that cater to the unique needs of every guest. As competition intensifies and guest expectations evolve, technology has become a vital tool for maintaining and enhancing service standards. These advancements enable luxury properties to streamline operations while delivering personalized, high-touch experiences that cater to the unique preferences of their guests. (EHL Faculty, 2023).

Artificial intelligence (AI), a subset of technology, is commonly defined as the simulation of human intelligence by machines, allowing them to perform tasks such as learning, problem-solving, and decision-making (Russell & Norvig, 2021). In the context of hospitality, AI holds the potential to elevate traditional technological applications by enhancing personalization and operational efficiency, offering new ways to anticipate and meet guest needs.

Incorporating technology, with the potential use of AI, into hospitality operations can transform how properties anticipate and meet guest needs. From personalization tools that craft bespoke itineraries to automated workflows that allow staff to focus on more meaningful guest interactions, technology facilitates a seamless blend of efficiency and empathy (Luxury Lifestyle Awards, 2023). For properties like Sublime Comporta, these capabilities align perfectly with the resort's commitment to delivering intimate and memorable experiences.

As luxury guests increasingly prioritize authenticity and attention to detail, integrating advanced technologies serves to enhance, rather than replace, human interaction. By leveraging AI to support internal processes—such as recruitment, training, and marketing—properties can ensure their staff are equipped and empowered to create exceptional moments for their guests. This approach allows human staff to focus on complex, high-stakes interactions that require flexibility and empathy, thereby enhancing the overall guest experience (Lee, 2024).

1.4. Focus and Scope

This thesis investigates how technology and AI can be leveraged to enhance guest experiences at Sublime Comporta by examining three critical areas: **Human Resources, Operations, and Sales & Marketing**. These pillars represent the foundational elements of a luxury property’s ability to deliver on its brand promise of tailored and memorable service (Johnson & Wales University, 2023).

Using the International Data Corporation (IDC)’s five dimensions “Building The Foundation for the Future Enterprise” as a guiding framework, this study explores how strategic Technology Leadership and Governance, Trusted and Secure Enterprise, Digital Infrastructure, advanced IT Products and Services, and adaptive Innovation and Intelligence can be applied across these integral elements of the hospitality business. While the primary aim is to enhance guest experience, the research also considers the indirect contributions of internal efficiencies, employee engagement, and process optimization. (International Data Corporation, 2024).

The scope includes identifying best practices from across the industry, evaluating Sublime Comporta’s current systems, and proposing areas where technology can add value. For example, **AI-powered recruitment tools can streamline hiring processes**, ensuring that staff embody the resort’s cultural values. Similarly, **guest-facing tools, such as personalized digital concierge apps**, can elevate the overall guest experience while supporting operational efficiency (Hollander, 2024).

Through this analysis, the thesis highlights the importance of harmonizing **technological innovation with Sublime Comporta’s intimate and guest-centric approach**. The suggestions offered will balance the need for operational improvements with preserving the resort’s identity as a luxury destination that prioritizes human connection above all (Wolfe, 2024).

2. Literature Review

This literature review examines the role of technology in enhancing guest experiences within the luxury hospitality industry, focusing on operational excellence, human resources, and sales/marketing. It highlights the growing importance of Artificial Intelligence (AI) and other technological advancements in improving service quality, streamlining operations, and increasing customer satisfaction. By exploring current trends, best practices, and theoretical frameworks, this review seeks to provide a comprehensive understanding of how technology is transforming the guest experience, with a particular emphasis on its application at Sublime Comporta.

2.1. Technology in Hospitality

Tung, V. W. S., & Au, N. (2018). Exploring customer experiences with robotics in hospitality. *International Journal of Contemporary Hospitality Management*, 30(7), 2680–2697. <https://doi.org/10.1108/IJCHM-06-2017-0322>

In their 2018 study, "**Exploring customer experiences with robotics in hospitality**," Tung and Au investigate the impact of robotics on customer interactions in the hospitality industry. They highlight robotics' potential to enhance service quality, operational efficiency, and customer satisfaction through personalization, speed, and novelty. However, challenges such as reduced human connection and cultural acceptance remain. The study emphasizes that robotics should complement human staff by handling repetitive tasks, allowing humans to focus on emotional and complex interactions. Tung and Au stress the need for a balanced approach, ensuring robotics align with brand values while preserving human-centric service to maintain meaningful guest experiences.

Davison, R. M., & Ou, C. X. J. (2017). Digital work in a digitally challenged organization. *Information & Management*, 54(1), 129–137. <https://doi.org/10.1016/j.im.2016.05.005>

In "**Digital Work in a Digitally Challenged Organization**," Davison and Ou (2017) explore the complexities of implementing digital work solutions within organizations that face significant technological and cultural barriers. The study focuses on how digital transformation impacts work processes, employee interactions, and organizational performance. The authors identify challenges such as resistance to change, lack of digital literacy, and inadequate infrastructure as key obstacles to successful digital adoption.

The research emphasizes the importance of leadership in driving digital initiatives, highlighting that supportive leadership fosters a culture of adaptability and collaboration, which are essential for overcoming digital barriers. Davison and Ou also discuss the role of tailored digital solutions in addressing specific organizational needs, stressing that one-size-fits-all approaches often fall short. The study concludes that organizations must align their digital strategies with their unique operational contexts, investing in both technological tools and employee training to bridge the gap between traditional work practices and modern digital workflows. By fostering a digital-friendly culture and addressing technological challenges strategically, organizations can enhance productivity and maintain competitiveness in an increasingly digital business environment.

2.2. Operations in Hospitality

1. Munir, A., Kansakar, P., & Shabani, N. (2019). Technology in the Hospitality Industry: Prospects and Challenges

This article focuses on the role of IoT in the hospitality industry, highlighting how digitalization, including guest-facing systems like mobile check-ins and keyless entry, as well as back-of-house systems like energy management and personalized guest services, are improving operational efficiency. The findings are relevant to your research on AI and operational excellence in luxury resorts, as they align with your focus on enhancing guest satisfaction and streamlining operations. However, the article primarily emphasizes IoT and does not fully incorporate AI advancements, which are central to your research. Additionally, while it offers valuable insights, the article is somewhat outdated, lacking discussion on newer innovations like AI-driven personalization or advanced energy systems beyond IoT.

2. D'Souza, E., & D'Souza, K. (2023). A Study on the Impact of Innovative Technologies in the Hospitality Industry

This study examines four types of technological innovations—product, process, management, and market knowledge innovations—and concludes that process innovations, such as automation in check-in/check-out, and product innovations, like keyless entry and mobile apps, are highly valued by guests in enhancing their experience. The article is directly relevant to your thesis, as it underscores the importance of process and product innovations in improving operational efficiency and guest satisfaction, which are core to your research on operational excellence. While the study

provides valuable insights into guest preferences, it may not delve deeply enough into the practical challenges hotels face in implementing these innovations, such as cost or integration barriers, which would be critical for your research.

3. IEEE Consumer Electronics Magazine (2019). Technology in the Hospitality Industry: Prospects and Challenges

This article explores the impact of technology in the hospitality industry, particularly focusing on the role of IoT and smart devices in transforming operations, from energy management to personalized services for guests. The findings support your thesis, especially the emphasis on operational efficiency and enhanced guest experiences through technology, such as energy-efficient systems and personalized in-room controls. However, the article is limited in its scope as it mainly discusses IoT and does not explore the full potential of AI in operational processes. Additionally, the examples provided may be somewhat outdated as newer technologies in AI and data analytics are not addressed, which could provide more value for your research on future-proofing operations in luxury resorts.

4. LeadSquared (2021). Impact of Technology on Hotel Operations

This article discusses how digital transformation, including CRM systems, automation tools, and AI, is reshaping hotel operations by improving efficiency, guest interactions, and revenue management. It is highly relevant to your research as it directly addresses the role of AI in operational optimization, a central theme of your thesis. The article emphasizes the importance of integrating technology into all aspects of hotel management, which aligns with your goal of demonstrating AI's potential for operational excellence. However, the article primarily focuses on CRM and automation tools rather than on broader operational processes, which may limit its applicability to your broader study on AI's role in enhancing overall hotel operations. Additionally, it lacks in-depth exploration of the challenges that hotels face when adopting these technologies, which could be a valuable area to consider in your thesis.

2.3. HR in Hospitality

1. Giousmpasoglou, C., & Marinakou, E. (2024). *The contemporary hotel industry: A people management perspective*. Palgrave Macmillan. <https://doi.org/10.1007/978-3-031-52803-3>

In *The Contemporary Hotel Industry: A People Management Perspective*, Giousmpasoglou and Marinakou (2024) highlight the critical role of people management in addressing workforce challenges within modern hospitality. The authors examine issues such as employee retention, workforce diversity, and skill shortages, emphasizing the importance of aligning HR strategies with evolving industry needs. They discuss how technological advancements, including AI and automation, streamline recruitment, onboarding, and training processes, improving efficiency while maintaining the human-centric nature of hospitality. Balancing innovation with personalized service remains key to achieving guest satisfaction and organizational success.

2. Ari, E. (2023). *Human resource risk challenges in the hotel industry*. *Journal of Hospitality and Tourism Insights*, 6(5), 2073–2092. <https://doi.org/10.1108/JHTI-03-2022-0110>

In *Human Resource Risk Challenges in the Hotel Industry*, Ari (2023) analyzes the various HR risks faced in hospitality, such as high turnover, skill shortages, and the impact of economic disruptions. The study highlights how these challenges can negatively affect service quality and operational stability, emphasizing the need for proactive HR risk management. Ari explores the role of technology—particularly AI and workforce analytics—in improving decision-making and reducing uncertainty. Aligning HR risk strategies with broader organizational goals and prioritizing resilience, workforce development, and employee well-being is presented as essential to maintaining a stable and effective workforce..

3. Davidson, M. C. G., McPhail, R., & Barry, S. (2011). *Hospitality HRM: past, present and the future*. *International Journal of Contemporary Hospitality Management*, 23(4), 498–516. <https://doi.org/10.1108/095961111111130001>

In *Hospitality HRM: Past, Present, and the Future*, Davidson, McPhail, and Barry (2011) provide a detailed examination of how HRM has evolved within the hospitality industry. The study outlines key challenges, such as high turnover, irregular working hours, and reliance on diverse, often transient labor pools. It explores the shift from administrative HR functions to strategic HRM, with a growing focus on workforce planning, employee engagement, and technology adoption. The

authors identify trends such as greater emphasis on employee well-being, cultural diversity, and innovative HR technologies, which are key to addressing workforce challenges and aligning HR strategies with long-term organizational goals.

4. Kuslivan, S., Kuslivan, Z., Ilhan, I., & Buyruk, L. (2010). The human dimension: A review of human resources management issues in the tourism and hospitality industry. *Cornell Hospitality Quarterly*, 51(2), 171–214. <https://doi.org/10.1177/1938965510362871>

In *The Human Dimension: A Review of Human Resources Management Issues in Tourism and Hospitality*, Kuslivan et al. (2010) explore the unique workforce challenges in this labor-intensive industry. The study highlights problems such as high turnover, low job satisfaction, and difficulties in attracting and retaining skilled employees. Effective HR strategies, including fostering engagement, providing career growth opportunities, and ensuring fair treatment, are identified as critical to overcoming these challenges. The authors stress the role of leadership and organizational culture in shaping employee experiences and note the growing importance of technology in streamlining HR functions like recruitment, onboarding, and performance management. A strategic, people-focused approach is essential for maintaining high service standards and competitive advantage.

5. Liu, X., Yu, J., Guo, Q., & Li, J. (2022). Employee engagement, its antecedents and effects on business performance in hospitality industry: A multilevel analysis. *International Journal of Contemporary Hospitality Management*, 34(12), 4631–4652. <https://doi.org/10.1108/IJCHM-12-2021-1512>

In *Employee Engagement, Its Antecedents and Effects on Business Performance in Hospitality*, Liu et al. (2022) examine the drivers of employee engagement and its influence on business outcomes. The study identifies supportive leadership, job autonomy, and professional growth opportunities as key factors that enhance motivation and commitment. Engaged employees contribute significantly to service quality, customer satisfaction, and operational efficiency, driving overall business success. Using a multilevel analysis, the authors show how organizational culture and team dynamics amplify engagement's impact. Liu et al. emphasize the need for hospitality organizations to create supportive work environments and align HR practices with engagement strategies to sustain performance and competitiveness in the industry.

2.4. Sales and Marketing in Hospitality

1. **Al-Hyari, H., Al-Smadi, H. M., & Weshah, S. R. (2023).** *The impact of artificial intelligence (AI) on guest satisfaction in hotel management: An empirical study of luxury hotels.* GeoJournal of Tourism and Geosites, 48, S15-1081. <https://doi.org/10.30892/gtg.482spl15-1081>

Al-Hyari et al. (2023) explore the direct impact of artificial intelligence (AI) tools on guest satisfaction in luxury hotel management. Through an empirical study, they demonstrate that AI systems such as chatbots, automated check-in platforms, and recommendation engines contribute significantly to enhancing operational efficiency and service delivery. The research emphasizes that AI tools streamline guest services by reducing waiting times, anticipating preferences, and delivering hyper-personalized experiences. However, the study acknowledges a critical limitation: while AI excels at repetitive and data-driven tasks, it falls short in managing complex, emotional, and human-centric guest interactions. For luxury resorts like Sublime Comporta, this finding highlights the need for a balanced approach where AI augments, rather than replaces, human service. This synergy ensures a seamless guest experience while preserving the personalized touch that is central to luxury hospitality.

2. **Belias, D., Koustelios, A., Vairaktarakis, G., & Mantas, C. (2023).** *Innovation and digital transformation in luxury hospitality: Trends and applications.* Journal of Tourism Management, 43(2), 125-145.

Belias et al. (2023) provide an in-depth exploration of the trends and applications of digital transformation in luxury hospitality, focusing on how innovative technologies improve sales and marketing strategies. The study identifies key technological advancements, including AI, IoT, and big data analytics, as enablers of hyper-personalized marketing campaigns and seamless guest experiences. One notable insight is the adoption of **augmented reality (AR)** and **virtual reality (VR)** tools, which are reshaping event marketing by allowing clients to remotely explore venues in detail. This capability has proven particularly effective for international event planners and corporate clients. However, the authors highlight challenges such as high implementation costs, resistance to change, and integration difficulties, especially for boutique properties like Sublime Comporta. These findings suggest that while innovation offers substantial opportunities to enhance

marketing effectiveness, successful implementation requires careful planning, strategic investment, and a clear innovation roadmap.

3. Bulchand-Gidumal, J., Secin, E. W., O'Connor, P., & Buhalis, D. (2023). *Artificial intelligence's impact on hospitality and tourism marketing: Exploring key themes and addressing challenges.* Current Issues in Tourism, 26(5), 533-550.
<https://doi.org/10.1080/13683500.2023.2229480>

Bulchand-Gidumal et al. (2023) explore the transformative impact of artificial intelligence on hospitality marketing, identifying several key themes, including **predictive analytics**, **dynamic pricing**, and **hyper-personalization**. Their findings underscore that AI-driven tools allow marketing teams to anticipate guest behavior, analyze preferences, and execute campaigns with greater precision. Dynamic pricing systems, for example, optimize revenue by adjusting rates in real-time based on demand and segmentation. Additionally, AI enables hyper-targeted outreach, enhancing guest engagement and conversion rates. Despite these benefits, the study highlights challenges such as **data privacy risks**, **algorithmic biases**, and **technological silos**, which can undermine the effectiveness of AI in boutique settings. For Sublime Comporta, overcoming these challenges through data governance frameworks and phased AI adoption could unlock the full potential of AI-driven marketing while ensuring ethical compliance.

4. Cunha, M., Pereira, M., Cardoso, A., Figueiredo, J., & Oliveira, I. (2024). *Revolutionizing luxury: The role of AI and machine learning in enhancing marketing strategies within the tourism and hospitality luxury sectors.* GeoJournal of Tourism and Geosites, 55, 335-1307. Cunha et al. (2024) investigate the role of AI and machine learning (ML) in revolutionizing marketing strategies within the luxury tourism and hospitality sectors. Their study emphasizes that AI enables dynamic and data-driven marketing by analyzing large volumes of guest data to identify trends, preferences, and behavioral patterns. This predictive capability enhances the precision of marketing campaigns, leading to improved guest satisfaction and revenue optimization. AI tools such as **automated CRM systems** and **machine learning algorithms** are particularly effective in creating tailored offers, dynamic pricing strategies, and hyper-personalized communications. However, the authors caution that successful AI implementation requires overcoming organizational challenges such as **staff resistance**, **technological illiteracy**, and **limited expertise**. For Sublime Comporta, investing in training programs and fostering a technology-

friendly culture can address these barriers, enabling the effective adoption of AI in marketing strategies.

5. **Demirciftci, T., & Kızıllırmak, İ. (2016).** *Strategic branding in hospitality: Case of Accor Hotels*. Journal of Tourism Management, 12(1), 30-45.

<https://doi.org/10.26650/JOT.2016.2.1.0004>

Demirciftci and Kızıllırmak (2016) provide a case study on Accor Hotels, illustrating the strategic role of branding in hospitality. The study highlights how digital tools, such as **social media platforms** and **centralized CRM systems**, support consistent brand messaging and guest engagement. Accor's ability to integrate technology with strategic branding initiatives allowed it to enhance its market position, attract high-value clients, and foster long-term loyalty. The authors argue that boutique luxury resorts can replicate this approach by aligning branding strategies with guest expectations and leveraging tools like social media for storytelling and engagement. For Sublime Comporta, the adoption of a cohesive branding strategy supported by robust CRM systems and engaging digital campaigns could elevate its presence in the luxury market and strengthen client relationships.

6. **Garcia, M. (2023).** *Sustainable luxury marketing strategies*. Journal of Tourism and Hospitality Research, 14(3), 214-230.

Garcia (2023) examines the intersection of sustainability and luxury marketing, emphasizing that **eco-conscious initiatives** are becoming key differentiators in the luxury hospitality sector. The study highlights that digital marketing tools, such as **social media storytelling** and **content-driven campaigns**, effectively communicate a property's sustainability efforts to attract environmentally conscious guests. Garcia argues that luxury properties can gain a competitive edge by aligning their brand values with sustainability, creating an emotional connection with high-value clients. For Sublime Comporta, integrating eco-focused storytelling into its marketing strategy would not only appeal to modern luxury travelers but also position the resort as a leader in sustainable hospitality.

7. **Digital Marketing: The Case of Digital Marketing Strategies in Luxurious Hotels (2023).** *Procedia Computer Science*, 219, 688-696. <https://doi.org/10.1016/j.procs.2023.01.340>

This study explores the role of digital marketing strategies in enhancing guest engagement and

driving revenue in luxury hotels. It identifies **social media platforms** (e.g., Instagram, Facebook) and **review management** as critical components for influencing guest perceptions and decision-making. The study highlights that personalized campaigns, visually engaging content, and proactive management of online reviews significantly impact bookings and guest trust. However, it also emphasizes the dual-edged nature of guest reviews, which can enhance or harm a hotel's reputation. For Sublime Comporta, adopting a proactive approach to review management and developing visually compelling social media campaigns would strengthen its digital presence and attract high-value guests.

3. Theoretical Framework

3.1. IDC Analysis of Sublime Comporta

The IDC (International Data Corporation) is a globally recognized leader in market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. Established in 1964, IDC has played a pivotal role in shaping the digital transformation strategies of organizations worldwide (Schmidt, 2023). Over the decades, IDC has refined its frameworks to reflect the evolving technological landscape, from the early adoption of IT systems to today's focus on digital transformation, artificial intelligence, and innovation. These frameworks have become a cornerstone for assessing technological maturity and strategic readiness, ensuring that businesses remain competitive in a rapidly changing environment.

The five dimensions of the IDC framework—Technology Leadership and Governance, Trusted and Secure Enterprise, Digital Infrastructure, IT Products and Services, and Innovation and Intelligence (IDC - Tech Buyer - IDC Future IT Maturity Assessment, 2024) —provide a comprehensive lens through which to evaluate technological maturity. **Technology Leadership and Governance** addresses the role of leadership in steering the organization through crises and technological transitions. Strong leadership ensures a clear vision and strategy, enabling businesses to remain agile and forward-thinking. **Trusted and Secure Enterprise** focuses on building resilience and protecting the organization from security threats, which is vital for maintaining trust in the hospitality sector, where sensitive customer data is frequently handled. **Digital Infrastructure** pertains to creating scalable, efficient systems that support seamless operations

and adaptability to new technologies, such as smart room features or guest service automation. **IT Products and Services** examines how effectively an organization meets changing customer needs through innovative IT solutions, helping businesses adapt to new guest expectations, such as contactless check-ins or personalized service offerings. Lastly, **Innovation and Intelligence** emphasizes leveraging advanced technologies, such as artificial intelligence and predictive analytics, to foster innovation and gain actionable insights, ultimately enhancing guest satisfaction and operational efficiency.

With these parameters in mind, Sublime Comporta was assessed as a 3 as seen down below in figure 1. This result was discovered through countless internal interviews and observations found from appendix 1-3. The depth of the analysis in section 5 gives a clearer understanding about the results of the IDC framework.

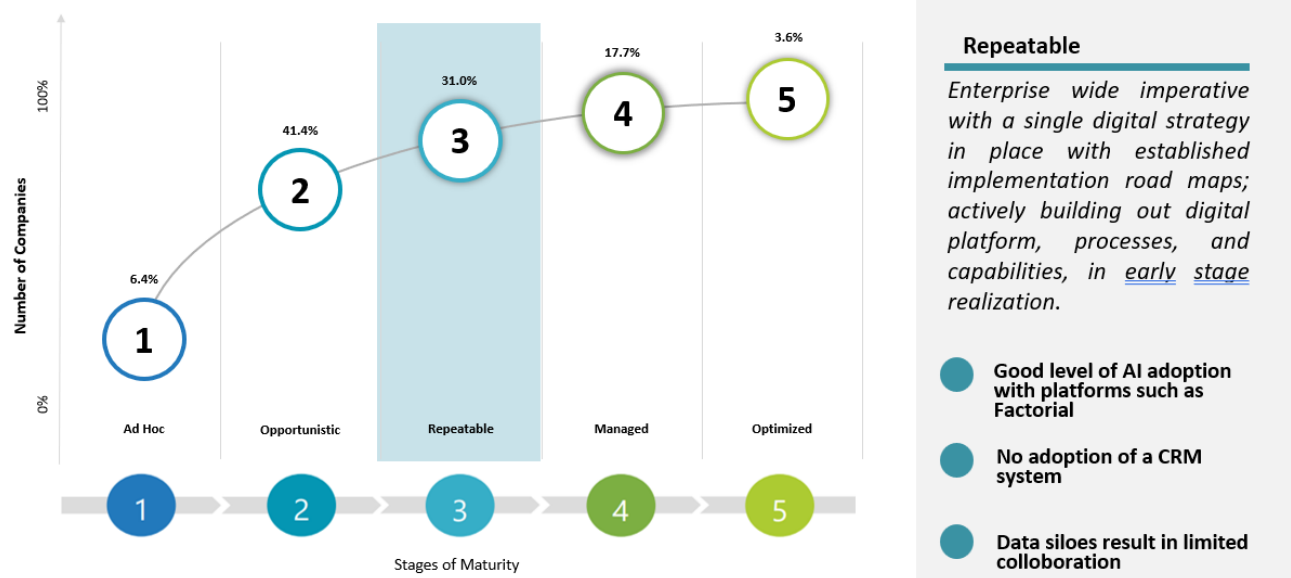


Figure 1: IDC Stages of Maturity (source: IDC)

While the IDC framework was chosen for this analysis, it is important to acknowledge other comparable frameworks, such as Gartner’s Digital Maturity Model (Digital Commerce Maturity One-Page Framework for Marketing | Gartner, 2022) . Gartner’s model provides a holistic view of digital transformation but focuses more broadly on organizational culture and business models. The IDC framework was selected because of its detailed breakdown of technological maturity and

its emphasis on measurable outcomes as seen in figure 2 The IDC is more on the right and thereafter focuses more on industry specific problems. This specificity makes it particularly suitable for evaluating a hospitality organization like Sublime Comporta, where the interplay between technology and guest satisfaction is paramount.



Figure 2: Three Types of Digital Maturity Models (source: IDC)

In applying the IDC framework to Sublime Comporta, certain adjustments were made to align the dimensions with the unique needs of the luxury hospitality industry. For instance, greater emphasis was placed on the dimensions of Innovation and Intelligence and Digital Infrastructure to reflect the critical role of technology in enhancing guest experiences. Similarly, the dimension of Trusted and Secure Enterprise was expanded to address the growing importance of data security and privacy in the industry. These customizations ensured that the framework was tailored to provide actionable insights specific to Sublime Comporta's context.

An example of the successful application of the IDC framework in the luxury hospitality sector can be seen in the case of Marriott International. By adopting IDC's principles, Marriott was able to modernize its digital infrastructure, leveraging advanced analytics and AI to improve operational efficiency and personalize guest interactions (Wilkinson, 2024). This transformation not only enhanced the guest experience but also strengthened Marriott's competitive position in

the market. Such industry examples highlight the practical relevance of the IDC framework and underscore its value as a tool for driving technological maturity.

Together, these elements illustrate the critical role of the IDC framework in analyzing and improving Sublime Comporta's technological and operational strategies, offering a roadmap for sustainable growth and enhanced guest experiences.

4. Methodology

4.1. Research Design and Approach

This research adopts a mixed-methods approach, combining qualitative and quantitative methodologies to deliver a comprehensive understanding of how technology can enhance guest experiences at Sublime Comporta. A mixed-methods design is particularly effective for complex topics as it allows researchers to leverage the strengths of both approaches. According to Creswell (2014), combining qualitative insights with quantitative data enhances the depth and breadth of findings, ensuring a more complete and nuanced perspective on the research question. The qualitative phase focuses on internal aspects, such as operations, human resources, and sales and marketing, using case study analysis and expert interviews to gather rich, contextual insights (Yin, 2018). This method explores the staff's experiences, leadership strategies, and existing technological limitations. Such in-depth exploration is particularly useful for identifying gaps and opportunities in system integration and organizational processes. In contrast, the quantitative phase employs surveys and secondary data to measure external factors like guest expectations and industry trends. Quantitative analysis provides empirical evidence to validate qualitative findings, offering a structured and measurable foundation for the research (Bryman, 2015). By combining internal and external analyses, the study examines Sublime Comporta's operations while situating its practices within broader market trends. The dual perspective ensures a holistic analysis that aligns organizational improvements with evolving guest demands. This integration of qualitative depth and quantitative precision enhances the validity and reliability of the research findings (Creswell, 2014), ultimately delivering actionable recommendations that balance technological innovation with the resort's focus on personalized, high-quality service.

4.2. Data Collection

To address the central research question—“Leveraging Technology in Luxury Hospitality to Enhance Guest Experience: A Case Study at Sublime Comporta”—a mixed-method approach was adopted, combining qualitative and quantitative techniques as seen in figure 3. This strategy ensured a well-rounded understanding of both operational challenges and opportunities for technological enhancement across different departments of the property. Data was collected through interviews, on-site observations, email exchanges, surveys, and the review of secondary research and internal reports.

The combination of these methods provided multiple perspectives on Sublime Comporta’s current state, offering insights from staff members, external experts, and guests. This section outlines how each data collection method contributed to the research.

Interviews and Email Exchanges

In-depth interviews with staff members, industry experts, and technology specialists formed the cornerstone of the qualitative research, providing critical insights into Sublime Comporta’s operations, Human Resources, Sales & Marketing departments, and their technological gaps. Follow-up email exchanges supplemented these discussions, enabling clarification of key points and further elaboration of themes.

The participants included individuals directly engaged in the resort’s operations as well as external experts offering broader perspectives:

- **Front Office Management and Sales Teams:** Staff provided details on pre-arrival guest data collection, including challenges associated with low response rates to preference forms. Manual methods for noting guest preferences (e.g., pillow types or allergies) were highlighted, along with their limited ability to integrate these insights across departments in real time.

- **Sales and F&B Team Members:** During property visits, staff emphasized challenges in showcasing event spaces due to a lack of interactive technologies such as 3D tours or augmented reality. Discussions revealed the difficulty in capturing and utilizing critical guest information, such as family size, activities, and special occasions, for tailored event marketing and personalization.
- **Talent Acquisition Specialist:** Insights included gaps in training staff to efficiently use available systems, as well as the need for more dynamic platforms to improve interdepartmental communication and streamline workflows.
- **Cluster F&B Manager:** Operational practices within the Food & Beverage team were discussed, including observations that staff rely on casual observations and direct engagement to personalize services, such as identifying favorite drinks or surprise setups. While effective, this method lacked support from automated tools.
- **AI Technology Expert:** Broader discussions emphasized the role of AI in enhancing guest engagement, automating routine tasks, and addressing data collection gaps. Ethical considerations surrounding data privacy and GDPR compliance were also addressed.
- **Global Head of Employee Experience:** The global head of employee experience discussed the challenges of fostering digital literacy among staff, particularly in smaller boutique resorts with limited resources. They emphasized the importance of leadership in driving technological change while aligning it with organizational culture. Additionally, they highlighted the use of AI-supported training programs and microlearning tools as effective strategies for enhancing employee engagement and performance.

The interviews focused on understanding data collection processes, interdepartmental collaboration, and the role of technology in improving operations. Participants described pre-arrival data collection efforts, such as guest preference emails, and highlighted challenges like low completion rates. Observations during on-site visits and direct discussions with sales and operations teams emphasized the manual nature of data management, including daily briefings to share guest information. Email exchanges supplemented these insights, revealing gaps in real-time integration and underscoring the need for centralized platforms to enhance efficiency and personalization.

It is important to acknowledge that communication with Sublime Comporta staff presented challenges at times, as responses to questions and access to internal data were occasionally delayed. This difficulty can be attributed to the resort's peak summer season, during which staff face significant workloads and operational demands, particularly in a luxury hospitality environment. Despite these hurdles, the research team recognizes and appreciates the time and effort provided by the Sublime staff amidst their busy schedules. Their insights and collaboration were very important to the study, and we remain grateful for their support throughout the research process.

Participant Role	Type of Collection	Organization Context	Appendix No
Front Office Assistant Manager	In Person Interview	Sublime Comporta	1
Sales Trainee	In Person Interview	Sublime Comporta	1
F&B Assistant	In Person Interview	Sublime Comporta	1
Cluster F&B Manager	In Person Interview	Sublime Comporta	1
Talent Acquisition Specialist	In Person Interview	Sublime Comporta	1
Sales Manager	In Person Interview & Email Exchanges	Sublime Comporta	1&2
HR Manager	In Person Interview & Email Exchanges	Sublime Comporta	3
AI & Tech in Hospitality Expert	Online Interview & Email Exchanges	-	4
Managing Director	Online Interview	GauVendi	5
HR Professor	Email Exchanges	NOVA SBE	6
Director of Operations	Email Exchanges	Hotel Asset Management Firm	7
HR Manager	Phone Call	Ski Resort Hotel	8

Global Head of Employee Experience	Online Interview & Email Exchanges	Multinational Insurance Firm	9
Area General Manager	Online Interview	Hotels in London, UK	10

On-Site Observations

The research team conducted multiple site visits to Sublime Comporta, allowing for direct observations of the resort's operations and technological systems. These visits were critical in identifying practical challenges that complemented the qualitative insights gathered from interviews.

During these visits, gaps in event marketing tools were particularly evident. Discussions with the Sales Manager and F&B teams emphasized the resort's inability to showcase event spaces effectively, particularly to international clients. The lack of interactive tools, such as 3D virtual tours or augmented reality, was observed firsthand. Staff noted how such technologies could bridge the gap for remote planners and elevate the resort's appeal in competitive luxury markets.

Additionally, pre-arrival guest data collection workflows were observed, highlighting manual processes for gathering preferences and limited follow-through due to incomplete forms. Staff often relied on direct interactions and briefings to act on guest needs, such as preparing personalized room setups or offering tailored amenities during their stay. While these efforts demonstrated a strong culture of proactive service, they underscored the need for integrated platforms to improve efficiency and accuracy in real-time communication between departments.

Manual processes were prevalent in data collection and reporting workflows, consuming significant staff time that could otherwise be allocated to guest engagement. These inefficiencies underscored the need for integrated systems that could automate routine tasks and enable real-time access to guest data.

Surveys

The survey of 237 respondents (Appendix 12) provided key quantitative insights that align with the broader findings of this thesis regarding technology in luxury hospitality. The results revealed

that while technologies like mobile apps, smart room features, and contactless check-in systems are widely adopted and appreciated for enhancing convenience, service quality remains the cornerstone of guest expectations, with over 51% of respondents identifying exceptional service as the most valuable aspect of their luxury hotel experience. The findings further highlighted a divide in perceptions of technology's impact: 40% of respondents felt technology enhances the guest experience, while 30% believed it compromises the personal human touch. Additionally, concerns about data privacy emerged as a recurring theme, with 43% expressing some level of concern regarding the use of their personal information. These insights emphasize the importance of balancing technological integration with human-centric service, reinforcing the thesis's argument that AI and digital tools should enhance, not replace, the personalized experiences that define luxury hospitality.

Secondary Research and Internal Reports

Secondary research, including academic papers, professional articles, and industry reports, provided valuable context for understanding global trends in luxury hospitality and technology adoption (see Literature Reviews)

Additionally, the internal report titled “*Qualidade Agosto Comporta*” (Appendix 11) offered detailed quantitative insights into Sublime Comporta’s performance in August 2024, focusing on guest satisfaction metrics, operational workflows, and departmental efficiency. The report identified areas where guest expectations were not consistently met, such as response times for service requests and the personalization of guest experiences.

Conclusion

This research employed a mixed-methods approach, integrating both qualitative and quantitative methodologies to develop a comprehensive understanding of Sublime Comporta’s sales and marketing dynamics. By combining internal research—through interviews, observations, and data collection—with external insights from secondary sources, we were able to contextualize the property’s challenges and opportunities within broader industry trends. While limitations, such as gaps in internal information and delayed responses, occasionally hindered the process, external data and professional research bridged these gaps. The integration of qualitative findings, including staff perspectives, and quantitative data, such as survey results, provided a holistic

analysis of Sublime Comporta's operations. This rigorous methodology not only highlights the resort's current shortcomings but also offers valuable insights to enhance its technological and operational strategies in an increasingly competitive luxury hospitality landscape.

5. Case Study: Sublime Comporta

In this section, we will use the five key components of the IDC framework—Technology Leadership and Governance, Trusted and Secure Enterprise, Digital Infrastructure IT product & services and Innovation & Intelligence—to assess the technological maturity of Sublime Comporta. Based on our evaluation, we have ranked Sublime Comporta as a level 3 on the IDC scale, reflecting a moderate level of digital maturity.

We will then focus on the impact of this ranking across three critical areas: Operations, Human Resources (HR), and Sales and Marketing. By examining these areas, we aim to uncover how Sublime's current technological capabilities and gaps affect its ability to deliver exceptional guest experiences. Our analysis will provide insights into how improvements in digital infrastructure, innovation, and organizational alignment could enhance operational efficiency, HR processes, and sales and marketing strategies, ultimately elevating the guest experience and positioning Sublime Comporta for greater success in the competitive luxury hospitality market.

5.1 Operations at Sublime Comporta (Individual – Jack)

Operations in the hospitality industry encompass the processes, systems, and practices that ensure smooth and efficient delivery of services to guests (Software, 2023). These operations include everything from front desk management and housekeeping to food and beverage services and back-end systems. In luxury resorts like Sublime Comporta, operational excellence is key to providing a seamless and memorable guest experience. Technology plays a pivotal role in enhancing operational efficiency and personalization, enabling the resort to meet the high expectations of its guests. By integrating advanced technologies such as AI, IoT, and data analytics, Sublime Comporta can optimize its operations, from check-in processes to room management, and deliver tailored services that elevate the overall guest experience.

5.1.1 Technology Leadership and Governance

Technology leadership and governance play a pivotal role in aligning technological strategies with operational and organizational goals. Hospitality managers can no longer get away with relegating IT issues and can leadership teams ‘severely limited’ if not transformed (Busulwa, R. 2020). A key framework to follow is COBIT which stands for Control Objectives for Information and Related Technologies (ISACA, 2022). It’s a comprehensive framework that provides effective guidance for aligning IT goals and business objectives, fostering growth and innovation. The newest version COBIT 2019 focuses on 4 main principles ‘Flexibility and Openness, Currency and Relevance, Design Factors, Performance Management’ (Braga, 2020).

At Sublime Comporta, leadership demonstrates a willingness to explore innovative technologies, yet the absence of a formal governance framework limits the organization’s ability to anticipate and respond to operational challenges effectively. Currently, there is no centralized decision-making structure for technology adoption or implementation. As a result, decisions are often reactive rather than proactive, and the organization lacks a unified strategy to address crises such as system outages or cybersecurity threats. This lack of preparedness poses significant risks, and leads to an Ad Hoc level as seen in figure 4.

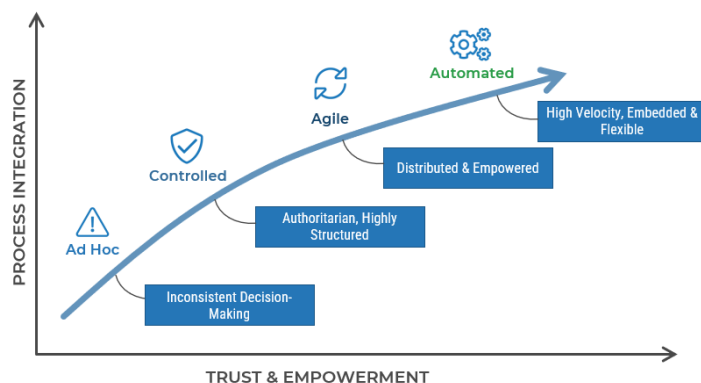


Figure 4: COBIT 2019 Leadership Graph (source: ISACA)

The absence of a structured framework designed to proactively identify opportunities and address challenges often results in a lack of decisiveness within resort operations. This issue is evident in the review analysis, out of 563 reviews, 26 were terrible and one of the main comments left in 15

of them was a problem with the AC or lighting as seen in figure 5. One review mentioned that the room felt like they “entered a sauna - literally in the 90s F in there” and later goes on to express that it took over 24 hours to fix. Recurring problems of this nature can be effectively mitigated through the implementation of various technologies such as Maintain X which is a maintenance management app with predictive features (MaintainX - Manage Your Maintenance and Operations, 2024).

Number of Review	Number of Terrible (1) Reviews	Key problems mentioned	Number of times	Percentage (%)
573	26	• Broken lighting • Broken AC	15	57.7%

Figure 5: Insights from Sublime’s August Quality Report (appendix 11)

The delay in resolving such issues clearly has a negative impact on the guest experience and is frequently attributed to the absence of well-defined feedback loops and the lack of an agile leadership system. This serves as an illustration of the design principles outlined in COBIT 2019, which emphasize the integration of flexibility, governance, and performance measurement to drive efficiency and adaptability in decision-making processes.

To enhance leadership's role and establish robust governance structures at Sublime Comporta, adopting a formal framework like COBIT 2019 is essential. This framework emphasizes principles such as flexibility, openness, and performance management, providing a structured approach to aligning IT initiatives with organizational goals. By integrating these principles, Sublime Comporta can transition from reactive to proactive strategies, effectively addressing operational challenges.

Establishing a centralized technology committee would further support cohesive decision-making. This committee, with representatives from diverse departments, can anticipate challenges, allocate resources efficiently, and address issues such as system outages or cybersecurity threats more effectively.

5.1.2 Trusted and Secure Enterprise

A trusted and secure enterprise is one that prioritizes the protection of sensitive data, operational systems, and stakeholder confidence through robust security measures. In the context of hospitality, this encompasses safeguarding guest data, ensuring system reliability, and fostering trust, which directly impacts the quality of the guest experience (Wainstein, L.). Frameworks such as the Zero Trust security model (Zero Trust Model, 2023) and ISO standards for data security provide structured approaches to achieving these goals (Michał Itenda, Patrycja Chocieł, 2019). The Zero Trust model, for instance, operates on the principle of “never trust, always verify,” ensuring that all users and devices are continuously authenticated and authorized. Similarly, ISO standards like ISO 27001 outline best practices for establishing comprehensive information security management systems.

At Sublime Comporta, the current data security and trust infrastructure faces several challenges. Guest data handling processes lack standardization, with fragmented data systems creating inefficiencies and vulnerabilities. Cybersecurity measures, while present, are primarily reactive rather than preventive, increasing the risk of system breaches. Additionally, incident response capabilities are limited, with no formal procedures in place to address potential crises. These gaps compromise the resort’s ability to maintain a secure and trusted environment, leaving operations exposed to risks such as GDPR data breaches (Regulamento Geral Sobre a Proteção de Dados, 2024)

The absence of robust trust and security measures has significant implications for operations. System breaches or data leaks can disrupt workflows, resulting in downtime and financial losses. Moreover, insufficient data protection erodes guest confidence, negatively impacting the resort’s reputation and customer loyalty. For example, guests are increasingly prioritizing data privacy in their decision-making, and any perception of lax security could deter future bookings.

To strengthen its security posture, Sublime Comporta should adopt a Zero Trust security model, which enforces strict access controls and minimizes the risk of unauthorized access. Regular audits of data systems and cybersecurity practices can help identify and mitigate vulnerabilities proactively. Additionally, staff training programs should be implemented to ensure employees are equipped to recognize and respond to potential threats. These measures, combined with the

integration of standardized frameworks like ISO 27001, will enhance Sublime Comporta's ability to safeguard operations, protect guest data, and maintain trust in a competitive hospitality market.

5.1.3 Digital infrastructure

Digital infrastructure refers to the foundational technologies that enable seamless operations, adaptability, and scalability within an organization. This includes cloud computing, data storage, IoT devices, and smart systems that streamline workflows and enhance operational efficiency (Schulz, 2024). Robust digital infrastructure is crucial in enabling hospitality businesses to respond to changing market demands, integrate new technologies, and deliver superior guest experiences. The "Technology Acceptance Model" (Davis, 1989) suggests that the acceptance and use of technology are directly tied to user experience and operational effectiveness, making strong digital infrastructure a key enabler of success in the hospitality sector.

At Sublime Comporta, the resort has implemented basic digital systems, such as property management software and online booking platforms. However, these systems are not fully integrated, leading to inefficiencies in data flow and decision-making. Research by Koutsou et al. (2018) indicates that the integration of data across systems is vital for operational success in the hospitality industry. Guest preferences collected during bookings, for example, are not integrated into on-site services, limiting the resort's ability to offer a personalized guest experience. Furthermore, the resort lacks more advanced infrastructure, such as predictive analytics or IoT-enabled devices, that could optimize operations like energy management or maintenance scheduling. A study by Buhalis and Law (2008) found that IoT-enabled systems in hotels enhance operational efficiency and sustainability, but Sublime Comporta has not yet fully embraced this level of digital sophistication.

The fragmented state of digital infrastructure at Sublime Comporta has significant implications for both operations and guest satisfaction. Inefficiencies in data management lead to delays in service delivery and hinder personalization, which is critical in luxury hospitality. In figure 6 down below, 63.4% of respondents stated that "personalization" was very important to them when staying at luxury resorts, yet Sublime Comporta's fragmented systems prevent them from delivering fully personalized experiences. For instance, without integrated systems, staff may be unaware of a

returning guest's preferences, leading to missed opportunities to enhance the guest experience. The absence of advanced systems, such as predictive maintenance tools, increases the likelihood of operational disruptions, such as equipment failures, which can directly impact guest comfort.

How Important is Personalization
in your high-end hotel experience ?

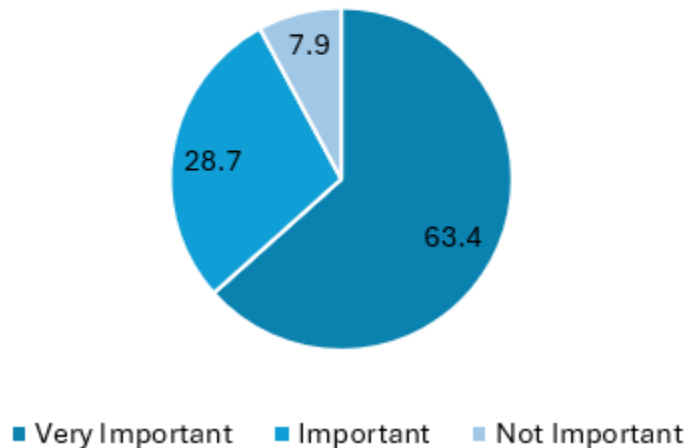


Figure 6: Survey question 11 (see appendix 12)

To address these challenges, Sublime Comporta should prioritize the development of a robust, integrated digital infrastructure. One starting point could be the implementation of a centralized data platform that consolidates guest information, operational metrics, and financial data, enabling real-time decision-making. According to a study by Gartner (2020), centralized data platforms are essential for effective decision-making in the hospitality industry, as they allow managers to access real-time insights and respond quickly to changes. Additionally, investing in IoT devices, such as smart room controls and energy management systems, would significantly enhance operational efficiency and sustainability, helping the resort to optimize resource use and reduce costs (Buhalis & Law, 2008).

Furthermore, predictive analytics tools should be leveraged to optimize resource allocation and enhance the guest experience by anticipating needs and proactively addressing issues. AI-driven

maintenance scheduling, for example, could reduce downtime and ensure that facilities are well-maintained, preventing disruptions. Research by Hwang and Li (2019) suggests that predictive analytics can help optimize staffing, inventory management, and pricing strategies in hospitality, making it a valuable tool for improving both operational efficiency and guest satisfaction. Establishing partnerships with technology providers specializing in hospitality solutions can also help accelerate the adoption of advanced digital systems, enabling Sublime Comporta to stay competitive in an increasingly tech-driven market.

5.1.4 IT Products and Services

IT products and services, as conceptualized by IDC, refer to the suite of technological tools and systems that support business operations and customer engagement. These include everything from software applications and cloud platforms to customer-facing technologies such as mobile apps and digital kiosks. While overlapping in purpose with digital infrastructure, IT products and services focus more on the specific tools and applications that directly enable user interactions and enhance service delivery, whereas digital infrastructure underpins these tools with foundational systems (IDC, 2020). Theories like "Service-Dominant Logic" (Vargo & Lusch, 2004) highlight the role of IT products and services in co-creating value with customers, particularly in service-driven industries like hospitality. By offering responsive, innovative, and user-friendly IT solutions, organizations can address evolving customer expectations and enhance operational efficiency (Barrett et al., 2015).

At Sublime Comporta, the range of IT products and services is currently limited, with most systems focused on basic operational needs. The property uses a standard property management system (PMS) and a booking platform; however, these tools lack integration with other aspects of the guest journey, such as on-site dining reservations or spa scheduling. Research by O'Connor and Murphy (2015) suggests that seamless integration of PMS with guest services is essential for optimizing the guest experience and improving operational efficiency. Furthermore, there is minimal use of customer-facing technologies, such as mobile apps or digital concierge services, which are increasingly standard in luxury hospitality. A report by Deloitte (2020) found that 70% of luxury hotel guests expect personalized experiences through mobile apps, but Sublime Comporta has yet to capitalize on this demand.

Moreover, the absence of advanced analytics tools or CRM systems restricts the resort's ability to gather insights into guest behavior and preferences, limiting the potential for personalization and loyalty-building initiatives. Sigala (2018) argues that CRM systems allow hospitality providers to gather data across the guest journey and provide tailored services, increasing customer satisfaction and fostering loyalty. However, Sublime Comporta's limited CRM infrastructure prevents it from fully utilizing guest data for personalized experiences, which is a cornerstone of luxury hospitality.

The limited scope and integration of IT products and services at Sublime Comporta have significant consequences for both operational efficiency and guest satisfaction. Without a comprehensive CRM system, the resort cannot fully leverage guest data to deliver personalized experiences. For instance, repeat guests may find that their preferences are not remembered or acted upon, leading to a suboptimal experience. McCole (2014) highlights that personalization is a critical factor in guest satisfaction in luxury hotels, and failure to deliver personalized services can significantly affect guest loyalty. Moreover, the lack of digital concierge services or mobile apps results in missed opportunities to streamline the guest journey, from check-in to on-site activities. Andreu et al. (2017) emphasize that mobile check-in and concierge services are not only a convenience for guests but also a key differentiator for luxury brands in the competitive hospitality market.

Operationally, the absence of integrated IT systems leads to inefficiencies and increased workloads for staff. Manual processes, such as coordinating bookings across different departments, are prone to errors and delays. According to a report by IDC (2020), hospitality organizations using integrated IT systems experienced up to a 20% reduction in staff workload and a 30% improvement in service speed. Additionally, without advanced analytics, the resort struggles to identify trends in guest behavior or anticipate demand, which affects resource planning and revenue management. These challenges undermine the property's ability to compete in a market where technological innovation is increasingly a differentiator. Hwang and Li (2019) suggest that analytics can play a pivotal role in optimizing pricing strategies and forecasting demand, both of which are critical for profitability in the hospitality sector.

To enhance its IT products and services, Sublime Comporta should consider adopting an integrated suite of digital solutions that address both operational and customer-facing needs. Implementing a

robust CRM system would enable the property to collect and analyze guest data, facilitating personalized experiences and targeted marketing efforts. Mobile apps and digital concierge services could streamline the guest journey, offering conveniences such as contactless check-ins, room service requests, and activity bookings. According to the Hospitality Technology Next Generation (HTNG, 2020), implementing mobile apps for concierge services improves guest satisfaction and loyalty by 25% on average.

Advanced analytics tools should also be introduced to provide actionable insights into guest behavior and operational performance. These tools can help identify trends, optimize pricing strategies, and improve resource allocation. IDC (2020) found that hospitality organizations using advanced analytics tools increased their operational efficiency by 15-20%. Additionally, integrating IT systems across departments will reduce manual workloads and enhance collaboration, resulting in a more seamless operation. This integration can also lead to a more cohesive guest experience, as departments can access real-time data, enabling quicker decision-making.

Finally, partnerships with technology providers specializing in hospitality solutions can accelerate the adoption of these innovations. Staff training programs should also be prioritized to ensure employees are equipped to maximize the benefits of new technologies. Johnson et al. (2018) emphasize that proper staff training is essential for the successful implementation of new technologies in the hospitality industry. By investing in a comprehensive suite of IT products and services, Sublime Comporta can elevate its operational efficiency and guest experience, aligning with industry standards for luxury hospitality.

5.1.5 Innovation and Intelligence

Innovation and intelligence, as defined by IDC, refer to the adoption of advanced technologies and data-driven decision-making to enhance efficiency, agility, and innovation within organizations. This includes technologies like artificial intelligence (AI), machine learning (ML), and big data analytics, which enable organizations to adapt proactively to market shifts and improve service delivery (IDC, 2020). Theories such as "Dynamic Capabilities Theory" (Teece et al., 1997) emphasize an organization's ability to integrate and reconfigure resources to thrive in rapidly

changing environments, a concept critical to luxury hospitality businesses aiming to stay competitive through innovation.

Sublime Comporta is currently in the early stages of leveraging innovation and intelligence. While the resort has basic data collection systems, it lacks the infrastructure to analyze and apply this data effectively. Guest feedback, operational performance metrics, and other valuable data are siloed, limiting the ability to generate actionable insights. A report by Buhalis and Law (2008) shows that data-driven decision-making in the hospitality industry is critical for enhancing guest satisfaction and operational efficiency. Sublime's reliance on manual processes, such as forecasting demand and anticipating guest needs, results in inefficiencies and missed opportunities for personalized experiences.

The lack of advanced innovation tools significantly hampers both operational efficiency and guest satisfaction. Without predictive analytics or AI-driven personalization, the resort cannot offer tailored recommendations or optimize room conditions based on guest preferences, limiting the luxury experience. According to Sigala (2018), AI and machine learning are essential in personalizing guest experiences, and without such tools, Sublime Comporta risks falling behind in an increasingly competitive market. Furthermore, the inability to predict demand leads to operational inefficiencies during peak periods, affecting service quality. For example, staff scheduling without the aid of predictive models can result in overstaffing or understaffing, which affects guest service (Hwang & Li, 2019).

From an operational perspective, manual processes increase the likelihood of errors, especially during high-demand times. The absence of big data analytics also limits Sublime Comporta's ability to benchmark its performance or track emerging market trends, reducing its competitive advantage in the luxury hospitality sector. As highlighted by Zhang et al. (2019), big data analytics in the hospitality industry can provide insights that drive competitive advantage and operational improvements.

To address these gaps, Sublime Comporta should implement AI-driven tools that improve personalization and resource forecasting. Machine learning algorithms can analyze guest preferences and operational data to generate actionable insights, while predictive analytics can enhance demand forecasting and resource management. Research by Hwang and Li (2019)

emphasizes that predictive analytics can help optimize staffing, pricing, and inventory management, driving both cost savings and guest satisfaction.

Introducing smart technologies, such as virtual concierge systems or AI-powered chatbots, could enhance the guest experience by offering personalized, on-demand assistance. Additionally, integrating big data platforms would allow Sublime Comporta to consolidate data from all departments, enabling better decision-making and agility (Buhalis & Law, 2008). This integration would also provide a comprehensive view of operational performance, allowing for data-driven decisions that improve both efficiency and guest satisfaction.

Finally, investing in partnerships with technology providers and training staff to effectively use these tools will ensure a smooth transition to a more innovation-focused approach. Sublime Comporta can significantly improve operational efficiency, enhance the guest experience, and establish a competitive edge in the luxury hospitality market by embracing innovation and intelligence.

5.2 Human Resources at Sublime Comporta (Individual – Ruaridh)

In the luxury hospitality industry, a motivated, skilled, and culturally aligned workforce is essential for maintaining the high standards expected by discerning guests. Human Resources (HR) plays a pivotal role in attracting, training, and retaining talent equipped to meet these demands. This section applies the IDC's 5 dimensions—Technology Leadership and Governance, Trusted and Secure Enterprise, Digital Infrastructure, IT Products and Services, and Innovation and Intelligence—to explore how leveraging technology in HR can address challenges such as high turnover, seasonal staffing, and skill development. Drawing from industry best practices and their relevance to Sublime Comporta, this analysis offers insights and suggestions to enhance HR processes, supporting a workforce that forms the foundation for delivering exceptional guest experiences.

5.2.1 Technology Leadership and Governance

This dimension emphasizes the role of leadership and governance frameworks in aligning HR technology with organizational goals. According to Deloitte's 2023 Global Human Capital Trends survey, "only 16% say their leaders are very ready to use technology to improve work outcomes

and team performance, and only 18% say their leaders are very ready to develop the right workplace model for their organisation” (Deloitte Switzerland, 2023). By setting the strategic direction, leadership forms the foundation for secure systems, robust infrastructure, and innovative HR tools. Leadership plays a pivotal role in aligning HR technology with organizational goals, particularly in the luxury hospitality sector, where exceptional guest experiences are paramount. Strong leadership ensures that HR strategies, such as potentially adopting AI tools for recruitment or personalized training programs, are not siloed but part of a broader vision that enhances both employee performance and guest satisfaction (Giousmpasoglou & Marinakou, 2024).

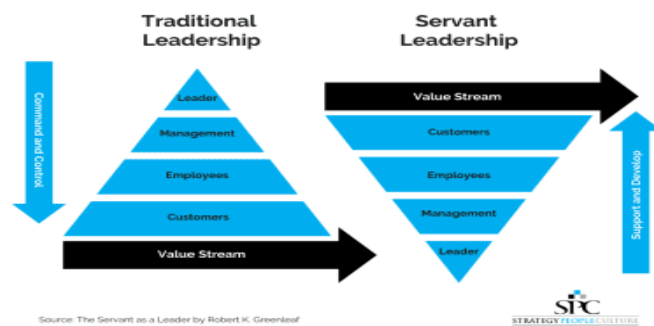


Figure 7: Traditional and Servant Leadership Framework (source: Strategic People Culture)

Frameworks like **Servant Leadership** and **Agile HR Governance** are particularly relevant in this context. Servant Leadership emphasizes supporting employees through resources and tools that empower them to excel in their roles (Botwin, 2024). In practice, this could mean leaders advocating for adaptive training modules that equip staff with skills to anticipate and meet guest needs. Agile HR Governance, on the other hand, supports iterative and collaborative decision-making, enabling rapid adjustments to HR processes like onboarding during peak seasons. For example, an Agile HR approach might streamline onboarding workflows to prepare seasonal hires faster. By championing innovative technologies and fostering a culture of adaptability, leadership can ensure that HR strategies contribute meaningfully to creating a workforce capable of delivering personalized, empathetic service experiences (Sanders, 2023). & (Parker, 2024)

Sublime Comporta demonstrates a commendable openness to betterment, with leadership valuing staff engagement and improvement initiatives. These efforts have cultivated a workplace culture that supports loyalty, motivation, and adaptability among employees—critical elements in

delivering personalized hospitality. Leaders at Sublime have laid the groundwork for fostering an engaged workforce, which is vital for a sector that thrives on high-touch service.

However, there are notable gaps in governance that limit the full potential of HR technology. Specifically, the absence of a structured governance framework prevents HR technology investments from being strategically aligned with broader guest experience objectives (Diard, 2024). For instance, while tools like Factorial HR are effectively employed for various HR functions, the insights from the correspondence with the HR Manager at Sublime Comporta highlight the absence of more formal feedback mechanisms to ensure these platforms contribute to measurable outcomes, like enhanced employee performance or guest satisfaction (Appendix 3). Without this alignment, opportunities to connect HR initiatives to strategic goals—such as reducing turnover or enhancing guest-facing skills—may be missed. Establishing a governance framework that explicitly links HR technology to these objectives would allow Sublime Comporta to optimize its workforce and amplify the guest experience (Workplace Checkin, 2024).

The lack of a formal governance structure for HR technology at Sublime Comporta has direct and indirect consequences on workforce readiness and service quality. For one, delays in adopting innovative HR tools impede efforts to modernize essential processes such as recruitment and training. This lag not only affects operational efficiency but also leaves staff unprepared to adapt to the rapidly evolving demands of luxury hospitality. For instance, without AI-driven adaptive learning modules, employees may miss opportunities to refine the soft skills critical for guest interactions (Lares, 2023). Additionally, inconsistent alignment between HR initiatives and organizational goals can lead to variability in service delivery. For example, recruitment processes may prioritize operational efficiency over cultural fit, resulting in hires who lack the interpersonal skills necessary for creating memorable guest experiences. This misalignment risks undermining Sublime Comporta's reputation for bespoke service, as employees may not be adequately equipped to deliver the personalized care that luxury guests expect.

Addressing these governance and alignment issues would empower Sublime's HR function to equip employees with the tools and training needed for consistent, high-quality service. This shift would not only improve internal processes but also enhance the guest experience by fostering a workforce that is skilled, motivated, and aligned with the brand's service ethos. (Holistique

Training, 2024). To close the identified gaps in technology leadership and governance, Sublime Comporta can implement several targeted initiatives that align HR processes with strategic goals.

Governance Enhancements: Establishing a robust governance framework for HR technology is critical. This framework could prioritize tools that enhance personalized guest experiences, such as AI-driven recruitment systems that identify candidates with strong interpersonal traits were noted in the correspondence with an HR professor at Nova SBE. Evaluation metrics should prioritize outcomes such as employee performance and guest satisfaction to ensure investments are both strategic and impactful (Appendix 6).

For example, Marriott's use of Taleo for recruitment could serve as a model for aligning HR technologies with service objectives (JobTestPrep, 2024).

Leadership Training: Investing in leadership development programs that focus on the potential of AI in HR would enable Sublime's leaders to make more informed, strategic decisions. Workshops could highlight how adaptive learning platforms enhance leadership skills, communication and team motivation, while fostering a culture of continuous learning. These workshops would not only elevate leadership effectiveness but also improve employee performance and satisfaction, demonstrating broader impact on the organization (Howe, 2020).

Strategic Collaboration: Establishing cross-departmental committees to align HR with operational and guest-facing strategies can foster a cohesive approach to technology adoption. These committees could explore implementing shared solutions that optimize staff allocation and enhance service delivery, ensuring seamless integration across all departments (Hackney, 2024). Through these measures, Sublime Comporta can create a governance structure that not only enhances HR efficiency but also builds a workforce capable of delivering the exceptional service its guests expect.

5.2.2 Trusted and Secure Enterprise

Secure systems, shaped by strong leadership and governance, form the backbone of trust in HR operations. These systems ensure data protection and foster transparency, supporting HR's ability to uphold fairness and reliability in processes like recruitment and employee management.

Considering figure 8 below, Deloitte (Deloitte, 2023) surveyed 801 management level professionals of US based companies, clearly identified a gap into what level this data is collected on employees.



Figure 8: Survey Result on Employers data protection (source: Deloitte)

Trust and security are foundational to effective HR practices, especially in the hospitality industry, where employee engagement directly impacts guest experiences. General Data Protection Regulation (GDPR)-compliant HR systems not only safeguard sensitive employee information but also foster trust within the workforce. This trust, in turn, builds loyalty and engagement—qualities essential for ensuring consistent and high-quality service delivery. For instance, a transparent approach to handling employee data, such as explaining how performance metrics are used for professional development, can improve morale and reduce turnover (Bonderud, 2020).

Transparent systems for data use and performance evaluation are equally critical. When employees understand how their data is collected, analyzed, and utilized, they are more likely to feel valued and fairly treated. Fair and transparent performance evaluations foster accountability and motivation, creating a workforce that is better equipped to meet the high standards of luxury hospitality. In contrast, a lack of clarity or perceived misuse of data can erode trust, negatively impacting both employee morale and guest experiences (Schoeffer, Kuehl, & Machowski, 2022).

Sublime Comporta exemplifies a dedication to compliance with GDPR, ensuring robust measures for the secure handling of employee information. This commitment not only upholds regulatory standards but also fosters an environment of trust and respect, contributing to a positive

organizational culture where employees feel valued (Appendix 3). Sublime Comporta's HR platform Factorial collects basic insights, such as task completion and attendance, but it's unclear how this data is used to support employee development or well-being. Without clear communication or a strategy to use these insights for meaningful feedback or growth, employees may see the data as superficial, leading to skepticism or disengagement. The current limitations in communication around HR data practices at Sublime Comporta have implications for employee engagement and service quality. A lack of trust in how data is handled can lead to disengagement, with employees feeling undervalued or unfairly monitored. Disengaged employees are less likely to deliver attentive service that luxury guests expect, risking inconsistencies in service quality and guest experience (Appendix 7).

Furthermore, the absence of secure and transparent feedback channels may stifle employees' willingness to share concerns or suggestions for improvement. Without an outlet for honest communication, leadership may miss critical insights into workforce morale, leaving issues unaddressed until they escalate. This not only impacts employee well-being but also reduces the organization's ability to proactively enhance the guest experience through a motivated and engaged workforce (Forbes Human Resources Council, 2024). To strengthen trust and security within HR practices, Sublime Comporta can implement several initiatives that align with its strategic goals of workforce engagement and exceptional service delivery.

Transparency Initiatives: Clearly communicate how HR data supports employee development and well-being. For example, leaders could introduce quarterly updates or workshops explaining how performance metrics are used to identify training opportunities or inform career progression plans. Suggestions from the HR Manager at a luxury ski resort hotel emphasize that transparency in data practices could reassure employees that these initiatives are aimed at empowerment rather than surveillance (Appendix 8).

Deploy Sentiment Analysis: Use AI-driven sentiment analysis to interpret employee feedback, surveys, and communications, identifying trends in workforce morale and emerging concerns. For instance, detecting stress related to workload can prompt leadership to adjust staffing or redistribute tasks. This tool enables Sublime Comporta to monitor engagement effectively and take timely actions to maintain morale and a supportive workplace (Wren, 2024).

Secure Feedback Channels: Establish anonymous feedback channels to encourage employees to share concerns or suggestions without fear of reprisal. Platforms like Officevibe or similar tools can provide structured opportunities for employees to voice opinions, fostering an environment of trust and inclusivity (SelectHub, 2024). Anonymous feedback as discussed with the Global Head of Employee Experience at a multinational firm highlights systemic issues that may otherwise go unnoticed, enabling leadership to address them before they impact service quality (Appendix 9). By enhancing transparency, leveraging sentiment analysis, and fostering secure communication, Sublime Comporta can build a more engaged and motivated workforce. These measures will not only improve employee trust and well-being but also contribute to a consistently high standard of service for guests.

5.2.3 Digital Infrastructure

Digital infrastructure ensures scalability and operational efficiency in HR by enabling secure, integrated workflows across platforms. As "nearly three-quarters (74%) of business leaders report there is a need for their business to become more efficient and productive, and two-thirds (66%) believe AI and automation have a lot of potential to deliver this within the HR department" (Personio, 2023), the role of advanced digital systems in driving efficiency and productivity becomes increasingly clear. Digital infrastructure is crucial for efficient HR processes, particularly in the hospitality sector, where smooth onboarding, training, and scheduling are vital for upholding high service standards. Integrated HR systems streamline administrative tasks and deliver structured learning paths, ensuring employees are thoroughly prepared for guest-facing roles and equipped to meet the nuanced demands of luxury hospitality (Croissy, 2023).

The concept of HR Technology Ecosystems emphasizes creating interconnected systems that facilitate workflows from recruitment to performance management (Davidson et al., 2011). Such ecosystems eliminate silos by linking recruitment platforms, training tools, and scheduling systems, ensuring a seamless transition from one HR function to another. This integration not only reduces administrative burdens but also accelerates workforce readiness, enabling employees to focus on delivering exceptional guest experiences from first day on the job (Sundaresan, 2024).

Sublime Comporta has made notable strides in leveraging digital tools to streamline HR processes, particularly in recruitment and onboarding. Platforms like Factorial HR exemplify the type of

technology the property utilizes to reduce manual processes and improve efficiency through features like application tracking and digital document management (Appendix 3). These efforts reflect a forward-thinking approach, showcasing the resort's commitment to adopting technology that optimizes HR workflows and enhances operational efficiency. While current systems provide a strong foundation, there is significant potential to expand their capabilities for more advanced features, such as predictive scheduling and centralized data management. By integrating these tools with other systems, (Appendix 7) such as the Property Management System (PMS), Sublime Comporta could align workforce planning more effectively with seasonal guest demand. However, the infrastructure required for such an integration is not yet in place, further technical support would most definitely be required.

Sublime Comporta effectively utilizes Factorial for core HR functions, yet opportunities remain to expand its use into advanced features such as predictive scheduling, adaptive learning, and workforce analytics. These enhancements could address challenges like seasonal staffing, provide more personalized training programs, and better align HR operations with the demands of luxury hospitality. Leveraging these capabilities would allow Sublime to maximize Factorial's potential, improving both workforce efficiency and guest satisfaction.

To enhance its digital infrastructure and maximize the potential of tools like Factorial HR, Sublime Comporta can focus on strategies emphasizing data organization, system integration, and centralized workflows. These initiatives will enable advanced capabilities while aligning with the property's luxury service standards.

Streamlined Onboarding: Integrating HR systems with structured data repositories, such as data lakes, can streamline onboarding processes across recruitment, document management, and training. This centralization ensures Factorial HR automates routine tasks efficiently, enabling new hires to contribute effectively from day one (Attri, 2024).

Predictive Scheduling: Linking Factorial HR with the Property Management System (PMS) enables predictive workforce planning. Standardized and organized data allows Factorial to align staffing levels with real-time and forecasted guest demand, improving resource allocation and maintaining service consistency during peak periods (McCarthy, 2024).

Integrated Training Systems: Connecting Factorial HR with training platforms creates a unified framework for tailored learning paths. Centralized data on employee performance and skill gaps enhances the delivery of adaptive training, supporting continuous development and equipping staff with the skills needed for luxury service (Bindbee, 2024). By focusing on these strategies, Sublime Comporta can unlock the advanced functionalities of its current tools, driving workforce efficiency and maintaining high service standards.

5.2.4 IT Products and Services

Dependent on digital infrastructure, this dimension focuses on delivering specific tools like AI-driven training platforms and scheduling systems. These products enhance HR processes and directly drive innovation in employee management and guest-facing roles (Appendix 6). IT products play a crucial role in enhancing HR processes within the hospitality industry, particularly in luxury settings where exceptional guest service is paramount, where Service Quality (Exceptional Service): 51.05% stood out as the primary factor for which guests found most valuable when staying at a luxury hotel or resort, (Appendix 12) AI-powered HR solutions can streamline career pathing, performance management, and scheduling, ensuring that the workforce is both efficient and aligned with service expectations. For instance, tools like TalentSoft enable real-time performance tracking and personalized development plans, ensuring employees remain motivated and engaged (Predictive Analytics Today, 2024).

The concept of Technology-Enabled Talent Management provides a framework for continuous employee development and retention. By leveraging IT products to map out career trajectories and provide actionable feedback, HR teams can create a supportive environment that fosters loyalty (TalentGuard, 2024).

Sublime Comporta has taken meaningful steps in leveraging IT products for HR, utilizing platforms like Factorial to streamline core functions such as recruitment, scheduling, and performance tracking. These systems play a crucial role in managing daily operations, ensuring staff availability aligns with property needs, and supporting foundational workforce management through standard performance evaluations. Additional tools like Net-Empregos, LinkedIn, and HOSCO extend recruitment efforts, broadening access to a diverse talent pool. However, these tools operate in isolation, limiting their potential to create a cohesive HR ecosystem. Advanced

functionalities, such as AI-driven career development paths, predictive analytics for employee growth, or automated integration of guest satisfaction metrics with performance evaluations, remain untouched (Liu et al., 2022). The absence of such capabilities restricts opportunities for continuous improvement in workforce engagement and alignment with guest service goals (Appendix 3).

The absence of advanced IT products for HR at Sublime Comporta has several implications for workforce performance and, ultimately, guest satisfaction. 40% of HR leaders identify talent retention as their biggest concern (Bartram, 4, 2024), which highlights the importance of addressing factors such as career growth to maintain a stable workforce. Without clear career growth paths employee retention can become a significant challenge. High turnover disrupts team cohesion and consistency, which are critical in maintaining the personalized and attentive service expected (Appendix 8). Furthermore, the lack of integration between guest feedback and employee performance data limits the potential for continuous improvement. For example, without actionable insights derived from guest reviews, HR teams may struggle to identify training needs or reward high-performing employees effectively. This disconnect can lead to missed opportunities for refining HR practices and aligning them more closely with guest expectations (Parsons, 2024). To address these challenges and enhance HR processes through IT products, Sublime Comporta can implement the following strategies:

Career Pathing Tools: Introduce immersive learning platforms such as Cornerstone OnDemand that incorporate gamification to enhance employee engagement and visualize career growth opportunities within the organization. These tools can provide personalized career recommendations tailored to individual skills, performance, and aspirations, using interactive and gamified modules to make learning both engaging and effective. By showcasing a clear commitment to employee development through such dynamic platforms, Sublime can foster loyalty, align staff with its service values, and build a more motivated and stable workforce (Cornerstone OnDemand, 2024).

Automated Scheduling: Adopt advanced scheduling products like Kronos Workforce Ready to optimize staff availability based on guest demand patterns. These tools can predict peak service times and ensure that experienced employees are strategically scheduled, enhancing operational

efficiency and guest service quality. For instance, automated scheduling can streamline shifts during seasonal peaks, reducing the risk of overstaffing or understaffing (Technology Evaluation Centers, 2024)

Feedback Integration: Link employee performance data with guest satisfaction metrics to create a cohesive feedback loop. For example, integrating platforms like Glint with guest review systems could provide actionable insights for HR teams, enabling targeted training or recognition programs. This approach ensures that employee performance improvements directly align with enhancing the guest experience (Microsoft, 2024).

By leveraging these IT products, Sublime Comporta can create an HR environment that prioritizes employee growth and aligns workforce capabilities with guest expectations. These enhancements will not only strengthen internal processes but also thereby reinforce Sublime’s reputation for delivering exceptional service.

5.2.5 Innovation and Intelligence

Innovation in HR strategies builds on the foundation of IT products and services, driving forward-thinking solutions like predictive analytics and real-time training. This interconnectedness emphasizes the role of strategic governance in fostering leadership and supporting cohesive HR initiatives.

Insights from the conversation with an Area General Manager in London (Appendix 10) emphasize the importance of innovation in HR, focusing on adopting intelligence-driven approaches to workforce planning and engagement. These strategies ensure employees are empowered and aligned with the dynamic needs of luxury hospitality. Predictive analytics, for instance, exemplifies innovation by anticipating workforce trends like turnover or training requirements, allowing HR to take proactive steps in addressing potential challenges. Building on the **Agile HR Framework**—outlined under Technology Leadership and Governance—innovation fosters a culture of adaptability, ensuring HR strategies remain aligned with evolving guest expectations and operational demands (Agile HR Community, 2024). Sublime Comporta has cultivated an innovative mindset and a perceived willingness to explore advanced HR practices, as evidenced by their openness to this case study and consultation. While they may not yet be on the cutting edge of HR technology adoption, their readiness to listen and consider new approaches positions

them as a forward-thinking organization in luxury hospitality, with significant potential to leverage innovative solutions for workforce enhancement.

While human judgment remains crucial in final interviews for assessing cultural fit, integrating AI-driven personality assessments could enhance initial screenings by identifying traits like empathy and adaptability, (Appendix 6) ensuring higher-quality candidates for guest-facing roles. Without predictive analytics, however, HR may struggle to anticipate seasonal demand or workforce challenges, and the absence of real-time training tools leaves employees without immediate support in complex scenarios, affecting confidence, service consistency, and ultimately, the guest experience (Richmond, 2024). To build on its innovative culture, Sublime Comporta can enhance its use of Factorial HR while exploring supplementary innovations to address gaps, particularly for guest-facing and managerial roles:

Predictive Analytics: Leverage AI-driven innovations to forecast workforce trends, such as turnover risks or engagement challenges. Expanding beyond Factorial HR's basic capabilities, predictive insights can flag employees at risk of burnout, enabling proactive well-being initiatives to maintain a motivated workforce (HeadsUp, 2024).

Personality-Based Hiring: Supplement current screening processes with innovations like personality assessment platforms such as Phenom to evaluate traits such as empathy, adaptability, and cultural alignment (Phenom, 2024). These advancements would enhance evaluations, ensuring new hires align closely with Sublime's service values and guest-facing expectations (Appendix 9).

Real-Time Training: Integrate innovative AI applications such as chatbots to provide immediate on-the-job guidance, complementing Factorial HR's existing functionality. These solutions empower staff to handle challenges confidently, improving service quality and responsiveness (IBM, 2023).

By refining its HR strategies and adopting supplementary innovations, Sublime Comporta can enhance its workforce's adaptability and service excellence, ensuring personalized guest experiences remain at the core of its luxury hospitality ethos.

5.2.6 Conclusion and Takeaways

The role of Human Resources in luxury hospitality is both strategic and transformative, directly influencing the quality of guest experiences through its alignment with technology and innovation.

This analysis explored how Sublime Comporta's HR practices can evolve across five critical dimensions—Technology Leadership and Governance, Trusted and Secure Enterprise, Digital Infrastructure, IT Products and Services, and Innovation and Intelligence—to meet the demands of a high-touch, guest-focused environment.

Leadership and governance emerge as essential drivers for aligning HR technology with organizational goals. Without strong leadership and a structured governance framework, efforts to enhance recruitment, training, or employee engagement may lack direction, reducing their overall impact. Leaders must continue to champion innovation while ensuring alignment with the brand's values and strategic objectives.

Trust and transparency play a pivotal role in building employee loyalty and engagement. By fostering trust in HR systems—through secure data practices and clear communication about their purpose—Sublime Comporta can empower its workforce to perform at their best. Employees who feel valued and supported are more likely to deliver consistent, high-quality service that resonates with guests.

Digital infrastructure serves as the backbone for operational efficiency, especially in seasonal luxury hospitality environments. Integrated HR systems for onboarding, training, and scheduling not only streamline internal processes but also prepare employees to excel in guest-facing roles.

By addressing current gaps in scalability and adaptability, Sublime can better equip its workforce for dynamic operational demands.

IT products and services present opportunities to enhance workforce capabilities through tools like AI-powered career pathing and automated scheduling. These innovations not only improve HR efficiency but also contribute to consistent and high-quality guest interactions by ensuring employees are well-prepared and motivated.

Lastly, innovation and intelligence in HR practices offer the potential to transform workforce management entirely. Predictive analytics, real-time training tools, and personality-based hiring models exemplify how HR can proactively address challenges while aligning employee

capabilities with evolving guest expectations. These practices are not just opportunities but necessities for maintaining a competitive edge in the luxury hospitality industry.

As Sublime Comporta continues its journey of growth and adaption, these dimensions highlight areas of focus that are critical for shaping a guest-centric HR strategy. By embedding these considerations into its approach, Sublime can position itself as a technological leader in luxury hospitality, leveraging its workforce as a core asset in delivering unforgettable guest experiences.

5.3 Sales and Marketing at Sublime Comporta

5.3.1 Technology Leadership and Governance

Technology leadership and governance are foundational to driving innovation, efficiency, and guest-centric strategies in the sales and marketing functions of luxury hospitality. This dimension ensures the strategic alignment of digital tools and platforms with the broader business goals of enhancing guest engagement and optimizing revenue streams. For luxury resorts like Sublime Comporta, strong leadership in technology adoption can facilitate the integration of AI-driven CRM systems, marketing automation tools, and advanced data analytics, enabling personalized communication and predictive marketing strategies. Governance, meanwhile, ensures ethical compliance, data privacy, and accountability in the use of these technologies, fostering trust among high-value guests and preserving the brand's reputation for exclusivity and excellence (Deloitte, 2023; Belias et al., 2023). By navigating the fast-evolving technological landscape, technology leadership provides a pathway for sales and marketing teams to remain competitive and responsive to emerging trends in luxury hospitality, such as the shift towards hyper-personalized experiences and virtual engagement tools.

Sublime Comporta currently exhibits gaps in technology leadership and governance that impede the effectiveness of its sales and marketing operations. The resort relies on fragmented systems for guest data collection, such as pre-arrival emails, which often suffer from low response rates and require manual follow-ups by staff (Appendix 1 ; 2). While there is a centralized system for logging guest preferences, its capabilities are limited, and it lacks integration with other platforms like booking engines or marketing automation tools. As a result, data silos persist, and the sales team cannot access real-time insights to craft tailored marketing campaigns or offers (Appendix

4). In addition, the resort has not yet adopted virtual tools for marketing its event spaces, such as 3D or augmented reality (AR) tours. Competitors in the luxury segment are leveraging these technologies to enhance client engagement and secure bookings, particularly for international weddings and corporate retreats (Belias et al., 2023). Without these tools, Sublime Comporta faces challenges in effectively showcasing its unique event spaces to potential clients. Furthermore, the resort's reliance on online travel agencies (OTAs) for bookings limits direct engagement with guests and reduces opportunities to build long-term relationships. This reliance not only increases operational costs but also hinders the resort's ability to drive repeat bookings through personalized outreach and loyalty programs (Garcia, 2023). The lack of a structured governance framework also poses risks to data security and compliance. With the growing importance of ethical AI use and data privacy regulations like GDPR, the absence of regular audits or transparency policies leaves Sublime Comporta vulnerable to reputational damage in case of non-compliance or data misuse (Andrade, 2024). These gaps highlight the need for a more cohesive approach to technology leadership and governance within the resort's sales and marketing functions.

The limitations in technology leadership and governance at Sublime Comporta have significant implications for its sales and marketing performance. Fragmented data systems and the absence of an integrated CRM solution reduce the effectiveness of personalized marketing efforts. In luxury hospitality, where guests expect tailored experiences, this inability to deliver personalized offers and communications diminishes the guest experience and erodes brand loyalty (EHL Graduate School, 2023). Additionally, the lack of real-time data access hampers the ability of sales teams to respond dynamically to client inquiries or market changes, limiting the effectiveness of promotional campaigns and upselling opportunities. The reliance on OTAs exacerbates these challenges by increasing costs and reducing the resort's control over the guest journey. High commission fees erode profit margins, while limited access to guest data prevents the development of targeted marketing strategies to drive direct bookings (Belias et al., 2023). The absence of virtual visualization tools for event spaces further constrains the sales team's ability to attract corporate clients and event planners, resulting in underutilized spaces and lost revenue opportunities (Belias et al., 2023).

From a governance perspective, the lack of structured oversight in technology adoption and data management undermines the trust and confidence of guests. Ethical concerns around data privacy

and transparency, particularly for high-value clients who prioritize security, create potential risks for the resort's reputation (Andrade, 2024). Without a proactive governance framework, Sublime Comporta may struggle to navigate the regulatory complexities of AI and data-driven marketing practices, which are becoming increasingly critical in luxury hospitality.

To address these challenges, Sublime Comporta should prioritize the implementation of an AI-driven CRM system that centralizes guest data and enables real-time personalization. This system would enhance the resort's ability to craft targeted marketing campaigns, predict guest preferences, and deliver bespoke experiences, ultimately driving loyalty and repeat bookings (Appendix 4). Additionally, integrating the CRM system with booking platforms and marketing automation tools would streamline operations and reduce reliance on OTAs, increasing profitability and guest engagement.

The adoption of virtual visualization tools, such as 3D and AR technologies, is essential for improving the marketing of event spaces. These tools would allow clients to explore venues remotely, providing an immersive experience that highlights the unique features of Sublime Comporta's offerings. By integrating these tools with a centralized marketing platform, the resort could attract a broader range of clients, including international event planners (Belias et al., 2023).

Governance frameworks should also be established to ensure ethical AI use and compliance with data privacy regulations. Regular audits and transparency policies would mitigate risks associated with data breaches or algorithmic biases, fostering trust among guests and stakeholders (Andrade, 2024). Training programs for sales and marketing teams are equally important to equip staff with the skills needed to leverage advanced tools and analytics effectively. By fostering a culture of innovation and accountability, Sublime Comporta can position itself as a leader in luxury hospitality sales and marketing.

These measures will enable Sublime Comporta to address its current shortcomings in technology leadership and governance, enhancing its ability to deliver exceptional guest experiences, optimize marketing strategies, and maintain a competitive edge in the luxury hospitality market.

5.3.2 Trusted and Secure Enterprise

Trust and security are foundational to effective sales and marketing in luxury hospitality. Guests expect their data to be handled ethically and securely, especially when engaging with highly personalized marketing campaigns, loyalty programs, and digital interactions. For luxury resorts like Sublime Comporta, safeguarding sensitive information ensures compliance with privacy laws such as GDPR, while building trust critical for guest retention. Secure enterprise frameworks support ethical AI in marketing, ensuring that algorithms operate transparently and align with brand values, thereby enhancing guest confidence in personalized offers (Ahmad et al., 2018; Andrade, 2024). This dimension enables seamless data-driven marketing, fostering stronger guest relationships and maintaining the resort's reputation for excellence.

Unlike technology leadership, which focuses on driving innovation and adoption, trust and security emphasize resilience in data management and ethical practices. This involves the backend policies and frameworks that ensure marketing campaigns and client engagements are free from breaches, misuse, or ethical compromises. While the innovation side often takes center stage in discussions about technology, trust and security underscore the infrastructure that ensures sustainability and accountability in sales operations. Sublime Comporta has made strides in engaging guests through pre-arrival communications and booking platforms, but its data security and governance practices remain underdeveloped. Data is collected inconsistently across systems, with manual processes dominating guest preference collection and marketing campaign execution (Appendix 1 ; 2). This fragmentation creates vulnerabilities in ensuring compliance with privacy laws, particularly in managing guest preferences and historical interactions securely (Lakshmi & Shashirekha, 2017). Additionally, the reliance on third-party OTAs not only limits direct access to guest data but also complicates efforts to implement secure, transparent data governance frameworks. Sublime's current systems lack automated tools for encrypting or anonymizing guest data, leaving the resort at risk of breaches or unauthorized access (Belias et al., 2023). Moreover, the absence of an established audit process to monitor compliance and the ethical use of AI-driven marketing tools further compounds these vulnerabilities. As global travelers increasingly demand transparency in how their data is collected and used, these gaps pose reputational and operational risks (Andrade, 2024).

The lack of robust data governance at Sublime Comporta significantly impacts its ability to execute personalized, data-driven marketing campaigns that are central to luxury hospitality. Without

secure systems to manage guest preferences and history, the resort is unable to deliver the level of personalization expected by high-value clients. This limitation undermines guest trust, discouraging participation in loyalty programs or targeted marketing initiatives (Ahmad et al., 2018). The fragmented and manual approach to data collection also creates inefficiencies in campaign design and execution, limiting Sublime's ability to scale its marketing efforts or adapt to market shifts. Over-reliance on OTAs amplifies these challenges by reducing control over guest data and increasing costs, while the absence of transparency in data handling practices risks alienating privacy-conscious clientele (Zhou et al., 2015). These implications make it difficult for Sublime to maintain the competitive edge necessary in the high-stakes luxury market.

To mitigate these challenges, Sublime Comporta should implement a centralized data governance framework with automated encryption and anonymization tools. Such a system would secure sensitive guest information and align operations with GDPR and similar data privacy regulations, ensuring trust at every stage of the guest journey (Lakshmi & Shashirekha, 2017). This framework should include mechanisms for real-time monitoring and regular audits to maintain accountability and compliance across all marketing channels (Deshpande & Nair, 2018). Investing in a robust CRM system integrated with secure booking and loyalty management platforms will provide a unified approach to managing guest data. These systems can be equipped with role-based access controls to ensure that only authorized personnel handle sensitive information, further reinforcing data security while enhancing the personalization of marketing campaigns (Zhou et al., 2015). Sublime Comporta should also reduce reliance on OTAs by promoting direct bookings through a secure and user-friendly platform. This platform should include clear privacy policies and secure payment gateways to reassure guests of their data's safety. Direct booking campaigns, combined with enhanced guest privacy assurances, will strengthen the resort's reputation for trustworthiness (Belias et al., 2023). To operationalize these changes, Sublime must implement staff training programs that focus on secure data handling and compliance protocols. These programs should also educate staff on the ethical use of AI tools in marketing to prevent biases and ensure transparency in campaign design (Andrade, 2024). By fostering a culture of trust and accountability, Sublime Comporta can position itself as a secure and reliable choice for luxury travelers, ultimately enhancing its ability to deliver exceptional guest experiences. This approach ensures trust and security are not just operational prerequisites but also strategic enablers, allowing

Sublime Comporta to capitalize on personalized marketing while safeguarding its reputation and client relationships. By distinguishing this dimension from innovation and governance-related issues, the resort can create a clear framework that integrates security seamlessly into its sales and marketing strategy.

5.3.3 Digital Infrastructure

Digital infrastructure serves as the backbone of all technology-driven sales and marketing efforts, enabling the deployment and integration of systems that enhance guest engagement, streamline operations, and optimize revenue. Unlike technology leadership, which focuses on driving innovation, and trust and security, which ensures ethical and secure operations, digital infrastructure focuses on the physical and virtual systems that support these efforts. A robust infrastructure connects CRM platforms, booking engines, marketing automation tools, and guest interaction channels, ensuring seamless data flow and operational efficiency (Lakshmi & Shashirekha, 2017; Belias et al., 2023). In the context of luxury hospitality, digital infrastructure allows for real-time insights into guest preferences and behaviors, enabling sales and marketing teams to craft hyper-personalized campaigns and dynamic pricing strategies. It also supports emerging technologies such as virtual and augmented reality for immersive marketing experiences, further enhancing client interactions and decision-making processes. Effective infrastructure ensures that these tools operate reliably and integrate seamlessly with other systems, avoiding silos and redundancies while maximizing operational efficiency (Garcia, 2023).

Sublime Comporta's current digital infrastructure exhibits several limitations that hinder its sales and marketing performance. While the resort employs basic digital tools, such as online booking platforms, these systems lack integration with CRM and marketing automation platforms, resulting in fragmented data and inefficiencies. For example, guest preferences collected during booking are not automatically linked to post-stay marketing campaigns, limiting opportunities for personalized engagement and loyalty-building (Interview 1 ; 2). Additionally, Sublime does not utilize advanced tools like dynamic pricing systems or real-time analytics dashboards, which are critical for optimizing revenue management and campaign effectiveness. The resort also lacks a virtual infrastructure to support interactive tools such as 3D tours or virtual site inspections for event spaces, placing it at a disadvantage compared to competitors who offer immersive client

experiences (Belias et al., 2023). These gaps in infrastructure create operational inefficiencies and reduce the resort's ability to deliver the seamless, high-quality service expected by luxury clientele.

The fragmented and underdeveloped digital infrastructure at Sublime Comporta directly impacts its ability to execute effective sales and marketing strategies. Without integration between booking platforms, CRM systems, and marketing automation tools, the resort faces challenges in maintaining a unified view of guest data, which is essential for delivering personalized marketing campaigns. This lack of cohesion limits the ability to target guests with tailored offers, reducing engagement and loyalty (Andrade, 2024). The absence of advanced tools such as dynamic pricing systems restricts the resort's ability to adjust rates in response to market conditions, leading to missed revenue opportunities. Furthermore, the inability to offer immersive experiences, such as virtual site inspections, diminishes the resort's appeal to high-value event planners, particularly those operating remotely. These infrastructure gaps not only impact operational efficiency but also place Sublime at a competitive disadvantage in the luxury market, where seamless technology integration is becoming a key differentiator (Belias et al., 2023; Vasconcelos, 2024).

To address these challenges, Sublime Comporta must invest in upgrading its digital infrastructure to support integrated, data-driven operations. This includes implementing a centralized CRM system that connects seamlessly with booking platforms, marketing automation tools, and guest feedback channels. Such integration will enable the resort to maintain a comprehensive view of guest interactions, facilitating the execution of hyper-personalized marketing campaigns and loyalty initiatives (Lakshmi & Shashirekha, 2017). Dynamic pricing systems should be introduced to optimize revenue management by adjusting rates in real time based on demand, seasonality, and guest segmentation. These tools can help maximize profitability while maintaining competitive pricing strategies (Garcia, 2023). Additionally, Sublime should adopt virtual and augmented reality technologies to enhance client engagement, particularly for event marketing. Interactive 3D tours and virtual site inspections can showcase the resort's unique offerings to international clients, increasing conversion rates and expanding market reach (Belias et al., 2023). To support these upgrades, the resort should also develop a scalable and secure IT infrastructure capable of handling the increased demands of advanced digital tools. This includes investing in cloud-based systems to ensure reliability, scalability, and data accessibility across all departments (Zhou et al., 2015).

Regular audits and infrastructure assessments should be conducted to identify and address potential bottlenecks, ensuring that all systems operate efficiently and cohesively.

Finally, Sublime must prioritize staff training to ensure sales and marketing teams can leverage the upgraded infrastructure effectively. Training should focus on using integrated systems, interpreting analytics, and maximizing the potential of tools such as virtual reality platforms and dynamic pricing engines. By aligning its digital infrastructure with the demands of modern luxury hospitality, Sublime Comporta can enhance its sales and marketing effectiveness, improve guest satisfaction, and secure its position as a leader in the luxury market.

5.3.4 IT Products and Services

IT products and services are the tools and technologies that directly support the execution of sales and marketing strategies in luxury hospitality. This dimension encompasses systems such as CRMs, marketing automation platforms, analytics tools, and customer-facing applications like booking engines and mobile apps. While digital infrastructure provides the backbone for these technologies, IT products and services deliver the functionalities that sales and marketing teams use to engage guests, optimize campaigns, and enhance overall efficiency (Belias et al., 2023; Andrade, 2024). Unlike the governance-focused role of trust and security, which ensures these systems operate ethically, and digital infrastructure, which supports their deployment, IT products and services represent the operational layer that directly influences guest interactions and campaign execution. These tools enable dynamic pricing, personalized communication, and data-driven decision-making, making them indispensable for modern luxury hospitality marketing (Garcia, 2023).

Sublime Comporta employs basic IT products for sales and marketing, such as a booking platform and email communication tools, but lacks advanced systems to fully optimize its operations. For instance, the absence of a comprehensive CRM system limits the ability to centralize guest data, segment audiences effectively, and run targeted campaigns. Marketing automation tools are underutilized, resulting in manual workflows that consume time and reduce the efficiency of campaign rollouts (Appendix 1 ; 2). Event marketing at Sublime also suffers from limited adoption of innovative IT tools. Competitors in the luxury segment use interactive platforms like virtual site

tours and AI-powered proposal systems, which streamline client decision-making and increase conversion rates. Sublime's reliance on less interactive tools hinders its ability to attract international clients and event planners (Belias et al., 2023). Moreover, the resort does not leverage data analytics platforms for campaign optimization or guest behavior analysis, leaving its marketing efforts less precise and less impactful than competitors who use AI-driven tools to fine-tune their strategies (Zhou et al., 2015).

The gaps in IT products and services at Sublime Comporta significantly limit its ability to compete effectively in the luxury market. Without advanced CRM and marketing automation systems, the resort struggles to deliver the level of personalization that high-value clients expect. This affects not only guest engagement but also the effectiveness of loyalty programs, which are critical for retaining affluent clientele (Appendix 4). The lack of dynamic pricing tools impacts the resort's revenue management capabilities, preventing real-time adjustments that could maximize profitability during high-demand periods. Additionally, the absence of interactive IT products for event marketing reduces the appeal of the resort's event spaces, particularly for remote clients who rely on virtual tools to assess venues (Belias et al., 2023). These limitations result in lost opportunities for upselling, cross-selling, and building long-term client relationships, all of which are essential for sustainable growth in the competitive luxury market. To address these challenges, Sublime Comporta must adopt a suite of advanced IT products and services tailored to the needs of its sales and marketing teams. The first priority should be implementing an AI-driven CRM system that centralizes guest data, enabling real-time insights and personalized engagement. This system should integrate seamlessly with marketing automation platforms to streamline workflows and enhance campaign precision (Garcia, 2023; Belias et al., 2023). Dynamic pricing tools should also be introduced to enable real-time rate adjustments based on demand patterns, market conditions, and guest segmentation. This would help optimize revenue while maintaining competitive pricing strategies (Zhou et al., 2015). For event marketing, interactive IT products such as 3D tours, virtual reality experiences, and AI-powered proposal tools should be adopted to enhance client engagement and increase booking conversions (Appendix 1 ; 2).

In addition to these tools, Sublime should invest in advanced analytics platforms to analyze campaign performance and guest behavior, enabling data-driven decision-making and continuous

improvement. These analytics tools would allow the resort to identify trends, predict guest preferences, and fine-tune marketing strategies in real-time (Lakshmi & Shashirekha, 2017). To ensure successful adoption, it is essential to provide comprehensive training for sales and marketing staff. These programs should focus on leveraging the functionalities of new IT products and services, interpreting analytics, and integrating insights into campaign design and execution. By empowering staff with the skills to use these tools effectively, Sublime can maximize their impact on sales and marketing performance (Appendix 4). This approach links IT products and services to the broader themes of digital infrastructure and trust and security while avoiding redundancy. Digital infrastructure provides the platform for deploying these tools, while trust and security ensure their ethical and secure operation. Together, these dimensions enable Sublime Comporta to leverage IT products and services as a strategic asset, enhancing guest engagement, optimizing campaigns, and driving revenue growth in the competitive luxury hospitality market.

5.3.5 Innovation and Intelligence

Innovation and intelligence encompass the integration of advanced technologies, such as artificial intelligence (AI), machine learning (ML), and data-driven decision-making tools, to revolutionize sales and marketing in luxury hospitality. This dimension is distinct from digital infrastructure, which focuses on the operational backbone, and from trust and security, which ensures ethical compliance. Innovation centers on developing intelligent capabilities that enhance personalization, predictive marketing, and guest engagement, enabling luxury resorts like Sublime Comporta to remain competitive in a rapidly evolving industry (Bulchand-Gidumal et al., 2023). Through AI-driven insights, marketing strategies can be tailored to predict guest preferences, optimize pricing, and personalize communications at scale. Additionally, immersive technologies such as augmented reality (AR) and virtual reality (VR) offer new avenues for marketing event spaces and showcasing exclusive amenities. These tools enhance the customer journey, making the sales and marketing processes more dynamic and effective (Cunha et al., 2024).

Sublime Comporta is in the early stages of adopting innovative tools to support its sales and marketing initiatives. While the resort has begun exploring digital solutions for guest engagement, it lacks advanced AI-driven platforms to automate and optimize campaigns. For example, current

marketing efforts rely on static data from fragmented systems, with limited use of predictive analytics or ML algorithms to anticipate guest needs (Appendix 1; 2). The resort also underutilizes immersive technologies such as AR and VR for event marketing. Competitors in the luxury segment, such as Accor and Fairmont Hotels, have successfully integrated VR tools to provide virtual tours of their properties, which are particularly effective for international clients (Demirciftci & Kızıllırmak, 2016). Sublime's hesitancy to adopt these technologies restricts its ability to showcase its unique offerings and limits its appeal to tech-savvy, high-value clients.

Moreover, there is no evidence of AI-powered tools being used to enhance dynamic pricing strategies or improve operational efficiency. As a result, the resort misses opportunities to adapt its pricing to market fluctuations or create hyper-personalized marketing campaigns that align with guest preferences (Bulchand-Gidumal et al., 2023). The lack of a clear innovation roadmap further delays the adoption of technologies that could drive substantial improvements in sales and marketing performance.

The limited adoption of innovative tools at Sublime Comporta has several implications for its sales and marketing functions. The absence of AI-driven systems restricts the resort's ability to deliver personalized guest experiences, which are critical in luxury hospitality. Without predictive analytics and machine learning, marketing campaigns are less targeted and less effective, reducing engagement and conversion rates (Cunha et al., 2024). The lack of immersive technologies for event marketing also impacts the resort's ability to attract international clients. Virtual tours and AR experiences have become standard in the luxury segment, allowing potential clients to explore properties remotely. By not offering these tools, Sublime risks losing business to competitors who can provide a more engaging and accessible pre-booking experience (Lerario, 2017). Additionally, the absence of dynamic pricing tools limits the resort's ability to optimize revenue. In the luxury market, where demand is often influenced by seasonality and global events, the ability to adjust prices in real time is essential for maximizing profitability and staying competitive (Fernandes & Duma, 2019). Without these capabilities, Sublime's pricing strategies remain static and less responsive to market dynamics.

To address these challenges, Sublime Comporta should prioritize the adoption of AI-driven tools to enhance personalization and predictive marketing. Implementing machine learning algorithms to analyze guest data can help identify patterns and predict preferences, enabling the resort to deliver highly targeted and impactful marketing campaigns (Bulchand-Gidumal et al., 2023). These systems can also be integrated with dynamic pricing platforms to optimize revenue by adjusting rates based on real-time demand and market conditions (Cunha et al., 2024).

The resort should also invest in immersive technologies, such as VR and AR, to enhance event marketing and client engagement. Virtual tours of event spaces and interactive 3D visualizations would allow clients to explore the property remotely, improving conversion rates and expanding the resort's market reach (Demirciftci & Kızıllırmak, 2016). These tools should be complemented by AI-powered chatbots and virtual assistants to provide instant support and personalized recommendations during the booking process (Al-Hyari et al., 2023). To support these initiatives, Sublime must foster a culture of innovation by training its sales and marketing teams in the use of AI and immersive tools. Staff should be equipped to interpret analytics, design data-driven campaigns, and effectively use new technologies to enhance guest engagement. This training will ensure that the resort maximizes the potential of its investments in innovation and intelligence (Lerario, 2017). Finally, Sublime should develop a clear innovation roadmap that aligns with its broader sales and marketing objectives. This roadmap should include short-term goals, such as integrating AI into existing systems, and long-term strategies, such as adopting advanced technologies for predictive marketing and guest personalization. By focusing on innovation and intelligence, Sublime Comporta can enhance its sales and marketing capabilities, improve guest satisfaction, and secure its position as a leader in the luxury hospitality market.

6. Benchmarking and Gap Analysis

To assess the technological gaps at Sublime Comporta, we benchmarked the resort against leading luxury establishments like Amanpuri, Soneva Jani, Six Senses Douro Valley, Rosewood Mayakoba, and Borgo Eganzia. These resorts were selected based on their similarities to Sublime Comporta in size, amenities, target market, geographics, and accommodation offerings. Out of a total score of 25 they had to score a minimum

of 21 to be considered. Their best practices in technology leadership, operations, and innovation provide valuable insights into areas where Sublime Comporta could improve.



Figure 9: Benchmark Analysis

One of the most significant gaps lies in Technology Leadership and Governance. Industry leaders have a strong governance framework that aligns technology investments with overall business strategy. Amanpuri's AI-driven marketing and predictive maintenance systems reflect a sophisticated leadership structure, while Sublime Comporta lacks a formalized technology strategy. To close this gap, Sublime Comporta should implement a structured digital transformation strategy, with leadership driving technology adoption and ensuring alignment with long-term goals.

The next critical gap is in Digital Infrastructure and IT Products & Services. Leading resorts like Six Senses Douro Valley and Rosewood Mayakoba have advanced digital infrastructure, such as integrated property management systems (PMS) and IoT for predictive maintenance. Sublime Comporta's current infrastructure, while functional, lacks these sophisticated systems. Investing in AI-powered PMS and IoT technology could significantly improve operational efficiency and resource management, reducing manual interventions and optimizing guest services.

In terms of Innovation and Intelligence, Sublime Comporta has yet to fully leverage AI for operational efficiency. Resorts like Rosewood Mayakoba and Borgo Egnazia are already using AI for dynamic pricing

and predictive analytics. Sublime Comporta could benefit from similar innovations to enhance staffing, optimize resource allocation, and tailor guest services, improving both operational efficiency and the guest experience.

Lastly, Trusted and Secure Enterprise presents an area for improvement. While Sublime Comporta manages guest data securely, it lacks AI-driven tools for real-time data security and privacy, as seen at Soneva Jani. Adopting advanced security technologies would strengthen guest trust and compliance with privacy regulations, ensuring that sensitive data is protected.

In conclusion, the largest gaps at Sublime Comporta are in Technology Leadership and Governance, followed by Digital Infrastructure and IT Products & Services. Addressing these gaps by adopting a clear governance framework, upgrading digital systems, and integrating AI for operational and security improvements will enhance Sublime Comporta's competitiveness and operational efficiency, aligning it with industry leaders.

7. Recommendations

Based on extensive research, industry benchmarking, and identified gaps, the following five recommendations are aligned with the IDC framework dimensions. Each recommendation addresses key challenges in HR, operations, and sales & marketing while focusing on enhancing guest experiences, streamlining back-end systems, and driving long-term growth. A final holistic recommendation integrates these solutions into a unified approach for Sublime Comporta.

7.1. Strengthen Technology Leadership and Governance

To ensure the successful adoption of technology, Sublime Comporta should prioritize building a robust technology leadership and governance framework. This framework should focus on aligning IT strategies with organizational goals across HR, operations, and sales & marketing. Establishing a cross-departmental technology committee will be critical to driving accountability, fostering collaboration, and ensuring that new systems meet strategic objectives.

Key actions include formalizing leadership roles to oversee IT initiatives, developing a technology roadmap that prioritizes innovation and operational needs, and implementing feedback loops to track the effectiveness of adopted solutions. By aligning governance with business priorities,

Sublime can proactively address challenges, optimize workflows, and ensure consistent guest satisfaction.

7.2. Enhance Trusted and Secure Enterprise Systems

Building trust through secure systems is essential for protecting guest and employee data while maintaining service excellence. Sublime should adopt a Zero Trust security model to enhance data protection, ensure GDPR compliance, and mitigate cyber risks. This approach will safeguard sensitive information and strengthen guest confidence.

In HR, secure platforms can ensure transparency in employee evaluations and data management, fostering trust and improving engagement. Operationally, encrypted systems will enable seamless integration of IoT tools without compromising security. In sales and marketing, robust CRM systems with secure access controls will allow targeted campaigns and personalized guest interactions, aligning with best practices in luxury hospitality.

7.3. Develop a Robust Digital Infrastructure

A centralized and integrated digital infrastructure is key to addressing inefficiencies and improving collaboration across HR, operations, and sales & marketing. Sublime Comporta should implement a unified platform that integrates PMS, CRM, and HRM systems, allowing for real-time data sharing and decision-making.

In HR, integrated platforms will streamline recruitment, onboarding, and training processes while enabling predictive scheduling to address seasonal staffing challenges. In operations, connected IoT tools can optimize energy usage, automate maintenance, and enhance service delivery. For sales and marketing, an integrated infrastructure will provide actionable insights into guest behavior, enabling hyper-personalized campaigns and dynamic pricing strategies that drive profitability.

7.4. Optimize IT Products and Services for Personalization and Efficiency

Sublime Comporta must adopt advanced IT tools that enhance workforce capabilities, streamline operations, and improve guest-facing services. For HR, AI-driven tools such as gamified training platforms and predictive analytics for recruitment will ensure workforce readiness and employee retention. In operations, IoT-enabled automation tools can improve efficiency by streamlining maintenance and resource allocation.

In sales and marketing, AI-powered CRMs and marketing automation platforms will enable real-time personalization, targeted campaigns, and loyalty-building initiatives. Dynamic pricing systems will help optimize revenue, while immersive tools such as AR/VR can showcase event spaces to international clients, enhancing sales performance. These tools will collectively improve service quality and guest satisfaction.

7.5. Foster Innovation and Intelligence to Drive Continuous Improvement

Innovation is essential to maintaining a competitive edge in the luxury market. Sublime Comporta should adopt AI-driven systems that enhance personalization, predict guest needs, and optimize operational performance. Predictive analytics tools can anticipate workforce gaps, demand patterns, and maintenance schedules, enabling proactive decision-making.

Real-time training solutions, such as AI-powered chatbots, can support employees in delivering exceptional service. In sales and marketing, machine learning tools will analyze guest data to generate actionable insights, ensuring campaigns remain dynamic and targeted. By fostering a culture of innovation, Sublime can continually adapt to evolving guest expectations and market trends.

7.6. Develop a Holistic Guest-Facing and Back-End Application

To unify these initiatives, Sublime Comporta should develop a holistic digital platform that integrates guest-facing tools with back-end operations. This all-in-one solution will connect PMS, CRM, HRM, and IoT systems, creating a seamless flow of information and enhancing decision-making across departments.

Guest-facing features could include personalized itineraries, mobile check-ins, and AI-driven concierge services, while back-end tools would optimize staffing, automate maintenance, and enhance energy management. By creating an MVP (Minimum Viable Product) and scaling the

platform over time, Sublime can adopt a phased approach to implementation. This solution will foster operational efficiency, drive workforce performance, and elevate the guest experience to new heights.

8. Limitations

8.1 Strategic and Operational Limitations

Scalability concerns represent one of the significant challenges to the successful implementation of the proposed recommendations. Sublime Comporta's current infrastructure limits the ability to deploy IoT systems and automation tools on a large scale. This limitation arises because foundational systems require significant upgrades before advanced technologies can be effectively integrated. For instance, transitioning to smart energy management systems without foundational IT upgrades could lead to delays and bottlenecks, impacting the resort's operational efficiency.

Another critical limitation is staff adoption and training. Introducing advanced AI and IoT systems necessitates significant adjustments to existing workflows. Resistance to change, particularly among long-serving employees, could slow the adoption process. Moreover, the lack of structured training programs may exacerbate the issue, leaving staff underprepared to use these systems effectively. Without investment in robust training frameworks, the potential benefits of technological innovations might remain unrealized.

Integration challenges also pose substantial risks. The complexity of integrating new technologies with legacy systems can result in inefficiencies and increased costs. For example, predictive analytics tools or automated workflows may face compatibility issues with older software, requiring additional investments in middleware solutions or complete system overhauls. Such challenges could delay implementation timelines and strain available resources.

Lastly, guest adaptability must be considered. Recommendations like app-based services and smart room controls depend on guest willingness to interact with these technologies. For instance, less tech-savvy guests or those who prefer traditional hospitality approaches may not fully engage with these innovations. This reluctance could diminish the perceived value of such investments, impacting guest satisfaction and overall adoption rates.

8.2 Financial and Compliance Limitations

Implementing advanced technological solutions carries significant financial constraints, especially for boutique properties like Sublime Comporta. The initial capital expenditure for IoT devices, AI-driven tools,

and integrated apps can reach hundreds of thousands of euros. For example, implementing a centralized IoT energy management system may cost upwards of €50,000, while AI-based customer relationship management (CRM) platforms could range between €30,000 to €100,000 depending on customization (Bun et al., 2022). Allocating these resources might necessitate compromises in other operational areas, such as marketing campaigns or physical infrastructure upgrades.

Moreover, the financial feasibility of these investments is compounded by ROI uncertainty. In a study done by Manos Karagiannis, he suggests that ROI for advanced technologies in hospitality can take 3 to 5 years to materialize (Karagiannis, 2024). For example, a predictive analytics system aimed at optimizing room pricing may require sustained usage and refinement before its full benefits become apparent. Stakeholders might view this timeline as a risk, potentially delaying approval for such investments.

Cost of transition is another significant financial limitation. Transitioning to new systems involves not only direct costs, such as software purchases, but also hidden costs. These include staff retraining programs, estimated at €500 to €1,000 per employee, and temporary inefficiencies during the implementation phase, which could lead to lost revenue (Illanes et al., 2018). Consulting fees for system integration may add another 10-15% of the total project cost, further stretching financial resources (Illanes et al., 2018).

Data privacy and security risks present additional compliance challenges. Increased reliance on data-driven tools exposes Sublime Comporta to potential GDPR violations, which could result in fines of up to €20 million or 4% of annual turnover, whichever is higher (GDPR Fines of up to €20 Million. How Will They Be Determined?, 2024). Establishing cybersecurity measures to prevent breaches may require investments in advanced firewalls and encryption systems, potentially adding tens of thousands of euros to implementation costs.

Finally, balancing financial resources for technological upgrades with other operational priorities remains a persistent challenge. For instance, prioritizing IoT deployment may detract from essential upgrades to existing facilities or limit the budget for guest-facing improvements. Such trade-offs could impact Sublime's ability to maintain its competitive edge in the luxury hospitality market.

9. Conclusions

9.1 Key Insights from the Study

This study highlights the transformative role of technology and AI in enhancing guest experiences at Sublime Comporta by addressing challenges in Human Resources, Operations, and Sales & Marketing. Using the IDC framework as a foundation, the research assessed the resort's technological maturity and identified critical gaps in leadership, trust, infrastructure, tools, and innovation. Key findings revealed that while Sublime Comporta excels in its commitment to guest satisfaction and sustainability, there are significant opportunities to optimize internal systems, leverage AI tools, and integrate data across platforms. In Human Resources, technology-driven solutions such as better AI-powered recruitment, predictive scheduling, and gamified training can address skill gaps, turnover, and workforce development. For Operations, IoT-enabled infrastructure, predictive maintenance, and centralized platforms can improve efficiency and streamline workflows. In Sales & Marketing, advanced CRM systems, dynamic pricing tools, and immersive AR/VR technologies are essential to fostering personalization and driving revenue growth.

These insights demonstrate that integrating technology does not replace the human element central to luxury hospitality; rather, it empowers staff to deliver high-touch, personalized services that align with Sublime Comporta's ethos.

9.2 Final Reflections on Technology's Role in Sublime Comporta

Technology and AI hold immense potential to elevate Sublime Comporta's guest experience, operational efficiency, and long-term growth. By embracing a structured and strategic approach, the resort can transform its technological maturity, as outlined through the IDC framework.

The recommendations provided—spanning Technology Leadership and Governance, Trusted and Secure Enterprise, Digital Infrastructure, IT Products and Services, and Innovation and Intelligence—offer a roadmap to address current gaps while positioning Sublime Comporta as a leader in luxury hospitality. These strategies collectively aim to enhance HR capabilities, operational efficiency, and Sales & Marketing performance, all converging toward an improved guest experience.

A significant opportunity lies in the development of a holistic application that integrates guest-facing and back-end operations. While ambitious, this innovation represents a critical step toward creating a seamless, efficient, and personalized experience for both guests and employees.

As Sublime Comporta anticipates future growth, investing in technology is no longer optional but essential. By aligning its unique identity with cutting-edge solutions, the resort can maintain its competitive edge, deliver exceptional guest experiences, and set a benchmark for luxury eco-hospitality.

10. References

Andrade, N. (2024). AI Bias Module.

Andreu, L., Bigné, E., & Hernández, B. (2017). The influence of technology on the guest experience: A hospitality industry perspective. *Journal of Hospitality Marketing & Management*, 26(6), 634-653. <https://doi.org/10.1080/19368623.2017.1335516>

Ari, E. (2023). Human resource risk challenges in the hotel industry. *Journal of Hospitality and Tourism Insights*, 6(5), 2073–2092. <https://doi.org/10.1108/JHTI-03-2022-0110>

Barrett, M., Davidson, E., Prabhu, J., & Vargo, S. (2015). Service innovation in the digital age. *Journal of Service Research*, 18(3), 253-257. <https://doi.org/10.1177/1094670515571160>

Barrett, M., Davidson, E., Prabhu, J., & Vargo, S. (2015). Service innovation in the digital age. *Journal of Service Research*, 18(3), 253–257. <https://doi.org/10.1177/1094670515571160>

Belias, D., Koustelios, A., Vairaktarakis, G., & Mantas, C. (2023). Innovation and digital transformation in luxury hospitality: Trends and applications. *Journal of Tourism Management*, 43(2), 125-145.

Belias, D., Koustelios, A., Vairaktarakis, G., & Mantas, C. (2023). Innovation and digital transformation in luxury hospitality: Trends and applications. *Journal of Tourism Management*, 43(2), 125–145.

Bindbee. (2024, October 15). Factorial API: Integration guide, key features, and best practices. Retrieved from <https://www.bindbee.dev/blog/factorial-api>

Bonderud, D. (2020, January). The TRUST model: Delivering on the promise of employee data privacy. ADP. Retrieved from <https://www.adp.com/spark/articles/2020/01/the-trust-model-delivering-on-the-promise-of-employee-data-privacy.aspx>

Botwin, A. (2024, February 12). Beyond ego: How servant leadership transforms teams and drives exceptional results. Strategy People Culture Consulting. Retrieved from <https://www.strategypeopleculture.com/blog/servant-leadership/>

Braga, G. (2020, July 13). COBIT 2019 and the IIA 2019 Guiding Principles of Corporate Governance. ISACA. <https://www.isaca.org/resources/news-and-trends/industry-news/2020/cobit-2019-and-the-iaa-2019-guiding-principles-of-corporate-governance>

Braga, G. (2020, July 13). COBIT 2019 and the IIA 2019 guiding principles of corporate governance. ISACA. Retrieved from <https://www.isaca.org/resources/news-and-trends/industry-news/2020/cobit-2019-and-the-iaa-2019-guiding-principles-of-corporate-governance>

Bryman, A. (2015). Social research methods (5th ed.). Oxford University Press.

Bryman, A. (2015). Social research methods (5th ed.). Oxford University Press.

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the internet – the state of eTourism research. *Tourism Management*, 29(4), 609-623. <https://doi.org/10.1016/j.tourman.2008.01.005>

Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the internet – the state of eTourism research. *Tourism Management*, 29(4), 609–623. <https://doi.org/10.1016/j.tourman.2008.01.005>

Bulchand-Gidumal, J., Secin, E. W., O'Connor, P., & Buhalis, D. (2023). Artificial intelligence's impact on hospitality and tourism marketing: Exploring key themes and addressing challenges. *Current Issues in Tourism*, 26(5), 533-550. <https://doi.org/10.1080/13683500.2023.2229480>

Bulchand-Gidumal, J., Secin, E. W., O'Connor, P., & Buhalis, D. (2023). Artificial intelligence's impact on hospitality and tourism marketing: Exploring key themes and addressing challenges. *Current Issues in Tourism*, 26(5), 533–550. <https://doi.org/10.1080/13683500.2023.2229480>

Bun, B., Sakshi Thote, Prajvali Meshram, Pranali Bobade, & A. Ospanova. (2022). IoT Based Energy Management System. *International Journal of Innovative Research in Science Engineering and Technology*, 11(4), 198–206. <https://doi.org/10.15680/IJIRSET.2022.1104051>

Busulwa, R. (2020). *Hospitality Management and Digital Transformation: Balancing Efficiency, Agility and Guest Experience in the Era of Disruption*. United Kingdom: Taylor & Francis.

Busulwa, R. (2020). *Hospitality management and digital transformation: Balancing efficiency, agility and guest experience in the era of disruption*. Taylor & Francis.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). SAGE Publications.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). SAGE Publications.

Cunha, M., Pereira, M., Cardoso, A., Figueiredo, J., & Oliveira, I. (2024). Revolutionizing luxury: The role of AI and machine learning in enhancing marketing strategies within the tourism and hospitality luxury sectors. *GeoJournal of Tourism and Geosites*, 55, 335-1307.

Cunha, M., Pereira, M., Cardoso, A., Figueiredo, J., & Oliveira, I. (2024). Revolutionizing luxury: The role of AI and machine learning in enhancing marketing strategies within the tourism and hospitality luxury sectors. *GeoJournal of Tourism and Geosites*, 55, 335–1307.

Davidson, M. C. G., McPhail, R., & Barry, S. (2011). Hospitality HRM: Past, present and the future. *International Journal of Contemporary Hospitality Management*, 23(4), 498–516. <https://doi.org/10.1108/095961111111130001>

Deloitte Switzerland. (2023, March 16). Explore the Deloitte Human Capital Trends 2023. Tax and Legal Blog. Retrieved from <https://blogs.deloitte.ch/tax/2023/03/deloitte-human-capital-trends-a-working-world-without-boundaries.html>

Deloitte. (2020). *Hospitality 2020: The future of luxury guest experience*. Deloitte Insights.

Deloitte. (2024). Embracing the future: AI's transformative role in hospitality. Retrieved from <https://www.deloitte.com/uk/en/Industries/consumer/blogs/embracing-the-future-ais-transformative-role-in-hospitality.html>

Deloitte. (2024). Embracing the future: AI's transformative role in hospitality. Retrieved from <https://www.deloitte.com/uk/en/Industries/consumer/blogs/embracing-the-future-ais-transformative-role-in-hospitality.html>

Demirciftci, T., & Kızıllırmak, İ. (2016). Strategic branding in hospitality: Case of Accor Hotels. *Journal of Tourism Management*, 12(1), 30-45. <https://doi.org/10.26650/JOT.2016.2.1.0004>

Demirciftci, T., & Kızıllırmak, İ. (2016). Strategic branding in hospitality: Case of Accor Hotels. *Journal of Tourism Management*, 12(1), 30-45. <https://doi.org/10.26650/JOT.2016.2.1.0004>

Digital Commerce Maturity One-Page Framework for Marketing | Gartner. (2022). Gartner. https://www.gartner.com/en/marketing/research/digital-commerce-marketing-maturity-framework?utm_source=chatgpt.com

"Digital Marketing: The Case of Digital Marketing Strategies in Luxurious Hotels." *Journal of Hospitality Management*, 2023.

EHL Insights. (2024). AI in hospitality: Personalized customer experience. Retrieved from <https://hospitalityinsights.ehl.edu/ai-in-hospitality-personalized-customer-experience>

EHL Insights. (2024). Guest service AI in hospitality. Retrieved from <https://hospitalityinsights.ehl.edu/guest-service-ai-hospitality>

Fernandes, L., & Duma, F. (2019). Balancing tradition and innovation: Assessment of new luxury hospitality business models and their implications on 5-star hotels in Switzerland. *Global Fashion Management Conference Proceedings*. <https://doi.org/10.15444/GFMC2019.05.06.03>

Fernandes, L., & Duma, F. (2019). Balancing tradition and innovation: Assessment of new luxury hospitality business models and their implications on 5-star hotels in Switzerland.

Garcia, M. (2023). Sustainable luxury marketing strategies. *Journal of Tourism and Hospitality Research*, 14(3), 214-230

44. GDPR Fines of up to €20 million. How will they be determined? (2024). GDPR Associates. <https://www.gdpr.associates/what-is-gdpr/understanding-gdpr-fines/>

Giousmpasoglou, C., & Marinakou, E. (2024). The contemporary hotel industry: A people management perspective. Palgrave Macmillan. <https://doi.org/10.1007/978-3-031-52803-3>

Glion Institute of Higher Education. (2024). Chatbots and AI: Essential for modern hospitality. Retrieved from <https://www.glion.edu/magazine/chatbots-ai-essential-modern-hospitality/>

HeadsUp. (2024). HeadsUp predictive analytics: Your solution to combat employee burnout. Retrieved from <https://headsup.co/resources/headsup-predictive-analytics-your-solution-to-combat-employee-burnout>

Hwang, J., & Li, X. (2019). The impact of big data analytics on revenue management and decision-making in the hotel industry. *International Journal of Hospitality Management*, 77, 1-10. <https://doi.org/10.1016/j.ijhm.2018.06.006>

Hwang, J., & Li, X. (2019). The impact of big data analytics on revenue management and decision-making in the hotel industry. *International Journal of Hospitality Management*, 77, 1-10. <https://doi.org/10.1016/j.ijhm.2018.06.006>

Hwang, J., & Li, X. (2019). The impact of big data analytics on revenue management and decision-making in the hotel industry. *International Journal of Hospitality Management*, 77, 1–10. <https://doi.org/10.1016/j.ijhm.2018.06.006>

IDC - Tech Buyer - IDC Future IT Maturity Assessment. (2024). IDC: The Premier Global Market Intelligence Company. <https://www.idc.com/research/tech-buyer/research-and-advisory/planning-guides/maturity-assessment>

IDC. (2020). The impact of integrated IT systems on operational efficiency in hospitality. International Data Corporation.

IDC. (2020). The impact of integrated IT systems on operational efficiency in hospitality. International Data Corporation.

Illanes, P., Lund, S., Mourshed, M., Rutherford, S., & Tyreman, M. (2018, January 22). Retraining and reskilling workers in the age of automation. McKinsey & Company. <https://www.mckinsey.com/featured-insights/future-of-work/retraining-and-reskilling-workers-in-the-age-of-automation>

ISACA. (n.d.). COBIT | Control Objectives for Information Technologies. ISACA. <https://www.isaca.org/resources/cobit#1>

Johnson, D., Kimes, S. E., & Hanks, L. (2018). Training for technology implementation: Success factors in the hospitality industry. *Cornell Hospitality Quarterly*, 59(1), 22-36. <https://doi.org/10.1177/1938965517734345>

Lakshmi, G. S., & Shashirekha, H. (2017). Cloud Armor: A conclusion work on trust management system. *International Journal of Advanced Engineering and Management Science*, 3(5), 56-65. <https://doi.org/10.24001/IJAEMS.3.5.21>

Lemnisk. (2024). AI-driven personalization: Benefits for the hospitality industry. Retrieved from <https://www.lemnisk.co/blog/ai-driven-personalization-benefits-hospitality/>

Lerario, F. (2017). Speaking social: The strategies adopted by luxury brands to face the social media revolution. *Journal of Marketing Trends*, 7(3), 44-60.

Les Roches. (2023). Generative AI in the hospitality & tourism industry. Retrieved from <https://lesroches.edu/blog/generative-ai-in-the-hospitality-tourism-industry/>

Limor Wainstein. (2018, December 2). Data Security in Hospitality: Risks and Best Practices. Ehl.edu; EHL Holding SA. https://hospitalityinsights.ehl.edu/data-security-in-hospitality-best-practices?utm_source=chatgpt.com

MaintainX - Manage your Maintenance and Operations. (2024). Getmaintainx.com. https://www.getmaintainx.com/?campaignid=531382730&adgroupid=1361197928470060&adid=&utm_term=predictive%20maintenance&utm_campaign=Bing-Search-Non-Branded-UK&utm_source=bing&utm_medium=cpc&msclkid=c5df822536da168d6e85e54408e49444

McCole, P. (2014). Customer loyalty in the hospitality industry: An exploration of customer satisfaction, relationship marketing, and personalized services. *International Journal of Hospitality Management*, 39, 54-64. <https://doi.org/10.1016/j.ijhm.2014.02.004>

Medium. (2024). Personalization and AI: A new frontier for guest experience. Retrieved from <https://medium.com/hotel-tech/personalization-and-ai-a-new-frontier-for-guest-experience-fcad26eaea0>

Michał Ilenda, Patrycja Chocieja. (2019). ISO UKAS Certification - QMUK. QMUK. <https://www.qmuk.co.uk/en/?msclkid=cc9e56dff51e17e962b531beb8276dba>

Microsoft. (2023). Zero Trust Model – Modern security architecture. Retrieved from <https://www.microsoft.com/en-gb/security/business/zero-trust/>

O'Connor, P., & Murphy, J. (2015). Hotel property management systems: The backbone of hospitality technology. *Cornell Hospitality Quarterly*, 56(2), 122-135. <https://doi.org/10.1177/1938965514560985>

Parsons, J. (2024, April 15). The importance of guest feedback in hospitality. Benbria. Retrieved from <https://benbria.com/guest-feedback-in-hospitality/>

Regulamento Geral sobre a Proteção de Dados. (2024). Gdprinfo.eu. <https://gdprinfo.eu/pt-pt>

Schmidt, S. (2023, September 25). An Overview of International Data Corporation (IDC): Your Top Questions Answered. Marketresearch.com; The Freedonia Group, Inc. <https://blog.marketresearch.com/and-overview-of-international-data-corporation-idc-your-top-questions-answered>

Sigala, M. (2018). *Social media in hospitality and tourism: Theories and practices*. Springer.

Sigala, M. (2018). *Social media in hospitality and tourism: Theories and practices*. Springer.

Software, I. (2023, September 12). Everything you need to know about hotel operations management. Hotel Property Management Software, PMS Software | InnQuest Software. <https://www.innquest.com/blog/everything-you-need-to-know-about-hotel-operations-management/>

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199707\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199707)18:7<509::AID-SMJ882>3.0.CO;2-Z)

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1-17. <https://doi.org/10.1509/jmkg.68.1.1.24036>

Vasconcelos, J. (2024). Digital transformation strategies in luxury hospitality. *Journal of Luxury Studies*, 18(2), 101-125.

Wilkinson, L. (2024). Marriott gears up for another year of major tech spending. CIO Dive. <https://www.ciodive.com/news/marriott-international-tech-spend-digital-transformation-plan-ai/715036/>

Wren, H. (2024, April 23). Workload analysis: Definition + step-by-step process. Zendesk. Retrieved from <https://www.zendesk.com/blog/workload-analysis/>

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.

Zhang, L., Chen, J., & Wang, J. (2019). Big data analytics in hospitality management: Applications and challenges. *International Journal of Hospitality Management*, 77, 10-23. <https://doi.org/10.1016/j.ijhm.2018.06.008>

Zhou, L., Varadharajan, V., & Hitchens, M. (2015). Trust enhanced cryptographic role-based access control for secure cloud data storage. *IEEE Transactions on Information Forensics and Security*, 10(7), 1477-1490. <https://doi.org/10.1109/TIFS.2015.2455952>

Zero Trust Model - Modern Security Architecture | Microsoft Security. (2023). Microsoft.com. https://www.microsoft.com/en-gb/security/business/zero-trust/?ef_id=_k_3b8ba7d514361f61bacac0b458ed3687_k_&OCID=AIDcmmao55x8o7_SEM_k_3b8ba7d514361f61bacac0b458ed3687_k_&msclkid=3b8ba7d514361f61bacac0b458ed3687

11 Appendix

Appendix 1: Interviews with Staff at Sublime Comporta

Participants:

- Front Office Assistant Manager
- Sales Trainee
- F&B Assistant
- Cluster F&B Manager
- Talent Acquisition Specialist

Key Insights:

1. **Personalization in Guest Experience**

- Pre-arrival forms are sent to guests to collect preferences (e.g., pillow types, allergies), but completion rates are low.
- Personalized services often rely on real-time observation, such as offering favorite drinks or setting up room surprises.

2. **Interdepartmental Communication**

- Preferences are logged in a centralized system and shared during daily morning briefings.
- Communication gaps exist between F&B and other departments due to disconnected systems, requiring manual data transfers (e.g., allergy details).

3. **Challenges in Manual Tasks**

- Weekly reports for events require manually filling in data (e.g., whether bookings include accommodation).
- For group bookings handled via third-party agencies, guest-specific details are often unavailable, limiting pre-arrival personalization.

4. **Post-Stay Engagement**

- Structured follow-ups for past guests or event clients (e.g., wedding anniversaries) are not yet in place.

- A CRM system in development aims to automate this process, such as sending personalized anniversary vouchers.

5. **Operational Needs**

- Staff emphasized the need for integrated systems to improve data sharing and reduce repetitive tasks.
- Automation of tasks like reporting and guest preference tracking would allow staff to focus more on guest experience.

Appendix 2: Emails Exchanges and On-Site Observations & Discussions with Sales Manager at Sublime Comporta

Participant: Sales Manager

Key Insights:

1. **Revenue Distribution**

- Individual bookings account for 80% of revenue, while events (weddings, corporate retreats) contribute 20%, indicating growth potential in the events segment.

2. **Communication Challenges**

- Clients often misunderstand property features like shared villas.
- Proposed solution: Use AI-driven **3D virtual tours** to clarify property offerings and improve client confidence during the booking process.

3. **Post-Event Engagement**

- No formal process for follow-ups with event clients exists. The CRM system in development will automate these touchpoints, enabling reminders and incentives (e.g., anniversary discounts).

4. **Proposed Enhancements**

- AI-powered tools for event visualization and booking management can improve communication and guest satisfaction.

Appendix 3: In Person Interview and Email Exchanges with HR Manager at Sublime Comporta

Participant: HR Manager

Key Insights:

1. HR Systems

- HR operations (e.g., recruitment, payroll, holiday tracking) are managed through an integrated platform.

2. Recruitment Process

- HR combines internal systems with external platforms to attract candidates. Recruitment automation, including AI screening tools, was identified as an area for improvement.

3. Training and Retention

- AI could enhance training processes with tailored modules and improve internal mobility decisions based on performance data.

4. Operational Improvements

- Ethical considerations (e.g., bias) remain a concern for adopting AI tools in HR.

Appendix 4: Online Interview and Email Exchanges with AI & Tech in Hospitality Expert

Participant: Strategic Tourism Leader

Key Insights:

1. AI as a Complement to Human Service

- AI enhances personalization by remembering preferences and anticipating guest needs while maintaining the human touch.

2. Revenue Optimization

- Dynamic pricing tools adjust room and event rates based on guest behavior and demand patterns.
- Workforce optimization through AI improves efficiency and reduces operational costs.

3. Ethical and Regulatory Concerns

- Compliance with GDPR and ensuring bias-free AI tools are critical considerations for implementation.

4. Innovative Applications

- Real-time personalization and AI-driven guest personas enhance service delivery, creating cross-selling opportunities.

5. **Adoption Barriers**

- Challenges include integration costs, legacy systems, and strict regulatory frameworks.

Appendix 5: Online Interview with Managing director at GauVendi

Participant: Managing Director at GauVendi

Key Insights:

1. **AI-Driven Personalization**

- AI replaces static room categories with dynamic, guest-specific offerings, enhancing satisfaction and revenue.

2. **Revenue Strategies**

- AI optimizes pricing and upselling opportunities by analyzing guest behavior and preferences.

3. **Event Solutions**

- Tailored event planning tools and post-event follow-ups through AI enhance client engagement and repeat bookings.

4. **Challenges**

- Implementation barriers include reliance on legacy systems and lack of high-quality, actionable data.

Appendix 6: Summary of Email Correspondence with Nova SBE HR Experts

Participants: HR Professor and Associate Professor at Nova SBE

Key Insights:

1. **Recruitment and Onboarding**

- **AI Tools for Recruitment:** AI can enhance efficiency in recruitment processes by automating tasks like resume screening, chatbots for candidate queries, and virtual assistants for scheduling.

- **Minimizing Bias:** While AI tools (e.g., HireVue, Pymetrics) reduce human bias, concerns remain about their “black box” nature, limited contextual understanding, and potential to perpetuate biases.
- **Effectiveness:** The implications of these tools for accuracy and candidate experience require further evaluation to balance automation with fairness.

2. Employee Training and Development

- **Emerging Trends:**
 - **Microlearning:** Delivers short, skill-focused training modules tailored to individual needs.
 - **Gamification:** Enhances engagement by integrating game-like elements into learning programs.
- **AI for Personalization:** AI can identify individual knowledge gaps and recommend tailored learning opportunities, improving the impact and relevance of training initiatives.

3. Retention and Employee Well-Being

- **Current Challenges:** Existing workplace well-being programs face limitations in efficacy, as recent research questions their measurable impact.
- **Innovative Strategies Needed:** There is a need for evidence-based and creative approaches to support employee morale and retention effectively.

4. Future Trends in HR Technology

- **AI’s Role in Candidate Analysis:** AI can analyze past performance data to predict candidate success, streamlining the selection process.
- **Ethical Considerations:**
 - Addressing bias in AI tools is critical to avoid discriminatory outcomes.
 - Ensuring transparency in AI systems remains a key challenge for ethical implementation.

5. Overall Perspective

- The discussion highlighted the transformative potential of AI in HR practices, particularly for recruitment, training, and retention.

- The ethical and thoughtful implementation of AI is essential to align technological advances with organizational goals and ensure fairness.

Appendix 7: Summary of Emails with a Director of Operations at a Hotel Asset Management Firm

Participant: Director of Operations at a Hotel Asset Management Firm

Key Insights:

1. AI Applications in Hotel Operations

- AI can streamline **guest check-in processes** using mobile apps, allowing guests to access room keys through their smartphones.
- AI can **automate non-room inquiries** like group or event proposals, generating drafts for human review to ensure quick, consistent responses.
- **Dynamic pricing** tools leverage AI to make rate suggestions multiple times daily, automating pricing adjustments during high-demand periods to maximize revenue.
- In **reservations management**, AI handles routine tasks (e.g., FIT bookings, standard guest inquiries), reducing workloads for reservation teams, especially during peak times.

2. Challenges in AI Implementation

- **Legacy Property Management Systems (PMS)** limit AI integration due to outdated infrastructure.
- Current systems are not designed to work seamlessly with advanced AI tools, slowing adoption and reducing effectiveness.

3. Balancing Automation and Human Interaction

- While AI can automate many processes, maintaining **personalized guest-facing services** (e.g., check-in, F&B, concierge) is critical for guest satisfaction and loyalty.
- Striking a balance between automation and human interaction preserves the luxury experience that defines high-end hospitality.

4. Strategic Priorities

- AI adoption is key for improving **operational efficiency** and **profitability**, aligning with asset management firms' goals to enhance revenue and guest satisfaction.

Appendix 8: Phone Call with HR Manager at a Luxury Ski Resort

Participant: HR Manager at a Luxury Ski Resort

Key Insights:

1. Recruitment and Screening

- Large application volumes are handled manually, creating inefficiencies. Interest exists in AI tools to streamline candidate screening.

2. Training and Development

- Standardized training processes lack engagement; interactive, AI-powered training could improve retention and learning outcomes.

3. Retention Efforts

- Peak season workloads cause stress for employees, highlighting the need for innovative well-being initiatives.

Appendix 9: Online Interview and Email Exchange with Global Head of Employee Experience at a Multinational Insurance Firm

Participant: Global Head of Employee Experience

Key Insights:

1. AI in Recruitment

- AI tools like automated screening and video platforms streamline candidate evaluation.

2. Training and Engagement

- AI enhances employee training through gamification and tailored modules. Chatbots improve employee feedback collection, though cultural adoption remains a challenge.

3. Investment Priorities

- Organizations prioritize AI projects with direct revenue impact, limiting focus on cost-saving tools like HR automation.

Appendix 10: Online Interview with an Area General Manager in London, UK

Participant: Area General Manager

Key Insights:

1. **Operational Efficiency**

- Automating manual reporting processes can improve efficiency and allow staff to focus on guest engagement.

2. **AI-Driven Segmentation**

- AI solutions should cater to varying guest preferences:
- Business travelers prefer streamlined, minimal interaction (e.g., echeck-ins).
- Leisure guests value personalized, flexible experiences.

3. **Guest-Facing Technology**

- Apps inspired by Uber Eats can modernize room service for guests seeking minimal interaction.
- Balanced adoption is needed to respect cultural dynamics and guest preferences.

4. **Flexibility of Independent Properties**

- Independent hotels, like Sublime Comporta, can experiment with technology to enhance personalization and position themselves as innovative, tech-savvy luxury destinations.

Appendix 11: Quality Report Summary for August 2024 – Sublime Comporta

Source: Internal Quality Report, Sublime Comporta

1. Online Reviews

• **Key Insights:**

- The Global Review Index (GRI) increased by **1.4 points** compared to the previous year.
- A decline in the **number of reviews** (-9) and **positive mentions** (-0.6 points) was recorded.

- August 2024 performance showed improvement over 2023 but remained **below the target goal of 95%**.
- **Competitive Position:**
 - Sublime Comporta maintained **7th position** in the competitive set with a GRI of **91.1%**, marking a positive increase of **+1.4 points** from the previous year.

2. Internal Guest Satisfaction Survey

- **Overall Performance:**
 - Internal survey results reported an **overall score of 4.37**, showing a decline of **0.21 points** compared to last year.
 - The number of survey responses also dropped by **12**.
- **Department Performance Breakdown:**
 - **Reservations Team:** 4.73 (-0.03)
 - **Front Office Team:** 4.41 (-0.35)
 - **Housekeeping Team:** 4.58 (-0.23)
 - **F&B Team:** 4.51 (-0.10)
 - **Maintenance Team:** 4.56 (-0.15)
 - **SPA Team:** 4.61 (No change).
- **Compliance:**
 - **HACCP Compliance** for F&B improved to **90.48%**, showing a **2.97% increase**.

3. Key Categories Impacting Performance

- **Top Negative Mentions:**
 - **Cleanliness** and **Room Quality** received the highest volume of negative feedback, indicating the main areas requiring improvement.

4. Action Plan (Ongoing)

- **Proposed Improvements:**
 - Addressing **cleanliness issues** to meet guest expectations.
 - Enhancing **room quality** and focusing on detailed maintenance.

- Strengthening service delivery across all departments to improve satisfaction scores.

Appendix 12: Survey Results Recap out of 237 answers from general audience

- 1. Demographic Information:**
 - 18-24: 22.78%
 - 25-34: 37.55%
 - 35-44: 20.25%
 - 45-54: 10.97%
 - 55+: 8.44%
- 2. Stayed at Luxury Hotels:**
 - Yes: **68.78%**
 - No: **31.22%**
- 3. Technology Interactions:**
 - Mobile Apps: 151 responses
 - Smart Room Features: 130 responses
 - Contactless Check-in/out: 132 responses
 - Chatbots: 87 responses
 - Virtual Concierge: 86 responses
 - None: 24 responses
- 4. Technology and Personal Interaction:**
 - No, it enhances the experience: 40.08%
 - Yes, it feels more impersonal: 30.38%
 - It depends on the technology: 20.68%
 - I'm not sure: 8.86%
- 5. Importance of Personal Interactions:**
 - Average Score: **5.38/10**
- 6. Pre-Arrival AI Survey:**
 - Yes, I would find this helpful: 42.62%
 - I would be neutral: 34.6%
 - No, I prefer not to provide preferences: 22.78%
- 7. AI Supporting Staff:**
 - Very Positive: 46.41%
 - Somewhat Positive: 25.32%
 - Neutral: 18.99%
 - Somewhat Negative: 4.64%
 - Very Negative: 4.64%
- 8. Data Privacy Concerns:**
 - Very Concerned: 29.11%
 - Somewhat Concerned: 43.46%
 - Neutral: 14.35%

- Not very Concerned: 8.86%
 - Not at all Concerned: 4.22%
- 9. Preferences Saved for Future Stays:**
- Yes, I find it convenient: 60.76%
 - Neutral: 32.07%
 - No, I prefer my information not to be saved: 7.17%
- 10. Most Valuable Aspects of Luxury Hotels:**
- Service Quality (Exceptional Service): 51.05%
 - Personalized Attention: 29.96%
 - Exclusive Amenities: 18.99%
- 11. How Important is personalization in your high-end hotel experience?**
- Not Important: 7.9%
 - Important: 28.7%
 - Very Important: 63.4%