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Artificial Intelligence in European Hotels: Adoption, Applications, and Barriers

Results of an Online Survey among Hotels in Austria, France, Germany, Greece, Italy and Switzerland

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Executive Summary: Study context



- The goal of this study is to **assess the current state of artificial intelligence (AI) adoption in the European hotel sector**. It focuses on the perceived impact, current usage, application areas, benefits, and barriers related to AI technologies, with the aim of understanding how AI supports hotel operations, decision-making, and competitiveness in an increasingly digitalized hospitality environment.
- The survey collected **responses from over 1,500 hotels across six countries** (Austria, Germany, France, Greece, Italy, and Switzerland). The sample reflects a broad diversity of hotel sizes, classifications, and locations. The study is a follow-up of a first survey conducted in 2023 by Khlusevich & Schegg: AI in Tourism: Unveiling the Potential and Benefits for SMEs in the Hotel Sector. Results of an online survey among hotels in Austria, France, Germany, Greece and Switzerland LINK
- The study was conducted under the <u>Resilient Tourism</u> initiative, an <u>Innosuisse</u>-supported national R&D program aimed at fostering data-driven and digitally enabled innovation within the Swiss tourism sector.

Executive Summary: AI perception and usage



Perceived Impact of AI on the Hotel Sector

 The overall perception of AI's impact in hospitality is cautiously optimistic. With a *mean score of 6.1* out of 10, hoteliers recognize the potential of AI but do not yet view it as transformative. The responses cluster around moderate-to-high values, with 20% rating the impact as 8 out of 10, but only 9% assigning the maximum score. This suggests growing awareness and interest, tempered by limited hands-on experience and ongoing uncertainties.

Current Levels of AI Adoption

Adoption levels remain modest but are increasing. While 43% of hotels report not using AI at all, 16% plan to adopt it in the near future. *Active AI usage (41% of respondents* stating to use AI-based technologies) is concentrated among recent adopters: 29% have implemented AI within the past two years, while only 4% have more than three years of experience. These findings point to an early-stage market, with momentum beginning to build through experimentation and pilot applications.

Perceived Benefits Among Current Users

Among hotels that already use AI, the perceived benefits are somewhat more positive. The *average* benefit score among users is 6.6, with a median of 7.0. Nearly one quarter (23%) rate their benefits as 8 out of 10, and another 14% give the maximum score. Only 5% report no benefit at all, suggesting that once implemented, AI tends to deliver value, especially in operational and marketing tasks.

Executive Summary: AI technologies used and barriers to AI adoption



Technologies Currently in Use by AI Adopters

The adoption of AI technologies in hospitality varies significantly depending on the type of solution and its complexity. The most widely used tool is *generative AI for guest communication (e.g., ChatGPT, Gemini), with 74% of AI adopters* reporting active use—reflecting the ease of implementation and immediate benefits in automating emails, web content, and guest messages. Other frequently adopted technologies *include online review analysis* (44%), *dynamic pricing tools for real-time revenue management* (42%), and *personalized services through guest apps or recommendation systems* (38%). In contrast, more complex or infrastructure-dependent technologies remain niche. Applications such as facial recognition (2%), robotics (3%), automatic menu generation (4%), and waste analysis (8%) have very low adoption, often due to higher integration costs, infrastructure demands, or perceived lack of maturity. Interestingly, several technologies show high "planned use" rates (e.g., predictive analytics and automation of responses at 17–20%), suggesting that while currently underused, interest is growing.

Barriers to AI Adoption

Despite growing interest, key barriers persist. Lack of awareness of available AI solutions (39%) is the top challenge, followed by high setup costs (35%) and technical complexity (34%). Other frequently cited issues include limited technical skills, integration difficulties, and concerns over data privacy. While these barriers are slowly declining compared to 2023 levels, they remain significant, especially for smaller and less tech-savvy operators.

Executive Summary: Perception of AI Benefits



Key Application Areas for AI

Hotels identify *reservations* (68%), *content generation* (62%), and *customer relationship management* (51%) as the most promising areas for AI. These are followed by data analysis and personalization of guest experience. Operational and back-office domains like finance, cybersecurity, and inventory management rank lower but still receive notable interest. This shows that AI is primarily seen as a tool for optimizing sales, marketing, and service performance.

Perceived Benefits of AI in Practice

Time savings (76%) is by far the most cited benefit, followed by improvements in communication (54%) and operational efficiency (51%). Data management, sales growth, and cost reduction are also frequently mentioned, underscoring AI's practical value in daily operations. Strategic or transformative outcomes, such as sustainable development, remain niche. This suggests that AI is currently valued more for incremental gains than for disruptive innovation.

Conclusion

- AI adoption in hospitality is clearly underway, but fragmented. Perceptions are increasingly positive, especially among recent adopters, yet uptake remains uneven and often constrained by structural or contextual factors. Smaller hotels face knowledge and cost hurdles; larger hotels struggle more with data integration and organizational inertia.
- Going forward, the sector will benefit from tailored support strategies—ranging from plug-and-play tools and training for small businesses to data governance and change management frameworks for larger properties.





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> The Survey





The survey: background (I)



- In today's rapidly evolving technological landscape, the tourism sector—particularly the hotel industry—is undergoing profound transformation. As businesses strive to enhance operational efficiency, optimize sales, and improve customer experience, digital tools and data-driven strategies have become essential. Among these, **Artificial Intelligence (AI) is emerging as a powerful** enabler of innovation, especially in areas such as customer service automation, dynamic pricing, and demand forecasting.
- At the same time, effective distribution and revenue management remain critical levers for competitiveness, requiring hotels to navigate increasingly complex ecosystems of online travel agencies (OTAs), direct booking channels, and performance analytics. However, the adoption of such technologies is not without challenges—especially for Small and Medium-sized Enterprises (SMEs), which often lack the financial, technical, and human resources available to larger hotel groups (Dredge et al., 2018; OECD, 2021).
- This study seeks to better understand how hotels across Europe are responding to these dual imperatives: mastering digital distribution and embracing AI-based innovation.
- The results are presented in <u>two separate reports</u> to allow for a more focused analysis of key thematic areas.
 - This present report addresses the adoption, use cases, and perceived impacts of artificial intelligence (AI) technologies in the hotel sector.
 - A **second report** covers hotel distribution and revenue management practices.

The survey: background (II)

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- This study builds on a previous survey conducted in 2023 by Khlusevich & Schegg: AI in Tourism: Unveiling the Potential and Benefits for SMEs in the Hotel Sector. Results of an online survey among hotels in Austria, France, Germany, Greece and Switzerland (LINK). Several questions from the original survey were retained, allowing for a direct comparison and assessment of developments between 2023 and 2025.
 - This study was conducted by HES-SO Valais together with EHL within the framework of the **Resilient Tourism** project. The Resilient Tourism Flagship (<u>www.resilienttourism.ch</u>), supported by <u>Innosuisse</u>, aims to promote the datafication of Switzerland's tourism and travel sector, fostering the development of resilient, digitally-supported services, processes, and business models. The program is led by six research institutes in collaboration with more than 30 Swiss tourism industry partners.

Methodology: questionnaire (I)



- We opted for an **online survey** as our primary data collection tool to gather insights into the current landscape of the hotel sector. This method allowed us to efficiently reach a wide range of participants within the industry, ensuring a comprehensive understanding of the prevailing trends, challenges, and opportunities related to technology adoption.
- The overall questionnaire (<u>see Annex 1</u>), comprising 56 questions, was developed based on a comprehensive literature review, expert interviews, feedback from hoteliers, and input from national hotel associations.
- A dedicated section of the questionnaire focused specifically on **artificial intelligence (AI) in hotel operations**. This AI sub-report focuses on these aspects, offering insights into how hotels perceive the impact of AI, the areas where AI is or could be applied, current usage levels, and key challenges and benefits identified by respondents.

Methodology: questionnaire (II)



• The questionnaire for the AI part was structured into several thematic sections:

General Information about the Hotel

This section gathers demographic and operational data (e.g. country, hotel size, classification, customer segment) to enable comparative analysis based on structural characteristics and geographic location.

Perceived Impact and Adoption of AI

This section explores hotels' current and planned AI use, perceptions of AI's impact and benefits, and overall AI maturity across the sector.

• AI Application Areas and Tools

Respondents identified the operational domains where AI could be most useful (e.g., marketing, operations, customer profiling), as well as specific AI technologies already in use or under consideration.

Barriers and Benefits of AI

This part investigates perceived challenges to AI adoption (e.g., lack of ROI, technical complexity) and anticipated or experienced benefits (e.g., efficiency, guest experience, data analysis).

Methodology: survey administration



- The questionnaire was translated in 5 languages : French, German, English, Italian and Greek.
- The survey was addressed **between January to April 2025** to the member hotels of six different hotel associations:
 - <u>WKÖ</u> in Austria
 - IHA in Germany
 - UMIH in France
 - <u>Research Institute for Tourism (RIT)</u> for the <u>Hellenic Chamber of Hotels</u> in Greece
 - <u>Associazione Albergatori ed Imprese Turistiche della Provincia di Trento in Italy</u>
 - HotellerieSuisse in Switzerland
- The different hotel associations contacted their members either by email or through newsletters. In Switzerland, the survey was sent out by HES-SO Valais-Wallis. In Greece, the survey was conducted independently by RIT.
- As not all hotels replied to all questions, the number of responses can vary from one to another question.





> The Sample

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Sample: Country



In which country is your hotel located?

Effective responses: 1,485 Response rate: 99%



The sample includes responses from 1,485 hotels, with a notably high proportion from Greece (31%), which may influence aggregate results. France (21%), Germany (17%), and Switzerland (13%) are also well represented, while Austria and Italy each contribute 9%, ensuring a broad geographic coverage across the six countries.

Sample: Location





What is the location of your hotel?

The sample reflects a wide variety of hotel locations, with the largest share situated in villages in the countryside (27%), followed by big cities (20%) and small cities (18%). Seaside and mountain resort hotels each represent 17% of the sample, indicating a balanced representation across urban, rural, and touristic areas.

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Sample: Type of Hotel



Is your hotel part of a hotel chain or a hotel cooperation?



The sample is largely composed of independent hotels, which make up 82% of respondents. Only 11% are affiliated with a hotel chain and 7% with a hotel cooperation, reflecting the dominant role of small and medium-sized enterprises (SMEs) in the sector.

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Sample: Customer Segments





What is your main customer segment?

The vast majority of surveyed hotels (69%) primarily serve holiday and leisure travellers, while 24% focus on business travellers. MICE guests account for only 2%, highlighting the predominantly leisure-oriented nature of the sample.

Sample: Classification





A large majority of the surveyed hotels (84%) are officially classified by star category. Among them, most fall into the mid-range segment, with 3-star (42%) and 4-star (30%) hotels dominating the sample, while 5-star properties represent 7%.

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Sample: Size of Hotels (Nbe of Rooms)



How many rooms does your hotel have?



The sample is largely composed of small and mid-sized hotels, with a median of 31 rooms and an average of 53.1. Most properties (81%) have fewer than 100 rooms, reflecting the SME structure of the sector, while only 12% of respondents operate larger hotels with 100 rooms or more.

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Sample: Size of Hotels (Number of Employees)



How many people work in your hotel (average number of full-time employees)?

Response rate: 97%

Median: 10.0

Effective responses: 1,445 Mean: 23.0 Min - Max: 0.5 - 740.0



The sample predominantly consists of small-scale operations, with a median of 10 full-time employees and an average of 23. Nearly half of the hotels (49%) employ fewer than 10 people, confirming the strong presence of SMEs in the respondent base.

Summary of Overall Sample Characteristics



A breakdown of the responses reveals:

- Country Distribution: The sample spans six countries, with the largest share of responses from Greece (31%), followed by France (21%), Germany (17%), Switzerland (13%), Austria (9%), and Italy (9%).
- Hotel Location: Most hotels were located in rural villages (27%), followed by large cities (20%), small cities (18%), and seaside or mountain resorts (17% each).
- Hotel Type: The vast majority were independent hotels (82%), with 11% belonging to hotel chains and 7% to hotel cooperations.
- Guest Profile: 69% of hotels primarily catered to holiday/leisure travellers, while 24% focused on business guests.
- Hotel Classification: 84% of hotels reported having an official classification. Among them, 3-star hotels dominated the sample (42%), followed by 4-star hotels (30%), 2-star hotels (16%), and 5-star hotels (7%).
- Hotel Size: The sample includes hotels of varying sizes, with a median of 31 rooms. Most hotels (81%) have fewer than 100 rooms.
- Staffing: Staffing levels were generally modest, with a median of 10 full-time employees and 71% of hotels employing fewer than 20 people.
- Further sample details on a country-base are shown in annex 2.

Summary of Overall Sample Characteristics: Cross-Country Patterns and Contrasts in Structure, Segments, and Settings

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The cross-country comparison of hotel sample characteristics across Austria, France, Germany, Greece, Italy, and Switzerland reveals both structural similarities and marked differences in the European hospitality landscape. A key similarity across all countries is the **predominance of small to mid-sized**, **independent hotels:** most properties operate with fewer than 50 rooms and under 20 full-time employees, indicating a strong presence of family-run or owner-managed businesses. Additionally, **3-star and 4-star hotels consistently represent the majority of classified properties**, forming the backbone of the accommodation offer in all surveyed countries.

Despite these common traits, **notable differences emerge in hotel location and customer segments**. Mountain resorts are dominant in Italy (mainly hotels from Trentino Region were contacted) and Switzerland, reflecting their alpine tourism orientation, while seaside hotels represent a significant share in Greece, and urban settings are more common in France and Germany. In terms of clientele, Greece and Italy rely almost exclusively on holiday and leisure travelers, whereas France and Germany have a more balanced market mix with business travelers.

Another contrast lies in hotel classification: while Greece, France, and Italy report over 90% official classification rates, much higher than in the other countries. Moreover, large hotels with over 100 rooms are rare in most countries but more present in Greece, likely linked to its resort infrastructure.

Finally, **more than 80% of surveyed hotels operate independently**, underscoring the highly fragmented structure of the European hotel industry. Chain-affiliated or cooperative hotels remain a minority across all countries—except in France, where the proportion is significantly higher at 41%.





The Survey Results: AI Adoption, Applications, and Barriers

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> Perceived Impact of AI

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Perceived Impact of Artificial Intelligence on the Hotel Sector



On a scale of 1 to 10, how would you rate the impact of using AI for hotels in general?

Effective responses: 1,194 Response rate: 80% Mean: 6.1 Median: 6.0 30% 20% Percentage 20% 17% 13% 11% 9% 8% 10% 7% 6% 5% 4% 0% 1-no impact at all 105-VERY Jarge Inpact Hemil Hems Herrie Herni Herr? Herna Herne Homo

The perceived impact of AI on the hotel industry is moderately positive, with a mean score of 6.1 out of 10. While a small share of respondents (5%) believe AI has no impact, the majority cluster around mid-to-high values, particularly at level 8 (20%). This suggests that most hoteliers recognize the potential of AI, though few currently rate its impact as extremely high—indicating optimism tempered by ongoing barriers or limited implementation experience.

Perceived Impact of Artificial Intelligence on the Hotel Sector versus Hotel Characteristics (I)



High Perceived Impact Group (ratings 8-10)

Hotels that attribute a high impact to AI (36% of respondents) tend to be located in large cities and cater predominantly to holiday and leisure travelers. These hotels are typically larger in size and structure, with 25% having more than 80 rooms and a significant portion employing 36 or more staff. They are also more likely to be classified in higher star categories, notably 4-star (44%) and 5-star (16%), indicating that upscale establishments with larger teams and more complex service portfolios are more likely to perceive AI as beneficial or transformative. Urban environments may expose these operators to stronger digital innovation pressures and provide better infrastructure and market readiness for AI technologies.

Middle Perceived Impact Group (ratings 4-7)

The middle segment, representing 44% of responses, shows a more mixed profile. These hotels are predominantly seaside resorts, with a roughly equal balance between leisure and business clientele. Star classification is moderate, with the largest share (42%) falling into the 3-star category and a smaller group in the 5-star range (22%). Notably, over half of the hotels in this group have 80 rooms or more, showing that scale alone does not guarantee a higher perception of AI's value. This group may represent establishments that are aware of AI's potential but face constraints or uncertainty regarding implementation, infrastructure, or ROI.

Perceived Impact of Artificial Intelligence on the Hotel Sector versus Hotel Characteristics (II)



Low Perceived Impact Group (ratings 1-3)

Hotels in the low perceived impact category (19% of respondents) are more commonly located in mountain resorts and seaside locations, and they tend to serve niche or unspecified customer segments ("other"). Structurally, these hotels are smaller: 19% fall in the 40–59 room range, and 29% operate with fewer than 9 full-time employees. The star rating is skewed toward lower categories, with 22% being 2-star and only 12% 4-star. This group reflects a more resource-constrained segment, possibly less exposed to digital innovation or less convinced of AI's added value due to simpler operations, seasonal business models, or guest preferences for human-centered service experiences.

Conclusion

The analysis highlights how the perceived impact of AI is strongly associated with hotel size, location, customer profile, staffing levels, and classification. Larger, better-staffed, urban hotels with higher service standards are significantly more likely to view AI as impactful. In contrast, small, rural or seasonal hotels with limited staff tend to be more skeptical. These distinctions underline the importance of context-sensitive AI strategies in the hotel sector and point to the need for differentiated support measures to foster broader adoption.





> AI Adoption Level

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Current Adoption Levels of Artificial Intelligence in Hotels



Does your hotel use artificial intelligence (AI)?

Effective responses: 1,432





AI adoption in the hotel sector remains limited but is gradually growing. While 43% of respondents report not using AI at all, 16% indicate that implementation is planned. Among the **41% of AI adopters**, the majority are recent users—16% for one year and 13% very recently—whereas only a small fraction (4%) report using AI for more than three years. This distribution suggests that AI implementation is still at an early stage across the industry, but momentum is building as more hotels begin to experiment with or plan for AI integration. It is also **likely that some hotels are already using AI-enabled functionalities without being aware** of it, as such features are increasingly embedded in software solutions.

Current Adoption Levels of Artificial Intelligence in Hotels versus Hotel Characteristics



ANOVA analysis reveals clear differences in AI adoption across hotel profiles. Hotels that have used AI for two years or more are typically located in large cities and include both low- and high-category establishments. These early adopters also tend to be larger in size, indicating that scale and urban location are favorable factors for early integration.

Recent adopters—those who integrated AI very recently—are more often business-focused, located in mid-sized cities, and tend to be small hotels (under 20 rooms). This indicates a gradual expansion of AI adoption toward smaller and more varied hotel types.

Among the hotels that have not yet adopted AI, 43% report no current use, and another 16% say adoption is planned. These hotels are more often located in rural or resort areas, have lower star ratings (2–3 stars), and are smaller in size. Their slower uptake reflects a more cautious stance or lack of resources, though the planned adoption rate signals growing interest.

In sum, AI adoption is most advanced in larger, urban hotels with either high or low star ratings. Planned adopters signal continued diffusion into smaller and more peripheral hotel types, while recent adopters reflect the widening relevance of AI beyond early innovators.

Current Adoption Levels of Artificial Intelligence in Hotels by country









> Perceived Overall Benefits of AI among Users

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Perceived Overall Benefits of AI Among Hotel Users

If you use AI, how do you rate the benefits of AI for your hotel on a scale of 1 to 10?



Among hotels that already use AI, the perceived benefits are generally positive, with a mean score of 6.6 and a median of 7.0. The highest proportion of respondents (23%) rated the benefits at level 8, followed by 14% assigning the highest score of 10. Only a small minority (5%) reported no benefit at all. These results suggest that while the technology is still emerging, early adopters already recognize its tangible advantages.



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Perceived Overall Benefits of AI Among Hotel Users versus Hotel Characteristics



A breakdown by hotel segment reveals that perceived benefits correlate with hotel size, affiliation, and staffing levels. Hotels reporting high perceived benefits (49% of AI users) are more likely to be part of a chain, have more than 80 rooms, and employ over 36 full-time staff, which may reflect a more advanced or structured approach to AI implementation in these contexts.

By contrast, those with low perceived benefits (12%) are more frequently found in smaller seaside hotels and are slightly overrepresented in Greece, suggesting possible limitations in infrastructure, skills, or AI use cases suited to those environments.

Chain affiliation and hotel size appear to play a critical role in how AI's value is realized. Hotels with access to greater internal resources or standardized group-level technology strategies may be better positioned to unlock the full benefits of AI tools—whether for personalization, automation, or efficiency.

Overall, these findings highlight the gap in outcomes between early adopters who are scaling AI strategically and smaller players still navigating its potential.
Perceived Overall Benefits of AI Among Hotel Users by Country





This comparison shows that hotel users across all countries perceive tangible benefits from AI implementation, with generally higher ratings among those who actively use AI tools. Austria leads with the highest perceived benefits (8.0) and sector impact (7.3), followed closely by Germany and Switzerland. Southern and Eastern European countries like France and Greece report lower overall scores, suggesting either more limited or less effective implementation of AI. The consistent gap between perceived benefits among users and overall sector impact highlights a key message: firsthand experience with AI tends to foster more positive evaluations.





> Adoption of AI-Based Technologies

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Does your hotel use technologies that incorporate or are based on artificial intelligence (AI)?



ChatGPT, Gemini or other content generation services: Generation of texts for guest communication (Email, Website)) Analysis and feedback on online customer reviews Real-time revenue management (dynamic pricing) Personalised service for customers (personalised e-mailing, recommendations, guest app) Predictive analytics (e.g. occupancy rate, profitability of a hotel) Automation of responses to customer comments ChatBot (applications for automated instant messaging) Generation of images for content (e.g. Midjourney, DALL.E2) Passport validation (Guest check-in) Assistance systems for product development, communication (e.g. ReGuest) Customer profiling (creation of unified customer profile) Workforce planning Virtual assistant (e.g. Apple Siri, Amazon Alexa) Collection and analysis of waste (waste management) Automatic menu creation and validation (cost of menu modification, streamlining of routine validation process) Automation of the hotel or hotel room (e.g. Andivi) and robotics (e.g. robot Pepper).



Adoption of AI-Based Technologies in Hotel Operations



- AI adoption in hotels is uneven across different technologies.
- The most widely implemented tool is generative AI for guest communication (e.g. ChatGPT, Gemini), used by 74% of respondents. Other frequently used applications include review analysis (44%), dynamic pricing (42%), and personalized services (38%).
- In contrast, more advanced or infrastructure-heavy tools like facial recognition (2%), robotics (3%), and automatic menu creation (4%) show very low adoption. High "planned" usage rates in several categories (e.g., automation of responses, predictive analytics) suggest growing interest, although significant barriers still limit uptake for more complex solutions.

Adoption of AI-Based Technologies in Hotel Operations: Other Tools Mentioned (Open Comments)



Hotels reported a growing use of AI tools to enhance **guest communication and service delivery**. Common applications include **chatbot-based telephone assistants**, **automated voice generators**, and tools like **PhoneAI**. Some hotels are planning to introduce AI-powered **interpretation services** at reception and already use machine translation tools to support multilingual operations.

Generative AI is widely used for **content creation and marketing**. Tools like ChatGPT, Adobe Firefly, Gemini Advanced, HERA, and Luma AI are used to produce guest communication content, images, and social media posts. Several properties leverage **AI to manage guest reviews**. The tool "Mara" is used both for review analysis and for automating responses, while "Kilian" is an AI-based marketing assistant for the sector. "Smart host" and "Rainmaker" are used to support the guest journey through automated messaging and upselling strategies.

AI is also supporting **operational efficiency**. Examples include staff training through avatar videos, AIassisted competitive analysis, and the use of cameras for guest flow analysis. Systems such as MEWS incorporate AI features for property management, while Pointchamp offers AI-based HR management. Perplexity and Julius.ai were also mentioned, likely for analytical purposes or research tasks.

Finally, some respondents expressed **concerns about data privacy** and regulatory compliance, particularly with regard to GDPR. One comment noted that the required data volume may not align with European privacy rules, while another highlighted that all hotel technology is outsourced to a general provider, suggesting a full-service AI integration model.

Evolution in the Adoption of AI-Based Technologies in Hotel Operations: Survey 2023 vs 2025



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ChatGPT, Gemini or other content generation services: Generation of texts for guest..

Analysis and feedback on online customer reviews

Real-time revenue management (dynamic pricing)

Personalised service for customers (personalised e-mailing, recommendations, guest app)

Predictive analytics (e.g. occupancy rate, profitability of a hotel)

ChatBot (applications for automated instant messaging)

Generation of images for content (e.g. Midjourney, DALL.E2)

Assistance systems for product development, communication (e.g. ReGuest)

Customer profiling (creation of unified customer profile)

Virtual assistant (e.g. Apple Siri, Amazon Alexa)

Collection and analysis of waste (waste management)

Automatic menu creation and validation (cost of menu modification, streamlining of...

Automation of the hotel or hotel room (e.g. Andivi) and robotics (e.g. robot Pepper).

% Evolution of AI-Based Technologies in Hotel Operations in DACH region: Survey 2023 vs 2025





Growth rate 2023/2025 (DACH)

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Evolution in the Adoption of AI-Based Technologies in Hotel Operations: Survey 2023 vs 2025 (I)



The comparison between the 2023 and 2025 surveys reveals a clear and **significant acceleration in the adoption of AI-based technologies in hotel operations**—especially in the DACH region (Germany, Austria, Switzerland). The most striking evolution lies not only in the increased adoption rates across nearly all technologies, but also in the emergence of generative AI tools as mainstream solutions. It is important to note that the 2025 sample includes a greater share of smaller hotels (median size in DACH falling from 50 to 30 rooms), which may influence adoption patterns and technology priorities.

Key Evolutions and Trends

- **1. Generative AI Breakthrough** (ChatGPT, Gemini, etc.): The most dramatic shift concerns the use of generative text AI tools. In 2023, usage was negligible (19% overall, 19% DACH). By 2025, adoption surged to 74% overall and 80% in DACH, making this the most widely implemented AI-based application in the sector. This explosive growth reflects the widespread accessibility, low barrier to entry, and direct benefits of such tools for guest communication and content creation.
- 2. Solid Growth Across Core Operational Tools: Other AI tools already in moderate use in 2023—such as analysis of online reviews, real-time revenue management, and predictive analytics—also showed strong growth. For example: Online review analysis rose from 38% to 44% in DACH. Dynamic pricing tools increased from 30% to 42% overall and even more in DACH (from 34% to 50%). Predictive analytics climbed from 37% to 44% in DACH. This suggests growing confidence in data-driven decision-making, particularly among DACH hotels, which often lead in structured pricing and guest feedback management.

Evolution in the Adoption of AI-Based Technologies in Hotel Operations: Survey 2023 vs 2025 (II)



3. Expansion of Customer-Facing and Personalization Tools: Technologies related to customer service like chatbots and personalized recommendations—witnessed notable gains. Chatbot adoption tripled in some areas: Chatbots rose from 11% to 31% overall (and 17% to 37% in DACH).Personalized services increased from 30% to 38% overall. This aligns with the increasing prioritization of guest experience and service automation, even in mid-size hotels.

4. Niche or Emerging Technologies Remain Marginal: Technologies such as facial recognition, robotics, or automatic menu creation remain at very low levels of adoption, with marginal growth between 2023 and 2025. For example: Facial recognition is still at just 2% in DACH. Robotics/room automation and AI in kitchen operations remain below 10% across the board. This suggests barriers like high costs, unclear ROI, or limited operational need in most hotel types.

5. Decline in some technologies: The observed drop in the use of AI for workforce planning and predictive analytics likely reflects a shift in the sample composition between 2023 and 2025—towards smaller, less data-intensive hotels (with median room numbers decreasing from 40 to 31 overall and from 50 to 30 rooms for countries in DACH region). This trend may also point to a growing focus on more accessible, guest-facing AI applications that promise quicker returns and easier implementation.

Conclusion: Between 2023 and 2025, AI adoption in hospitality has entered a new phase—driven primarily by generative AI, deeper integration of analytics, and expanded use of customer service automation. Meanwhile, more experimental or infrastructure-heavy technologies remain niche, highlighting a pragmatic approach: prioritize what is scalable, impactful, and immediately applicable.

Adoption Patterns of <u>Common</u> AI Technologies in Hotels (I)

The adoption of widely used AI technologies in hotels—such as **content generation tools** (e.g., ChatGPT), **review analytics**, **real-time revenue management**, **personalized guest services**, **predictive analytics**, and **automated communication**—is notably concentrated in **larger**, **urban hotels with high levels of operational complexity**. Hotels that have implemented these tools tend to have more than 30 rooms and employ over 36 full-time staff, often operating in big cities where competition, guest volume, and data intensity are high. These hotels are typically in the 4- and 5-star categories, indicating that AI is being leveraged to optimize resource allocation, improve pricing accuracy, and personalize guest experiences—functions that are especially valuable in upscale environments.

Interestingly, both chain and independent hotels are actively engaging with these AI tools, but their motivations and implementations differ. **Chain hotels are particularly active in the adoption of internalfacing AI technologies** such as real-time revenue management and predictive analytics. These tools align well with chain hotels' centralized data systems and structured processes, enabling consistent revenue optimization across multiple properties. In contrast, **independent hotels are more likely to adopt guestfacing technologies** like content generation, chatbots, and review analytics. These tools are relatively easy to deploy and have immediate effects on customer communication and digital visibility, offering independents a competitive edge in attracting and converting online guests.

 $\Sigma \pi \approx 8$

Adoption Patterns of <u>Common</u> AI Technologies in Hotels (II)

Hotels that **plan to adopt such common technologies** show similar traits, though they tend to be **slightly smaller and less mature in terms of staffing and scale**. These planning hotels often fall into the midsized segment, with 20 to 50 rooms and 18 to 35 employees. Many are located in leisure destinations such as mountain or seaside resorts. While they may not yet have the volume of data or operational scale to fully exploit complex AI systems, their interest signals an ongoing diffusion of AI across the hotel sector. These properties see value in automation and digitalization but may be waiting for solutions that are more costeffective, user-friendly, or adapted to their business model.

Overall, the integration of popular AI tools is closely tied to hotel scale, complexity, and category level. High-volume, high-end hotels lead the way, not only because they have more resources but also because they face more operational and strategic challenges where AI can provide measurable improvements. However, the strong level of interest from mid-sized and independent properties suggests that AI adoption is broadening, with many hotels viewing it as a necessary step to remain relevant and competitive in a fast-evolving market.

 $\Sigma \pi \approx 8$

Adoption Patterns of <u>Emerging</u> AI-Based Technologies in Hotels (I)



- 1. Low adoption technologies are tied to niche or resource-intensive contexts: Technologies such as facial recognition, hotel automation (e.g. robotics, smart rooms), and automatic menu creation remain marginal (used by fewer than 5–6% of respondents). These solutions are more likely to be used or planned in hotels with very specific contexts: either upscale or tech-driven urban settings (as seen in automation and facial recognition), or in cases where the hotel has sufficient scale and complexity to justify integration costs. For instance, those planning hotel automation are primarily large hotels with 40+ rooms, while those who already use it are rare and mostly urban.
- 2. Certain innovations appeal to smaller or independent hotels: A few technologies—such as generation of images for content and virtual assistants—appear to find early adoption among small hotels (often under 20 rooms) or those located in destinations like Greece. These tools likely offer low-barrier experimentation opportunities (e.g. Midjourney for image creation or Siri for guest communication) that do not require system-wide integration. Interestingly, hotels using **virtual assistants** often have fewer than 9 employees, suggesting that such tools may be leveraged in low-staffing environments as a support mechanism rather than as part of a strategic tech rollout.
- **3. Technologies linked to guest interaction show diverging patterns**: Technologies supporting **guest check-in (passport validation, facial recognition)** are generally underused. When used, they are most often found in urban, mid-sized hotels—especially in countries like Italy and France. However, a significant portion of the hotels that have implemented passport validation are classified with 2 or 5 stars, reflecting both ends of the market spectrum. This duality suggests some use these technologies for efficiency at low-cost scale, while others leverage them for premium digital experience positioning.

Adoption Patterns of <u>Emerging</u> AI-Based Technologies in Hotels (II)



4. Workforce and operations management attract larger hotels with clear functional needs: Solutions like **workforce planning** and **assistance systems for product development** or communication (e.g. ReGuest) tend to be used in larger hotels, particularly those part of chains. Hotels planning to adopt workforce planning tend to focus on MICE clientele and have higher staff numbers (>36 employees), signaling a more strategic, HR-focused tech implementation trend.

5. Customer profiling and personalization are in transition: Customer profiling remain relatively underutilized, but planned adoption is visible—especially among mid-sized mountain resorts and 4-star hotels. These segments may be seeking to improve loyalty and marketing precision in competitive leisure markets. The lack of use in urban business hotels may suggest that either such tools are integrated elsewhere (e.g. PMS/CRM) or deprioritized compared to more immediate operational tools.

Conclusion: Overall, adoption of advanced or emerging AI technologies in hospitality remains selective and context-driven. Resource constraints, relevance to hotel size and segment, and clarity of use case appear to strongly shape adoption. High perceived complexity or capital intensity may correlate with slower uptake, while modular and affordable tools (like content generation) show more promising dynamics especially in hotels where scale or operational needs justify the investment.





> Key Application Domains of AI

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In which areas do you think AI will be the most useful for hotels? (several choices possible)

Key Application Areas of AI in Hospitality

68% Reservations Marketing (content generation for social 62% networks, website etc.) Customer relationship management (e.g. 51% customer profiling, personalized service for customers) Enhancing data analysis and reporting 49% capabilities 45% Personalization of the customer experience 41% Finance Enhancing cybersecurity and fraud 38% detection. Streamlining financial analysis and 34% forecasting Optimising the efficiency of operational 34% processes Improving inventory and supply chain 28% management 26% Predictive maintenance management 25% Human ressources 22% Kitchen (measure and monitor food waste) Kitchen (generation of ideas for the menu. 20% creation and validation of menus) 3% Others, please specify 0% 10% 20% 30% 60% 70% 80% 40% 50% Percentage

Respondents identified reservations (68%) and marketing content creation (62%) as the most promising domains for AI integration in hotels. This reflects a strong focus on improving customerfacing functions and optimizing revenue generation channels. Other top areas include customer relationship management (51%), data analysis (49%), and personalized quest experiences (45%), suggesting that AI is seen as a lever for both operational efficiency and enhanced service delivery. Operational and back-office functions like finance, cybersecurity, and supply chain management also show notable interest, though kitchen applications remain niche.

Key Application Areas of AI in Hospitality : <u>Other Domains Mentioned</u> (open comments)



The open responses on additional areas where hotels see AI as potentially useful reveal a mix of enthusiasm, caution, and outright rejection. Several respondents emphasized **concrete operational benefits**. Some highlighted **time savings at the reception**, more **efficient revenue management**, or **automation of repetitive administrative tasks** such as official forms, internal communication, or accounting. A few mentioned specific solutions such as smart room and IoT management, energy optimization, voice-controlled guest services, and even augmented reality for enhancing on-site guest experience. AI was also seen as useful for managing night shifts or low-staff periods, enabling customer self-service during off-hours.

Some participants stressed **strategic or integrative uses**, such as consolidating complex guest scheduling from multiple systems in health tourism environments or replacing expensive interface systems through AI-based integration and monitoring. The potential of **AI to detect fake negative reviews** (linked to unfair competition) or to assist in multilingual communication and guest FAQs was also mentioned.

On the other hand, several responses reflected **deep skepticism or rejection**. Some view AI as harmful to authentic customer interaction, environmentally problematic, or simply a "hype" not suited to the hospitality industry. A few respondents explicitly said they see no benefit, while others expressed uncertainty.

In sum, while some respondents envision AI as a practical tool to reduce workload and improve guest services or back-office efficiency, others remain unconvinced—citing emotional, ethical, or contextual limitations to its usefulness in the hotel environment.

Key Application Areas of AI in Hospitality versus Hotel Characteristics (I)



Hotel Size and Staffing - A Key Differentiator: Larger hotels—especially those with 80+ rooms or employing 36+ full-time staff—tend to **perceive AI as broadly useful across multiple domains**. These properties are more likely to see benefits not only in guest-facing areas like reservations and personalization, but also in finance, HR, and operational functions. Their scale likely justifies investment in automation and data analytics, and their organizational complexity makes AI more applicable to streamline back-office processes. Conversely, **small hotels** (e.g., fewer than 20 rooms or with fewer than 9 staff members) focus their **expectations more narrowly on marketing and reservations**, reflecting their limited operational scope and resource constraints. For these hotels, AI is primarily seen as a tool to boost visibility and sales rather than to optimize internal processes.

Hotel Category and Star Rating: Hotels with higher star ratings (4- and 5-star) demonstrate a stronger belief in the **potential of AI across a wide spectrum of applications**. They are more likely to mention personalization, data analytics, finance, cybersecurity, and HR—suggesting that upscale properties aim to use AI not just for efficiency but also to enhance guest experience and strategic management. By contrast, 2- and 3-star hotels tend to concentrate their perceived benefits on core marketing and operational tools (e.g., content creation, reservations, customer relationship management), where immediate ROI is more visible and technology adoption may require fewer structural changes.

Key Application Areas of AI in Hospitality versus Hotel Characteristics (II)



Customer Segments and Service Orientation: Hotels that primarily serve **business travelers or MICE** segments report higher **expectations for AI in HR, finance, inventory, and cybersecurity**. These properties may prioritize automation and reporting for workforce management, planning, or fraud detection. Their clientele likely demands operational precision and responsiveness, which aligns with more advanced AI solutions. In contrast, **leisure-focused hotels emphasize AI's potential in marketing**, content creation, personalization, and reservations—applications more closely tied to demand generation and customer engagement in competitive leisure markets.

Location Type: Hotels in urban environments (cities of 10,000 to 50,000 or more) show higher **expectations for AI across both customer-facing and administrative functions**, reflecting their exposure to complex distribution channels and diverse client needs. These properties also tend to rate the usefulness of AI in streamlining processes and financial forecasting more highly than rural or resort-based hotels.

Conclusion: Across all profiles, AI is widely seen as a strategic lever—but the expected areas of benefit differ by operational profile. Larger, upscale, and business-oriented hotels foresee broad and deep AI applications across guest services and internal operations. Smaller or leisure-focused properties are more selective, favoring high-impact tools for marketing, bookings, and personalization. This divergence highlights the need for tailored AI adoption strategies aligned with hotel typology and capabilities.

Evolution of Key Application Areas of AI in Hospitality : Comparison Study 2023 vs 2025 (I)



Four items have been added in the 2025 survey: Enhancing data analysis and reporting capabilities, enhancing cybersecurity and fraud detection, Streamlining financial analysis and forecasting, improving inventory and supply chain management

Evolution of Key Application Areas of AI in Hospitality : Comparison Study 2023 vs 2025 (II)



Between 2023 and 2025, hotel professionals' perceptions of the most promising application areas for AI have broadened. While *reservations and marketing continue to top the list*—with marketing slightly gaining importance (up to 62%)—there is growing perceived potential in customer relationship management (+6 percentage points) and data analysis and reporting, which was newly introduced in 2025 and already cited by 49% of respondents. This suggests that **hoteliers increasingly see AI as a tool not only for customer-facing tasks but also for enhancing data-driven decision-making**.

The addition of areas like cybersecurity, financial forecasting, and inventory management in the 2025 survey also reflects a shift in perception toward more strategic and operational uses of AI. Respondents in the DACH region appear to value these operational domains even more strongly—particularly when it comes to optimizing processes and supply chain management.

In contrast, perceived usefulness in areas like human resources and predictive maintenance remains more limited, though not insignificant. Overall, the 2025 results suggest that hotel professionals now see AI as having broader potential across multiple hotel functions, extending beyond guest interaction to include operational efficiency, risk mitigation, and business intelligence.

The decline in certain application areas—such as operational efficiency (-14 points) and human resources (-7 points)—between 2023 and 2025 likely reflects a shift in the respondent profile toward smaller hotels, with the median number of rooms dropping from 40 in 2023 to 31 in 2025. These smaller establishments tend to focus more on guest-facing AI applications and less on complex back-office optimization solutions.





> Key Barriers to AI Adoption

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Key Barriers to AI Adoption in the Hotel Sector

What specific challenges or obstacles have you encountered in integrating artificial intelligence into your hotel's operations, if you have already adopted it? If you have not yet adopted AI, what potential barriers do you perceive? (multiple choices possible)



The commonly cited challenges most for AI implementation in hotels are related to knowledge gaps and technical limitations. Nearly 40% of respondents report a poor understanding of available AI solutions on the market, followed by concerns over high setup costs (35%), system complexity (34%), and difficulties integrating AI into existing workflows (34%). Additional barriers include a lack of technical skills (32%), general AI awareness (32%), and trust issues related to reliability and data privacy. These findings highlight that overcoming both knowledge and integration hurdles will be essential for broader AI adoption in hospitality.

Key Barriers to AI Adoption in the Hotel Sector: <u>Other Barriers Mentioned</u> (open comments)



Several hotel professionals expressed deep skepticism or resistance to AI, citing a perceived **loss of human touch and sovereignty**. Many fear that implementing AI may compromise the personal and familiar relationships they have built with guests. Some explicitly stated they prefer analog methods and value direct interaction over digital tools.

A number of comments highlighted **technical and infrastructural limitations**, such as lack of reliable internet, unstable networks, or insufficient system interfaces. These gaps make the integration of AI tools technically difficult or unfeasible in certain locations or settings. Some also cited an overload of fragmented solutions with no unified provider, adding complexity to adoption and operations.

Others raised **privacy and regulatory concerns,** particularly around the use of personal data, voice or facial recognition, and compliance with regulations like the **GDPR** (DSGVO). There were also worries about storing sensitive company data in the cloud and the risk of such data being used to train large language models.

Resource constraints were also frequently mentioned: lack of time, staff capacity, budget, and decision-making authority within hotel organizations. Some noted that they have no corporate credit cards or internal processes to pay for AI tools, requiring personal payment for tools like ChatGPT. A few commented that management's outdated mindset remains a barrier to innovation.

Additionally, **strategic and timing uncertainties** surfaced, with hoteliers unsure when and how to adopt AI tools without constant readjustments. The rapid pace of development was seen as both overwhelming and risky, making it difficult to evaluate stable solutions.

Finally, **emotional and ethical concerns** were voiced: fear of artificial intelligence, skepticism over misinformation and fake content, and philosophical opposition to replacing human labor with machines. These concerns underline that AI adoption in hospitality is not only a technical or economic issue, but also a cultural and value-based one.



Transversal Analysis of Key Barriers to AI Implementation in Hospitality (I)



Barriers to adopting artificial intelligence in hotels are strongly influenced by structural and operational characteristics.

<u>Smaller hotels</u>—particularly those with fewer than nine full-time employees—are more likely to cite **high** setup costs as a major challenge. This reflects limited investment capacity and lower economies of scale, making AI deployment appear riskier or financially unviable. The same small-scale operations also tend to report lack of technical skills and poor knowledge of AI solutions, pointing to a need for more targeted support, accessible training, and simplified solutions tailored to smaller operators.

Conversely, hotels with more complex organizational setups, such as <u>larger properties</u> or those serving **business and leisure travellers**, are more likely to face **challenges around data**—including **lack of quality data**, **difficulty integrating AI into existing systems**, and **concerns over data privacy and security**. These hotels are also more often officially classified (3–5 stars), which likely implies more digitized operations and greater data reliance, thereby exposing more technical barriers and integration hurdles.

Hotels located in <u>resort or countryside settings</u> frequently mention **low ROI certainty** and **difficulty finding reliable AI providers**—barriers likely tied to seasonal operations and limited supplier networks. This also corresponds with a **lack of trust in the reliability of AI outputs**, a concern raised more often by those not embedded in tech-driven urban ecosystems.

Transversal Analysis of Key Barriers to AI Implementation in Hospitality (II)



Interestingly, employee-related barriers such as **resistance to change** are more prominent in **m**<u>id-sized</u> <u>hotels</u> (e.g. those with 18–35 employees), suggesting that internal culture and change management efforts are key at this scale—where structures are formalized but agility may be reduced.

In summary, the data highlights that micro-enterprises primarily struggle with financial and knowledgebased constraints, while larger and more complex hotels are increasingly exposed to data and integration barriers. Mid-sized hotels, meanwhile, are caught between both worlds, facing adoption frictions from organizational inertia and transitional technical gaps. Tailored strategies—ranging from subsidies and plugand-play solutions to internal change facilitation and data governance—are needed to address these diverse bottlenecks across the hotel landscape.

Evolution of Perception of Key Barriers to AI Adoption: Comparison Study 2023 vs 2025 (I)



High setup cost High technical complexity of AI systems Difficulty integrating AI into existing processes Lack of technical skills to use AL Lack of understanding of AI in general It was difficult to find a reliable AI service provider Reliability and accuracy of AI outputs Lack of suitable and affordable 'off the shelf' products Concerns about security and privacy of customer data Strict data protection and privacy regulations Lack of understanding of the benefits of AI Employee resistance to change Uncertain return on investment (ROI) Compatibility of AI systems with our information system Lack of quality data Faulty and immature products Ethical concerns around AI decisions Strategy is focused on a traditional customer experience. No management support Other challenge(s) or obstacle(s):

Two items have been added in the 2025 survey: Reliability and accuracy of AI outputs, Ethical concerns around AI decisions

Evolution of Perception of Key Barriers to AI Adoption: Comparison Study 2023 vs 2025 (II)

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Between 2023 and 2025, hotel professionals' perception of the barriers to AI adoption has remained relatively stable overall, but with some noteworthy shifts in emphasis.

The most cited difficulties—such as **poor knowledge of available AI solutions**, **high setup costs**, **technical complexity**, and **integration challenges**—continue to top the list, with small increases in most categories. This suggests that despite growing interest in AI, the practical obstacles to implementation remain tangible for many operators.

The barrier of **high set-up costs shows one of the most significant decreases**, with a drop from 61% in 2023 to 39% in 2025 (-22 points). This suggests that AI technologies are becoming more affordable or that hotels now better understand cost-benefit trade-offs. Alongside this, concerns about compatibility with existing systems (-14 pts), faulty products (-8 pts), and strategy misalignment (-6 pts) also declined, indicating a general reduction in perceived implementation hurdles across the sector.

In sum, the findings point to a more informed yet cautious stance: while AI has gained visibility, the perceived hurdles—especially technical and knowledge-related—remain prominent. However, the sharp drop in the perception of high set-up costs (-22 points) suggests a growing awareness of AI's affordability and feasibility. New concerns around trust and ethics are also beginning to surface as adoption broadens.





> Perceived Benefits of AI Implementation

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Perceived Benefits of AI Implementation in Hotels

What are the experienced or perceived benefits of introducing these technologies for a hotel? (Multiple answers possible)



Time savings (76%) is by far the most commonly perceived benefit of AI implementation in hotels, followed by improvements in communication and marketing (54%) and operational efficiency (51%). A significant number of respondents also associate AI with enhanced data management (44%) and increased sales (40%). While cost reduction and competitive positioning are noted, more strategic or sustainability-oriented impacts, such as optimized tourist experience or emergency response, are less frequently mentioned—indicating that AI is primarily valued for its operational and commercial efficiencies rather than broader systemic transformations.

Perceived Benefits of AI Implementation in Hotels: <u>Other Benefits</u> (open comments)



Several respondents noted potential **supportive benefits** of AI rather than transformative ones. For example, one commented that AI should be seen as "only supportive", emphasizing that human involvement remains essential ("*il faudra toujours la main de l'homme*").

Operational relief was mentioned in a few responses, such as the potential for AI to replace staff in areas where hiring is difficult. One respondent hoped AI could at least reduce paperwork, administrative tasks, accounting, and stock management when staff shortages are acute.

Strategic improvements were cited by a few, particularly around pricing. "*Optimierung der Preisgestaltung*" and "*stratégie tarifaire*" suggest that some see AI as a tool for improving yield management and rate optimization.

However, **many respondents expressed skepticism or provided non-responses**, reflecting either a lack of familiarity or belief that there are no additional benefits beyond the predefined list.

Some expressed **critical concerns**, stating that AI might lead to job losses ("cela va créer du licenciement") or erode personal guest contact ("der persönliche Kontakt wird fehlen"). These highlight a persistent tension between efficiency gains and the perceived loss of human touch in hospitality.

One respondent noted **knowledge acquisition** as a less tangible but meaningful potential benefit, pointing toward AI's value in internal learning and capability development.

Transversal Analysis of Perceived Benefits by Hotel Profile



AI implementation is broadly seen as delivering operational and strategic benefits across hotel types, but the nature of these benefits varies significantly by hotel size, location, classification, and customer segment.

Larger hotels, especially those with more than 80 rooms, are more likely to report a wide array of benefits from AI adoption. These establishments tend to emphasize improved **user experience** and **data management**, reflecting their greater capacity to leverage AI technologies across more complex operations and higher guest volumes. The same segment also reports stronger gains in **operational efficiency** and competitiveness, likely due to economies of scale and dedicated resources for implementation and optimization.

Hotels situated in **mid-sized urban areas** (10,000–50,000 inhabitants) and with a focus on the MICE segment (Meetings, Incentives, Conferences, and Events) particularly highlight improvements in communication, marketing, and operational efficiency. This suggests that AI tools are being leveraged not only for back-office tasks but also to enhance interaction with more demanding or professional clientele.

Transversal Analysis of Perceived Benefits by Hotel Profile



<u>Star classification</u> also influences perceived benefits. Hotels in the 4-star range are more likely to report multiple benefits, from time savings and improved guest experience to decision-making and competitiveness. This points to a segment that is both digitally progressive and customer-focused, investing in AI for both service quality and process improvement.

<u>Smaller hotels</u> (under 20 rooms) also perceive **time savings** and **marketing enhancements**, but fewer strategic or data-driven benefits are cited. This suggests that AI is mostly valued for relieving staff pressure and supporting basic guest communication, rather than transforming management systems or customer analytics.

In sum, the perception of AI benefits grows with hotel complexity: larger, higher-rated, and MICEoriented hotels report broader and deeper returns. Smaller and less classified properties see AI more as a tool for saving time and simplifying communication.





> Most Useful AI Tools for Hotels

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Three most Useful AI Tools Mentioned by Hotels (open comments)

1. Most Frequently Mentioned AI Tools

The dominant tool cited by far is ChatGPT, often used for:

- Text generation (e.g., emails, newsletters, social media content)
- Customer communication (responses to reviews, FAQs)
- Translation tasks

Other generative AI tools mentioned include:

- Claude, Gemini, Perplexity, Mistral AI, Copilot (Microsoft)
- Canva, HERA, Midjourney, (for image generation)
- Adobe Firefly, Gamma.app
- Savebrain ChatGPT for business (private, secure)

2. AI-Powered Hospitality Software

Several sector-specific tools are repeatedly cited:

- Atomize, E-AXESS, HappyHotel, Ideas, Lighthouse, RateBoard, RateFinder, RoomPriceGenie, SmartPricing, for revenue management/dynamic pricing
- Customer Alliance, Mara, Qualitelis, ReGuest, smart host, TrustYou– for guest feedback management, review response
- HiJiffy, DialogShift for chatbots and customer interaction
- BellaBot, Hola Bot service robots
- Aleno, ASA, Gauvendi, ibelsa, MEWS, Mirus, Protel PMS systems / reservation systems

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> Conclusions

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Key Insights – Where Do We Stand in 2025?



- From Hype to Adoption: A Growing but Uneven Landscape: In 2025, 43% of hotels report not using AI at all, while 16% plan to adopt it soon. Among the 41% who already use AI, the vast majority are recent adopters: 29% started within the past two years, and only 4% have used AI for more than three years. This distribution highlights the early stage of AI maturity in the hotel sector. Adoption is strongest among larger hotels and upscale segments, while many smaller, independent properties remain cautious.
- **Perceived Impact Is Mostly Positive With Nuance**: While AI adoption in hotels is still emerging, users already report generally positive experiences. Among those who have implemented AI, the perceived benefits are rated at an average of 6.6 out of 10, with a median of 7. The most frequent rating is 8 (23%), followed by 10 (14%), showing strong satisfaction among early adopters. However, expectations remain tempered: the overall perception of AI's impact is more operational than transformational, with limited perceived influence on broader innovation, sustainability, or staff learning—especially in non-urban or budget segments.
- Most Used in Revenue Management and Marketing Guest-Facing Use Still Emerging: AI adoption in hotels is currently concentrated in revenue-related and content-driven applications, such as dynamic pricing, performance analytics, and automated content generation. These tools are easier to integrate into back-office workflows and offer clear operational value. In contrast, more interactive and guest-facing technologies including chatbots, personalization engines, and service robots remain marginal. Their lower adoption is often linked to technical integration challenges, staff readiness, and concerns about maintaining service quality and authenticity in guest interactions.
Overcoming Barriers and Tailoring AI Strategies in a Diverse Hotel Landscape

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- Perceived Barriers Are Declining but Not Gone: AI adoption in the hotel sector continues to face significant hurdles, primarily rooted in knowledge and technical constraints. The most frequently cited obstacle is a lack of awareness regarding available AI solutions (39%), highlighting a critical information gap within the industry. This is closely followed by concerns over high setup costs (35%) and the technical complexity of AI systems (34%), both of which create entry barriers for smaller or less digitally mature hotels. Additionally, challenges related to integrating AI into existing processes (34%) and a shortage of technical skills (32%) underline the operational difficulties many hoteliers face when considering AI implementation. These findings suggest that for AI to scale meaningfully in hospitality, greater emphasis must be placed on education, accessible tools, and supportive integration frameworks.
 - **AI Strategies Must Reflect Hotel Diversity: One Size Doesn't Fit All.** The findings confirm that AI adoption in the hotel industry is shaped by structural and operational diversity—what works for one type of hotel may not suit another. Small hotels face cost and knowledge barriers, mid-sized hotels often struggle with change management and internal inertia, while larger or more complex operations deal with data integration and privacy challenges. Similarly, location and seasonality—particularly in resort or countryside settings—can exacerbate issues like ROI uncertainty or limited access to AI providers. These nuances highlight the **importance of tailored support mechanisms**, from plug-and-play tools and training for smaller players, to data governance and integration solutions for larger properties.

Implications and Outlook



From Experimentation to Strategic Integration

 AI is shifting from a trend to a strategic tool. To fully benefit, hotels must move beyond isolated pilot projects toward coordinated, cross-functional deployment. This requires not only investments in data quality, upskilling, and change management, but also the development of a digital transformation strategy that is firmly aligned with the overall business strategy. Only then can AI adoption evolve from experimentation to a strategic asset that delivers long-term value across operations, marketing, and guest services.

Opportunities for SMEs – If Support Is Provided

 Small and medium-sized hotels still lag behind in AI adoption—not for lack of interest, but due to structural constraints such as limited financial resources, technical know-how, and strategic capacity. To bridge this gap, coordinated support from policymakers, industry associations, and technology providers is essential. Beyond operational tools and training, SMEs need access to strategic guidance, including simplified roadmaps, benchmarking tools, and coaching. This will allow even the smallest players to develop future-ready strategies and actively shape the sector's digital evolution.

Shaping a Human-Centric AI Future

 Finally, the future of AI in hospitality will depend not only on technology, but on values: transparency, accountability, and enhancing—not replacing—the human connection that defines hospitality. Hotels that can align AI tools with their service identity and guest expectations will shape the next wave of innovation.









Contact





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> Annex 1: Questionnaire

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Annex 1: The Questionnaire (1)



Artificial Intelligence (AI) and Distribution Strategies in the Hotel Sector

Dear Hoteliers,

In a rapidly changing hotel industry, the introduction of new technologies such as **Artificial Intelligence (AI)** is becoming increasingly crucial to remain competitive and optimise guest service. By taking part in our survey, you will make an important contribution to better understanding the challenges and potential of AI and **distribution strategies** and developing innovative solutions that will benefit you and the industry as a whole.

By sharing your experiences, you will help us to gain valuable insights into the current trends and requirements in hotel distribution, while also highlighting ways in which AI can be used effectively to increase efficiency and profitability.

The questionnaire should take approximately **7-10 minutes** to complete. Please rest assured that all responses will be handled confidentially, and no individual hotel will be identified in our reports or survey results, in strict accordance with data protection principles.

Please note:

- You can navigate between the pages using the arrows;
- Please do not forget to save your answers by clicking on the "save" button

Prof. Roland Schegg (roland.schegg@hevs.ch), HES-SO University of Applied Sciences Western Switzerland Valais-Wallis in collaboration with Cindy Heo (prof. at EHL Hospitality Business School)

Annex 1: The Questionnaire (2)



| General information about your hotel | | | | |
|---|---|------------------------|--|-------------|
| In which country is your hotel located? | | | | |
| O Austria | France | Germany | Greece | Switzerland |
| Big city (more that | tion of your hotel? an 50'000 inhabitants) an 10'000 and 50'000 | Village in countryside | Seaside Other |) |
| What is your main customer segment? | | | | |
| O Holiday / leisure t | travellers O Busin | ess travellers | MICE (Meetings, Incentives, Conferences, Exhibitions / Events) | Other |

Annex 1: The Questionnaire (3)



| Is your hotel officially classified (star category)? | | | | |
|---|-----------------------------------|--|--|--|
| ◯ Yes | ◯ No | | | |
| | | | | |
| How many rooms does your hotel have? | | | | |
| | | | | |
| | | | | |
| How many people work in your hotel (average numbe | er of full-time employees)? | | | |
| | | | | |
| | | | | |
| Is your hotel part of a hotel chain or a hotel cooperation? | | | | |
| No (independent hotel) Yes, from a cha | ain Yes, from a hotel cooperation | | | |



| Distribution/sales technologies and strategies | | | | |
|---|--|---|--|--|
| Does your hotel currently implement a revenue management strategy? | | | | |
| Yes | No | Planned to implement | | |
| Which KPIs (Key Performance Indicators) do you actively track to evaluate your hotel's performance? (select all that apply) | | | | |
| Average Daily Rate (ADR) | Gross Operating Incom Rooms (GOI Rooms | Customer Acquisition Cost (CAC) | | |
| Net Average Daily Rate (NetADR) | Gross Operating Income F+B (GOI F+B) | Customer Satisfaction Score | | |
| Occupancy Rate (room) | Total Gross Operating Profit (TGOP) | Labor Cost Ratio | | |
| Revenue per Available Room (RevPAR) | Gross Operating Profit per Available Room (GOPPAR) | Staff Retention Rate | | |
| Revenue Per Occupied Room (RevPOR) | EBITDA Margin | Local Sourcing / Procurement Percentage | | |
| Revenue Per Square Meter/Foot (RevPAM) | Average Length of Stay (ALOS) | Energy Consumption Per Occupied Room | | |
| Total Revenue Per Available Room (TRevPAR) | Direct Booking Ratio | Percentage of Renewable Energy Used | | |

Annex 1: The Questionnaire (8)





Annex 1: The Questionnaire (9)



How do you maintain your rates and availabilities on the online booking channels? on several channels at the same time (channel manager) manual online Ob you work with a PMS (Property Management System) / Front Office system? Yes No



Annex 1: The Questionnaire (10)

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Artificial intelligence (AI)

On a scale of 1 to 10, how would you rate the impact of using AI for hotels in general?





Annex 1: The Questionnaire (11)



Does your hotel use technologies that incorporate or are based on artificial intelligence (AI)?

| | Yes | It is planned | No | Don't know / Not applicable |
|---|------------|---------------|------------|--------------------------------|
| ChatBot (applications for automated instant messaging) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Virtual assistant (e.g. Apple Siri, Amazon Alexa) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Passport validation (Guest check-in) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Facial recognition systems (Guest check-in) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Customer profiling (creation of unified customer profile) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Personalised service for customers (personalised e-mailing, recommendations, guest app) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Automatic menu creation and validation (cost of menu modification, streamlining of routine validation process) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Collection and analysis of waste (waste management) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Real-time revenue management (dynamic pricing) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Predictive analytics (e.g. occupancy rate, profitability of a hotel) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Workforce planning | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Analysis and feedback on online customer reviews | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Automation of responses to customer comments | \bigcirc | 0 | \bigcirc | \bigcirc |
| ChatGPT, Gemini or other content generation services: Generation of texts for guest communication (Email, Website)) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Generation of images for content (e.g. Midjourney, DALL.E2) | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Automation of the hotel or hotel room (e.g. Andivi) and robotics (e.g. robot Pepper). | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Assistance systems for product development, communication (e.g. ReGuest) | \bigcirc | 0 | \bigcirc | \bigcirc |

If you use or plan to use other Al-based technologies or tools, please specify:

Enter your text here

Annex 1: The Questionnaire (12)



In which areas do you think AI will be the most useful for hotels? (several choices possible)

| Finance | Kitchen (generation of ideas for the menu, creation and validation of menus) |
|--|--|
| Human ressources | Kitchen (measure and monitor food waste) |
| Reservations | Enhancing data analysis and reporting capabilities |
| Customer relationship management (e.g. customer profiling, personalized service for customers) | Improving inventory and supply chain management |
| Personalization of the customer experience | Streamlining financial analysis and forecasting. |
| Predictive maintenance management | Enhancing cybersecurity and fraud detection. |
| Optimising the efficiency of operational processes | Others, please specify |
| Marketing (content generation for social networks, website etc.) | |

Annex 1: The Questionnaire (13)

What specific challenges or obstacles have you encountered in integrating artificial intelligence into your hotel's operations, if you have already adopted it? If you have not yet adopted AI, what potential barriers do you perceive? (multiple choices possible)

Lack of quality data
Uncertain return on investment (ROI)
High technical complexity of AI systems
Employee resistance to change
Strategy is focused on a traditional customer experience.
Lack of technical skills to use AI
Faulty and immature products
Lack of suitable and affordable 'off the shelf' products
Difficulty integrating AI into existing processes
Poor knowledge of AI solutions available on the market
It was difficult to find a reliable AI service provider

- Concerns about security and privacy of customer data
 Lack of understanding of Al in general
 Ethical concerns around Al decisions
 Reliability and accuracy of Al outputs
 Lack of understanding of the benefits of Al
 High setup cost
 No management support
 Compatibility of Al systems with our information system
 Strict data protection and privacy regulations
 - Other challenge(s) or obstacle(s):

Annex 1: The Questionnaire (14)



What are the experienced or perceived benefits of introducing these technologies for a hotel? (Multiple answers possible)

| Time savings | Improving communication and marketing |
|--|---|
| Improving operational efficiency | Optimized tourist experience design |
| Improved intercultural communication (internal and external) | Improved response capability to emergency situations. |
| Reducing costs | Increase in sales |
| Improved data management and analysis | Improved user experience |
| Improved competitive position | Improving decision-making |
| Sustainable development (optimization of resources etc.) | Other benefits |

Annex 1: The Questionnaire (15)



What are the 3 most useful AI tools in your hotel? Name the products:

Enter your text here

Do you have any general comments on AI in the hospitality industry?

Enter your text here

If you wish to receive a summary of the study, please indicate your e-mail address:

Enter your text here

Thanks for your collaboration!

Please save your answers







> Annex 2: Sample Profile by Country

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Annex 2: Sample Characteristics Austria





Annex 2: Sample Characteristics Austria (I): location





Annex 2: Sample Characteristics <u>Austria</u> (II): customer segments



Effective responses: 129 Response rate: 100% Holiday / leisure travellers 70% Business travellers 25% MICE (Meetings, Incentives, 4% Conferences, Exhibitions / Events) 2% Other 0% 10% 20% 30% 40% 50% 60% 70% 80% Percentage

What is your main customer segment?

Annex 2: Sample Characteristics <u>Austria</u> (III): classification



Is your hotel officially classified (star category)?

Effective responses: 103

Response rate: 80%



Annex 2: Sample Characteristics <u>Austria</u> (IV): star rating



If yes, what is the star rating of your hotel?

Effective responses: 71

Response rate: 55%



Annex 2: Sample Characteristics <u>Austria</u> (V): size of hotels



 How many rooms does your hotel have?

 Effective responses: 115
 Response rate: 89%

 Mean: 51.5
 Median: 30.0

 Min - Max: 6.0 - 600.0
 Min - Max: 6.0 - 600.0

30%

24% 23% 18% 20% Percentage 15% 13% 10% 7% 0% From 10 to 19 From 20 to 29 From 30 to 49 Less than 10 From 50 to 99 100 and over

Annex 2: Sample Characteristics <u>Austria</u> (VI): number of staff



How many people work in your hotel (average number of full-time employees)?

Response rate: 95%

Median: 10.0

Effective responses: 123 Mean: 20.8 Min - Max: 1.0 - 502.0



Annex 2: Sample Characteristics <u>Austria</u> (VII): type of hotel



Is your hotel part of a hotel chain or a hotel cooperation?



Summary of overall sample characteristics for Austria



The Austrian sample includes 129 effective responses and reflects the characteristics of a predominantly leisure-oriented, independent hotel market located in rural and alpine regions. The following features stand out:

Location:

Hotels are mainly located in **villages (45%)** and **big cities (30%)**, with **mountain resorts** accounting for **17%**. No hotels reported being located in seaside areas.

Customer Segments:

The vast majority of Austrian hotels cater to **holiday/leisure travellers (70%)**, while **business travellers** make up **25%**. MICE clients account for only **4%**, showing a strong orientation toward leisure markets.

Classification and Star Rating:

70% of hotels are **officially classified**, and among them, the most frequent category is **4-star (56%)**, followed by **3-star (35%)**. Only **1%** are in the 5-star segment.

Size and Staffing:

Room capacity is centered around small to medium sizes: Most hotels have between **10 and 99 rooms**, with the median at **30 rooms**.

Staff size is also modest:

68% of hotels operate with fewer than **20 full-time employees**, reflecting the **SME-dominated** nature of the Austrian hotel sector.

Type of Hotel:

A clear **majority (89%)** are **independent hotels**, with minimal participation in hotel chains (8%) or cooperations (3%).

Annex 2: Sample Characteristics Germany





Annex 2: Sample Characteristics Germany (I): location





Annex 2: Sample Characteristics <u>Germany</u> (II): customer segments





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Annex 2: Sample Characteristics <u>Germany</u> (III): classification



Is your hotel officially classified (star category)?

Effective responses: 209

Response rate: 83%





Annex 2: Sample Characteristics Germany (IV): star rating



If yes, what is the star rating of your hotel?

Effective responses: 111 Response rate: 44% 0% 1 3% 2 40% 3 52% 4 5 5% 1% Autre 5% 0% 10% 15% 20% 25% 30% 35% 40% 45% 55% 50% Percentage

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Annex 2: Sample Characteristics <u>Germany</u> (V): size of hotels



How many rooms does your hotel have? Effective responses: 244 Response rate: 97% Mean: 67.1 Median: 33.5 Min - Max: 5.0 - 2,510.0 30% 21% 19% 19% 19% 20% Percentage 16% 10% 7% 0% From 10 to 19 From 20 to 29 From 30 to 49 From 50 to 99 Less than 10 100 and over

Annex 2: Sample Characteristics <u>Germany</u> (VI): number of staff



How many people work in your hotel (average number of full-time employees)?

Response rate: 97%

Median: 12.0

Effective responses: 245 Mean: 23.5 Min - Max: 1.0 - 195.0



Annex 2: Sample Characteristics Germany (VII): type of hotel





Is your hotel part of a hotel chain or a hotel cooperation?

Summary of overall sample characteristics for Germany



Location

German hotels are geographically diverse, with 37% located in the countryside, followed by a strong presence in small (27%) and large cities (23%), and a notable 13% in seaside areas.

Customer Segments

The market is almost evenly split between leisure (48%) and business travelers (43%), with MICE and other segments accounting for less than 10%.

Classification and Star Rating

Just over half of the hotels (53%) are officially classified, most of which are 4-star (52%) or 3-star (40%) establishments.

Size and Staff

Hotels are relatively mid-sized, with an average of 67 rooms and of 23 full-time employees; staffing levels vary widely, from under 5 to over 50 employees.

Type of Hotel

The vast majority (80%) are independent hotels, with only 21% affiliated with chains or cooperations.

The German sample represents a structurally balanced and operationally mature landscape, with a blend of rural and urban settings. The high percentage of both leisure and business clients suggests versatility, while the notable presence of 4-star hotels and higher room capacities indicates a competitive mid-to-upper market focus. Despite being mainly composed of independent hotels, the relatively even staff and size distribution across segments points to professionalized operations even beyond chain affiliation.
Annex 2: Sample Characteristics France







Annex 2: Sample Characteristics France (I): location



What is the location of your hotel?

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Annex 2: Sample Characteristics <u>France</u> (II): customer segments





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Annex 2: Sample Characteristics <u>France</u> (III): classification



Is your hotel officially classified (star category)?

Effective responses: 289

Response rate: 93%





Annex 2: Sample Characteristics <u>France</u> (IV): star rating



If yes, what is the star rating of your hotel?

Effective responses: 262 Response rate: 85% 1% 2 22% 49% 3 25% 4 5 3% 0% Autre 0% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% Percentage

Annex 2: Sample Characteristics <u>France</u> (V): size of hotels

From 10 to 19

Less than 10



Effective responses: 302 Response rate: 97% Mean: 44.2 Median: 32.0 Min - Max: 6.0 - 218.0 30% 26% 20% 20% 20% 20% Percentage 10% 8% 7% 0%

From 20 to 29

From 30 to 49

From 50 to 99

100 and over

How many rooms does your hotel have?

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Annex 2: Sample Characteristics <u>France</u> (VI): number of staff



How many people work in your hotel (average number of full-time employees)?

Response rate: 98%

Median: 9.0

Effective responses: 304 Mean: 14.8 Min - Max: 1.0 - 150.0



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Annex 2: Sample Characteristics France (VII): type of hotel



Effective responses: 309 Response rate: 100% 61% No (independent hotel) Yes, from a chain 24% Yes, from a hotel cooperation 17% 0% 10% 20% 30% 40% 50% 60% 70% Percentage

Is your hotel part of a hotel chain or a hotel cooperation?



Summary of overall sample characteristics for France



Location

Hotels are equally distributed between big cities and countryside villages (29% each), followed closely by small cities (26%), with seaside (14%) and mountain resorts (5%) representing niche locations.

Customer Segments

The market is balanced between holiday/leisure travelers (50%) and business travelers (44%), with only 2% targeting the MICE segment and 4% citing other niches.

Classification and Star Rating

An overwhelming majority (91%) of hotels are officially classified; among these, 49% are 3-star, 25% are 4-star, 22% are 2-star, and only 3% are 5-star establishments.

Size and Staff

The median number of rooms is 32, with a slight concentration (26%) in the 50–99 room range; staffing is modest, with a median of 9 full-time employees and over half of hotels employing fewer than 10 staff.

Type of Hotel

A majority of French hotels in the sample are independent (61%), while 24% are part of a chain and 17% belong to a hotel cooperation.

The French hotel sample reflects a highly diverse landscape, both in terms of location and market positioning. Hotels are almost evenly split across urban, rural, and small-town areas, and they serve both leisure and business clientele in similar proportions. While most hotels are officially classified, they tend to operate in the mid-range category (2–4 stars), with relatively small team sizes and a predominance of independent ownership, indicating a fragmented yet structured market

Annex 2: Sample Characteristics <u>Greece</u>





Annex 2: Sample Characteristics <u>Greece</u> (I): location



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Annex 2: Sample Characteristics <u>Greece</u> (II): customer segments





Annex 2: Sample Characteristics <u>Greece</u> (III): classification



Is your hotel officially classified (star category)?

Effective responses: 454

Response rate: 100%



Annex 2: Sample Characteristics <u>Greece</u> (IV): star rating



If yes, what is the star rating of your hotel?

Effective responses: 453 Response rate: 100% 8% 1 2 24% 35% 3 21% 4 5 13% 0% Autre 0% 5% 10% 15% 20% 25% 30% 35% 40% Percentage

Annex 2: Sample Characteristics <u>Greece</u> (V): size of hotels





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Annex 2: Sample Characteristics <u>Greece</u> (VI): number of staff



How many people work in your hotel (average number of full-time employees)?

Effective responses: 447 Mean: 31.5 Min - Max: 0.5 - 740.0 Response rate: 98% Median: 7.0



Annex 2: Sample Characteristics <u>Greece</u> (VII): type of hotel



Is your hotel part of a hotel chain or a hotel cooperation?



Summary of overall sample characteristics for Greece



Location

Hotels in Greece are predominantly located in seaside areas (39%), followed by villages in the countryside (23%), and smaller cities (16%).

Customer Segments

The Greek hotel market is overwhelmingly oriented towards holiday/leisure travelers (91%), with only 7% focusing on business travel and negligible presence in MICE or other segments.

Classification and Star Rating

All surveyed hotels (100%) are officially classified; the majority fall into the 3-star (35%) and 2-star (24%) categories, followed by 4-star (21%) and 5-star (13%) properties.

Size and Staff

Hotels show varied sizes: 23% have 20–29 rooms and 21% have 10–19 rooms, with a median of 30 rooms. Staffing is lean, with 36% employing fewer than 5 full-time employees and a median of 7 FTE.

Type of Hotel

Greece's hotel landscape is dominated by independent establishments, which account for 91% of the sample, with minimal representation from chains (9%) and none from cooperations.

The Greek sample reflects a tourism model heavily anchored in leisure-oriented, seaside, and independently operated hotels, with smaller team sizes and mostly 2- to 4-star classifications. Business travel and chain affiliations remain marginal.

Annex 2: Sample Characteristics <u>Italy</u>







Annex 2: Sample Characteristics Italy (I): location





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Annex 2: Sample Characteristics <u>Italy</u> (II): customer segments





What is your main customer segment?



Annex 2: Sample Characteristics <u>Italy</u> (III): classification

Is your hotel officially classified (star category)?

Effective responses: 128

Response rate: 91%





Annex 2: Sample Characteristics <u>Italy</u> (IV): star rating



If yes, what is the star rating of your hotel?

Effective responses: 118 Response rate: 84% 2% 1 2 4% 3 49% 38% 4 5 3% 4% Autre 5% 0% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55% Percentage

Annex 2: Sample Characteristics <u>Italy</u> (V): size of hotels



How many rooms does your hotel have?



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Annex 2: Sample Characteristics <u>Italy</u> (VI): number of staff



How many people work in your hotel (average number of full-time employees)?



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Annex 2: Sample Characteristics <u>Italy</u> (VII): type of hotel



Effective responses: 140 Response rate: 99% No (independent hotel) 92% Yes, from a chain 6% Yes, from a hotel cooperation 2%

20%

0%

Is your hotel part of a hotel chain or a hotel cooperation?

Percentage

60%

80%

100%

40%

Summary of overall sample characteristics for Italy



Location

Mountain destinations dominate the Italian sample, with 67% of hotels located in mountain resorts. Urban locations are much less represented, with 13% in big cities and 8% in small cities.

Customer Segments

The vast majority of hotels (86%) cater primarily to holiday and leisure travelers, while business tourism is marginal (6%) and MICE is virtually absent.

Classification and Star Rating

92% of hotels are officially classified. Among them, 49% are 3-star and 38% are 4-star, while only 3% reach 5 stars.

Size and Staff

Most hotels are mid-sized: 44% have 30–49 rooms and the median is 35 rooms. Regarding staff, 36% of establishments employ 10–19 full-time employees, with a median of 12 FTE.

Type of Hotel

Independent hotels make up 92% of the sample, with very limited representation from chains (6%) or cooperations (2%).

The Italian hotel sample, largely sourced via the Trentino hotel association, is strongly skewed toward independent, mountainbased leisure hotels with official classification. These mid-sized businesses are mostly family-run or locally operated, focusing on tourism rather than business segments.

Annex 2: Sample Characteristics Switzerland





Annex 2: Sample Characteristics <u>Switzerland</u> (I): location





What is the location of your hotel?

Annex 2: Sample Characteristics <u>Switzerland</u> (II): customer segments



Effective responses: 196 Response rate: 98% Holiday / leisure travellers 67% Business travellers 21% MICE (Meetings, Incentives, 4% Conferences, Exhibitions / Events) Other 8% 0% 10% 20% 30% 40% 50% 60% 70% 80% Percentage

What is your main customer segment?

Annex 2: Sample Characteristics <u>Switzerland</u> (III): classification



Is your hotel officially classified (star category)?

Effective responses: 162

Response rate: 81%





Annex 2: Sample Characteristics <u>Switzerland</u> (IV): star rating



If yes, what is the star rating of your hotel?

Effective responses: 109

Response rate: 55%



Annex 2: Sample Characteristics <u>Switzerland</u> (V): size of hotels



How many rooms does your hotel have?



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Annex 2: Sample Characteristics <u>Switzerland</u> (VI): number of staff



How many people work in your hotel (average number of full-time employees)?

Effective responses: 189 Mean: 20.0 Min - Max: 1.0 - 350.0





Annex 2: Sample Characteristics Switzerland (VII): type of hotel



Effective responses: 191 Response rate: 96% 84% No (independent hotel) Yes, from a chain 5% Yes, from a hotel cooperation 12% 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% Percentage

Is your hotel part of a hotel chain or a hotel cooperation?

Summary of overall sample characteristics for Switzerland



Location

Nearly half of the hotels (48%) are located in mountain resorts, followed by 24% in countryside villages and 16% in big cities.

Customer Segments

The majority cater to holiday/leisure travelers (67%), while 21% focus on business travelers and 4% on MICE.

Classification and Star Rating

67% of hotels are officially classified, with 49% rated 3 stars and 37% 4 stars.

Size of Hotels

Room numbers are modest, with a median of 24 and most hotels having between 10 and 49 rooms (67% combined).

Staffing

The median staff size is 11 FTEs; 46% of hotels have fewer than 10 employees.

Type of Hotel

Independent hotels dominate the market (84%), while only 5% belong to chains and 12% to cooperations.

The Swiss hotel sample is predominantly composed of independent mountain hotels catering to leisure guests, often small in size and staff. A majority are officially classified, especially in the mid-range 3- and 4-star categories.




> Annex 3: Survey Resultats by Country

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Annex 3: Survey Results for Austria





Annex 3: Survey Results for <u>Austria:</u> Perceived Impact of Artificial Intelligence on the Hotel Sector



On a scale of 1 to 10, how would you rate the impact of using AI for hotels in general?



Annex 3: Survey Results for <u>Austria:</u> Current Adoption Levels of Artificial Intelligence in Hotels



Does your hotel use artificial intelligence (AI)?



Annex 3: Survey Results for <u>Austria:</u> Perceived Overall Benefits of AI Among Hotel Users



If you use AI, how do you rate the benefits of AI for your hotel on a scale of 1 to 10?



Does your hotel use technologies that incorporate or are based on artificial intelligence (AI)?



In which areas do you think AI will be the most useful for hotels? (several choices possible)

Annex 3: Survey Results for <u>Austria:</u> Key Application Areas of AI in Hospitality



Annex 3: Survey Results for <u>Austria:</u> Key Barriers to AI Adoption in the Hotel Sector

What specific challenges or obstacles have you encountered in integrating artificial intelligence into your hotel's operations, if you have already adopted it? If you have not yet adopted AI, what potential barriers do you perceive? (multiple choices possible)



Annex 3: Survey Results for <u>Austria:</u> Perceived Benefits of AI Implementation in Hotels

What are the experienced or perceived benefits of introducing these technologies for a hotel? (Multiple answers possible)



Synthesis: AI use in Austria



1. Perceived Impact of AI on the Hotel Sector

Austria reports a generally positive perception of AI's impact on hospitality. The average rating is 7.3 out of 10 (median 8.0), which is above the overall sample mean (6.1). A notable 38% of respondents rate the impact as 9 or 10, suggesting high optimism, particularly compared to the broader European average. This points to a stronger conviction in AI's transformative potential among Austrian hoteliers.

2. Current Adoption Levels

In Austria, 49% of respondents report already using AI tools, with 18% having adopted it within the past year. Another 20% plan to implement AI in the future. However, 31% of respondents say their hotel does not use AI at all — slightly below the general average (43% in the overall sample). Notably, Austria shows a somewhat earlier start: 21% report using AI for more than two years compared to only 12% in the full sample.

3. Perceived Benefits Among Users

Among Austrian hotels that use AI, 33% rate its benefits as 10 out of 10 - significantly higher than the 14% in the full sample. The average score is 8.0 (compared to 6.6 overall), indicating a more favorable evaluation from actual adopters. These users particularly associate AI with high operational and strategic value.

4. Use of Specific AI-Based Technologies

The most used AI technologies in Austria include: ChatGPT, Gemini, and similar tools for text generation (90%) — much higher than in the overall sample (74%). Review analysis (59%), automation of guest responses (50%), and revenue management (48%). Austria also exceeds the average use in tools like: Predictive analytics (43%)Assistance systems for product development (36%), Chatbots (33%). This reflects a higher level of operational integration compared to the broader European landscape.

Synthesis: AI use in Austria



5. Priority Application Areas

Austrian hoteliers identify Reservations (76%) and Marketing (70%) as the top domains for AI — in line with but slightly higher than the overall sample. Other strong areas include: Customer relationship management (54%), Data analysis and reporting (51%), Operational efficiency (39%). These results suggest a clear strategic alignment of AI with both guest-facing functions and internal optimization.

6. Perceived Barriers to Adoption

The main barriers in Austria are: Lack of affordable "off-the-shelf" solutions (42%), opor knowledge of available tools (41%), integration difficulties (40%), Pripacy/security concerns (37%). These closely mirror the concerns of the full sample but tend to appear more often in Austria, especially technical complexity and lack of reliable vendors.

7. Perceived Benefits of Implementation

Time savings dominate (82%), followed by improved communication/marketing (68%) and operational efficiency (56%). Interestingly, cost reduction and competitive positioning also score well, aligning with Austrian hoteliers' stronger emphasis on performance and differentiation. Compared to the general sample, benefits like intercultural communication and sustainable development are perceived slightly more positively in Austria.

Annex 3: Survey Results for <u>Germany</u>







Annex 3: Survey Results for <u>Germany</u>: Perceived Impact of Artificial Intelligence on the Hotel Sector



On a scale of 1 to 10, how would you rate the impact of using AI for hotels in general?



Annex 3: Survey Results for <u>Germany :</u> Current **Adoption Levels of Artificial Intelligence in Hotels**



Does your hotel use artificial intelligence (AI)?

Yes, for more than 5 years 2% Yes, for 4 years 2% 3% Yes, for 3 years Yes, for 2 years 12% Yes, for one year 11% 13% Yes, recently No, but it is planned 18% 39% No 0% 5% 10% 15% 20% 25% 30% 35% 40% 45% Percentage

Response rate: 99%

Annex 3: Survey Results for <u>Germany</u> : Perceived Benefits of AI Among Hotel Users



If you use AI, how do you rate the benefits of AI for your hotel on a scale of 1 to 10?



Does your hotel use technologies that incorporate or are based on artificial intelligence (AI)?



No

Yes It is planned

In which areas do you think AI will be the most useful for hotels? (several choices possible)

Annex 3: Survey Results for <u>Germany :</u> Key Application Areas of AI in Hospitality



Annex 3: Survey Results for <u>Germany :</u> Key Barriers to AI Adoption in the Hotel Sector

What specific challenges or obstacles have you encountered in integrating artificial intelligence into your hotel's operations, if you have already adopted it? If you have not yet adopted AI, what potential barriers do you perceive? (multiple choices possible)



Annex 3: Survey Results for <u>Germany</u> : Perceived Benefits of AI Implementation in Hotels

What are the experienced or perceived benefits of introducing these technologies for a hotel? (Multiple answers possible)



Synthesis: AI use in Germany



1. General Perception of AI Impact

In Germany, hoteliers rated the general impact of AI on the hotel sector with a mean of 6.5 and a median of 7, slightly lower than the overall sample (mean: 6.6, median: 7). The share of respondents giving high scores (8–10) reached 39%, compared to 47% in the overall sample, indicating more reserved attitudes in Germany toward AI's sector-wide impact.

2. AI Adoption Levels

Among German respondents (n=249), 39% stated they do not yet use AI, while 18% plan to do so. Only 2% had been using AI for more than 5 years, similar to the global average. Adoption over the past 1–3 years is relatively stable (36%), although this is somewhat lower than Austria (also 36% but more recent) and the total sample (\approx 38%). Germany shows a larger share of hotels still not using or planning to adopt AI (57%) than the overall sample (\approx 52%).

3. Perceived Benefits of AI (Among AI Users)

German hotels that already use AI (n=105) assessed the benefits with a mean and median of 8.0, aligning closely with Austria and higher than the total sample. The share of top scores (9-10) reached 32%, slightly above the overall sample.

4. Technologies in Use

The most used AI-based technology in Germany is text generation via ChatGPT, Gemini, etc. (81%), which is in line with the overall sample (74%). Other technologies also show moderate to strong usage: Revenue management: 56% (Germany) vs. 48% (overall), Customer review analysis: 53% vs. 44%, Personalised services (emails, guest apps): 48% vs. 38%, Automation of responses to customer comments: 46% vs. 37%, Predictive analytics: 43% vs. 37%. Germany shows above-average adoption for all these key AI functionalities. However, usage drops sharply for more advanced or hardware-intensive tools like facial recognition (1%), robotics (6%), or waste analytics (5%), similar to or below the average.

Synthesis: AI use in Germany



5. Key Application Areas

AI is seen as particularly useful in: Reservations (72%) and Marketing (66%) –aligned with the total sample. Customer relationship management (52%), data analysis (51%), and process optimization (43%) – mirroring the global trend. Lower perceived usefulness is noted for HR (25%), kitchen-related applications (18–24%), and supply chain (23%), matching the overall patterns. Germany's results are consistent with the global sample in terms of which domains AI is expected to support most.

6. Barriers to AI Adoption

German hoteliers report a broad and evenly distributed set of challenges: High setup costs (43%) are the top barrier – the highest of any country surveyed. Integration into existing processes (40%), strict data protection (39%), and poor knowledge of AI solutions (36%) are also major concerns. Other notable concerns include compatibility with IT systems (34%), lack of understanding or technical skills (31–33%), and security/privacy risks (31%). German hoteliers express more concerns across the board, especially regarding cost, privacy regulations, and system compatibility - reflecting a more technically cautious and regulation-aware context.

7. Perceived Benefits of AI in Practice

When asked about experienced benefits, German hoteliers confirmed: Time savings (80%) – strongly aligned total sample (76%). Communication/marketing (64%) and operational efficiency (55%) - consistent with international patterns. German hoteliers emphasize also cost reduction (43%) and competitive position (38%), possibly reflecting a more cost-conscious implementation rationale. Benefits like emergency response (17%) and user experience (22%) are less prominent.

Conclusion

Germany shows moderate AI adoption and cautious optimism. While AI users in Germany report high satisfaction (median score 8). German hoteliers appear more technically skeptical and concerned about costs, data privacy, and integration challenges, reflecting the country's generally rigorous regulatory and operational culture. Nonetheless, those who have adopted AI are achieving tangible benefits, particularly in communication, marketing, and efficiency.



Annex 3: Survey Results for <u>France</u>







Annex 3: Survey Results for <u>France</u>: Perceived Impact of Artificial Intelligence on the Hotel Sector



On a scale of 1 to 10, how would you rate the impact of using AI for hotels in general?



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Annex 3: Survey Results for <u>France :</u> Current Adoption Levels of Artificial Intelligence in Hotels



Does your hotel use artificial intelligence (AI)?

Effective responses: 306

Response rate: 99%



Annex 3: Survey Results for <u>France :</u> Perceived Benefits of AI Among Hotel Users



If you use AI, how do you rate the benefits of AI for your hotel on a scale of 1 to 10?



Does your hotel use technologies that incorporate or are based on artificial intelligence (AI)?



In which areas do you think AI will be the most useful for hotels? (several choices possible)

Annex 3: Survey Results for <u>France</u> : Key Application Areas of AI in Hospitality



Annex 3: Survey Results for <u>France</u>: Key Barriers to AI Adoption in the Hotel Sector

What specific challenges or obstacles have you encountered in integrating artificial intelligence into your hotel's operations, if you have already adopted it? If you have not yet adopted AI, what potential barriers do you perceive? (multiple choices possible)



Annex 3: Survey Results for <u>France</u> : Perceived Benefits of AI Implementation in Hotels

What are the experienced or perceived benefits of introducing these technologies for a hotel? (Multiple answers possible)



Synthesis: AI use in France



1) Perceived Impact of AI on the Hotel Sector

In France, hotel professionals report a relatively moderate perception of AI's overall impact on the sector. With a mean score of 6.0 and a median of 6.0 on a scale from 1 (no impact) to 10 (very large impact), France ranks lowest among the countries surveyed. The most frequent rating given was 5 (22% of respondents), reflecting a neutral or undecided stance. Only 7% of respondents rated the impact as very high (score of 10). These results suggest a cautious or reserved attitude towards the disruptive potential of AI in French hospitality.

2) Current Levels of AI Adoption

France also lags behind in the actual adoption of AI tools in the hotel sector. Only 37% of respondents indicated that their hotel had started using AI in any capacity—much lower than the approximately 50% found in the overall sample. Among these, only a small minority (9%) had used AI for more than one year. In contrast, 44% of French respondents said they had not adopted AI at all, which is the highest proportion of non-users among the countries studied.

3) Perceived Benefits Among Current Users

Among French hotels that do use AI, the perceived benefits remain modest. The mean benefit rating was 6.2, lower than in global sample. Only 7% of French AI users rated the benefits as very high (score of 10), which again is significantly below other countries. This suggests that even among users, the added value of AI technologies has not yet fully convinced hoteliers or translated into tangible operational or strategic improvements.

4) AI Technologies Currently in Use

In terms of technologies, the most widely used AI-related tools in France are content generation services such as ChatGPT and Gemini, with 71% of respondents indicating their use for guest communication (emails, website texts). This is followed by online review analysis (46%), predictive analytics (39%), and chatbots (38%). However, more advanced applications such as revenue management systems (30%), automation of customer response (27%), or virtual assistants (18%) are less commonly implemented. Sophisticated tools like robotics, image generation, or facial recognition are only marginally used.

Synthesis: AI use in France



5. Key Application Areas

French hoteliers identify reservations (64%) and customer relationship management (58%) as the most promising areas for AI deployment, closely followed by personalization of the guest experience (51%) and marketing (50%). Interestingly, marketing ranks slightly lower than in most other countries, where it typically occupies one of the top two positions. Areas such as finance, predictive maintenance, or inventory management appear less often as priorities in France than in the overall sample. This indicates a clear focus on customer-facing processes rather than backend or efficiency-driven applications.

6. Barriers to AI Adoption

The most significant barriers reported by French hoteliers concern knowledge and capabilities rather than infrastructure or financial constraints. A striking 58% cite poor knowledge of AI solutions as a key obstacle—the highest rate among all countries surveyed. This is followed by lack of technical skills (44%), lack of understanding of AI in general (41%), and difficulty integrating AI into existing systems (34%). Concerns related to return on investment, security, or ethics were less frequently mentioned than in countries like Germany. Interestingly, while high setup costs (32%) remain relevant, they do not top the list, which further supports the idea that capacity-building—rather than cost—is the most urgent need in the French context.

7. Perceived Benefits of AI in Practice

When asked about the experienced or perceived benefits of AI implementation, French hoteliers most frequently cited time savings (73%), improvement in communication and marketing (51%), and enhanced data management and analysis (48%). These results align with trends observed in the overall sample. However, cost reduction (27%) and sustainability-related benefits (15%) were less frequently acknowledged in France than in other countries. This points to a perception of AI as a support tool for administrative and communication tasks, rather than as a strategic driver of performance, competitiveness, or environmental efficiency.

Conclusion: In summary, France shows a slower pace of AI adoption in the hotel sector, both in perception and in practice. The main differentiating factors are a high degree of uncertainty about the benefits of AI, a low level of tool diversification, and especially a widespread lack of knowledge and technical readiness among hospitality professionals. While interest in AI is growing and basic tools like ChatGPT are increasingly used for content-related tasks, more strategic or operational applications remain rare.

Annex 3: Survey Results for <u>Greece</u>







Annex 3: Survey Results for <u>Greece</u>: Perceived Impact of Artificial Intelligence on the Hotel Sector



On a scale of 1 to 10, how would you rate the impact of using AI for hotels in general?



Annex 3: Survey Results for <u>Greece :</u> Current Adoption Levels of Artificial Intelligence in Hotels



Does your hotel use artificial intelligence (AI)?

Effective responses: 436

Response rate: 96%



Annex 3: Survey Results for <u>Greece</u> : Perceived Overall Benefits of AI Among Hotel Users



If you use AI, how do you rate the benefits of AI for your hotel on a scale of 1 to 10?

Effective responses: 162 Response rate: 36% Mean: 5.3 Median: 5.0 30% 23% Percentage 20% 17% 14% 12% 9% 10% 7% 6% 6% 5% 0% 0% 10=very high benefits 1 = no benefits at all Hemil tems . end Heme Noms "en , one

Does your hotel use technologies that incorporate or are based on artificial intelligence (AI)?



No


In which areas do you think AI will be the most useful for hotels? (several choices possible)

Annex 3: Survey Results for <u>Greece :</u> Key Application Areas of AI in Hospitality



Annex 3: Survey Results for <u>Greece :</u> Key Barriers to AI Adoption in the Hotel Sector

What specific challenges or obstacles have you encountered in integrating artificial intelligence into your hotel's operations, if you have already adopted it? If you have not yet adopted AI, what potential barriers do you perceive? (multiple choices possible)



Annex 3: Survey Results for <u>Greece :</u> Perceived Benefits of AI Implementation in Hotels

What are the experienced or perceived benefits of introducing these technologies for a hotel? (Multiple answers possible)



Synthesis: AI use in Greece

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1) Perceived Impact of AI on the Hotel Sector

The overall perception of the impact of AI on the hotel sector in Greece is significantly lower than in the total sample. The mean perceived impact score is 5.5 out of 10, with a median of 5.0, compared to higher values observed in most other countries. A considerable share of respondents in Greece rated the impact of AI at the lower end of the scale: 19% selected level 2 (the highest among all countries) and 7% indicated no impact at all (level 1). The distribution suggests polarisation in perceptions, with only 11% giving the highest score (10 = very large impact).

2) Current Levels of AI Adoption

In terms of current adoption, Greece is lagging behind the average. Over half of the hotel respondents (52%) stated they do not use AI at all, which is significantly above the total sample average. A further 10% say it is planned, leaving only 38% with some level of actual AI use — the lowest among all surveyed countries. While 25% reported having adopted AI for at least one year, only 8% reported a usage period of more than two years, indicating relatively recent adoption among those already using the technology.

3) Perceived Benefits Among Current Users

Greece also stands out with relatively low satisfaction levels among AI users. The mean rating for perceived benefits is 5.3, with a median of 5.0 - both well below the overall average (typically around 7.5 to 8). Notably, 12% of respondents using AI reported that it brings no benefits at all (score = 1), while 17% gave it a score of 2, indicating significant scepticism or unmet expectations. Only 9% selected the maximum score (10 = very high benefits).

4) AI Technologies Currently in Use

The actual technologies used reveal further disparities. Greece shows relatively strong adoption of basic generative AI tools such as ChatGPT or Gemini for guest communication (59%), though this is still slightly below the sample average. However, advanced tools such as predictive analytics (31%), real-time revenue management (27%), chatbots (27%), and personalised guest services (29%) are less widely adopted than in the overall sample. More complex or niche applications such as robotics, facial recognition, customer profiling, and AI-assisted product development are rarely used, with rejection rates above 60% in many cases.

Synthesis: AI use in Greece



5. Key Application Areas

Reservations (72%), marketing content (65%), and finance (64%) are seen as the most promising domains for future AI application in Greece, indicating that Greek hoteliers still associate AI primarily with commercial functions. Interestingly, enhancing data analysis (57%) ranks higher than customer relationship management (45%) or personalisation (43%), which may suggest a preference for back-end analytical use rather than front-end service innovation. Applications related to kitchen or supply chain remain marginal.

6. Barriers to AI Adoption

The key barriers to AI adoption in Greece reflect a mix of structural, technical, and organisational challenges. The top obstacle identified is the high technical complexity of AI systems (58%), followed by difficulties in finding reliable AI providers (44%) and high setup costs (38%). Lack of quality data (38%) and doubts about reliability and accuracy (36%) are also frequently mentioned, which may explain both the low adoption and low satisfaction rates. The perceived skill gap is relatively high: 33% of respondents mentioned a lack of knowledge about available solutions, and 25% mentioned insufficient skills to operate them

7. Perceived Benefits of AI in Practice

Despite these challenges, Greek hotels that have implemented AI technologies still report tangible benefits. The most commonly cited benefits include time savings (71%) and improved operational efficiency (56%), both above the global average. Additional perceived advantages include increased sales (44%), better data management (41%), and improved marketing (40%). Yet compared to other countries, benefits such as sustainable development, emergency responsiveness, or user experience rank lower, suggesting that Greek hotels primarily perceive AI as a tool for efficiency and cost-effectiveness rather than holistic transformation.

Conclusion

Greece exhibits the lowest AI maturity and perceived effectiveness across the countries studied. The sector faces a combination of limited exposure, relatively recent adoption, low satisfaction, and significant implementation challenges — particularly technical and provider-related. However, where adopted, AI does yield tangible benefits in operational efficiency and commercial performance, which could serve as a foundation for more strategic and confident implementation in the future.

Annex 3: Survey Results for <u>Italy</u>







Annex 3: Survey Results for <u>Italy</u>: Perceived Impact of Artificial Intelligence on the Hotel Sector



On a scale of 1 to 10, how would you rate the impact of using AI for hotels in general?

Effective responses: 117 Mean: 6.4 Response rate: 83% Median: 7.0



Annex 3: Survey Results for <u>Italy :</u> Current Adoption Levels of Artificial Intelligence in Hotels



Does your hotel use artificial intelligence (AI)?

Effective responses: 140

Response rate: 99%



Annex 3: Survey Results for <u>Italy :</u> Perceived Benefits of AI Among Hotel Users



If you use AI, how do you rate the benefits of AI for your hotel on a scale of 1 to 10?



Does your hotel use technologies that incorporate or are based on artificial intelligence (AI)?



In which areas do you think AI will be the most useful for hotels? (several choices possible)

Annex 3: Survey Results for <u>Italy :</u> Key Application Areas of AI in Hospitality



Annex 3: Survey Results for <u>Italy</u>: Key Barriers to AI Adoption in the Hotel Sector

What specific challenges or obstacles have you encountered in integrating artificial intelligence into your hotel's operations, if you have already adopted it? If you have not yet adopted AI, what potential barriers do you perceive? (multiple choices possible)



Annex 3: Survey Results for <u>Italy</u> : Perceived Benefits of AI Implementation in Hotels

What are the experienced or perceived benefits of introducing these technologies for a hotel? (Multiple answers possible)



Synthesis: AI use in <u>Italy</u>

1) Perceived Impact of AI on the Hotel Sector

In Italy, perceptions of the impact of artificial intelligence (AI) on the hotel sector are relatively positive and aligned with the overall sample, with a slightly above-average optimism. The mean score for perceived impact is 6.4, and the median is 7.0. A notable concentration of responses lies in the 7–8 range, indicating moderate to high expectations, while negative perceptions (ratings 1–3) remain very low. This suggests that Italian hoteliers generally believe AI can contribute meaningfully to hotel operations, though without strong polarization in sentiment.

2) Current Levels of AI Adoption

Regarding current adoption levels, the Italian hotel sector shows a fairly standard pattern compared to the overall sample. Around 19% of respondents report that their hotel has recently implemented AI tools, and an additional 20% have plans to do so in the near future. However, 44% still report no adoption, revealing that implementation remains limited in scope. The proportion of hotels with more than two years of experience using AI is low, under 10%, which indicates that adoption is still in its early phases for most.

3) Perceived Benefits Among Current Users

Among those using AI, the perceived benefits are relatively strong. Italy reports a mean benefit rating of 7.1 (median: 7.0), which is slightly higher than the overall sample. The distribution of responses skews towards the higher end of the scale, with a majority of respondents assigning scores of 7 or above. This reflects a level of satisfaction among adopters and suggests that those who have begun integrating AI into hotel operations observe tangible value.

4) AI Technologies Currently in Use

In terms of specific technologies in use, Italy stands out as one of the most enthusiastic adopters of generative AI tools for guest communication. An overwhelming 92% report using ChatGPT or similar services to generate texts for emails or websites—this is substantially above the average observed across the full sample. Real-time revenue management (52%) and tools for customer communication and personalization (43–44%) are also widely adopted. On the other hand, more complex or operationally embedded technologies, such as robotics, facial recognition, or automated kitchen systems, show limited penetration—frequently below 10%—which is consistent with general trends.



Synthesis: AI use in <u>Italy</u>

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5. Key Application Areas

As for anticipated application areas of AI, Italian respondents see the most potential in marketing (61%), reservations (59%), and customer relationship management (57%). This pattern mirrors global tendencies but with a particularly strong emphasis on marketing. There is also substantial interest in data analytics and the personalization of guest experiences, underscoring a commercial and customer-centric focus.

6. Barriers to AI Adoption

Barriers to adoption in Italy present a slightly different profile compared to the overall sample. While technical integration challenges (28%), lack of skills (25%), and employee resistance (22%) are commonly cited, concerns around regulatory issues, privacy, and data protection are less prominent. The perception of high technical complexity is also comparatively low (10%). This suggests that the main limitations in Italy are less about technology aversion or legal constraints and more about practical integration hurdles and limited internal capacity to implement AI solutions efficiently.

7. Perceived Benefits of AI in Practice

Perceived benefits of AI implementation in Italy largely center on time savings (78%), improved communication and marketing (55%), and operational efficiency (52%). These benefits are consistent with overall results, but the emphasis on time efficiency appears especially pronounced. Italian hoteliers also identify data management, increased sales, and cost reduction as relevant advantages, with each cited by 36–50% of respondents.

Conclusion

In summary, Italy shows a moderate but growing level of AI adoption in hospitality, with relatively positive perceptions of both impact and benefits. Early adopters are particularly engaged with communication and marketing tools, and there is a strong focus on operational and customer-facing benefits. Barriers are present but not overwhelming, indicating a favorable environment for broader future uptake—especially if solutions become easier to integrate and internal capabilities are strengthened.

Annex 3: Survey Results for Switzerland





Annex 3: Survey Results for <u>Switzerland</u>: Perceived Impact of Artificial Intelligence on the Hotel Sector



On a scale of 1 to 10, how would you rate the impact of using AI for hotels in general?

Effective responses: 140 Mean: 6.3 Response rate: 70% Median: 7.0



Annex 3: Survey Results for <u>Switzerland :</u> Current Adoption Levels of Artificial Intelligence in Hotels



Does your hotel use artificial intelligence (AI)?

Effective responses: 171 Response rate: 86% Yes, for more than 5 years 1% Yes, for 4 years 1% Yes, for 3 years 3% Yes, for 2 years 8% Yes, for one year 15% Yes, recently 19% 18% No, but it is planned 35% No 0% 5% 10% 15% 20% 25% 30% 35% 40% Percentage

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Annex 3: Survey Results for <u>Switzerland</u> : Perceived Benefits of AI Among Hotel Users



If you use AI, how do you rate the benefits of AI for your hotel on a scale of 1 to 10?



Does your hotel use technologies that incorporate or are based on artificial intelligence (AI)?



In which areas do you think AI will be the most useful for hotels? (several choices possible)

Annex 3: Survey Results for <u>Switzerland :</u> Key Application Areas of AI in Hospitality



Annex 3: Survey Results for Switzerland : Key Barriers to AI Adoption in the Hotel Sector

What specific challenges or obstacles have you encountered in integrating artificial intelligence into your hotel's operations, if you have already adopted it? If you have not yet adopted AI, what potential barriers do you perceive? (multiple choices possible)



Annex 3: Survey Results for <u>Switzerland :</u> Perceived Benefits of AI Implementation in Hotels

What are the experienced or perceived benefits of introducing these technologies for a hotel? (Multiple answers possible)



Synthesis: AI use in Switzerland

1) Perceived Impact of AI on the Hotel Sector

In terms of perceived impact, Swiss hoteliers view artificial intelligence as moderately influential in the sector, with a mean score of 6.3 and a median of 7.0. This places Switzerland slightly above the global sample average, suggesting a generally positive outlook. Notably, 21% of respondents rated the impact at level 8, the highest share for any single item, and another 19% selected 7. Only a small minority (4%) felt there was no impact at all. These figures suggest a consolidated belief in the usefulness of AI, although extreme ratings (9–10) were not dominant.

2) Current Levels of AI Adoption

Switzerland demonstrates an intermediate level of AI adoption in hotels. While 35% of hotels have not yet implemented any AI tools, this is below the overall average, and an additional 18% have plans to adopt AI soon. The proportion of establishments using AI for more than three years remains limited (only 5% combined for 3+ years), indicating a fairly recent and gradual diffusion. Still, the share of hotels declaring recent adoption (19%) or adoption within the last one to two years (15% and 8% respectively) reflects a growing uptake momentum.

3) Perceived Benefits Among Current Users

Perceptions of AI benefits among Swiss hotels currently using it are markedly positive. With a high mean rating of 7.3 and a median of 8.0, Switzerland stands out from the overall sample. A notable 28% rated the benefits at level 8, followed by 24% at level 7, and 15% even at the maximum level 10. Very few respondents reported minimal benefits. This pattern indicates a stronger perceived return on AI investments compared to global averages, despite the relatively recent adoption.

4) AI Technologies Currently in Use

When looking at actual usage of AI-enabled technologies, Switzerland demonstrates selective integration. The most commonly adopted tools are text generation services (e.g. ChatGPT, Gemini) used by 82% of respondents—significantly higher than average—and real-time revenue management (61%). Adoption drops off for more complex or capital-intensive systems, such as facial recognition (1%), robotics (3.5%), or automated menu validation (6%). However, Switzerland is above average in automation of customer responses (40%), review analysis (42%), and image generation (28%), indicating openness to generative AI and back-office automation tools.



Synthesis: AI use in <u>Switzerland</u>

5. Key Application Areas



The most anticipated and strategic application areas for AI in Swiss hospitality include marketing (67%), reservations (62%), and CRM/personalized services (47%), which largely mirrors global trends. However, Switzerland places comparatively greater emphasis on cybersecurity and fraud detection (35%) and operational process optimization (37%), suggesting a stronger orientation toward risk management and efficiency gains. Areas such as predictive maintenance, food waste monitoring, or human resources are cited less often.

6. Barriers to AI Adoption

Swiss hoteliers also report some distinct patterns in the perceived barriers to adoption. Security and privacy concerns are the most frequently mentioned issue (38%), followed closely by doubts about the reliability and accuracy of AI outputs (38%) and lack of AI literacy (36%). Interestingly, while setup costs and technical complexity are acknowledged (30% each), they are not as dominant as in some other contexts. Concerns such as employee resistance (28%) and lack of affordable solutions (27%) remain relevant but secondary. Compared to the overall sample, Swiss responses show a heightened sensitivity to data governance and regulatory risks, consistent with the country's strict legal framework.

7. Perceived Benefits of AI in Practice

Finally, the perceived benefits of AI implementation confirm the generally optimistic stance of Swiss hotels. Time savings were cited by 80% of respondents—significantly above average—and communication/marketing improvements (61%) and operational efficiency (54%) also ranked highly. Other frequently mentioned advantages include cost reduction (37%), improved data management (36%), and sales increases (34%). While sustainability and emergency responsiveness were mentioned less often, Switzerland does rank relatively high in improved intercultural communication and decision-making support, aligning with the profile of a multilingual, high-complexity market.

Conclusion

In summary, Switzerland presents a profile of gradual but confident AI adoption in the hotel sector, with strong perceived benefits, cautious risk awareness, and high prioritization of productivity and service efficiency. The country stands out for its early adoption of content-generation tools, relatively high expectations regarding AI benefits, and stronger-than-average concerns around data security and regulatory compliance.