

RESEARCH HIGHLIGHTS  
Tech Report

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h2c's Global Study

# AI & Automation in Hospitality

Navigating Today's Challenges,  
Shaping Tomorrow's Gains

# HOTEL

# AI & Automation in Hospitality

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## INTRODUCTION

Artificial Intelligence (AI) and automation are rapidly reshaping the hospitality industry worldwide. Yet, actual deployment and measurable business value remain elusive for many hotel chains. This landmark study from h2c provides a global snapshot of where the industry stands today **and where it is heading next—capturing authentic hotelier perspectives at a time of accelerating technology change.** The study captures the perspectives of 189 respondents from 171 unique hotel chains across Europe, the Middle East & Africa, Asia Pacific, and the Americas. While 78% of chains already use AI and 89% plan to implement additional applications, most initiatives remain confined to pilots or rely on general-purpose public tools. **Average AI reliance scores (4.7) continue to lag behind trust (6.6), highlighting significant untapped potential.** Unlocking this value requires greater proof of reliability, stronger ROI measurement, and enterprise-wide integration.

This Tech Report examines the areas where AI creates the most value—from business intelligence and chatbots to digital marketing—and identifies the strategic and operational gaps that slow progress. It explores how chains approach “make vs. buy” decisions, the barriers posed by skills shortages and unclear strategies, and the readiness of marketing, revenue management, and guest experience functions for AI-driven transformation. The findings also reveal that while expectations for established technologies like chatbots remain high, **the industry's innovation focus is rapidly advancing toward Robotic Process Automation (RPA), emerging AI Agents, digital identity verification, and ever-more sophisticated, automated guest interactions.**



## 1 Trust–Reliance Gap Slows Progress

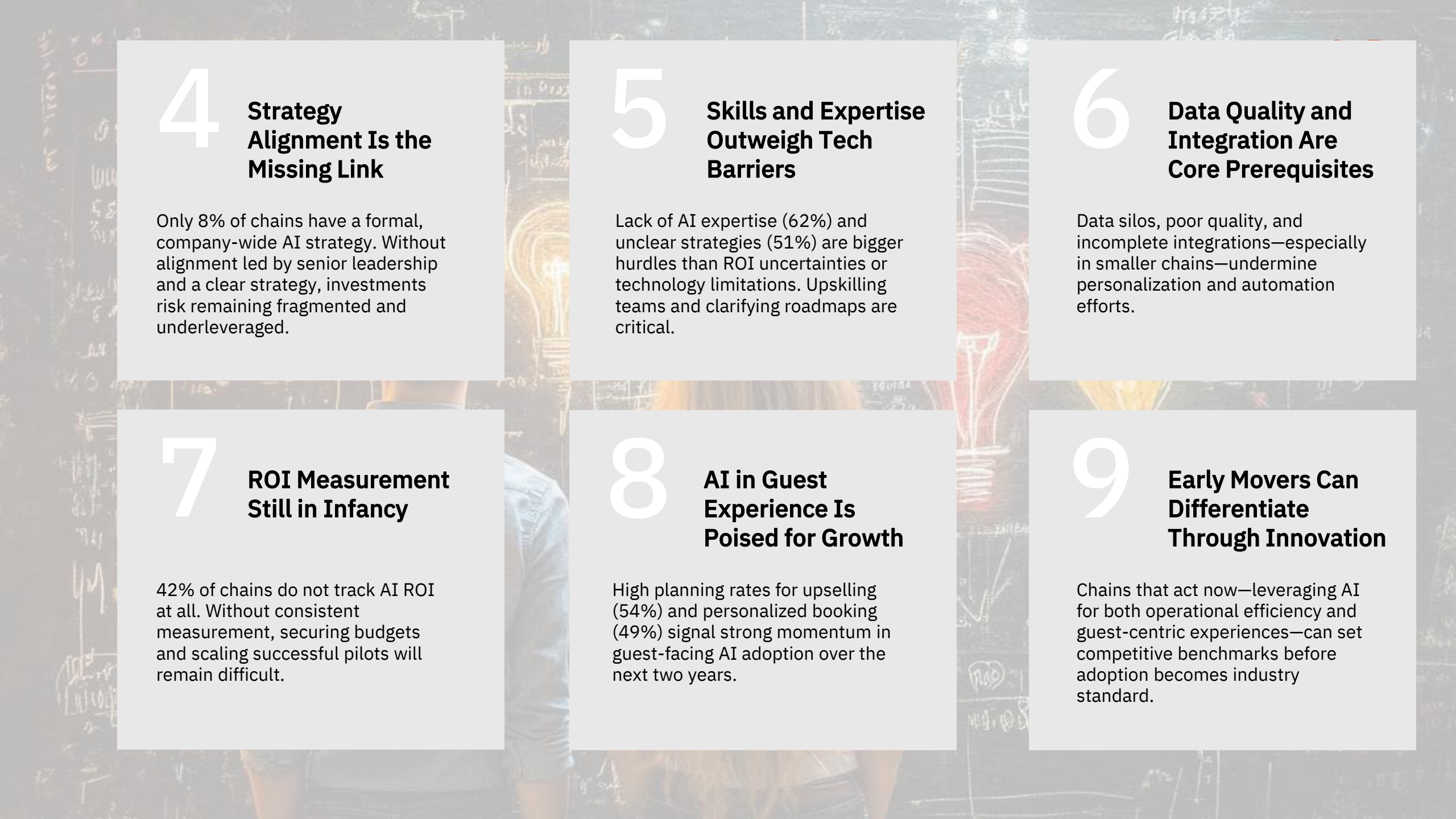
Despite a trust score of 6.6, reliance on AI remains low at 4.7, underscoring a significant unrealized potential. Bridging this gap requires stronger evidence of AI's reliability, ROI, and operational integration.

## 2 AI Adoption Is Widespread but Tactical

78% of chains use AI today and 89% plan more applications, yet most adoption remains confined to pilots or public tools. A strategic, enterprise-wide approach is rare but essential to unlock full value.

## 3 Business Intelligence Leads AI Value Creation

BI/Data Analytics tops the perceived value ranking (7.8), followed closely by chatbots (7.7) and digital marketing (7.2). Chains see clear potential for smarter decisions and guest engagement, but integration gaps remain.

A background image featuring a chalkboard filled with various mathematical equations and diagrams. A single lightbulb is illuminated in the center, casting a warm glow. The overall theme is intellectual and analytical, fitting for a report on AI strategy.

# 4

## **Strategy Alignment Is the Missing Link**

Only 8% of chains have a formal, company-wide AI strategy. Without alignment led by senior leadership and a clear strategy, investments risk remaining fragmented and underleveraged.

# 5

## **Skills and Expertise Outweigh Tech Barriers**

Lack of AI expertise (62%) and unclear strategies (51%) are bigger hurdles than ROI uncertainties or technology limitations. Upskilling teams and clarifying roadmaps are critical.

# 6

## **Data Quality and Integration Are Core Prerequisites**

Data silos, poor quality, and incomplete integrations—especially in smaller chains—undermine personalization and automation efforts.

# 7

## **ROI Measurement Still in Infancy**

42% of chains do not track AI ROI at all. Without consistent measurement, securing budgets and scaling successful pilots will remain difficult.

# 8

## **AI in Guest Experience Is Poised for Growth**

High planning rates for upselling (54%) and personalized booking (49%) signal strong momentum in guest-facing AI adoption over the next two years.

# 9

## **Early Movers Can Differentiate Through Innovation**

Chains that act now—leveraging AI for both operational efficiency and guest-centric experiences—can set competitive benchmarks before adoption becomes industry standard.

# The State of AI Adoption

**78%**

of hotel chains are using AI today

**89%**

are planning additional applications

**3%**

are neither using nor planning to adopt AI

In which business areas is your company currently using AI or planning to use AI within the next 12-24 months? N = 188.

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Most **used** AI application today (42%):

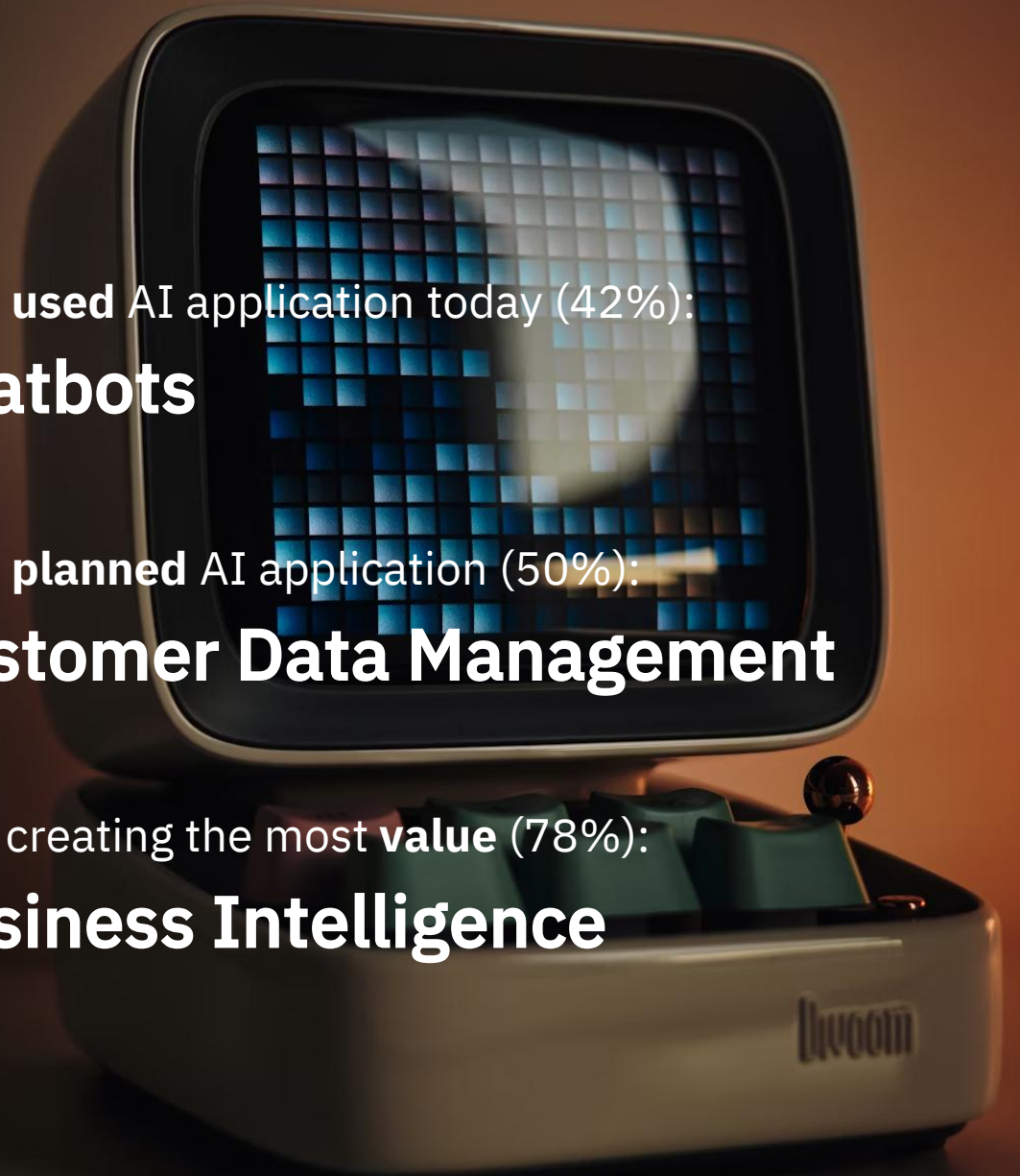
**Chatbots**

Most **planned** AI application (50%):

**Customer Data Management**

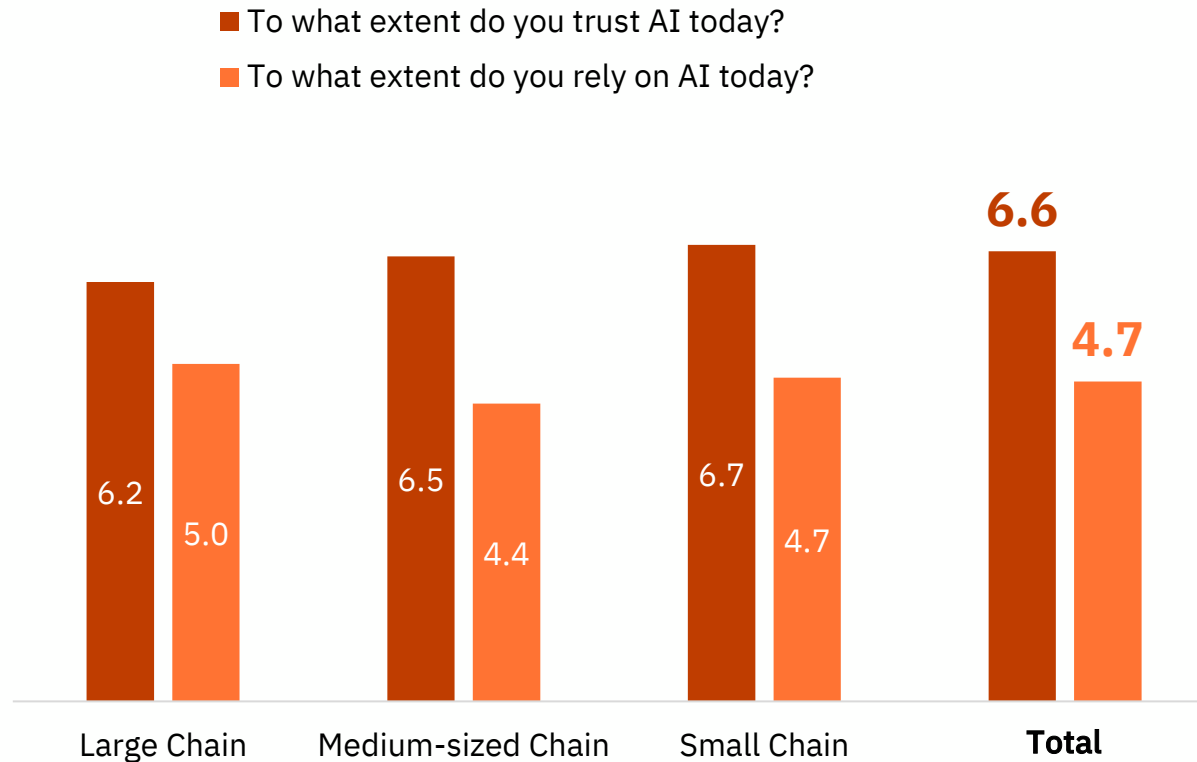
Area creating the most **value** (78%):

**Business Intelligence**



# Still Early Days for AI Reliance in Hospitality

Perceptions of **Trust** and **Reliance** on AI Solutions



Even though trust in AI exists, the **low reliance** highlights a **major gap in adoption and confidence** — requiring urgent action by industry stakeholders.

Using NPS-style analysis:

- **Trust scores (-30)** point to **skepticism** about reliability, accuracy, and data security.
- **Reliance scores (-70)** expose **weak confidence and satisfaction**, signaling the need for immediate attention.

**NPS:** Net Promoter Score

**-100:** Every respondent is a detractor (scores 0–6)

**0:** Equal percentage of promoters (9–10) and detractors

**+100:** Every respondent is a promoter

To what extent do you trust AI today? Please rate on a scale of 0-10, with 10 indicates full reliance on AI. N = 189

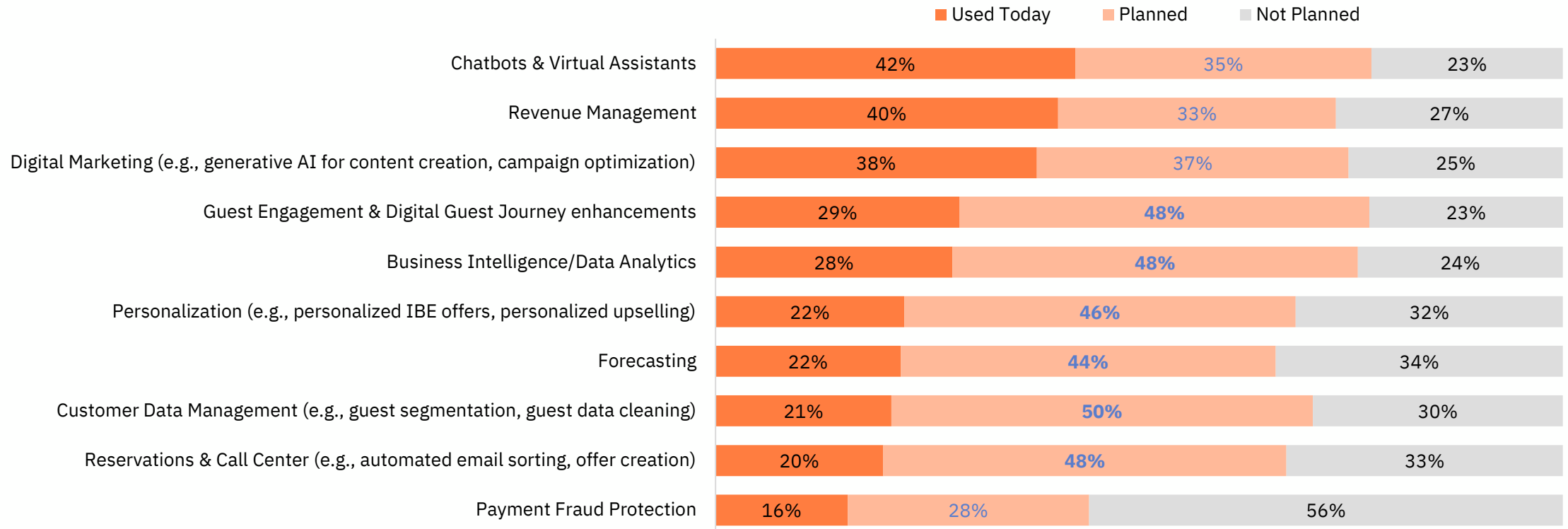
To what extent do you rely on AI today? Please rate on a scale of 0-10, with 10 indicates full reliance on AI. N = 189



# The State of AI Adoption

## High Rate of Planned AI Implementations

Top business areas where hotel chains are currently using AI or **planning to use AI** within the next 12-24 months



In which business areas is your company currently using AI or planning to use AI within the next 12-24 months? N = 188. Note: 147 are currently using one or more AI applications, while 168 are planning to implement at least one new AI application.

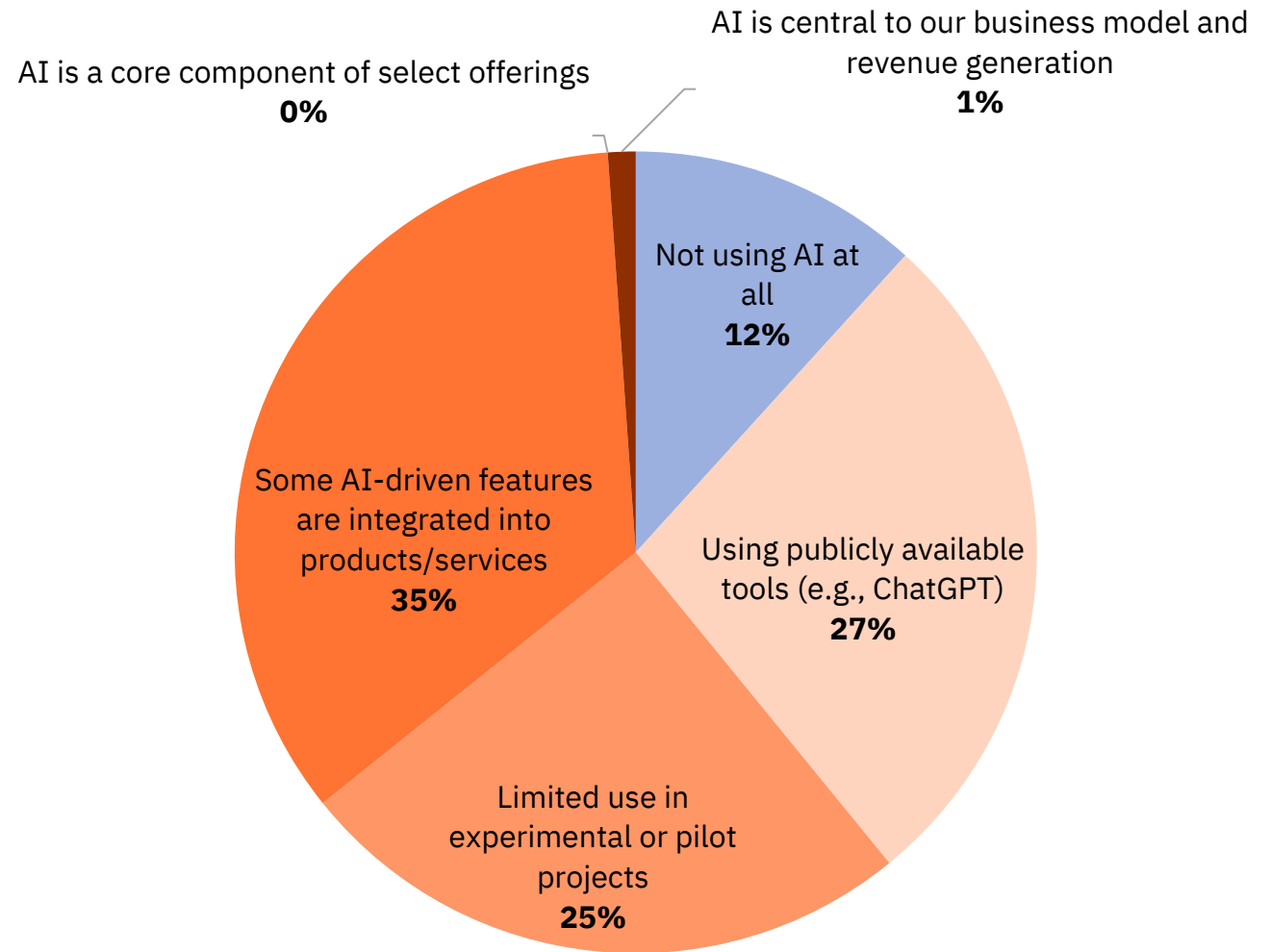
# Level of Commercial AI Integration

AI-Centric Hospitality: Still a Future Ambition

**Most hotel chains are in the early stages of AI adoption**, primarily experimenting with general-purpose tools such as ChatGPT for text and image generation, and/or hospitality-specific platforms.

**Only 1% report that AI is central to their business model**, and none identify it as a core component of select offerings—highlighting a tactical rather than strategic approach to integration.

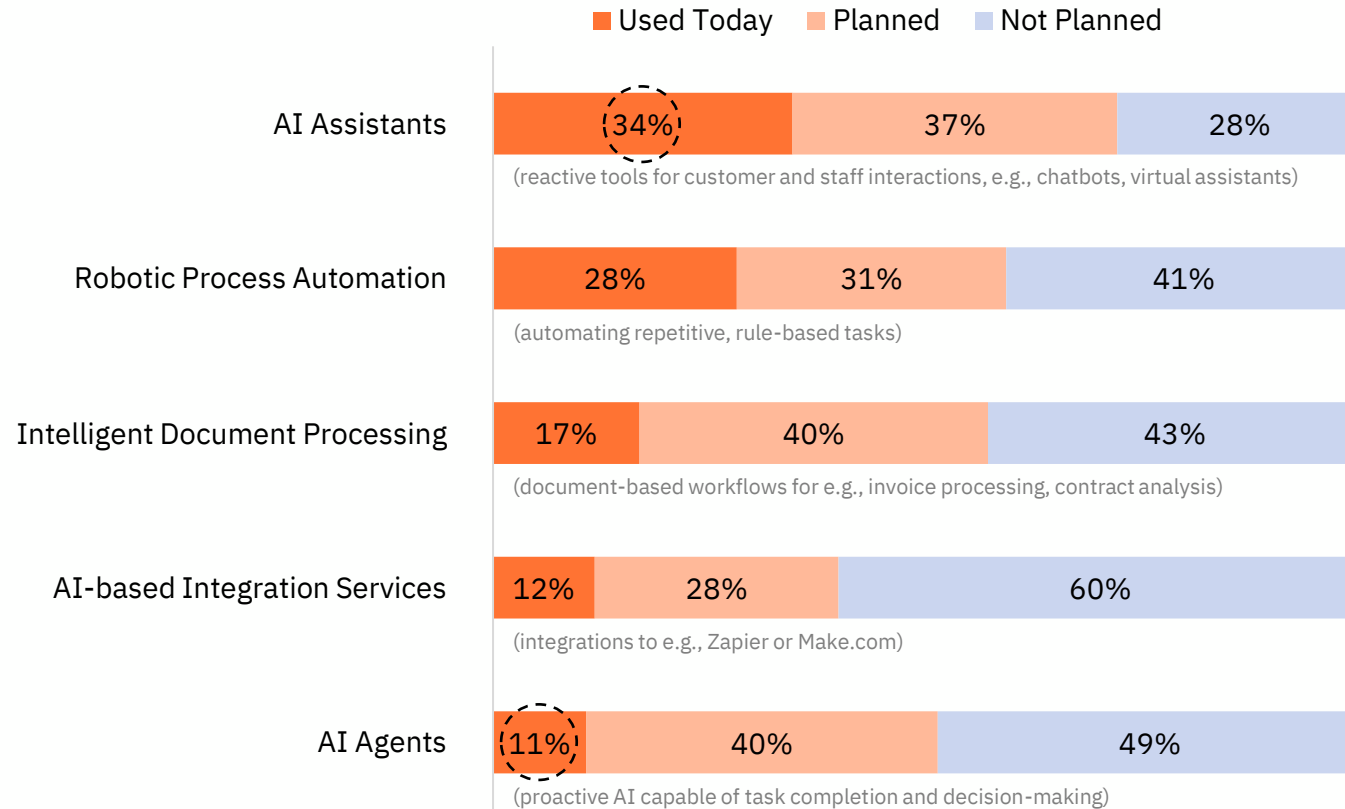
To what extent is AI commercially integrated into your organization's products, services, and operations today? (Select one). N = 179





# Adoption of AI Solution Types

## Current Use and Future Plans



**1 in 3**  
organizations use **AI Assistants**, while only

**1 in 10**  
use **AI Agents**

### AI Assistants vs. AI Agents

**Assistants** help with specific tasks and respond to user input.

**Agents** act independently, making decisions and taking steps toward a goal.

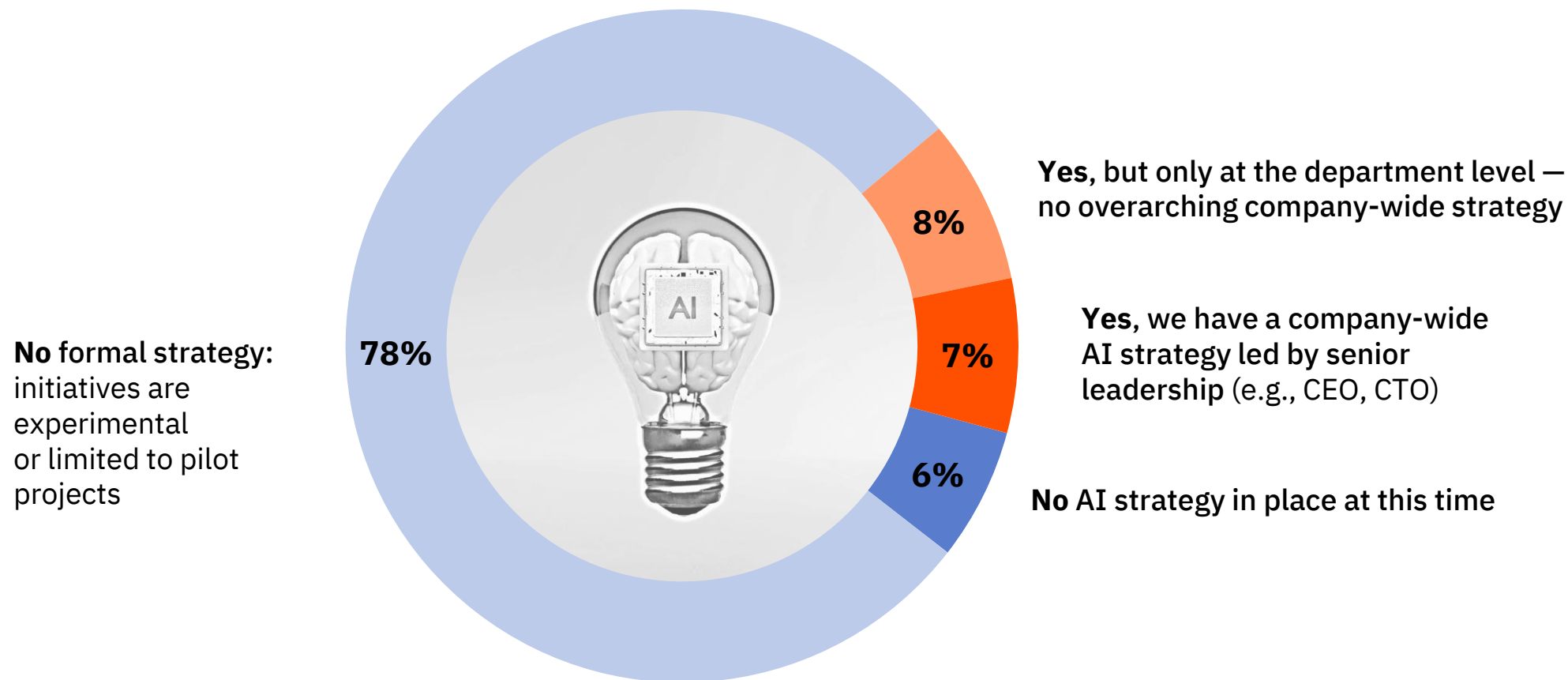
**In short:** Assistants react; agents act.

What types of AI solutions are you currently using or planning to use in your organization?

(Select one per row, only select Other if applicable). N = 175.

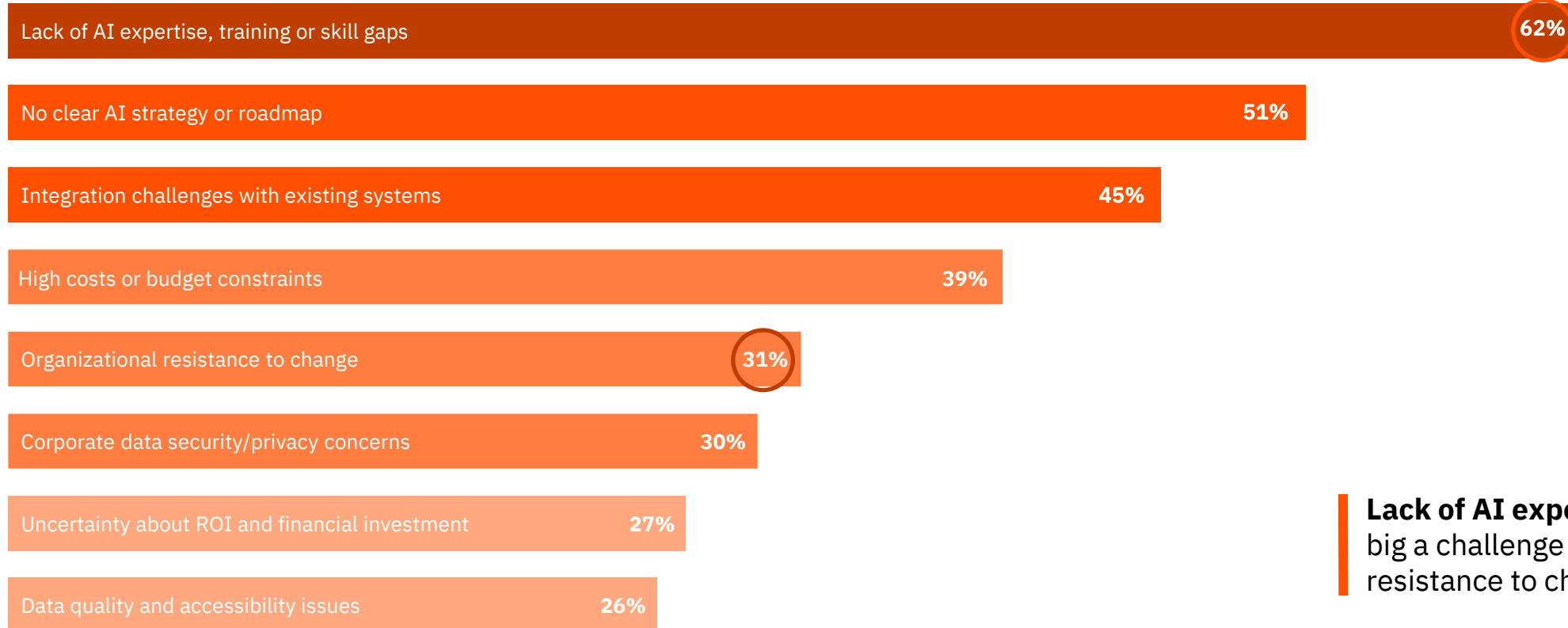
# AI Strategy Alignment Across Departments

Formal AI Strategies Remain the Exception



Does your organization have a comprehensive AI strategy across all departments?  
(Select one). N = 189

# Biggest Challenges of Adopting AI & Automation



**Lack of AI expertise** is twice as big a challenge as organizational resistance to change.

What are the biggest challenges or barriers your organization faces when adopting AI and automation? (Select all that apply). N = 172

# Data Sharing Remains a Key Challenge for Scaling AI

Most organizations still lack the structure and consistency needed to fully support AI initiatives

We face barriers to effective data usage (e.g., quality, accessibility, integration issues) 41%

Cross-departmental data sharing remains a major obstacle 32%

Departmental data silos are limiting AI adoption 29%

We have a centralized data structure that feeds AI and automation tools 22%

We use a centralized content/data platform to maintain consistency across departments 21%

How does your organization currently manage and share data across departments to support AI initiatives? (Select all that apply). N = 146

## TREND

**Large chains:** Leading in centralized content/data platforms (31%), but still hindered by integration barriers (19%).

**Medium-sized chains:** Barriers to effective data usage (44%) are the dominant challenge.

**Small chains:** Equally challenged by barriers to effective data usage (44%) and cross-departmental data sharing (35%).

**Americas:** Barriers to effective data usage (42%).

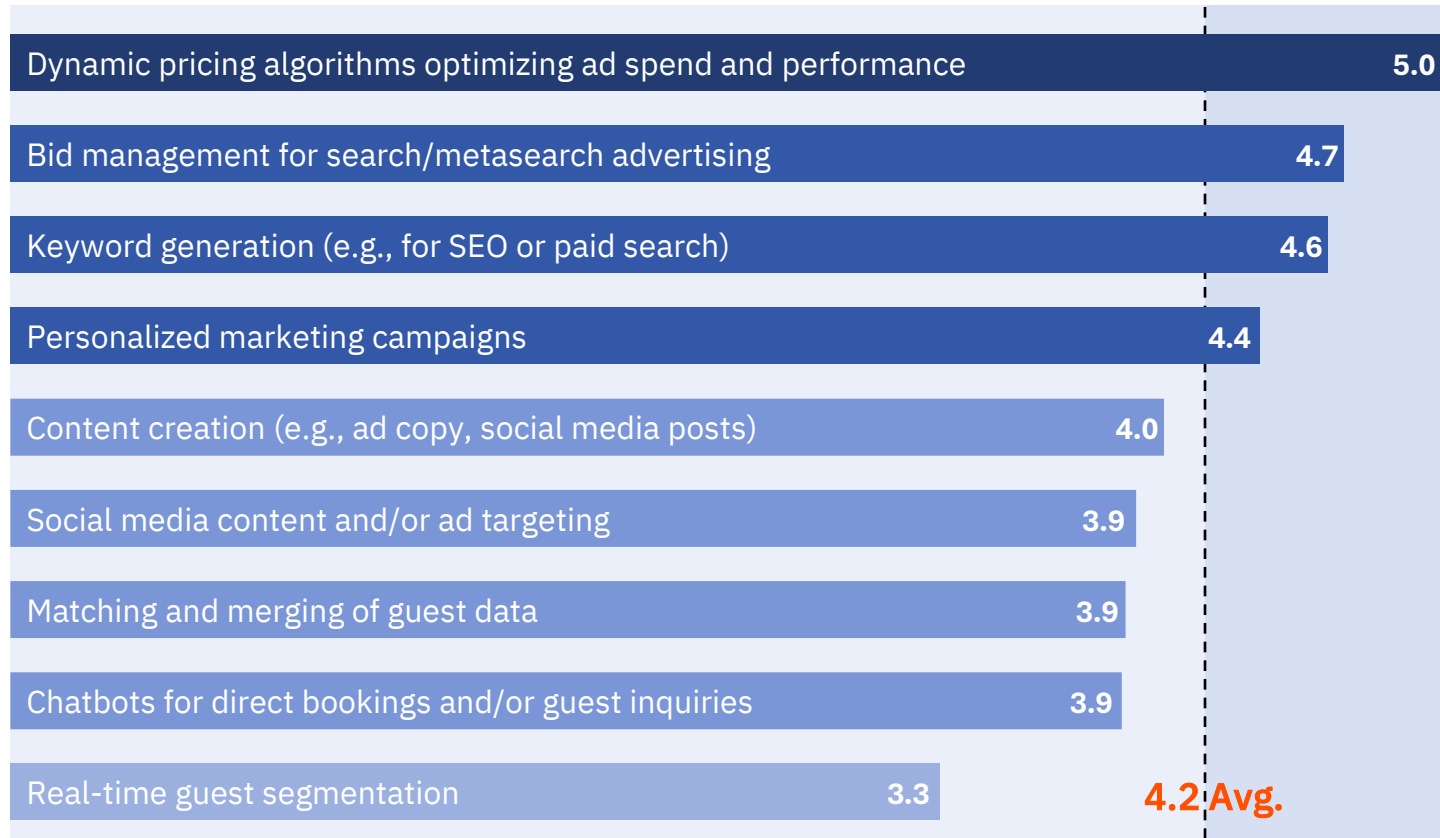
**Asia Pacific:** Cross-departmental data sharing remains the biggest obstacle (50%).

**Europe:** Barriers to effective data usage (43%).

**Middle East & Africa:** Departmental data silos limiting AI adoption (47%).



# Level of Automated Marketing Activities

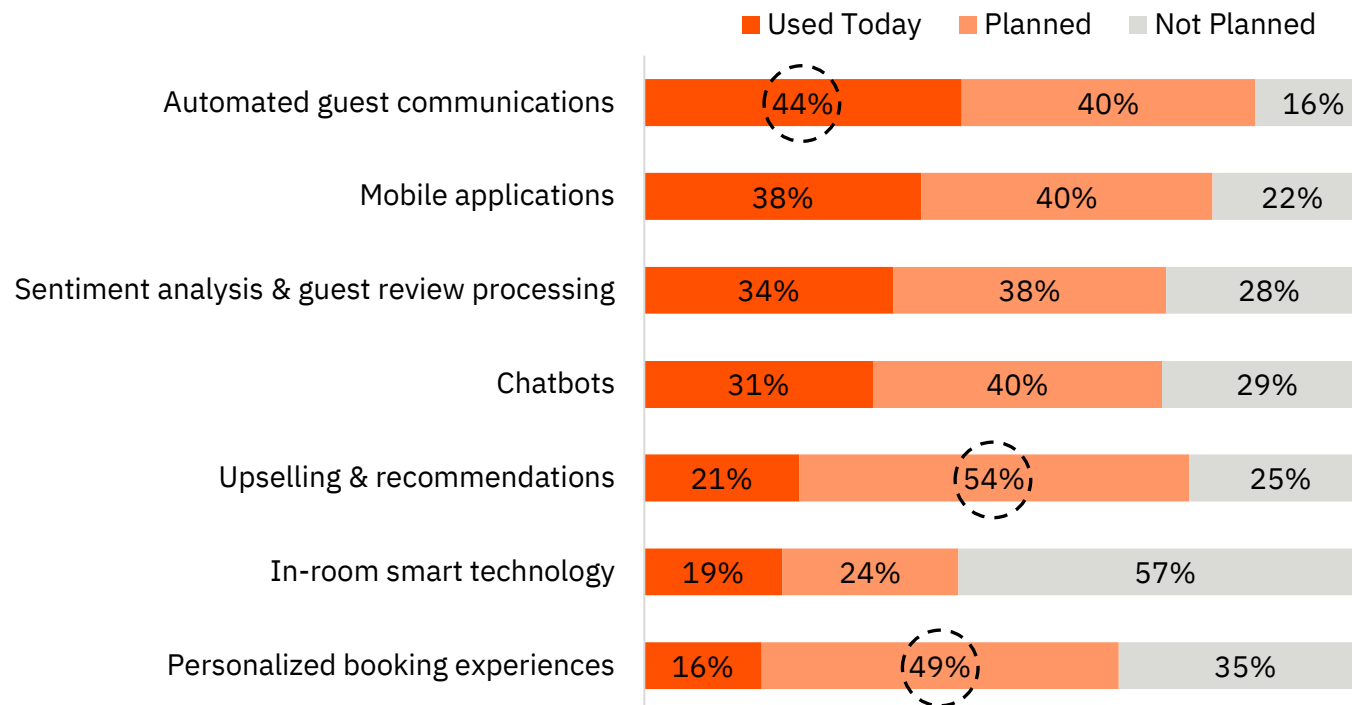


Hotel chains' current **marketing automation** averages **4.2**, highlighting an underdeveloped area—especially compared with **digital marketing**, which ranks third in AI value at **7.2**.

To what extent are your marketing activities currently automated? Please rate on a scale of 0-10, where **0** = Not automated at all and **10** = Fully automated. N = 137.

# AI-driven Applications Used & Planned to Enhance the Guest Experience

## Most important AI-driven applications



**Automated guest communications** is the only AI application with higher current use (**44%**) than planned adoption.

**Planning rates** for AI-driven guest experiences are high across the board — especially for:

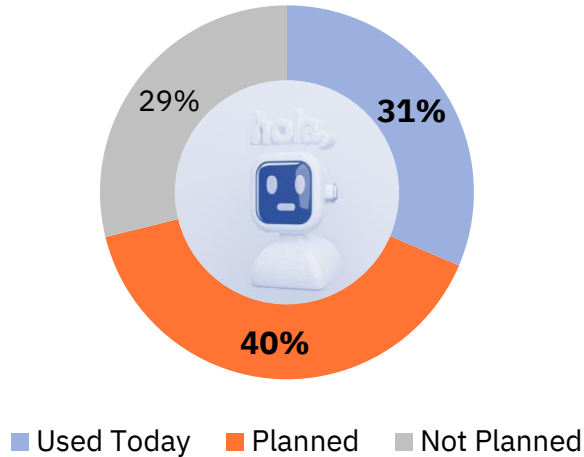
- **Upselling (54%)**
- **Personalized booking (49%)**

Both signal strong growth potential.

Which AI-driven technologies are you currently using to enhance the guest experience, and which do you plan to adopt within the next 12-24 months? (Select one per row, only select Other if applicable). N = 159

# Chatbots Go Mainstream: Adoption Accelerates

## Current and Planned Use of Chatbots



With 40% of chains planning to implement chatbots, their **adoption rate is expected to surpass 70%**, making them commonplace soon.

Which AI-driven technologies are you currently using to enhance the guest experience, and which do you plan to adopt within the next 12-24 months? (Select one per row). N = 159

## Chatbot Features Considered Essential

|                                                                                     |     |
|-------------------------------------------------------------------------------------|-----|
| Booking Process:<br>Handling guest inquiries and assisting with bookings            | 85% |
| Multilingual Support:<br>Assisting international travelers in their native language | 82% |
| Direct Booking:<br>Enabling reservations directly through the chatbot               | 71% |
| During Stay:<br>Automating common guest requests                                    | 66% |
| Upselling:<br>Providing personalized upgrades and recommendations                   | 66% |

**Focus:** Booking, Language Support, and Guest Experience Automation

Which features do you consider essential for a hotel chatbot? (Select all that apply). N = 146.

# Top Concerns Regarding AI in Guest Services

## Balancing Automation with Human Touch

Bias or errors in AI-generated suggestions or decisions

58%

Large Chain **74%**  
Americas **64%**

Loss or reduction of human interaction or personalized service

50%

Large Chain **62%**

Data security risks impacting guest privacy

47%

Medium-sized Chain **58%**  
APAC **55%**

Lacking guest acceptance to use AI-powered services

42%

Europe **48%**

What concerns do you have about AI's impact on the guest experience?  
(Select all that apply). N = 173; "No concerns": N = 6

Major deviations (%)

# Comfort Level With AI-driven Pricing Decisions

Perceived impact in revenue management lags expectations but surpasses current reliance.

## Perception of AI in Revenue Management

Comfort level with AI-driven pricing decisions

6.4

Comfort with AI pricing (6.4) lags trust and is held back by caution

Actual impact of AI in revenue management compared to expectations

5.6

Perceived impact (5.6) is still below expectations

## Perception of AI in General

Level of trust in AI today

6.6

Comfort (6.4) closely matches overall trust (6.6)

Level of reliance on AI today

4.7

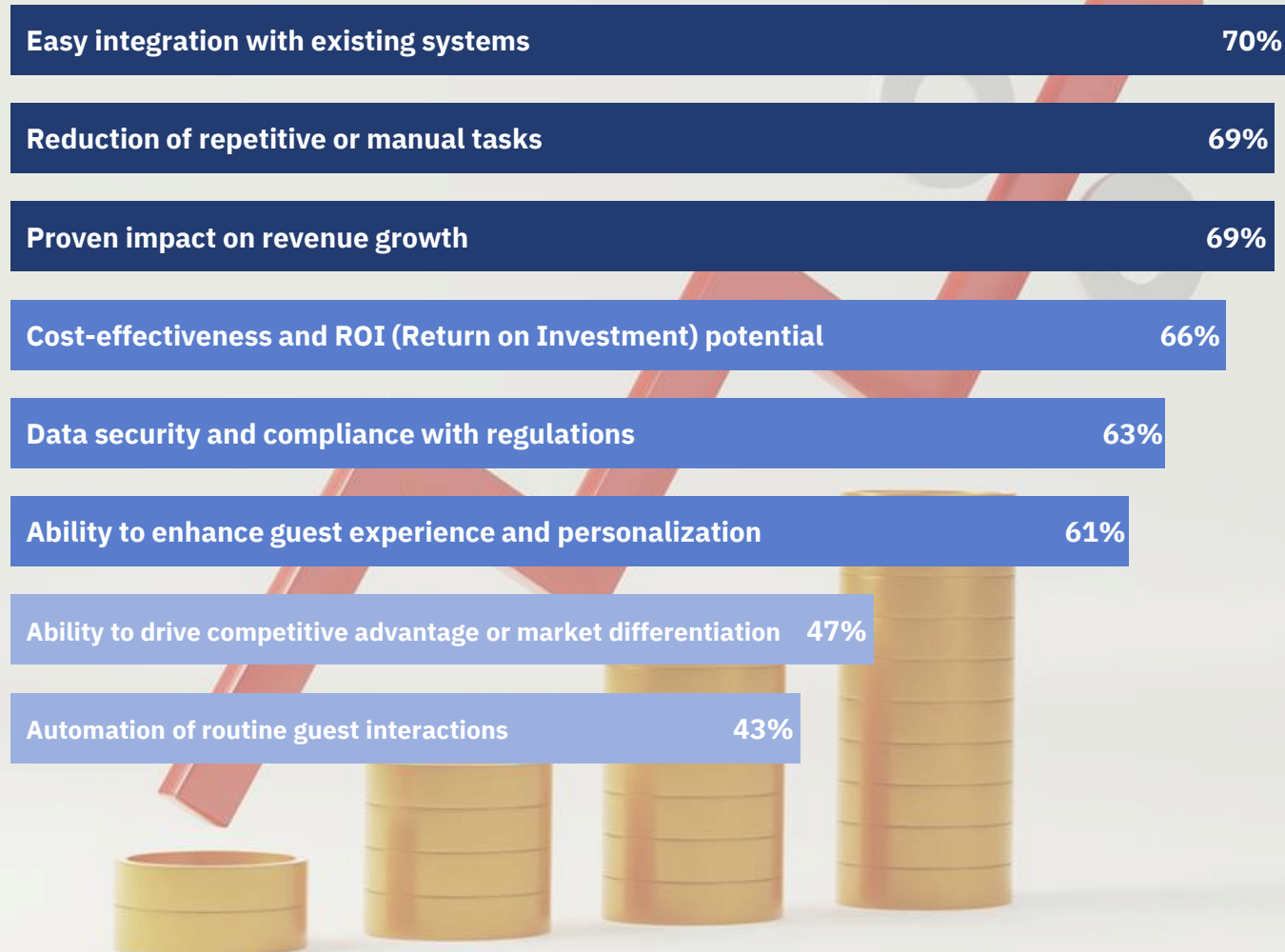
Perceived impact (5.6) exceeds current reliance (4.7)

How comfortable are you with AI-driven pricing decisions? Please rate on a scale from 0-10, where **0** = Not at all comfortable and **10** = Fully comfortable. N = 143. How does the actual impact of AI in revenue management compare to your expectations? Please rate on a scale from 0-10, where **0** = AI is significantly underdelivering and **10** = AI is exceeding expectations. N = 138



# AI Investment Decision-driving Factors

Integration ease, task automation, and revenue impact lead AI investment decisions



## Ease, Efficiency & Growth Lead Decisions

Integration with existing systems, reducing manual tasks, and proven revenue impact are the top priorities for AI investment.

## ROI, Security & Guest Experience Strongly Considered

ROI potential, data security/compliance, and guest experience personalization remain strong secondary drivers, reinforcing risk mitigation and business case validation.

When evaluating an AI solution, which of the following factors most influence your organization's investment decision? (Select all that apply). N = 151. "Not considering AI / No AI implemented yet": N = 2

# How AI Impacts Staffing, Training and Job Roles

AI is mostly an enabler

AI is enabling staff to focus on more strategic or guest-facing tasks

66%

Staffing or skill gaps are limiting AI adoption

38%

AI is replacing or redefining certain job roles and responsibilities

25%

We have a team or role responsible for identifying automation opportunities

24%

We are gradually reducing team size as AI capabilities expand

13%

“ I believe people have very special skills—but they often don’t have the time or space to use them. With AI, we’re finally giving that time back.

Small chain

“ A computer is only as good as the person who feeds it. AI is here to make jobs easier today—freeing staff to spend more time on other tasks, such as strategy development.

Medium-sized chain

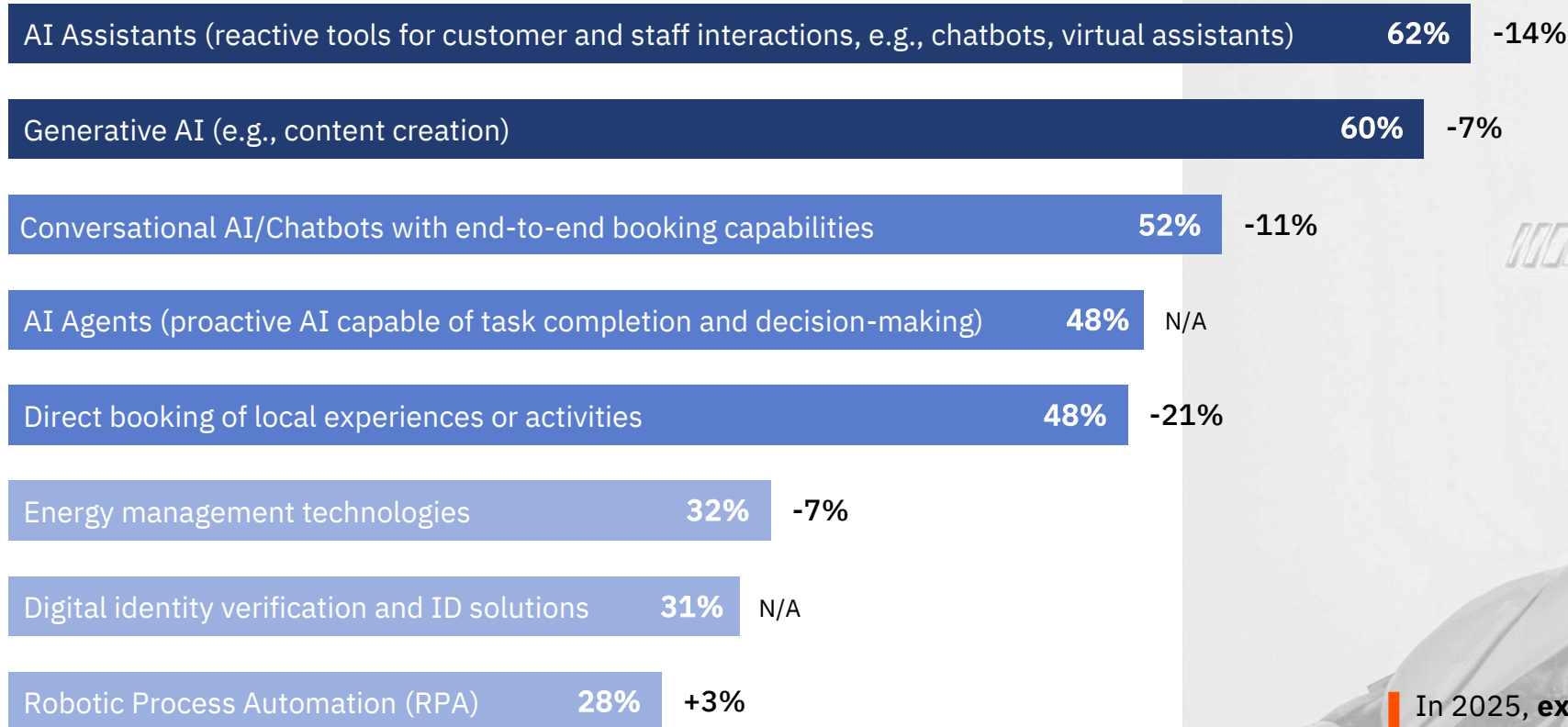
How is AI impacting staffing, training, and job roles in your organization?

(Select all that apply). N = 138. Includes “No impact yet / AI not in use” (N = 10)

# Where is AI Heading?

Shifting Expectations in Emerging AI Applications

Change vs. 2024 *Direct Booking*  
*Acceleration Study* results



In which areas do you see innovation arising in the next 2 years? (Select all that apply). 2025: N = 151. 2024: N = 51  
N/A: Not asked in 2024 study

In 2025, **expectations dropped in all innovation areas** except RPA — and AI Agents weren't even on the radar.

Now, **AI Agents** rank fourth in importance, and **ID Verification** has surpassed RPA.

# Functions Expected to Be Fully Automated by 2030

All 4 areas have significant potential—yet **1 in 4 expect full automation to remain out of reach** due to cost, complexity, or data/privacy concerns.

Reservations & Call Center 48%

Customer Data Management 46%

Revenue Management 44%

Digital Marketing 43%

Widespread full automation in 5 years is unlikely 26%

Which hospitality functions do you believe are most likely to be fully automated in the next 5 years? (Select all that apply). N = 152

“ We’re still building the basic framework. It will take another 1–2 years to lay the foundation before we can flexibly plug in automation. Human oversight is still essential to steer departments.

Large chain

“ In hospitality, the human touch makes all the difference. Even if tasks change, humans will continue to add the most value.

Small chain

# Thoughtful AI Adoption Is Essential for Hospitality Success—Ensuring No One Is Left Behind



AI holds enormous potential for hospitality, but its benefits will only be realized through deliberate and inclusive adoption.

## Industry Outlook

The industry's next phase will be defined by **value-driven, integrated AI strategies**—going beyond experimentation to deliver enterprise-wide benefits. As a result, innovation expectations are shifting:

- The perceived impact of established technologies such as chatbots remains strong, and the user base, though still comparatively small, is expanding.
- Investment and optimism are increasing for Robotic Process Automation (RPA), proactive AI agents, digital identity verification, and smarter automated guest interactions.
- Embedding AI into core operational processes—rather than isolated pilots—will deliver sustainable advantage for early movers and set new industry standards.

## Conclusion

Unlocking AI's full value in hospitality requires more than investment in technology—leaders must also prioritize staff skills, robust strategies with clear ROI, and enterprise-wide integration. As the industry progresses from experimentation to scalable adoption, those who weave AI into the core of both guest experience and operations will shape the next standard in competitive hospitality.



# Methodology

Overall study results are based on input from **171 unique hotel chains**.

In total, **189 responses** form the basis of our quantitative research, comprising

- **177 online surveys** and
- **12 executive interviews** with hotel chains.

Regional coverage: **Europe, Middle East & Africa, Asia Pacific, and the Americas**

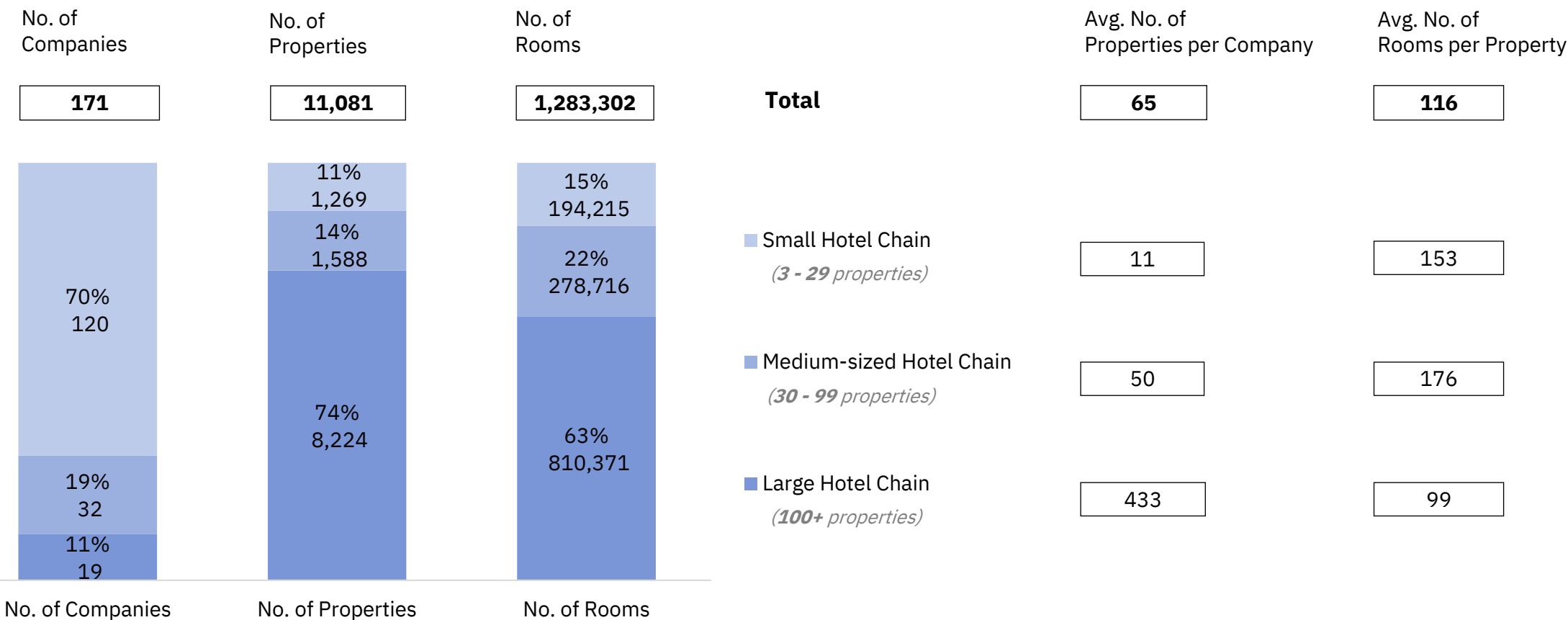
In addition, **14 executive interviews with study sponsors** were conducted to contrast their perspectives with the study results.

*Hotel chains with properties across multiple regions are assigned to the region with the most properties.*

*The overall study evaluation is based on the number of responses rather than weighting by chain size. This ensures that global chains do not disproportionately influence the results. For deeper insights, findings are further broken down by chain size (small, medium, and large hotel chains) and by region.*

# Participating Hotel Chains

By Company, Property and Rooms Size



What kind of hospitality company do you represent? N = 189 (171 unique companies).  
 Figures may not add up due to rounding.

# Sponsors

(alphabetical)



Access Hospitality, The Access Group's hospitality division, built through strategic acquisitions of Guestline, SHR Group and STAAH, delivers an integrated suite of AI-powered solutions spanning property management, distribution, guest engagement and revenue optimisation. Access Hospitality caters to hotels globally across Europe, North America and Asia-Pacific, providing comprehensive smart hotel solutions using AI enabled software, Access Evo.



Apaleo is the open property management platform for hotel and serviced apartment groups, empowering accommodation providers to create the ultimate digital experience for guests and staff. The API-first property management platform powers brands across more than 24 countries, disrupting the nature of hospitality software with the transition from single-vendor suites to best-of-breed technology.



Blastness is a one-stop shop providing a comprehensive suite of systems and services to boost direct bookings and maximise hotel revenue. The company offers all types of properties reservations and connectivity systems, revenue management software, website development, and digital marketing to help them make the most of digital market opportunities.



Cendyn is a global hospitality technology company that enables hotels to drive revenue, maximize profitability, and create deeper connections with guests through its integrated solutions. Cendyn drives commercial success for hotels through its Find, Book, Grow promise: find the right guests; drive them to book direct, and grow loyalty and revenue.



Cloudbeds is hospitality's only intelligent growth engine — a unified platform powering operations, revenue, distribution, and guest experience for ambitious hoteliers in 150+ countries. With Signals, the industry's first AI foundation model, properties can anticipate demand, automate operations, and deliver more personal, profitable guest journeys.



dailypoint™ is the CRM/CDP and loyalty solution for individual hotels and groups. By collecting, cleaning, consolidating, and enriching data from all relevant sources — including PMS, POS, IBE, newsletters, websites, and Wi-Fi — one Central Guest Profile is created. This enables personalized marketing and better guest experiences, positioning dailypoint as a pivotal tool in hospitality.



Hospitality Solutions is an innovative technology partner powered by SynXis®, the leading global hospitality commerce and distribution platform.

With our comprehensive portfolio of solutions, hoteliers have the tools to maximize revenue, improve operational efficiency, and deliver personalized guest experiences that drive satisfaction.



IDEaS, a SAS company, is the world's leading revenue management software and services provider. Combining industry knowledge with innovative data analytics technology, IDEaS empowers revenue leaders with precise, automated recommendations they can trust. With 35 years of expertise, IDEaS delivers revenue science to 30,000+ properties in 164 countries.

# Sponsors

(alphabetical)



Established in 2014, Ireckonu revolutionizes hospitality strategy through its sophisticated blend of Middleware expertise and an advanced Customer Data Platform. Empowering hotels with a unified, data-driven approach, Ireckonu strives for excellence in creating unmatched guest experiences for globally distinguished brands like Okura, CitizenM, Hard Rock Hotels, and others.



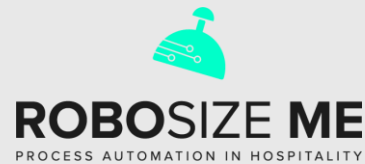
Oracle Hospitality brings over 45 years of experience in providing globally recognized technology solutions to independent hoteliers, hotel chains, gaming, and cruise lines. Our solutions include cloud-native platforms for property management, point-of-sale, distribution, and guest engagement and merchandising that empower our customers to deliver personalized guest experiences, maximize profitability, and encourage long-term loyalty.



Planet is a leading global provider of integrated technology and payments solutions serving millions of people across the world. We combine Payments, PMS and Networking on a single platform to help hospitality brands deliver the best experiences. Founded over 35 years ago, we have 2,500+ employees serving our customers in 120+ markets.



Profitroom is a direct booking solution that boosts hotel bookings by up to 96%. Our platform integrates booking, marketing, and upselling in one place. Increase revenue, save time, and enhance brand recognition with the support of our dedicated customer success team, driving your hotel's success.



RobosizeME combines 80+ years of hospitality expertise with industry-specific automation technology. Seamlessly integrating with your existing systems and major vendors, we serve 4,500+ hotels across Europe, USA, and MENA. Our hospitality-focused solutions deliver immediate, trackable ROI through enhanced efficiency and cost savings.



SuitePad is the leading provider of in-room tablets for hotels with a pay-per-use model and instant ROI. The all-in-one solution includes guest directory, booking, phone, and TV control. Used by 1,000+ hotels worldwide, SuitePad boosts guest engagement, reduces staff workload, and increases revenue through high usage and measurable results.



With over 9,000 people, 2,000+ Partners worldwide, and 700,000 customers, Zucchetti Group is a leading Italian IT company. Its unmatched product range in Italy and Europe gives customers a competitive edge and the convenience of relying on a single partner for all their information technology needs.

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GRAZIE!  
GRACIAS!  
DANK JE WEL!

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# Supporters

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## About h2c

Founded in 2001, h2c is a leading professional services provider to the global hospitality industry. The company specializes in empowering hotels and hospitality businesses to identify, implement, and manage the right technology solutions for their unique needs.

Backed by deep market expertise and regular market research projects that continuously track hospitality technology trends, h2c supports clients across every stage of digital transformation—from system specifications and RFP (Request for Proposal) processes to supplier-independent consulting and comprehensive project management.

h2c also offers Conttessa, a smart solution that automates static content updates across OTAs, metasearch sites, and direct channels—helping hoteliers save time, reduce errors, and ensure consistency.

**Mission Statement:** h2c inspires success in hospitality commerce. We turn marketplace complexities into actionable strategies, ensuring our clients remain confidently in control.

For more information, please visit [h2c.de](https://h2c.de)

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