



INTRODUCTION

Top Industry Technology Challenges

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Members of the T100, the hotel industry's global technology leadership group, convened to distill a list of the most pressing challenges facing the hotel industry. The list recommends focus areas for both hoteliers and technology vendors. Assembling a list of problems was not enough; the T100 also suggested areas where individual companies may benefit from further assessment. The goal is to keep hoteliers and vendors thriving as the technological landscape and consumer behavior changes.

INDUSTRY CHALLENGE #1

Capitalizing on generic and agentic AI to grow direct booking levels while enabling new revenue opportunities

Hotel companies are at a pivotal moment: emerging technologies—such as conversational trip planning, agent-to-agent (A2A) bookings, and intelligent messaging platforms—are reshaping digital travel behavior. These innovations create an opportunity to protect and strengthen direct booking performance and deliver seamless, personalized guest journeys.

Success requires more than acknowledging these tools exist; it demands rapid, intentional action. By embedding generative and agentic AI throughout the booking lifecycle, hotel companies can unlock growth through personalized merchandising, dynamic offers, and loyalty engagement. The question for 2026 is simple: who will move decisively and lead this new era of AI-driven commerce?

SUGGESTED AREAS OF FOCUS

Data Preparedness for AI

To fully capitalize on AI-driven opportunities, hotels must invest in foundational data work. This includes unifying guest databases, improving data cleanliness, and structuring both static and dynamic content. Without strong data foundations, AI capabilities will remain limited or unusable.

Optimize Content for AI Search, Not Just Google

Large Language Models (LLMs) are reshaping how travelers research by enabling threaded, conversational searches. Hotels must ensure their answers to high-funnel questions are authoritative, accessible, and easily crawlable by LLMs.

Key actions:

- Ensure LLMs and search agents can easily traverse first-party content.
- Own destination, neighborhood, and event-related content.
- Provide high-quality English-language content even in non-English markets.
- Allocate small, experimental budgets to emerging AI discoverability tactics, with tightly defined goals and measurement windows.

Prepare for Agent-to-Agent (A2A) Bookings

While vendors will lead the development of A2A booking pathways, hotel companies should:

- Encourage distribution partners to invest in A2A models.
- Support early testing and pilot opportunities.
- Make direct booking flows machine-readable and logically structured so LLMs can easily navigate and transact.
- Engage LLM providers along with vendors, to advocate on the needs of consumers.

Declining RevPAR growth and rising global expenses are compressing margins, requiring bold initiatives in cost efficiency and new revenue generation

Hotels face dual pressures: slowing RevPAR growth and escalating costs across labor, utilities, compliance, and supply chains. This margin compression impacts profitability and limits reinvestment capacity. To remain competitive, hotel companies must adopt new strategies that expand margins through efficiency, automation, and diversified revenue streams.

The path forward requires reimagining both sides of the margin equation: lowering the cost to serve and increasing wallet share. Leaders who act boldly and innovate in 2026 will establish a sustainable foundation for growth.

SUGGESTED AREAS OF FOCUS

Reduce Customer Acquisition Costs

Drive more repeat guests to book direct by:

- Capturing accurate guest information during the stay.
- Encouraging loyalty enrollment.
- Engaging guests with targeted, personalized post-stay communications.

Modernize the Economics of Payments

The hotel industry bears significant hidden costs, including card processing and foreign exchange fees. New payment technologies and alternative settlement models offer opportunities to reduce these expenses and uplift margins.

Expand Use of Physical Robotics

Delivery robots and robotic vacuums have already demonstrated operational value. In 2026, expect the emergence of humanoid robots capable of managing more sophisticated back-of-house tasks, enhancing efficiency and service levels.

Advance Robotic Process Automation (RPA) & AI Agents

RPA and AI agents are accelerating internal productivity by eliminating repetitive tasks. With expanding API access to PMS and other systems, hotels can:

- Automate data analysis and reporting.
- Reduce manual workflows.
- Improve overall operational efficiency.

Increase Revenue Management System (RMS) Adoption

RMS platforms continue to grow in sophistication as AI models evolve and more demand signals become accessible. Expanding RMS adoption is essential to optimize pricing and revenue performance.

Grow Ancillary Revenue & Trip Wallet Share

Early check-in, late checkout, experience add-ons, and pre-arrival merchandising can significantly increase total revenue per guest. Tools now exist to orchestrate these offers throughout the booking journey and enhance guest satisfaction.

INDUSTRY CHALLENGE #3

Lack of standardization and interoperability across hotel systems creates costly complexity, slows innovation, and burdens teams with non-value added work

The hospitality industry continues to struggle with heterogeneous systems, proprietary APIs, and inconsistent integration patterns that make data sharing cumbersome and expensive. This fragmentation raises costs, slows innovation, and limits the ability to deliver seamless, personalized guest experiences.

Simplifying the integration landscape is an industry-wide priority for 2026.

SUGGESTED AREAS OF FOCUS

▶ Accelerate Cloud Migration

Transitioning from legacy on-premise systems to cloud-native, API-first solutions reduce complexity and improve interoperability.

▶ Leverage AI to Improve Connectivity

More consistent API patterns—and emerging capabilities such as MCP and A2A—will simplify integrations and reduce custom development.

▶ Partner Around Shared Data Models

Structured data models and repeatable integration patterns prevent redundant work across hotel companies and vendors. Collaborative approaches reduce cost and accelerate innovation.

▶ Promote API Standards Adoption

AHLA/HTNG continues to offer industry-standard APIs, such as PMS Express, that streamline integrations. Adoption of these standards should be a priority for 2026.

▶ Continue Industry Education

As AI and integration technologies evolve rapidly, ongoing education—particularly through HTNG—will be essential to ensure smooth adoption.

INDUSTRY CHALLENGE #4

Many AI solutions promise operational gains – success depends on strategic evaluation and responsible adoption

As AI becomes central to hotel operations, leaders must navigate a crowded vendor landscape and complex questions regarding data privacy, compliance, security, and integration. Without clear frameworks, organizations risk misaligned investments, security vulnerabilities, and operational inconsistencies.

The opportunity for 2026 is to establish disciplined, transparent governance models and educate decision-makers—ensuring AI becomes a trusted, value-generating capability rather than a source of risk.

SUGGESTED AREAS OF FOCUS

▶ Define an Enterprise AI Strategy

Ensure AI strategy is embedded within the broader technology roadmap and aligned with long-term business objectives.

▶ Link AI Initiatives to Measurable Outcomes

Every AI deployment should clearly map to an explicit business result.

▶ Clarify Data Ownership & Usage Rights

Establish who owns which data, who can use it, and under what conditions—all within regulatory bounds.

▶ Strengthen AI Security Posture

Define AI-specific risk appetite, strengthen tools and controls, and implement continuous oversight.

▶ Standardize Enterprise AI Governance

Adopt a unified governance framework such as NIST AI RMF, Databricks DAGF, or the upcoming SAGE model.

▶ Determine the Role of Agentic AI

Define levels of autonomy and decision-making authority for agentic systems to balance innovation with accountability.

▶ Ensure Secure Data Provisioning Pathways

Secure the flow of data to AI systems, including external SaaS integrations and the broader AI supply chain.

▶ Evaluate Vendor Problem-Solving Capabilities

Assess how each vendor's approach aligns with your strategic objectives, architecture, and compliance requirements.

INDUSTRY CHALLENGE #5

Guest data remains fragmented across properties and third parties, limiting the ability to deliver effective, real-time personalization

Hotels struggle to create a unified view of the guest. Critical information about the full traveling party is often incomplete or missing due to duplicate profiles and inconsistent data. Without accurate, accessible, and permission-aware data, hotels cannot activate real-time personalization.

The opportunity is to treat guest data as a strategic asset—structured, governed, and deployed in ways that elevate loyalty and revenue.

SUGGESTED AREAS OF FOCUS

▶ Strengthen Identity Resolution via Profile Store Optimization

Enhance CDP/CRM capabilities to create an authoritative, privacy-compliant source of truth for guest identity and credentials.

▶ Expand Behavioral Data Store Capabilities

Capture and unify anonymized behavioral, purchase, and operational data across all touchpoints to enable predictive insights.

▶ Establish a Compliance Engine

Build systems capable of managing complex consent rules across jurisdictions, preparing for increasingly strict privacy regulation.

▶ Prepare for Digital Credential Acceptance

Assess requirements for validating emerging digital identity frameworks such as mobile driver's licenses (mDL), EUDI wallets, and verifiable credentials via Apple/Google Wallet.

▶ Develop Partnerships for Verifiable Credential Management (VCM)

Collaborate with vendors, associations, and government bodies to run pilots and build early leadership in digital identity interoperability.