



AI in Travel and Hospitality: Executive Brief for 2026

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AI in Travel and Hospitality: Executive Brief for 2026 Critical Insights for Travel Leaders

By James Lever, Principal Director, CTO Advisory for Travel (UK), DataArt

This document builds upon the excellent work carried out by my DataArt colleagues on Data and AI and combines insights from recent industry conferences including Phocuswright 2025, AWS re:Invent 2025, Push (UX) Conference 2025 and Skift's "Permission to Exist" presentation.

The Bottom Line

As a Director for Travel Advisory, here's my view on where the industry stands:

AI success in 2026 will be driven by data infrastructure, not new models.

Whilst travellers increasingly use AI for trip planning and startups demonstrate sophisticated capabilities, established travel companies' operations remain untouched by meaningful AI adoption.

Three paths lie ahead:

- Leaders who invested in data platforms and organisational readiness are moving from pilots to production
- Fast followers are correcting course, investing after limited pilot success
- Laggards with slow progress, are watching the competitive gaps widen

What AI Winners Do Differently

Senior Leadership

Support: High-impact AI programmes are 3x more likely to have clear senior leadership sponsorship and accountability for outcomes - not just isolated experiments.

Workflow Redesign:

Winners are 2.8x more likely to redesign workflows around AI, changing how work actually gets done, instead of bolting models onto old processes.

Growth & Innovation

Focus: Top performers are 1.6x more likely to aim AI at new capabilities and growth, not just cost-cutting, using it to reimagine how their business will work in the future.

Where AI Delivers Value Today in Travel

Successful implementations share common traits: specific use cases, clean data, clear business outcomes, and proper governance.

Five High-Impact Applications

- 1. Intelligent Automation:** AI agents handling manual processes (revenue cycle management, guest communications, back-office workflows). ROI delivered within months.
- 2. Personalisation at Scale:** Moving beyond surface-level customisation to understanding trip context and evolving preferences. Early adopters report 7-12% revenue uplifts.
- 3. Dynamic Pricing:** Real-time demand signals and competitive intelligence drive continuous optimisation. Clear ROI in 3-6 months.
- 4. Conversational Commerce:** Agentic AI layers for research, search, booking, and support. ROI in 6-12 months.
- 5. Developer Productivity:** Tools like GitHub Copilot deliver 20-30% gains for experienced developers, accelerating delivery.

Ancillary Provider Opportunities

Ground Transportation & Transfers: AI-powered integration with flight data for predictive positioning and dynamic pricing. "roughly 25 to 30 million people a day arrive at airports and even less than 10% of them actually have transportation booked" a massive opportunity (*Phocuswright 2025*)

Lounge Operations: Predictive demand management based on flight schedules and delays enables 15-20% efficiency gains in resource allocation.

Loyalty & Payment Optimisation: AI simplifies complex value calculations across credit cards, airline miles, and hotel points, enhancing customer experience and programme engagement.

The Six Critical Mistakes Holding Companies Back

- 1. Technology First, Problem Later:**
Treating AI as a tech initiative rather than starting with business problems
- 2. Building on Quicksand:**
Attempting AI with poor data quality and weak governance
- 3. Tactical Thinking, Strategic Neglect:**
Disconnected use cases without production pathway planning
- 4. Misunderstanding AI's Nature:**
Treating probabilistic AI as deterministic logic (leading to wrong applications)
- 5. Separating Technology from Business:**
Tech teams as service providers rather than strategic partners
- 6. AI in Isolation Without Governance:**
Approaching AI as a technical project rather than a business governance challenge requiring executive sponsorship, clear policies, defined responsibilities, risk management frameworks, and ethical guidelines. AI governance is not a technical problem; it's a business governance issue.

The Existential Threat: AI Disintermediation

Whilst AI delivers measurable value in specific applications, it poses an existential threat to traditional distribution. Phocuswright discussions made this unmistakably clear.

The AI-Only Rival Scenario

A report scenario adapted to travel: "An AI-only travel retailer launches with no call centre. It promises 10-second refunds, automatic disruption management, zero fees, and visibly lower costs. It optimises across airline, hotel, and car loyalty with one-to-one personalisation. Suppliers quietly test it since it only charges 5% commission. Within hours it undercuts paid search with agent-driven creative." (Skift)

"The most likely OTA disruptor could be OpenAI"

Why Agents Have the Advantage

AI agents don't need OTA infrastructure (Rafat Ali, Skift). They don't aggregate inventory, they "aggregate the aggregators" without operational burden. They don't build supplier relationships, manage payments, or run call centres. Expedia and Booking.com's October 2025 ChatGPT integration acknowledges this: pivoting from consumer platforms to agent infrastructure.

This became more tangible at AWS re:Invent 2025: Visa and AWS announced collaboration enabling AI agents to "transact securely and autonomously" with Expedia Group, lastminute.com, and Eurostars Hotel Company reviewing blueprints. As AWS Vice President of Agent AI emphasized: "For the first time in history, we can describe what we want to accomplish in natural language, and agents generate the plan." The distinction: **"Chatbots answer. Agents act."**

PUSH UX 2025: Agent traffic is expected to handle majority of interactions within 2-3 years. One message via agent versus dozens of app clicks suggests transactional apps may become obsolete.

Multi-Channel Disruption

Sabre executive at Phocuswright: "It's going to disrupt everybody... Meta will be disrupted... there's going to be disintermediation of every channel." Even suppliers maintaining direct relationships face control shifts: "If Meta and Google flight search traffic moves into agentic AI channels, airlines may still get that, but their control of distribution is going to be different. Booking may not happen in airline.com it may happen in the agentic workplace."

Traditional Search Collapse

First-of-its-kind research on LLM user behaviour revealed: 37% of travellers now trust ChatGPT answers, Google Business Profiles get more clicks than websites in AI mode, and users plan in AI environments then leave to book. The aggregation advantage OTAs built over decades erodes when AI agents directly access supplier inventory.

Strategic Response

Timeline: 5-15 years for major disruption, though some believe sooner. The imperative: "Everybody's got to play offense here very aggressively. Think about commercial models differently than they have previously."

Action priorities:

- Strengthen direct relationships that survive channel shifts
- Prepare inventory/content for agentic distribution
- Rethink traditional commission economics
- Control data quality for AI agent aggregation
- Position as essential service layer for AI platforms

The window to prepare is narrowing.

Strategic Priorities for the Next 18 Months

Priority One: Data Infrastructure

Modern platforms, governance frameworks, self-service analytics, real-time data availability. Companies that invested in cloud platforms 3-5 years ago see returns at a scale AI cannot yet match.

Priority Two: Legacy Modernisation

The industry's 20+ year old technology cannot support required personalisation and flexibility. Offer-order transformation and API-first architectures are foundational.

Priority Three: Organisational AI Literacy

Treat AI adoption as organisational change. Train everyone, not just tech teams. The competency gap between management and developers is slowing progress.

Priority Four: Structured Experimentation

Start with out-of-the-box solutions for common problems. Build custom solutions only for differentiating capabilities unique to your business model.

Priority Five: Production-Ready Governance

AI governance, monitoring, observability tools. Clear policies on data access. Responsible AI frameworks. Human oversight for critical decisions.



Sector Outlook for 2026

Hotels: This sector most urgently requires technology transformation. Leaders will integrate data across property management, booking, guest services, and loyalty. Agentic AI for guest services and room assignment moves from pilots to production.

Airlines: Rapid experimentation becomes mandatory. Data-sharing platforms and predictive AI for disruption management show significant promise. Airlines also exploring ancillary revenue.

OTAs/Agencies: Face most acute disruption risk from agentic AI. Conversational AI reshapes booking, but critically, AI agents with direct supplier access could disintermediate traditional aggregators. Today's commission structures particularly vulnerable. Survival requires aggressive offense: building essential service layers AI platforms need, rethinking commercial models.

Winners create seamless experiences whilst recognising: "What is going to drive value creation going forward is collaboration. There's no one company that will unlock the seamless travel experience."

Tour Operators: Face critical inflection point. Multi-day itinerary coordination across multiple suppliers creates both AI opportunity (dynamic packaging, real-time problem resolution, personalised experiences) and risk (legacy systems, fragmented data).

Winners will: implement structured metadata for AI discoverability, build API connectivity for agent access, use dynamic pricing algorithms, automate multi-supplier coordination. Most operators are without strong IT capabilities, cloud-based tour management systems offering AI-ready infrastructure represent practical path.

Sector Outlook for 2026

Cruise Lines: Unique advantage from extended guest engagement (3-14 days) enables comprehensive personalisation impossible for hotels/airlines.

2026 priorities: hyper-personalised guest experiences (dining, entertainment, excursions orchestrated by AI), dynamic yield management (cabins plus onboard ancillary revenue optimisation), shore excursion AI (capacity management, personalised recommendations), predictive operations (maintenance, provisioning, crew optimisation), sustainability/efficiency (regulatory imperative).

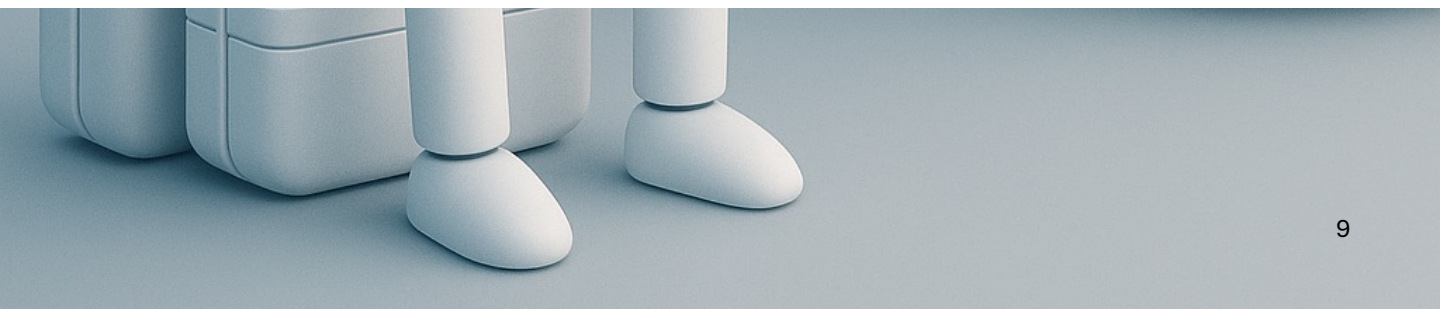
Distribution challenge: traditional travel agents face pressure from direct digital and AI agent bookings; winners enable both human agents and AI agents effectively.

Competitive differentiation shifts from ships (which competitors can build) to data infrastructure and AI capabilities orchestrating personalized experiences. Leading lines move from AI pilots to production-grade systems; laggards struggle with legacy integration whilst maintaining high-touch service expectations.

Ancillary Providers (Activities, Lounges, Transfers, Experiences):

2026 represents breakthrough year for previously underserved segments. Ground transportation integrates with travel data for predictive positioning. Lounge operators leverage AI for capacity optimisation and differentiation.

Key enabler: data integration into broader journey orchestration platforms.



Practical Next Steps

1. Foundation Assessment

Audit your current state: data quality, governance frameworks, technology integration, staff AI literacy, legacy constraints

2. Use Case Prioritisation

Identify 3-5 high-value opportunities with clear business impact (revenue, cost savings, guest experience, operational efficiency)

3. Build or Buy Decision

Consider what adds value: should you own your strategic core (data, integration, business logic) whilst treating vendors as interchangeable components? Is your vendor defining your operating model and limiting your innovation speed.

4. Pilot with Clear Metrics

Defined outcomes, measurable KPIs, governance in place, clear path to production, committed resources

5. Scale Systematically

Integration with workflows, change management, ongoing monitoring, continuous governance

Risk Management Essentials

- **Trust and Transparency:** Guests expect to understand how AI influences their experience
- **Bias and Fairness:** Active monitoring and mitigation required
- **Data Privacy:** Rigorous standards essential despite Gen Z's comfort with data sharing
- **Human Oversight:** Critical for safety, financial transactions, and service recovery

The DataArt Advantage

I work with a team at DataArt that delivers breakthrough data, analytics, and AI platforms for demanding travel organisations. We help companies bridge the gap between AI ambition and operational reality through:

- Modern data platforms and real-time analytics
- Production-ready AI implementations
- Deep travel industry expertise (airlines, hotels, cruise lines, OTAs, tour operators)
- Pragmatic delivery focused on sustainable transformation

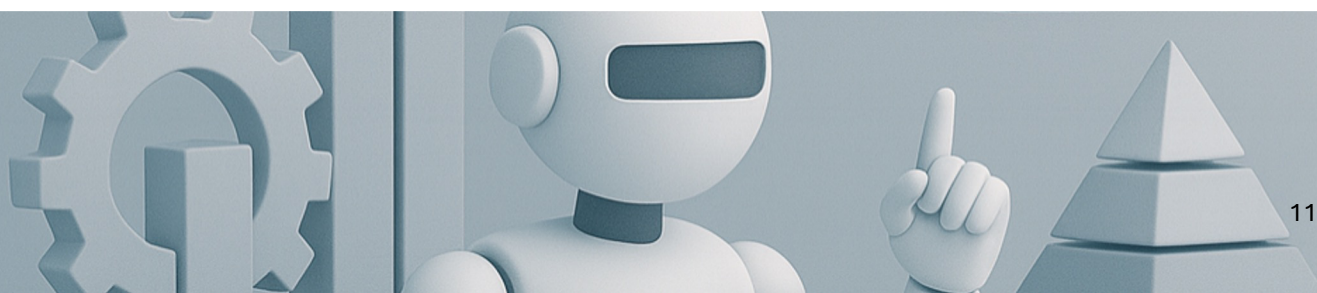
We combine technical excellence with industry knowledge and practical experience with both AI's genuine capabilities and its most common failure points.

DataArt's \$100M AI Investment & Artisyn Platform:

DataArt is committing \$100 million through 2028 to accelerate AI capabilities. Built on this investment, Artisyn is our AI-enabled delivery platform combining intelligent agents, reusable foundations, and proven frameworks.

DataArt's travel-specific Artisyn catalogue, includes production-ready accelerators: booking experience assistants, loyalty personalisers, CRM automation agents, journey companions, and quality control systems.

For travel organisations, this means: 70% faster prototyping, 30% development efficiency gains, and 15% lower engineering costs whilst we focus on building your competitive differentiation, not recreating commodity capabilities.



The foundations you build today determine which path you'll take in 2026.

Get in touch

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About this brief:

This document builds upon DataArt's 2026 Trends Report (24 expert interviews, September-October 2025) and insights from Phocuswright Conference 2025, AWS re:Invent 2025, PUSH UX 2025, and Rafat Ali's "Permission to Exist" (Skift, October 2025). Direct quotes from industry leaders are used throughout.

About the Author:

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