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EVIDENCE BRIEF
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EVIDENCE BRIEF · TECHNOLOGY AND AI

Tourism Data Stays in Silos

How is big data used in tourism?

In early 2026, 98 percent of hotel owners in the U.S., Canada and the Caribbean had begun using AI, yet 32 percent said it was embedded across most of their operations. Studies of hospitality analytics, smart hotels, 58 smart destinations in Spain and three data sources at Kiel Week in Germany show where tourism data turn into decisions and where they stall.

By Eventamin · How we work 19 November 2026

Worldwide, U.S., Canada, Caribbean, Spain, Germany

5 studies · 4 industry sources

big data in tourism | hospitality analytics | business intelligence | smart hospitality | smart destinations | open tourism data | hotel data integration | AI in hotels | event data | Wi-Fi crowd data

Also in Destinations and impact

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KEY FINDING

Collecting data is no longer the constraint; connecting it is. Hotels keep guest, revenue and operations data in systems that do not exchange it, destinations lack the budget and skills to share theirs, and at events different data sources give different answers. Value follows from integration and use, not from the volume of data.

Five studies, 2015–2026; industry data 2026

Key findings

- **AI is common, rarely embedded.** In a survey published by Wyndham in January 2026, 98 percent of hotel owners in the U.S., Canada and the Caribbean had begun using AI, but 32 percent said it was embedded across most of their operations[1].
- **Integration is a top barrier.** Hotel owners named data privacy and security (46 percent), the cost of AI tools (42 percent) and integration with legacy systems (40 percent) as their main barriers[1].
- **Own data, own models are rare.** In June 2026, 91 percent of exhibition companies used AI, but four percent ran their own models on their own data[2].
- **Destinations lack means, not ideas.** Heads of 58 smart destinations in Spain's Valencian Community rated lack of budget and technical capacity the strongest barrier to sharing open data, at 5.60 out of seven, and visitor-flow management the leading opportunity, at 6.34[3].
- **Data sources disagree.** During Kiel Week 2022, average hourly Wi-Fi signals across the wider festival area were 67 percent above the surrounding weeks, while smartphone location signals for the same area fell seven percent[4].

FOR THE MARKET

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Market outcomes

What the studies mean for each part of the industry.

Hotels	The return on data comes from connecting property, revenue, guest and partner systems through shared standards, not from adding tools. Owners name privacy, cost and integration with legacy systems as the main barriers, so integration work comes before new AI features.
Venues & destinations	Destinations see visitor-flow and overcrowding management as the main use of shared data, but budget, technical capacity and skills hold back publication. A shared data space run by a trusted body addresses the fear of losing a competitive edge.
Organisers & associations	Event data gain value when sources are combined and checked against each other; at Kiel Week, Wi-Fi and smartphone data pointed in opposite directions. Integration of the event platform with sales and marketing systems goes with higher satisfaction with event performance.
Academia	Most evidence on tourism data is conceptual or comes from single cases. Studies that track whether integrated data change pricing, staffing or crowd decisions, and with what return, are missing.

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Data and AI in hospitality and events in 2026

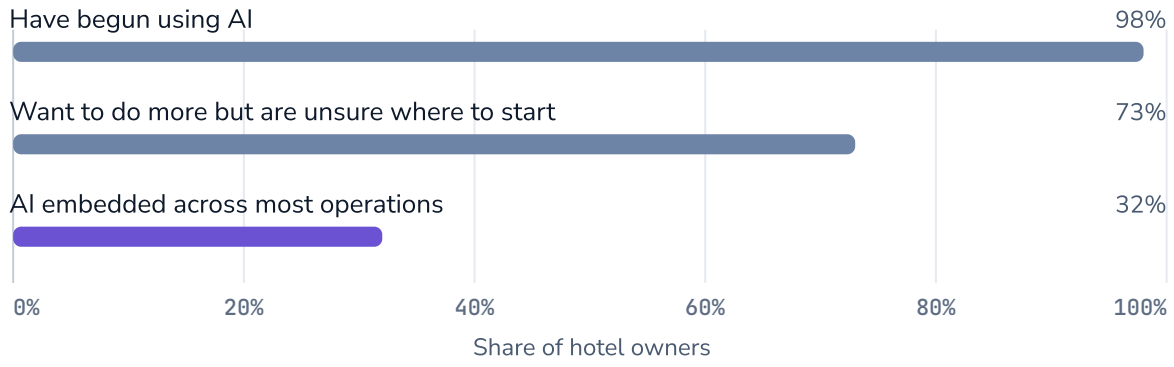
AI has spread faster than the data behind it. In a survey of hotel owners and developers in the U.S., Canada and the Caribbean published by Wyndham in January 2026, 98 percent had begun incorporating AI into their business, but 32 percent said AI was embedded across most aspects of their operations, and 73 percent wanted to do more but were unsure where to start[1]. Owners already using AI applied it mostly to operational efficiency, energy efficiency and revenue optimization[1].

Use is broad across tasks. In a March 2026 survey of more than 500 hoteliers by the hotel software provider Mews, hoteliers used AI in 11 of 19 common operational tasks on average, and Mews named fragmented technology stacks as the main limit on what AI can do for a property[5].

The exhibition industry shows the same pattern. In UFI's Global Exhibition Barometer, conducted in June 2026, 91 percent of exhibition companies used AI in some form, 70 percent used only standard tools and four percent ran their own models on their own data[2]. In Forrester's survey of more than 400 B2B event decision-makers in the first quarter of 2026, 63 percent named data quality and accessibility as a barrier to using AI for personalized attendee experiences[6].

Use of AI among hotel owners in the U.S., Canada and the Caribbean in 2026

Share of hotel owners and developers.



Source: Wyndham Hotels & Resorts, as reported by Hotel Technology News · Release date: January 2026 · Region: U.S., Canada and the Caribbean · Number of respondents: not stated

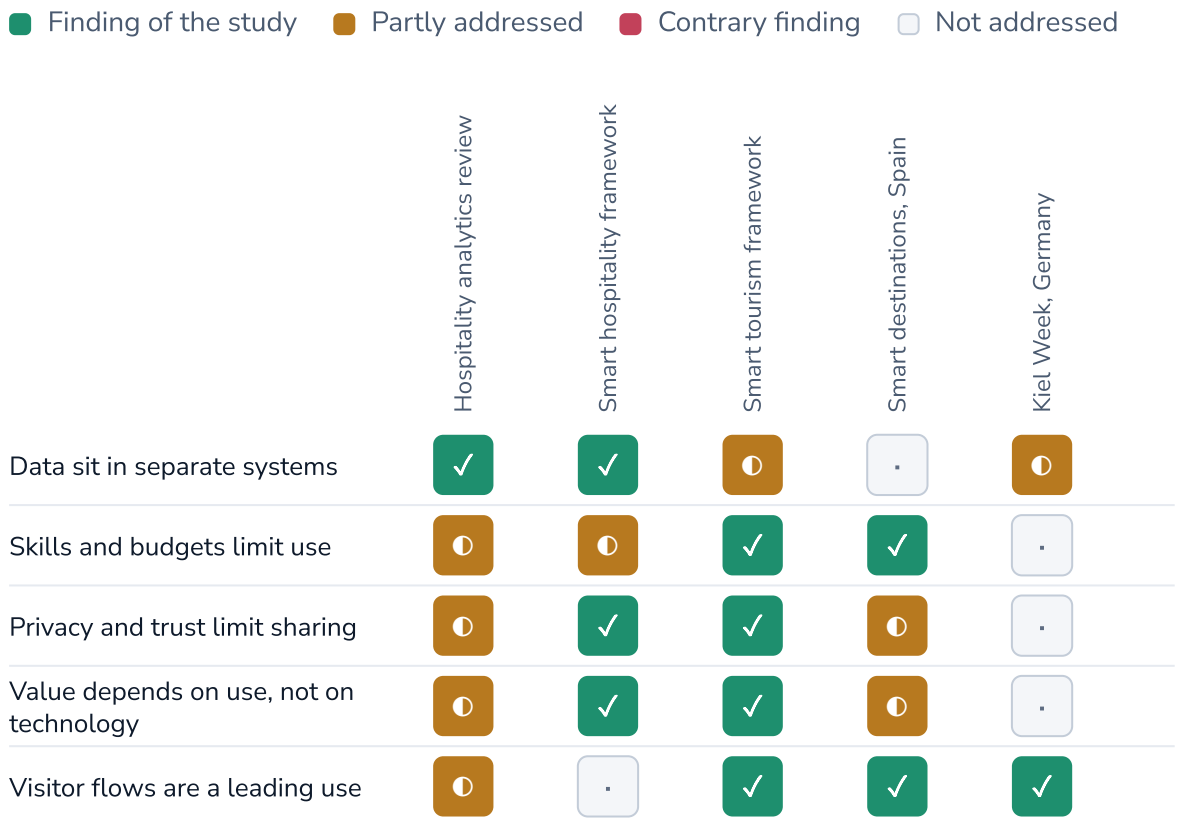
What research shows about hospitality data

Research on hospitality data has grown but remains thin. A review of studies published between 2000 and 2016 found 96 articles on big data and 77 on business intelligence in hospitality and tourism, of which 17 and nine appeared in tourism or hospitality journals[7]. The authors described the field as fragmented in scope and limited in methods, and real-time business intelligence as still a rarity in tourism[7].

The obstacles are practical. The same review named the automatic collection of non-standard data, its storage, integration and quality, and the extraction of useful knowledge as the main challenges[7]. A framework of smart tourism describes three layers that data must pass through, from collection to exchange between systems to processing into services, and names privacy, information governance, dependence on technology and unclear business models as its main drawbacks[8].

Findings on the use of data in hotels, destinations and events, by study

Classification of each study's findings on five conditions for using tourism data.



Sources: Mariani et al.; Buhalis & Leung; Gretzel et al.; Celdrán-Bernabéu et al.; Reif et al. · Release dates: 2015 to 2026 · Regions: Worldwide; Spain; Germany · Classification: Eventamin

Hotels: value lies in connected systems

Hotels hold data in many systems that rarely exchange it. A framework of smart hospitality argues that hotels need standard protocols, a shared cloud data layer and business intelligence to combine their own data with that of partners, and finds that many hotels integrate their systems only in part because non-standard interfaces are costly[9]. Connected systems reduce errors, raise efficiency and support dynamic revenue management, including pricing around local events[9].

Technology alone does not raise profits. The authors saw no direct link between advanced technology and profitability, since results depend on how hotels use it, and named data ownership, subscription costs, trust and exposure to competitors

as the main obstacles to sharing[9]. Hotel owners named similar barriers in 2026: 46 percent cited data privacy and security, 42 percent the cost of AI tools and 40 percent integration with legacy systems[1].

Integration also pays in event businesses. Two-thirds of B2B event organizations had linked their main event platform to their sales and marketing systems by early 2026, and 62 percent of those with deep integration were satisfied with event performance, against 37 percent of those without[6].

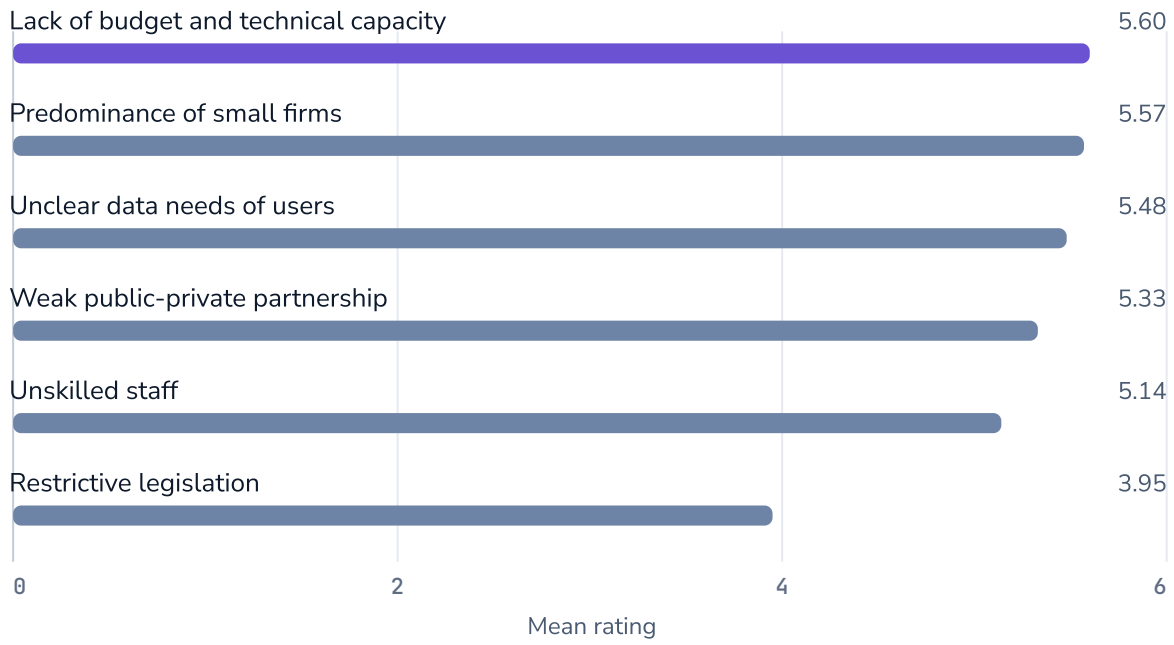
Destinations: open data in strategy, not in practice

Smart destinations plan to share data but rarely do. In a survey of 58 heads of destinations in the Network of Smart Tourist Destinations of the Valencian Community, conducted in May and June 2023, open data featured in destination strategies but was rarely put into practice[3]. Lack of budget and technical capacity was the strongest barrier, rated 5.60 on a seven-point scale, followed by the predominance of small firms at 5.57 and unclear data needs of users at 5.48; restrictive legislation was not seen as a barrier, at 3.95[3].

Managers expected the largest gains in managing crowds. Better management of tourist flows and overcrowding was the top-rated opportunity, at 6.34, ahead of smart solutions adapted to the destination at 6.29 and a better destination image at 6.28; an improved return on investment scored 5.90[3]. Smart tourism research describes the same use: sensors that count visitors at each site against its carrying capacity[8].

Barriers to publishing open tourism data rated by heads of smart destinations in the Valencian Community, 2023

Mean rating on a seven-point scale; higher values mark stronger barriers.



Source: Celdrán-Bernabéu et al. · Release date: November 2025 · Region: Spain (Valencian Community) · Survey period: May to June 2023 · Number of respondents: 58

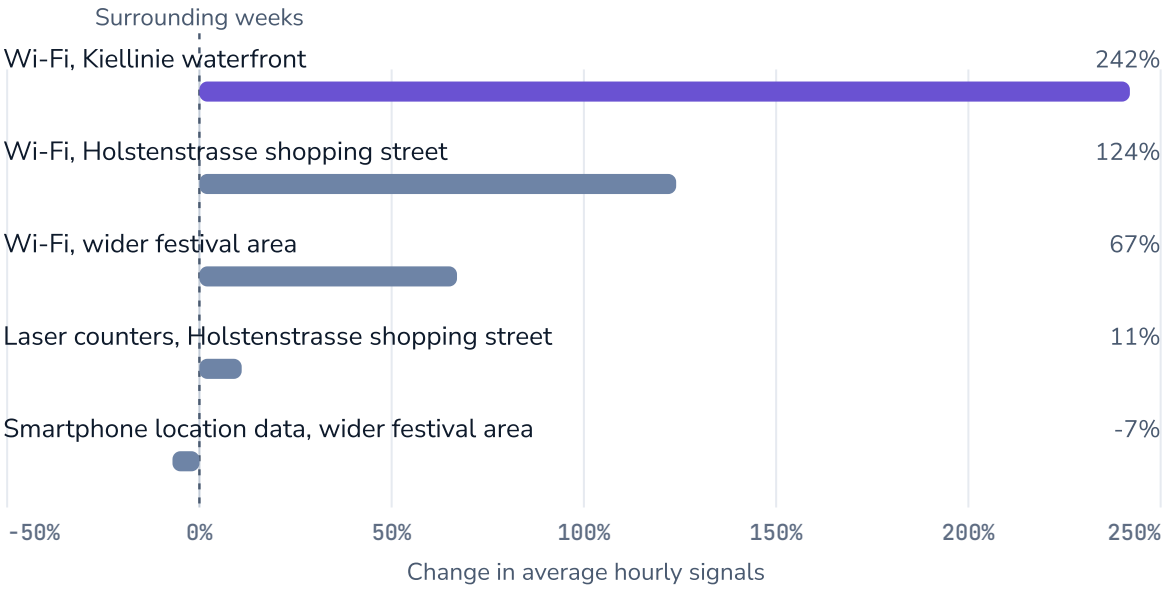
Events: data sources tell different stories

At events, the choice of data source shapes the result. During Kiel Week 2022, a nine-day sailing event and festival in Germany that organizers put at around 3 million visitors, researchers compared Wi-Fi access-point data, laser pedestrian counters and smartphone location data with the weeks before and after[4]. Average hourly Wi-Fi signals were 242 percent above the surrounding weeks along the Kiellinie waterfront and 124 percent above them in the Holstenstrasse shopping street, while laser counters in the same street recorded 11 percent more passers-by[4].

Smartphone data from commercial providers showed fewer signals during the event than before and after, and their algorithms were not disclosed[4]. The researchers described Wi-Fi data as a sensitive indicator of crowd activity at large urban events, and peak hours moved into the evening during the event[4].

Change in average hourly signals during Kiel Week 2022 compared with the surrounding weeks, by data source and area

Change in the average number of signals per hour, in percent.



Source: Reif et al. · Release date: 2025 · Region: Germany (Kiel) · Survey period: May to August 2022 · Data: Wi-Fi, laser pedestrian counters and smartphone signals · Calculation: Eventamin

Notes on the data

The figures are based on five studies published between 2015 and 2026: a systematic review of 173 articles on business intelligence and big data in hospitality and tourism published between 2000 and 2016, conceptual frameworks of smart hospitality and smart tourism, a survey of 58 heads of smart destinations in the Valencian Community in 2023, and a comparison of three big data sources during Kiel Week 2022[3,4,7–9]. The Kiel Week changes are Eventamin's calculation from the study's average hourly signal counts during the event and in the surrounding weeks. The classification of study findings is Eventamin's coding. Industry figures are from Wyndham's 2026 owner survey as reported by Hotel Technology News, Mews, UFI and Forrester; the Wyndham, Mews and Forrester figures come from published summaries, not full reports, and the four surveys cover different populations[1,2,5,6].

Sources

● Study ○ Industry source

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The evidence

5 studies · 4 industry sources

SAMPLE

Five studies: a systematic review of 173 articles on business intelligence and big data in hospitality and tourism, conceptual frameworks of smart hospitality and smart tourism, a survey of 58 heads of smart destinations in the Valencian Community, and a comparison of three big data sources at Kiel Week 2022; four industry sources

YEARS

2015–2026 (studies); 2026 (industry data)

METHOD

Systematic literature review, conceptual frameworks, a destination survey and a big data case study

About Eventamin

Eventamin reads the peer-reviewed research on events, exhibitions and hospitality, sets it against industry data and states what it means for the market. Every brief is published by Eventamin as an organisation: its sources, method and corrections are open.

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