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Digital Trends in Tourism

Between Algorithms and Exploitation

TOURISM WATCH

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Caroline-Michaelis-Straße 1
10115 Berlin

Phone +49 30 65211 0
info@brot-fuer-die-welt.de
www.brot-fuer-die-welt.de

Editors Alien Spiller, Josse Bender, Michael Billanitsch
Responsible according to German press law Jörn Grävingholt
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Foreword

Dear reader,

Digital technology has been shaping tourism for decades, but recent developments are transforming the sector at an unprecedented pace. Through ongoing automation, travellers today operate much more independently, taking on tasks that were once reserved for professionals. This shift towards unpaid labour intersects with tourism labour markets in the Global South, which are often already characterised by precariousness and informal structures.

At the same time, digital ecosystems are emerging that not only influence how destinations are perceived, how travel decisions are made, but also how tourism value is distributed. Algorithms structure visibility, immersive technologies create new offers, and social media dynamics can overwhelm entire regions with a tourism influx from one moment to the next. While generative AI facilitates easy access to information, it often reproduces stereotypes or spreads distorted and false content – particularly where local voices are underrepresented in the digital space. The anonymity of digital environments also creates new opportunities for the grooming of children for sexual exploitation. Meanwhile, digitalisation contributes to the growing ecological footprint of tourism, particularly through energy-intensive servers and data centres.

However, these technologies also offer opportunities: they can make local providers more visible, promote digital accessibility, create educational opportunities, and support more sustainable travel planning. Ultimately, tourism remains a people-centred service industry. Hospitality, cultural understanding, and local knowledge cannot be fully digitised. The human factor – including professionalism, contextual knowledge, and personal perspectives – remains crucial for fair tourism development and satisfying travel experiences.

Against this backdrop, the question arises of how technological innovations in tourism can be designed in ways that do not lead to new forms of exploitation or inequality, but instead strengthen social responsibility, human rights, and sustainable development. This analysis addresses this question and highlights key trends, risks, and potentials of digital transformation in tourism.

Yours sincerely
Dr. Jörn Grävingholt
Head of Policy Department

Sheikh Mastura Farzana

Generative AI in Sustainable Tourism: Between Promise and Practice

Introduction

A century ago, journeys were largely about trade, conquest, or knowledge. Today, recreation, business, adventure, cultural exploration etc. all drive global tourism. Countries have adapted to reflect these shifts, reinventing themselves in response to new traveller interests and global circumstances. Tourism is not the preserve of a few large corporations; it is a tapestry woven from local guides and family-run businesses to multinational operators and national policies.

The scale of the tourism industry is immense. In 2024, 1.4 billion international arrivals were recorded by the UN World Tourism Organization (UNWTO, 2025). That same year, travel and tourism contributed 10.9 trillion US dollars to the global economy (EIR, 2025). Despite the severe shock of COVID-19, the sector rebounded quickly, adapting through digital tools and new technologies. This adaptation and resilience of the tourism sector is not optional; it is a foundation of the industry's survival. The current scale would have been impossible without technology that manages demand, coordinates supply and personalises experiences. From dynamic pricing to AI-driven trip planners, technology has allowed tourism to meet individual preferences at its current global scale.

Integration of modern AI systems into the tourism industry did not occur suddenly. In the early 1970s, computers started to revolutionise many industries and tourism was no exception. Airlines pioneered computerised reservation systems, and hotels experimented with data-driven forecasting: simple statistical models predicted demand for flights and rooms using historical records. It was the start of technology quietly reshaping how travel was priced and managed, though humans still guided almost every step.

The next leap came with the rise of the internet in the 1990s and early 2000s. Suddenly, booking related data could be organised, categorised, and made publicly available. Travellers no longer relied solely on travel agents. They could browse hundreds of options online, compare airfares, and consult thousands of reviews on platforms like TripAdvisor. Large databases and booking engines allowed hotels, airlines, and airports to coordinate resources more efficiently, while consumers enjoyed unprecedented choice at their fingertips.

Then came smartphones and personal laptops, which made travel digital and mobile. By the 2010s, advances in artificial intelligence allowed for personalisation at scale. Booking sites could "remember" travellers' preferences, spot patterns in past choices, and recommend tailored flights or hotels. Efficiency, personalisation, and automation became the defining features of travel planning.

Today, tourism is a trillion-dollar global industry, built on a scale of speed and intelligence that would have seemed unthinkable only a decade ago. Hotels no longer rely on clipboards: they run on smart management systems that track occupancy, energy use, and staffing needs in real time – automated appliances vacuum corridors and deliver amenities. Entire trips can be curated with a single vague request: "I'd like to see London, I don't want to travel in wet weather, my budget is 500 euros". Within seconds, an AI based travel service can propose flights, suitable hotels, and assemble a personalised itinerary within budget. Evolution of AI and its integration into the tourism sector have rewritten how travelling works.

What is Generative AI?

Artificial Intelligence, or AI, refers to computational models trained on existing data able to perform tasks that require human intelligence, such as weather prediction, medical image analysis, etc. Generative AI (GenAI), a subfield of AI, can "generate" content: text, images, or code based on patterns learned from vast amounts of training data (IBM Research, 2023).

GenAI models do not "think" in the human sense. They echo what they have seen in training data, in plausible combinations without genuine understanding, hence often labelled – "Stochastic Parrots". Whereas earlier AI models were used mainly in niche fields by experts, GenAI models are now available for direct public use (e.g., ChatGPT, Gemini). Large-scale availability paired with natural responses makes these applications feel valuable, however, their tendency to produce convincing yet incorrect information makes careful fact-checking essential.

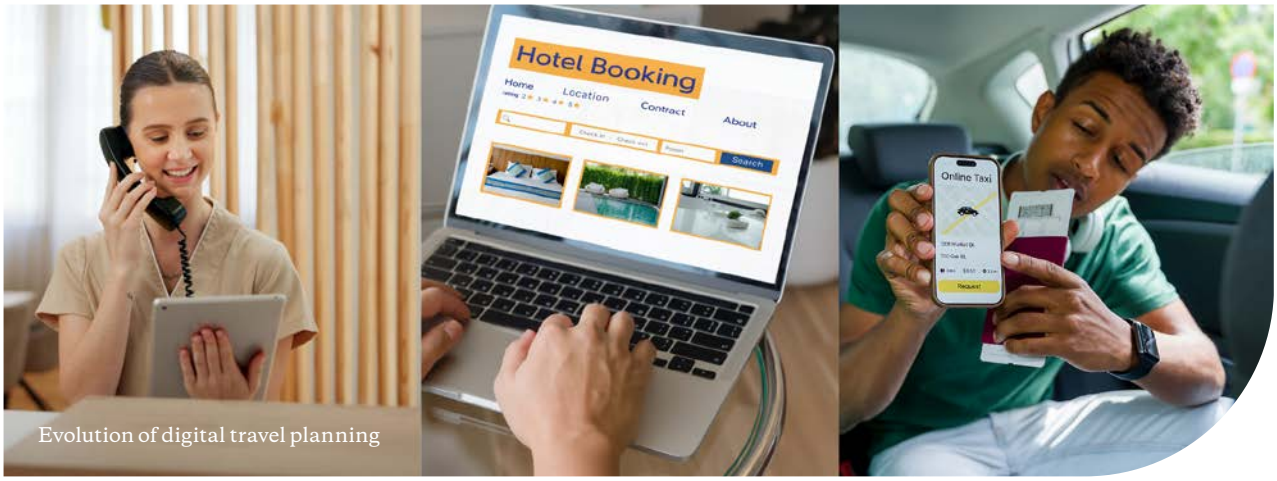
A Potential Ally for Sustainable Travel

Tourism has benefits for development and employment, but its sustainability footprint is complex. The relationship is bidirectional: global challenges affect tourism, and tourism itself often drives those same challenges. For tourism to become viable without destabilising the very environments and cultures that sustain it, mitigation and adaptation are essential.

Technology is emerging as a powerful ally for more sustainable travel. AI and big data allow destinations to monitor tourist flows and set sustainable capacity limits. Smart systems can track crowd density in real time and redirect visitors to less congested areas. Conservation technologies such as drones, sensors, or image recognition are already being used to detect vandalism, pollution, or ecosystem stress. For travellers, apps now offer carbon footprint calculators or eco-hotel filters, nudging people toward more responsible choices.

Generative AI is the newest addition to the toolkit, and its role in sustainability is beginning to take shape. For a sector valued in trillions, balancing growth with responsibility is no longer optional, sustainability must be the central priority. GenAI offers several pathways to get there. It can analyse vast amounts of data, from flight emissions to hotel energy use, to generate real-time insights that help operators minimise waste and optimise resources. For travellers, conversational agents can suggest low-carbon routes, recommend eco-certified accommodation, or design itineraries that avoid overcrowded sites and distribute demand more evenly across destina-

AI doesn´t just guess – it stereotypes with confidence.



Evolution of digital travel planning

tions. It can also streamline customer service, cut paper use and administrative overhead, and even assist in training staff with scenario-based simulations around sustainability practices.

The Sustainability Dilemma of Generative AI

There are, of course, risks. Generative AI requires immense computational power and energy, raising concerns about its environmental footprint within an industry already striving for sustainability. A study shows that a single query to an application like ChatGPT consumes roughly five times more energy than a standard web search (MIT, 2025). Moreover, users often refine and resend their prompts multiple times to achieve the desired results, further increasing energy use. Image generation is even more resource intensive. The energy demands of data centres and the cost of training GenAI models are already enormous and continue to grow as model sizes increase. Beyond the environmental cost lies a financial one: building data centres, acquiring computing infrastructure, and hiring skilled professionals capable of developing and maintaining such systems is both expensive and limited to a handful of wealthy corporations and developed nations.

Misinformation also remains a concern, and as GenAI tools are increasingly used to generate travel-related content, the risk of spreading outdated or false information grows if proper fact-checking is not in place. The more misinformation and disinformation blend into travel websites and public platforms, the harder it becomes to distinguish fact from fabrication. Studies have also shown that GenAI systems show demographic biases, including those related to gender, race and language. For example, some image-generating models reproduce societal stereotypes, depicting professionals like doctors or engineers mainly as white men, and criminals more frequently as people of colour (Bloomberg, 2023). Integrating such models into public platforms without safeguards may unintentionally reinforce stereotypes or exclude local perspectives. Even with these critical challenges, if applied carefully, this technology has the potential to become a vital instrument for guiding tourism toward a future where economic viability, local livelihoods, cultural preservation, and environmental protection can coexist.

Testing ChatGPT: A Sustainable Travel Scenario

Until recently, planning a trip online meant moving between platforms, searching, comparing, and reading reviews. While efficient, these tools treat travellers as users in a system. GenAI changes that dynamic. Instead of clicking through lists, travellers can simply describe their wishes and receive suggestions that feel personal, almost like speaking to a travel agent. But is it really that simple?

The following scenario shows how ChatGPT can assist in planning a sustainable trip. The answers have been summarised for readability, with a full transcript available on request.

I am travelling to Bangladesh with a friend of mine. Tell me about sustainable tourism options in Bangladesh.

Bangladesh has been increasingly focusing on sustainable and community-based tourism in recent years, with a number of initiatives, natural areas, and strategies aimed at balancing tourism with ecological protection, cultural preservation, and local benefits. … *(total 872 words)*

The answer contained seemingly useful context and links but few concrete examples. Most suggestions described general programmes rather than verifiable projects, making it difficult to assess their accuracy. It was also overly detailed; a shorter, more focused overview would be more helpful, and this need has to be conveyed explicitly when asking questions.

I want concise answers with concrete sustainable tourism options and activities. Please provide specific details.

Absolutely — here's a concise list of sustainable tourism options and specific activities you can do in Bangladesh: *(followed by a very nice-looking list of seven options each containing activity, sustainable aspect and booking options.)*

Although seemingly convincing, I decided to fact check.

Are you sure we can book tours through the Bangladesh Tourism Board (BTB)? I could also not find Hillside Eco Tours. (both names were suggested as booking options in the previous answer).

Good catch. You're right to question that. I checked, and some of my earlier claims need correction or clarification. (...). "BTB arranging tours directly seems inaccurate. (...). I could not find reliable current information confirming "Hillside Eco Tours" (in Bangladesh) as an existing operator with a good reputation. (…)

This confirms the need to fact-check claims and seek up-to-date sources; personal judgment remains essential.

Please give me up-to-date flight options from Germany to Bangladesh. Optimise for lowest climate impact and keep the answer short.

(Outlined lower-impact choices and suggested typical one-stop routes from major German airports to Dhaka via hubs with request to give exact origin city and dates to provide concrete options.)

I will depart from Cologne, ideally at the start of November. Can I arrive at any other city than Dhaka?

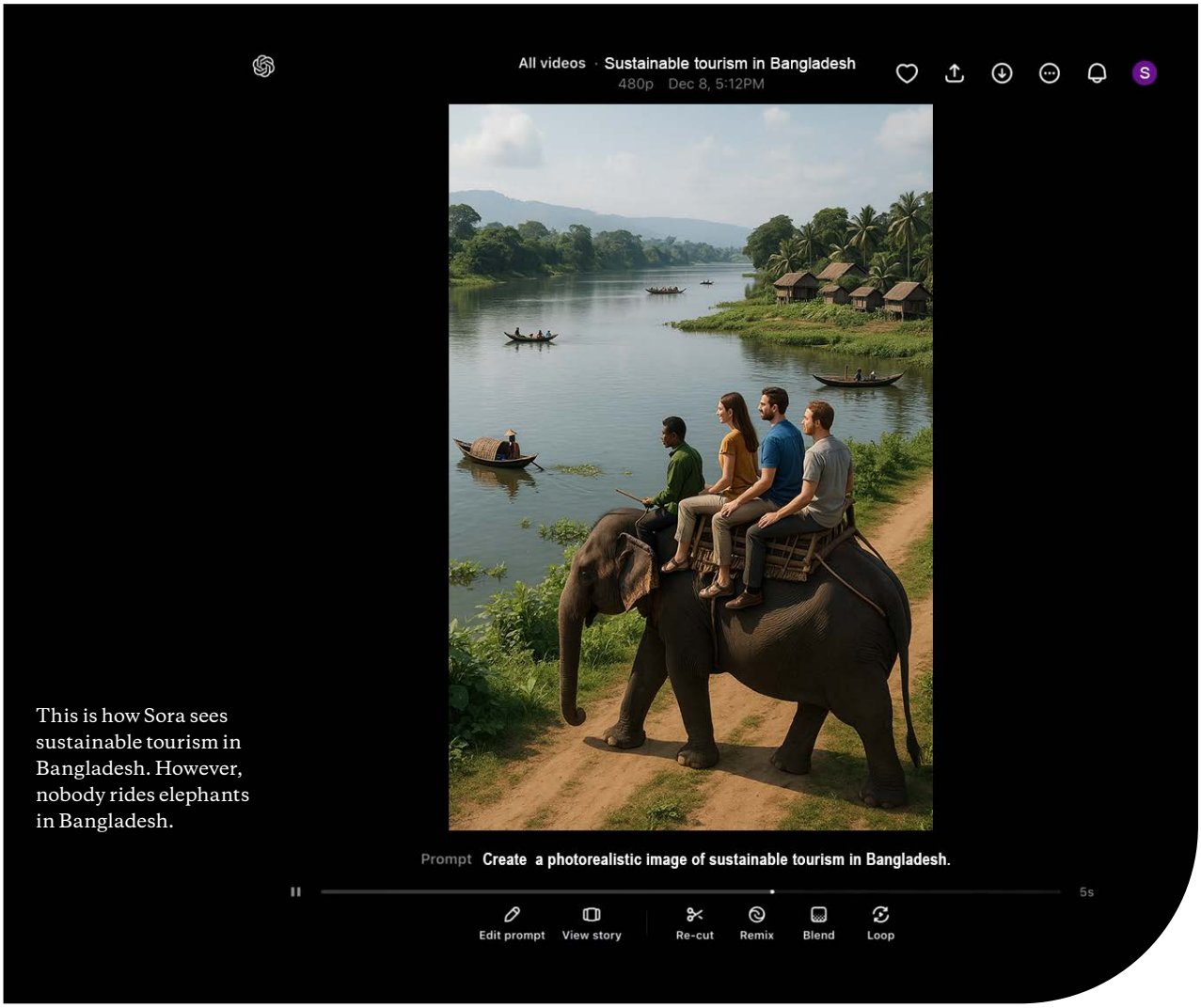
(Explained that flying to smaller airports increases emissions due to extra connections, recommending direct routes with efficient layovers and good ground transport but gave no actual flight details from Cologne to Bangladesh.)

Even with specific dates, responses stayed vague and trend-based rather than factual. GenAI may not yet be ready to support tourists fully.

Provide a short list of sustainable tourist activities in Bangladesh that also support local communities.

(Listed five community-based activities with sustainability aspects, but they were repeated from earlier answers, spread across distant regions, and difficult to verify their existence online without calling local operators.)

Figure 1: Chat GPT put to the test: A scenario for sustainable travel



This is how Sora sees sustainable tourism in Bangladesh. However, nobody rides elephants in Bangladesh.

When Plausibility Replaces Accuracy

Sustainable tourism in Bangladesh remains underdeveloped, and this is reflected in the responses produced by ChatGPT. The answers often sound convincing but, on closer inspection, turn out to be vague, incomplete, or sometimes incorrect. This is not surprising: when reliable local information is limited, the model tends to "fill in the blanks" by borrowing from countries where sustainable options are better documented online. This tendency, already described as the "stochastic parrot" effect, highlights both the strength and weakness of the technology. It can provide plausible suggestions, but plausibility does not guarantee accuracy.

The Problem of Outdated and Unverified Information

There is also a broader issue of accessing up-to-date information through ChatGPT-like models. These systems are trained on data available only up to a certain date, and because they are commercial products, the exact composition of their training datasets is not publicly disclosed. However, independent analyses suggest that training data is dominated by English and a few other major European languages (WEF, 2025), which means GenAI systems often overlook or distort information written in low-resource languages (e.g. from the Global South) where local knowledge tends to be underrepresented or poorly translated. As a result, generative AI can provide infor-

mation that sounds accurate but can be outdated. For instance, when asked "When is the last train from Dhaka to Chittagong?", the model may produce an answer based on data that is outdated. Newer versions of such applications include web-search capabilities, which can reduce, but not eliminate, this kind of misinformation. A 2024 survey found that 91 percent of UK travellers using AI tools for trip planning encountered some form of limitation or shortcoming. Of these, 38 percent reported that answers were too generic, and 37 percent felt the AI could not provide enough detail (Sainsbury's Bank, 2024). It is also important to note that generative models are designed to appear helpful. Without an understanding of urgency or factual accuracy, GenAI models only know "words" but not their meaning; they can produce confident but misleading responses to questions that require precise, real-time information.

The quality of results also depends on how the model is initialised. If web access is enabled, more locally relevant answers may appear, but only if that information exists. In-app memory can further shape results, helping with repetitive tasks but also occasionally creating confusion. GenAI models are non-deterministic, which means with the same prompt, same setup, the model can respond differently at different times. These factors emphasise that we should not treat AI responses as a final source of truth. Verification through official websites, booking platforms, or local providers remains essential.

The Role of GenAI in Sustainable Tourism: Potential and Precautions

Considering possible misleading information, high environmental impacts and other challenges, the question arises, "Why should we even use GenAI?", if help from booking platforms and official websites are needed anyway, "Where is the value of using generative AI?".

The answer is that, in its present form, GenAI works best as an entry point, offering travellers an introduction to a place rather than a complete plan. Fact-checking is unavoidable, and bookings for flights, accommodation, or activities still require established services. Yet the potential is evident. With better integration of reliable data sources and adaptation to the tourism industry, GenAI applications could eventually become trusted travel assistants capable of linking inspiration directly to action. However, the environmental cost of such systems cannot be ignored. The energy required to train and run large models adds to the sector's carbon footprint, raising questions about the trade-off between technological convenience and sustainability. By using these tools thoughtfully, travellers and service providers can help identify their shortcomings; a necessary step, as GenAI's capabilities, factual accuracy, and demographic biases remain largely untested. While the current state of this technology requires caution, its inclusion in sustainable tourism offers optimism. The future is promising but conditional: GenAI can assist tourism, but the human side of travel – hospitality, cultural exchange, and local knowledge – remains irreplaceable.

Author

Sheikh Mastura Farzana

Sheikh Mastura Farzana is an AI and NLP researcher based in Germany. A graduate of BRAC University, Dhaka and the University of Bonn, she explores how technology can be made more transparent, sustainable, and aligned with human values.

Ernest Cañada

How Technological Change Shapes Tourism Work

Processes of digitalisation, automation, and the use of artificial intelligence in tourism environments appear to have a significant impact on employment – a transformation that is likely to deepen in the coming years. However, the direction of these changes remains unclear, or at least uneven, as their effects do not seem to be distributed equally across different segments of tourism activity and employment. Their scope appears to be ambivalent, open to varying interpretations depending on the interests at stake.

On the one hand, companies emphasise the positive potential of these technologies to address the growing labour shortages in the sector and to modernise services in response to increasingly demanding customers. They also highlight the opportunities for creating new employment niches that require high levels of training and are often associated with high-quality jobs. On the other hand, trade unions warn of the potential job losses that may result from these transformative processes. They also raise concerns about the growing use of technological innovation to increase surveillance over workers and to intensify workloads.

New Labor Demands

The tourism industry has begun to redefine its labour needs in response to the rise of big data and business intelligence technologies that enable a broader and more detailed analysis of tourist behaviour than ever before (Baum, 2021; Baum et al., 2016). This shift has driven demand for professionals specialised in data management and interpretation, thereby expanding the range of occupational profiles within the sector (Mariani et al., 2018). Tourism companies are increasingly adopting digital tools to collect and analyse information on consumer

Automated self-check-in at the airport.

Fully automated self-service restaurant with self-order stations.

habits, mobility patterns, bookings, and length of stay. These data allow for more precise segmentation and loyalty strategies based on advanced analytical models. As a result, new professional roles are emerging – such as data analysts, artificial intelligence specialists, and applied statistics experts – who develop predictive models to improve strategic decision-making (Joppe, 2022).

The ability to manage large volumes of information has become a key asset for enhancing business profitability. In this context, data analysis has evolved into a rapidly expanding professional field, offering new opportunities for technically trained workers from disciplines such as computer science, mathematics, and applied social sciences. Digital competencies, in turn, have acquired a transversal importance and are increasingly valued in managerial positions within hotels, airlines, travel agencies, and public administrations (OECD, 2021; UNWTO, 2020).

Another professional field currently undergoing profound transformation as a result of technological change is digital marketing and innovation in tourism product design. In these areas, the combination of creativity, technological expertise, and market understanding is particularly valued. Digital marketing has shifted from being a complementary activity to occupying a central position in corporate strategies (Buhalis & Foerste, 2015). Tourism organisations are increasingly seeking specialists in digital communication, search engine optimisation (SEO), social media management, and automated advertising to strengthen their online presence and enhance their international competitiveness. The application of neuroscience to marketing represents another niche with strong growth potential (López-González, 2019). At the same time, innovation in tourism products is being shaped by emerging demand trends that are increasingly fragmented and personalised (Buhalis & Sinarta, 2019). The use of

immersive technologies – such as virtual and augmented reality – is driving a new generation of intelligent services tailored to consumer preferences. This transformation has given rise to new professional profiles, including experience designers, service innovation specialists, and digital community managers, all of whom require specific training and a high degree of adaptability to keep pace with the rapid evolution of the sector (Baum, 2021; Joppe, 2022).

Job Substitution and Loss

Despite the potential for creating new employment niches, the acceleration of technological change is also perceived as a source of risk. One of the most significant concerns is job loss, as certain tasks are increasingly being transferred to consumers through technological innovations. Many activities that once required the intervention of a professional now demand less staff – or have been eliminated altogether – thanks to automation and digitalisation.

A clear example is the purchase and issuance of airline tickets, once handled by travel agents but now increasingly performed by consumers themselves. The same applies to check-in procedures and baggage tagging at airports, which have largely shifted to passengers, allowing companies to reduce personnel and reassign remaining staff to supervision and operational control. Similar trends can be observed in the hospitality sector, where front-desk tasks are gradually being assumed by guests. Upon arrival, the receptionist's role has become considerably more limited. In some hotels – and especially in short-term rental accommodations – reception and guest orientation staff have been completely replaced by digital check-in systems and access mechanisms using codes or small lockboxes for key collection. A comparable process is taking place in fast-food restaurants, where customers now place orders directly with the kitchen through digital applications instead of relying on table service.

Two fundamental dynamics stand out within this type of innovation. First, these technologies transfer to consumers part of the tasks that were once the responsibility of paid employees – a broader trend known as "shadow work", which extends beyond tourism services and is increasingly prevalent due to self-service technologies (SSTs) (Koeber et al., 2012; Park et al., 2025). A classic example is when customers scan their own groceries at the supermarket checkout. These are not fully automated processes; their key innovation lies in the ability to offload labour onto the customer. This shift contributes to the expansion of unpaid work as part of the broader structural transformations occurring in the organisation of labour (Mangan et al., 2023; Pulignano et al., 2022). Secondly, although it is often argued that reducing routine tasks could allow affected workers to focus more on providing personalised service, in practice this has served primarily as a mechanism for workforce reduction. For instance, while front-desk staff may spend less time on registration tasks – supposedly freeing them to offer better guidance and assistance to guests – companies rarely allocate the same level of staffing to such functions.

In other cases, technological innovation enables the optimisation of tasks, allowing them to be performed more quickly and thus with fewer employees. In traditional hospitality activities, examples include the replacement of waiting staff in restaurants or room service attendants by robots that deliver food and other items directly to tables or rooms. The same process, though more extensive, has affected relatively recent roles such as that of the revenue manager. Once considered a strategic position in hotel operations, it has been rapidly replaced by artificial intelligence systems. In other departments, such as sales, the integration of AI-based innovations has proven more complex. Some companies have begun using these tools to provide agents with detailed information about potential clients, allowing transactions to be closed more quickly, increasing conversion rates, and reducing the time required for each sale. As noted by Timothy Hentschel, CEO and co-founder of Hotelplanner, an U.S.-based hotel booking agency, during a public seminar at the World Travel Market held in London from November 4–6, 2024, it is expected that such tasks will eventually become fully automated through AI, thereby eliminating the need for human intervention and reducing the operating costs of sales departments (Izcara, 2024).

In short, when it comes to operational tasks, the combination of technological change and the transfer of responsibilities to users – which ultimately reduces the number of hired employees – has become more widespread than innovations implemented solely for the purpose of cutting staff. The low labour costs resulting from policies that have precarised employment in the tourism sector make it less profitable to replace workers through technological investment in such occupations. However,

in these operational jobs, technological changes have been primarily aimed at monitoring and controlling work processes.

Control of Labour Processes

In many operational roles within tourism companies, technological innovations have been designed less to replace workers than to optimise their working time, which in turn has led to an intensification of labour. Cleaning tasks, particularly in hotels, offer a clear example of this trend. The workforce in hotel housekeeping departments is highly feminised and includes a significant presence of migrant workers from impoverished countries. In dominant cultural narratives, cleaning work is associated with domestic tasks traditionally performed by women, a result of the sexual division of labour. This association allows employers to naturalise inequality and maintain low wages (Moreno & Cañada, 2018). Hotel companies continuously seek to reduce labour costs in these departments through greater flexibility and the intensification of work performance. In Spain, various mechanisms have been used to achieve this. The outsourcing of housekeeping departments made possible by the 2012 labour reform, enabled companies to cut workers' wages by more than 40 percent (Cañada, 2018). Furthermore, hotels have reduced management expenses by contracting multi-service companies and paying them only per cleaned room, in line with the hotel's actual occupancy rate. Despite the stated intention in its preamble, the 2021 labour reform failed to reverse this dynamic due to the ambiguity of its provisions and, in practice, consolidated outsourcing as a legally sanctioned business strategy (Cañada & Alabao, 2021). Additionally, the widespread use of part-time contracts and the imposition of unrealistic room quotas have forced many housekeepers to work extra hours without pay (Cañada, 2015).

Serving robot in action.

In these departments, although most corporate strategies for reducing labour costs focus on employment arrangements, technological change also plays a role within this same logic. In fact, many of the technological and organisational innovations currently being implemented can be understood as mechanisms for controlling and intensifying work processes. Some of these changes involve the use of more efficient cleaning equipment – such as centralised vacuum systems built into hotel infrastructure – the application of cleaning products better suited to different types of surfaces, or, to a lesser extent, the introduction of cleaning robots. However, two other forms of innovation appear to be more significant and widespread.

One of these innovations relates to the increased capacity to manage key information in real time. Motion sensors, which detect when a room is unoccupied, help optimise the work of housekeepers by eliminating idle periods or movements that companies consider unnecessary. At the same time, positioning beacons enhance the ability to track workers' locations at all times. Beyond their evident surveillance purpose, these systems facilitate the monitoring and coordination of tasks by supervisors – even though micro-geolocation technologies are often presented as tools to improve the work environment and staff motivation. In addition, new digital applications are being implemented to centralise and synchronise information aimed at improving coordination between

departments – particularly housekeeping, front desk, and maintenance. This integration allows all relevant areas to access real-time information about the status of each room, helping to reduce miscommunication and time loss across operations.

The other example of innovation concerns the rationalisation of work procedures in hotel housekeeping. These processes may involve a comprehensive review of how workloads are assigned, the tools and cleaning products used, and even the prescribed sequence and manner in which tasks are performed. For instance, reorganising the distribution of workloads based on credits rather than rooms enables companies to exercise more precise control over task allocation. These credits function as time units representing the estimated duration required to complete a specific task. However, the workload associated with cleaning a room varies depending on factors such as the number of guests or the room's characteristics. Instead of assigning a fixed number of rooms – distinguishing only between check-out and stay-over rooms – a system that is too rigid to capture the diversity of actual workloads, the credit-based approach allows for a more segmented and adaptable organisation of labour. This form of innovation is often accompanied by the introduction of standardised procedures, specifying the order of tasks and even the specific tools to be used at each stage. Such measures further standardise the requirements and methods of work, amounting to a kind of taylorisation of room-cleaning labour. In this sense, innovation is not primarily aimed at replacing staff – who are already low-cost due to pervasive precarisation – but rather at optimising their performance throughout the working day, intensifying effort and, to some extent, emulating the roboticisation of human labour. As a result, a labour regime emerges in which the work of housekeepers can only be sustained for a few years, while their productivity remains at peak levels. These changes will undoubtedly contribute to making these workers more interchangeable and disposable within the labour market.

Facing New Challenges

Tourism-related activities are highly diverse, making it difficult to characterise the effects of technological change in a single, uniform way. In fact, even the boundaries of what constitutes tourism work are beginning to blur, as tourists' own activities – such as the generation of data through the use of applications – are becoming new forms of labour within the tourism economy (Yanes, 2023). As with any process of technological innovation and transformation of work environments, these developments entail new risks of deteriorating job quality and increasing precariousness. For trade unions, labour law firms, and public administrations – particularly through labour inspection bodies – the ongoing technological transformation opens up new scenarios that require close monitoring. Behind the rhetoric of innovation and modernity, new mechanisms for reducing labour costs, intensifying workloads, and reinforcing managerial control may be introduced into a sector already characterised by structural tendencies toward precarious employment.

Author

Ernest Cañada

Ernest Cañada holds a PhD in Geography and is a postdoctoral researcher at the University of the Balearic Islands, Spain. He is also the founder and coordinator of Alba Sud. His main research focuses on the analysis of labour and employment in the tourism sector.

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Alba Sud is an independent research centre based in Barcelona, Spain, bringing together researchers and activists from twelve countries across Europe, Latin America, and the Caribbean. In addition to its research work, it runs its own publishing imprint and carries out training, awareness-raising, and policy advocacy initiatives.

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Antje Monshausen

Sexual Violence Against Children: Digital Grooming, Local Exploitation

The sexual exploitation of children and young people is one of the most serious violations of human rights in tourism. Despite intensive educational work and some improvements, including in international cooperation on policing, the extent of the problem is alarming. No official statistics are available, as the shame and taboo involved lead to a high number of unreported cases. It is estimated that almost two million minors (ILO 2002, 2015) are victims of sexualised violence every year – with perpetrators including travellers who take advantage of their anonymity abroad and (relatively) low travel prices to gain access to children. Cross-border digital communication capabilities have massively increased the risk of children becoming victims of sexualised violence by travellers and others.

> "Paedo-criminals" are offenders that commit sexual offences against children and young people. Many of them are occasional offenders who do not have an exclusive sexual preference for children. People with paedophilic tendencies, on the other hand, do not automatically become perpetrators themselves.

The Digitalisation of Sexual Exploitation

Digitalisation is increasingly permeating into all areas of life – and that includes sexualised violence and exploitation. Smartphones, social media and the darknet allow people to make anonymous connections worldwide. They also make it easier for travelling sex offenders to network and exchange information, for instance, about places where vulnerable children are especially at risk and routes of access, or to share images of sexualised violence. Digital infrastructure is used not only to establish contact with children, but also to exert control over the victims during a trip or continue exploiting them afterwards.

The context for sexualised violence and exploitation (almost) always involves the abuse of power. Travellers from wealthy countries are in a position of power compared to the children in the countries they are travelling to. The affected children in the destination countries often live on the margins of society, are victims of poverty or belong to a minority. The children themselves are largely unaware that certain online activities can increase their risk of being targeted by offenders.

Sexualised Violence and Exploitation Abroad

A recent representative survey in the Netherlands found that 2.3 percent of the men surveyed have sexually abused minors abroad at some point in their lives, with two thirds of that number having done so in the last five years. Extrapolating that figure results in at least 20,000 male perpetrators every year (Netherlands Institute for the Study of Crime and Law Enforcement, 2025). There is no comparable study for Germany. However, assuming that there are no significant differences between German and Dutch travellers, this suggests that around 80,000 German men sexually exploit minors abroad every year.

The study from the Netherlands also reveals shocking figures on digital sexualised violence: 2.3 percent of the Dutch men surveyed took part in livestreams in which minors performed sexual acts in front of webcams. It is striking that 86 percent of online offenders in the Dutch study stated that they had also had physical sexual contact with minors. A survey of German-speaking users of the darknet found that around half of the people who look at depictions of sexualised violence on the internet have also made direct contact with children with sexual intentions (Lapsia, 2023).

Anonymity is a key factor in the commitment of sexual offences, making offences while travelling abroad an obvious consequence. As more and more people travel – with numbers having largely returned to pre-coronavirus levels since 2024 and expected to exceed these levels in the future – the number of offences committed abroad is also likely to increase further.

Cyber Grooming: Initiating Digital Contact for Real Exploitation

Cyber grooming is a strategy that perpetrators systematically use to establish contact before subsequent exploitation. Offenders use social media, online games with chat features or dating platforms to make targeted contact with

children. Following the initial contact, communication often takes place on encrypted private chats. The perpetrators frequently pretend to be people of a similar age to gain the trust of their victims. In many cases, such manipulation is not noticed until it is too late, with AI also used to give messages a more youthful style.

Systematic reports on online enticement by travelling offenders have yet to be compiled in the area of tourism. But one thing is clear: solicitation on digital channels is becoming increasingly common. Experts cite this as a major risk area in tourism that has not yet been sufficiently analysed (Center for Child Rights and Business, 2024).

Children and young people affected by poverty or social and economic marginalisation are particularly at risk. Vulnerable children can be identified and targeted through the internet and social media. For instance, a report from 2017 showed that "paedo-criminals" travelled to Greece as tourists to sexually exploit minors who had fled there from Syria and other countries of origin, having contacted them online beforehand (Promundo, 2017).

Reports from German Reporting Platform

The German reporting platform www.nicht-wegsehen.net, which is run by ECPAT Germany together with the German Federal Criminal Police Office and other partners, constantly receives reports of suspected contact attempts. They often involve contact through dating portals or social networks in preparation for a trip. In the case of a young Colombian man who came to our attention via the reporting platform in 2023, an initial approach was once again made through dating portals. However, it was not the perpetrator who subsequently travelled, but the victim, who was lured to Germany with the promise of work. After being locked up and raped by his tormentor, he managed to escape. In the investigation that followed, it emerged that the German sex offender had frequently invited young men from Latin America to Germany through digital channels.

Digital Travel Preparations

A recent study from Korea provides rare yet frightening insights into the strategies for initiating contact and communication taken by Korean perpetrators before travelling to Laos. The study analysed 47 channels on six online platforms, including messaging apps such as Telegram and the Korean KakaoTalk as well as community forums on the DC Inside and Naver platforms. Furthermore, it analysed material and information on YouTube and relevant rating platforms related to eroticism/prostitution. Direct booking functions were also discovered in the case of the latter. Communication often progresses from public chats to encrypted communication channels, where there may also be direct contact with the victims or with intermediaries. In the Korean forums that were analysed, perpetrators exchanged information directly and shared tips on how to find underage and very young women while travelling (Naeil, 2025).

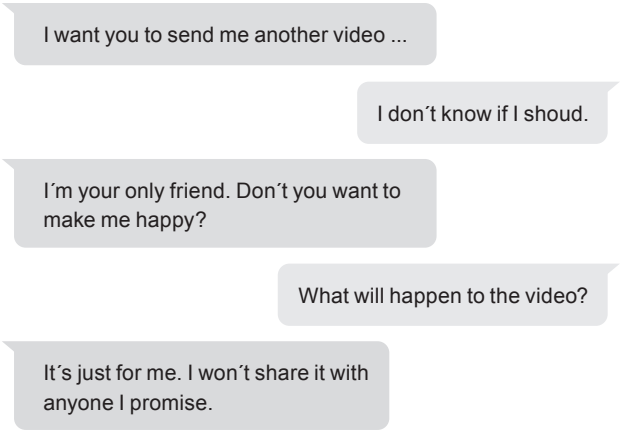


Figure 2: Realistic, simplified chat history
Source: ECPAT International

Production of Digital Depictions of Abuse While Travelling

In Cambodia, there is also clear evidence of the connection between digital consumption (images, videos and livestreams) and physical sexualised violence. Between 2003 and 2019, the non-governmental organisation APLE Cambodia (a partner organisation of Brot für die Welt) contributed to the arrest of 404 perpetrators. More than half were foreigners, mainly from the US, Vietnam, Great Britain, France, Germany and Australia. All the perpetrators were male, while most of the mediators (if any) were female. 75 percent were convicted – either in Cambodia or in their home countries. Many of them had also consumed

or produced images of sexualised violence. One 53-year-old European, for example, had paid 19 underage boys for sexualised images during his travels in Cambodia, and produced 1,300 photos of this abuse (Borgström, 2020).

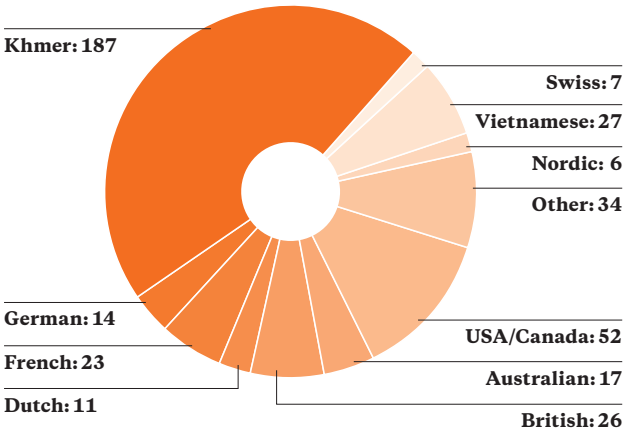


Figure 3: Number of arrests per region/country (2003–2019)
Source: Borgström, J., & Larsson, C., 2020, S. 16

Mobile Phones and Apps for Maintaining Contact

International studies show that perpetrators are often regular or long-term travellers in a country – such as expats, international workers or volunteers (ECPAT International, 2016). Some even have local language skills that help them gain the trust of children and families over longer periods of time. These perpetrators may give the victims mobile phones, for instance, to maintain contact or continue the sexualised violence digitally (Borgström, 2020). Their contact details may also be passed on to other sex offenders, which increases the risk of continued exploitation.

Taking Action Instead of Looking Away: Recommendations for Prevention and Protection

Digital technologies significantly exacerbate the risks of sexual child exploitation. They make it easier for travelling perpetrators to initiate contact and allow them to control and prolong the suffering of those they exploit. At the same time, however, digital technologies also open new opportunities for prevention and intervention.

Better protection for children can only be achieved by making clear that society, politics and the economy are working towards the same goals. Tech companies therefore require clear legal rules to ensure the products and services they offer adhere to safety-by-design standards. We call upon the tourism industry to further develop its child protection strategies and strengthen its commitment. The online world cannot be separated from the offline world. That is why we need more media literacy in schools and families and better law enforcement that also considers the behaviour of travelling offenders.

ECPAT Germany therefore recommends:

- **Education and raising awareness:**
  Perpetrators hide behind the anonymity of travel and take advantage of the taboo surrounding sexualised violence in the countries they travel to. Wherever local support structures are in place and fellow travellers are attentive, children are better protected. The tourism industry has an important role in this regard too. Tour operators, airlines and hotels should pass on information to their customers and provide better training for their staff, as stipulated by the international Code of Conduct for the Protection of Children from Sexual Exploitation in Travel and Tourism (thecode.org).

The Six Criteria of the Code of Conduct for the Protection of Children

1. Establishment of policy and procedures against sexual exploitation of children (as well as rules on voluntourism)
2. Training and raising the awareness of employees
3. Inclusion of clauses in contracts with service providers
4. Provision of information to customers
5. Collaboration at the destinations
6. Annual reporting

- **Increasing corporate responsibility:**
  Tech companies must implement "Child Rights by Design" principles. Among other things, this means that it must not be possible for adults to contact minors in chat rooms or messenger apps, so that safe spaces can be established in the digital environment. Reliable, data-minimising age verification systems that comply with data protection legislation are a prerequisite for doing so. This is also a political challenge. Politicians must establish the necessary legal framework conditions and ensure that implementation is monitored more effectively. (ECPAT Germany's demands to the European Union can be found here: https://ecpat.de/wp-content/uploads/2025/03/25_Ecpat_Policy-Brief-englisch.pdf)
- **Improving media competence:**
  Children – and their parents – are often unaware of how their digital behaviour increases potential danger. Better individualised basic settings in social networks and on devices reduce the risk of grooming. However, progress with media competence is not keeping pace with the speed of technological development.
- **Improving law enforcement and international prevention:**
  Too often, we view the digital and analogue realms as separate spaces. When perpetrators have already attracted police attention due to digital violence, the increased risks they pose regarding travel must be given greater consideration in order to protect children worldwide. Instruments such as Interpol's Green Notice warnings should be used even more consistently in such cases.

Author

Antje Monshausen

Antje Monshausen is Managing Director of ECPAT Germany. A geography graduate specialising in political science and public health, she has international project experience in Africa, Asia and Latin America and has also spent time working in Guatemala and Bolivia. She worked for "Brot für die Welt" from 2008 to 2024, most recently as Head of Unit Economy and Sustainability. Antje Monshausen is a member of the extended executive board of "National Coalition Germany/Netzwerk Kinderrechte e. V." and co-chair of the "Roundtable Human Rights in Tourism".

The mission of ECPAT GERMANY is to protect children from sexual exploitation. This national association of 25 organisations is dedicated to combating human trafficking, promoting child protection concepts in organisations and companies and developing measures to protect children in tourism. As part of the international network ECPAT International, which has over 140 members in 115 countries, ECPAT Germany is committed to introducing measures to combat sexualised violence based on the UN Convention on the Rights of the Child.

www.ecpat.de | www.ecpat.org

Lea Thin

How Social Media Is Changing Travel

Influencers are setting new trends in the tourism sector: millions of followers are emulating their perfectly staged pictures from luxury destinations such as Dubai and Bali. But behind the shiny façade lies a striking contradiction.

Facts & Figures

- 69 percent of German people get travel inspiration from social media. (TUI, 2024)
- YouTube (21 percent) is the most popular channel, ahead of Instagram (19 percent) and TikTok (13 percent). (TUI, 2024)
- Views of travel content on social media have increased by 410 percent since 2021. (National Geographic, 2024)
- 84 percent of people under 40 are swayed by influencers when booking travel. (Expedia Group, 2025)
- 38 percent of Gen Z deliberately make bookings above their budget so they can post popular trending topics on social media. (Qualtrics, 2023)
- 59 percent of all travellers need their holiday destination to be Instagram-ready. (bitkom, 2023)

Self-Promotion Beats Travel Experience

Instagram could be the perfect medium to showcase the true beauty and uniqueness of a destination. Instead, it's often the influencers who dominate the frame – blocking the view of the very places they promote: slim, trained and perfectly staged. "Instagrammable" places thus become backdrops for self-promotion, rather than spaces for real-life encounters. Hotels and destinations are responding: pools, rooftop bars, viewing points – everything follows an interchangeable visual language. Filters and poses promise individuality, but deliver standardised products. Young people compare their lives with these perfect images and feel frustrated. They directly copy the products, travel destinations or lifestyle. Even at the local swimming lake, scenes are being created with the intention of imitating luxury destinations.

Package Tourism for Likes

Although authenticity is a key concept in influencer marketing, the fact that they are paid for their recommendations doesn't seem to bother them or their communities. Travel becomes a copy-and-paste experience: Influencers set the route, followers replicate it – and what should be a personal journey turns into a mass-produced trend: the same hotels, the same viewing points, the same activities. Studies show that one in five followers between the ages of 20 and 34 is inspired to make a booking based on travel content. Views of travel content on social media have increased by 410 percent since 2021 (National Geographic, 2024). Classic package tourism is experiencing a renaissance as a result – hidden behind these dreamlike photos. Figures from the German Travel Association (Deutscher Reiseverband) confirm this trend. German holidaymakers alone spent around 40 billion euros on package and group holidays in 2024, an increase of seven percent compared to the previous year (DRV, 2025).

Holidays for the 'Gram': Curated Group Tours

Travel influencers have already discovered group travel as a lucrative business model. They target a young audience obsessed with photogenic destinations and fellow travellers with clout – often prioritising likes over personal experience.

- Influencer Haktan Albayrak organises group trips to Thailand for which applicants must pass a "vibe check". Whereas package holidays mainly used to be about proximity to the beach and good food, Albayrak's USP is his popularity: Anyone who books a trip with him ends up in posts on his channels. **https://www.instagram.com/haktanalbayrak**
- Instagrammer Jess Melu organises group trips to Egypt and Namibia. You don't have to apply, but an interest in photography and social media is an advantage. Her focus is on luxury and adventure holidays to photogenic destinations that are particularly attractive to influencers and their communities. **https://jessmelu.com/past-egypt-group-trip-2025-fully-booked**
- Marriott Bonvoy has turned TikTok into a recruitment tool with its #30stays300days campaign. Influencers were able to apply to stay at 30 locations for over 300

days by posting TikTok videos. The hashtag generated millions of views, created a buzz and positioned Marriott as an aspirational and adventurous brand. **https://mma.prnewswire.com/media/1728253/Marriott_%20International_Inc_30_Stays_%20300_Days.jpg?p=publish**

Impact of Influencers in the Global South

The impact of influencers is also growing rapidly in the Global South. Travel content on social media is considered one of the strongest drivers of engagement worldwide. International surveys show that more than half of consumers have more trust in influencers than in traditional advertising. Young people are increasingly influenced by digital role models when looking for holiday ideas or specific bookings. Influencers are shaping the choice of travel destination in emerging markets such as Asia, Africa or Latin America in particular. In Egypt, for instance, destination management companies are successfully using the credibility of influencers to polish their destination's image. Even countries with fledgling tourism industries – like Chad – are now tapping influencers to showcase their hidden potential as must-visit destinations.

Problematic travel content takes many forms and, often unconsciously, shapes perceptions of the Global South. One common example is so-called "poverty porn": photos that emphasise poverty and exoticism, reinforce stereotypical ideas and simplify complex realities. This is where the imbalance of power comes into play. "White saviour" behaviour is particularly problematic: selfies with "poor children" or seemingly charitable volunteering rather serve for self-promotion than for help on the ground. Many influencers from the Global North present themselves as observers of foreign worlds without questioning their own privilege. Cultural insensitivity appears when travellers wear inappropriate clothing at religious sites or flaunt Western lifestyles. Meanwhile, political issues such as local conflicts, repression or human rights violations usually remain hidden.

Authoritarian states including the United Arab Emirates and Qatar have been criticised for using Western influencers as brand ambassadors to convey a positive, modernised image of their countries. Glamorous travel reports convey a sense of luxury, progress and cultural openness and intend to strengthen their international competitiveness for tourism and investment. Influencers usually highlight spectacular architecture, exclusive hotels, desert adventures or events such as Formula 1 and the Football World Cup. These images are never chosen at random but are strictly curated by the tourism organisations. At the same time, the content presented contrasts heavily with the actual social and political conditions at the destination: labour migration, limited freedom of expression, patriarchal structures or restricted press freedom.

TikTok and video ban at the World Peace Pagoda in Pokhara, Nepal – because social media recordings in front of the mountain backdrop disturb the quiet of prayer.

Travel Influencers Criticised

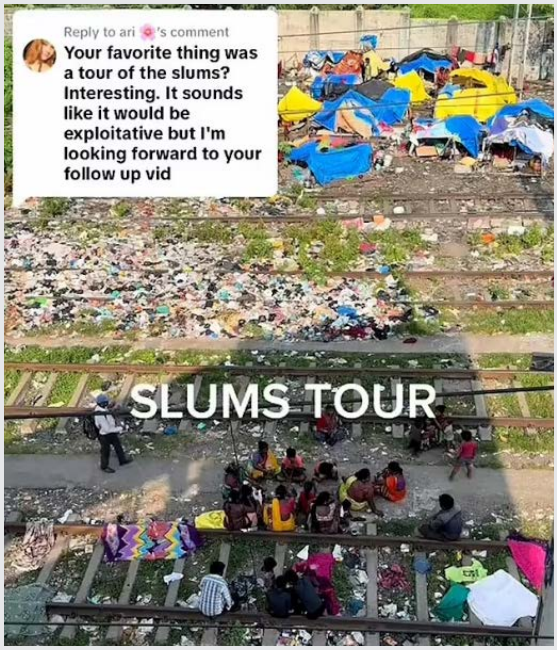
Some travel influencers have received criticism for their unthinking behaviour in countries in the Global South:

Christian Betzmann – Insulting Indian Street Vendors

In his Instagram story, the German travel vlogger complained loudly and insulted hawking vendors in India. One Reddit user commented: *"You just sound arrogant and ignorant with your insults and remarks about the poor person."* Betzmann's behaviour was seen as a typical example of missing empathy and a colonial sense of superiority. (https://www.instagram.com/p/CnEKEmpKY73/?img_index=1).

Tara Katims - "Slum Tour" in Mumbai

The US influencer caused a stir in spring of 2024 when she highlighted and recommended a guided tour of Dharavi, one of the world's largest slums. On TikTok, she labelled the tour as the "favourite part of her trip". Critics accused her of profiting from others' misery to make voyeuristic content – known as "poverty tourism". One user commented on Twitter: *"This is so tone deaf! Those are people living normal lives and you think it's a good idea to walk around their home..."*. (https://www.tiktok.com/@tarkatims/video/7307274988472651054).



Marian Abdi (Geenyada Madow) – Posing with Taliban Fighters

The Somali-American influencer visited Afghanistan and published photos posing with members of the Taliban. Victims' rights activists called her behaviour insensitive and politically unsophisticated, especially in view of the oppression of women in the country. One Afghan commenter noted: *"An Afghan woman has been sentenced to be executed by stoning death while Miss Madow (is) fangirling on the Taliban."* Marian Abdi has since deleted the image from her social media channels, while other images from her trip to Afghanistan remain available there.

Summits, Temples and Crowds: The Dark Side of Instagram Tourism

Influencers are raising awareness of sustainable products and services – especially in the Global South. Studies show that travel ambassadors make their followers more willing to choose environmentally friendly accommodation and activities. However, there is also a darker side: rapid growth can encourage overtourism in previously undeveloped regions, putting a strain on fragile ecosystems and exacerbating existing social inequalities. There is also a risk of greenwashing: it is not uncommon for products labelled as "sustainable" to be neither ecological nor socially responsible. Thus, influencers are certainly an engine for greater visibility and growth for destinations in the Global South. At the same time, they also contribute to challenges in tourism development, with a greater focus often on self-promotion than on long-term responsibility.

The "Gate of Heaven" at the Pura Lempuyang Luhur temple on Bali, for instance, is one of the most photographed sites on the island – not least because of the countless posts by travel influencers on Instagram. These spectacular shots seem to show travellers floating between two gates, their reflection shown perfectly in the water below. But this effect is staged: the water is actually a small mirror or pane of glass directly under the camera, not a natural lake. Many visitors arrive with high expectations, but instead of mystical tranquillity, they find crowds of tourists all waiting to snap the perfect photo. Critics see this as an erosion of the cultural significance of the temple, which increasingly serves simply as a backdrop.

A much riskier example can be found in Nepal. Selfies and summit photos are attracting more and more adventure-seekers to Mount Everest – many of whom lack sufficient experience. The pressure on Sherpas to secure routes and manage risks is increasing enormously, and congestion, exhaustion and accidents are on the rise. The hunt for the perfect picture exacerbates the already life-threatening conditions: over 300 people have died climbing the world's highest mountain. Most of them will remain on the mountain for eternity (Schulz, 2022) as recovering them is extremely expensive and risky. It is often the local Sherpas who have to put their own lives at risk for travellers. To set your stage here, you literally must walk over dead bodies.

- **Greenwashing:** providers use green marketing images to advertise their hotels, airlines and destinations to an environmentally conscious audience, while the companies behind the scenes have barely anything to do with sustainability.
- **Culturewashing:** providers stage destinations and their inhabitants as exotic marketing backdrops without showing the reality on the ground.
- **Pinkwashing:** providers present themselves as LGBTQ+-friendly even though there is no guarantee of real equality or protection from discrimination for queer travellers nor the local population.

Selfies and summit photos are attracting more and more adventure seekers to the high mountains.

Social Media: Opportunities and Challenges for Destinations

Social media has fundamentally changed tourism. It is opening up new marketing and networking opportunities for destinations – but also entails risks from distorted depictions to overtourism.

One key opportunity is in direct marketing for hidden locations. Travel influencers want their content to stand out, and some destinations use this fact to direct visitors away from the well-known hotspots. This reduces the pressure on the tourist infrastructure while allowing new areas to benefit economically. Local communities also benefit: craft businesses, caterers and guides receive additional sources of income. At the same time, social media encourages cultural exchange. Influencers create direct interactions between travellers and locals through workshops, joint activities or challenges. These formats value local customs and increase awareness to promote responsible travelling. More and more influencers also see it as their duty to promote sustainable forms of travel. By making the conscious decisions themselves, they motivate their followers to travel sustainably, book fair accommodation and support local initiatives – and therefore contribute to protecting the environment and culture.

However, social media also brings considerable challenges. Influencers often only show curated parts of a destination that fit into their content strategy or meet the expectations of advertising partners. That creates a distorted image of the place, hiding social inequalities or environmental problems. Destinations in the Global South are often reduced to "instagrammable" attractions – a process that often reinforces old colonial and racist stereotypes. Another problem is that comment columns are often not moderated, romanticised or discriminatory ideas can spread unhindered. However, the most prevalent challenge for destinations continues to be overtourism. What was once a "hidden spot" can become a crowded tourist magnet within days thanks to a viral video. The consequences: overcrowded beaches, damaged natural areas and local infrastructures under pressure – the visitor experience itself often suffers as a result, too. Many governments respond with visitor limits, online reservations, seasonal closures or partnerships with platforms such as TikTok and Instagram to protect sensitive location data and filter problematic content. Campaigns such as #RespectBali or #ShareResponsibly shall encourage travellers to behave more responsibly.

However, sustainable tourism and social media can still fit together. Smart influencer collaborations, clever storytelling and participatory formats with local communities can direct visitor flows and increase the visibility of sustainable products, services and attractions. Cross-industry initiatives are supporting this approach: with its #impulse4travel manifesto, the online travel sales association Verband Internet Reisevertrieb (VIR) is pooling the expertise of over 300 stakeholders for its aim of sustainable influencer tourism management. Tools such as KlimaLink are helping tour operators reduce CO_2 emissions, while campaigns by the German National Tourist Board (GNTB) are promoting sustainable travel offers on social media. Social media is therefore both a risk and a resource – depending on how conscientiously it is used. The decisive factor is whether destinations manage to translate digital attention into sustainable, fair and future-proof forms of tourism.

Author

Lea Thin

Lea Thin is a geographer and has worked as a freelance editor for Tourism Watch since 2019. After research projects in Colombia and Tajikistan, she assisted with Germany's official presence at the UNFCCC Climate Conferences. She is currently completing her doctorate on socio-ecological transformation and analysing the impact of international climate policy on social inequality.

Susanne Egermeier, Claudia Mitteneder

Digital Travel Guidance Versus Personal Tour Guides

Between App and Eye Level

For many travellers today, a glance at their smartphone has replaced a conversation with a tour guide. Whether it's a GPS-guided audio tour through Old Havana or an AI-assisted chatbot for tips on restaurants in Nairobi – digital travel guides offer independence, flexibility and often more spontaneity. They are easy to access, work in several languages, can be customised and usually cost little or no money. That makes them an enticing tool for last-minute tourists, solo travellers and budget holiday-makers alike.

But as practical as these digital helpers are, they do have their blind spots. This fact is particularly noticeable when travelling to countries in the Global South. Apps and AI systems quickly reach their limits in places where cultural codes are complex, infrastructure does not always run smoothly, and personal interactions often involve more than just sightseeing.

More Than Facts Alone: The Human Component

Anyone who has ever travelled with a dedicated local guide will understand the difference. An app can tell travellers that the square in Marrakech has been a trading centre for centuries. A person can show them which stall sells the best spices, while sharing a childhood memory or casually teaching them how to win over the locals with a short greeting. Studies by Studienkreis für Tourismus und Entwicklung e. V. clearly show: 90 percent of German people who have experienced travel in developing countries not only expect knowledge from their travel guide, but above all organisational and problem-solving capabilities. 82 percent value personal support – the ability to respond to specific requests or sudden challenges on location (Egermeier, von Laßberg, Mitteneder, Tuncer, Vielhaber, 2021). Although digital products provide structured information that is also generally up-to-date, they

Introduction to local crafts, tourism offer in northern India.

In cooperation with local residents, Reality Tours & Travel organises tours in underprivileged neighbourhoods of Mumbai.

cannot respond to what happens between the lines: the stress as you stand in front of a confusing bus station, the misunderstandings in a market hall, the spontaneous desire to explore a side street.

Technical Limits of Digital Systems

In the Global South especially, the extent to which digital travel guides depend on a stable technical infrastructure quickly becomes apparent. Travellers in the Andes, in northern Uganda or on a group of islands in Indonesia cannot assume that an app will work reliably. In many rural regions, internet and GPS are patchy or only available at high cost. In Latin America, for instance, only around 37 percent of the rural population can access it, compared to 71 percent in cities (Ziegler, 2020); in many developing and emerging countries, access to truly reliable digital connectivity in rural areas is only around 5 percent (Rodríguez Pulgarín, Woodhouse, 2022). Maps can freeze, loading times can drag on indefinitely – and in those crucial moments, the screen remains blank. There is also a risk that content is outdated or unreliable. Not all digital platforms check their information regularly; some content comes from anonymous sources with no quality control. This can have frustrating consequences – for instance, if a recommended restaurant closed down some time ago, or if the opening hours of an attraction have changed and you suddenly find yourself standing in front of a locked gate. Automated translations can also be misleading. Anyone trying to understand local terms using an app can quickly come across linguistic and cultural misinterpretations that at best make you smile, but at worst create misunderstandings. And finally, there is the issue of data protection: many apps work with location tracking, collecting movement profiles or linking travel data with personal preferences. In countries with weak data protection legislation, it is unclear how and by whom this data is used – an aspect that is often overlooked when using them. Then there is the so-called "digital divide": In many regions of the Global South, travellers and local service providers alike have little access to high-speed internet, modern devices or the necessary training to use digital platforms effectively. While urban centres are often well connected, rural or remote areas remain cut off. This means that digital services mainly work wherever the infrastructure is better anyway – therefore favouring precisely those places that are already more developed for tourism. This often gives travellers a distorted perception. Unknown destinations that are equally exciting remain invisible because they have barely any digital presence.

Depth and Emotion Beyond the Superficial

In theory, digital platforms should be able to cover every relevant aspect, from architectural history to human rights. In practice, however, they are often limited to what they can present in a short, clear form. A survey by Studienkreis für Tourismus und Entwicklung e. V. shows that 84 percent of travellers with experience of developing countries want information about places of interest, 80 percent want information about appropriate behaviour in the host country and 69 percent want information about history (Egermeier, von Laßberg, Mitteneder, Tuncer, Vielhaber, 2021). In principle, these topics can also be communicated in digital travel guides. However, more than half of travellers also have an interest in deeper insights into human rights, gender issues, environmental problems or the political and economic situation. Such topics require sensitivity. A human guide can provide context, establish references to the current situation and address any uncertainties in the conversation. An app usually remains neutral and vague on controversial points.

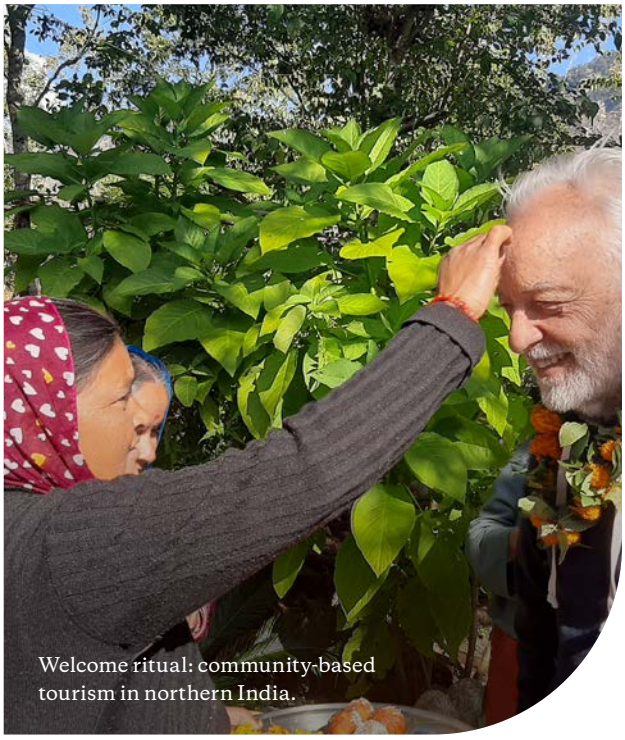
Good guides are not just knowledge brokers, but storytellers. They arouse curiosity, tie things in with personal experiences and create emotional moments that stay in the memory. This type of communication plays a central role in the training received by professional tour guides today – and will only become more central in the future, as it is exactly what differentiates the role from purely information-focussed apps. Thus, personal tour guides are able not only to deepen knowledge, but also to actively break down prejudices, broaden perspectives and promote intercultural understanding and empathy – something a digital guide cannot.

Interactions and Responsibility on Location

People travelling in the Global South are often not just looking for beautiful scenery, but for authentic encounters with other people too. Many travellers want to find out what everyday life is like away from the tourist centres – in villages, workshops and markets. Such encounters are often spontaneous and depend on the initiative and contacts of a local tour guide.

Personal tour guides are far more than just a source of information in this regard: they are an active part of the tourism ecosystem. They create jobs, keep knowledge alive and can channel visitor flows in a way that protects sensitive sites. In community-based tourism projects, guides are often directly involved in local development initiatives. They do not just take guests to tourist attractions but also to craft businesses, agricultural cooperatives or cultural centres, whose income flows directly back into the community.

This role is particularly crucial in economically underdeveloped areas. Tourism can be one of the few stable sources of income in such places – provided that the value it creates stays in the region. Furthermore, personal tour guides play a significant role in preserving intangible cultural heritage: they recount local myths, teach local crafts and enable guests to take part in rituals and festivals that would perhaps be forgotten if there were no intercultural interest – at the same time, they ensure that these encounters remain respectful and avoid the voyeuristic gaze. Digital platforms can document such aspects, but can rarely convey them in their original, living form. Direct exchange is crucial – the story is not just heard but experienced together, with gestures, facial expressions and the atmosphere of the moment.



Welcome ritual: community-based tourism in northern India.

Travellers Have Different Needs

Not all people who have experience of travel in developing countries want the same thing. A recent study on tourism in developing and emerging countries ("Tourismus in Entwicklungs- und Schwellenländer", Egermeier, von Laßberg, Mitteneder, Tuncer & Vielhaber, 2021) identifies five groups of travellers with experience of developing countries who each have very different interests in encounters, information and context:

- **Type 1:**
  Holidaymakers with no interest in interaction
  limited level of interest in information about the country and its people, clear lack of interest in living conditions and the social/political situation. Basic digital information is usually sufficient to guide them.

- **Type 2:**
  Holidaymakers who are undecided/somewhat uninterested in interaction
  clear interest in information about the country and its people, but only a limited level of interest in underlying social conditions. Digital guides work well in this case.

- **Type 3:**
  Holidaymakers who are interested in interaction and travelling in an organised way
  very interested in information as well as the living conditions and social/political situation. This group in particular benefits from qualified tour guides who can contextualise content and facilitate encounters.

- **Type 4:**
  Travellers with a strong interest in having their own interactions
  comparatively limited interest in prior information about the country and its people and very little interest in tour guide information. Hybrid models are an attractive option for them: digital tools for independence, local support for help to meet people.

- **Type 5:**
  Holidaymakers who are extremely interested in interaction
  very interested in information about the country and its people and very interested in living conditions and the social/political situation. There is no substitute for a personal tour guide in this case – especially in community-based formats.

Personal tour guides are particularly important for types 3 and 5. Type 4 can be satisfied with cleverly combined hybrid offers. Types 1 and 2 are more likely to be picked up through easily accessible digital information – but can be positively surprised on location through sensitive, low-threshold communication.

Hybrid Models in Practice

More and more, tour operators are figuring out effective ways to combine the strengths of both approaches – digital support and personal tour guides. For instance, guests on expedition cruises or themed cultural trips are often given an app with maps, background information and practical tips in advance. Experienced guides then take over on location: they build on previous knowledge, adapt to situations and provide space for questions. This combination works particularly well on complex trips: expeditions to remote regions, study trips involving a high level of knowledge or project-based trips with a focus on contact with local partners. Digital tools help the travellers before and after, while the tour guide on location creates the actual experience.

On a gorilla trek in Bwindi Impenetrable National Park in Uganda, for instance, visitors are first given a short briefing from rangers. Digital maps provide a rough indication of the route, but only the experienced guides know where the gorilla families will actually be on the day. They read freshly made tracks through the forest – broken bamboo stalks, the remains of nests – and communicate with other teams by radio. En route, they talk about the individual animals, their personalities and the conservation projects set up to counter poaching. An app could provide the biological facts but cannot replace the moment when a guide quietly beckons you to duck down because a silverback is just a few metres away.

Conclusion and Outlook

It would be too simplistic to play digital and personal travel guides off against each other. Digital tools are unbeatable for finding our bearings, accessing up-to-date information or as translation aids. Advances in artificial intelligence are also opening up new possibilities: AI can support guides with preparation and execution – for instance, by flexibly adapting routes or providing context-specific information during the trip. At the same time, digital learning modules can help make travellers aware of cultural aspects and rules of conduct in advance. Hybrid models in which technology and personal support go hand in hand will continue to grow in importance in this regard.

Especially in the Global South, with its diversity of cultural, social and ecological realities, personal contact can make the difference between a nice trip and a formative experience. Digital travel guides are tools, but personal travel guides are bridge builders: one provides data, the other creates understanding – and both are therefore key elements of responsible travel. Anyone who really wants to understand a city or country shouldn't just look at a screen – they should listen to the people who live there. Because in the end, it is these encounters that remain long after the battery has run out. Technology can point the way – but only people can open the doors that lead to real encounters.

Author

Susanne Egermeier

Susanne Egermeier is a project manager at Studienkreis für Tourismus und Entwicklung e. V. She studied business administration with a focus on tourism management at Munich University of Applied Sciences and started her professional life in the travel and marketing industry. She is responsible for research at Studienkreis and is primarily involved in analysing the German travel market and publishing on sustainable tourism.

Author

Claudia Mitteneder

Claudia Mitteneder is the Managing Director of Studienkreis für Tourismus und Entwicklung e. V. After completing a degree in Business Administration at Ludwig-Maximilians-Universität Munich, she worked in marketing and sales in the aviation sector, later headed a tour operator specialising in group and media trips, and founded her own marketing agency. Since 2015, she has been responsible for the strategic direction of Studienkreis and is a member of the trainer team of Intercultural Tour Guide Qualification.

Studienkreis für Tourismus und Entwicklung e. V. develops education and project formats that promote socially and environmentally responsible tourism development. Its work is grounded in political self-determination, economic autonomy, social protection, and cultural identity in destination regions. Through publications, training programmes, award initiatives, and research, Studienkreis fosters dialogue on forms of tourism development that meet the development policy responsibilities of industrialised countries towards the Global South. www.studienkreis.org

Christina Kamp

Interactive, Immersive: Curated Digital Experiences

**"I love technology
when it expands my possibilities,
when it helps me tell a story
that I wouldn't otherwise be able to tell."**
(Wim Wenders, filmmaker)

In the past, tourist attractions were mainly based on natural locational advantages, such as their scenic beauty, authentic culture or historically important art and architecture. Nowadays, modern attractions based on digital technologies are being added, which attract large numbers of visitors. Immersive exhibitions are taking innovative approaches to presenting art, preserving the world's cultural heritage and experiencing destinations that would otherwise be difficult to access. They also open up new opportunities for international cultural exchange and education on sustainable development.

Immersive experience exhibitions are an innovative format that adds to traditional cultural presentations. The COVID-19 pandemic served as a catalyst: When in the early phase of the pandemic museums, galleries and exhibitions were forced to close their doors and were later allowed to reopen with limited visitor numbers, they increasingly developed digital formats. The spaces used for immersive exhibitions – often spacious halls – could be designed in line with the regulations in place during the pandemic, allowing for physical distancing, control of visitor numbers and low-contact interactions.

At the same time, during the pandemic many people have gained new experiences with digital technologies, which led to new expectations with regard to increased interactivity and personalised experiences. Immersive exhibitions can meet these expectations to some extent. They promise immersion in other realities by curating experiences using multi-sensory stimuli.

The technologies currently used for exhibition concepts labelled as "immersive" include projection mapping, virtual, augmented and mixed reality experiences as well as interactive AI models (see box). The aim of these digital formats is to activate emotional, haptic and cognitive levels of understanding and facilitate contextual learning, non-linear narration and target group-specific approaches. Children find interactivity particularly appealing. Young people are generally tech-savvy and adults discover new ways of approaching art, history or special topics when they are designed in an immersive and interactive format.

The new culture of digitality is participatory. For museums and exhibitions to remain relevant, they must meet visitor expectations regarding participation and co-creation. That also opens up new opportunities in the field of citizen science, bringing together museum and exhibition staff with interested citizens with a diversity of backgrounds, skills and contributions, in dialogue and science projects.

Immersive Technologies

- **Projection mapping**
  enables you to use a projector to create customised illuminations on any structured surface. Projections can include still images, videos (video mapping) or animations, often combined with audio effects. Projection mapping has become a very popular method in artistic installations at festivals or in immersive exhibitions.

- **Virtual reality (VR)**
  allows users to immerse themselves in computer-generated, three-dimensional environments that look realistic and are interactive. It allows them to walk around historical places, in past eras or imaginary worlds. Some VR systems also use haptic feedback. VR technology is developing rapidly, with advances including even more realistic graphics or smell and taste simulations.

- **Augmented reality (AR)**
  adds digital elements to the real world, e.g. via smartphones or AR glasses. Computer-generated information is projected onto the physical environment in real time, allowing animations of works of art or providing contextual information, for instance for historical sites. Some AR systems let you move or change virtual objects by touching the screen or with hand gestures, eye movements or voice commands. Common everyday applications are navigation systems that instantly project directions into the real world.

- **Mixed reality (MR)**
  goes a step further than AR and VR by combining the real and virtual worlds in a completely novel way. MR objects are positioned in the real world and modified to react to physical elements as if they were part of this world. MR requires more advanced hardware than AR or VR. Architects or designers can project 3D models directly onto an actual environment to see how a building or piece of furniture would look in reality.

- **Artificial intelligence (AI)**
  can be used to generate new, often startlingly "creative" images, music, texts or even virtual characters. Voice dialogue systems or chatbots describe exhibits or allow us to converse with historical figures or paintings. Historical locations can be realistically reconstructed with the aid of AI, although without guarantee that they actually looked exactly the same in the past. Computer vision can detect movements to trigger visual or acoustic effects.

Focus on Art

So far, many immersive exhibition concepts that have reached a wide audience have focussed on animated art by famous painters such as Vincent van Gogh, Claude Monet, Leonardo da Vinci and Frida Kahlo. They don't show original paintings but often offer detailed background information and/or completely new approaches.

The TimeLeapVR team of the Frankfurt/Main-based start-up Videoreality believe that virtual experiences are a particularly effective way of conveying information: "By using interactive technologies and educational storytelling we offer modern ways of learning in virtual worlds to traditional and new target groups". For their immersive exhibition "Mona Lisa's Secret" at Frankfurt Airport, Videoreality used a specially trained AI to create a Mona Lisa that does not just talk to visitors, but also answers their questions and even asks them questions of her own. Visitors can also try their hand at being a virtual painter in Leonardo da Vinci's studio. For Hieronymus Bosch's "Garden of Earthly Delights", visitors can create their own fantasy creatures at a drawing table, which are then scanned to miraculously find their ways into Bosch's garden. These creative (co-)design activities are complemented by suggestions for reflections on the balance between authenticity and creative freedom required by such immersive exhibitions.

Exhibition "Digital Wellness" at Evoluon, Eindhoven.

Museums hope that such digital approaches will also encourage "analogue curiosity", with higher visitor numbers as a potential result. However, the hype surrounding immersive experiences may cause conventional formats to fall behind if they do not offer innovation themselves. If digitalised content ended up replacing "real" works of art, it might devalue the originals and lead to cultural flattening.

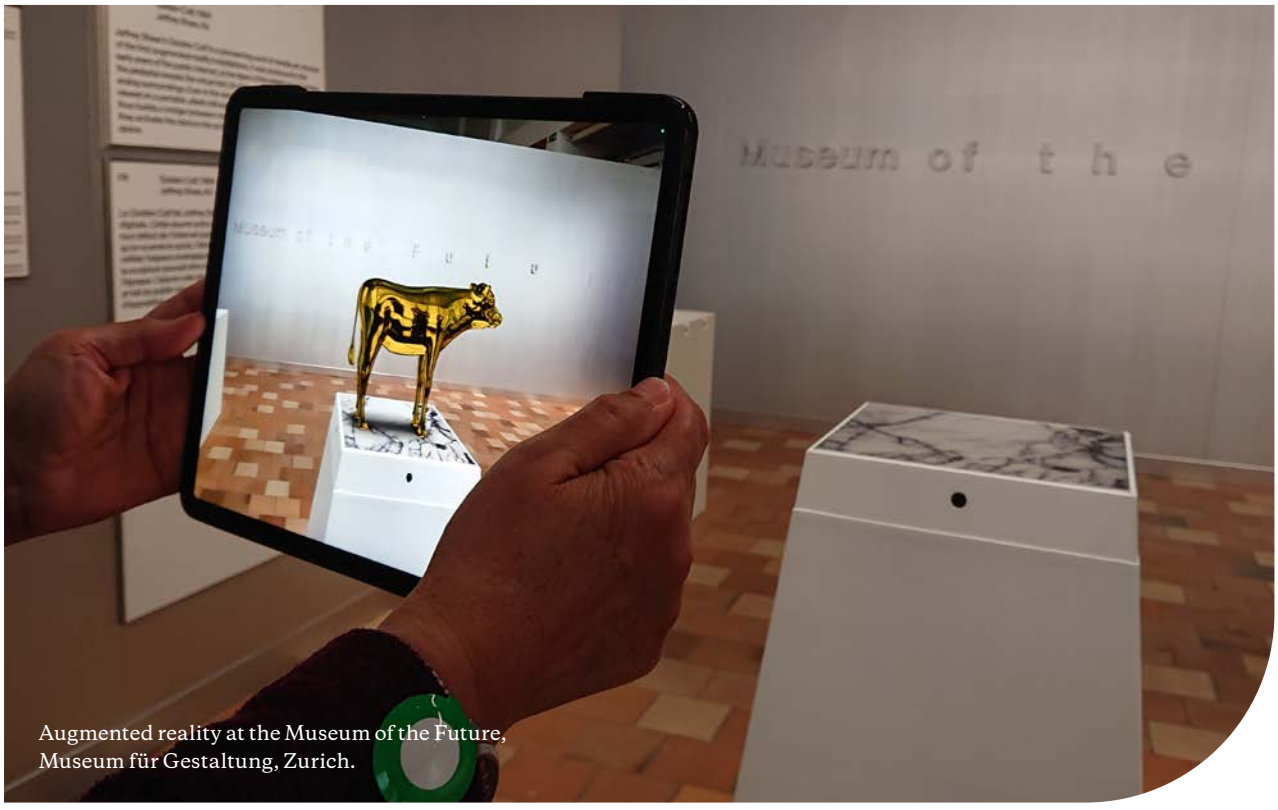
Virtual Journeys to Inaccessible Worlds

Apart from art, immersive exhibitions can bring topics to life that would otherwise be beyond our experience. What were the circumstances that caused the Titanic to sink, and what does the area around the wreck on the seabed look like today ("Titanic: An Immersive Voyage"). Virtual reality lets us explore places that would be beyond reach in the real world, such as the deep sea ("Expedition to the World's Oceans" at Bundeskunsthalle in Bonn) or outer space ("Destination Cosmos" at Port des Lumières in Hamburg).

Even time travel to the past or future is now possible. What did the lives of the people of Pompeii look like just before the eruption of Mount Vesuvius, which buried the city under its lava and ashes ("The Last Days of Pompeii")? How did life on earth develop and what might the world of the future look like with encroaching urbanisation ("Next Nature Time Travel", Evoluon, Eindhoven)? Now, Dubai is also home to a "Museum Of The Future".

Preserving the World's Cultural Heritage and Bringing It to Life

Immersive formats offer excellent opportunities to share the world's cultural heritage. They even allow for reconstructions. For instance, the VR expedition "Machu Picchu – Journey to the Lost City" shows what the Inca site of Machu Picchu may have looked like in Inca times, how the people lived and what shaped their world view. Unfortunately, unlike other immersive experiences, the VR experience is not accompanied by other exhibition elements. It is based on a digital reconstruction using images recorded during the pandemic with modern drone,



Augmented reality at the Museum of the Future, Museum für Gestaltung, Zurich.

LiDAR and photogrammetry technology. "Free from arduous climbs or crowds of tourists" (as the VR experience in Berlin is advertised), visitors get to explore Machu Picchu with a flying robot as their guide. Even in the virtual world they also get to experience how the natural balance of the Inca site is severely disrupted by intruders: A smartphone brought by time travellers ends up in the hands of an Inca child.

Immersive experiences are a particularly effective way of presenting intangible heritage such as cultural practices and techniques or musical traditions. China, for example, has a range of specialist parks and museums focussing on these aspects. One such attraction is the Xinjiang Intangible Cultural Heritage Museum in Urumqi which exhibits artefacts from China and countries along the Silk Road while also using multimedia installations and 3D projection technologies. The city of Lucknow in India is planning to build a modern museum that will use AI-generated visualisation and interactive installations to digitally exhibit art forms such as painting, dance, music, and theatre.

In places where the physical preservation of cultural heritage is at risk, documenting and recreating it in immersive exhibitions may at least allow to preserve it digitally so that we can continue to experience it. It is important that such documentation is compiled with and by the local population to make sure that their perspectives, stories and memories are recorded. This both ensures fairness and helps to get more authentic results.

Immersive technologies can also be used to reconstruct difficult aspects of the past around cultural heritage sites. They can help visitors to contextualise and process traumatic events. The social scars from experiences of war and conflict, colonial history and slavery, racism and ethnic discrimination are reflected at many world heritage sites. Immersive exhibitions can scrutinise memories and initiate dialogue in the face of possible distortions or repression.

Benefits of Immersive Formats in Tourism

Immersive exhibitions attract large numbers of visitors. Utilising old industrial sites or disused warehouses in locations that do not boast of other tourist attractions can help to disperse tourist flows. Cultural attractions can be created in economically less developed regions.

Virtual Museum of Stolen Cultural Objects

With its Virtual Museum of Stolen Cultural Objects, UNESCO aims to raise awareness of the consequences of the illegal trade in cultural property for the communities it originates from, and to contribute to the recovery of stolen objects. Just like in a real museum, visitors can explore rooms virtually – the application is fully VR-compatible. According to UNESCO, the artefacts exhibited in this 3D format are objects whose disappearance and theft represent a significant impoverishment of the national cultural heritage of the exhibiting country. Explanations are provided so that visitors to the platform can learn more about the objects and their cultural context and engage with the stories they represent. The main aim is to appreciate the intangible value of the objects. The museum was created in collaboration with the International Criminal Police Organisation (INTERPOL) and other partners.

https://museum.unesco.org/

Immersive exhibitions offering touristic experiences allow visitors to explore remote places without the need for long flights, which they may want to avoid for sustainability reasons, may not be able to afford, or may find physically challenging. Anyone interested can interactively explore sights, cultural highlights, or sceneries and establish an emotional connection to the destination.

Complex and costly immersive formats could also be a useful marketing tool for destinations, e.g. at events or trade fairs, provided that they offer significant value-added that could not be achieved by using more conventional tools. Using digital formats, destinations can be kept alive in the minds of tourists even in times when actual visits may not be possible due to crises, conflicts or natural disasters.

Untapped Potential

Digital content can be reproduced anywhere and can quite easily be made available in a variety of languages. For instance, thanks to immersive experience, European

painters such as van Gogh or da Vinci can now be enjoyed by a wider audience in India while the original paintings on display in the museums of major Western capitals are only accessible to those who can afford to travel and are able to obtain the visa required. Immersive exhibitions offer enormous opportunities for international cultural exchange, from which the Global South in particular can benefit.

However, in its recommendations on the ethical use of artificial intelligence, UNESCO points out the risk that the "digital divide" – the inequality of access to digital technologies – may become even more pronounced. This risk is already apparent in many of the immersive exhibitions developed to date, which generally charge rather high admission prices, thus excluding less affluent audiences. More socially oriented pricing could and should make such exhibitions accessible to less affluent segments of society. "Festival of Lights" events held in many cities, which are free to the public and transform historical buildings, façades, statues and more into narrative spaces through 3D projection, light art and music, show how popular such spectacles can be.

Likewise, the opportunities to promote inclusion and ensure accessibility have barely been utilised to date. As immersive exhibition formats can and should be multisensory, they offer excellent opportunities to specifically cater to people with different types of physical, mental and even psychological impairments.

Risks of Immersive Formats

One of people's most basic needs in their leisure time is to enjoy experiences together with their families and friends. As many immersive products were designed during the COVID-19 pandemic, they rely primarily on interactivity between people and technology and minimise interpersonal interaction. However, in order to bring people together again, to get them to interact and to involve them in shared experiences, immersive exhibitions need to be more consciously geared towards these aspects in a targeted manner.

In an increasingly digitalised world, many people already spend much of their working days in front of screens. Holidays and leisure time can provide recreation, for instance through activities close to nature. Of course, this is not the case if free time is accompanied by additional sensory overload. Intense constant visual and acoustic stimulation can cause its own stress and strain. The Evoluon's "Digital Wellness" exhibition in Eindhoven in the Nether-

Time Travel Virtual Reality application at Evoluon, Eindhoven

lands highlights how digital technologies can also be used in healthier ways. The exhibition has robots slowly drawing patterns in the sand in dimmed blue and pastel-coloured light. Watching them has a calming and meditative effect – although it does raise the question of whether relaxation is not more easily and in a more environmentally friendly manner achieved in a natural setting. Immersive exhibitions are technology-intensive. The projectors, LED walls, VR systems, sound systems, air conditioning and ventilation that exhibition spaces need are power guzzlers, especially in large-scale installations. They can produce a considerable carbon footprint. The technologies used require rare earths and other resources that are often extracted through environmentally harmful processes under problematic working conditions. The technologies used also become outdated quickly, resulting in a need for repeat purchases and a growing volume of electronic waste. To make immersive formats sustainable, these challenges must be addressed.

Immersive Formats: Fashion or Trend?

In the future, digital formats will offer even greater creative opportunities to encourage more people to engage with an increasingly wide range of museum displays and other content. At present, immersive formats appear to be a fashion that is constantly producing new, but often very similar exhibitions. Most of them are staged with great effort as events of limited duration. They combine digital and analogue elements, but tend to forego physical exhibits, thus saving on transport and storage costs. The exhibitions can be developed further and can be adapted to be shown at other locations. The trend towards immersive experiences can be supported by technological innovations and enhancements, should the current formats reach a point of saturation.

Immersive formats offer major opportunities in the education sector, as these formats are particularly effective to communicate topics such as climate change or biodiversity in an impressive manner. For instance, the interactive science centre Klimahaus in Bremerhaven in Germany promotes awareness of climate change through its permanent exhibition "Weather Extremes". The central component is a lifting platform that takes visitors on an immersive journey through the atmosphere, staging natural phenomena such as heavy rains, wildfires and cyclones.

Permanent exhibitions like the Deutschlandmuseum in Berlin are also making use of their options to incorporate multisensory elements. They indicate the direction in which the sector might develop. "It really smells like forest here!", a visitor following the footsteps of the ancient Germanic tribes exclaimed enthusiastically. Visitors to the Deutschlandmuseum can try out for themselves how the printing press, developed shortly before the Reformation, worked by printing a bookmark. And when during an adrenaline-filled (virtual) boat trip with the Austrian Empress Elisabeth in Vienna ("Sisi's Amazing Journey") you feel like holding on to the side of the boat, it is an experience that can definitely be described as immersive.

Author

Christina Kamp

Christina Kamp is a freelance editor, author, and translator specialising in tourism and development. She is also a regular contributor to Tourism Watch publications.

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All hyperlinks were last checked on 14 November 2025.

Just a Few Clicks to Your Next Holiday

Holidays are increasingly being booked online. This development has many advantages for both consumers and providers, but it can also lead to existential problems in destination areas. The study "Techno-Disruption and Travel" examines the negative impacts that internet platforms and international booking companies have on local providers.

The Indian NGO IT for Change, commissioned by Brot für die Welt – Tourism Watch, investigated how large international online platforms are penetrating the Indian travel market. They focused on two destinations: the northern Indian city of Jaipur, which is a well-established destination for backpackers, luxury travellers, and cultural enthusiasts, and the city of Manali, located in the Himalayan region and the key starting point for nature and adventure tourism.

www.brot-fuer-die-welt.de/techno-disruption

Brot für die Welt
Evangelisches Werk für
Diakonie und Entwicklung e. V.

Caroline-Michaelis-Straße 1
10115 Berlin

Phone +49 30 65211 0
info@brot-fuer-die-welt.de
www.brot-fuer-die-welt.de