

Scottish Digital Tourism

Digital Marketing Practices
for Scottish Tourism and
Hospitality Businesses

The Rise of TravelTech: Revolutionizing the Way We Explore the World

The travel industry has always been a dynamic space, adapting to cultural shifts, economic changes, and technological advancements.

In recent years, a new wave of innovation has transformed how we plan, experience, and share our journeys: 'TravelTech'.

This burgeoning sector, blending travel with cutting-edge technology, is redefining the travel landscape by enhancing convenience, personalization, and sustainability. From AI-powered trip planners to blockchain-based booking systems, TravelTech is reshaping the way we explore the world.

What is TravelTech?

TravelTech refers to the application of technology to streamline and enhance the travel experience. It encompasses a wide range of solutions, including mobile apps, artificial intelligence (AI), virtual reality (VR), blockchain, and the Internet of Things (IoT), applied across various aspects of travel—booking, navigation, accommodation, and beyond. The sector addresses pain points for travelers, businesses, and service providers, offering seamless, efficient, and personalized solutions.

The global TravelTech market is booming. According to industry reports, the market size was valued at over \$9 billion in 2022 and is projected to grow at a compound annual growth rate (CAGR) of around 8% through 2030. This growth is fueled by increasing smartphone penetration, rising demand for personalized travel experiences, and the need for sustainable travel solutions.

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Key Innovations in TravelTech

AI and Machine Learning: Personalization at Scale

Artificial intelligence is at the heart of TravelTech, enabling hyper-personalized travel experiences. AI-powered platforms analyze user data—preferences, budgets, and past trips—to recommend tailored destinations, accommodations, and activities. For example, companies like Hopper use AI to predict flight and hotel price fluctuations, advising travelers on the best time to book.

Chatbots and virtual assistants, such as those integrated into platforms like Expedia or Kayak, provide real-time customer support, answering queries about bookings, cancellations, or itinerary changes. These tools leverage natural language processing (NLP) to offer conversational, human-like interactions, reducing the burden on customer service teams.

Mobile Apps: Travel in Your Pocket

Smartphones have become indispensable travel companions, and TravelTech has capitalized on this trend. Mobile apps like Google Maps, Triplt, and Airbnb consolidate essential travel functions—navigation, itinerary management, and accommodation booking—into user-friendly interfaces. Apps like Citymapper go further, offering real-time public transit updates and multi-modal route planning for urban travelers.

Augmented reality (AR) is also gaining traction. Apps like Google Lens allow users to point their phone cameras at landmarks or signs to access instant translations or historical information, enriching the travel experience.

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Blockchain: Secure and Transparent Transactions

Blockchain technology is addressing trust and security concerns in travel. It enables secure, decentralized booking systems, reducing reliance on intermediaries like online travel agencies (OTAs). Platforms like Winding Tree use blockchain to connect travelers directly with service providers, cutting costs and increasing transparency.

Blockchain also streamlines loyalty programs. Instead of fragmented reward systems, travelers can earn and redeem universal tokens across airlines, hotels, and other services, simplifying the process and enhancing flexibility.

Sustainable Travel Solutions

As environmental concerns grow, TravelTech is prioritizing sustainability. Platforms like Skyscanner now highlight “greener” flight options based on carbon emissions, while apps like GreenGlobe help travelers find eco-friendly accommodations. Startups like Cool Cousin connect users with local guides to promote authentic, low-impact tourism.

IoT devices are also playing a role. Smart hotels use sensors to optimize energy consumption, reducing waste while maintaining guest comfort. These innovations align with the growing demand for responsible travel, particularly among younger generations.

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Virtual and Augmented Reality: Immersive Experiences

Virtual reality is transforming how travelers research and experience destinations. VR platforms allow users to take virtual tours of hotels, attractions, or entire cities before booking. For instance, Marriott Hotels has experimented with VR to showcase properties, giving guests a “try before you buy” experience.

AR enhances on-the-ground exploration. Apps like AR City overlay digital information onto real-world views, providing historical context or navigation cues as travelers explore new places.

The Future of TravelTech

The future of TravelTech is bright, with several trends poised to shape the industry:

- **Contactless Travel:** Post-pandemic, touchless check-ins, digital passports, and biometric authentication (e.g., facial recognition at airports) are becoming standard.
- **Metaverse Integration:** As the metaverse evolves, virtual travel experiences could become mainstream, allowing users to “visit” destinations in fully immersive digital environments.
- **AI-Driven Hyper-Personalization:** Advances in AI will enable even more granular customization, from curated dining suggestions to real-time itinerary adjustments based on weather or crowd levels.
- **Sustainability as a Priority:** TravelTech will continue to innovate in eco-friendly solutions, such as carbon offset integrations and AI-optimized travel routes to minimize environmental impact.

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Scottish TravelTech Pioneers

The UK traveltech sector has reached record investment levels, with Edinburgh emerging as a key hub, driven by advancements in AI, according to a [Dealroom analysis](#) commissioned by the [Traveltech Innovation Hub](#) at Edinburgh Futures Institute, led by Joshua Ryan-Saha, Director.

Edinburgh hosts major players like Skyscanner, [TravelNest](#), [Citizen Ticket](#), and TravelPerk, which recently [opened](#) a new office in the city.

The report highlights Edinburgh's AI expertise and innovation ecosystem as key drivers, with AI transforming how travel is discovered, booked, and experienced. Edinburgh-based [Obvlo](#) recently raising \$2 million (£1.5m) to develop AI solutions for personalised local content for travel and hotel brands such as Virgin Hotels.

Conclusion

TravelTech is more than a trend—it's a transformative force in the travel industry. By leveraging AI, blockchain, VR, and other technologies, it empowers travelers with greater control, flexibility, and access to unique experiences. As the sector continues to evolve, it promises to make travel more seamless, sustainable, and personalized, ensuring that the journey is as rewarding as the destination. Whether you're a frequent flyer or an occasional explorer, TravelTech is paving the way for a new era of global adventure.

From the 'Outlander Effect' to Chinese "Micro-dramas" - Harnessing Viral Media Marketing to Boost Scottish Digital Tourism

The most powerful approach to industry cluster development for economic growth purposes is to maximize the intersection between them.

For example for Scotland one of our key industry focus areas is Tourism, and another is Media.

The perfect example of their intersection is the '[Outlander Effect](#)', the growth in visitor traffic to Scotland that the very popular TV show generated. The popularity of Outlander has significantly boosted tourism in Scotland, with fans flocking to visit filming locations, historic sites, and themed experiences.

Known as "Outlander tourism," this phenomenon has led to a surge in guided tours, themed attractions, and cultural experiences tied to the show's settings and 18th-century Scottish history.

Heritage Tourism – Leveraging Scotland's rich history

For tourism venues through e-commerce sales of tartan products, Scotland's heritage offers a goldmine of what is truly valued most in today's online world – Storytelling that stimulates the mind and soul, and any Scottish company can thoughtfully relate this to their online business to better achieve audience engagement.

The key to capturing this market is content for engaging Internet research. As Digital Tourism Scotland describes:

From the 'Outlander Effect' to Chinese "Micro-dramas" - Harnessing Viral Media Marketing to Boost Scottish Digital Tourism

"Did you know that 90% of travelers research their holidays online and 80% book their holidays online? Digital channels play a huge role in the visitor experience. From dreaming up their ideal trip to sharing it, good digital marketing is essential for any business looking to get the attention of today's visitors."

During this research stage tourists aren't necessarily interested in the logistics of the trip, the hotel bookings et al, instead they are seeking a stimulating **experience**.

Scotland's history is a treasure trove of assets that can be utilized towards this goal. Our heritage of folklore, the historic battles and the tales of family tartans all are rich sources of the type of storytelling ideal for eye-catching promotional blogs.

This is the ideal type of content for publishing online to catch the attention of potential visitors planning their vacation, and it's typically the local residents who are the most expert, so providing them the tools to easily publish it is a key success factor.

So do we sit back and wait for Hollywood to create more Outlander series?

Not at all, and this highlights another aspect of the opportunity to maximize the intersection between sectors, in this case 'micro-dramas' that are becoming hugely popular in China. Scotland could cultivate their own local versions of this, especially taking into account the above points where we might focus on our history and folklore.

From the 'Outlander Effect' to Chinese "Micro-dramas" - Harnessing Viral Media Marketing to Boost Scottish Digital Tourism

Chinese micro-dramas (also known as duanju or short dramas) are ultra-short episodic video series, typically 1-2 minutes per episode, designed for vertical mobile viewing on platforms like Douyin (TikTok's Chinese version), Kuaishou, and dedicated apps. By mid-2025, over 150,000 micro-dramas have been produced in China, reaching a domestic user base of around 696 million (nearly 60% of the online population).

The micro-drama sector has exploded from a niche format to a dominant force in China's entertainment landscape, outpacing traditional media like box office films. In 2024, 36,400 new series were released, and market projections estimate a market of \$9.4-13 billion in 2025, driven by premium content and AI integration, with long-term forecasts growing to \$16.2 billion by 2030.

Series cost \$14,000-\$110,000 to produce (vs. millions for full dramas) and can be shot in weeks, enabling rapid iteration, highlighting the key, double-barrelled opportunity for Scotland: This format could be leveraged to create content that both advances the Scottish media production industry into a massive, dynamic global market, and by doing so creates content that further boosts tourism traffic.

ScotPay - A National Crypto Tourism Payment System for Scotland

The idea of this project is to adapt Bhutan's pioneering national crypto tourism payment system—a QR code-based solution enabling seamless cryptocurrency payments for tourism services via the Binance app—for implementation in Scotland.

The adapted system will allow tourists and local businesses (e.g., hotels, restaurants, and attractions) to accept over 100 cryptocurrencies (such as BTC, BNB, and USDC) with instant conversion to GBP, targeting Scotland's thriving tourism sector, which attracts over 14 million visitors annually and generates £5.5 billion in revenue.

'[Crypto tourism](#)' is a form of tourism that caters to cryptocurrency enthusiasts by offering packaged travel tours that can be paid for with digital currency.

Pioneers like the Robin Hill Hotel has [launched cryptocurrency payment options](#), aiming to modernize guest experiences by offering secure, convenient digital payments for international travellers. It's part of MDJM's expanding network, which includes Fernie Castle in Scotland and Robin Hill in England—properties being redeveloped as tech-infused cultural destinations.

For guests this means faster transactions, reduced currency conversion fees, enhanced security, and hassle-free payments—ideal for global visitors and crypto enthusiasts on business or leisure trips. For the hotel it means attracting tech-savvy demographics, differentiation from competitors as an early adopter in Scotland, simplification of handling foreign currencies, and boosts competitiveness in the evolving travel sector.

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Crypto Payments

Launched in partnership with Binance Pay and DK Bank, Bhutan's system uses smartphone-generated QR codes for crypto payments, processed via the Binance app with zero gas fees and instant local currency conversion. It supports tourism services like flights, hotels, and food, benefiting remote vendors without needing advanced infrastructure.

Scotland's tourism economy mirrors Bhutan's in emphasizing natural and cultural attractions but faces challenges like poor connectivity in rural areas and high cross-border fees for international visitors. Crypto integration can streamline payments, attract tech-savvy tourists (e.g., from Europe and Asia), and align with Scotland's progressive digital economy goals under the Scottish Government's "Digital Scotland" strategy.

Objectives

Enhance payment accessibility in remote Scottish areas (e.g., Highlands and islands), reduce reliance on traditional card networks, promote financial inclusion for small vendors, and position Scotland as a global leader in crypto-integrated tourism.

Expected Outcomes

Increased tourist spending via fee-free crypto transactions, broader economic participation for local businesses, and a scalable model for UK-wide adoption.

Metinburgh! A Vision for Metaverse Digital Tourism in Scotland

There are many technologies that the tourism industry can harness to grow the sector, with Augmented and Virtual Reality an especially potent innovation to harness.

The Metaverse—a dynamic blend of virtual reality (VR), augmented reality (AR), and blockchain—ushers in an immersive digital layer where tourism experiences can be explored in revolutionary ways.

These can be applied in a practical way to boost success for Scottish businesses. Tourism is a great example. Enhancing the experience with these types of exciting innovations will draw in even greater visitor numbers and continue the massive economic success of this industry.

Immersive Tourism

[This Conversation article](#) comments on the details of this economic success and the critical role immersive experiences can play in facilitating this boost.

Simple examples include AR tourism guides, such as this one for [Inverness Castle](#), and for [Loch Lomond](#) they inserted 'Zapcodes' into the local guide magazine, to trigger AR links that enhance the printed word with a virtual experience.

You can [discover Fife](#) and [discover the Highlands via AR](#).

Another great example is described in [this news](#), about Blair Castle adopting the [Smartify](#) app. Via easy-to-use interfaces and well designed technology available as a native and web app, the Smartify guide allows visitors to follow their own interests and curated tours, with additional features such as e-commerce, targeted push notifications and donations.

Metinburgh! A Vision for Metaverse Digital Tourism in Scotland

Metaverse Worlds

'Metinburgh' is a concept for how a full Metaverse experience could be developed for tourism, for Edinburgh in this case. It aims to redefine global tourism by creating immersive digital replicas of real-world locations, starting with Edinburgh, specifically Castlehill at the foot of Edinburgh Castle.

Metinburgh blends VR and augmented reality (AR) to offer authentic exploration experiences, allowing users to visit iconic sites, engage in gamified activities, and collect blockchain-based digital items like NFTs.

These items are interoperable across SITEnetwork's virtual worlds, such as Metahattan and Mayaverse, and are supported by partners like MRKD and New York Culture Club using NFC technology. The project enhances cultural exploration, education, and e-commerce, with potential to boost physical tourism. Metinburgh is preparing for a closed-alpha phase, setting a new standard for virtual tourism.

Featured BizzTech

Vendor:

BizzTech is a vendor who can be used for this type of scenario. They offer immersive, AI-powered metaverse platforms that reshape how people interact with cities, industries, and education.

Metinburgh! A Vision for Metaverse Digital Tourism in Scotland

From urban planning and industrial efficiency to education and civic engagement, we are redefining how cities, industries, and communities interact with technology. Using AI, digital twins, and the photorealistic metaverse, we bring history to life, optimize infrastructure, and create immersive experiences that empower governments, businesses, and individuals alike.