

A model practice for the technological revival of historic cities

Region	Europe and Central Asia
Award Scheme	Shanghai Manual
Themes	Data-Driven Process and Management Others
Sustainable Development Goals	Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

Summary

Seville, the capital of Andalusia, exemplifies how a historic city can achieve sustainable growth through technological innovation while safeguarding its cultural heritage. Renowned for its UNESCO World Heritage Sites and vibrant tourism, Seville faced challenges balancing economic vitality with heritage preservation and residents’ well-being. To address these tensions, the city launched a comprehensive smart tourism strategy centered on sustainability, accessibility and cultural resilience. Through the establishment of the Smart Tourism Office, Seville introduced an integrated system combining big data, IoT and AI to manage visitor flows, enhance accessibility and improve decision-making. Initiatives such as the Smart Tourism Monitoring System and Smartspace incubator have diversified tourism beyond congested areas, supported local entrepreneurship and fostered citizen participation in heritage management. The city’s approach merges technology with inclusivity, transforming tourism into a shared urban experience benefiting both residents and visitors. Recognized as the **European Capital of Smart Tourism 2023**, Seville demonstrates that digital transformation can reinforce, rather than replace, cultural authenticity. Its success lies in blending innovation with tradition—using data to protect heritage, empower communities and sustain cultural industries. This model offers valuable lessons for other historic cities striving to balance preservation, participation and sustainable development.

Background and Objective

Seville, Spain’s fourth-largest city, is a global symbol of cultural richness and architectural heritage. However, rapid tourism growth brought challenges—overcrowding in heritage districts, declining resident comfort and threats to historical authenticity. To reconcile preservation with economic development, Seville adopted a smart tourism strategy combining technology, sustainability and inclusivity. The goal was to protect cultural assets while enhancing the visitor experience and residents’ quality of life. The Smart Tourism Office was established to coordinate digital solutions, promote data-driven management, and foster collaboration between public authorities, businesses and citizens, positioning Seville as a model for sustainable cultural tourism.

Actions and Implementation

Seville's transformation began with the creation of the Smart Tourism Office, which coordinates projects under four pillars; digitization, sustainability, accessibility and cultural creativity. It introduced the Smart Tourism Monitoring System, a big data platform using IoT sensors to collect real-time information on visitor flows, accommodation and feedback. Based on this data, diversified routes were designed to reduce congestion in areas like Santa Cruz, while an accessibility app improved inclusive mobility. Complementing this, Smartspace, a startup incubator, supports entrepreneurs in sustainable tourism innovation through training, data access and business mentoring, helping translate cultural heritage into creative economic value.

Outcomes and Impacts

Seville's smart tourism initiatives have enhanced both cultural preservation and quality of life. Real-time monitoring has reduced congestion in heritage sites, while visitor satisfaction and local employment have risen. Diversified routes revitalized underexplored districts such as Macarena and Triana, distributing economic benefits more evenly. Accessibility upgrades improved inclusivity, and Smartspace has nurtured numerous sustainable tourism startups, strengthening local innovation capacity. As a result, Seville achieved the European Capital of Smart Tourism 2023 title and has been recognized by the European Commission as a benchmark for integrating digital technology into heritage management and urban sustainability.

Sustainability and Scalability

Sustainability is embedded in Seville's strategy through circular tourism principles and data-driven environmental management. The city converted over 260 public buildings into nearly zero-energy facilities and joined the EU's 100 Climate Neutral and Smart Cities initiative. The Smart Tourism Monitoring System continuously evaluates tourism's carbon footprint, while Smartspace promotes projects aligned with green tourism and social entrepreneurship. Scalability is ensured through open data policies and adaptable digital tools that other heritage cities can replicate. By institutionalizing coordination through the Smart Tourism Office, Seville has created a long-term, transferable governance model for sustainable tourism and cultural resilience.

Gender and Social Inclusivity

Seville's smart tourism framework emphasizes inclusivity for all residents and visitors. Its accessibility initiatives such as the Accessible Tourism Guide and citywide barrier-free routes ensure that people with disabilities can fully experience cultural landmarks. Women's participation is promoted through training programmes in Smartspace, supporting female entrepreneurs in creative and tourism industries. Local

residents benefit from reduced congestion, community revitalization and expanded employment opportunities. The “shared city” vision ensures that technological progress strengthens social equity, allowing residents, businesses and visitors alike to share in the cultural and economic value generated by Seville’s sustainable tourism ecosystem.

Innovative Initiative

Seville’s innovation lies in applying smart technologies to heritage protection rather than replacement. The integration of big data, AI and AR tools has revolutionized tourism management—balancing visitor satisfaction with preservation. The Smart Tourism Monitoring System enables real-time decision-making and predictive management of tourist flows, while Smartspace links data with entrepreneurship, fostering creativity and knowledge exchange. By embedding digital intelligence into cultural policy, Seville demonstrates that historic cities can evolve technologically without losing their identity. This fusion of heritage and innovation offers a model for culturally grounded smart city development worldwide.

Resources devoted to delivery

The smart tourism strategy was financed through the Seville City Government’s budget, European Union Smart Cities and Horizon 2020 programmes, and public–private partnerships. The Smart Tourism Office serves as the coordinating entity, while collaborations with universities and research institutes provide technical expertise. Smartspace operations are co-funded by municipal and private sector contributions, ensuring ongoing training and innovation support. Investments include data infrastructure, IoT deployment and digital accessibility tools. This diversified financing structure ensures resilience and accountability while maximizing public value and knowledge transfer across Seville’s tourism and cultural sectors.

Conclusion

Seville’s experience proves that heritage cities can thrive in the digital age through innovation rooted in cultural identity. Its smart tourism strategy, anchored in technology, sustainability and inclusivity redefines how cities manage, share and benefit from their cultural assets. By merging real-time data analytics with participatory governance and entrepreneurship, Seville ensures that tourism enhances rather than endangers its heritage. The model’s success demonstrates that digital transformation can be a tool for cultural preservation and equitable growth, offering an inspiring blueprint for historic cities seeking harmony between progress, tradition and community well-being.