

Transforming destination websites into needs-based touchpoints: An AI agent approach for sustainable content ecosystems

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INTRODUCTION

With the rapid recovery of inbound tourism to Japan, Destination Marketing Organizations (DMOs) face a critical challenge: managing increasing visitor demands with limited human resources. Current information dissemination often relies on a "supply-side" approach, where existing Japanese content is simply translated into foreign languages. This method frequently fails to address the specific, real-time needs of international travelers across their journey, resulting in a mismatch between provided information and actual search intent. This study proposes a solution through the implementation of an "AI Agent" system in Atami City. Unlike standard generative AI applications focused on simple text creation, this system functions as an autonomous analyst that integrates data across the entire Customer Journey—from Pre-trip planning to In-trip experiences. The objective is to demonstrate how DMOs can transition from "translation" to "needs-based optimization" by automating the PDCA cycle, thereby achieving sustainable growth in organic traffic and improving traveler satisfaction without advertising expenditure.

LITERATURE REVIEW

Tourism marketing literature emphasizes the importance of delivering relevant information at specific stages of the Customer Journey (Awareness, Consideration, Action, Satisfaction) (Lemon & Verhoef, 2016). However, resource-constrained DMOs often struggle to perform continuous analysis of these stages for multiple international markets due to the complexity of smart tourism ecosystems (Gretzel et al., 2015). While Generative AI is increasingly used in tourism (Dwivedi et al., 2023), limited research focuses on its use as a backend "strategist" to automate internal DMO operations compared to consumer-facing applications like chatbots (Buhalis, 2020). This study addresses this gap by validating a practical model where an AI Agent monitors indicators across the customer journey to guide content strategy, bridging the digital and physical experience as suggested in service automation studies (Ivanov & Webster, 2019).

METHOD

The study implemented an "AI Dashboard and AI Agent" system in Atami City. The system architecture, illustrating the vertical automation and horizontal linkage across four indicators, is presented in Figure 1. The core methodology involved rigorous iterative testing of prompts for each specific indicator to ensure high-precision output. Crucially, human expertise was integrated into the preparation phase; specific lists for extraction were manually curated in advance to enable precise AI automation. Once accuracy was established, the system vertically automated the workflow—extraction, analysis, summary, and proposal—for four distinct indicators. These vertical processes were then horizontally linked to create a continuous feedback loop that directly fuels website content creation.

The system automates analysis based on the Customer Journey using these pre-prepared lists (Figure 1). First, for the Awareness Indicator, the AI utilizes a manually curated "Major Media List," identified as frequent touchpoints for target travelers, to objectively extract how Atami is portrayed by third parties. It visualizes current coverage to propose thematic keywords that DMO should emphasize. Second, for the Consideration Indicator, the system uses a "SEO Priority Keyword List" pre-selected by human staff to target top search rankings. By analyzing top-ranking content, the AI evaluates competitor strategies and proposes content differentiation or parity required to achieve higher visibility. Third, for the Action Indicator, integration with GA4 and Search Console allows the AI to identify high-potential keywords with low Click-Through Rates (CTR) for optimization. Finally, for the Satisfaction Indicator, the system captures granular local needs by synthesizing two data sources: online sentiment from Google Maps reviews and monthly inquiry logs compiled by the Tourist Information Center. By combining digital

feedback with on-the-ground inquiries, the AI identifies specific information gaps—such as local event information or complex transport rules—that require immediate intervention.

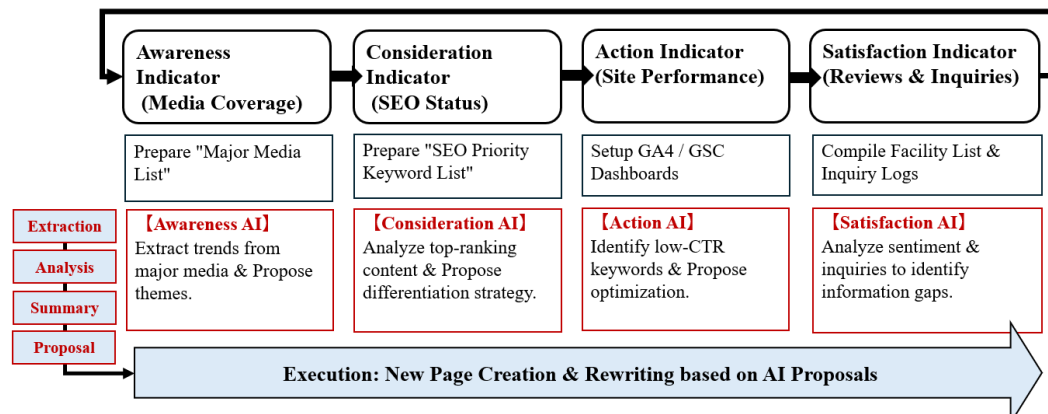


Figure 1. The AI Agent System Architecture utilizing Vertical Automation and Horizontal Linkage.

Based on proposals from this automated cycle, the DMO executes new page creation and rewriting of existing pages. A key strategy in this phase was the deliberate choice of delivery channel. Rather than immediately deploying AI chatbots which often fail to match user intent without a rich base of localized content the project focused first on continuously generating needs based multilingual articles. To deliver this dynamic content efficiently and support human staff at Tourist Information Centers and hotels, high demand articles were organized into "QR Code Lists," as illustrated in Figure 2. This approach enables staff to use the website as a digital support tool during face to face interactions, creating a seamless information cycle that integrates online data with offline experiences (OMO).

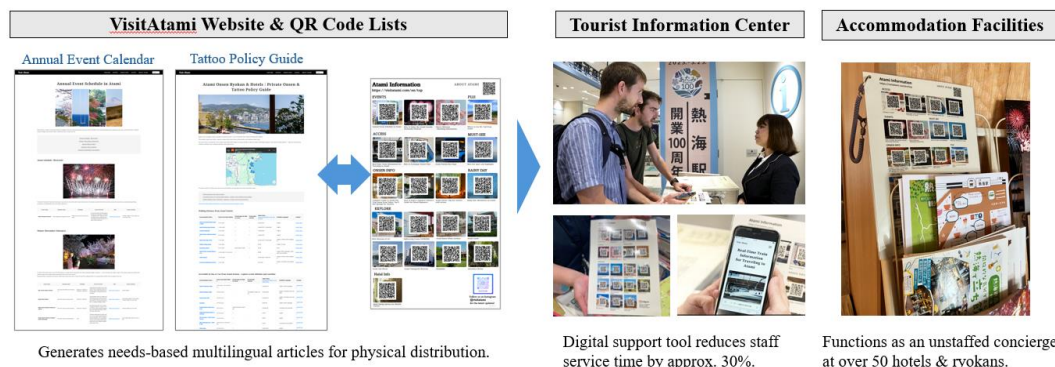


Figure 2. Execution of Needs-Based Content and OMO Strategy using QR Code Lists.

FINDINGS

The implementation of the system demonstrated a clear shift in information quality and quantitative performance. Analysis revealed that direct translation of historical content did not meet the practical needs of travelers in the "Consideration" phase. The shift to needs-based generation enabled the deployment of high-value assets such as "Tattoo Policy Guides" and "Annual Event Calendars," directly addressing inquiries gathered from the Tourist Information Center. Quantitatively, despite zero advertising expenditure, the system achieved significant growth over the observation period ending December 2025. Search visibility impressions increased by 15.3 times compared to the baseline, and the average search ranking for target keywords improved from 42.6 to 6.3. Consequently, page views increased by 4.6 times. Crucially, approximately 30% of website access occurred during the trip. This high in-trip usage correlates with the integration of Tourist Information Center data, confirming that the content successfully addressed immediate, on-the-ground needs. Operational efficiency also improved significantly; automating the vertical analysis process reduced the workload for content planning by approximately 90%. Furthermore, as highlighted in Figure 2, the use of QR Code Lists as a digital

support tool during face-to-face interactions reduced staff service handling time by approximately 30%, demonstrating that digital assets can effectively alleviate physical labor shortages.

IMPLICATIONS

This study contributes to tourism management by defining a framework for "AI Agents" that synchronizes macro tourism statistics with micro, on-the-ground inquiries. It demonstrates that integrating physical data (Tourist Information Center logs) with digital metrics creates a more accurate reflection of the Customer Journey than digital analytics alone. For DMOs, this offers a scalable implementation model. The study highlights that before automating customer interaction via chatbots, DMOs must first automate the "needs detection and content creation" cycle. The success of the "QR Code List" strategy suggests that digital assets are most effective when designed to support, not replace, physical customer service, offering a practical solution to labor shortages. In conclusion, the integration of AI Agents transformed the DMO's website from a static information archive into a dynamic touchpoint optimized for the traveler's journey, achieving sustainable engagement growth.

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