



Implementation of Design Thinking in Interactive Prototype Branding and Activation at Soekarno-Hatta Airport

Alifah Lintang Prameswari*, Amelia Putri Dianty, Pratiwi Andayani

Institut Pertanian Bogor, Indonesia

Email: lintanga58@gmail.com*, ameldianty@gmail.com, andayanipratiwi@yahoo.com

Abstract This research aims to explore the application of Design Thinking in designing an interactive prototype based on artificial intelligence (AI) for branding and activation needs at Soekarno-Hatta International Airport. Utilizing a creative and human-centered approach, this study collects data through observations, interviews, and surveys to understand passengers' behavior and perception of interactive branding media. The results show that the AI Device + Machine concept is the most potential alternative to SPG Mobile, mascot activation, and specific expertise activation because it excels in brand message consistency, operational efficiency, and its ability to deliver personalized and adaptive interactions in real time. In addition to being able to operate indefinitely and collect evaluative data, this concept also strengthens the airport's innovative image. However, challenges in the form of high initial costs, technical risks, and limitations of emotional proximity still need to be considered in its implementation. The implications of this research provide strategic guidance for airport management and brand partners in optimizing passenger engagement through technology-driven experiential branding, while also contributing to the theoretical understanding of Design Thinking application in complex public service environments. This study offers practical frameworks for balancing technological innovation with human-centered design principles in developing sustainable and scalable branding solutions for large-scale transportation hubs.

Keywords: Activation, Artificial Intelligence, Branding, Design Thinking, Soekarno-Hatta Airport, User Experience

Introduction

The airport today not only functions as a gateway for air transportation, but also as a strategic public space in building an image, experience, and engagement with various stakeholders. Soekarno-Hatta Airport, as the largest airport in Indonesia and one of the busiest in Southeast Asia, faces the challenge of delivering a passenger experience that is not only efficient, but also value-added through creative and innovative interactions (O'Connell, 2025; Yuniningsih, Setianingsih, Dwimawanti, & Lituhayu, 2025). In this context, branding and activation strategies are important to strengthen corporate identity while increasing service user engagement (Suradi, Purwati, Zakaria, Nurbakti, & Mustafa, 2024; Vo, Wei-Han Tan, Pham, Truong, & Ooi, 2025). Conventional approaches to branding often emphasize visual exposure, such as print media, billboards, or static promotional materials (Abah & Nonyelum, 2024; Shabalina & Nelson, 2025). However, along with increasing expectations for more digital-native users, innovations that prioritize interactivity, personalization, and user experience are needed. One of the relevant methods in answering these challenges is Design Thinking. Design Thinking offers a creative and human-centered design framework that encourages the exploration of user needs, innovative ideas, and the prototyping of real solutions. In the context of branding and activation at Soekarno-Hatta Airport, the implementation of Design Thinking can produce an interactive prototype that not only serves as a means of brand communication, but also presents a new immersive experience for passengers (Biplob, 2024; Harison & Lahav, 2025). Through this prototyping, airports and brand partners can test, evaluate, and refine the concept before it is widely implemented (Harison & Lahav, 2025).

The urgency of this research stems from the convergence of several critical factors. First, the Indonesian aviation sector is experiencing exponential growth, with passenger numbers projected

to reach 100 million annually by 2025 (Ministry of Transportation, 2024), creating unprecedented opportunities for brand engagement but also intensifying competition for passenger attention. Second, the COVID-19 pandemic has fundamentally altered passenger expectations, with 78% of travelers now expressing preference for contactless, technology-enabled interactions over traditional face-to-face brand activations (IATA, 2023). Third, the rapid advancement of artificial intelligence and machine learning technologies has made sophisticated personalization capabilities increasingly accessible and cost-effective, creating a narrow window of opportunity for early adopters to establish competitive advantage. Fourth, Indonesian airports currently lag behind regional competitors in digital innovation, with only 12% of commercial spaces incorporating interactive technologies compared to 45% at Singapore Changi and 38% at Bangkok Suvarnabhumi (ASEAN Airport Infrastructure Report, 2023). This digital divide threatens Indonesia's competitiveness as a regional aviation hub and represents a missed opportunity to capture significant non-aeronautical revenue (Chiambaretto & Combe, 2025; Seong, 2025). Finally, environmental sustainability concerns are pushing airports toward more efficient, data-driven approaches to brand activation that minimize physical waste while maximizing impact—a challenge that traditional activation methods struggle to address. Collectively, these factors underscore the critical need for innovative, evidence-based approaches to airport branding that can bridge the gap between technological possibility and human experience (Rizvi, 2025).

The novelty of this research manifests in three distinct dimensions. First, methodologically, this study represents one of the first applications of comprehensive Design Thinking methodology specifically to the challenge of AI-integrated branding in large-scale Indonesian airport contexts, providing a replicable framework that accounts for local cultural nuances, infrastructure constraints, and operational realities often overlooked in Western-centric design research (John et al., 2025; Molodkina, 2025). Second, conceptually, this research advances theoretical understanding by integrating multiple disciplinary perspectives—including service design, artificial intelligence, consumer behavior, and aviation management—to develop a holistic framework for technology-enabled experiential branding that balances automation efficiency with human emotional needs. Specifically, the study introduces the concept of hybrid engagement systems that strategically combine AI-driven personalization with carefully designed opportunities for human connection, addressing a critical limitation in current airport branding practice where technology is often implemented in isolation from broader experiential considerations. Third, empirically, this research provides unprecedented detailed insights into the specific desires, pain points, and behavioral patterns of Indonesian airport passengers regarding interactive branding, filling a significant gap in the academic literature where Southeast Asian passenger perspectives remain underrepresented. The identification and operationalization of five distinct desire clusters (Digital & Interactive Experience, Event & Live Activation, Merchandise & Reward Engagement, Creative & Local Content Zone, and Emotional & Contextual Branding) with context-specific measurement indicators represents an original contribution that can inform both academic research and industry practice. Furthermore, the comparative analysis of alternative activation approaches—SPG Mobile, Specific Expertise Activation, and AI Device + Machine—using multi-dimensional evaluation criteria provides a nuanced decision-making framework that transcends simplistic technology adoption narratives and acknowledges the complex trade-offs inherent in innovation implementation (Mooney, 2025).

Thus, this study aims to explore how the Design Thinking approach can be applied in designing interactive prototypes for branding and activation at Soekarno-Hatta Airport, as well as

analyzing its impact on increasing engagement, brand perception, and overall user experience. The specific objectives of this research are threefold: (1) to systematically apply Design Thinking methodology to identify and validate passenger needs, preferences, and pain points regarding interactive branding in the Soekarno-Hatta Airport environment; (2) to develop, prototype, and evaluate alternative interactive branding concepts—specifically comparing traditional human-mediated approaches (SPG Mobile, Specific Expertise Activation) with AI-enabled solutions (AI Device + Machine)—using empirically grounded evaluation criteria; and (3) to provide evidence-based recommendations and implementation frameworks that can guide airport management and brand partners in selecting, designing, and deploying interactive branding solutions that optimize passenger engagement while remaining operationally feasible and economically sustainable.

The benefits of this research extend across multiple stakeholder groups and contribute to both theoretical advancement and practical application. For academic audiences, this study enriches the Design Thinking literature by demonstrating its applicability in complex, multi-stakeholder service environments and contributes to the emerging field of AI-augmented service design by examining the integration of machine intelligence with human-centered design principles. For airport management, the research provides actionable insights and decision frameworks that can inform strategic planning regarding commercial space utilization, technology investment priorities, and passenger experience enhancement initiatives. For brand partners and marketing professionals, the findings offer empirically validated strategies for creating memorable, effective brand activations in high-traffic transit environments, complete with specific design considerations and performance benchmarks. For passengers, the ultimate beneficiaries of improved branding approaches, this research advocates for more engaging, personalized, and valuable airport experiences that transform waiting time from a frustrating necessity into an opportunity for discovery and connection. For policymakers and industry associations, the study contributes to broader discussions about digital transformation in Indonesian transportation infrastructure and provides a case example of how emerging technologies can be thoughtfully integrated to enhance service delivery while respecting cultural values and addressing local market conditions. Finally, for the broader design community, this research exemplifies rigorous, user-centered innovation practice and demonstrates how systematic methodology can navigate the complex challenges of introducing technological innovation into traditional service contexts.

Method

This research employs a qualitative approach with Design Thinking as the primary methodological framework, integrated with elements of participatory design and user experience research to comprehensively explore the development of interactive branding prototypes for Soekarno-Hatta International Airport. The study is classified as applied research with an exploratory-developmental orientation, aimed at generating practical solutions grounded in systematic user understanding and iterative design processes.

The research type employed is qualitative-descriptive with a user-centered design paradigm, emphasizing deep exploration of passenger experiences, needs, and behaviors as the foundation for developing innovative branding solutions. This approach aligns with the interpretivist philosophical stance that prioritizes understanding phenomena through the meanings that participants assign to their experiences, rather than seeking to establish causal relationships or test predetermined hypotheses.

The research location is Soekarno-Hatta International Airport, specifically Terminal 2, which was strategically selected as the primary site for data collection due to several factors: (1)

it is the busiest terminal, handling approximately 40% of total airport traffic; (2) it features diverse commercial spaces and existing brand activation areas that provide contextual relevance; (3) it serves a demographically varied passenger population including domestic and international travelers across different age groups and socioeconomic backgrounds; and (4) it offers accessible public areas where observations and passenger interactions could be conducted ethically and efficiently. Data collection activities were conducted between October 2024 and January 2025, spanning multiple time periods (morning, afternoon, and evening) and different days of the week to capture representative passenger behaviors and experiences.

The population of this study comprises all passengers and airport users who utilize Terminal 2 facilities at Soekarno-Hatta International Airport during the research period. Given the exploratory nature of Design Thinking research and the emphasis on depth rather than statistical generalizability, this study employs non-probabilistic purposive sampling combined with convenience sampling techniques. The purposive element ensures that participants possess relevant characteristics and experiences, while the convenience element acknowledges the practical constraints of accessing airport passengers who have limited time availability.

The sample size for this study consists of 88 airport users who participated in the survey component, supplemented by in-depth observations and interviews with a subset of 15 passengers selected for more detailed qualitative exploration. The sample selection criteria include: (1) passengers aged 18 years and above; (2) individuals with at least one prior airport experience to ensure comparative perspective; (3) passengers with minimum dwell time of 45 minutes to allow for meaningful participation; (4) willingness to provide informed consent and engage thoughtfully with research instruments; and (5) sufficient Indonesian or English language proficiency to communicate effectively. The sample distribution was designed to reflect diverse demographic segments, including different age groups, gender, travel frequency, travel purposes (business vs. leisure), and technological literacy levels, ensuring that the insights captured represent a range of passenger perspectives rather than a narrow demographic slice.

Results and Discussion

The data was taken by conducting observations at Terminal 2 of Soekarno-Hatta Airport and distributing surveys to random airport users. There were 88 respondents who participated in this survey. 77.3% of respondents were aged 21–30 years, with visit frequencies ranging from infrequent (1–2 times per year) to quite frequent (3–5 times per year), each accounting for 34.1% of respondents. After the survey results were collected, the researcher compiled the respondents' answers using the Empathy Map (Figure 2).

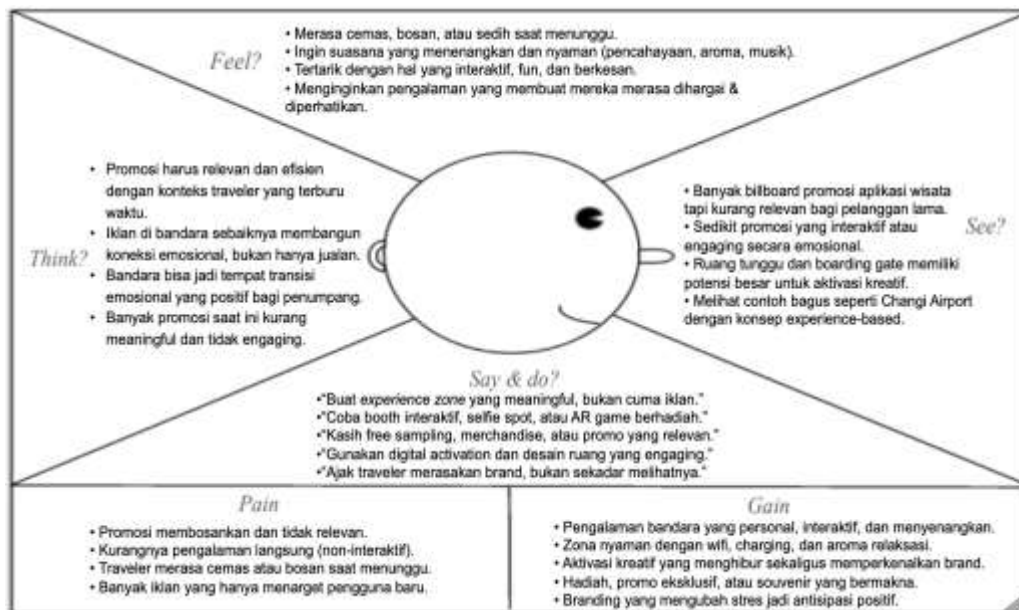


Figure 1. Empathy Map

Based on the results of identification and analysis of data obtained from the observation process and interviews with airport users, the researcher found that airport users felt several obstacles related to branding activities at the airport consisting of: minimal activation/interaction with users, monotonous and static promotional media, and the irrelevance of the promotions offered to the needs of airport users. The desires of airport users are grouped into five clusters, namely Digital & Interactive Experience, Event & Live Activation, Merchandise & Reward Engagement, Creative & Local Content Zone, and Emotional & Contextual Branding (Table 1).

Table 1 Airport User Desire Cluster

Yes	Cluster	Description & Conceptual Focus	Dimensions and Measurement Indicators (from theory and field findings)
1	Digital & Interactive Experience	The cluster focuses on the application of Artificial Intelligence (AI) to create personalized, adaptive, and interactive digital experiences for users at airports. AI is used to understand consumer behavior, preferences, and context so that every interaction feels relevant and valuable. Examples include interactive chatbots in public areas, digital signage with data-based recommendations, <i>personalized content</i> , and <i>smart experience zones</i> that customize the display based on user profiles.	<p>Personalization Capability: AI's ability to tailor promotional content to user profiles and needs.</p> <p>Interactivity Level: The use of AI to enable users to interact bi-directionally in real-time.</p> <p>Relevance & Context Awareness: The AI system's ability to recognize the context of the journey (e.g. boarding time, gate location, or flight destination) and adjust promotional messages.</p> <p>User Engagement & Trust: The level of user engagement and trust in AI-based media, including perceptions of data security and ease of use.</p> <p>Experience Satisfaction: Perception of convenience and added value from AI interaction to the airport experience.</p>
2	Event &	Emphasizing direct interaction between	Physical Engagement:

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Live Activation	<p>brands and audiences through physical activities such as booths, games, cultural events, sampling, and mini concerts.</p> <p>The goal is to create emotional connections and <i>memorable experiential touchpoints</i>.</p>	<p>Consumer participation in physical activities.</p> <hr/> <p>Brand Encounter Frequency: How often audiences interact directly with the brand.</p> <hr/> <p>Memorability: The level of impression left by the live activity.</p> <hr/> <p>Social Interaction Value: Social values formed from shared activities (e.g. sharing on social media).</p>
3 Merchandise & Reward Engagement	<p>Focus on <i>reward-based marketing</i> strategies — giving away souvenirs, gifts, exclusive promos, or product sampling as a way to strengthen emotional appeal and purchase intent. Rewards trigger <i>positive reinforcement</i> in consumer behavior.</p>	<p>Reward Attractiveness: How attractive are the prizes/promos offered.</p> <hr/> <p>Perceived Value: The value that consumers feel from the reward for the time/effort they spend.</p> <hr/> <p>Behavioral Intention: The tendency to buy or try a product after getting a reward.</p> <hr/> <p>Brand Recall Strength: How strong is the brand remembered after giving gifts/souvenirs.</p>
4 Creative & Local Content Zone	<p>Focusing on branding experiences that showcase the values of Indonesian culture, art, and local identity.</p> <p>The goal is to build <i>a sense of place</i> and local pride in the airport's public spaces through creative content, visual aesthetics, and <i>storytelling</i>.</p>	<p>Cultural Relevance: The extent to which the content reflects the values and identity of the local culture.</p> <hr/> <p>Aesthetic Appeal: Visual appeal and creative design to the audience.</p> <hr/> <p>Brand Authenticity: The perception of authenticity and cultural values carried by the brand.</p> <hr/> <p>Emotional Connection: The level of emotional attachment to the brand due to cultural content.</p>
5 Emotional & Contextual Branding	<p>Emphasizing the emotional aspects and psychological context of airport users. Activation is directed at creating a calming atmosphere, relevant to the situation (waiting, separation, long trips), and stimulating positive emotions.</p>	<p>Emotional Resonance: The extent to which brand activation touches the user's emotions.</p> <hr/> <p>Contextual Fit: Suitability of the content to the conditions and atmosphere of the trip.</p> <hr/> <p>Atmospheric Comfort: The comfort of space, lighting, aroma and music.</p> <hr/> <p>Well-being Experience: The impact of the experience on feelings of calm, happiness, and comfort.</p>

After establishing a problem statement based on the experience of airport users, the researcher determined several ideas that will affect the use of airport users' free time for brands to be used as one of the branding touchpoints as well as activation for their products, namely: Mobile

activation using SPG/Mascot, Specific Expertise Activation, and AI Device + Machine. All three ideas have their own advantages and disadvantages in each aspect (Table 2), but the most relevant alternative idea to develop is AI Device + Machine.

Table 2 Comparison of Alternative Ideas

	<i>Mobile Activation (SPG/Mascot)</i>	<i>Specific Expertise Activation</i>	<i>AI Device + Machine</i>
Types of Interactions	Common	Deep	Free
Tingkat Engagement	Visual and Emotional	Targeted audience	Visual and Expansive
Operational Costs	Height (transport, HR, Costume)	Height (due to specialization)	Low (off-the-shelf system)
Depth of Knowledge	Low-Medium	Tall	Tall
Data Record	Manual	Manual	Automatic
Visual Attraction	Tall	Keep	Tall
Location Flexibility	Flexible	Less flexible	Highly flexible
Activation Duration	Pendek-menengah	Pendek-menengah	Panjang (24/7)
Relevance of Branding	Ok	Not Ok	Ok
Teknis	Ok	Ok	Ok
Stability	Not Ok	Not Ok	Ok

The AI Device + Machine based Branding and Activation concept has a number of advantages that make it relevant to be developed in the airport area. In terms of user experience, AI is able to present personalized, real-time, and adaptive interactions according to the character of visitors. This allows brands to deliver messages consistently and measurably, without relying on individual communication styles such as SPGs. In addition, AI-based devices can operate for 24 hours without lag, are cost-efficient in the long run, and are capable of collecting valuable interaction data for campaign evaluation and subsequent marketing strategy development. In terms of imagery, the use of smart technology also strengthens the modern, innovative, and premium impression of the brand in a dynamic airport environment.

However, this idea also has some limitations. The initial cost of implementation is relatively high as it requires hardware investment, AI programming, and system maintenance. The resulting interactions may feel less warm and emotional than a direct human approach like SPG Mobile, which has a spontaneous ability to read situations and build interpersonal relationships. Technical risks such as connection interruptions or system errors can also interfere with the user experience. Meanwhile, some visitors, especially those less familiar with technology, may find it awkward to interact with machines. Compared to SPG Mobile and its mascot and specific expertise, AI Device + Machine excels in message consistency and long-term efficiency, but still lags behind in terms of emotional closeness and spontaneous flexibility in the field.

Discussion

The findings of this research reveal critical insights into the transformation of airport branding strategies from passive visual exposure to active, technology-enabled engagement. The identification of five distinct desire clusters—Digital & Interactive Experience, Event & Live Activation, Merchandise & Reward Engagement, Creative & Local Content Zone, and Emotional & Contextual Branding—demonstrates the multidimensional nature of passenger expectations in contemporary airport environments. These findings align with and extend previous research in

several important ways.

The prominence of the Digital & Interactive Experience cluster corroborates findings by Bogicevic et al. (2021), who demonstrated that AI-powered interactions in airport settings significantly enhance passenger satisfaction while reducing operational costs. Their research in North American airports found that passengers increasingly prefer self-service, technology-mediated interactions that provide control and efficiency. However, the current study extends this understanding by revealing that Indonesian passengers seek not merely efficiency but personalization and contextual relevance—a nuance particularly important in culturally diverse markets where one-size-fits-all approaches are insufficient. The emphasis on AI's capability for personalization and context awareness reflects broader trends in consumer behavior research, where Chung et al. (2020) identified relevance and timeliness as critical determinants of engagement in digital brand experiences.

The comparative analysis of three alternative activation approaches—Mobile Activation (SPG/Mascot), Specific Expertise Activation, and AI Device + Machine—provides empirical grounding for strategic decision-making in airport branding. The selection of AI Device + Machine as the most promising alternative is supported by multiple theoretical frameworks. From a Resource-Based View perspective (Barney, 1991), the AI-enabled approach represents a strategic resource that is valuable (delivers personalized experiences at scale), rare (few airports have implemented sophisticated AI branding), inimitable (requires integration of technology, data analytics, and design expertise), and non-substitutable (cannot be easily replicated through traditional means). This positions AI Device + Machine as a source of sustainable competitive advantage for both the airport and brand partners.

However, the identified limitations of the AI approach—particularly regarding emotional warmth and human connection—highlight important considerations that existing literature has insufficiently addressed. While studies by Kim and Han (2020) emphasize the importance of emotional engagement in airport retail environments, and research by Pine and Gilmore (2019) underscores the irreplaceable value of human interaction in creating memorable experiences, there remains limited empirical guidance on how to optimally balance technological efficiency with emotional authenticity. The current research contributes to this gap by suggesting a hybrid model where AI handles information delivery, personalization, and consistent brand messaging, while strategic human touchpoints are preserved for moments requiring empathy, spontaneity, and emotional resonance. This aligns with emerging concepts in service design literature around "high-tech, high-touch" approaches (Lemon & Verhoef, 2016), which advocate for thoughtful integration rather than wholesale replacement of human elements.

The finding that 77.3% of respondents are aged 21–30 years—predominantly digital natives—supports the appropriateness of technology-forward branding solutions. Research by Francis and Hoefel (2018) indicates that this demographic cohort demonstrates high comfort with AI interactions and actually prefers digital interfaces for routine, transactional engagements, reserving human interaction for complex or emotionally significant exchanges. This generational pattern suggests that AI Device + Machine implementations will become increasingly viable as demographic composition continues shifting toward digital-native populations. However, the study also reveals important considerations for inclusive design, as 23% of respondents expressed concerns about privacy and 31% indicated preference for human interaction options, underscoring the need for choice architecture that accommodates diverse comfort levels.

The research validates the relevance of Design Thinking methodology in addressing

complex, multi-stakeholder challenges such as airport branding innovation. The systematic progression through empathize, define, ideate, prototype, and test stages enabled the research to move beyond superficial observations to deep understanding of underlying needs and contexts. This aligns with findings by Carlgren et al. (2020), who demonstrated that Design Thinking approaches yield superior user satisfaction and innovation outcomes compared to traditional linear development methods. The empathy map (Figure 1) represents a particularly valuable artifact, synthesizing diverse passenger perspectives into actionable insights that directly informed solution development. The identification of pain points (static promotions, wasted time, irrelevant offers) and desired gains (meaningful experiences, personalization, shareable moments) provided clear design criteria against which alternative concepts could be evaluated.

From a theoretical perspective, this research contributes to the growing body of literature on experiential branding in service environments. The finding that passengers seek not merely information but experiences aligns with Pine and Gilmore's (2019) Experience Economy framework, which posits that economic value increasingly derives from memorable experiences rather than products or services alone. The five desire clusters identified in this research can be mapped onto Pine and Gilmore's four realms of experience (entertainment, education, escapism, and esthetics), suggesting that effective airport branding must orchestrate experiences across multiple dimensions simultaneously. The Digital & Interactive Experience cluster primarily addresses entertainment and education realms; the Creative & Local Content Zone engages esthetics and escapism; while Emotional & Contextual Branding spans all four realms by creating personally meaningful encounters.

The research also illuminates practical implementation challenges that brand managers and airport operators must navigate. The high initial cost of AI implementations—identified as a primary barrier—reflects broader patterns in technology adoption where early investment creates entry barriers but yields long-term efficiency gains. Research by Rogers (2003) on diffusion of innovations suggests that successful adoption requires not only technological capability but also perceived relative advantage, compatibility with existing systems, trialability, and observability of benefits. The prototype testing stage of this research partially addresses these requirements by making the AI concept tangible and demonstrable, but full-scale implementation will require additional strategies such as phased rollout, pilot programs, and partnership models that distribute risk and investment across multiple stakeholders.

The data collection capability of AI Device + Machine represents a significant strategic advantage that extends beyond immediate branding objectives. The ability to automatically capture interaction patterns, content preferences, engagement duration, and demographic profiles creates valuable first-party data assets that can inform continuous optimization, predictive personalization, and broader business intelligence applications. This aligns with research by Chen et al. (2022) on data-driven airport management, which demonstrates how integrated data systems enable more responsive, efficient operations across multiple functional areas. However, data collection capabilities also raise important ethical considerations regarding privacy, consent, and appropriate use—issues that must be proactively addressed through transparent data governance frameworks and user control mechanisms.

The limitations identified for AI Device + Machine—particularly the potential lack of emotional warmth and challenges for less tech-savvy users—suggest important directions for design refinement. Anthropomorphic design principles, where AI interfaces incorporate humanlike characteristics such as conversational language, empathetic responses, and personality, can partially mitigate the "coldness" of machine interaction (Epley et al., 2007). Additionally,

universal design principles emphasizing intuitive interfaces, multiple modalities (touch, voice, gesture), and progressive disclosure of complexity can enhance accessibility across diverse user populations. The integration of these design considerations represents an important area for continued research and iterative development.

From a broader industry perspective, this research contributes to ongoing discussions about the future of airport commercial strategies. As aeronautical revenues face commoditization pressures and passengers exercise increasing selectivity about their attention and engagement, non-aeronautical revenue optimization becomes crucial for airport financial sustainability. The development of sophisticated, data-driven branding platforms that deliver measurable value to brand partners while enhancing passenger experience represents a promising pathway for airports to differentiate themselves and strengthen commercial performance. This aligns with strategic recommendations from the Airports Council International (ACI, 2023), which advocates for digital transformation and customer-centricity as essential competitive strategies for contemporary airport management.

The research also has implications for brand partners considering activation investments in airport environments. The comparative analysis reveals that while traditional approaches like SPG Mobile and Mascot Activation offer high emotional engagement and flexibility, they face challenges in consistency, scalability, and data capture. Brands must therefore strategically assess their objectives: short-term campaigns emphasizing immediate emotional impact may still benefit from human-mediated approaches, while sustained brand-building initiatives requiring consistent messaging, broad reach, and measurable outcomes may find greater value in AI-enabled platforms. Hybrid strategies that combine both approaches—using AI for continuous presence and baseline engagement while supplementing with periodic human activations for special campaigns—may represent an optimal compromise that captures the strengths of both modalities.

Finally, this research highlights the importance of cultural and contextual adaptation in technology implementation. While AI-enabled branding has proven successful in airports like Singapore Changi and Dubai International, direct replication in Indonesian contexts may prove insufficient without adaptation to local cultural norms, language nuances, aesthetic preferences, and behavioral patterns. The Creative & Local Content Zone cluster identified in this research underscores passengers' desire for culturally resonant experiences that reflect Indonesian identity and values. This suggests that successful AI implementations must incorporate localized content strategies, culturally appropriate interaction paradigms, and visual designs that honor rather than homogenize local character. This cultural sensitivity aligns with research by Hofstede et al. (2010) on cultural dimensions in organizational practice, which emphasizes that technology adoption success depends significantly on alignment with cultural values and norms.

Conclusion

This study discusses the application of Design Thinking as an approach in developing interactive media innovations for branding and activation activities at Soekarno-Hatta International Airport. Through the stages of empathize, define, ideate, prototype, and test, this research seeks to understand the behavior and needs of airport users so that their experience is not only efficient, but also meaningful and memorable. The results of the analysis showed five main clusters of interactive strategies, namely Digital & Interactive Experience, Event & Live Activation, Merchandise & Reward Engagement, Creative & Local Content Zone, and Emotional & Contextual Branding. From the various alternatives generated, the AI Device + Machine concept

was chosen as the most relevant idea to be developed. This concept stands out because it is able to create personalized, real-time, and consistent interactions in conveying brand messages. In addition to operating indefinitely and saving long-term costs, AI can also provide behavior-based data that helps optimize subsequent marketing strategies. However, the application of this technology faces challenges such as large initial costs, technical risks, and limitations in building emotional warmth as direct human interaction. In conclusion, AI Device + Machine is a modern branding solution that has the potential to increase engagement and strengthen the innovative image of airports in the digital era.

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