

American University Kyiv

A Capstone Project

Management Transformation in the Ukrainian Vacation Short-Term Rental
Market: Leveraging AI Tools for Marketing as a Competitive Advantage and
Resource Optimization

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ABSTRACT

The rapidly growing artificial intelligence industry is transforming hospitality operations, with applications spanning automated customer service, content generation, and workflow optimization. While large hotel chains have more resources to adopt enterprise AI solutions, small vacation rental operators managing cabins, cottages, and nature-based properties face critical challenges: dependence on online travel agencies (OTAs) extracting 15-25% commission fees while controlling customer relationships, combined with resource constraints limiting competitive response capabilities.

This capstone develops a management framework enabling small Ukrainian vacation rental operators to leverage accessible AI tools for marketing automation, platform independence, and resource optimization. The research employs qualitative methodology: empathy mapping and customer journey analysis. Applying them across nine in-depth interviews with vacation rental guests. Analysis identifies five distinct guest segments (Aesthetic Sensualists, Comfort Planners, Nature Explorers, Festive Socializers, Retreat Seekers) and three universal friction points: insufficient online brand presence, slow communication response times, and content-audience mismatch.

The resulting framework integrates four automated components implemented through a phased 12-week roadmap, reducing weekly operator time to 2-3 hours while targeting 30-40% direct booking conversion within six months. While specific AI tools evolve rapidly (ChatGPT, Make.com, Google Vision AI may be superseded), the framework emphasizes goal-oriented methodology: defining clear key performance indicators (KPIs), validating tool effectiveness against strategic objectives, and continuously adapting technology choices to serve business outcomes rather than pursuing technology for its own sake.

This research proposes an actionable framework enabling resource-constrained operators to potentially achieve competitive advantages through strategic AI adoption. The framework design suggests significant time savings and platform independence opportunities.

Keywords: artificial intelligence, marketing automation, vacation rentals, short-term rentals, OTA platform independence, digital transformation, hospitality management, empathy mapping, customer journey, small business strategy, resource optimization, social media automation

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CHAPTER 1: INTRODUCTION

1.1 Background and Market Context

1.1.1 Global and European context of nature-based short-term rentals

The global vacation rental market has experienced sustained growth over the past decade, driven by changing travel preferences, digital platforms, and the expansion of remote work. According to industry estimates, the global vacation rental market is projected to expand steadily through 2032, supported by demand for flexible, experience-oriented accommodation formats (Grand View Research, 2024).

Within this broader market, nature-based short-term rentals (STRs), including cabins, countryside houses, eco-lodges, and glamping accommodations, have emerged as a distinct and fast-growing sub-segment. Unlike urban STRs, which compete primarily on price, location, and convenience, nature-based STRs compete on experience, atmosphere, emotional value, and lifestyle alignment. These accommodations are often selected well in advance and are closely tied to leisure, wellness, and workation travel patterns.

Across Europe, rural and non-urban destinations have benefited from post-pandemic shifts to lower-density travel, sustainability concerns, and a desire for privacy and nature. This has positioned nature-based STRs not as a niche offering, but as an increasingly mainstream accommodation category.

This international context is important for Ukraine, as it illustrates the direction of market development rather than an isolated or local phenomenon. Ukrainian nature-based STRs are entering a market phase that more mature regions experienced earlier, but under different structural constraints.

1.1.2 Nature-based STR market potential in Ukraine

In Ukraine, the nature-based STR segment remains relatively underdeveloped in absolute scale, but demonstrates strong structural potential. Domestic tourism has become increasingly important due to on-going war, mobility constraints, and economic factors. Nature-oriented destinations like forests, lakes, mountains, countryside regions - play a central role in domestic travel decisions, particularly for short leisure breaks and weekend stays.

Digital adoption in Ukraine provides a strong foundation for market development. Internet penetration, mobile usage, and social media engagement remain high, making digital channels the primary interface between accommodation providers and potential guests (DataReportal, 2025).

This digital readiness contrasts with the organizational and managerial readiness of many small STR operators.

The supply side of the Ukrainian nature-based STR market is dominated by small entrepreneurs: individuals or families managing one to several accommodation units. These operators typically perform a lot of operational and administrative functions themselves. As for marketing, and as a part of it - social media management, usually is done either by outsource agency or by themselves. As a result, strategic marketing activities are often irregular, intuition-driven, or outsourced at a cost that is difficult to sustain.

Travelers increasingly value short, restorative trips focused on nature, privacy, and emotional comfort. Such travel decisions might be made spontaneously, but taking into account limited proposition on the market, they usually involves virtual exploring in advance and early pre-booking. This involve early inspiration, visual exploration, trust-building, and planning, which places strong emphasis on pre-booking digital engagement rather than last-minute transactional search.

1.1.3 Platform-driven market structure and its implications

Independent vacation rental operators in Ukraine (and globally) face a critical strategic vulnerability: dependence on online travel agencies (OTAs) like Airbnb and Booking.com that extract 15-25% commission fees while controlling customer relationships and competitive positioning. For operators managing 1-5 properties (cabins, cottages, villas) in nature settings, this dependency creates three interconnected problems:

Economic burden: Commission fees of 15-25% per booking, directly reducing profitability and reinvestment capacity (Airbnb, 2024; Booking.com, 2024).

Loss of strategic control: Platforms own guest data and communication channels, preventing operators from building direct relationships, loyalty programs, or repeat booking strategies

Commoditization pressure: Research on peer-to-peer accommodation indicates that as platforms mediate competition among hosts, listings tend to become more standardized, and performance metrics like ratings and responsiveness increasingly drive visibility, which can shift competitive emphasis away from unique experiences toward price and reputation signals (Farmaki et al., 2020).

In general, OTAs are optimized for standardized, comparable listings, whereas nature-based accommodations rely on storytelling, emotional differentiation, and experiential branding. As a result, many operators may struggle to communicate their unique value proposition within platform constraints and become increasingly commoditized.

From a management perspective, this is not merely a marketing issue but a strategic capability gap. One realistic way to reduce this dependency is to strengthen direct demand generation and guest communication through digital channels that operators can control.

1.1.4 AI-Driven Digital Transformation Opportunity

Social media platforms (Instagram, Facebook) combined with AI-powered automation tools create possibility for a different strategic approach for small STR operators: they can reduce execution effort, improve consistency, and enable more personalized communication at scale. Instead of relying only on platforms optimized for standardized listings, operators can build direct guest relationships through content-driven discovery and faster response cycles. Besides that, they avoiding traditional barriers:

Low entry barriers. Instagram and Facebook accounts are free, require no technical expertise, and can be managed via smartphones. AI tools like ChatGPT (\$20/month for ChatGPT Plus; OpenAI, 2024) generate professional content, ManyChat or SendPulse automates Instagram DM responses and so on.

Strategic alignment. Vacation rentals compete on visual appeal, experiential value, and personal relationships - exactly what Instagram's and Facebook's visual storytelling enable. Social media naturally communicates differentiation that platforms undershow or hide.

1.1.5 Personal Motivation and Practical Relevance

This research is personally relevant because I am a co-owner of a short-term rental property in Ukraine and I have experienced the operational limitations of nature-based properties marketing first-hand. OTAs help generate demand, but they also create dependency and reduce control over guest relationships and brand positioning. At the same time, outsourcing marketing often requires a budget and ongoing coordination that is difficult to sustain for small entrepreneurs, especially for remote locations where operational complexity and costs are higher.

With a technical background and a full-time role in the IT industry, I needed a more sustainable approach - one that reduces manual workload while improving consistency and response quality. This is what motivated me to explore AI-enabled automation as a practical management solution and to develop a framework that small STR operators can implement under real-world constraints.

1.2 Automation marketing approach

While the operational challenges and automation opportunities for small STR operators are clear, the effectiveness of any marketing approach ultimately depends on how guests discover, evaluate, and choose accommodation. In the nature-based STR segment, booking decisions are often influenced by emotional expectations (comfort, privacy, atmosphere) and are shaped through digital touchpoints long before the actual stay. Guests typically form trust through visual exploration, peer validation, and the quality of online communication rather than through standardized listing comparisons alone.

Therefore, understanding guest digital decision-making is a necessary input for building a defensible automation strategy. Without aligning automation workflows to actual guest expectations across the customer journey, any digital tool risks generating content and communication that is ineffective.

1.3 Digital behavior of travelers and implications for STR marketing

Travel decision-making has become deeply embedded in digital and social media environments. High-quality digital content, visual narratives, and perceived authenticity significantly influence destination trust and travel intention (Mendes-Filho et al., 2022). For nature-based STRs, social media platforms often function as the first point of contact, long before guests engage with booking platforms.

However, effective use of social media requires continuous effort, content planning, and responsiveness - activities that are difficult to sustain for time-constrained micro-entrepreneurs. This creates a gap between guest expectations for digital engagement and operator capacity to deliver it consistently.

1.4 Research Purpose And Questions

1.4.1 Research Purpose

This research develops a strategic management framework for AI-driven digital transformation that enables vacation STR owners\managers in Ukraine to systematically reduce platform dependency, build competitive advantage through social media automation, and create sustainable direct booking channels.

The framework integrates Customer Journey Mapping (identifying critical touchpoints and pain points), Empathy Map (for prioritizing features to be implemented), and guest segmentation by their type of decision making and how they spend vacations (differentiating automation strategies by guest preferences) to provide evidence-based, actionable guidance grounded in empirical guest data rather than operator assumptions or vendor claims.

1.4.2 Research Questions

This research addresses three questions:

- *RQ1: Customer Journey and Empathy Mapping Understanding.* What are the critical touchpoints, pain points, and expectations experienced by vacation rental guests across social media-driven customer journeys (Instagram discovery -> DM inquiry -> Booking -> Community), and how do these vary by guest segment?
- *RQ2: How to avoid platform dependency,* which restricts strategic autonomy and decrease margins?
- *RQ3: Framework Development.* What strategic management framework can enable operators to systematically implement AI-driven digital transformation through social media automation, achieving competitive advantage and platform independence within resource constraints?

1.4.3 Research Objectives:

The objective of this capstone is to address this gap by developing a practical, management-oriented AI marketing automation framework tailored to small nature-based STR operators.

Specifically, the study aims to:

- Analyze guest expectations and decision-making behavior in nature-based STR contexts.
- Identify points in the customer journey where automation can reduce operator workload.
- Integrate insights from AI, marketing automation, and digital transformation literature to design a realistic framework.
- Demonstrate how AI-enabled tools can support strategic goals such as direct bookings, relationship building, and reduced platform dependency.

By grounding the framework in real market conditions and managerial constraints, the study contributes to both academic understanding and practical application in the field of technology management.

1.5 Scope and Limitations

The study focuses on small, non-urban STR operators in Ukraine and does not address large hotels, urban STR portfolios, or enterprise-level hospitality systems. European and US market references are used only as comparative benchmarks to illustrate long-term trends, not as direct predictors.

The proposed framework emphasizes **feasibility, simplicity, and cost efficiency**, reflecting the realities of small entrepreneurship in the Ukrainian STR market.

Target operators: STR owners managing vacation rental properties (cabins, cottages, villas) in nature/destination settings targeting leisure travelers, families, and remote workers.

Geographic focus: Ukrainian vacation rental market (but might be potentially expanded globally).

Functional scope: Social media marketing (Instagram, Facebook), messaging automation (WhatsApp, Telegram), community building, and AI-powered content creation.

Excluded: Platform optimization, operational automation (pricing, PMS), urban hotels/apartments.

Strategic focus: Platform independence (reducing OTA dependency), competitive advantage through relationship differentiation, and resource-optimized digital transformation.

1.5 Research Contributions

Contribution 1: Strategic Management Framework for AI-Driven Digital Transformation

The primary deliverable is a comprehensive framework providing:

- Strategic layer: Empathy maps, segment-specific competitive strategies, platform independence roadmap
- Resource allocation layer: Automation prioritization matrices combining Empathy maps classifications, segment preferences, and pain point severity; budget frameworks
- Implementation layer: Month-by-month transformation plan, process-specific automation guides (Instagram content, DM responses, Booking workflow), tool selection matrices with Ukrainian market considerations
- Performance management layer: KPI frameworks measuring platform independence progress (direct booking %, commission savings)

Contribution 2: Guest Insights for Evidence-Based Decision Making

Operators receive empirical insights enabling customer-centric strategies:

- Guest segmentation by travel behaviour
- Journey stage pain points
- Empathy Mapping classifications with implementation priorities
- Direct guest quotes explaining preferences

This enables operators to understand guests better than platforms do and use insights for competitive advantage.

Contribution 3: Ready-to-Implement Tools and Templates

Practical materials include:

- Tool recommendations with Ukrainian market availability
- Implementation roadmap

CHAPTER 2: LITERATURE REVIEW

This literature review prioritizes sources that explain (1) guest decision-making in STR contexts, (2) the role of digital trust and communication, and (3) how AI-driven automation can operationalize marketing activities under resource constraints.

2.1 Digital Transformation as a Management Challenge in Tourism

Digital transformation is increasingly understood not as a technological upgrade, but as a strategic and managerial transformation that reshapes how organizations create value, engage customers, and organize work. In tourism and hospitality, digital transformation affects marketing, operations, customer communication, and service delivery simultaneously.

Westerman, Bonnet, and McAfee (2014) emphasize that successful digital transformation requires the development of new managerial capabilities, including leadership alignment, process redesign, and integration of digital tools into daily decision-making. Technology alone does not create competitive advantage; rather, advantage emerges when digital tools are embedded into coherent management practices.

In the tourism context, digital transformation is shaped by sector-specific characteristics such as demand volatility, experience-based value creation, and the strong role of digital intermediaries. A systematic literature review by Gutierrez, Ferreira, and Fernandes (2025) shows that digital transformation in tourism primarily involves the reconfiguration of business models, customer engagement mechanisms, and internal workflows, rather than the adoption of isolated technologies. The authors further highlight that small tourism enterprises face structural barriers to transformation due to limited resources, lack of specialized staff, and time constraints.

For small vacation rental operators specifically, digital transformation presents the following management challenges, that this capstone systematically addresses:

- *Strategic positioning challenge*: Platform dependency limiting differentiation and autonomy (analyzed in Section 2.2, addressed in framework Section 5.4.1)
- *Resource constraint challenge*: Marketing capability gap with limited budget and time (analyzed in Section 2.1, addressed through cost-optimized framework Section 5.3)
- *Information asymmetry challenge*: Lack of systematic guest insights informing strategy (addressed through empirical research Chapter 4, translated to framework priorities Chapter 5)
- *Operational efficiency challenge*: Time scarcity forcing trade-offs between service and marketing (quantified through journey mapping Chapter 4, resolved through automation Section 5.4)
- *Technology adoption challenge*: Barriers to evaluating, selecting, and implementing appropriate tools (addressed through phased implementation Section 5.5, tool selection matrices Section 5.3)

By explicitly connecting these management challenges to specific analytical framework solutions, this research provides a systematic pathway from problem identification through empirical investigation to practical resolution.

2.2 Platform Economy and Structural Constraints on Small STR Operators

The growth of the platform economy has fundamentally reshaped accommodation markets. Platforms such as Airbnb and Booking.com operate as multi-sided marketplaces, mediating interactions between guests and accommodation providers while making a significant control over visibility, communication, and reputation systems.

Oskam and Boswijk (2016) conceptualize these platforms as networked hospitality ecosystems, where value creation is distributed but power is increasingly centralized. For small

STR operators, platforms provide access to demand but simultaneously impose dependency. Operators benefit from exposure yet lose control over customer relationships and brand identity.

This structural dependency is particularly problematic for nature-based STRs. Unlike standardized urban accommodations, rural and experiential properties rely on storytelling, emotional differentiation, and long-term relationship building. Platform interfaces, however, prioritize comparability and transactional efficiency, limiting the ability of operators to communicate unique value.

From a management perspective, platform dependency constrains strategic autonomy and reinforces short-term, price-driven competition. This creates strong incentives for operators to develop direct digital engagement channels, but few possess the managerial capacity to do so systematically.

2.3 Artificial Intelligence in Hospitality and Tourism Marketing

Nowadays we can see a sharp growth in AI-related publications within tourism and hospitality journals, reflecting both technological advances and rising industry interest. A comprehensive review by To and Yu (2025) demonstrates that AI research in this domain has evolved from early applications such as data mining and recommendation systems toward more advanced use cases, including machine learning - based personalization, service automation, sentiment analysis, and, more recently, generative AI.

The study by To and Yu (2025) identifies several dominant research clusters in hospitality AI literature, including customer service automation, marketing analytics, intelligent decision-support systems, and AI-enabled content generation. Importantly, the authors highlight the increasing relevance of generative AI tools, which are beginning to influence how hospitality organizations manage customer communication, branding, and engagement. These developments suggest a shift from AI as a purely operational technology toward AI as a strategic marketing and management resource.

As highlighted in recent reviews - AI adoption in hospitality spans chatbots, recommendation systems, content generation, demand forecasting, and automated communication (Bulchand-Gidumal et al., 2023). While large hotel chains and technology-intensive organizations are typically early adopters of AI, small hospitality businesses encounter significant barriers related to cost, technical complexity, and limited access to specialized skills (Bulchand-Gidumal et al., 2023). Consequently, a persistent gap remains between the theoretical potential of AI technologies and their practical implementation among small-scale operators.

From a managerial perspective, this gap underscores the importance of developing simplified, scalable AI adoption approaches tailored to the realities of small hospitality enterprises. For nature-based STR operators, AI-enabled marketing automation offers particular value by reducing manual workload, improving consistency of digital communication, and supporting relationship building with guests across the customer journey.

From a guest perspective, AI-driven tools are increasingly accepted, and in some contexts expected, particularly when they improve responsiveness, personalization, and convenience. Sousa, Cardoso, and Dias (2024) show that tourists generally perceive AI systems positively when they enhance communication efficiency and service quality without reducing perceived authenticity.

Despite this potential, prior research largely emphasizes enterprise-level AI implementations, leaving limited guidance on how such technologies can be operationalized by small hospitality businesses with minimal resources. This gap is particularly relevant for STR operators, who require lightweight, low-cost, and low-maintenance AI applications.

2.4 Marketing Automation in Hospitality

Marketing automation refers to the use of digital systems to automate repetitive marketing tasks such as content distribution, customer communication, segmentation, and performance tracking. In hospitality, marketing automation has been shown to improve consistency, responsiveness, and efficiency, especially in digital channels (Sun et al., 2023).

Sun et al. (2023) demonstrate that marketing automation enables hospitality organizations to sustain continuous engagement with potential guests while reducing manual marketing workload, highlighting its particular value in contexts where human resources are constrained.

For small STR operators, marketing automation represents a management leverage mechanism: it allows owners to achieve outcomes that would otherwise require dedicated staff or agencies. However, automation tools are often designed for larger organizations, creating a mismatch between system complexity and user capacity.

This highlights the need for simplified automation frameworks that align with the operational realities of micro-entrepreneurs and integrate seamlessly into daily workflows.

2.5 Customer Journey Perspective in Nature-Based STRs

The customer journey framework provides a holistic lens for understanding how guests interact with hospitality services across multiple touchpoints, from initial inspiration to post-stay reflection. Pantouvakis and Gerou (2022) emphasize that modern service journeys are non-linear, multi-channel, and highly influenced by emotional and experiential factors.

In the context of nature-based STRs, the customer journey begins long before booking. Guests often encounter accommodations through social media content, peer recommendations, or visual storytelling. Trust, self-congruity, and perceived authenticity play a crucial role in shaping travel intention (Mendes-Filho et al., 2022).

This journey-based perspective is critical for identifying where digital and AI-enabled interventions can add value. Rather than automating isolated tasks, effective digital transformation requires aligning tools with specific journey stages such as inspiration, evaluation, booking, pre-arrival communication, and post-stay engagement.

2.6 Empathy Mapping and Persona Development

To translate customer journey insights into actionable strategies, qualitative methods such as empathy mapping and persona development are widely used. Ferreira et al. (2015) describe empathy mapping as a structured approach to capturing users' thoughts, emotions, motivations, and pain points.

Applied to the STR context, empathy mapping enables operators to move beyond generic demographic segmentation and focus on situational and experiential motivations such as the desire for escape, reconnection with nature, or work-life balance. This approach is particularly relevant for nature-based accommodations, where emotional drivers play a central role in value creation..

By combining empathy mapping with customer journey analysis, managers can identify opportunities for automation that enhance guest experience while reducing operational complexity.

2.7 Synthesis and Research Gap

The reviewed literature reveals several consistent patterns. First, digital transformation in tourism is fundamentally a management challenge rather than a purely technological one (Westerman et al., 2014; Gutierriz et al., 2025). Second, small STR operators face structural constraints linked to platform dependency, limited resources, and fragmented marketing

capabilities (Oskam & Boswijk, 2016). Third, while AI and marketing automation show strong potential to improve efficiency and guest engagement, much of the existing research and applied guidance remains focused on larger organizations with dedicated teams and budgets (Bulchand-Gidumal et al., 2023; Sun et al., 2023). Finally, customer journey and empathy-based approaches provide effective lenses for designing guest-centered experiences and interventions (Pantouvakis & Gerou, 2022; Ferreira et al., 2015).

However, there is a clear gap in the literature regarding practical, management-oriented frameworks that enable small nature-based STR operators to adopt AI-powered marketing automation in a realistic and sustainable manner. This gap is especially relevant in markets such as Ukraine, where digital access is high but managerial capacity and execution consistency are complicated, especially now.

This capstone addresses the gap by translating guest expectations across the customer journey into actionable automation design requirements and an implementation-oriented framework suitable for micro-entrepreneurs in the nature-based STR sector. To achieve this, the study applies a qualitative research design based on semi-structured guest interviews and thematic analysis, which forms the foundation for the framework presented in later chapters.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Research Design and Philosophical Foundations

This research employs a qualitative exploratory design to develop an evidence-based social media automation framework for small nature-based short-term rental (STR) operators in Ukraine. The study follows an interpretivist logic: guest experiences are socially constructed, context-dependent, and may vary even for similar travel situations. Therefore, the goal is not to produce universal statistical generalizations, but to identify meaningful patterns in how different guest types search, evaluate, and emotionally experience countryside rentals.

The qualitative approach is justified by the study's objectives: to uncover underlying motivations, emotions, and decision drivers that shape booking behavior; to understand what creates trust or hesitation before booking; and to identify friction points where potential guests disengage. These questions require depth, detail, and narrative explanation rather than breadth of coverage, which makes semi-structured interviews a more appropriate method than surveys.

To structure interpretation of the interview data, the analysis used two practical lenses: (1) persona-based typology, which organizes participants into segments based on repeated patterns in values and behavior, and (2) a customer journey perspective, which helps locate where those expectations emerge across stages such as inspiration, evaluation, booking, pre-arrival communication, and post-stay reflection.

Parts of the interpretation and synthesis were supported through AI-assisted text analysis (ChatGPT) as a tool for organizing raw statements into consistent categories, highlighting recurring themes, and drafting structured summaries. Final interpretation decisions, segmentation logic, and implications for STR operators were made by the researcher and validated through cross-checking against direct participant quotes included in Chapter 4 and the evidence table in Appendix.

3.2 Research Context and Setting

The Ukrainian vacation rental market serves as the empirical context, selected strategically for compelling reasons.

Ukraine demonstrates substantial digital penetration, with an estimated 82.4% of the population using the Internet in 2023 (World Bank, 2024b). This high level of connectivity supports the investigation of social media-based booking behaviors and digital engagement strategies among vacation rental guests. Ukrainian operators face platform dependency challenges representative of global dynamics, including 15-25% OTA commission rates (Booking.com, 2024). The nature-based vacation rental segment is well-developed across the Carpathian Mountains, Black Sea coastal areas, and rural destinations, providing a diverse participant pool.

The framework is designed for global applicability despite Ukrainian data collection. Generalizability is achieved through examining fundamental psychological constructs (pain points, gains, booking motivations) that transcend cultural boundaries, ensuring the empathy mapping methodology is fully replicable in any market, and applying automation prioritization principles (high pain plus high gain equals priority) universally.

3.3 Participant Selection and Sampling Strategy

3.3.1 Sampling Approach

This research employs purposive sampling with maximum variation to capture diverse perspectives across age, relationship status, travel patterns, and vacation motivations. The strategy aims to identify distinct guest segments with differing needs, preferences, and booking behaviors.

3.3.2 Inclusion and Exclusion Criteria

Inclusion criteria: Adults aged 25-55 years who stayed at nature-based vacation rentals (cabins, villas, cottages, rural guesthouses) within the past 12 months; medium-to-high income levels (\$1,500+ monthly) with remote work flexibility; active social media users (Instagram, Facebook, or TikTok) willing to participate in 45-60 minute interviews; fluent in Ukrainian or English.

Exclusion criteria: Guests who stayed exclusively at urban apartments or large hotel chains (50+ rooms); non-social media users; business travelers whose bookings were employer-decided; minors under 18 years.

3.3.3 Sample Structure and Size

The sample comprises 9 participants with deliberate age and travel pattern distribution:

- **Age 25-40:** 6 participants (4 couples/groups, 2 solo travelers)
- **Age 40-55:** 3 participants (2 couples/groups, 1 solo traveler)

This structure ensures representation of both partnership-oriented and independent travel styles while maintaining focus on the target demographic most likely to book nature-based rentals and engage with social media marketing.

3.3.4 Recruitment Process

Recruitment proceeds through multiple channels: Collaboration with 2-3 vacation rental operators who invite recent guests.

3.4 Data Collection Methodology

3.4.1 Interview Format and Setting

Data collection employs semi-structured in-depth interviews lasting 45-60 minutes. Interviews are conducted via Zoom/Google Meet, in the participant's preferred language (Ukrainian). Audio recording ensures accurate data capture, with explicit consent obtained and confidentiality protections explained. Recordings are stored on encrypted devices and will be permanently deleted following thesis completion.

3.4.2 Interview Protocol Structure

The interview protocol comprises six phases designed to elicit empathy mapping categories (Says, Does, Thinks/Feels, Hears, Pains, Gains):

- Phase 1 - Procedural (2 min): Consent confirmation, recording explanation, confidentiality assurances.
- Phase 2 - Getting Acquainted (5-7 min): Participant background, typical vacation habits, travel companions, ideal countryside vacation description. Establishes rapport and baseline context.
- Phase 3 - Context (5 min): Recent vacation rental experiences within past 12 months, trip goals (relaxation, romance, workation, socializing, recreation), accommodation format choice rationale.
- Phase 4 - Booking Behavior (8-10 min): Search methods and channel preferences; planning horizon and search duration; emotions during property search; selection criteria across location, exterior/interior design, promotional materials (video tours, professional photography, social media reels), service/communication expectations (automation vs. personalization, responsiveness, self-service options); decisive booking factors; abandonment triggers; social media sharing behaviors.
- Phase 5 - Barriers and Pains (5-7 min): Unmet expectations or frustrations (interior, exterior, service, overall experience); issue resolution attempts and outcomes; critical deal-breakers preventing return visits.
- Phase 6 - Value and Gains (5 min): Most pleasing aspects of recent stays; "wow" moments generating delight; special details making vacations memorable; desired additional services.
- Phase 7 - Conclusion (3 min): Summary confirmation, participant questions, compensation details.

Pilot testing with 2 interviews preceded full data collection to refine question clarity, timing, and probing techniques.

3.5 Data Analysis Framework

3.5.1 Empathy Mapping

Participants were grouped into segments using a qualitative persona-based typology based on repeated patterns in booking behaviors, social media usage, travel values, and pain/gain profiles. For each segment, comprehensive empathy maps are constructed following the framework established by Ferreira et al. (2015), who demonstrated empathy mapping's effectiveness in capturing user perspectives through systematic organization of behavioral and emotional data.

This methodology is particularly suited to vacation rental research because it captures both explicit behaviors (booking actions, communication patterns) and implicit motivations (emotional drivers, unmet needs) that influence guest satisfaction.

Each segment's empathy map comprises four core quadrants with additional pain/gain dimensions:

Says: Direct verbatim quotes

Does: Observable behaviors and actions

Thinks/Feels: Internal thoughts, emotions, aspirations, concerns

Hears: External influences from friends, media, reviews, advertising

Pains: Frustrations, obstacles, fears
 Gains: Goals, desires, successes

This structured approach, validated by Ferreira et al. (2015) across multiple user research contexts, enables systematic comparison across segments while preserving the richness of individual experiences. The empathy mapping process transforms raw interview transcripts into segment-specific insight profiles that inform framework priorities in Chapter 5.

Based on repeated patterns observed across participant narratives, pain points and gains were prioritized using a structured qualitative assessment rather than numeric scoring. This choice maintains analytical integrity by avoiding artificial quantification of qualitative evidence that was not collected with standardized scales.

This qualitative prioritization approach aligns with customer journey research principles, where understanding the complete context of guest experiences - including emotional intensity, behavioral consequences, and cross-touchpoint patterns - provides richer insights than isolated satisfaction scores (Pantouvakis & Gerou, 2022).

3.5.2 Customer Journey Mapping

A synthesized customer journey map documents the complete vacation rental experience across all participants, capturing how guests interact with properties and operators from initial awareness through post-stay loyalty. This analytical approach follows customer journey research established by Pantouvakis and Gerou (2022), who demonstrated that understanding the complete customer journey - rather than isolated touchpoints - is essential for identifying service quality gaps and designing sustainable service improvements.

As Pantouvakis and Gerou (2022) emphasize, customer journey mapping reveals systemic patterns in service delivery that impact satisfaction across multiple touchpoints. In vacation rental contexts, this is particularly valuable because guest experiences span diverse channels (social media discovery, messaging communication, in-person stay) and temporal phases (planning weeks in advance, experiencing property amenities, forming post-stay loyalty intentions).

The journey map documents six critical stages:

1. Inspiration/Awareness: How guests become aware of vacation rental options (social media algorithms, friend recommendations, influencer content, targeted advertising). Documents emotional state (excitement, exploration) and information sources.
2. Consideration/Research: Active property search and evaluation behaviors including platform usage (Instagram, Booking.com, Google), comparison criteria (aesthetics, facilities, location, reviews), and decision-making factors. Captures uncertainties and verification needs.
3. Booking/Decision: Conversion triggers and barriers including communication responsiveness, pricing transparency, booking platform preferences (direct vs. OTA), and final selection rationale. Commitment and payment.
4. Pre-Arrival: Communication touchpoints between booking and arrival including confirmation messages, check-in instructions, facility information provision, and expectation management. Critical period for setting satisfaction baseline.
5. Stay Experience: On-site interactions with property facilities, surrounding environment, and operator (if contact occurs). Captures facility utilization, unexpected discoveries, problem resolution, and emotional peaks/valleys during stay.
6. Post-Stay/Loyalty: Review submission behaviors, property recall quality, repeat booking intentions, and word-of-mouth recommendations. Reveals brand memory failures and loyalty drivers.

3.6 Ethical Considerations

This research adheres to human subjects research ethical principles. Informed consent is obtained verbally, covering study purpose, interview procedures, voluntary participation and withdrawal rights, audio recording, confidentiality protections, data storage/retention, researcher contact information.

Confidentiality protections: Participants assigned codes P01-P9; property names and exact locations generalized; identifying details removed from quotations.

Data security: Audio recordings password-protected; transcripts stored on secure place with researcher access only; permanent deletion two months post capstone completion.

Researcher positionality: The researcher is a graduate student of Master in Technology Leadership & Artificial Intelligence program at AUK with academic background in management as well as experience in hospitality, bringing enthusiasm for digital innovation alongside awareness of potential biases toward technological solutions.

3.7 Research Limitations

Methodological limitations: Sample size of 9 interviews precludes statistical generalizability but enables analytical generalization - developing frameworks adaptable across contexts. Self-reported interview data introduces recall and social desirability bias. The temporal snapshot captures perspectives at a single point rather than longitudinal patterns.

Scope limitations: Ukrainian market focus may exhibit unique characteristics, though methodology is fully replicable elsewhere. Nature-based property focus may not transfer to urban apartments or luxury resorts. Small operator focus (up to 5-10 properties) may not apply to large management companies. Social media focus does not address comprehensive digital marketing strategies.

Analytical limitations: Researcher subjectivity as primary interpretive instrument, mitigated through transparency and peer debriefing. Segment boundaries may be permeable with guests exhibiting multiple segment characteristics. Pain/gain intensity ratings involve researcher judgment, validated through reliability checks.

Implementation limitations: This pre-implementation study develops a framework but does not test actual operational outcomes. Future research should validate effectiveness through longitudinal case studies. Rapid technology evolution may date specific tool recommendations, though underlying prioritization methodology remains relevant.

CHAPTER 4: FINDINGS AND ANALYSIS

This chapter presents the findings from 9 in-depth interviews with guests of nature-based vacation rental properties in Ukraine, conducted between 27.11.2025 and 11.12.2025. The analysis employed six-phase thematic analysis integrated with empathy mapping methodology to identify distinct guest segments, their pain points and gains, and critical touchpoints throughout the booking journey.

4.1 Guest Segment Profiles and Empathy Maps

In my study, segmentation was based primarily on user attitudes and psychographic characteristics rather than solely on the format or type of trips undertaken. This methodological choice is grounded in the assumption that values, motivations, and overall approach to leisure play a decisive role in shaping a person's behavior across different travel contexts, whereas the specific travel format may vary depending on companions, circumstances, or immediate needs. By focusing on these deeper psychological and behavioral drivers, I aimed to uncover patterns that are consistent and predictive, rather than simply descriptive of past behavior.

To develop the segments, I conducted a series of in-depth, semi-structured interviews with representatives of the target audience. This qualitative approach allowed us to explore participants' perspectives in detail, gaining insights into their:

- Priorities during leisure and travel, such as comfort, freedom, aesthetic appeal, or social interaction;
- Expectations and criteria for selecting a location, including infrastructure, natural surroundings, privacy, and opportunities for activities;
- Behavioral patterns and emotional responses, capturing both routine decision-making and reactions to positive or negative experiences.

Based on these interviews, I constructed empathy maps for each participant segment. These maps systematized:

- What the user thinks and feels in relation to their leisure time;
- What they see and hear in their environment, including social media influences and peer recommendations;
- Problems and pain points encountered during trips;
- Sources of inspiration and motivation, which guide their travel decisions.

This methodological framework enabled the identification of stable, meaningful segments that capture not only observable travel practices but also the underlying user attitudes and motivational drivers. The segmentation provides nuanced insight into the diversity of traveler needs, helping to inform service design, digital experiences, and personalized offerings.

Identified type of personas:

1. Aesthetic Sensualists - travel for the beauty of locations and interiors; photogenic aspects are important.
2. Comfort Planners - prioritize comfort, convenience, and basic services; trips are planned in advance.
3. Nature Explorers - value outdoor activities and nature; combine leisure with movement.
4. Festive Socializers - travel for celebrations with friends; atmosphere is more important than details.
5. Retreat Seekers - seek silence, isolation, emotional reset; choose remote nature-focused stays with minimal interaction.

Detailed empathy maps for each segment, including verbatim quotes, observed behaviors, pain points, and gains, are provided in Appendix A. The following subsections summarize key characteristics and automation implications for each segment.

4.1.1 Aesthetic Sensualists: Preferences, Behaviors, and Motivations

Aesthetic Sensualists segment is characterized by a strong preference for visually pleasing and comfortable cottage retreats. These individuals prioritize the overall ambiance of the property, valuing natural surroundings, architecture, and well - designed interiors. For them, leisure is not merely about taking a break from routine but about creating meaningful, restorative experiences with a partner or close company. Comfort, attention to detail, and aesthetic appeal are decisive factors in selecting a destination, often outweighing practical considerations such as price, distance, or standard amenities.

Participants in this segment are highly influenced by social media and recommendations from trusted sources. Instagram-worthy settings, first impressions of the property, and positive reviews play a critical role in their decision-making. They tend to travel few times per year domestically and may combine these trips with international travel. Poor service, lack of essential amenities, or repeated negative feedback can strongly deter them from booking a cottage.

Automation Implications: This segment requires high-quality visuals, curated recommendations, seamless booking processes, and options for experiential personalization. Content should emphasize aesthetic details, atmospheric qualities, and Instagram-worthy moments. Communication should be visually rich with minimal text.

See *Appendix A.1* for complete empathy map with verbatim quotes and detailed pain/gain analysis.

4.1.2. Nature Explorers: Preferences, Behaviors, and Motivations

The Nature Explorers segment is defined by a strong preference for freedom, autonomy, and immersive natural experiences. These individuals prioritize rural or suburban cottages that allow direct engagement with the surrounding environment, access to outdoor activities, and a balance between comfort and “wild” experiences. They value self-sufficiency, mobility, and flexibility, often preferring accommodations that enable them to cook, explore, and manage their own schedule without excessive rules or interference. For them, leisure is about reconnecting with nature, trying new experiences, and maintaining control over their own itinerary.

Participants in this segment make booking decisions based on location, privacy, surrounding environment, and the friendliness of hosts. Flexible payment and booking options, access to outdoor activities, and opportunities for authentic local experiences are highly valued. These travelers tend to plan trips spontaneously and are less influenced by standard amenities, while unfriendly staff, poor maintenance, noise, or crowded conditions strongly restrain them from choosing a property. participant shared:

"I want to feel like I'm really out in nature, free to do what I want, explore trails, and just enjoy being away from the city." P06

Automation Implications: Emphasis on clear information about location and available activities, flexible booking and payment options, and showcasing unique natural or local experiences. Content should feature trails, landscapes, and outdoor adventure opportunities. Communication should be concise and activity-focused.

See *Appendix A.2* for complete empathy map with verbatim quotes and detailed pain/gain analysis.

4.1.3. Comfort-Oriented Planners: Preferences, Behaviors, and Motivations

The Comfort-Oriented Planners segment comprises travelers, who prioritize predictability, comfort, and convenience in their trips. These individuals often travel with a partner or family and carefully plan their vacations in advance, seeking to minimize stress and ensure a smooth, enjoyable experience. Their choice of accommodations - particularly rural or suburban cottages - is guided by reliable reviews, trusted booking platforms, and assurances of basic services. For these travelers, a holiday is about security, comfort, and well-organized arrangements rather than novelty or adventure.

Members of this segment are highly sensitive to disruptions that may affect their sense of control or relaxation, such as poor service, unclean or inconvenient accommodations, or unexpected complications. They value seamless logistics, dependable amenities, and small personalized touches - like a welcome basket or a neatly arranged space - that enhance comfort without requiring additional effort or attention on their part. One participant explained:

"I just want everything to work as expected - comfortable, clean, and stress-free, so I can focus on enjoying the time with my family."

Automation Implications: Emphasize verified reviews, clear information about amenities and services, ready-made packages or "all-inclusive" options, and small personalized touches to enhance the sense of care and reliability. Digital tools should simplify planning, provide reassurance, and highlight dependable experiences.

See *Appendix A.3* for complete empathy map with verbatim quotes and detailed pain/gain analysis.

4.1.4. Festive Socializers: Preferences, Behaviors, and Motivations

The Festive Socializers segment is characterized by a strong preference for lively, social, and celebratory experiences in rural or suburban getaway houses. Individuals in this group prioritize group interactions, shared activities, and festive atmospheres over comfort, meticulous planning, or high-end amenities. Their travel choices are motivated by the opportunity to gather with friends or colleagues, enjoy entertainment, and create memorable social moments in a cozy, communal environment. For them, a retreat is less about solitude or detailed planning and more about shared energy, spontaneity, and emotional engagement.

Convenience and basic amenities are secondary to the overall social experience. Participants often select cottages or holiday homes that offer communal spaces, opportunities for games, outdoor activities, music, and visually appealing areas suitable for group photos or Instagram content. One participant shared:

"We just want a place where everyone can hang out together, play games, and take fun photos. As long as the space feels lively and welcoming, the details like Wi-Fi or fancy beds don't matter much." P08

Automation Implications: Emphasize event-based recommendations, highlight group-friendly features, showcase social activities, and provide seamless group booking options. Content should be energetic and visually dynamic, featuring group celebrations and party atmospheres.

See *Appendix A.4* for complete empathy map with verbatim quotes and detailed pain/gain analysis.

4.1.5. Retreat Seekers: Preferences, Behaviors, and Motivations

The Retreat Seekers segment is characterized by a strong preference for solitude, meditation, and restorative experiences in rural or remote getaway houses. Individuals in this group prioritize quiet, privacy, and immersion in nature over social interaction, high-end amenities, or elaborate planning. Their travel choices are motivated by the need to disconnect from noise, crowds, and daily stress, seeking calm environments where they can focus on relaxation, reflection, and personal well-being. For them, a retreat is about mental and physical restoration rather than social engagement or structured activities. One participant shared:

"I need a place where I can truly disconnect - just me with my girlfriend, the forest, and the lake. The fewer people around, the better."

This segment relies on careful evaluation of location, privacy, and environmental authenticity. They are highly sensitive to disruptions such as noise, overcrowding, or poorly maintained facilities. Another participant noted:

"If there are too many people or the place feels busy, it completely ruins the experience. I just want calm and space to breathe."

Participants often select cottages or holiday homes that are secluded, surrounded by natural landscapes such as forests, mountains, or lakes, providing opportunities for meditation, personal rituals, or gentle outdoor activities. This segment relies on careful evaluation of location, privacy, and environmental authenticity. They are highly sensitive to disruptions such as noise, overcrowding, or poorly maintained facilities.

Automation Implications: This segment requires unobtrusive technology and maximum autonomy. Streamlined booking without unnecessary forms, silent communication via messenger instead of calls, and optional rather than mandatory personalization surveys are key. Digital solutions like contactless check-in, privacy-mode preferences, and minimal-contact approaches reinforce the sense of emotional space and independence.

See *Appendix A.5* for complete empathy map with verbatim quotes and detailed pain/gain analysis.

4.2 Cross-Segment Analysis

Cross-segment analysis reveals both unifying patterns and critical divergences across the five identified guest types. Complete segment comparison matrix is provided in *Appendix B.1*.

Universal Emotional Driver: Across all segments, travelers seek emotional reward rather than simply a functional place to stay. Each segment values a sense of fulfillment: relaxation for Comfort Planners, inspiration for Aesthetic Sensualists, freedom for Nature Explorers, shared joy for Socializers, and inner stillness for Retreat Seekers. Universal pain points emerge around unmet expectations, misleading listings, noise, and lack of alignment between promised atmosphere and actual experience. When emotional payoff is broken - whether visually, socially, or mentally - satisfaction declines sharply across all profiles.

Key Divergences: Where segments differ most clearly is in the nature of the emotional reward and the ideal environment for achieving it. Aesthetic Sensualists and Comfort Planners both appreciate order and pleasant surroundings, but the former prioritize visual magic while the latter prioritizes reliability and clarity. Nature Explorers and Retreat Seekers share bonds with landscapes, but one seeks movement and discovery while the other seeks stillness and withdrawal. Festive Socializers occupy a distinct space - stimulation over calm, spontaneity over structure, shared spaces over personal retreat.

Automation Implications: These differences imply that automation, booking flow, and content strategy must be segment-specific. Where Comfort Planners require detailed amenity breakdowns and transparent logistics, Aesthetic Sensualists convert through high-quality photography and atmospheric storytelling. Nature Explorers respond to maps, trails, and activity suggestions, while Festive Socializers require community-oriented offerings and visually dynamic spaces. Retreat Seekers value minimalism, silence indicators, and signals of privacy - low information density rather than overload.

The opportunity lies in adaptive personalization - dynamic content, tailored filters, and segment-aware recommendations. Universal pain points can be addressed through truthful listings and quality assurance, yet true differentiation happens by speaking to the emotional core

of each traveler type. The closer the experience narrative matches the user's inner expectation, the higher the booking likelihood, loyalty, and repeat engagement.

Beyond persona typology differences, the interviews also revealed a recurring failure mechanism in how properties communicate value: a mismatch between the content owners publish and the information guests actually need to decide. P02 (Nature Explorer) demonstrates activity-focused decision criteria: “What do I pay attention to? Based on my criteria - what can be done there, where to walk and so on, I very thoroughly scour Google Maps, studying everything around” (P02), prioritizing trail access information. Yet this segment must filter through generic property Instagram feeds showing undifferentiated content mixing activities, aesthetics, wellness, and facilities - creating cognitive burden where most of content proves irrelevant to decision criteria. P05 describes resulting platform fatigue: “We use Instagram, but honestly, it's becoming harder and harder to use because there's so much... overexposed places constantly in the feed, and finding something new is very difficult” (P05). This mismatch operates bidirectionally: Nature Explorers ignore design-focused properties offering excellent hiking access (relevant value buried in aesthetic content), while Aesthetic Sensualists overlook visually stunning properties whose feeds emphasize outdoor activities over interior or exterior design (irrelevant value emphasized). P04 demonstrates activity promotion opportunity currently unrealized through generic approaches: “If they helped us with organizing the trip there... if there were some kind of discount option, that would be additionally pleasant” (P04), yet generic content cannot effectively promote activities because promotional relevance depends on audience segment matching. Properties lose not through experience deficiency but through experience communication failure - broadcasting everything to everyone rather than bringing right people first through precision targeting, then showing them segment-relevant content.

4.3 Customer Journey Mapping Analysis

This section presents a synthesized customer journey map that illustrates the six stages guests move through - from initial inspiration to long-term loyalty and repeat bookings. The model captures how travelers discover, evaluate, book, experience, and later re-engage with retreat accommodations, reflecting emotional dynamics, decision drivers, and behavioral shifts at each step.

The journey map integrates insights from all participant segments, aligning touchpoints with lived experiences rather than abstract assumptions. At every stage, the map highlights moments of delight, friction, hesitation, and confidence-building triggers that shape overall satisfaction. It also reveals where expectations are formed - visually, socially, or informationally - and where they most frequently break.

Complete customer journey map with segment-specific touchpoints, emotions, pain points, and automation opportunities is provided in *Appendix B.2*.

Key Universal Patterns: Several important similarities emerge across all segments despite their distinct motivations and travel styles. Every group relies heavily on visual confirmation when choosing a destination - high-quality photos and authentic guest-generated content form the foundation of trust. Participants across segments also express discomfort with incomplete, outdated, or inconsistent information, demonstrating a universal need for clarity and transparency. Peer-generated inputs, such as reviews, recommendations, and social media posts, were consistently cited as influential triggers that shape expectations and guide final decisions, regardless of segment.

Critical Touchpoints for Automation:

- Inspiration/Awareness: Visual-first content on Instagram; algorithm-driven discovery
- Consideration/Research: Responsive communication; segment-relevant content
- Booking/Decision: Speed of response determines conversion; pricing transparency
- Pre-Arrival: Consolidated information delivery; optional personalization survey
- Stay Experience: Facility awareness through pre-arrival communication
- Post-Stay/Loyalty: Review request timing; loyalty incentives for repeat bookings

These touchpoints informed the framework design in Chapter 5, ensuring automation addresses empirically-validated friction points rather than assumed challenges.

4.4 From Findings to Framework Design Requirements

This chapter demonstrated how guest expectations in nature-based STRs are formed through digital discovery, trust-building signals, and communication quality across the customer journey. While the persona profiles, cross-segment comparison, and journey mapping analysis provide a detailed understanding of guest decision-making, the purpose of this capstone is managerial: to convert these insights into implementable automation practices for resource-constrained operators.

To achieve this, the findings were translated into framework design requirements - practical conditions that an AI-enabled marketing system must satisfy to reduce operational workload while improving booking conversion and guest experience. Each requirement is grounded in a recurring guest expectation and the associated friction point identified during the interviews.

As a result, Chapter 5 presents a structured AI-enabled marketing automation framework organized around repeatable functions rather than tool-specific prescriptions. The framework is designed to be phased and scalable, allowing small STR operators to implement it gradually depending on time, budget, and operational capacity, while maintaining alignment with both segment-level differences and universal guest expectations.

CHAPTER 5: AUTOMATION FRAMEWORK DEVELOPMENT

5.1 Introduction

This chapter translates the empirical findings from Chapter 4 into a practical AI-enabled automation framework designed to address three operational challenges observed across guest interviews:

- *Insufficient online brand presence*, which limits property discovery and increases platform dependency;
- *Communication quality gaps*, where slow or inconsistent responses delay booking decisions and reduce conversion;
- *Content-audience mismatch*, where properties broadcast generic content to diverse guest segments, forcing potential guests to filter irrelevant information and weakening engagement.

The framework is designed specifically for small and micro nature-based STR operators working under real resource constraints (limited time, limited staff, and limited marketing budgets). It leverages AI-supported content workflows and lightweight automation to improve

consistency, reduce repetitive manual tasks, and strengthen direct guest acquisition without requiring sophisticated technical infrastructure.

A key strategic distinction of the framework is its targeting-first methodology. Unlike generic social media automation that publishes identical content and passively relies on algorithms to reach the "right" audience, this approach actively shapes audience composition through a three-step cycle:

Step 1: Intelligence - identify the guest segments that actually convert and deliver the highest satisfaction through post-stay surveys and structured feedback;

Step 2: Targeted acquisition - bring more of those segments through precision advertising and audience selection mechanisms;

Step 3: Segment-matched content - maintain engagement through organic content and communication patterns optimized for the identified segments.

By aligning content and communication with the segments most relevant to the property, the framework reduces wasteful broadcasting, improves engagement quality, and increases the likelihood of direct bookings and repeat visits.

The framework is intentionally designed as a management blueprint rather than a technology manual. It does not assume advanced technical skills, nor does it require a full-scale digital transformation program. Instead, it supports incremental adoption through simple workflows that reduce repetitive work, standardize guest communication, and improve content consistency while preserving authenticity and the emotional value of nature-based stays.

5.2 Universal Friction Points Driving Framework Design:

Segment	Participants	Key Characteristics
Aesthetic Sensualists	n=2	Instagram-driven, content creators, aesthetic priorities
Nature Explorers	n=1	Nature > comfort, self-sufficiency, discovery mindset, anti-hotel
Comfort Planners	n=2	Systematic verification, safety/service focus, family/pet considerations
Festive Socializers	n=2	Group organizers, celebration-focused, coordination challenges, large networks
Retreat Seekers	n=2	Solitude-seeking, burnout recovery, privacy critical, minimal interaction preferred

Chapter 4 identified three universal friction points affecting guest satisfaction and operational efficiency through systematic thematic analysis of nine in-depth interviews spanning all five guest segments.

Content-Audience Mismatch: Properties publish undifferentiated Instagram content to heterogeneous follower bases, creating irrelevance for each visitor segment. Nature Explorer seeks trail access, yet scrolls through feeds dominated by interior design (Aesthetic Sensualists), spa amenities (Retreat Seekers), group spaces (Festive Socializers). Instagram algorithm prioritizes engagement-matched content - hiking posts surface to hiking enthusiasts, design posts to design

enthusiasts. Properties posting mixed content achieve mediocre engagement triggering algorithmic suppression.

The mismatch operates through two mechanisms: **(1) Algorithmic suppression**: Instagram prioritizes engagement-matched content. Properties posting mixed content achieve mediocre engagement across all topics. **(2) Passive audience building**: Broadcasting generic content and hoping algorithm surfaces posts to appropriate segments is low-probability approach: operator has no control over follower composition, cannot predict which segments will discover property, and wastes effort creating content that most of audience might ignore.

Communication Quality Gaps: All participants emphasized communication quality as booking determinant, with four experiencing negative outcomes ranging from minor frustrations to relationship-ending failures. One of Comfort Planners described experiences as "traumatic," leading to permanent blacklisting. Segment-specific communication needs diverge sharply-Festive Socializers require fast, comprehensive responses for group coordination; Retreat Seekers require minimal, consolidated contact respecting solitude.

Limited Property Discoverability and Weak Brand Recall: Most discovery of property was algorithm-driven (Instagram), platform-mediated (Booking.com), or invitation-based (personal networks). Brand recall failures were universal-participants could not name properties from recent trips despite satisfaction, preventing repeat bookings and word-of-mouth referrals. This pattern was strongest among Festive Socializers (who organize multiple trips but cannot recall names) and Retreat Seekers (who travel infrequently and completely forget properties between trips).

Unlike segment-specific preferences (e.g., aesthetic style variations, activity type preferences), these friction points represent fundamental operational gaps affecting all guest types, making them ideal targets for standardized automation interventions with segment-adaptive parameters.

This chapter presents a management-oriented automation framework specifically designed to address these empirically-validated friction points through strategic resource allocation, data-driven decision support, and intelligent process optimization. Unlike purely technical automation solutions focused on technological capability, this framework prioritizes management decision-making capacity, focusing specifically on how small Ukrainian vacation rental can leverage AI-powered tools to compete with larger competitors while maintaining sustainable time commitments (≤ 10 hours/week) and operational costs ($\leq \$100$ /month).

5.3 Framework Architecture and Design Rationale

Technology Stack Rationale

Platform selection prioritized three criteria: (1) pricing accessibility for small operators, (2) native AI integration capabilities, and (3) possibility of using it with limited tech background. Table 5.3 presents complete technology stack with selection justification.

Table 5.3: Technology Stack Components

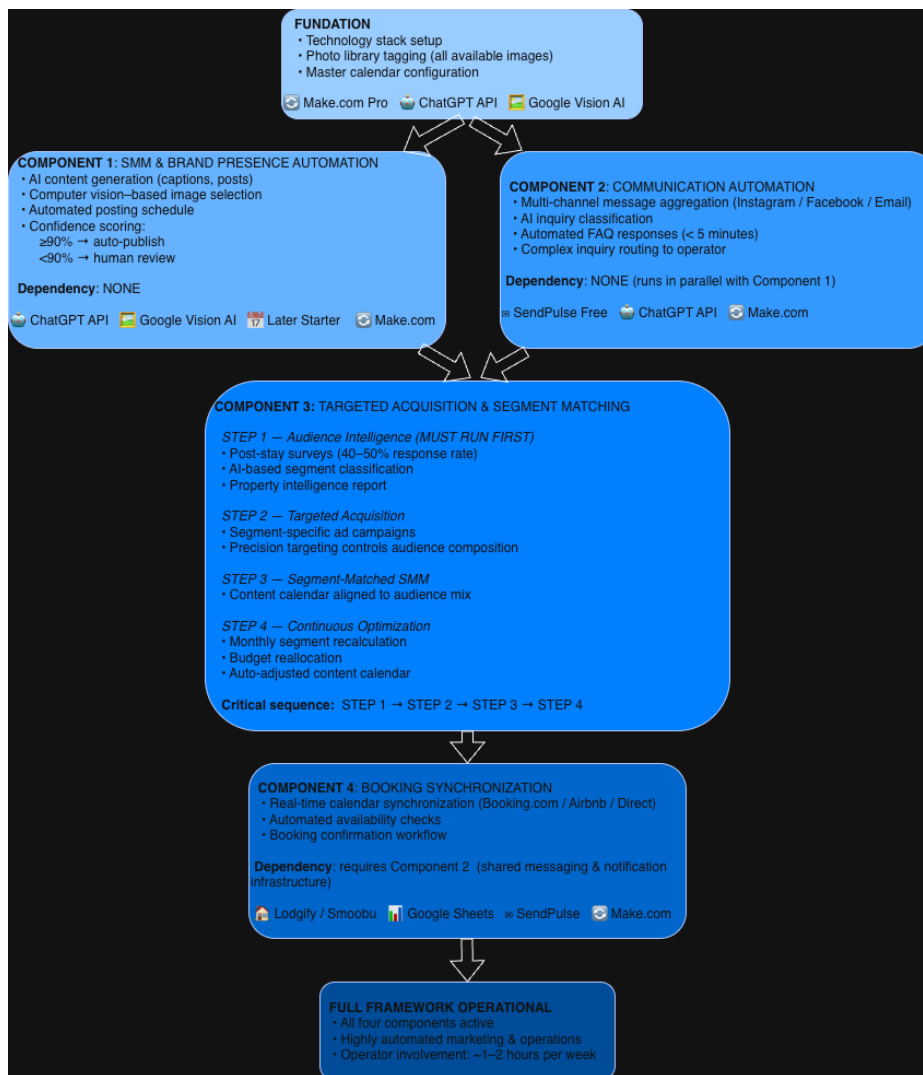
text	Tool	Monthly Cost	Selection Rationale	Alternative Considered
Automation Hub	Make.com Pro	€15	Webhook support (critical for calendar sync), visual interface (operator-friendly), 10,000 operations sufficient for up to 5 properties	Zapier (\$20, more expensive)

Content AI	ChatGPT API	€4.70	Native Make.com integration, GPT-4 quality, cost-effective (€0.10 per caption)	Claude API (similar cost, less Make.com integration)
Photo Intelligence	Google Vision AI	€2.80	Accurate object/scene detection, competitive pricing, Google Cloud ecosystem	Amazon Rekognition (\$3.50, more expensive)
Social Scheduling	Later Starter	€25	Instagram-specific features, analytics API, optimal timing algorithms	Buffer (\$10, lacks Instagram API access)
Booking Platform	Lodgify/ Smoobu	€50-80	Channel manager + direct booking site, webhook support, Ukrainian market compatibility	Guesty (€150, too expensive)
Message Automation	SendPulse Free	€0	500 subscribers sufficient, drag-drop builder, API access on free tier	Mailchimp (€13, paid tier required)

Base Framework costs (€97-127/month) for core automation without advertising. Advertising depends on desire and capacity available, but with average Instagram Ads: €210 per month, we can assume that total environment cost for framework with adds will cost in total €307-337/month

5.4 Framework Components: Addressing Empirical Findings

The components of this framework could be implemented in some sequence. The dependency map represents in a figure below:



5.4.1 SMM and Brand Presence Automation

In interviews, participants consistently identified difficulty in discovering properties outside of major OTA platforms, where standardized listing formats prevent differentiation. New listings do not impact OTA algorithms and fully depend on them. Searches on OTA platforms are usually conducted based on location, city, or area, which is not very efficient for properties in less-known areas.

AI Content Generation System

The content generation subsystem addresses this challenge through automated Instagram posting maintaining consistent brand presence without operator labor. Core workflow operates on weekly cycle: every Monday at 6:00 AM, system queries Google Sheets content calendar for week's themes, employs ChatGPT API to generate 140-160 word captions matching brand voice guidelines, utilizes Google Vision AI to select matching photos from tagged library (200+ images analyzed during setup), and implements confidence scoring algorithm determining whether content requires operator review (score <90%) or proceeds to automatic publishing (score ≥90%).

The framework aims to generate 8-10 posts monthly (70% automated + 30% manual operator stories), matching Instagram algorithm preferences for regular posting cadence while maintaining authentic human elements preventing detection as purely automated accounts.

Confidence Scoring Algorithm

Quality assurance employs multi-dimensional scoring preventing inappropriate or low-quality automated posts from damaging brand reputation:

$$\text{Confidence Score} = (0.40 \times \text{Photo_Match}) + (0.30 \times \text{Grammar}) + (0.20 \times \text{Brand_Voice}) + (0.10 \times \text{Structure})$$

Where Photo_Match quantifies alignment between AI-generated caption themes and Google Vision AI image labels, Grammar employs ChatGPT evaluation for linguistic correctness, Brand_Voice compares generated content against 10 approved historical captions using semantic similarity, Structure validates caption length (140-160 words) and mobile-readability formatting. Content scoring $\geq 90\%$ proceeds to automatic scheduling via Later API; content scoring 70-89% triggers operator email review with approve/edit/regenerate options; content scoring $< 70\%$ undergoes automatic regeneration with feedback incorporation.

The proposed confidence thresholds ($\geq 90\%$, 70–89%, and $< 70\%$) represent a pragmatic operationalization of marketing automation best practices rather than fixed values prescribed in prior studies. Existing hospitality marketing literature emphasizes that fully automated guest-facing actions should only be executed under conditions of high decision confidence to mitigate reputational and service risks (Sun et al., 2023). For cases involving moderate uncertainty, hybrid AI - human decision frameworks are recommended, where automated outputs are subject to managerial review before execution (Bulchand-Gidumal et al., 2023). Consistent with these principles, operators are advised to dynamically adjust confidence thresholds based on observed performance, brand voice consistency, and operational capacity. Monthly review cycles (Section 5.6.2) provide structured feedback loops to iteratively optimize these parameters.

Instagram Advertising Automation

Organic content establishes baseline presence; paid advertising accelerates discovery among target audiences. Automated campaign system operates bi-weekly cycle: identifies top organic posts by engagement rate and saves (indicating booking intent), generates ad copy variations (for identified segments) per post using ChatGPT (feature-focused, emotion-focused, urgency-focused), creates campaigns via Meta Marketing API targeting identified audience segments and generates campaigns in PAUSED status requiring operator approval before activation.

Framework budget allocation (€210/month or 300 UAH/day) targets brand awareness objective (reach) rather than direct conversions, recognizing that vacation rental booking decisions involve multi-week consideration periods where initial awareness must precede eventual booking action.

Performance monitoring operates daily: system queries Meta Marketing API for CPM (cost per thousand impressions), CTR (click-through rate), and frequency metrics. This continuous optimization emphasis on data-driven marketing automation requiring systematic performance feedback loops.

5.4.2 Quick Communication Automation

communication speed as critical factor determining booking conversion, with guests consistently reporting booking decisions influenced by response time rather than property features alone. Quantitative quote: "I messaged five properties asking about March availability. Only one replied within an hour and got my booking " (P07).

Multi-Channel Message Aggregation

Guests contact properties via multiple channels (Instagram DM, Facebook Messenger, website chat, email), creating message fragmentation where operators must monitor four separate inboxes. Framework implements unified aggregation system where all platforms send webhook notifications to Make.com central hub, messages transform to standardized format regardless of source platform, and system matches conversations across platforms by guest email/username preventing duplicate responses to same inquiry received via multiple channels.

Intelligent Inquiry Classification and Routing

Classification system employs ChatGPT to categorize incoming messages into eight inquiry types with confidence scoring. For simple FAQ inquiries (wifi speed, amenity availability, location logistics) with $\geq 85\%$ classification confidence, system generates immediate response (< 5 minutes) incorporating property-specific details from knowledge base. For availability inquiries with $\geq 90\%$ confidence, system triggers automated booking flow: queries Google Sheets master calendar for real-time availability, calculates dynamic pricing (base rate + weekend premiums + multi-night discounts + cleaning fees), and presents complete breakdown with booking links for both direct website and OTA platforms.

For complex inquiries (multiple questions, custom requests, complaints) or low-confidence classifications ($< 85\%$), system immediately posts acknowledgment ("Thanks for your message! Checking on this and will respond within 1 hour (or in working hours, based on time of the day)") while simultaneously alerting operator via email and SMS with AI-drafted suggested response. This hybrid approach prevents automation errors on high-stakes communications while maintaining perceived responsiveness.

Booking Flow Automation

Availability inquiries represent highest-intent communications requiring actionable next steps. Automated booking flow guides guest through decision process: parses dates from natural language ("Available May 15-18?») using ChatGPT structured data extraction, checks Master Booking Calendar in real-time for conflicts, presents pricing breakdown including all fees with direct booking link (commission-free) plus OTA links (Airbnb, Booking.com) for guest preference, and implements 1-hour and 24-hour follow-up messages if guest hasn't responded («Still thinking about those dates? Let me know if you have questions!«).

This flow directly addresses the competitive dynamic identified in interviews where first responder captures booking while slow responders receive rejection or no response. System delivers < 5 minutes time for availability inquiries compared to 4-8 hours under manual management.

5.4.3 Targeted Acquisition & Segment-Matched Communication

Interview analysis revealed that each segment looking for completely different information. By providing specific targeting and content, specific to relevant segment, we can expect the increase of engagement and as result more direct bookings. Nature Explorers seeking trail information scroll through interior design posts targeting Aesthetic Sensualists, while Aesthetic Sensualists seeking visual inspiration encounter hiking difficulty ratings targeting Nature Explorers. This mismatch creates algorithmic suppression: properties posting mixed content achieve low engagement triggering low visibility, while segment-focused competitors can achieve better engagement.

Framework addresses mismatch through targeting-first. System identifies actual guest segments through post-stay surveys, systematically brings more of those people through precision advertising (active, controllable), then maintains engagement through segment-optimized organic content. Paid targeting functions as precision tool. Organic SMM functions as retention tool.

Automated post-stay survey system (WhatsApp/Email 24 hours post-checkout, 10% discount incentive) collects segment classification data through 8 questions covering primary visit reason, activities completed, information gaps and demographics. AI classification algorithm scores guests across five segments (Nature Explorer, Aesthetic Sensualist, Comfort Planner, Retreat Seeker, Festive Socializer) using weighted formulas. After 3 months (12 classified responses), automated intelligence report reveals property-specific segment distribution with strategic recommendations.

5.4.4 Booking Synchronization and Guest Communication

Multi-platform booking strategy (Airbnb, Booking.com, direct website) maximizes discovery reach but creates calendar synchronization challenge. Manual blocking - where operator blocks Platform B after receiving booking on Platform A - creates a vulnerability windows enabling double-booking scenarios.

Real-Time Webhook Architecture

Framework employs Make.com Pro's webhook capabilities for instant cross-platform synchronization. When guest books on any platform, webhook triggers immediate calendar updates across all other platforms within ~10 seconds: Airbnb booking -> webhook to Make.com -> API calls block Booking.com + Lodgify -> log to Master Calendar -> trigger guest communication sequence. This eliminates manual synchronization labor (5-8 minutes per booking) while reducing double-booking risk (prevented through automated conflict detection).

Master Calendar in Google Sheets serves as single source of truth, recording booking ID, source platform, guest details, check-in/check-out dates, revenue breakdown (gross, commission, net), and sync timestamps. This centralized approach enables revenue intelligence analyzing platform-specific profitability: Airbnb 15-18% commission vs Booking.com 15-25% commission vs Direct Website 0% commission, informing strategic decisions about marketing budget allocation across channels.

Automated Guest Communication Sequences

Guest journey spans multiple touchpoints (booking confirmation, pre-arrival preparation, check-in logistics, during-stay support, post-stay review request) requiring consistent communication regardless of booking source. Framework implements five-touchpoint sequence:

1. Immediate confirmation (<1 minute post-booking): Confirms dates, lists key facilities, sets expectations for upcoming communications
2. Pre-arrival guide (7 days before): Triggers personalization survey system (described above in this section), delivers customized Notion guide
3. Check-in day instructions (morning of arrival): Provides door code, wifi password, parking details, GPS coordinates, emergency contact
4. Mid-stay wellness check (Day 2): Brief message asking if everything working well, escalates issues to operator within 1 hour if guest reports problems
5. Post-stay review request (2 days after checkout): Thanks guest, requests platform-specific review (Airbnb/Booking.com/Google), includes RETURN15 loyalty code (15% off next direct booking), adds guest to quarterly retargeting list

This sequence ensures 100% touchpoint completion while maintaining brand consistency across booking sources.

5.5 Implementation Strategy and Phased Rollout

Simultaneous implementation of all framework components risks overwhelming operators with configuration complexity and technical debt. This section applies structured project management methodology adapted for small-business technology adoption, organizing the 12-week implementation into five standard project phases: Initiation, Planning, Execution, Monitoring & Control, and Closure.

5.5.1 Phase 1: Project Initiation (Week 1)

Objective: Define project scope, establish success criteria, and secure stakeholder commitment.

Key Activities:

Define Success Metrics:

- Platform independence: Achieve 30-40% direct bookings within 6 months
- Time efficiency: Reduce marketing time from 25-30 hours/week to 2-3 hours/week
- Cost control: Maintain monthly operational budget at €307-337
- Guest satisfaction: Maintain or improve current review ratings

Assess Readiness:

- Verify basic requirements: reliable internet connection, smartphone or computer, active Instagram account
- Evaluate operator technical comfort level: high (self-implementation), medium (partial assistance), low (full developer support recommended)
- Confirm time availability: 4-5 hours per week for 12 weeks

Resource Planning:

- Allocate operational budget (€307-337/month)
- Reserve implementation time (4-5 hours weekly)
- Decide on external support needs (€200-300 optional developer assistance for technical setup)

Risk Assessment:

- Identify potential obstacles: time constraints, budget limitations, technical complexity
- Plan mitigation strategies: seek developer help for complex phases, extend timeline if needed, start with base framework (€97-127) before adding advertising

Deliverables:

- Written project goals (1 page document)
- Signed commitment to timeline and budget
- Decision on self-implementation vs. external assistance

Success Indicators:

- Clear goals documented and understood
- Budget approved and allocated
- Weekly time commitment realistic and confirmed
- Support resources identified

Time Investment: 3-4 hours

Risk Level: Low (planning and documentation phase)

Management Focus: Strategic planning and commitment

Difficulty: *Low (strategic planning, no technical implementation)

5.5.2 Phase 2: Project Planning (Weeks 2-3)

Objective: Establish foundational infrastructure and develop detailed implementation roadmap.

Key Activities:

Week 2: Foundation Setup

- Tool Procurement: Subscribe to required services (Make.com, ChatGPT, Google Cloud, Later, property management system, Instagram Business)
- Baseline Measurement: Document current state before automation:
 - Current weekly time spent on marketing
 - Current booking channel distribution (typically 100% OTA)
 - Current inquiry response time (typically 2-6 hours)
 - Current Instagram follower count
- Team Orientation: If using developer assistance, conduct kickoff meeting establishing roles, communication protocols, and decision-making authority

Week 3: Strategic Planning

- Process Mapping: Document current workflows to be automated:
 - How bookings currently flow between platforms
 - How guest inquiries are currently handled
 - How content is currently created and posted
- Brand Strategy: Define communication style and visual identity guidelines
- Content Planning: Identify property features and facilities to showcase over 13-week rotation
- Quality Standards: Establish acceptable performance thresholds (response time, content quality, calendar accuracy)

Deliverables:

- All required tool subscriptions active
- Baseline metrics documented
- Current process workflows mapped
- Brand guidelines established (tone, style, visual approach)
- 13-week content calendar outlined

Success Indicators:

- All tools accessible and functional
- Baseline data recorded for future comparison
- Clear understanding of what will be automated
- Quality standards defined

Time Investment: 12-15 hours (Weeks 2-3 combined)

Management Focus: Infrastructure preparation and process documentation

Risk Level: Medium (technical setup complexity)

Difficulty: *** High (API configuration, webhook setup)

Recommendation: This phase involves technical configuration. Operators with low technical comfort should engage developer assistance (additional cost) to prevent frustration and ensure proper setup.

5.5.3 Phase 3: Project Execution (Weeks 4-10)

Objective: Build operational capabilities incrementally, layer by layer.

Phase 3 implements four capability streams sequentially to avoid overwhelming operators:

STREAM 1: Booking Management Foundation (Weeks 4-5)

Business Problem Addressed: Double-booking risk, manual calendar updates across multiple platforms, missed booking opportunities.

Capabilities Built:

- Unified Calendar System: Single source of truth for property availability across all booking platforms (Airbnb, Booking.com, direct website)
- Automated Synchronization: When booking arrives on any platform, all other platforms automatically update to prevent conflicts
- Automated Guest Communication: Confirmation emails, check-in instructions, and review requests send automatically at appropriate times

Operator Role:

- Review automated messages and confirmation emails templates for brand consistency
- Test booking flow with dummy reservations
- Verify calendar syncs correctly across platforms

Quality Checkpoints:

- Zero double bookings in testing
- All automated messages deliver within 5 minutes
- Calendar shows identical availability across all platforms

Time Investment: 10-12 hours over 2 weeks

Risk Level: High (errors could cause guest dissatisfaction)

Difficulty: *** HIGH (Requires configuring multi-platform integrations, webhooks, and real-time data synchronization. Errors in this phase directly impact revenue and guest satisfaction.)

Management Decision Point: Confirm 100% calendar accuracy before proceeding to next stream

Recommendation: Developer assistance strongly recommended for operators without technical background (included in setup cost).

STREAM 2: Social Media Presence (Weeks 6-8)

Business Problem Addressed: Inconsistent posting, time-consuming content creation, difficulty maintaining professional quality.

Capabilities Built:

- Automated Content Creation: System generates Instagram captions based on property features, matching brand voice
- Visual Content Management: Photo library organized with searchable tags, enabling automatic matching of images to captions
- Quality Assurance: High-confidence content posts automatically; medium-confidence content requires operator approval; low-confidence content regenerates
- Comment Management: Common questions in comments receive automatic FAQ responses

Operator Role:

- Review and approve content that requires human judgment
- Monitor first week of automated posts closely

- Provide feedback to improve content quality over time
- Respond personally to genuine guest inquiries in comments

Quality Checkpoints:

- 8-10 posts published monthly without manual effort
- 70%+ of generated content meets automatic publishing threshold
- No inappropriate or off-brand content published
- Operator approval time <30 minutes weekly

Time Investment: 8-10 hours over 3 weeks

Risk Level: Medium (brand reputation depends on content quality.)

Difficulty: ** MEDIUM (Requires organizing photo library, writing effective prompts for AI content generation, and establishing quality thresholds.)

Management Decision Point: Confirm content quality meets brand standards before scaling posting frequency

Recommendation: Self-implementation feasible for most operators following templates and examples. Optional content strategist consultation potential additional cost) if struggling with brand voice definition.

STREAM 3: Guest Communication Automation (Weeks 8-9)

Business Problem Addressed: Slow inquiry response time causing lost bookings, repetitive FAQ questions consuming operator time.

Capabilities Built:

- Inquiry Classification: System determines if inquiry is simple FAQ, availability question, or complex request requiring human attention
- Instant FAQ Responses: Common questions (wifi speed, check-in time, pet policy) receive accurate answers within 30 seconds
- Automated Availability Checking: Date inquiries receive instant response with pricing breakdown and booking links
- Human Escalation: Complex requests or complaints immediately alert operator with suggested response draft

Operator Role:

- Build FAQ knowledge base (20 most common questions with answers)
- Monitor automated responses for accuracy during first two weeks
- Manually review and approve all complex inquiry responses
- Gradually increase automation confidence as system learns

Quality Checkpoints:

- 60%+ of inquiries resolved automatically
- <5 minutes response time for FAQ and availability questions
- Zero missed critical inquiries
- No incorrect information provided to guests

Time Investment: 10-12 hours over 2 weeks

Risk Level: High (communication errors damage guest relationships)

Difficulty:*** HIGH (Requires multi-channel message routing, intelligent classification logic, and integration with booking calendar. Mistakes directly impact guest experience and revenue.)

Management Decision Point: Achieve 100% accuracy on test inquiries before enabling live automation

Recommendation: Developer assistance strongly recommended (typically included in initial setup if purchased for Stream 1). Self-implementation possible for operators with high technical comfort.

STREAM 4: Personalization & Enhancement (Week 10)

Business Problem Addressed: Generic communication missing guest preferences, facility features not highlighted to right guests.

Capabilities Built:

- Guest Preference Survey: Optional pre-arrival questionnaire identifying guest type (visual-focused, information-focused, activity-focused, etc.)
- Customized Recommendations: Survey responses trigger personalized facility guides highlighting features most relevant to that guest
- Dynamic Activity Suggestions: Weather-based recommendations sent during stay (hiking on sunny days, sauna suggestions on rainy days)

Operator Role:

- Design survey questions balancing information gathering with guest convenience
- Create content variations for different guest types
- Review personalized guide samples for appropriateness
- Monitor guest feedback on personalization value

Quality Checkpoints:

- 40-60% of guests complete optional survey
- Personalized guides delivered 5-7 days before arrival
- Positive guest mentions of "helpful recommendations"

Time Investment: 6-8 hours over 1 week

Risk Level: Low (optional enhancements, not critical to booking)

Difficulty:* LOW (Primarily content creation work - writing survey questions, creating guide templates, and organizing recommendations. Uses simple tools (Google Forms) familiar to most operators.)

Management Decision Point: Evaluate guest engagement with personalization; expand or simplify based on response

Recommendation: Self-implementation by all operators. No specialized technical skills required.

5.5.4 Phase 4: Monitoring & Control (Weeks 11-12 + Ongoing)

Objective: Launch marketing initiatives, implement performance tracking, establish continuous improvement systems.

Key Activities:

Week 11: Marketing Campaign Launch

- Advertising Strategy: Launch Instagram advertising campaigns targeting potential guests within 50-100km radius
- Automated Campaign Management: System identifies best-performing organic posts and creates advertising variations automatically
- Budget Control: Daily monitoring ensures cost-per-impression stays within acceptable range (auto-pause underperforming ads, increase budget for high performers)
- Performance Optimization: Continuous adjustment based on real-time data

Week 12: Performance Dashboard Implementation

- KPI Tracking System: Automated dashboard tracking:
 - Platform independence progress (direct booking % increasing)
 - Marketing effectiveness (Instagram growth, engagement rates)
 - Operational efficiency (time savings, response speed)
 - Guest satisfaction (ratings, repeat bookings)
- Monthly Intelligence Reports: Automated summary highlighting successes, identifying areas needing attention
- Feedback Loops: System suggests improvements based on performance data

Operator Role:

- Review advertising performance weekly
- Approve new ad campaigns before launch
- Analyze monthly performance reports
- Make strategic adjustments based on data insights

Quality Checkpoints:

- Advertising costs remain within budget (€210/month)
- Dashboard updates automatically daily
- Monthly reports provide actionable insights
- Continuous improvement cycle operational

Time Investment: 3-4 hours for setup, then 20-30 minutes weekly ongoing

Risk Level: Low (monitoring and optimization, not new development)

Difficulty:** MEDIUM (Requires navigating Meta Business Manager for advertising setup and building data dashboards. More complex than content creation but simpler than technical integrations.)

Management Focus: Data-driven decision making and strategy refinement

Recommendation: Self-implementation feasible following step-by-step guides. Optional ads consultant for first campaign setup if unfamiliar with Meta advertising platform.

5.5.5 Phase 5: Project Closure & Transition to Operations (End of Week 12)

Objective: Formalize project completion, document learnings, transition to business-as-usual operations.

Key Activities:

Final Project Assessment:

- Compare planned vs. actual outcomes:
 - Time invested (target: 48-61 hours | actual: ___ hours)
 - Budget spent (target: €307-337/month | actual: €___)
 - Capabilities delivered (all four streams operational?)
- Measure baseline vs. current metrics:
 - Instagram followers: ___ → ___
 - Response time: ___ hours → ___ minutes
 - Weekly marketing time: ___ hours → ___ hours
 - Direct booking %: ___% → ___%

Knowledge Transfer:

- Document operational procedures for common scenarios
- Create troubleshooting guide for routine issues
- Establish escalation protocols (when to seek external help)
- Archive all technical documentation for future reference

Transition Planning:

- Reduce time investment from implementation mode (4-5 hours/week) to maintenance mode (2-3 hours/week)
- Establish routine maintenance schedule:
 - Daily: 5-minute system health check
 - Weekly: 30-minute performance review
 - Monthly: 1-2 hour strategic assessment
- Set 6-month evaluation milestone to assess long-term outcomes

Deliverables:

- Project completion report (outcomes achieved, lessons learned)
- Operational procedures manual
- Maintenance schedule and checklist
- 6-month success criteria for evaluation

Success Indicators:

- All framework components operational
- Operator confident managing system independently
- Measurable improvement over baseline metrics
- System requires only 2-3 hours/week maintenance
- Documentation complete for future reference
-

Time Investment: 2-3 hours

Risk Level: Low

Difficulty: * LOW. (Documentation and reflection - no technical implementation required. Suitable for all operators.)

Management Focus: Knowledge capture and operational transition

5.5.6 Total Investment Summary

Projected total time commitment for 12 weeks - 48-61 hours. Mixed average. 4-5 hrs/week. However if manager is not familiar with tools to be used, learning time should be added as well to get on-board with them. Ongoing Maintenance (Post-Week 12): 2-3 hours/week

Implication for Resource Planning: Operators with low-medium technical skills should budget money for developer assistance (projected €200-300), that covering the 45% high-difficulty components (Phases 2-3, Streams 1 & 3). This transforms implementation from overwhelming technical challenge to manageable strategic project.

Financial Investment:

- Implementation Period: €307-337/month × 3 months = €920-1,010
- Ongoing Operations: €307-337/month
- Optional Support: €200-300 (developer assistance for high-difficulty phases)
- Total First-Year Cost: €4,600-4,750 (including setup support)

5.6 Success Metrics and Performance Monitoring

Framework success measurement employs three-dimensional approach: operational efficiency (time saved, error reduction), business performance (bookings, revenue, satisfaction), and technical reliability (uptime, accuracy). Monthly review protocol ensures ongoing optimization and identifies underperforming components requiring adjustment.

5.6.1 Key Performance Indicators

Table 5.6.1 presents comprehensive KPI framework with baseline (manual operation), targets (automated system), and measurement frequency.

Table 5.6.1: Framework Success Metrics

Category & Metric	Baseline (Manual Operation)	Target (Automated Framework)	Measurement
OPERATIONAL EFFICIENCY			
Content creation time	Manual post creation (typically 8-12 hours/week) or communication with SMM agency	AI-generated with review (20-40 minutes/week)	Weekly
Calendar sync time	Manual platform updates (5-30 minutes/booking)	Automated sync (3-10 seconds/booking)	Per booking
FAQ response time	Operator availability-dependent (2-8 hours typical)	Automated response (<5 minutes)	Per inquiry
Total operator time	All manual marketing/operations (20-35 hours/week typical)	Automated with oversight (2-4 hours/ week)	Weekly
TARGETING PERFORMANCE			
Audience composition	Mixed followers from organic growth	Dominant segment 55-65% via precision targeting	Monthly
Ad CTR (Click-Through Rate)	Generic targeting (1.5-2.5% industry standard)	2-3X improvement	Daily
CAC (Cost Per Acquisition)	Should be analyzed (€12-20 typical)	3-5X reduction	Daily
Follower growth (segment-matched)	Organic baseline growth	Targeted acquisition (2-3X organic rate)	Monthly
ORGANIC SMM PERFORMANCE			
Post engagement rate	Generic content to mixed audience (3-6% typical)	Segment-matched content (10-14% achievable)	Per post
Profile visits	Baseline organic reach	Algorithmic boost (2-2.5X baseline)	Monthly
Profile visit -> Inquiry	Baseline conversion rate	Relevant content effect (2-3X baseline)	Monthly
DM inquiries	Current inquiry volume	Increased visibility (1.5-2X baseline)	Monthly
BOOKING PERFORMANCE			
Inquiry-to-booking rate	Property baseline conversion	Improved response + relevance (1.5-1.8X baseline)	Monthly

Direct booking percentage	Current OTA reliance (often 70-80% OTA)	Reduced dependency (50-70% direct target)	Monthly
Total bookings/month	Current monthly volume	Combined growth (1.5-2X baseline)	Monthly
GUEST SATISFACTION			
Post-stay survey response	Current rate if exists (typically 10-25% without incentive)	Automated with incentive (35-50% target)	Per checkout
Overall rating	Current property rating	Maintain or improve (+0.3-0.5 typical)	Post-survey
Repeat booking intent	Current percentage expressing interest	Improved targeting (1.5-2X baseline)	Post-survey
FINANCIAL PERFORMANCE			
Monthly revenue	Property baseline revenue	Increased bookings (varies by property)	Monthly
OTA commission paid	Current platform fees (typically 15-25% revenue)	Reduced with direct bookings (40-60% reduction)	Monthly
Marketing cost	Variable or zero	Structured framework (€300-500/month typical)	Monthly
Net profit increase	Baseline profitability	Additional profit after costs (property-dependent)	Monthly
Framework ROI	N/A	Return on investment (typical range: 3-8X)	Annual

5.6.2 Monthly Review Protocol

Automated monthly review system aggregates performance data across all framework components: queries Google Sheets (bookings, revenue, platform breakdown), Later API (follower growth, engagement rates, top posts), Instagram Conversations Log (DM volume, auto-reply success), Guest Communication Log (email open rates), Facility Usage Log (utilization rates), and Meta Ads Manager API (if campaigns active).

ChatGPT analyzes aggregated data generating intelligence report identifying: areas exceeding expectations, metrics below target with root cause analysis, month-over-month trends, strategic recommendations for next month, and investment priorities. Operator receives report via email with visual dashboard, reviews in 10-15 minutes, and approves/customizes recommended strategy adjustments. Make.com automatically implements approved changes: updates content calendar percentages, adjusts ad targeting parameters, modifies templates, and revises pricing rules.

5.7 Continuous Improvement Through Automated Feedback Loops

Beyond monthly performance reviews, framework incorporates multi-touchpoint feedback collection and AI pattern recognition identifying optimization opportunities operators might miss through manual observation. Post-stay surveys: request detailed feedback, facility-specific ratings, and improvement suggestions.

Quarterly Intelligence Analysis

Every 90 days, system aggregates behavioral data and employs ChatGPT to identify strategic patterns. This pattern recognition capability enables proactive strategy adjustments before performance metrics decline.

5.8 Error Handling & Monitoring

Daily Health Checks:

- Morning check (9 AM): Verify overnight DM responses sent
- Evening check (6 PM): Confirm scheduled Instagram post published
- Tool: Make.com execution history review (2 minutes daily)

Weekly System Audit:

- Calendar sync accuracy (all platforms showing identical availability)
- ChatGPT API usage (track spending, set alert at €4/month)
- Instagram engagement metrics (flag if engagement drops >20%)

Backup Procedures:

- Weekly export of Master Booking Calendar (Google Sheets -> Excel backup)
- Monthly backup of ChatGPT prompts and brand voice guidelines
- Guest communication log export quarterly

5.9 Economic Analysis and Return on Investment

5.9.1 Complete System Economics

Monthly investment totals €307-337: Make.com Pro (€15), ChatGPT API (€4.70), Google Vision AI (€2.80), Later Starter (€25), Lodgify/Smooibu (€50-80), SendPulse (€0 free tier), and Instagram Ads (€210). This represents substantial cost savings compared to traditional SMM agency fees (€500-2,000/month based on Ukrainian market estimates), while delivering superior consistency and 24/7 availability that human agencies cannot match.

5.9.2 Qualitative Benefits

Beyond saved costs, framework delivers operator quality-of-life improvements: freedom from constant phone checking (automation handles FAQs), strategic focus versus tactical execution (monthly reviews versus daily posting), and confidence in guest communication consistency. Guest experience enhancements include: perceived professionalism from instant responses, personalization at scale (every guest receives customized guidance), facility awareness preventing disappointment, and consistent communication quality regardless of operator availability.

Business scalability represents critical long-term benefit: framework supports growth of properties number with same operator time commitment (2-3 hours weekly), enabling multi-property operators to manage portfolio without proportional labor scaling. Growth path clear: add properties without adding proportional operational overhead.

5.10 Legal and Compliance Considerations:

Operators implementing this framework should be aware of:

- Data Privacy: Guest email addresses and preferences constitute personal data. Maintain records of consent for marketing communications and provide opt-out mechanisms in all automated responses.
- Automated Communication Disclosure: Consider adding "(Automated response)" tag to AI-generated messages during initial testing period for transparency.

- Platform Terms of Service: Ensure automation practices comply with Instagram, Facebook, and OTA platform policies. Excessive automation or spammy behavior can result in account restrictions.

This framework is provided for educational purposes. Operators should consult legal counsel for jurisdiction-specific compliance requirements.

CHAPTER 6: CONCLUSIONS

6.1 Research Findings

This capstone addressed a critical management challenge facing small vacation rental operators: strategic vulnerability through platform dependency, where OTAs extract 15-25% commissions while controlling customer relationships. The research developed an empirically-grounded AI automation framework enabling small vacation rental operators to systematically reduce platform dependency and controlling marketing better, by automating SMM activities, within severe resource constraints (€97-337/month, 4-5 hours/week implementation time).

Through qualitative methodology, empathy mapping and customer journey analysis across nine guest interviews, the study identified five distinct segments (Aesthetic Sensualists, Comfort Planners, Nature Explorers, Festive Socializers, Retreat Seekers) and three universal friction points: insufficient brand presence, slow communication, and content-audience mismatch. These empirically-validated insights enabled guest-centered automation priorities rather than technology-driven adoption.

The resulting four-component framework (social media automation, communication routing, segment-specific content strategy, booking synchronization) demonstrates that small businesses can achieve enterprise-grade capabilities through strategic AI tool integration, challenging assumptions that digital transformation requires unlimited budgets or dedicated IT departments.

6.2 Contribution

This framework represents methodological contribution to hospitality technology research through the following dimensions:

1. Empirical Foundation: Solutions derive from actual guest interviews (Chapter 4) employing empathy mapping methodology.
2. Resource-Constrained Design: Explicit focus on tools/costs accessible to small operators rather than enterprise-only solutions, contributing to underserved segment of hospitality automation literature dominated by large hotel chain case studies.
3. AI Integration Patterns: Demonstrates practical confidence scoring, hybrid human-AI workflows, and continuous learning architectures applicable beyond vacation rental domain. Confidence scoring algorithm (Section 5.3.1) provides replicable model for quality assurance in automated content generation across hospitality applications.
4. Measurement Framework: Comprehensive KPI dashboard (Table 5.3) enables academic study of automation impact on small business operations, guest satisfaction, and revenue optimization, providing longitudinal research foundation.

6.3 Global Applicability and Market Transferability

While empirically grounded in the Ukrainian vacation rental market, the framework addresses universal challenges facing small vacation rental operators globally in platform-dominated hospitality ecosystems. The framework's AI-enabled automation approach is directly

transferable across regions, as identified guest segments (that can be adjusted based on market) reflect fundamental human motivations transcending cultural boundaries rather than region-specific behaviors. Cross-market implementation requires adjusting tool selections (language-specific AI models, region-appropriate social platforms, local payment integrations) while maintaining the core guest-centered methodology and phased implementation approach. The fundamental insight transcends geography: small vacation rental operators worldwide face asymmetric competition against platform intermediaries, and the same marketing challenges, so AI automation provides an accessible pathway toward strategic autonomy regardless of local market conditions.

6.4 Future Research Priorities

Priority 1: Property-Specific Framework Customization through Quantitative Surveys

The immediate next step involves developing quantitative survey instruments enabling individual operators to customize the framework for their specific guest base. While this qualitative study identified five segments through thematic analysis, each property attracts particular segment concentrations based on location, amenities, pricing, and positioning. Recommended approach: develop 15-20 question survey instrument based on Chapter 4 empathy maps and journey insights, distribute to operator's past guests (minimum 50-100 responses), employ cluster analysis to identify dominant segments, and generate property-specific automation priorities and marketing strategy. For example, a remote mountain cabin may attract primarily Retreat Seekers and Nature Explorers (requiring minimal automated contact, nature-focused content), while a lakeside villa attracts Festive Socializers and Comfort Planners (requiring responsive group coordination, detailed facility information). This quantitative validation enables operators to focus resources on highest-impact segments rather than implementing generic framework designed for broad applicability.

Priority 2: Longitudinal Implementation Studies (6-12 Months)

Find 5-10 operators across diverse property types for framework implementation, measuring actual outcomes versus projections (30-40% direct booking conversion, 90% time reduction). Identify common implementation barriers, quantify ROI achievement timelines, and reveal which framework components deliver highest impact across different contexts.

Priority 3: Guest Response to AI Automation

Conduct A/B testing comparing automated versus manual communication across booking inquiries. Randomly assign guests to automated response condition (AI-generated messages, instant response) versus manual condition (operator-written messages, 2-6 hour delay), measuring booking conversion rates, response quality perceptions, and satisfaction differences across cultural contexts. Validate assumptions about automation benefits (speed, consistency) versus potential drawbacks (perceived impersonality) and identify cultural variations in AI acceptance.

6.5 Closing Reflection

This research demonstrates that AI democratizes capabilities previously affordable only to large organizations, enabling small businesses to achieve marketing automation sophistication, guest insight depth, and operational efficiency rivaling well-resourced competitors. However, technology alone does not create competitive advantage - success requires understanding what customers value (empirical insights), aligning automation with strategic goals (platform independence, relationship building), and maintaining human judgment where authenticity matters.

For Ukraine's vacation rental industry specifically, this framework offers resilience and economic value retention within local communities rather than surrendering margin and control to

international platforms. The broader message extends beyond vacation rentals: in platform-dominated economies, small businesses need not accept dependency as inevitable. Through strategic technology adoption informed by customer understanding and aligned with operational realities, micro-entrepreneurs can reclaim strategic autonomy and compete effectively against structural disadvantages.

While specific AI tools evolve rapidly, the framework's enduring value lies in its goal-oriented methodology: defining clear KPIs, validating tool effectiveness against strategic objectives, and adapting technology choices to serve business outcomes. This management-first approach ensures relevance regardless of which specific AI platforms dominate future landscapes.

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Appendices

APPENDIX A: DETAILED GUEST SEGMENT EMPATHY MAPS

Appendix A.1: Aesthetic Sensualists - Complete Empathy Map

Table: Aesthetic Sensualists - Empathy Map

Category	Details
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Persona	Creative professions, traveling regularly few times per year year. Mix of planned and unplanned vacations. Using social media a lot.
Thinks & Feels	Seeks a comfortable, aesthetic, and peaceful retreat; values nature, architecture, and quiet; leisure = time with partner + stress-free recharge.
Sees	Instagram, recommendations from friends/bloggers; typical cottages -> first impression is crucial.
Says & Does	Shares experiences on social media; travels 2-3 times per year domestically and also abroad; chooses accommodations based on recommendations; poor service -> informs owners, may not recommend.
Hears	Recommendations from friends and bloggers; reviews from other guests (especially repeated negative ones).
Pain / Frustrations	Dislikes searching from scrath cottages; poor service or lack of basic amenities -> critical; negative experiences of others strongly deter.
Needs / Gains	Interior & Exterior: Scandinavian style, large windows, cleanliness Comfort: warm house, quality bed, good shower Nature: mountains/forest, few neighboring cottages Service: quick responses, clear instructions, basic amenities, Instagram points space
Decisive Factors	Interior + exterior + first impression from Instagram; then checking reviews and booking.
Deterrents	Poor service, cold house / shower issues, lack of basic amenities; repeated negative reviews.
Wow Experience / Positive	Personalized welcome basket with local delicacies or tasty snacks; small surprises for photography - beautiful blankets, candles, or décor for Instagram shots; opportunity to book a spontaneous mini-workshop or tasting on-site (e.g., preparing a local dish); small “secret” access to a picturesque spot on the property (viewpoint, cozy picnic area).

Appendix A.2: Nature Explorers - Complete Empathy Map

Table: Nature Explorers - Empathy Map

Category	Details
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Persona	Travelers that values family time, nature, freedom, and autonomy.
Thinks & Feels	Ideal getaway balances natural surroundings, freedom, and comfort; dislikes hotels and all-inclusive resorts; values self-sufficiency (cooking, moving around), mobility, and new connections; reacts negatively to unfriendly people and excessive control.
Sees	Instagram and recommendations from friends; studies maps (Google Maps), walking routes; analyzes nearby options for activities.
Says & Does	Shares experiences rarely, mostly observes social media; plans trips spontaneously; considers location, activity opportunities, comfort, and hosts' friendliness when choosing a place; solves minor issues independently but avoids conflicts.
Hears	Recommendations from friends; other travelers' experiences; targeted Instagram ads; reviews on Booking and Airbnb.
Frustrations / Pain Points	Gap between expectations and reality; unfriendly staff; poorly maintained surroundings; subpar interiors or design; unsafe/old equipment (e.g., bikes); strict payment policies; lack of privacy; too many other guests or noise.
Needs / Gains	Access to nature from the accommodation; autonomy (cooking, fire, transport); wild nature; interesting trails; connection with like-minded people; local services/products; bikes, board games; freedom without unnecessary restrictions.
Decisive Booking Factors	Location, privacy, surroundings, friendly hosts, flexible booking and payment, activity options.
Deterrents	Unfriendly staff, neglected surroundings, noise, infrastructure mismatched with expectations; unsafe or poor-quality items; rigid payment rules; large tourist groups.
Wow Experience / Positive	Unusual, local, "wild" or authentic locations; places with history; interaction with like-minded people; freedom to act; ability to light a fire, ride a bike, and manage own time.

Appendix A.3: Comfort-Oriented Planners - Complete Empathy Map

Table: Comfort-Oriented Planners - Empathy Map

Category	Details
Persona	Travelers with family or as a couple, aged 30-50+, who value predictability, comfort, and order; they plan trips in advance.
Thinks & Feels	Seeks a safe and stress-free vacation; values comfort and predictability; aims to avoid unpleasant surprises.
Sees	Clean and comfortable hotels or cottages, basic services, comfortable beds, convenient infrastructure, positive online reviews.
Says & Does	Plans trips ahead, compares reviews, checks infrastructure, chooses ready-made packages or "all-inclusive" options, prefers reliable booking platforms.
Hears	Recommendations from friends and acquaintances, online reviews, information from trusted platforms (Booking, Airbnb).
Pain / Frustrations	Poor service, uncleanliness, inconvenient location, lack of basic amenities, unpredictable circumstances during the trip.
Needs / Gains	A safe and comfortable trip without stress; everything works as expected; no need to solve problems on-site.
Decisive Factors	Quality of the cottage/hotel, cleanliness, comfortable bed, basic service, predictability, positive online reviews.
Deterring Factors	Negative service reviews, cold or dirty premises, lack of basic amenities, complicated logistics.
Wow Experience / Positive	Small on-site surprises: welcome basket, nicely set table, additional bonus service (e.g., grocery delivery, bottle of wine, or snacks).

Appendix A.4: Festive Socializers - Complete Empathy Map

Table: Festive Socializers - Empathy Map

Category	Insights
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Persona	Groups of friends or colleagues, aged 20-40, who value celebrations, fun atmospheres, and social interaction; trips are planned for enjoyment and shared experiences.
Thinks & Feels	Focused on fun, emotions, and entertainment; less concerned about details; seeks carefree and enjoyable experiences.
Sees	Locations suitable for group activities, bars, shared spaces, party venues, music and entertainment, visually striking or Instagram-worthy moments.
Says & Does	Books for the group, plans activities and parties, shares experiences and photos on social media; less critical of comfort and service.
Hears	Recommendations from friends, social media posts and videos, reviews about lively locations, influencer advice.
Pain / Frustrations	Boring locations, lack of company or fun, restrictions, absence of activities, negative group energy.
Needs / Gains	Vibrant, carefree group experiences; fun and shared emotions; ability to enjoy celebrations without worries.
Decisive Factors	Location atmosphere, ability to socialize in a group, availability of music and activities, communal spaces.
Deterrents	Quiet or dull locations, restrictions on entertainment, unpleasant company, unfriendly neighbors.
“Wow” Experience / Positive	Unique party location, themed décor, interactive activities (karaoke, board games, fire shows), group surprises (welcome drinks, etc.).

Appendix A.5: Retreat Seekers - Complete Empathy Map

Table : Retreat Seekers - Empathy Map

Category	Insight
Persona	Adults aged 30-60+, seeking solitude, meditation, and peace; travel solo or as couples and value nature and silence.

Thinks & Feels	Desire to disconnect from noise and people, restore physical and emotional balance; inner harmony is essential.
Sees	Remote cabins in mountains, near lakes or forests; minimal human presence; scenic and calming natural landscapes.
Says & Does	Plans retreats, searches for quiet and secluded locations, avoids popular tourist areas, spends time meditating and in silence.
Hears	Sounds of nature, silence, absence of loud crowds, calm recommendations from close acquaintances.
Pain / Frustrations	Loud tourists, crowded places, limited access to nature, unnecessary bustle or disturbance.
Needs / Gains	Restoration and inner peace, full solitude, immersion in nature, a comfortable space for meditation.
Decision Drivers	Silence and remoteness, natural surroundings, limited presence of other guests, essential

APPENDIX B: CROSS-SEGMENT ANALYSIS

Appendix B.1: Segment Comparison Matrix

Table: Segment Comparison Matrix

Dimension	Aesthetic Sensualists	Comfort Planners	Nature Explorers	Festive Socializers	Retreat Seekers
Primary motivation	Beauty, atmosphere, emotional restoration	Predictability, comfort, convenience	Freedom, exploration, contact with nature	Shared joy, celebration, memorable group experiences	Silence, isolation, mental reset, nature immersion
Planning horizon	Medium - 1-4 weeks ahead	Long - structured planning, bookings in advance	Flexible - often spontaneous or semi-planned	Short - spontaneous, driven by group dynamics	Flexible - chosen when burnout peaks or rest is needed

Primary platform	Instagram, Pinterest, aesthetic-driven sources	Booking platforms, detailed listings, review aggregators	Maps, hiking forums, nature apps, experience search	Social media, peer recommendations, group chats	Minimalistic browsing, direct recommendations, retreat websites
Content preference	Photogenic visuals, interior design, mood aesthetics	Clear lists: comfort, safety, amenities, rules	Trails, landscapes, activities, routes	Group photos, celebrations, entertainment	Nature soundscapes, calm visuals, meditative framing
Booking trigger	Beautiful scenery + well-photographed space	Strong reviews + detailed clarity	Proximity to nature + autonomy	“Fun” endorsement from friends or social media	Privacy, distance from crowds, promise of silence
Top pain theme	Poor aesthetics, cluttered or outdated interiors	Uncertainty, disorder, unclear conditions	Restrictions, lack of freedom to explore	Boring or quiet environments, missing group features	Noise, people, interruptions, crowded areas
Top gain theme	Serenity + sensory pleasure	Smooth, predictable, low-stress experience	Adventure + immersion in nature	Collective joy, memories, emotional peak	Deep peace, disconnection, restoration of inner balance

Appendix B.2: Complete Customer Journey Map

Table: Customer Journey Map

Journey Stage	Aesthetic Sensualists	Comfort Planners	Nature Explorers	Festive Socializers	Retreat Seekers
1. Inspiration & Awareness	Triggered by visuals: beautiful interiors, landscape shots, Instagram aesthetics.	Triggered by recommendations, safety, family suitability, predictable facilities.	Triggered by adventure content: trails, lakes, forest areas, outdoor activities.	Triggered by group photos, party setups, BBQ zones, “fun” content.	Triggered by videos/photos of quiet cabins, misty forests, meditation spaces.

Channels	Instagram, Pinterest, influencers.	Google search, booking platforms, friends.	YouTube, Friends, Instagram, hiking groups, nature blogs.	Instagram, TikTok, friends' stories.	Mindfulness blogs, slow-travel accounts, eco-retreat pages.
Emotions	Curiosity, longing, serenity.	Confidence, safety, predictability.	Excitement, freedom.	Anticipation, fun, social energy.	Calmness, desire for escape, emotional fatigue.
2. Consideration & Research	Compares aesthetics, design quality, photogenic spaces.	Compares amenities, cleanliness, check-in clarity, price.	Compares proximity to nature, trails, outdoor options.	Compares capacity, entertainment zones, social spaces.	Compares privacy, remoteness, noise levels, nature immersion.
Pain Points	Poor photography, inconsistent style, low-light images.	Missing info, unclear rules, chaotic communication.	No trail info, no nature descriptions, misleading surroundings.	No large communal areas, noise restrictions, high price for groups.	Nearby neighbors, unclear privacy level, lack of real solitude.
3. Booking & Decision	Books when convinced it's visually perfect.	Books when details, rules, and comfort elements are clear.	Books when nature access is confirmed.	Books when group alignment + availability match.	Books when assured of quiet, remote setting.
Triggers	Beautiful gallery + positive reviews.	Transparent policies + clear pricing.	Maps, terrain photos, nature proximity.	Group approval + amenities for socializing.	Assurances of silence, distance, no crowds.
4. Pre-Arrival	Wants aesthetic previews, photo-based instructions.	Wants detailed checklists, arrival info, house rules.	Wants nature tips, sunrise spots, route details.	Wants info on BBQ, fire pit, music rules, communal zones.	Wants instructions minimizing interaction, options for self-check-in.
Emotions	Excitement.	Preparedness.	Motivation.	Anticipation.	Relief, groundedness.
5. Stay Experience	Enjoys atmosphere, lighting, textures, curated design.	Values comfort, cleanliness, smooth functioning.	Spends time outdoors; uses cabin as base.	Uses space actively for games, celebrations, shared meals.	Meditates, reads, walks, enjoys silence + nature.

Pain Points During Stay	Bad lighting, clutter, poor décor, noise.	Broken equipment, unclear instructions, discomfort.	Lack of nature access, crowds, artificial surroundings.	Noise rules, lack of entertainment spaces, bad weather.	Any noise, nearby neighbors, insufficient privacy or nature contact.
6. Post-Stay & Loyalty	Returns if environment is “beautiful and calming.”	Returns if everything “worked smoothly.”	Returns if nature access was excellent.	Returns for group traditions and shared memories.	Returns for emotional restoration + solitude.
Review Style	Long, aesthetic-focused reviews with photos.	Practical, detailed, checklist-like reviews.	Experience- and nature-focused reviews.	Emotion-driven, group photos, story-like captions.	Quiet, reflective reviews emphasizing peace & renewal.

Appendix C: Evidence Traceability Table (English, translated quotes)

Theme (Finding)	Persona (primary)	Journey stage	Evidence (English quote)	Source
Response speed drives conversion	Aesthetic Sensualists	Booking	“I messaged five properties asking about March availability. Only one replied within an hour and got my booking.”	P07
Reliability + low stress is the value	Comfort-Oriented Planners	Consideration / Booking	“I just want everything to work as expected - comfortable, clean, and stress-free, so I can focus on enjoying the time with my family.”	P09
“Social vibe” outweighs amenities	Festive Socializers	Inspiration/ Decision	“We just want a place where everyone can hang out together, play games, and take fun photos... the details like Wi-Fi... don’t matter much.”	P08
Need solitude & privacy	Retreat Seekers	Consideration	“I need a place where I can truly disconnect... forest and the lake. The fewer people around, the better.”	P06
Crowds ruin experience	Retreat Seekers	Consideration / Stay	“If there are too many people or the place feels busy, it completely ruins the experience. I just want calm and space to breathe.”	P06
Instagram saves = discovery behavior	Festive Socializers	Inspiration/ Search	“I have a huge folder on Instagram... the algorithm shows me all the cool cabins, and I always save them.”	P03
Ukraine: Instagram; abroad: OTAs	Nature Explorers	Search	“If it’s Ukrainian cabins, it’s usually Instagram. If it’s abroad — Booking or Airbnb.”	P02
Maps deep-dive decision style	Nature Explorers	Consideration	“I explore Google Maps so thoroughly... when I arrived it felt like I’d lived there for a year.”	P02
Unfriendly tone blocks booking	Nature Explorers	Consideration / Booking	“If the person is friendly... great. But if they are simply unfriendly — it feels unpleasant.”	P02
“Just make a message template”	Festive Socializers	Pre-arrival/ Stay	“It’s really cool... comfortable communication... You can just write a message template and send it.”	P03

Aesthetic preference is content-driven	Aesthetic Sensualists	Consideration	"I like Scandinavian style... I love taking photos, and the content matters to me."	P01
Minimalism + big windows	Aesthetic Sensualists	Consideration	"I choose something minimalistic... not cluttered... I like big windows."	P01
"Good shower + clean bed" basics	Comfort-Oriented Planners	Stay	"The basics: a good shower and a clean bed with a good mattress."	P04

Dictionary Of Terms:

OTA - Online Travel Agencies

STR - Short-Term Rental

KPI - Key Performance Indicator

API - Application Programming Interface

CPM - Cost Per Thousand Impressions

CTR - Click-Through Rate

CAC - Cost Per Acquisition

Engagement Rate = $(\text{Likes} + \text{Comments} + \text{Saves} + \text{Shares}) \div \text{Reach} \times 100$

Net Profit = Total Revenue - Total Costs. The actual money you keep after paying ALL expenses.

ROI = Annual Net Benefit \div Annual Framework Cost