

AI-Enabled Experience Orchestration: Coordinating Physical, Digital & Human Resources across Situational Customer Journeys

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Abstract

Purpose: The study creates AI-enabled experience orchestration (AIEO) to describe how service systems can orchestrate digital, physical and human resources as customer requirements vary through a journey.

Design/methodology/approach: The study incorporates customer-journey, service-system, omni-channel and AI-enabled service lenses. In a doctoral survey of 578 complete eligible herbal-cosmetics consumers, bounded phenomenon motivation has been administered instead of a test of AIEO; the survey did not include any AI measures.

Findings: AIEO consists of situational sensing, matching of resources, sequencing and continuity journey. The relevance, coherence, confidence, reducing uncertainty and perceived control, subject to the complexity of journey, situational changeability, resource complementary features, readiness of AI and responsible governance theories these capabilities should function.

Originality: The framework goes beyond channel connectivity and discrete points of contact with the AI system by imagining adaptive, journey-level coordination of heterogeneous services resources and keeping customer agency.

Practical implications: Service managers ought to diagnose the existing customer need, activate the most appropriate resource, and maintain only authorized context and present meaningful override and human escalation.

Keywords: *AI-enabled service; customer journey; service orchestration; resource integration; human-AI collaboration; responsible AI*

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Introduction

Customers are experiencing an increasing level of interactions over a variety of environments. A customer can now experience a company by searching through a search engine, using a social site, market place, brand site, mobile app, in-store, call centre, in-store frontline worker or post purchase customer service. Such experiences do not have to be independent. Information obtained in one setting can influence evaluation in another, while a physical inspection may change the consumer's subsequent digital behaviour. Customer experience therefore develops across a sequence of touchpoints rather than within a single channel or isolated interaction (Lemon and Verhoef, 2016).

The growth of omnichannel service has responded to this complexity by emphasizing the integration and coordination of channels. Multichannel and omnichannel research has established that consumers can use channels for different functions and can move between them during information search, evaluation, purchase and post-purchase activities (Neslin et al., 2006; Verhoef et al., 2015). However, the existence of connected channels does not by itself explain how the underlying service resources should be configured when a customer's requirement changes during a

journey. A connected journey can still involve repeated information requests, inconsistent recommendations, inappropriate handoffs or a failure to provide the resource that is most useful at a particular stage.

This is more critical when the customer journey is an amalgamation of heterogeneous needs. A customer can first need the information, followed by comparison, and followed by the confirmation of authenticity followed by physical examination followed by professional help followed by convenient fulfillment. Different resources may be appropriate for these requirements. Digital information can support search and comparison; physical environments can support sensory evaluation; employees can provide explanation or reassurance; and digital fulfilment systems can provide availability and convenience. The managerial problem is therefore not simply how to connect channels but how to coordinate resources around an evolving need state (Low, et al., 2024).

Service research provides several theoretical foundations for understanding this problem. Service-system and service-dominant perspectives emphasize actors, resources and resource integration. Customer-journey research explains touchpoints and experience

across time. Omnichannel research examines channel integration and cross-channel behaviour. AI-enabled service research examines how artificial intelligence can augment or automate service activities. Experience research focuses on how customers interpret and evaluate interactions across the journey. These streams are individually developed, but their intersection leaves room for a more specific conceptualization of how AI-supported systems may configure and coordinate heterogeneous resources over time (Vargo, & Wieland, 2026).

Artificial intelligence is particularly relevant because it can potentially process information from multiple interactions, detect patterns, support contextual interpretation, recommend resources, assist employees and coordinate transitions between service environments. Yet treating AI merely as another interaction technology misses a broader possibility. AI may operate as an enabling layer that helps determine which resource should be activated, when it should be activated, what information should accompany the transition and when human intervention should be retained. Huang and Rust (2018, 2021) demonstrate the expanding role of AI in service and marketing, while more recent work has begun to examine AI across customer journeys and hybrid human-AI service encounters.

The conceptual problem addressed here is consequently narrower than the general question of whether AI improves service. The question is how an AI-supported service system can coordinate heterogeneous resources across a journey in which customer needs evolve. This paper calls that capability AI-enabled experience orchestration (AIEO). AIEO is defined as a journey-level service-system capability through which AI-supported systems sense evolving customer need states and configure, sequence and coordinate complementary digital, physical and human service resources while preserving relevant context and customer agency (Jaiswal, & Gupta, 2026).

The paper makes three principal conceptual contributions. First, it distinguishes experience orchestration from channel connectivity by treating the service resource, rather than the channel alone, as the primary object of coordination. Second, it specifies four dimensions—contextual sensing, resource matching, journey sequencing and continuity preservation—that together describe the proposed capability architecture. Third, it connects these capabilities to experience mechanisms while recognizing customer agency, governance and organizational readiness as conditions rather than assuming that greater automation necessarily creates better experiences.

The empirical setting is herbal cosmetics, a category in which green-cosmetics research identifies multiple behavioral antecedents and contextual considerations (Amberg and Fogarassy, 2019; Limbu and Ahamed, 2023) and a category in which consumers can simultaneously value information, convenience, authenticity, quality, physical evaluation and interpersonal assistance. The doctoral thesis underlying this paper surveyed 812 nonblank responses, of which 640 were eligible and 578 were complete eligible analytical cases. Within those 578 cases, 116 respondents selected online as their primary channel, 78 selected offline, 188 selected both equally, and 196 indicated that their choice depended on product, brand, price or availability. Thus, 384 respondents, or 66.4%, were represented by equal or conditional channel use. These observations motivate the problem of heterogeneous resource requirements, but they do not constitute evidence of AI adoption, AIEO implementation or AIEO effectiveness.

The remainder of the study develops the theoretical foundations, distinguishes AIEO from related concepts, specifies its four dimensions, develops propositions, identifies boundary and governance conditions, presents the conceptual framework, uses the doctoral evidence as bounded empirical motivation, and discusses theoretical and managerial implications.

1. Theoretical Foundations

1.1 Customer journeys

Customer-journey research treats experience as developing across multiple stages and touchpoints rather than being confined to a single service encounter. Lemon and Verhoef (2016) conceptualize the customer journey as a sequence involving pre-purchase, purchase and post-purchase stages and emphasize the importance of touchpoints across the broader experience. This perspective is useful because it makes temporality central: what occurs at one stage can influence subsequent interactions.

For the present framework, the important extension is to distinguish a journey stage from the resource required at that stage. A customer journey is not only a sequence of touchpoints. It is also a sequence of changing requirements. Information may be sufficient at one point but inadequate later; a recommendation may be useful before physical inspection but insufficient afterward; and human assistance may be unnecessary for routine reordering but important when uncertainty is high. The journey therefore creates a coordination problem that cannot be reduced to the availability of channels (Rosenbaum, et al., 2017).

Customer-journey research also puts emphasis on customer control and context.

Customers can actively select touch points, mix firm-managed and customer-managed resources, but can move backwards or forwards between phases. It implies that orchestration is not to be thought of as a steroidal program led by the firm. Instead, it ought to assist the customer in his or her developing process without being rigid and authoritative (Canfield, & Basso, 2017).

1.2 Service systems and resource integration

The perspectives of service systems focus on the actors, resources, interactions and value creation. Service-dominant logic emphasizes the position of resource integration as the core of value creation because value is created by integrating and utilizing a variety of resources, instead of single-handedly producing a completed product. Similar to Payne et al. (2008), processes are highlighted by which the interaction between the firms and the customers occurs through relationship and value-creation practices (Ng, & Vargo, 2018).

The integration of resources is an insufficient concept to define the manner in which resources need to be dynamically configured in the course of a customer journey by a service system. The resources with the firm, the customers, the employees, platforms, the external actors may be listed in a journey. Their applicability may vary with time. The conceptual problem that AIEO is tackling is thus a problem of temporal coordination: how do we enable a service system to recognize the need at hand, choose a suitable resource, how do we decide the next transition and how do we maintain the context across that transition?

The distinction is important because AIEO is not proposed as a replacement for resource integration theory. Instead, it specifies a particular capability through which resources may be configured and coordinated under changing journey conditions. In this sense, orchestration represents a dynamic coordination layer that connects resource availability with journey requirements.

1.3 Omnichannel service

Omnichannel research has moved beyond the assumption that online and offline channels operate as isolated alternatives. Neslin et al. (2006) identified the managerial challenge of coordinating multiple channels, while Verhoef, Kannan and Inman (2015) described omnichannel management as involving integrated customer experiences across channels. More recent customer-journey research similarly emphasizes the interconnectedness of touchpoints (Neslin, 2022; Wolf and Steul-Fischer, 2023).

Yet four analytically different conditions should be distinguished: channel presence, channel availability, channel integration and adaptive resource orchestration. A firm may offer many

channels without integrating them. It may integrate channels without preserving context. It may preserve context without dynamically determining which resource should be activated next. AIEO addresses the final problem.

This distinction is particularly relevant in the herbal cosmetics context and in wider evidence on web-rooming and show-rooming (Kleinlercher et al., 2020; Halibas et al., 2023). The thesis evidence indicates that respondents did not fall neatly into online and offline groups. Equal-channel and conditional respondents represented 66.4% of complete eligible cases. Webrooming was reported by 48.4% and showrooming by 32.2%. These observations are consistent with a view of channel use as a combination of functions rather than a permanent identity, although the self-reported measures do not establish complete longitudinal journeys.

1.4 AI-enabled service

Artificial intelligence has become increasingly important in service because it can perform, augment or support activities previously dependent on human judgement. Huang and Rust (2018) conceptualize AI in service in terms of the kinds of tasks that machines can perform, while Huang and Rust (2021) position AI within a broader strategic marketing framework. AI can therefore be understood as more than a chatbot or recommendation engine.

Recent service research also points toward hybrid human-AI encounters and AI-supported customer journeys. The significance of these developments for the present paper lies not in treating AI as inherently superior to human service but in examining its potential coordination role. An AI system may help interpret contextual signals, identify relevant resources, and recommend transitions, support employees and transfer information between touchpoints.

AI nevertheless remains an enabling mechanism rather than the theoretical object of value by itself. The value proposition of AIEO depends on whether the system can connect the right resource to the right requirement at an appropriate point in the journey while preserving customer agency. An intelligent system that makes an inappropriate recommendation, creates an opaque transition or prevents human escalation may increase automation without improving experience.

1.5 Experience management

Customer experience provides the outcome-oriented perspective for the framework. Lemon and Verhoef (2016) emphasize that experience emerges across the customer journey and is shaped by multiple touchpoints. Bitner, Ostrom and Morgan (2008)

similarly demonstrate the importance of service processes and the configuration of service activities.

AIEO proposes five conceptual experience mechanisms: journey relevance, cross-touchpoint coherence, experiential confidence, uncertainty reduction and perceived control. These are not presented as empirically validated mediators in the present study. Rather, they identify the mechanisms through which appropriate resource configuration may theoretically contribute to experience.

Relevance concerns whether the available resource fits the customer's current requirement. Coherence concerns whether interactions across resources make sense as a connected journey. Confidence concerns the customer's ability to proceed with sufficient assurance. Uncertainty reduction concerns the resolution of informational or experiential ambiguity. Perceived control concerns the customer's ability to influence or reject the journey configuration (Bolton, et al.,2018).

2. From Channel Integration to Experience Orchestration

The central conceptual distinction of the paper can be developed by comparing AIEO with several established approaches. Personalisation primarily asks how an interaction can be tailored to an individual. Recommendation asks what product, service or option should be suggested. Automation asks which activity can be performed by technology. Omnichannel integration asks how channels can be connected. Customer-journey management asks how journey stages and touchpoints can be coordinated. Service recovery asks how failures can be resolved. AIEO asks a broader journey-level question: which combination of digital, physical and human resources should be configured and sequenced for the customer's evolving requirement? (Béziau, 2012).

This distinction does not imply that the related concepts are theoretically weak or obsolete. Instead, AIEO integrates aspects of them around a different object of analysis. A recommendation can be one resource-matching decision. Personalisation can be one form of contextual adaptation. Automation can execute one activity. Omnichannel integration can provide the infrastructure through which resources are connected. AIEO concerns how these capabilities are combined across a temporally unfolding journey.

The distinction also prevents AI from becoming a generic label for digital transformation. AIEO does not require every interaction to be automated. Indeed, the framework explicitly includes human resources and recognizes that some situations may require human judgement, physical inspection or interpersonal reassurance. The theoretical contribution therefore concerns coordination among

heterogeneous resources, with AI serving as an enabling layer.

Table I. Distinguishing AIEO from related concepts

Concept	Primary concern	Temporal scope	Resource scope	Role of AI	Customer agency
Personalization	Tailoring an interaction	Usually interaction-level	Often narrow	Optional	Relevant
Recommendation	Suggesting options	Point/stage	Products/services	Central or optional	High/variable
Automation	Performing activities	Task-level	Selected activities	Execution	Variable
Omnichannel integration	Connecting channels	Cross-channel	Channel resources	Optional	Relevant
Journey management	Managing progression	Journey-level	Touchpoints	Optional	Relevant
Service recovery	Resolving failures	Episode-level	Recovery resources	Optional	Relevant
AIEO	Dynamic resource coordination	Journey-level and iterative	Digital, physical and human	Enabling/coordination	Central

Source: Author's own work.

3. AI-Enabled Experience Orchestration

AIEO is defined as a journey-level service-system capability through which AI-supported systems sense

evolving customer need states and configure, sequence and coordinate complementary digital, physical and human service resources while preserving relevant context and customer agency. The definition contains five conceptual commitments.

First, the level of analysis is the service journey or service system, not an individual interface. Second, the object being coordinated is heterogeneous service resources rather than channels alone. Third, the capability is dynamic because the relevant resource can change as the customer's need changes. Fourth, AI is an enabling layer rather than an autonomous substitute for all service resources. Fifth, customer agency is an integral boundary of the construct rather than an afterthought.

The proposed capability is therefore broader than an AI recommendation function but narrower than the general idea of digital transformation. It requires an interaction between contextual interpretation and service-resource configuration. It also requires organisational infrastructure capable of connecting information and resources across touchpoints (Sjödin, et al.,2023).

The four dimensions are analytically distinct but operationally interdependent. Contextual sensing identifies the relevant need state; resource matching identifies an appropriate resource; journey sequencing determines the timing and order of activation; and continuity preservation ensures that relevant context travels across transitions. The dimensions may operate iteratively rather than as a strictly linear pipeline. A new signal may cause the system to reassess the need, select a different resource or change the next step.

Table II. Dimensions and mechanisms of AIEO

Dimension	Core question	Conceptual function	Experience mechanism
Contextual sensing	What is happening with the customer's need now?	Interpret current journey state	Relevance
Resource matching	Which resource can address	Fit need and resource	Relevance/confidence

	the need?		
Journey sequencing	What should happen next?	Coordinate temporal order	Coherence
Continuity preservation	What context must move across the transition?	Maintain relevant journey memory	Coherence/confidence/control

Source: Author's own work.

4. Dimensions of AI-Enabled Experience Orchestration

4.1 Contextual sensing

Contextual sensing refers to the ability of an AI-supported service system to interpret information relevant to the customer's current journey state. The purpose is not unrestricted surveillance. It is to identify information necessary to understand what the customer is attempting to accomplish and what requirement is currently unresolved. Relevant signals can include an explicit request, prior interaction, journey stage, product category, expressed preference, availability condition or request for assistance.

The theoretical importance of sensing follows from the fact that resource suitability depends on context. The same customer may require different resources at different stages. A customer initially searching for ingredient information may need digital content, while the same customer later seeking authenticity assurance may require certification information or human assistance. A system that cannot distinguish these states cannot reliably coordinate resources (Reis, 2026).

4.2 Resource matching

Resource matching is an issue to do with the alignment between an identified requirement and the resource that can bring satisfaction to the need. The resource can be a combination of, physical, human or digital. The range of matching is thus not the same as that of recommendation. The point is not to propose an option only but identify which one of the service resources could address the current need.

Complementarity is also brought by resource matching. A customer can advantage through online product details prior to actual examination, or online explanation following the online reviews. Therefore, a service system must not believe that there is never

enough of the resource. The right combination or order could be a sequence or composition (Ayala, et al.,2018).

4.3 Journey sequencing

The issue of journey sequencing is the organisation of resources in time. Even the accurate selection of resources may lead to a poor experience in case resources are unintroduced at the wrong point. The sequencing can be whether the digital information will be placed first to a visit to a store or whether the digital interaction has failed and results in a human employee intervention, or whether the purchase has occurred and post purchase digital support is preceded by a physical transaction.

The sequencing aspect renders AIEO journey-oriented expressly. It replaces the question What channel to use with What do we need to do next? and understands that different resources have varying values based on the time of their use (Eleftheriou, et al.,2018).

4.4 Continuity preservation

Preservation of continuity deals with the preservation of pertinent context amid interactions. It should not be the case of the customer having to piece the journey back every time it crosses channels or resources. The adjacent circumstances can be likes and dislikes or already given information or issues that are yet to be addressed.

Continuity does not mean to hold all the customer data. Minimization of data and proper governance is needed in responsible orchestration. The pertinent issue is what background is required to back the next interaction without resulting in unwarranted surveillance and/or privacy intrusion.

4.5 Non-interchangeability and iterative operation

The four dimensions are not to be used as crossable titles. A system can be able to detect that the customer needs something but choose an inappropriate resource. It might figure out the appropriate resource but trigger it at the wrong time. It can rank resources in an appropriate order yet does not port across the context. These possibilities of failure show why sensing, matching, sequencing and continuity are different theoretical functions.

At the same time, the dimensions should not be interpreted as a rigid one-directional algorithm. Customer journeys are recursive. A new interaction can generate new information that changes the perceived need state, which can trigger a new matching and sequencing decision. AIEO is therefore better understood as iterative capability architecture (Hudda, & Haribabu, 2025).

5. Experience Mechanisms and Proposition Development

The framework distinguishes capability dimensions from experience mechanisms. The capabilities describe what the service system can do; the mechanisms describe how appropriate coordination may contribute to customer experience. The propositions below are conceptual relationships, not statistical hypotheses tested by the doctoral survey.

5.1 Resource-need alignment

Customer journeys contain requirements that can vary by stage, product, customer and situation. When the service system matches a resource to the requirement currently being resolved, the interaction should be more relevant to the customer's task. This logic follows from customer-journey theory and resource-integration perspectives: value depends partly on whether available resources can be integrated into the activity the customer is attempting to accomplish (Fuller, et al.,2023).

Proposition 1: The contribution of AI-enabled experience orchestration to customer experience increases when the resources activated by the service system are aligned with the customer's current situational need.

Resource complementarity extends this logic. Some requirements cannot be adequately addressed through one resource. Information may reduce uncertainty, but physical inspection may provide additional assurance; an employee may interpret complex information that a digital interface presents but does not explain. The ability to coordinate complementary resources therefore represents a distinct source of orchestration value.

Proposition 2: The contribution of AI-enabled experience orchestration increases when complementary digital, physical and human resources jointly address a customer requirement that cannot be adequately resolved by a single resource.

5.2 Journey dynamics

Complexity of journeys adds to the burden of coordination since additional stages, movement and assets add to the likelihood of mismatch and discontinuity. Complexity does not at all render orchestration valuable in all situations; instead, it aggravates the coordination problem that is supposed to be solved by orchestration.

Proposition 3: The extent of journey complexity reinforces the value of the AI-enforced experience orchestration since the more interim steps, transitions and resources it involves, the higher the coordination of resource organisation is required.

A second boundary is the situational variability. In the case of a stable customer need, a fixed service set up can suffice. In situations where there is a significant change in needs,

reconfigurability becomes increasingly significant. AI can play a role in determining the signals to change something and supporting the change.

Proposition 4: The adaptability of AI-facilitated experience orchestration can be reinforced by the situational alterations since the variability in customer demands leads to the necessity to reconfigure the resources.

Sequencing establishes a temporal process in which the option of resources and experience interdepend. Even the correct resources may create a disjointed pathway when it is presented in the incorrect sequence, or when a sequence begins in advance of the customer. Adequate sequencing must hence play a role in bringing about coherence on touch-points.

Proposition 5: Proper sequencing of heterogeneous service resources enhances cross-touchpoint coherence, by matching resource activation and temporal evolution of customer needs.

Continuity preservation will deal with transition problem. The customer can get a reduced repetition load and be more convinced about the service system knowing about the trip when the relevant information has been transported in the middle of the interactions. This does not imply that one retains all information; continuity ought to be selective and controlled.

Proposition 6: The maintenance of the pertinent journey context amidst the shift of resources enhances experiential confidence and minimizes unnecessary discontinuity.

5.3 Customer and organizational conditions

Customer agency is a critical condition because orchestration can otherwise become a form of automated steering. Customers should retain meaningful opportunities to accept, reject or modify recommendations and to access human assistance where appropriate. The goal is not to maximize automated coordination but to support the customer's ability to accomplish the journey.

Proposition 7: Customer agency strengthens the positive experiential contribution of AI-enabled experience orchestration by preserving perceived control over resource and journey choices.

Governance conditions are equally important. AI-enabled orchestration can require the combination of information from multiple interactions and the allocation of resources through algorithmic decisions. Privacy, transparency, fairness, contestability and human oversight therefore influence whether orchestration is acceptable and sustainable.

Proposition 8: The contribution of AI-enabled experience orchestration to customer value is contingent on governance conditions that preserve

transparency, privacy, fairness, contestability and appropriate human oversight.

Finally, orchestration depends on organizational and technological readiness. A firm may possess AI tools but lack integrated data, interoperable systems, trained employees, suitable processes or governance mechanisms. AI readiness therefore operates as an enabling condition rather than merely a technological feature.

Proposition 9: Organizational and technological AI readiness strengthens the feasibility and effectiveness of AI-enabled experience orchestration by enabling reliable sensing, resource integration, sequencing and continuity.

Table III. Propositions and theoretical mechanisms

Proposition	Relationship	Theoretical mechanism	Condition
1	Need-resource alignment	Situational fit	Changing needs
2	Resource complementarity	Integrated value creation	Heterogeneous resources
3	Journey complexity → orchestration importance	Coordination burden	Complex journeys
4	Situational variability → orchestration importance	Adaptive reconfiguration	Changing needs
5	Sequencing → coherence	Temporal coordination	Multiple transitions
6	Continuity → confidence	Context preservation	Cross-touchpoint journeys
7	Agency → experiential contribution	Perceived control	Customer choice
8	Governance → responsible	Legitimacy/control	AI-mediated coordination

	value		on
9	Readiness → orchestration n capability	Organizational enablement	Data/system readiness

Source: Author's own work.

6. Boundary and Governance Conditions

6.1 Journey complexity

The framework suggests the high relevance of orchestration in case journeys have more than one stage, resources, and transitions. The complexity brings new chances of an imbalance between need/resource and loss of context between interactions. But, complexity should not be seen as necessarily bad. An elaborate process can be required in deciding on a high-involvement decision; coordinating the complexity may be the managerial goal but not the destruction of meaningful steps.

6.2 Situational variability

Situational variability is a variation in customer needs under different circumstances or over time. This is particularly critical since a fixed channel approach might be suitable when needs are stable and when change is required. Adaptive orchestration will be more useful where the system has to react to new informational cues as opposed to repeating a knowingly pre-established plateau.

6.3 Resource complementarity

Resource complementarity acknowledges the fact that digital, physical and human resource can be stronger or weaker. Information and comparison can be supported using digital channels; sensory assessment can happen in physical environments; explanation or reassurance can be given by employees. The framework does not take the assumption of the most digital or the most automated journey as the best journey (Guo, et al.,2023).

6.4 AI readiness

Artificial intelligence orchestration places a greater demand than an algorithm. It demands quality of data, interoperability, integration of processes, staff competency, government and monitoring and repair mechanisms. Bad preparedness can give an unreliable sensing, wrong discontinuous or unsuited matching, transitions. Responsible implementation is thus conditional upon preparedness.

6.5 Customer agency and responsible governance

Customer agency is central because service orchestration affects the choices available during a journey. Customers can be informed about AI intervention through increased transparency; unwarranted data aggregation can be averted by privacy measures; unfair processes can be

empowered by fairness measures; contestability should act as a way to challenge the results; and a human-centred approach can be taken in situations where automated coordination fails. These circumstances characterize customer-focused orchestration and technology-driven automation as well (Mosca, 2026).

7. Conceptual Framework

[Insert Figure 1 here]

Figure 1 positions situational customer needs and journey conditions upstream of the orchestration capability. Contextual sensing identifies the relevant state; resource matching connects that state with appropriate service resources; journey sequencing organizes their activation; and continuity preservation maintains relevant context across transitions. These capabilities are theorised to operate through relevance, coherence, confidence, uncertainty reduction and perceived control.

The framework also separates enabling conditions from the core capability. AI readiness represents organisational and technological capacity to support orchestration, while customer agency and governance conditions determine whether coordination can produce legitimate customer value. The arrows represent proposed conceptual relationships and are not empirical estimates from the present study.

8. Empirical Motivation: Herbal Cosmetics Consumer Journeys

9.1 Purpose and evidentiary boundary

The doctoral thesis provides an empirical setting for illustrating why a journey-level resource perspective is relevant. The underlying research examined consumer channel preferences and behaviour in herbal cosmetics through a cross-sectional quantitative survey. The empirical evidence is used here as bounded motivation. It does not test the AIEO construct or propositions because the survey did not measure AI implementation, AI adoption, AI trust, AI readiness or AIEO.

9.2 Sample pathway

Table IV. Analytical sample pathway

Analytical stage	Cases	Role
Nonblank responses	812	Initial response pool
Eligible responses	640	Screening-valid cases
Complete eligible responses	578	Primary analytical sample

Complete unflagged responses	536	Robustness assessment
Explicit online/offline subset	194	Binary comparison only

Source: Doctoral survey data and author's analysis.

9.3 Observed channel configuration

Table V. Observed channel-use configuration

Channel configuration	n	%
Online primary	16	0.1
Offline primary	8	3.5
Both equally	88	2.5
Conditional: product/brand/price/availability	96	3.9
Both equally + conditional	84	6.4
Total	78	100.0

Source: Doctoral survey data and author's analysis.

The distribution is important for the conceptual argument because only 194 of the 578 complete eligible respondents selected an explicit online or offline primary channel. The remaining 384 respondents reported either equal use of both channels or conditional choice. Thus, a binary online-versus-offline classification would remove 66.4% of the complete analytical sample from the direct comparison. The thesis therefore treats the four-category outcome as the broader representation of observed channel behaviour and the binary comparison as a restricted robustness analysis.

9.4 Channel-specific benefit patterns

The thesis provides additional evidence that the four channel categories correspond with different evaluations of channel-specific benefits. Online Purchase Facilitation differed significantly across the four groups, $F(3,574)=57.876$, $p<.001$, $\eta^2=.232$. Offline Experiential Assurance also differed significantly, $F(3,574)=52.522$, $p<.001$, $\eta^2=.215$. In contrast, Trust-Based Assurance did not differ significantly, $F(3,574)=1.005$, $p=.390$, $\eta^2=.005$, and

Perceived Risk did not differ significantly, $F(3,574)=1.105$, $p=.347$, $\eta^2=.006$. These results suggest that observed channel differences in this dataset were more closely associated with channel-specific functional and experiential benefits than with broad differences in trust or risk.

The thesis also found that age group was significantly associated with the four-category channel-choice outcome, $\chi^2(12)=35.542$, $p<.001$, although the association was small (Cramér's $V=.143$). Gender, education, occupation, income, region and purchase frequency were not statistically significant. These findings reinforce the caution against explaining channel behaviour solely through demographic segmentation.

9.5 Webrooming and showrooming

Table VI. Supplementary cross-channel behaviour

Cross-channel behaviour	Yes n	Yes %
Webrooming	280	48.4
Showrooming	186	32.2

Source: Doctoral survey data and author's analysis.

The reported webrooming and showrooming patterns provide additional contextual evidence that search, evaluation and transaction can occur across different environments. However, these self-reports should not be interpreted as complete longitudinal journey records. They do not establish the precise temporal sequence of a particular product-level journey for each respondent.

9.6 Why the evidence motivates AIEO

The empirical evidence indicates a broader issue as compared to channel preference. When consumers conditionally utilize the channels or integrate channels, firms should know what role each touchpoint fulfills and how resources can be aligned across the roles. Online, herbal cosmetics environment may offer a source of information, comparison, reviews and convenience, where a physical environment may offer inspection, sensory analysis and interpersonal support. The empirical trend thus offers a convenient environment of the conceptualization of resource complementarity.

The boundary of evidence is still imperative. The doctoral survey had no AI implementation measures, AI adoption measures, AI trust measures, AI readiness (AIEO measures). As a result, the survey fails to prove that AI is capable of achieving the suggested orchestration tasks, lacks an impact on

customer experience and fails to confirm the nine propositions. It just demonstrates the service-management underlying problem: the customers might need various resources at various stages of a buying process.

10. Discussion

10.1 Contribution to service-system theory

The initial contribution is to theory-conceptualise the dynamic resource configuration as a journey-level service-system capability. Resource integration literature describes the role of actors and resources in value generation, whereas AIEO describes a process wherein resource setups can vary over time as journey demands adapt. There is a temporal and operational difference between the framework and answer: the framework does not focus on which resources are available, but rather what resources are to be coordinated (Li, & Tuunanen, 2022).

10.2 Contribution to customer-journey research

The second contribution is to shift attention from touchpoint mapping toward resource coordination across transitions. Customer journeys are commonly represented through stages and touchpoints. AIEO adds a service-system question: what resource configuration is required to support the customer's next task? This allows journey research to connect experience description with service-resource design.

10.3 Contribution to omnichannel research

The third contribution is the distinction between channel integration and adaptive orchestration. A firm can connect channels while still failing to provide continuity or appropriate resource matching. AIEO therefore treats channels as environments through which resources are accessed rather than as the ultimate objects of coordination. The thesis evidence supports the relevance of this distinction because a substantial share of respondents reported equal or conditional channel use.

10.4 Contribution to AI-enabled service research

The fourth contribution is to position AI as a coordination enabler. AI research in service has examined automation, augmentation, recommendation and interaction. AIEO extends this logic by asking how AI can support coordination across multiple resources and transitions. The contribution is not the claim that AI is inherently superior, but that AI may provide a layer for contextual sensing, matching, sequencing and continuity when organizational and governance conditions are appropriate.

10.5 Contribution to experience management

The fifth contribution is to connect operational resource configuration with customer-experience mechanisms. This bridge also clarifies why

orchestration should not be evaluated solely through operational efficiency or conversion. A configuration that increases provider efficiency but reduces customer control may not constitute improved experience.

11. Managerial Implications

The framework suggests six-question managerial implementation logic. First, managers should diagnose what the customer needs at the current journey stage. Second, they should identify which resource can address that need. Third, they should determine the appropriate sequence of resources rather than assuming that the current channel should remain dominant. Fourth, they should preserve only the relevant context needed to avoid unnecessary repetition. Fifth, they should identify where human assistance or escalation is appropriate. Sixth, they should evaluate performance using customer-relevant journey measures as well as conventional operational measures.

Table VII. Managerial implementation framework

Managerial question	Implementation focus	Illustrative metric
What does the customer need?	Need-state diagnosis	Requirement resolution
Which resource is appropriate?	Digital/physical/human fit	Resource relevance
What should happen next?	Journey sequencing	Transition success
What context should transfer?	Selective continuity	Repetition burden
Where should humans intervene?	Escalation and expertise	Resolution confidence
How should success be measured?	Customer + operational outcomes	Coherence, control, effort, fairness

Source: Author's own work.

For herbal cosmetics specifically, digital touchpoints can support ingredient information, comparison, availability, reviews and reordering. Physical touchpoints can support packaging

inspection, sensory evaluation, product demonstrations and authenticity assurance. Human employees can explain complex claims or help customers resolve uncertainty. The objective is not to force all customers into one channel but to coordinate these resources according to the requirement being resolved.

Managers should also resist evaluating orchestration exclusively through conversion. Journey-level measures such as unnecessary repetition, successful transition, confidence, perceived control and fairness can reveal customer costs that conversion metrics conceal. The framework therefore encourages service managers to evaluate whether AI-supported coordination actually reduces customer effort and improves the quality of resource fit (Spence, & Velasco, 2025).

12. Social Implications

The use of AI to orchestrate has consequences to informed choice and autonomy. As customers switch between digital, physical and human resources, clear information about the use of AI could assist the customer to know how they are supporting their decisions. Protecting privacy is also critical since continuity is able to provide incentives to gather data during several interactions. The framework thus considers data minimization as an aspect of responsible continuity and not a second compliance concern.

Another social consideration is its accessibility by the human beings. The needs of customers must not be automated into journeys which need to be explained and empathized with and which need to be physically assessed and judged with professional attitude. Agency can be maintained by contestability and human escalation. These factors are particularly applicable in the types of products that the consumer might be in doubt over authenticity, content, safety or appropriateness (Sjödin, et al., 2023).

13. Limitations and Future Research

First, AIEO is a conceptual framework and has not been empirically validated. The nine propositions therefore require systematic testing rather than acceptance as established relationships.

Second, the four dimensions require operationalization. Future research should develop candidate items, establish content validity, test dimensionality and examine discriminant validity across independent samples. The dimensions should not be treated as a validated reflective scale on the basis of the present doctoral survey.

Third, the empirical motivation is based on a cross-sectional survey and self-reported behaviour. It does not establish complete longitudinal customer journeys or actual transaction sequences. Journey

diaries, clickstream data, transaction records and service logs would provide stronger evidence of transitions and resource use.

Fourth, the doctoral sample was obtained through purposive non-probability access and was predominantly North Indian. The findings therefore should not be treated as nationally representative. Future research should test the framework across regions, countries and service categories.

Fifth, the survey did not measure AI implementation, AI adoption or AIEO. Future studies should directly observe or experimentally manipulate orchestration configurations. Field studies could examine cases in which an AI system recommends a store consultation, transfers a case to an employee or coordinates digital and physical fulfilment.

Sixth, future research should examine responsible-AI conditions. Experiments can test whether disclosure, explanation, human override, privacy controls and contestability affect customer acceptance of orchestration. Research should also identify situations in which non-orchestration or human-led service is more appropriate.

Finally, future research should examine whether AIEO operates differently across contexts. Healthcare, banking, travel, hospitality, education and professional services may have different levels of journey complexity, risk, resource complementarity and need for human judgement. Comparative studies could establish the boundary conditions under which the framework is most useful.

14. Conclusion

Connected channels are not necessarily coordinated journeys. The central challenge for contemporary service systems is not simply to provide customers with more channels or more intelligent interfaces, but to coordinate the heterogeneous resources required as customer needs change across a journey.

The study conceptualizes AI-enabled experience orchestration as a journey-level service-system capability through which AI-supported systems sense evolving needs, match appropriate resources, sequence those resources and preserve relevant context. The framework distinguishes these capabilities from personalization, recommendation, automation and conventional omnichannel integration and connects them to relevance, coherence, confidence, uncertainty reduction and perceived control.

The framework also rejects a technology-deterministic view. Customer agency, governance, privacy, transparency, fairness, contestability, human oversight and organisational readiness condition the contribution of orchestration. AI is therefore positioned as an enabling layer rather than an end in itself.

The doctoral evidence from herbal cosmetics provides a bounded empirical motivation for this theoretical problem. Among 578 complete eligible respondents, 66.4% reported either equal use of both channels or conditional channel choice. This pattern illustrates why a service system may need to coordinate complementary digital, physical and human resources. It does not, however, validate AIEO or demonstrate AI effects. Future empirical work must directly operationalize and test the framework.

The principal theoretical implication is a shift from thinking about channels as the primary objects of coordination toward thinking about resources, requirements and transitions. The managerial implication follows directly: firms should ask what the customer needs next, which resource can resolve that need, how the resource should be sequenced, what context should transfer, and where customer control and human assistance must remain available.

Ethics and informed consent statement

The underlying survey involved adult participants. The research synopsis received approval through the relevant university Research Degree Committee on 29 August 2025. Participation was voluntary, identifiers used for duplicate checking were removed from the analytical dataset, anonymous respondent codes were used and findings were reported in aggregate. The available record does not establish separate ethics-committee approval or a formal waiver, and the exact form of informed consent is [AUTHOR VERIFICATION REQUIRED] before submission. No undocumented approval number, waiver or consent procedure is claimed.

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