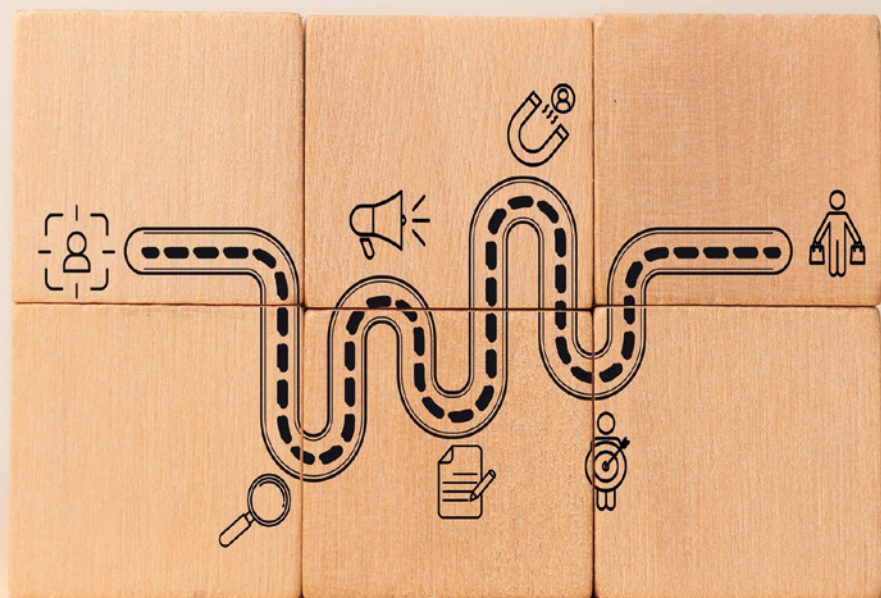


Gundars Kokins

**INTEGRATING CUSTOMER EXPERIENCE
MANAGEMENT AND KNOWLEDGE MANAGEMENT
FOR EFFECTIVE PERSONALIZATION STRATEGIES**

Summary of the Doctoral Thesis



RIGA TECHNICAL UNIVERSITY

Faculty of Engineering Economics and Management
Governance and Security Institute

Gundars Kokins

Doctoral Student of the Study Programme “Management Science and Economics”

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To be granted the scientific degree of Doctor of Science (PhD) in Social Sciences (in the field of Economics and Business), the present Doctoral Thesis is submitted for defence at the open meeting of the RTU Promotion Council on 25 August 2026 at 11.30 at the Faculty of Engineering Economics and Management of Riga Technical University, 6 Kalnciema Street, Room 209.

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DECLARATION OF ACADEMIC INTEGRITY

I hereby declare that the Doctoral Thesis submitted for review to Riga Technical University for promotion to the scientific degree of Doctor of Science (PhD) in Social Sciences (in the field of Economics and Business) is my own. I confirm that this Doctoral Thesis has not been submitted to any other university for promotion to a scientific degree.

The Doctoral Thesis has been written in English. It consists of an Introduction, three chapters, Conclusions and Recommendations, 12 figures, 17 tables, and five appendices; the total number of pages is 150, not including appendices. The Bibliography contains 268 titles.

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INTRODUCTION

In today's competitive market, companies are increasingly tailoring their offerings and messages to individual customer needs and interests. Such personalization is pursued as a way to drive greater customer engagement, loyalty, and sales. Studies show that about 71 % of customers now expect personalized interactions, and 76 % become frustrated when personalization is absent, indicating that tailored experiences are no longer optional for competitive businesses (Twilio Segment, 2023). To successfully implement a personalization strategy means adjusting and tailoring products, services, and communication messages to each specific customer's needs and context. However, for organizations to scale personalized experiences, this requires practitioners to manage two main components: firstly, identifying the right customer experience elements that should be adjusted to fit a specific customer's needs (e.g., personalized offers, communication, data-driven journeys through multiple channels) and, secondly, ensuring the organization has the internal processes and capabilities to implement these elements effectively. Companies recognize this – roughly 69 % of firms prioritize personalizing the customer experience, yet about 39 % struggle to implement it effectively (Twilio Segment, 2023). This disconnect reveals a clear problem: organizations lack a unified approach that aligns customer experience management (CEM) with customer knowledge management (CKM). In practice, many companies invest in personalization tools, but without integrating the way they manage customer knowledge (data, insights, feedback) with how they manage the customer experience, their efforts remain ad hoc and inconsistent. No widely accepted framework currently guides this integration. This gap in both theory and practice – amidst high competition and rising customer expectations – makes the topic urgent and significant. However, current research and practice lack a cohesive model that aligns these customer-facing personalization efforts with the necessary internal organizational processes. Current prior research has mainly focused on either specific application areas (e.g., personalized marketing campaigns and efforts) or new and emerging technologies (e.g., AI-based recommendation systems in e-commerce) in silo's (Chandra et al., 2022; Timimi et al., 2025). This fragmentation in research has created a gap in understanding how to holistically implement personalized customer experience strategies across an entire organization.

A critical challenge underscoring this gap is the persistent misalignment between customer experience management (CEM) and knowledge management in many organizations. Modern personalized customer experiences rely heavily on customer data and insights – in other words, on robust customer knowledge management – to inform and tailor each interaction. Unfortunately, the effectiveness of advanced personalization tools (such as AI-driven recommendation engines, marketing automation journey builders using real-time analytics) is often limited by internal organization-wide issues, such as data silos, privacy concerns, and a lack of integration with internal knowledge management systems (Krouska et al., 2021; Potwora et al., 2023). In practice, companies frequently struggle to collect, share, and utilize customer knowledge across departments, leading to inconsistent or suboptimal personalization efforts. In other words, many companies invest in personalization initiatives but fail to see them fully realized, due in part to insufficient internal alignment and guidance on *how* to implement personalization effectively.

The background above illustrates a clear problem: organizations need a unified approach that aligns CEM processes with customer knowledge management in order to deliver personalized customer experiences. Without this alignment, personalization efforts remain *ad hoc* and their success becomes unpredictable. Thus, there is a need for a strategic framework organization can use in order to align the front-stage elements of customer experience (the touchpoints and interactions experienced by different customers) with the back-stage elements (the internal knowledge, processes, and capabilities that support those interactions). Additionally, emerging concepts such as open innovation and customer co-creation add another layer of opportunity by bringing external ideas and customer input into personalization efforts (Chesbrough, 2003; Yun et al., 2024). Integrating these concepts requires careful management of knowledge flows and stakeholder collaboration. All these considerations reinforce the justification for this research – to address the identified gap by developing a holistic strategy and framework that aligns CEM and Customer Knowledge Management (CKM) in implementing personalized customer experience in organizations.

The Thesis is building on the theoretical foundation laid by Pine and Gilmore in 1999 by defining the concept of the experience economy (Pine & Gilmore, 2011), that was further developed by academic research to establish and propose customer experience management as a discipline, defining the various dimensions and aspects managed within in CEM, such as customer journeys, customer personas – imaginary, but data-driven customer archetypes created to help an organization’s employees empathize with customers’ needs, beliefs, characteristics, and other parameters that describe them, touch-points and channels and reaction types to stimuli customers perceive when interacting with organizations and the stimuli created through this (De Keyser et al., 2020; Lemon & Verhoef, 2016; Meyer & Schwager, 2007). To describe and operationalize the aspects of co-creation, the Thesis draws on the service-dominant (S-D) logic from behavioral economics (Lusch & Vargo, 2014; Vargo & Lusch, 2004) as well as customer knowledge management (Davenport & Prusak, 1998; Nonaka, 1994; Nonaka & Takeuchi, 1995).

Research Questions

In order to systematically address the outlined problem, the research is guided by several specific research questions (RQs). These questions break down the complex issue of aligning customer experience management with knowledge management for personalization into manageable inquiries.

1. RQ1: What are the key dimensions of CEM, and how do they integrate with CKM in order to create a personalized customer experience?
2. RQ2: What are the overlapping elements of CKM and CEM that are required for the implementation of a personalized customer experience in organizations?
3. RQ3: What are the key factors (enablers and barriers) that impact the successful implementation of a personalized customer experience in organizations?
4. RQ4: What criteria and organizational factors should be evaluated to design and implement a personalized customer experience?

5. RQ5: What steps and components are required to design and implement a personalized customer experience in an organization using CEM and CKM frameworks, tools, and methods?

These five questions encompass both theoretical aspects (understanding core concepts and the relationships between CEM, CKM, and personalization) and practical aspects (identifying factors, criteria, and steps for successful implementation). Research Question 1 and Research Question 2 focus on establishing a comprehensive conceptual foundation by identifying the elements and intersections of CEM and CKM that are necessary for effective personalization. RQ3, RQ4, and RQ5 build on this foundation to explore implementation issues: RQ3 seeks to uncover what helps or hinders personalization strategies, RQ4 seeks measurable criteria or conditions for organizational readiness, and RQ5 aims to outline the process or methodology that organizations can follow to implement personalized customer experience. Answering all five questions will collectively provide the knowledge needed to develop and validate an integrated framework for personalized customer experience strategy implementation.

The goal of the research is to develop a holistic approach for implementing personalized customer experiences in organizations by aligning customer experience management with customer knowledge management. This research seeks to create an integrated framework that ensures customer-facing personalization efforts are fully supported by an organization's internal knowledge, processes, and capabilities – thereby bridging the gap identified in the problem background. To achieve the research goal, the following research objectives have been formulated.

- To perform a literature review to identify, describe, and define the key dimensions and elements of customer experience management, customer knowledge management, and personalization and to understand the overlap and synergies between the three concepts in creating personalized customer experiences. This objective addresses foundational theory and ensures clarity on core concepts.
- To analyze (based on the literature review) how customer knowledge management can be integrated (what are the overlapping elements) with customer experience management to facilitate personalization. This involves reviewing existing frameworks, tools, and methods for combining CKM and CEM.
- To identify and classify the key impact factors – enablers and barriers – that influence the success of an implementation of personalized customer experience strategies, creating a list of internal and external factors affecting personalization initiatives.
- Develop a readiness self-assessment tool (survey) for organizations to check and measure their readiness and progress towards implementing personalized customer experiences. The tool will use the identified barriers and enabling factors and provide a practical way for companies to diagnose potential risks and gaps before taking action.
- Formulate an initial implementation roadmap for personalized customer experience strategies. This roadmap should specify the steps an organization needs to take to implement a personalized customer experience strategy and will be based on insights from the literature review and factor analysis.
- Conduct empirical research to validate and refine the proposed roadmap and self-assessment tools through expert interviews and Delphi surveys to test the framework's

applicability in real settings and make improvements. Finally, summarize the findings and propose recommendations based on both theoretical and practical insights gained.

By accomplishing these objectives, the research will systematically build from theory to practice – first understanding what needs to be done (via literature review and analysis of concepts), and then developing and testing how it can be done in organizational settings.

The research object is the phenomenon of personalized customer experience management – essentially, the management of customer experiences that are tailored to individual needs and preferences. The research subject is the process of implementing personalized customer experience strategies in organizations, with a particular focus on the alignment between CEM practices and customer knowledge management practices; the subject centers on how organizations can internally organize and leverage customer knowledge (data, insights, learnings) to enhance and personalize the customer’s experience at every touchpoint.

Limitations of the Research

The following key limitations define the scope of this Thesis and clarify what is *not* covered.

- Scope of personalization. The study focuses on the *managerial and strategic* aspects of personalization (i.e., aligning strategy, processes, knowledge, and organizational capabilities to enable personalized experiences), rather than developing new personalization technologies or algorithms. Technical and engineering aspects – for example, designing machine learning models or software development for personalization systems – are beyond the scope. Thus, while the research considers how technology is used, it does not delve into the detailed engineering or IT development of personalization platforms.
- The practical validation that has been done as of the research in this Thesis (expert interviews, Delphi surveys, and pilot tests) covers a limited number of organizations and participants. While the selection process ensured that diverse company types and industries were covered, it is important to note that the findings may not capture all possible industry contexts or cultural nuances. Thus, some industry-specific or regional factors in implementing personalized customer experience might not be fully represented, and the recommendations are kept broad; practitioners can then adapt them to fit specific industry and cultural aspects.
- Depth of implementation testing. The proposed implementation framework and the self-assessment tool are validated through expert feedback and limited pilot usage within the timeframe of this doctoral research. A full-scale, long-term implementation of the framework in a large organization (to directly measure long-term outcomes such as sustained improvement in customer satisfaction or financial performance) was not feasible. Therefore, the long-term impacts and effectiveness of the framework (for instance, measured via post-implementation performance over multiple years) are not directly observed in this study.
- Dynamic environment. Customer experience trends and enabling technologies (for example, advances in AI, changes in data privacy regulations, evolving consumer behaviors) are rapidly evolving. This research captures the state of the art up to the

period of study (primarily through sources of the last 5–7 years), but future developments could introduce new factors or necessitate updates to the framework. In other words, the conclusions drawn are temporally bounded; the framework should be revisited and possibly revised, as technologies and customer expectations change over time.

Despite these limitations, the research has been designed to maximize validity and relevance within its scope. For instance, multiple methods and data sources are used to triangulate findings (mitigating biases or gaps of any single method), and the focus is kept on fundamental principles and processes of personalization strategy that are likely to remain applicable even as specific tools or trends evolve.

Theoretical and Methodological Framework

This study builds on several streams of literature and established theories at the intersection of customer experience and knowledge management co-creation. From a theoretical standpoint, three main pillars underpin the research.

1. Customer experience management (CEM). CEM provides the main foundation of this Thesis – that managing all touchpoints of a customer’s journey in a deliberate way can drive customer satisfaction, loyalty, and thus positively impact an organization’s performance. This Thesis particularly focuses on the customer journey and experience quality; for example, Lemon and Verhoef (2016) on the dynamics of customer experience over time. Additionally, the study examines how personalized customer experience can enhance customer satisfaction when interacting with organization-managed touchpoints, and how the extent of personalized offers and communications influences the customer’s perceived effort at each touchpoint (Lemon & Verhoef, 2016).
2. Customer knowledge management (CKM). The second theoretical pillar is customer knowledge management, which extends traditional knowledge management (Davenport & Prusak, 1998; Nonaka, 1994; Nonaka & Takeuchi, 1995) into the realm of customer relationships. This research uses the notion of these different types of customer knowledge – knowledge *about* customers (e.g., demographics, behaviors, preferences), knowledge *from* customers (feedback, co-created ideas, complaints), and knowledge *for* customers (information and insights provided back to customers) – and examines how these knowledge flows support personalization.

Methodologically, the research follows a phased mixed-methods approach combining qualitative and quantitative techniques. The overall research design was structured in multiple phases (described in detail in the next section) to progressively build and validate the framework. Key methodological components include the following.

Systematic literature review and qualitative content analysis. The initial phase of research employed a systematic literature review and qualitative content analysis to extract patterns and constructs related to personalized customer experience implementation. Using open coding (Corbin & Strauss, 2008) and elements of grounded theory, the study identified recurring themes in two domains: front-stage customer experience elements (what the customer directly

perceives and engages with) and back-stage organizational dimensions (the internal processes, structures, and resources that enable those experiences). This approach was influenced by the service blueprinting concept (Bitner et al., 2008), which conceptually separates customer-facing processes from supporting processes, ensuring that the framework would cover both perspectives of personalization. The literature analysis phase provided the conceptual building blocks (CEM elements, CKM elements, etc.) for the framework.

Delphi expert input. Subsequent phases of the research design incorporated expert input for refinement and validation. Notably, a Delphi method (iterative expert panel technique) was used to refine the classification of CEM/CKM elements and to achieve consensus on the key enablers and barriers for personalization identified in the literature. This Delphi study engaged a panel of academics and industry experts in customer experience, knowledge management, and digital innovation through multiple rounds of questionnaires and feedback. The experts rated and discussed the importance of each identified factor, which helped validate the factors' relevance and clarified their definitions. The Delphi results were instrumental in shaping the content of the self-assessment tool and the framework by confirming which factors are critical in practice.

Expert interviews. To assess the clarity, completeness, and practical applicability of the proposed framework and the self-assessment tool developed in this Thesis, semi-structured expert interviews with practitioners (customer experience managers, marketing, revops/revenue operations, sales operations, and CRM specialists) were conducted, transcribed, and analyzed. As a result, the author identified real-world perspectives to adjust both the terminology and approach, making the tools more practitioner-friendly, and also identifying real-world challenges and success factors.

Testing the self-assessment tool. To practically validate the personalization readiness self-assessment tool, a pilot test of the tool is conducted, involving participants approached during the expert interviews, in order to validate in practice how different organizations assess their level of readiness across the identified dimensions. In addition, feedback is collected to identify potential areas for further improvement of the tool.

The above combination of various research approaches was required to triangulate the novelties – comparing insights from literature, expert feedback, practitioner evaluation and comments, and as a result helped to validate, strengthen and improve the developed framework, methods and models.

Sources of Information

To support the research objectives and ensure a robust base of evidence, a wide range of information sources was utilized.

Academic literature. The core theoretical foundation is built on existing academic research. This includes an extensive review of peer-reviewed journal articles, conference proceedings, and scholarly books primarily from the last 5–7 years (to capture up-to-date developments in personalization, CEM, and KM). Literature databases such as Scopus, Web of Science, EBSCO, IEEE Xplore, and ScienceDirect were used to identify relevant publications. In total, several hundred publications were screened, and over one hundred key sources were reviewed in depth as part of the literature review and content analysis phases. This scholarly literature provided definitions, conceptual models, and identified gaps that the Thesis builds upon.

Industry reports and statistics. To understand the practical landscape and underscore the urgency of the problem, market research and reports were consulted. They were used to gather quantitative insights on how many organizations are pursuing personalization and how many are struggling with its execution, to identify both trends, justify the gap and also identify potential barriers (e.g., adoption rates, common obstacles and the results/outcomes of the personalization implementation projects). These sources were also used as market examples and case studies to help define the aspects of the Thesis.

Expert knowledge. Delphi surveys and expert interviews were used as part of the research to gather information directly from practitioners/researchers within the field. This was required to get up-to-date insights into current best practices, potential commonly made mistakes and emerging issues (for example, in the light of the development of AI technologies within experiential marketing/service design and marketing automation) in implementing personalized customer experience strategies in actual real-world scenarios. The knowledge of the approached experts was used both as an information and as a validation source for the research findings – this validation was used as a means to help the developed tools and frameworks have a sound theoretical background, but also to reflect the reality of industry challenges and constraints as they are experienced by practitioners at this very moment in the market.

A pilot was run as part of the validation – using the self-assessment tool developed as part of the Thesis. The responses to this survey were analyzed to be used as empirical data on how organizations self-assess their maturity or readiness for personalization across the dimensions that were identified earlier in the research. Open-ended feedback collected in the pilot survey (and from follow-up discussions with participants) provided insights that informed refinements to both the assessment tool and the framework’s guidance.

The research maintains a well-rounded perspective by drawing on a multi-faceted set of information source types – academic literature for theoretical foundations, industry benchmarks, expert opinion, and empirical organizational data. This approach to sourcing information enhances the credibility of the results and enables thorough triangulation when answering the research questions.

Scientific Novelty

This Thesis produces several original contributions to the academic fields of customer experience management and knowledge management. The scientific novelty of the research can be summarized in five main points, each corresponding to a key output of the study.

1. A new classification scheme is developed that maps the dimensions of customer experience management to the different types of customer knowledge, illuminating how various forms of customer knowledge (*knowledge about, from, and for the customer*) support specific aspects of the customer experience. This refined framework clarifies the interrelationships between CEM and CKM in the context of personalization – an area that was previously fragmented in the literature. It provides a structured view of which knowledge assets and processes correspond to which experience elements, thereby extending existing CEM frameworks with a knowledge management perspective.
2. A new approach on how organizations should consider integrating personalization elements is proposed in the form of a matrix that links front-stage (customer-facing) elements with

the back-stage (not visible to customers) elements necessary to successfully overcome the identified gaps/barriers they might face. The proposed framework fills a gap in the academic literature around the topic of personalization – offering a holistic model that organizations (practitioners) and scholars can use to ensure that internal processes are aligned with the personalized experiences being designed.

3. Using literature review and analysis in combination with empirical research, a comprehensive list of factors that act as enablers or barriers to implementing personalized customer experiences is compiled. Each factor is defined, and importantly, the research distinguishes whether it primarily facilitates or hinders implementation (describing also in what conditions it does so). This list of factors was then used in the Thesis for assessing organizational readiness by highlighting what to strengthen and what pitfalls to avoid.
4. A practical self-assessment tool (checklist/survey instrument) is developed to enable organizations to evaluate their readiness to implement personalized customer experiences. While there are general digital readiness or customer-centricity assessments in practice, this tool is novel in its specific focus on personalization implementation projects – not a general digital transformation assessment. This is based on the conceptual results of the previous chapters (the identified dimensions, combining the concepts of customer experience management and customer knowledge management, front-stage and back-stage elements, and the identified factors influencing personalized customer experience) and translates them into a practically usable instrument that enables the assessment of criteria companies can use to evaluate their level of readiness. The developed tool bridges theory and practice, and no such comprehensive personalization readiness checklist has existed before this study.
5. A validated step-by-step methodology has been developed for implementing personalized customer experiences (a roadmap) in real-world organizational contexts. Unlike high-level conceptual models in the existing literature, this methodology offers concrete guidance including phases such as preparation (readiness assessment), design (co-creation of a personalization roadmap based on identified gaps), execution (pilot projects and rollout of personalized customer experience initiatives integrated with KM practices), and ongoing improvement (establishing feedback loops and iterative refinement of the customer experience strategy) – all underpinned by the alignment of CEM and CKM. The novelty here is twofold: (1) the content of the methodology – which explicitly integrates knowledge management considerations (like knowledge sharing, learning mechanisms, and open innovation) into each step of customer experience implementation; and (2) the fact that it has been empirically refined and validated through expert review and pilot applications. This methodology can serve as a blueprint or template for organizations to use before starting personalization projects and as a foundation for further academic research on executing personalization strategies in case studies.

The five developed novelties in the Thesis help to advance the understanding of how organizations can systematically approach personalized customer experience strategy implementation. They extend existing theoretical frameworks by incorporating knowledge management perspectives (*knowledge for, from and about* customers), and the Thesis develops new tools and a framework that did not previously exist in the literature for the area of research.

Research Phases

The research was designed as a series of four main phases, each aligned with specific research questions and objectives, forming a pathway from theoretical exploration to practical framework validation.

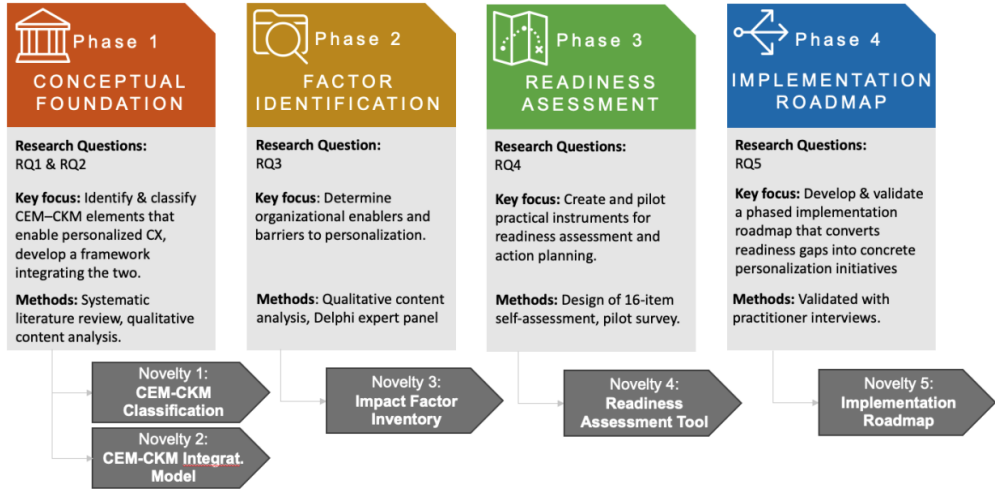


Fig. 1. Research phases.

Phase 1: Conceptual foundation – literature analysis and initial framework development. The first phase addressed RQ1 and RQ2 by establishing the conceptual linkages between CEM, CKM, and personalization. Activities in this phase included an extensive literature review and a qualitative content analysis of recent studies to extract the *front-stage* (customer-facing) elements of personalized customer experience and the *back-stage* (organizational) dimensions needed to support them. By coding and categorizing themes from the literature, an initial definition of CEM and CKM dimensions was developed (Novelty 1). Additionally, using insights from service blueprinting and prior relevant frameworks, a preliminary matrix framework was formulated that pairs each major customer-facing personalization element with a corresponding organizational component required to deliver it. This front-stage × back-stage matrix represented the first version of an integrated implementation framework (addressing RQ1 and RQ2), hypothesizing how each aspect of the personalized customer experience is enabled by specific internal factors. For example, this initial framework posited that a front-stage element like personalized product recommendations would require back-stage capabilities like data analytics and knowledge-sharing processes. The outcome of Phase 1 was thus a set of defined CEM–CKM dimensions and a tentative alignment matrix (Novelty 2) serving as the conceptual foundation for the research.

Phase 2: Identification of implementation factors. The second phase of the research focused on RQ3 – pinpointing what organizational factors enable or hinder the successful implementation of personalized customer experiences. A systematic literature review method was used, identifying and analyzing research articles on success factors and challenges in the relevant domains (e.g., CRM system implementations, digital transformation projects related to

customer experience enhancement, and innovation adoption in organizations). As a result, an initial list of potential enablers and barriers was compiled. These included factors such as organizational culture, leadership support, data governance practices, privacy and ethical considerations, technological infrastructure, and employee skills and training. To refine and validate this list, a Delphi study was carried out with a panel of industry experts. The experts were asked to rate and evaluate the importance of each factor identified in the Thesis. The Delphi process helped to reach a consensus and finalize a list of enablers and barriers for personalization initiatives (Novelty 3). Phase 2 produced a validated inventory/list of factors that must be managed by organizations and their practitioners for successful implementation of personalized customer experience (answering RQ3).

Phase 3: Readiness assessment tool development. With the factors identified and validated, Phase 3 tackled RQ4 and contributed to RQ5 by creating practical instruments to apply the research findings in organizational contexts. The key output of this phase was the personalization readiness self-assessment tool (Novelty 4). To develop this tool, enablers and barriers identified in Phase 2 were used as a basis and organized into thematic categories. Developing the tool involved drafting assessment items (questions and statements) based on the literature and expert input, then pilot-testing the tool. A pilot was conducted with a sample of organization representatives, who are also stakeholders in implementing personalized customer experiences, to gather feedback on the clarity, relevance, and completeness of the self-assessment scale. In parallel with the tool, Phase 3 also began formulating the structure of a step-by-step implementation roadmap (addressing part of RQ5). Using the factor inventory and matrix as a guide, an initial template for a phased roadmap (with recommended actions and “scan-cards” for each gap area) was designed, to be fully developed in Phase 4.

Phase 4: Implementation roadmap. The final phase addressed RQ5 in full by validating and refining the implementation methodology developed across the earlier phases. Building on the initial framework from Phase 1 (the CEM–CKM matrix) and the insights from Phases 2 and 3, a consolidated implementation methodology was proposed – essentially combining the readiness assessment, the action roadmap, and best-practice scan-cards into an integrated toolkit for organizations. This methodology outlines how an organization should proceed from assessing its readiness, through planning and design, to execution and continuous improvement of a personalized customer experience aligned with knowledge management principles. In Phase 4, the Thesis focused on expert evaluations to validate this methodology. Experts who were not part of the earlier Delphi panel were asked to review the final framework as an external check on its completeness and novelty. Through this iterative refinement process, the framework and methodology were adjusted and finalized. The outcome of Phase 4 is a validated methodology (Novelty 5) that organizations can follow to implement personalized customer experiences, with built-in considerations for knowledge management, organizational change management, and continuous learning.

Throughout all phases of this research, iteration and feedback were key principles. Findings from one phase informed the next, and in some cases prompted revisiting earlier results (for example, expert feedback in Phase 4 leading to minor adjustments in the factor list or tool developed in previous phases). This design ensured that theoretical constructs were

continuously confronted with empirical evidence and practical insights, leading to a robust and applicable framework by the conclusion of the study.

Structure of the Thesis

The Thesis is organized into three core chapters followed by a consolidated concluding section. Chapter 1 establishes the conceptual foundation for the research: it defines the principal constructs of customer experience management (CEM), customer knowledge management (CKM) and personalization, and by answering RQ1 and RQ2, derives a front-stage/back-stage classification together with an integrated 4×4 matrix that links customer-facing experience elements to their enabling knowledge processes. Chapter 2 addresses RQ3 by identifying, through systematic literature analysis and a Delphi study, the key organizational enablers and barriers that influence the implementation of a personalized customer-experience strategy. Chapter 3 responds to RQ4 and RQ5: it describes the design of the self-assessment tool (in the form of a survey), as well as the development of an implementation system consisting of a roadmap and an implementation guide, the latter operationalized as a set of sixteen scan-cards. Together, these elements translate the proposed framework into structured, actionable steps and support the development of a personalized customer-experience strategy. The chapter also presents the expert evaluations through which the implementation methodology was refined. Finally, the Conclusions and Recommendations chapter synthesizes the main findings, articulates the scientific contribution and practical implications, acknowledges limitations, and outlines avenues for future research. A list of references and five appendices complete the Thesis: Appendix 1 presents the personalization readiness self-assessment tool; Appendix 2 presents the implementation guide, consisting of sixteen scan-cards that support the operationalization of the matrix and the roadmap-defined actions within an organization; Appendix 3 presents the roadmap building tool; Appendix 4 provides an overview of the expert interviews; and Appendix 5 contains the Delphi questionnaire (Round 1).

Practical Application of the Research

Beyond theoretical contributions, the research has significant practical implications for businesses aiming to enhance their customer experience through personalization. The findings and deliverables of this study can be applied in several concrete ways.

Guiding strategy development. Managers and customer experience professionals can use the integrated framework (the front-stage/back-stage alignment matrix and associated roadmap) as a guide when formulating their personalized customer experience strategy. The Thesis proposes and develops a matrix of front-stage and back-stage elements that can be used by the practitioners of an organization as a checklist of considerations for personalization strategies, ensuring that customer-facing personalization initiatives (personalized recommendations, customized product and service offerings, or co-created service experiences) are linked to the necessary back-stage (or invisible-to-the-customer) elements right from the planning stage.

This helps prevent gaps where a company might launch a personalization effort without the supporting infrastructure (or vice versa). By following the framework, practitioners can design more cohesive and feasible personalization programs and roadmaps. The research framework

serves as a reference model or template for developing a personalization strategy that is aligned across all levels of the organization.

Assessing organizational readiness. The self-assessment tool developed in this research is a ready-to-use instrument that organizations can employ to diagnose their current state of readiness for personalized customer experience. In practice, a leadership team or project team can deploy the checklist as an internal survey or workshop exercise to evaluate how well the company is prepared across various dimensions – such as data governance, technological infrastructure, team skills and knowledge sharing, customer-centric culture, and change management capabilities. The result of this assessment can help highlight specific areas of strength and weakness to consider. An organization may have strong technology platforms but weak cross-departmental knowledge sharing, building information silo's, or a solid customer-centric strategy but insufficient data privacy measures, damaging trust on the front-stage of the efforts. This can help develop action plans to address weaknesses *before* heavily investing in personalization initiatives, which can carry a high resource cost. The developed self-assessment survey was created using the factor inventory, which has been developed as part of the Thesis.

Personalization initiative rollout plan using the roadmap. Using the phased rollout framework developed in this Thesis, organizations can treat personalization as a structured implementation effort that unfolds over time rather than as a single, end-to-end initiative. The developed roadmap helps to split a personalized customer experience implementation program into successive and smaller phases, each with a more detailed and specific focus and set of responsibilities. This helps organizations pre-plan the overall, long-term plan for how a personalized customer experience strategy should be implemented and then split into manageable and more affordable phases. The roadmap, implementation guide, and scan-card library support this process by translating assessment results into a suggested set of actions, which should be executed in a certain order.

As a result of the research conducted in this Thesis, organizations are provided with a practical set of tools to support personalization implementation projects, including a self-assessment tool to evaluate organizational readiness (diagnosing the as-is situation), a strategic framework (the 4×4 matrix) to analyze survey results within a broader customer-facing and organizational context, and a set of actionable recommendations (using the developed roadmap and implementation guide, operationalized through scan-cards) to effectively implement a personalized customer experience strategy. Organizations can adopt these tools to more efficiently align their internal resources and efforts towards personalization, thereby improving their ability to deliver superior, individualized experiences while also enhancing return on investment (a challenge frequently identified in personalization initiatives).

Hypothesis

The primary hypothesis of this research is that the effective implementation of a personalized customer experience strategy in an organization is contingent upon the alignment of customer experience management and customer knowledge management practices within a structured framework – organizations which systematically integrate their customer experience initiatives with robust knowledge management processes (i.e., continuously capturing and

leveraging customer insights) will achieve more successful and sustainable personalization outcomes than those that pursue personalization in isolation from knowledge management.

It can be concluded that neither advanced technology nor isolated customer-facing innovations alone are sufficient to guarantee a successful personalization strategy implementation – instead, a holistic, aligned approach (encompassing strategy, people, processes, and knowledge systems together) is needed to be able to scale personalization (as complexity increases, specifically when scaling) and to adapt it over time. More specifically, the hypothesis can be elaborated into three interrelated propositions corresponding to the focus areas of the research.

1. If CEM and CKM dimensions are properly aligned in an organization, then every customer interaction can be supported by relevant customer insights and organizational learnings – leading to higher personalization quality and consistency in the customer's experience.
2. If an organization addresses the key enablers and mitigates the key barriers identified (through conducting a readiness assessment and undertaking targeted improvements), it will create a conducive internal environment for the execution of a personalization strategy. In such an environment, personalization initiatives are more likely to take root and succeed.
3. If the implementation process follows a clear, knowledge-informed methodology (as proposed in this Thesis), the rollout of personalized customer experience initiatives will be more efficient and effective, yielding improved customer experience outcomes compared to a haphazard or purely technology-driven approach.

The central thesis proposes that aligning CEM and CKM is necessary for successful personalized customer experience strategies. This hypothesis was tested throughout the research by examining each link in the proposed alignment. By the conclusion of the study, evidence from the literature, expert consensus, and real-world case applications was used to evaluate the hypothesis. As will be discussed in later chapters, the findings support the view that alignment of CEM and CKM, operationalized through the developed framework and tools, is indeed a crucial factor in achieving effective personalization, thereby substantiating the hypothesis put forward.

Approbation and Practical Application of Research Results

The results of the research are presented in six scientific articles, five of them published and indexed in SCOPUS and Web of Science.

Kokins, G., Straujuma, A., Lapiņa, I. “From Theory to Practice: A Holistic Framework for Implementing an Open Innovation Driven Personalized Customer Experience Strategy”, article finalized, and submitted for publishing in *Journal of Services Marketing* (ISSN: 0887-6045).

Kokins, G., Straujuma, A. Systematic Literature Overview: Gaps, Inconsistencies, Contradictions and Future Research Directions within Customer Experience Management. In: *The 24th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2020): Proceedings*. Vol. 3, Callaos, N. C., Gaile-Sarkane, E., Horne, J., Sanchez, B. (eds.). US, Orlando: International Institute of Informatics and Systemics (IIIS), 2020, pp. 65–70. ISBN 978-1-950492-45-9. Database: Scopus.

Kokins, G., Straujuma, A. Business Process Knowledge Management: Literature Review. In: The 24th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2020): Proceedings. Vol. 3, Callaos, N. C., Gaile-Sarkane, E., Horne, J., Sanchez, B. (eds.). US, Orlando: International Institute of Informatics and Systemics (IIIS), 2020, pp. 71–76. ISBN 978-1-950492-45-9. Database: Scopus.

Kokins, G., Straujuma, A., Lapiņa, I. The Role of Consumer and Customer Journeys in Customer Experience Driven and Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 2021, Vol. 7, No. 3, Article number 185. ISSN 2199-8531. Available from: doi:10.3390/joitmc7030185. Database: Scopus.

Straujuma, A., Kokins, G. Developing a Customer Centric Journey Map. In: 12th International Multi-Conference on Complexity, Informatics and Cybernetics (IMCIC 2021): Proceedings. US, Virtual Conference: International Institute of Informatics and Systemics (IIIS), 2021, pp. 134–139. ISBN 978-1-950492-57-2.

Kokins, G., Zāga-Bremmere, L., Ozoliņš, M. Increasing Performance through Loyalty by Improving Customer Service Quality: Case Study of a Fuel Retailer. In: The 26th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2022): Proceedings. Vol. 2, Callaos, N. C., Gaile-Sarkane, E., Hashimoto, S., Sanchez, B. (eds.). International Institute of Informatics and Cybernetics, 2022, pp. 154–159. ISBN 978-1-950492-65-7. ISSN 2771-0947. Available from: doi:10.54808/WMSCI2022.02.154. Database: Scopus.

The results of the research were presented at 10 international scientific conferences.

1. Kokins, G. Systematic Literature Overview: Gaps, Inconsistencies, Contradictions and Future Research Directions within Customer Experience Management. 24th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2020), online, 13/09/2020–16/09/2020.
2. Kokins, G. Business Process Knowledge Management: Literature Review, 24th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2020), online, 13/09/2020–16/09/2020.
3. Kokins, G. Who Are Your Customers Really? Introduction to “Customer Personas” and “Consumer Journeys”. ICARe Alumni 2021 Conference “Reimagining Strategy for Alumni Relations and Career Development”, online, 11/05/2021–18/05/2021.
4. Kokins, G. Creating a Customer-Centric Journey Map. 25th World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2021), online, 18/07/2021–21/07/2021.
5. Kokins, G. The Role of Consumer and Customer Journeys in Customer Experience Driven Innovation. Society of Open Innovation: Technology, Market, and Complexity (SOI) & Riga Technical University (RTU) 2021 Conference, online, 12/07/2021–15/07/2021.
6. Kokins, G. Establishing a Data-Driven Approach for Consumer Journey Mapping and Measurement. Riga Technical University 62nd International Scientific Online Conference “Scientific Conference on Economics and Entrepreneurship” (SCEE’2021), Riga, 14/10/2021–15/10/2021.

7. Kokins, G. Developing a Customer-Centric Journey Map: The Case Study of Cambridge Venture Camp. 80th International Scientific Conference of the UL section “Higher education institution and business cooperation: potential, challenges and innovations”, Riga, 01/03/2022.
8. Kokins, G. From Theory to Practice: A Holistic Framework for Implementing an Open Innovation Driven Personalized Customer Experience Strategy. Society of Open Innovation: Technology, Market, and Complexity (SOI) & Riga Technical University (RTU) 2024, 09/07/2024–12/07/2024.
9. Kokins, G. Personalization vs. Privacy: Strategies for Gaining Customer Trust through Transparency. 65th International Scientific Conference “Scientific Conference on Economics and Entrepreneurship” (SCEE’2024), Riga, 11/10/2024.
10. Kokins, G. Integrating Customer Experience and Knowledge Management: A Self-Assessment Tool For Personalization Readiness, 66th International Scientific Conference on Economics and Entrepreneurship (SCEE’2025), Riga, 16/10/2025.

The research results were developed through participation in the following projects.

1. Fostering Student Engagement through AI-driven Qualitative Quality Assurance Practices (01.11.2020–30.04.2023): 03000-3.1.2.1-e/278 | 2020-1-LV01-KA203-077578 | 4382. Position: Expert. Funding programme: ERASMUS+.
2. European Deans Council for Designing Sustainability Impact Roadmaps (01.09.2020–31.08.2023): 03000-3.1.2.1-e/22 | 2020-1-IT02-KA203-079952 | 4458. Position: Expert, Study Process Expert. Funding programme: ERASMUS+.
3. European Entrepreneurship Training Community (01.09.2018–31.08.2021): 03000-3.1.2-e/103 | 2018-1-LV01-KA203-046974 | 3802/2018. Position: Research Assistant. Funding programme: ERASMUS+.

1. THEORETICAL ASPECTS OF CUSTOMER EXPERIENCE AND KNOWLEDGE MANAGEMENT CONCEPTS

Customer experience management (CEM) refers to the strategies and processes that organizations use to design, orchestrate, and react to customer interactions in order to meet or exceed customer expectations and enhance their experiences (Homburg et al., 2017; Meyer & Schwager, 2007). Customer Experience Management is about understanding the customer experience – often defined as the cumulative, holistic perception that customers have of their interactions with a firm, including cognitive, emotional, sensory, and social elements (De Keyser, 2015). Unlike traditional marketing approaches that focused on individual transactions or customer satisfaction in isolation, CEM emphasizes a customer-centric, journey-level view. The customer journey reflects the sequence of customer interactions and experiences across organization-managed touchpoints, encompassing cognitive, emotional, and behavioral responses throughout the entire relationship lifecycle – this definition is developed by the author based on the conceptualization and description of the customer journey by Lemon and Verhoef (2016). CEM considers every touchpoint across the entire customer lifecycle and seeks to manage these touchpoints in an integrated way to create a coherent, positive experience (Lemon & Verhoef, 2016; Verhoef et al., 2009).

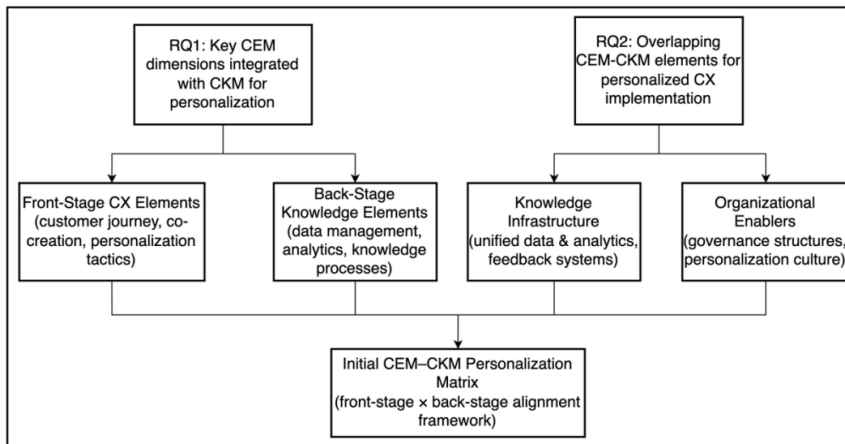


Fig. 1.1. Conceptual foundation (RQ1 and RQ2).

Personalizing customer experiences requires a tight integration between CEM and CKM – essentially linking the knowledge *about/from* customers with the management *of* the customer’s experience. CEM provides the framework for taking action (designing and delivering experiences), while CKM provides the raw material and insights that inform what actions will be most effective for each customer. This integration addresses a gap where marketing management (CEM) and knowledge management (CKM) have traditionally been separate silos. The rationale is that every customer interaction both uses knowledge (to personalize the

experience in that moment) and creates new knowledge (from the customer’s response, which should be fed back for continuous improvement).

Framework of CEM and CKM dimensions. There are several overlapping elements and activities in CEM and CKM that can be identified as critical for personalization (this is the focus of RQ2 of the study – understanding which elements of CKM and CEM must work together for personalized customer experience implementation). First, both CEM and CKM start with a deep understanding of customer needs and context. In CEM, this appears as customer journey analysis and customer personas; in CKM, it appears as collecting knowledge about customers (e.g., preferences, histories of interactions with the organization). These are essentially the same foundation viewed through two lenses – experiential and informational. Second, feedback loops are central to both: CEM emphasizes listening to the customer to fix pain points, while CKM explicitly values knowledge from customers (feedback, suggestions). Thus, a Voice of Customer (VoC) program can be seen as a joint CEM–CKM mechanism: it not only improves experiences but also feeds a knowledge repository. Third, consider personalization itself: delivering a tailored experience is a CEM goal, but it cannot be achieved without analyzing customer data and knowledge (CKM processes). So, practices like real-time recommendation, dynamic content, or adaptive customer service scripts are where CEM execution is directly fueled by CKM insights (Adke et al., 2022; Gazi et al., 2024). Even internally, the capabilities needed overlap – organizational culture that is customer-centric is needed for CEM, and the same culture must encourage knowledge sharing about customers across departments (for CKM to work). As another example, the role of employees in delivering personalized experiences (CEM) overlaps with internal knowledge management: front-line staff need access to customer knowledge (profiles, histories) and also need to feed back new knowledge (what they learn about customers during interactions) into the system (Bhattacharya & Sinha, 2022).

To structure this integration, it is helpful to map the types of customer knowledge (from CKM) to corresponding CEM processes.

Table 1.1

Customer experience and customer knowledge management integration framework (created by the author)

CEM phase	Knowledge about customers (data captured & analyzed)	Knowledge from customers (input consciously or tacitly provided)	Knowledge for customers (information returned to enhance customer experience)
1. Strategy & segmentation	• Demographics, value tiers, customer lifetime value • Channel preference-logs • Propensity & needs clustering	• Voice of Customer interviews • Pain point narratives • Co-ideation on value propositions	• Personalized onboarding experience • Expectation setting FAQs • Comparative value stories

Table 1.1. continued

2. Experience design (customer journeys & touchpoints)	• Customer persona parameters/facts for journey mapping • Historic data from interactions	• Co-creation workshops and usability testing • Feedback from customers on proposed journeys via surveys	• Prototype walkthrough guides • “How to” videos for new journeys • Customer experience option explainers
3. Experience delivery & personalization	• Real-time behavioral telemetry • Predictive scores for offers/recs	• Heat-map findings and real-time identification • Social media – comments/feedback triggering evaluation of journeys and approach	• Dynamic content & offers • Contextual help/tooltips (proactive) • FAQ/knowledge articles appearing contextually during the journey
4. Monitoring & continuous improvement	• KPIs for various micro/macro segments (NPS, CES, churn rates, CLV) • Funnel drop-off analytics	• Post-interaction surveys • Complaint logs & community threads	• Proactive status updates based on collected data • Personal progress dashboards • “What we changed” transparency notes

Based on the literature review, the author has developed a matrix for implementing personalized customer experiences in organizations of varying sizes. This matrix combines elements of organizational change, technology utilization, data management, and a deep understanding of customer needs and preferences (which could be determined as personalization elements).

Customer-facing (front-stage) elements

Table 1.2. presents a holistic framework that integrates organizational and customer-facing elements essential for implementing a personalized customer experience (customer experience) strategy. This table was constructed through qualitative content analysis of the existing literature, identifying intersections between front-stage components (observable to clients) and back-stage components (organizational frameworks and methodologies). Each cell in Table 1.2 demonstrates the overlap between these dimensions – capturing how organizational back-stage related processes and elements overlap and interact with specific customer-facing components, ideally – enabling and supporting those. For instance, it underscores how data governance facilitates transparency or how technological infrastructure is essential and a baseline requirement for omnichannel customer experiences. Each cell provides a short explanation of

the overlap between these dimensions, guiding organizational practitioners in effectively aligning strategies with client expectations.

Table 1.2

Customer facing and back-stage (non-visible) organizational element 4×4 matrix

Customer facing (front-stage) elements	Back-stage (non-visible) elements				
		Personalization strategy	Ethics and privacy	Data analytics and continuous improvement	Technological infrastructure for personalization
	Co-creation and customization	Ensures organizations can provide more personalized experiences by gathering and reacting to customer input	Ensures that customers can trust that their input will be provided securely and enables responsible customization	Helps to not only shape but later improve the personalization efforts by using the previously saved customer's input	Helps to achieve real-time reaction based on customer's involvement with integrated tools.
	Transparency and trust	Builds trust by clearly demonstrating and explaining the algorithms used	Strengthens trust through clear ethical (and regulatorily compliant) practices	Communicates improvements to the customers with data-driven insights	Ensures that data is stored securely, and access and usage matches obtained customer consent
	Personalized customer journey	Touchpoints across all the organizations channels are managed to personalize journeys across all of them.	Helps organizations keep the collected and provided data across all touchpoints of the journey secure and safe	Ensures that all touchpoints across multiple online/offline channels are improved over time.	Links touchpoints for personalized omnichannel journeys in all channels (not just a select few)
	Personalized offers and recommendations	Ensures the offers and other communication are relevant and timely	Delivers responsible and trustworthy tailored offers, and keeps track of "why" a specific offer was created for the customer	Helps to optimize and improve offer precision and relevance using performance-based analytics	Delivers accurate, data-driven recommendations for the organization to evaluate how well offers are perceived by customers

Personalization strategy involves aligning organizational goals with customer expectations and behaviors, specifically focusing on creating a personalized customer experience that fits the company culture, value proposition, and resource constraints. In this aspect of the strategy, the company must clearly define customers' needs and goals and use customer personas alongside strong customer knowledge management practices as foundational elements (Daline & Thomas, 2024; Hutson et al., 2023; Sakas et al., 2022).

Ethics and privacy are essential when creating personalized customer experiences. Ethical data collection, compliance with GDPR and other local regulations governing the use of personal data, as well as robust security measures, are recurrent themes. The literature emphasizes that ethical considerations and transparency in data usage may significantly affect customer perceptions and, as a result, their personalized experiences (Eg et al., 2023; Kunz &

Wirtz, 2024; Yan & Chiou, 2020). Researchers argue that preventing bias in algorithmic decision-making and maintaining clarity are critical for building and ensuring trust (Volchek et al., 2019).

Technological infrastructure for personalization. A strong technology infrastructure supports the implementation of personalized experiences. CRM systems, customer data platforms (CDPs), real-time analytics, and recommendation engines are essential technologies that can help drive customer loyalty if utilized correctly (Anshari et al., 2019; Gazi et al., 2024; Magatef et al., 2023; Sigala, 2018). Furthermore, an organizational commitment and strategically matching knowledge management strategies can improve a CRM's performance (Gazi et al., 2024). Articles also describe how CRM and knowledge management systems impact customer satisfaction and brand loyalty, underscoring the technological backbone needed for effective personalization (Bashar et al., 2022).

Data analytics and continuous improvement involve updating personalization strategies based on evolving customer data and feedback (Arachchi et al., 2020; Bashar et al., 2022; Liu et al., 2022; Wasilewski, 2024; Zet et al., 2023). The integration of journey mapping, service blueprinting, and marketing automation facilitates this adaptive learning process (Anshari et al., 2019; Vasantham et al., 2023). Multistakeholder recommendation frameworks adapt over time to improve customer experience through continuous feedback loops and assumption testing (Abdollahpouri et al., 2020).

Customer-facing (front-stage) elements

The personalized offers and recommendations aspect does not only evaluate the formulation of product recommendations within e-commerce frameworks but also the provision of tailored offers disseminated through email and various other communication channels (Esmeli et al., 2022; Shyam et al., 2024). The personalization of offers can extend to offline interactions, including face-to-face engagements or telephonic communications, particularly evident in traditional brick-and-mortar business models, wherein a personalization engine employed by store personnel, contingent upon the identification of the customer during the interaction, can proffer the most pertinent recommendations based on the customer's historical interactions, purchases, and behavioral patterns (Sujata et al., 2019).

This shift necessitates a substantial transformation in mindset and strategy for numerous organizations, as personalization necessitates a fundamental reassessment from the perspective of the customer's lifecycle: a process that may require considerable time to establish efficiently regarding content, channel strategies, and customer journeys, often resulting in an initial return on investment that is slower and lower than that of traditional product-segment-channel-message frameworks for sales and marketing campaigns, thereby potentially leading organizations to dismiss personalization as a feasible strategic option, implementation must be approached from both top-down and bottom-up perspectives to ensure that explicit expectations are articulated for the effective execution of a personalized customer experience strategy (Ameen et al., 2021).

Personalized customer journey means customizing the methodology of a tailored experience. With individualized propositions and suggestions, the subsequent critical inquiry must determine the optimal manner of conveying this proposition through the appropriate channel,

at the optimal moment, and with the precise communication. Implementation of personalization on a large scale necessitates a genuine omnichannel experience without causing any disruption to the customer journey that has been strategically designed by the organization (Van Nguyen et al., 2024). To realize this objective at scale, it is imperative to automate a significant portion of the interactions – employing (Kaperonis, 2023; Krishnareddy et al., 2022; Landim et al., 2022) and various automated self-service instruments. The orchestration of omnichannel interactions throughout the customer journey, driven by the customer’s requirements and customized to their specific preferences, necessitates extensive collaboration among various departments to facilitate this – compelling sales, service, marketing, and technology divisions to cooperate in order to deliver a unified experience, rather than concentrating solely on their departmental touch-points, but rather on the journey in its entirety (Indriasari et al., 2019; Magatef et al., 2023; Zhang et al., 2024).

Transparency and trust. The presence of biases, as well as the potential risks associated with security and data breaches, significantly influences a customer’s perception – primarily because when incidents occur, they often attract extensive media attention and are typically acknowledged by a considerable number of consumers. Furthermore, it is essential to emphasize the necessity for transparency in order to mitigate the negative repercussions that may arise when personalization engines and algorithms yield erroneous assumptions – thereby elucidating the underlying processes. When an inappropriate product is suggested to a customer without any clarity regarding the rationale, this situation tends to provoke a more adverse response compared to circumstances in which the recommendation is contextualized by indicating that it was derived from the purchasing history of similar customers (Alcaraz-Herrera et al., 2022; Butori & Lancelot Miltgen, 2023; Saleem & Naseem, 2023b).

Co-creation and customization. Creating a customized experience tailored to the unique requirements of each individual customer is a challenging task to achieve, as the decision-making process of human beings is a considerably complex process. Our needs are influenced by a multitude of different factors, which can prove rather complicated to anticipate, even with the application of artificial intelligence and machine learning technologies. The ability to provide a co-creation experience, where customers can themselves influence and shape their interactions and engage in the decision and process of what constitutes a “personalized customer experience”, has been shown to reduce some of the complexity and take away the “guesswork” an organization needs to do – leading to better outcomes (Chandra et al., 2022). This approach also facilitates the establishment of a feedback loop from the customer to the organization, enabling practitioners to incorporate the co-creation activities of customers and modify the algorithms used within the personalization engines to enhance accuracy (Saleem & Naseem, 2023a). Furthermore, the process of customization may be employed as an exceptionally effective strategy to enhance the individualized experience – permitting consumers to utilize a pre-established array of options to customize an experience in accordance with their requirements: frequently, customization constitutes an integral component of the co-creation process (Stojčić et al., 2024).

Chapter 1 establishes the theoretical foundation of the Thesis by systematically integrating the concepts of customer experience management and customer knowledge management in the context of personalized customer experience. The chapter identifies the main CEM dimensions,

the key CKM knowledge types, and the overlapping elements whose alignment is necessary for implementing personalized customer experience in organizations. Thus, Chapter 1 provides an answer to research questions RQ1 and RQ2. At the same time, the theoretical integration framework developed in this chapter supports the theoretical basis of the hypothesis, namely that the effective implementation of personalized customer experience depends on the structured alignment of CEM and CKM dimensions and elements. Having established the conceptual integration of CEM and CKM, the discussion now turns to the organizational factors that determine whether this integration can successfully drive personalization.

2. PERSONALIZED CUSTOMER EXPERIENCE IMPLEMENTATION IMPACT FACTORS

To examine the organizational conditions that support or hinder the implementation of personalized customer experience strategies, this chapter follows a structured process grounded in both theory and expert validation. The goal is to move beyond ad hoc assumptions about “what matters” and instead identify a well-justified set of enablers and barriers based on established research and practitioner insight. Figure 2.1 outlines the analytical flow used to derive these factors: beginning with a literature review across relevant domains such as CRM, customer experience, and digital transformation, followed by the development of a preliminary list of potential implementation factors. This list served as the foundation for a Delphi expert panel, where practitioners and academics reviewed, refined, and reached consensus on which factors are most critical for successful personalization efforts. The outcome of this process is a validated set of enablers and barriers that underpin the tables and analyses presented later in this chapter.

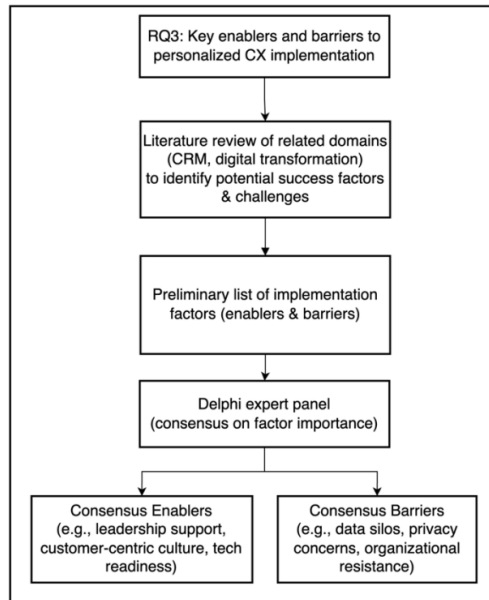


Fig. 2.1. Phase 2: Identification of implementation factors (RQ3).

Implementing a personalized customer experience strategy is a complex task and requires managing multiple organizational factors at the same time. Currently, a lot of companies are investing heavily in personalization initiatives. Yet a significant proportion struggle to translate these plans into successful practice, while nearly 69 % of business leaders surveyed in 2024’s State of Personalization research prioritize personalizing customer experiences, about 39 % also report challenges in implementation (Twilio Segment, 2023). This implementation gap underscores the importance of understanding why some personalization strategies thrive and

others falter. Academic and industry observers note that the key factors organizations must consider when integrating personalization have not been thoroughly examined in prior research. Identifying these success factors is crucial because personalization efforts often fail not due to a flawed concept but due to barriers within the organization's strategy, culture, data management, or technology. Therefore, a focused analysis of enablers (factors that facilitate successful implementation) and barriers (factors that hinder it) is needed to guide organizations in refining their approaches.

Fig. 2.2. Matrix of front- and back-stage dimension, which is required so that recommendations of how to overcome the barriers can be developed for organizational practitioners to use.

	Personalization strategy	Ethics and privacy	Data analytics and continuous improvement	Technological infrastructure for personalization
Co-creation and customization	BARRIERS	BARRIERS	BARRIERS	BARRIERS
	RECOMMENDATIONS	RECOMMENDATIONS	RECOMMENDATIONS	RECOMMENDATIONS
Transparency and trust	BARRIERS	BARRIERS	BARRIERS	BARRIERS
	RECOMMENDATIONS	RECOMMENDATIONS	RECOMMENDATIONS	RECOMMENDATIONS
Personalized customer journey	BARRIERS	BARRIERS	BARRIERS	BARRIERS
	RECOMMENDATIONS	RECOMMENDATIONS	RECOMMENDATIONS	RECOMMENDATIONS
Personalized offers and recommendations	BARRIERS	BARRIERS	BARRIERS	BARRIERS
	RECOMMENDATIONS	RECOMMENDATIONS	RECOMMENDATIONS	RECOMMENDATIONS

Fig. 2.2. Matrix of front- and back-stage dimension overlap – barriers and recommendations.

Tables 2.1 and 2.2 provide a consolidated summary of the key enablers and barriers for implementing personalized customer experience strategies, as identified through the literature review and analysis. These two tables serve as a reference, contrasting positive drivers with the challenges that must be managed.

Table 2.1

Summary of key enablers for implementing a personalized customer experience in organizations (developed by the author based on literature review)

Enablers (success factors)	
Integrated customer data and systems	Unified platforms (CRM, CDP, etc.) provide a single customer view across channels. This enables consistent, omnichannel personalization and effective CKM sharing.
Strong leadership support and clear strategy	Top management champions a cohesive personalization strategy, aligning it with business goals and dedicating resources. Explicit objectives and top-down/bottom-up communication guide all teams.

Table 2.1. continued

Customer-centric culture and collaboration	Organizational culture prioritizes customer experience; cross-functional teams and knowledge sharing are encouraged to deliver seamless journeys. Employees embrace personalization goals.
Advanced analytics and CKM practices	Having a developed data analytics capability within the organization that can gather and analyze customer knowledge and process it can inform decision-making for leaders in the organization. Continuous testing and learning (A/B testing, feedback loops) allows personalization approaches to be refined and improved iteratively over time as more information is gathered.
Technology infrastructure	Being able to collect data in real-time and to react in real-time to customer actions in various organization-owned channels, AI-driven recommendation engines (reducing the need for employee and manual involvement), and journey automation tools enable personalization at scale. Making sure that the organization's IT architecture is integrated across departments and areas can also help to support quick deployment of newly created and tested personalized content, as well as react to feedback that is received after the launch.
Ethical data handling and transparency	Strong data governance, privacy compliance, and transparency in how organizations use collected data build customer trust. Customers feel more comfortable with data-driven personalization if they understand the main principles and goals – thus feeling more confident to share more data and engage.
Employee empowerment and training	Staff are trained in personalization tools and empowered to make customer-centric decisions on the fly. Front-line employees have access to customer insights (via CKM systems) and are encouraged to use them to tailor service.
Agility and adaptability	Since personalization requires a lot of testing and adjustments, organizations should quickly adjust personalization strategies in response to changing customer behavior or feedback, as well as market trends. A culture of experimentation and quick learning from failures, instead of covering them up, ensures that the results are improved over time.
Customer co-creation and external partnerships	Customers are involved as co-creators (providing input, customizing their experience) and external ideas (open innovation) are leveraged. This ensures solutions closely fit customer needs and fosters buy-in.
Sufficient resources and long-term commitment	The initiative is backed by adequate funding, time, and personnel. A long-term view is taken where initial slow ROI is tolerated in expectation of strategic gains (customer loyalty, LTV, etc.).

Table 2.1 reveals several clear themes among the key enablers. Many of these factors emphasize robust data and technology – for example, unified customer systems and advanced analytics – indicating that a single customer view and the ability to derive insights are foundational. Other enablers highlight leadership and culture (strong executive support, cross-functional teams, and a customer-centric mindset), suggesting that strategic alignment and organizational buy-in are critical. The inclusion of agility, continuous testing, and customer involvement (co-creation) underscores that personalization is an iterative process requiring

flexibility, learning, and sustained engagement. These factors together suggest that robust technical infrastructure and aligned organizational culture must work hand in hand to enable effective personalized customer experiences.

Table 2.2

Summary of key barriers for implementing a personalized customer experience in organizations (developed by the author based on literature review)

Barriers (challenges)	
Data silos and fragmented knowledge	Customer data is scattered in disconnected systems or departments, leading to an incomplete view of customers and inconsistent experiences. Knowledge is not shared organization-wide, hindering CEM–CKM integration.
Lack of strategic alignment and support	No clear personalization vision or leadership buy-in. Initiatives suffer from unclear goals or get deprioritized, and resources (budget, time, staff) are not adequately allocated, causing efforts to stall.
Resistance to change and siloed mindset	Departments or individuals resist new personalization processes. A silo mentality (“my department’s goals first”) leads to poor coordination, duplicative or conflicting efforts, and reluctance to adopt customer experience innovations, undermining personalized strategy execution.
Skill and insight gaps	The lack of not only skilled but technologically enabled and available data analysts, experience designers, or relevant IT expertise prevents effective use of personalization technology. Limited analytical capabilities can mean that the organization cannot derive or apply the gathered insights, resulting in static or basic personalization that does not improve over time.
Outdated technology and integration challenges	Many organizations may have legacy systems that do not communicate in real time with each other or lack automation capabilities, making it hard to personalize efficiently, especially at scale. Technical constraints or integration costs become barriers, causing delays or an inability to execute certain journeys, and require substantial investment to solve.
Privacy concerns and low trust	Customers can be uneasy or sceptical about how their data is used if this is not transparently explained to them. Regulatory restrictions can limit data collection and usage. Low trust leads to reduced voluntary data sharing or opt-outs, weakening the personalization effectiveness.
Unprepared workforce	Employees lack training or confidence to use new personalization systems, or fear that automation will displace them. Without understanding the organization’s personalization strategy (meaning: knowing which are the main components and elements being personalized, what is the main goal for the personalization strategy for the specific organization) front-line staff might not execute it correctly or consistently, diminishing the customer experience.
Rigid processes and inflexibility	The company cannot or will not adapt existing processes. Personalization efforts get bogged down in red tape, or once implemented, remain static. The lack of agility means personalization becomes outdated as customer preferences or market conditions evolve.

Table 2.2 continued

Reduced customer input	Personalization design is done in an “inside-out” manner without meaningful customer feedback collected and processed – without external insights. This can lead to a mismatch with customer expectations and to missed opportunities for improvements and also innovation. Customers might reject or disengage from personalization attempts that do not match their expectations – especially after their input has been provided.
Resource constraints and short-term focus	Budget limitations, insufficient personnel, or tight timelines force a narrow implementation (or none at all). Pressure for immediate ROI may cause the project to be dropped if quick wins are not evident, preventing the realization of long-term benefits.

Tables 2.1 and 2.2 highlight that many enablers and barriers are mirroring each other – which further shows the importance for organizations to not only promote enablers but also actively combat the corresponding barriers instead. The insights from this chapter lay the foundation for the next steps in the research process: evaluating how organizations can measure and assess their readiness and developing a step-by-step framework to implement personalization strategies by aligning customer experience and customer knowledge management. The ultimate aim is to provide both a theoretical and practical blueprint that helps practitioners navigate these factors to achieve a truly personalized, knowledge-infused customer experience. Each enabler contributes to aligning customer experience management (CEM) and customer knowledge management (CKM) for personalization, while each barrier represents a misalignment or deficiency that can undermine the strategy. The successful implementation requires maximizing enablers and systematically addressing the corresponding barriers. These identified enablers and barriers set the stage for developing a practical evaluation framework and toolkit, which are presented in the next chapter.

Chapter 2 identifies and structures the main enablers and barriers influencing the successful implementation of personalized customer experience in organizations. In doing so, it provides a direct answer to research question RQ3, showing that successful personalization is not accidental but depends on the existence of specific organizational preconditions and the deliberate mitigation of key barriers. These findings also strengthen the Thesis hypothesis and the second thesis for defense, as they confirm that effective implementation of personalized customer experience is not possible without the systematic alignment of CEM and CKM within the internal organizational environment. The novelty of this chapter lies not only in the identification of these factors, but also in their structured integration into a unified view of personalization implementation, grounded in both literature analysis and expert validation.

3. EVALUATION FRAMEWORK AND IMPLEMENTATION TOOLKIT FOR PERSONALIZED CUSTOMER EXPERIENCE

In order to address the remaining research questions, this chapter introduces a self-assessment framework and implementation toolkit that align CEM and CKM in practice, guiding organizations through the personalization process. To translate the self-assessment results into actionable implementation steps, this research complements the roadmap with an implementation guide consisting of scan-cards. These scan-cards serve as concise, structured intervention summaries designed to address specific gaps in personalization readiness. Each scan-card is aligned with a particular cell of the 4×4 matrix, or with a small cluster of closely related cells, and summarizes the main barriers, recommended actions, required resources, and expected outcomes relevant to that area. In this way, the scan-cards act as a bridge between diagnostic assessment results and the structured implementation of personalized customer experience within the organization.

	(A) Personalization strategy	(B)
(1) Co-creation and customization	Scan Card 1-A - Key Barriers - Recommended Actions - Quick Wins - Resources & Effort - Success Metrics	Scan Card 1-A: Co-Creation & Customization × Personalization Strategy Purpose (cell link): Align customer-driven co-creation initiatives with the overall personalization strategy. Key Barriers - Strategy built <i>without</i> direct customer input → low relevance. - Isolated co-creation workshops/customization options → ad-hoc, inconsistent impact. Recommended Actions Embed Customer Input - set up advisory panels / online forums; feed insights into quarterly strategy refresh. Connect Ideas to Roadmap - evaluation criteria for customer-suggested features; prioritize high-value ideas. Governance - add customer-insight/QA reps to strategy meetings. Quick Wins - Run a one-off co-creation workshop with loyal users; immediately tweak an upcoming feature. - Add a "Was this personalization useful?" prompt on customized content and review feedback next sprint. Resources & Effort - Cross-functional team incl. customer Insights repr. - Tools: virtual workshop platform, survey tool, KM repository. - Moderate start-up effort (panel setup in 2-3 months; scalable thereafter). Success Metrics ↑ Satisfaction dynamic personalized offers post-workshop. - Customer engagement: # ideas submitted, workshop participation rate.
(2) Transparency and trust	Scan Card 2-A - Key Barriers - Recommended Actions - Quick Wins - Resources & Effort - Success Metrics	- Key Barriers - Recommended Actions - Quick Wins - Resources & Effort - Success Metrics
(3) Personalized customer journey	Scan Card 3-A - Key Barriers - Recommended Actions - Quick Wins - Resources & Effort - Success Metrics	- Key Barriers - Recommended Actions - Quick Wins - Resources & Effort - Success Metrics
(4) Personalized offers and recommendations	Scan Card 4-A - Key Barriers - Recommended Actions - Quick Wins - Resources & Effort - Success Metrics	- Key Barriers - Recommended Actions - Quick Wins - Resources & Effort - Success Metrics

Fig. 3.1. An example of a roadmap implementation guide's scan-card (created by the author).

Figure 3.1 provides an example of how an implementation guide scan-card is linked to a specific matrix cell. The alignment is designed so that, when the self-assessment indicates a low score in a given area, for example in Cells 2A and 2B, the respondent is directed to the corresponding scan-card. In this way, each identified weakness is connected not to a generic recommendation but to a targeted course of action relevant to that specific intersection of CEM and CKM elements. This approach helps prevent a common implementation mistake, namely jumping to attractive or technology-driven solutions before addressing the actual root causes

related to strategy, governance, data, or trust. The alignment is such that if the assessment flags Cells 2A and 2B as low, the person filling in the questionnaire would see the implementation guide's scan-card recommended. Our approach was to categorize cards by the matrix.

By aligning scan-cards to weak cells, the roadmap ensures relevance. It prevents a common pitfall, where companies jump to popular and trending solutions that do not address their root problems. For example, many companies underperforming in personalization think “maybe we need AI”. But if the matrix/self-assessment indicated the real problem is lack of strategy or trust, the appropriate scan-cards (and thus roadmap items) will focus on strategy workshops or trust-building initiatives before investing heavily in an AI tool. In that sense, the scan-cards embody the knowledge integration of CEM and KM: they are knowledge artifacts (cards) derived from academic and practical knowledge, delivered to improve customer experience management.

The implementation guide, consisting of scan-cards reference findings of prior chapters – the identified common barriers and success factors. For example, if earlier interviews said “siloes data is a big barrier”, a scan-card for data analytics (C) likely is “Implement an integrated data lake or customer data platform” – a direct response to that barrier.

Not all improvements can or should be done at once. The sequencing strategy in the roadmap is crucial for practicality. We prioritize actions based on the following factors.

Impact: How much will this action improve the customer experience or the organization's capability? (High-impact items often move to earlier phases to realize benefits sooner, but sometimes a high-impact item requires pre-requisites).

Urgency: Are there any compliance or competitive pressures? For instance, if privacy governance is very weak (and it is a regulated industry), that's urgent to fix – so a governance scan-card might be Phase 1.

Dependency: As mentioned, some things need others first. Usually, strategy and governance actions come early. Quick technical fixes or pilot projects can often happen in parallel with strategy work (to maintain momentum), but full-scale tech rollouts might wait until strategy clarifies requirements. Cultural changes (like training staff or shifting mindset) often need to start early because they take time to permeate.

Resource availability: If a company has limited budget this quarter, we might schedule big tech investments in the next fiscal period and focus now on process changes that are cheaper. The roadmap builder can take inputs about constraints (if the user specifies them) to adjust timing.

Our sequencing strategy is also informed by models like Kotter's 8-step change model (Kotter, 1996) – e.g., establish urgency (the assessment already does that by revealing gaps), form a guiding coalition (we often recommend forming a personalization task force early), create a vision (strategy work), communicate quick wins (perhaps pilot a new personalized campaign within 3 months to show value), etc.

Table 3.1

Phases of personalized customer experience implementation roadmap (created by the author)

Roadmap phase	Main activities	Kotter step(s) addressed	Rationale
Phase 1 – Strategic alignment and quick wins (months 1–3)	• Strategy alignment • Form cross-functional team • Pilot project • Customer-data audit	1. Create a sense of urgency – data audit surfaces gaps 2. Build a guiding coalition – cross-functional team 3. Form strategic vision and initiatives – alignment on personalization strategy 6. Generate short-term wins – pilot project delivers early success	Establishes momentum: a clear vision, influential coalition, and quick victories prove value and build credibility for change
Phase 2 – Infrastructure and process build (months 4–9)	• Implement tech solutions • Create playbooks • Train staff • Improve analytics capability	4. Enlist a volunteer army / communicate vision – training spreads the vision organization-wide 5. Enable action by removing barriers – upgrading tech, codifying playbooks, and upskilling staff remove structural obstacles	Converts early momentum into organizational capability; everyone understands and can act on the personalization vision
Phase 3 – Scaling and continuous improvement (months 10–18)	• Scale previously tested pilots • Co-creation feedback loops • Operationalize governance • Measure ROI	7. Sustain acceleration – scaling rapidly (to remain competitive in the market), enabling real-time feedback loops, tracking ROI, governance embeds accountability	Ensures personalization is no longer a one-off separate project but an evolving, metrics-driven organization-wide programme that keeps advancing
Phase 4 – Innovate and lead (optional) (18 + months)	• Pioneer new techniques • Build new data models • Automate support processes	8. Institute change – embed advanced personalization, AI, automation into culture and processes; personalization becomes “how we do business”	Locks in gains and positions the company as a market leader; new tech and data models reinforce the cultural shift

Additionally, we consider organization-specific sequencing: a bank might need to do governance first due to regulators watching, whereas a startup might do tech first because agility is high and there are no legacy systems.

The front-stage × back-stage matrix establishes the *criteria and components* necessary for personalization-aligned customer experience management. It essentially acts as a blueprint for both what the customer should experience (co-creation, trust, journey continuity, relevant offers) and what the organization must have behind the scenes (strategy, ethics, analytics, technology) to deliver that experience. By articulating 16 specific intersections, it ensures that no critical

element is overlooked – it bridges the gap between high-level concepts (like “we need to personalize”) and operational specifics (like “do we have a feedback loop for improvements in our recommendation system?”). This matrix draws from both CEM and KM literature: CEM provides the front-stage perspective of designing for the customer’s perceptions and interactions (e.g., Lemon & Verhoef, 2016; Bitner et al., 2008), while KM ensures the knowledge flow, learning, and internal processes (e.g., knowledge from customers in co-creation, knowledge about customers through data analytics) support those experiences (Gibbert, Leibold, and Probst, 2002). The matrix is a conceptual alignment of CEM and KM elements required for personalized customer experience.

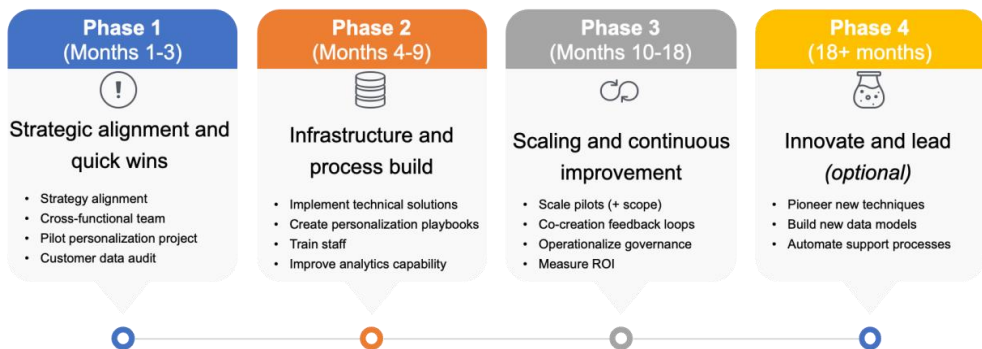


Fig. 3.2. Personalized customer experience implementation model (created by the author, adopted from Kotter (1996)).

The self-assessment tool and the roadmap builder with scan-cards operationalize the evaluation and implementation, respectively. The self-assessment allows an organization to evaluate its current state against the matrix criteria. It serves as a mirror – revealing strengths to leverage and weaknesses to address. Importantly, because it is structured by the same matrix, the evaluation is comprehensive and systematic. Traditional assessments or maturity models might give an overall score, but here we give a diagnostic across 16 specific areas. This granularity is powerful: an organization might find, for example, that they excel in technology (great systems in place) but maybe lack ethical governance – a nuance that a single maturity number could mask. By integrating knowledge from KM (e.g., capturing how well knowledge is shared or learned) and from customer experience (e.g., measuring quality of journey personalization), the tool ensures the evaluation covers both sides of the alignment equation.

The roadmap and its complementary implementation guide, operationalized through scan-cards, can then be used by practitioners once they have reviewed their results, as these tools provide a structured pathway forward. This answers the “how to implement” part of RQ5 in this Thesis. It is not enough to know the current state of an organization’s personalization strategy – organizations also need to know what the next steps should be. The framework developed in this Thesis is unique in that the roadmap for implementing personalized customer experience – with its main implementation phases applicable across organizations – is complemented by specific recommendations linked to specific gaps, grounded in both research and practice. For example, if the assessment reveals a gap in personalization strategy, the results

of the personalization readiness self-assessment tool will point to the relevant scan-cards within the implementation guide, which describe concrete actions for developing that strategy (for example, showing how knowledge management practices such as lessons learned can provide input into strategy development, thereby linking customer knowledge management with the strategy creation process). If the gap lies in data analytics, the scan-cards may recommend establishing a knowledge repository to consolidate customer insights or improving analytics tools – representing a direct integration of CKM into CEM implementation. Each scan-card either explicitly or implicitly connects back to CEM theory (for example, “improving customer journey mapping,” derived from customer experience design literature) or CKM theory (for example, “establishing knowledge-sharing workshops between marketing and IT units” to reduce siloed thinking, based on CKM principles).

When applied together, the matrix, self-assessment tool, and roadmap builder form a joint system of improvement: framework → self-assessment → action plan. The matrix helps to provide the overall structure to develop a personalization vision and elements that need to be considered; the self-assessment measures reality against that vision, and the action plan provides steps to close the gap between reality and vision. This aligns with the idea of double-loop learning in organizations (Argyris, 1977) – not only are they making incremental improvements (single-loop), but reflecting on whether their current paradigms (e.g., approach to personalization) are aligned with desired outcomes and adjusting accordingly (the matrix provides that “ideal model” to aim for). By iterating through these tools (for instance, an organization could re-assess after a year of improvements to track progress), a culture of continuous improvement in personalized customer experience can be cultivated.

It is also worth noting that these tools facilitate cross-functional dialogue. One big challenge in personalization efforts is that they involve marketing, IT, customer service, compliance, etc. The matrix and assessment give all these stakeholders a common language and shared understanding of what is important. The scan-cards and roadmap then give them concrete projects to collaborate on. In pilot feedback, we observed that the framework often acted as a mediator: IT might not have realized the marketing team felt transparency was a major concern, or vice versa, until they sat together reviewing the matrix results. In that sense, the framework not only provides a technical solution but also a socio-technical one, leveraging knowledge sharing across departments (a key KM outcome) to improve CEM.

In summary, RQ4 (criteria/components for alignment) is answered by the 4×4 matrix itself – it is our proposed set of criteria, derived from theory and practice, that an organization should meet to align customer experience and KM for personalization. RQ5 (evaluation and implementation approach) is answered by the combination of the self-assessment (evaluation mechanism) and the roadmap/scan-cards (implementation mechanism). The research contributes a method for an organization to go from *analysis* to *action* in a structured way. This goes beyond existing literature, which might offer high-level guidance or isolated best practices, by providing an integrated, stepwise framework.

In conclusion, the novelty of this part of the Thesis lies not only in the development of individual tools but in the set of tools developed to create an integrated assessment and implementation methodology for enabling personalized customer experiences in organizations. The proposed approach combines the 4×4 front-stage/back-stage matrix, the personalization

readiness self-assessment tool, the roadmap, and its complementary implementation guide into a unified system that allows an organization to move in a structured way from diagnosing its current state to sequenced and practically actionable implementation. Thus, the Thesis offers a methodology that not only defines which elements must be aligned to enable personalization, but also demonstrates how this alignment can be assessed and how it can be implemented progressively in organizational practice.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions have been drawn based on the Thesis's comprehensive literature review, the developed CEM–CKM integration framework, and pilot insights. These conclusions address the research questions stated in the introduction and demonstrate that integrating customer experience management (CEM) with customer knowledge management (CKM) is a prerequisite for the development and implementation of effective personalized customer-experience strategies.

1. An in-depth analysis of contemporary literature demonstrated that CEM and CKM concepts can be systematically integrated. The developed two-dimensional integration framework shows that successful personalization depends on the joint management of customer experience management stages and customer knowledge management types. The CEM dimension consists of four main customer experience management stages – strategy and segmentation, experience design, experience delivery and personalization, as well as monitoring and continuous improvement. In turn, the CKM dimension consists of three types of customer knowledge – knowledge *about* customers, knowledge *from* customers, and knowledge *for* customers. This conclusion is grounded in the literature review and confirms that personalization is based on linking customer experience processes with knowledge management practices.
2. As a result of the literature analysis and expert interviews, those CEM and CKM elements that overlap and are necessary for implementing personalized customer experience in organizations were identified and structured. This overlap is reflected in the developed 4×4 matrix of interactions between the front-stage elements of personalized customer experience (visible to the customer) and back-stage elements (invisible to the customer). Four key customer-visible organizational elements – co-creation and customization opportunities, transparency and trust-building measures, personalized customer journey, and tailored offers or recommendations – are linked to four customer-invisible organizational elements – personalization strategy governance, ethics and privacy governance, data analytics and continuous improvement processes, as well as technological infrastructure. The matrix, developed on the basis of literature analysis and expert input, demonstrates how specific knowledge management and organizational capabilities enable each personalized customer experience implementation and improvement initiative. Therefore, it can be concluded that the implementation of personalized customer experience requires the systematic alignment of customer-visible and customer-invisible CEM and CKM elements, and that the developed matrix provides a concrete tool for visualizing these points of overlap or synergy.
3. Using literature analysis, a Delphi expert panel, expert interviews, and case analysis, the main enablers and barriers influencing the successful implementation of personalized customer experience in organizations were identified. It was found that an organization's ability to successfully implement personalized customer experience is determined by a comprehensive set of interrelated factors, from which nine critically

important enablers and nine main barriers were identified. These results, grounded in both the literature and expert validation, demonstrate the multidimensional nature of aligning CEM and CKM and highlight the areas that organizational practitioners need to strengthen or mitigate during the implementation of personalization.

4. Based on the identified enablers and barriers, a practical self-assessment tool in the form of a simple questionnaire was developed to measure an organization's readiness to implement personalized customer experience. The tool covers various elements that overlap between front-stage and back-stage dimensions and that the organization needs to manage in order to overcome the identified barriers. It consists of a structured Likert scale grouped according to the elements defined during the development of the 4×4 matrix, and it was initially piloted and refined based on feedback. This tool diagnostically measures how well the organization's current capabilities correspond to the CEM–CKM integration matrix. By linking the self-assessment survey results to the matrix of front-stage and back-stage element interactions, the organization can obtain a clear diagnosis of gaps in readiness for personalization implementation. This diagnosis can be easily understood and shared with colleagues, thereby helping to reduce silos, which represent a significant barrier. Thus, it was confirmed that organizations can reliably use this tool to identify the strengths and weaknesses of their personalization capabilities.
5. Based on the interpretation of the self-assessment results and expert validation, a step-by-step personalization implementation methodology was developed, showing which steps and elements are necessary for an organization to design and implement personalized customer experience using CEM and CKM frameworks, tools, and methods. The developed methodology includes an assessment of organizational readiness, prioritization of identified gaps, a roadmap, and an implementation guide complementing the roadmap through a library of recommended actions consisting of information cards that serve as a practical reference for specific personalization improvement activities. The phased implementation approach provides a clear progression from initial diagnosis to the design, implementation, and iterative optimization of personalization. The proposed implementation solution was co-created with practitioners and demonstrates how personalization initiatives can best be planned and sequenced, for example by addressing quick wins first and then planning broader infrastructure improvements, while already defining a clear strategy at an early stage so that the initial phases do not constrain future personalization scaling. Based on the feedback gathered in expert interviews and the initial validation, it can be concluded that the developed implementation solution is both practical and sufficiently adaptable for different organizations. As a result, it was demonstrated that the theoretical model of the Thesis has been transformed into a practically usable and action-oriented model by translating theory into concrete steps.
6. Pilot application during expert evaluation sessions showed that the proposed CEM and CKM integration framework is practically viable. Experts confirmed that the framework's components are clear, logically interconnected, and relevant to real organizational needs in the context of personalization implementation. Therefore, it can

be concluded that the developed approach is not merely a theoretical construct, but a practically applicable solution that helps organizations structure the implementation of personalized customer experience. This strengthens the confirmation of the hypothesis by demonstrating that the alignment of CEM and CKM is not only theoretically justified, but also feasible in practice. At the same time, it should be noted that a full evaluation of impact would require continuous long-term observation.

7. The research conducted in this Thesis confirms that effective, scalable, ethical, and legally compliant personalization within an organization requires the alignment of customer experience initiatives with knowledge management capabilities and processes. Organizations that synchronize CEM and CKM efforts – for example, by ensuring that every personalized offer or interaction is based on up-to-date customer knowledge and supported by internal processes – are able to provide more meaningful, consistent, and customer-expectation-aligned experiences, particularly at scale. It can therefore be concluded that the Thesis hypothesis is confirmed: the effective implementation of personalized customer experience depends on the mutual alignment of CEM and CKM dimensions and elements within a structured framework. The study also shows that neither advanced technologies nor isolated customer-oriented innovations alone are sufficient to guarantee successful implementation of a personalization strategy if the alignment of strategy, people, processes, and knowledge systems is not ensured.

The developed CEM and CKM integration framework and its complementary tools, including the self-assessment survey, the guide development tool, and diagnostic cards, demonstrate a high degree of flexibility and adaptability. Expert interviews covering different industries and organizational sizes showed that the main aspects and challenges of personalization implementation remain similar across contexts, even though their specific manifestations may differ. Therefore, it can be concluded that the developed approach is not limited to a single type of organization, but can be applied across different industries and organizational contexts by adapting it to specific strategic goals, customer segments, and technological environments. This further supports the confirmation of the hypothesis by showing that structured CEM and CKM alignment is practically relevant not only in one specific case but in a broader and more generalizable way.

Considering the above conclusions, targeted recommendations are proposed for three key audiences – organizations' practitioners, customer experience leaders and/or change agents.

For practitioners (customer experience management teams, service designers or customer service managers, knowledge and training managers, marketing managers, IT CRM/customer data platform product owners, revenue operations managers and specialists).

1. Embed knowledge in experience design. Incorporate customer knowledge management practices into everyday customer experience design and delivery. For every customer journey mapping or service design activity, ensure that customer knowledge (knowledge *for*, *from* and *about* customers) is systematically captured and fed back into improving the experience. Front-line practitioners should treat each customer interaction as an opportunity to generate useful knowledge (e.g. via feedback forms, CRM notes, social listening) and use that knowledge to tailor and refine subsequent experiences later on.

While this practice helps close the loop between customer interactions and organizational learning, directly supporting personalization efforts with up-to-date insights – this is not an easy task as it requires also technological infrastructure support to capture and be able to reuse this gathered knowledge to improve the personalization efforts, as well as the strategy to help facilitate this process daily.

2. Use the front-stage and back-stage organizational element 4×4 matrix as a practical checklist when planning personalization initiatives. Before launching a new personalized service or campaign, customer experience practitioners should review the matrix to ensure all enabling elements are in place. For example, if a team plans to roll out a real-time personalized recommendation feature (a front-stage element), the matrix reminds them to confirm that the corresponding back-stage capabilities (such as a robust analytics system and updated knowledge base content, and most importantly – all the legal and ethical aspects) are prepared. By using the matrix in project planning and retrospectives, practitioners can more systematically align their customer-facing innovations with the necessary internal knowledge support, reducing the risk of inconsistent execution or siloed efforts.
3. Foster cross-functional knowledge sharing. Proactively collaborate across departments to break down the existing information silos that many organizations have developed over the years. Practitioners on customer experience and KM teams should regularly exchange customer insights, data, and best practices with one another (and with IT, marketing, customer service, legal and compliance, IT CRM/Marketing automation teams, etc.). For instance, a service designer might coordinate with a knowledge manager to integrate customer support FAQs into a digital experience, or a marketing specialist might share analytics trends with the product team to drive co-creation of personalized features. Such bottom-up knowledge sharing complements any top-down organizational initiatives and helps cultivate a culture where customer knowledge flows freely to wherever it can enhance the experience. This recommendation is driven by the finding that siloed knowledge is a key barrier – practitioners can begin to chip away at that barrier by actively reaching out and forming informal networks for customer knowledge exchange in their day-to-day projects.

For customer experience leaders and change agents (digital transformation project managers and leads in organizations, or as outsourced functions, customer experience director or other higher-level management representatives focusing on customer experience).

1. Institutionalize personalization readiness audits. Implement the self-assessment tool as a periodic organizational audit. Customer experience leaders should mandate a regular (e.g. annual or bi-annual) use of the personalization readiness self-assessment across relevant teams. As a result of implementing this on a regular basis, leaders can obtain a clear, evidence-based view of the company's strengths and weaknesses in personalization strategy implementation. Reviewing and analyzing the results from the self-assessment tool can help with strategic planning – for example, if the assessment reveals low maturity in data analytics capabilities or knowledge sharing culture, leaders can prioritize investments or training in those areas for the coming period. Regular

assessments additionally can help to foster a culture of accountability in the organization and help track progress over time as new initiatives are rolled out during the roadmap of a personalized customer experience strategy implementation, ensuring the organization stays on course toward higher personalization maturity and can make sure that leadership is notified in advance if certain capabilities start to lag behind (especially foundational ones).

2. Utilize the roadmap for phased implementation. Leverage the Thesis's roadmap to plan and execute personalization initiatives in phases. Customer experience change agents should break down the transformation into manageable stages, as outlined by the roadmap. Begin with "quick wins" – high-impact personalization improvements that are feasible with existing resources – to build momentum and demonstrate value (for example, launching a transparent customer preference center or improving an existing recommendation algorithm using already collected data). In parallel, schedule more complex, resource-intensive projects (such as deploying a unified customer data platform or overhauling knowledge management systems) in later phases of the roadmap when sufficient budget and executive buy-in have been secured. By using this phased approach, leaders can balance short-term results with long-term capability building, avoid change fatigue, and maintain stakeholder support throughout the transformation. The roadmap's structured planning also helps change agents coordinate across departments, as each phase's goals and required contributions are clearly defined.
3. Based on the findings in the Thesis, it is proposed to establish some formal governance mechanisms to strengthen governance around data and ethical data management. Since the developed framework also covers the elements of transparency and trust, leaders should help form and establish bodies or processes (e.g., a data ethics board or cross-department privacy committee) that review and guide personalization initiatives. For example, an internal "personalization ethics council" can evaluate proposed uses of customer data or AI algorithms for fairness, compliance, and alignment with customer expectations. The purpose of this would not be only to help the organization mitigate legal and compliance related risks but, more importantly, also build customer trust – turning privacy and ethical concerns into a competitive advantage rather than a liability.
4. Cultivate a knowledge-sharing culture and structure. Leaders and transformation agents should formalize the collaboration that practitioners need by setting up interdisciplinary "personalization teams" or working groups. These teams might include members from marketing, customer service, analytics, tech/engineering/IT, and knowledge management (and other relevant functions like compliance functions) all working together on personalization initiatives – or helping decide on personalization-related issues and decisions once implemented. By organizing teams around customer-centric goals rather than by the function or department itself, leaders ensure that knowledge flows freely and each project benefits from expertise, which has historically been siloed in different teams and areas. Additionally, leadership can encourage a culture of continuous learning from customer feedback – for instance, by scheduling and running regular debrief sessions after major campaigns to discuss what was learned about customer preferences and expectations and how that knowledge can be applied to

improve the process and algorithms. It is important to point out the need to also introduce recognition and incentives (such as KPI adjustments to reward knowledge sharing and customer-centric innovation) in order to sustain these types of cross-functional activities in the long run.

Suggestions for researchers.

1. Cross-industry and cross-cultural validation. Future research should further test and refine the proposed customer experience and customer knowledge management integration framework and defined tools (self-assessment survey and roadmap builder tool) in various contexts – a larger set of different organizations across different industries, sectors, and perhaps even cultural environments. By collecting data on how the framework performs in, say, purely B2B or purely B2C companies, or in different cultures that come from different historical backgrounds, it can be evaluated how generalizable the model is. By doing this, it would not only validate the framework's applicability more broadly but could also help highlight any context-specific modifications that could be added to the model to strengthen the theoretical aspects and practical precision of the developed framework and tools.
2. Investigate the long-term effects of aligning customer experience and customer knowledge management on organizational performance and customer experience quality. While this Thesis provided initial evidence of improved coherence and effectiveness, future research should employ more long-term study designs to measure causal links between high CEM–CKM alignment and sustained business benefits in the long term. For example, studies could be designed and run to track organizations that adopt the proposed approach and then measure changes in customer lifetime value, retention rates, or revenue growth from personalized offerings over several years. By analyzing whether organizations with higher personalization readiness (as measured by the tools proposed in this research) continue to achieve superior customer equity and competitive advantage, researchers will be able to justify the business case for integration in quantifiable terms. This line of inquiry would elevate the discussion from framework validation to demonstrating strategic ROI, which is important for both academic understanding and executive adoption.
3. Researchers may explore how emerging technologies that are maturing in the near future (such as general AI and more advanced and AI-driven analytics) can enhance customer experience and customer knowledge management integration further. Since personalization at scale often involves big data and real-time decision-making, future studies could focus on AI-driven knowledge management systems that automatically capture, analyze, and distribute customer insights within an organization. The research conducted in this Thesis can also be expanded further by examining the role of new technologies (machine learning, natural language processing). This would also keep the framework up to date with technological progress, especially with the impressive progress that is currently being made in the field of AI, and suggest how automation and intelligence might further support the integration of customer experience and customer knowledge management for even more responsive and personalized experiences.

4. Study consumer perceptions of personalization (that is knowledge-management-based), especially around ethical perceptions and trust. While the present research emphasizes internal alignment for personalization, future research should also look outward to customers' comfort and trust in these practices. Researchers can conduct experiments or surveys on how different approaches to personalization (especially those leveraging extensive customer knowledge) influence customer attitudes, privacy concerns, and acceptance. Testing different variations of transparency levels and how they are experienced by the customers could be tested, as well as consent mechanisms (both UX and customer experience aspects) could be beneficial to better understand how to improve customer trust in the long term. That way it would be possible to refine guidelines on what constitutes ethically acceptable personalization from the customer's point of view – ideally compared across different cultures and industries, as that may differ heavily. Those findings could then be used to improve the organizational element dimension in the “Ethics & Privacy” section of the framework proposed in the Thesis.

To summarize, the practical validation results that were performed as part of this Thesis development of the proposed integration framework indicate that the approach is both feasible and valuable as a practical model for bridging customer experience and knowledge management. The framework and its tools provide a structured yet flexible guide, adaptable to different organizational contexts and evolving technological environments. Summarizing the results of this doctoral research, it can be concluded that the research aim was fully achieved and all the Thesis objectives were successfully fulfilled. The Thesis aim – to develop a holistic approach to implementing personalized customer experience strategies by aligning CEM with CKM – has been realized. The framework that has been created to create the integration between CEM and CKM, plus the developed toolkit, ensures a novel contribution to the academic and professional field related to personalization strategy implementation projects. This Thesis addresses the gap within the academic literature by uniting two previously disparate domains, extending theory with a comprehensive model of personalization that links experiential and knowledge dimensions. The Thesis also offers organizations actionable self-assessment tools and roadmap-building templates to systematically deliver more personal, meaningful customer experiences supported by robust knowledge management. Together, these contributions underscore the significance of CEM–CKM integration and provide a foundation for both immediate application and future scholarly advancement in the quest to personalize customer experiences at scale.

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