UNIVERSITY OF LJUBLJANA
SCHOOL OF ECONOMICS AND BUSINESS

MASTER THESIS

TOWARDS A FRAMEWORK FOR GRACEFUL AI: CONCEPTUALIZING AI-ENABLED WELL-BEING SERVICE INNOVATION

Ljubljana, September 2025 CHANTELLE HENN

AUTHORSHIP STATEMENT

The undersigned Chantelle Henn, a student at the University of Ljubljana, School of Economics and Business, (hereafter: UL SEB), author of this written final work of studies with the title Towards a Framework for Graceful AI: Conceptualizing AI-Enabled Well-being Service Innovation, prepared in collaboration with mentor Prof. Dr. Mojca Indihar Štemberger and co-mentor Prof. Dr. Peter Weiß.

D E C L A R E

1. this written final work of studies to be based on the results of my own research;
2. the printed form of this written final work of studies to be identical to its electronic form;
3. the text of this written final work of studies to be language-edited and technically in adherence with the UL SEB Technical Guidelines for Written Works, which means that I cited and / or quoted works and opinions of other authors in this written final work of studies in accordance with the UL SEB Technical Guidelines for Written Works;
4. to be aware of the fact that plagiarism (in written or graphical form) is a criminal offence and can be prosecuted in accordance with the Criminal Code of the Republic of Slovenia;
5. to be aware of the consequences a proven plagiarism charge based on the this written final work could have for my status at the UL SEB in accordance with the relevant UL SEB Rules;
6. to have obtained all the necessary permits to use the data and works of other authors which are (in written or graphical form) referred to in this written final work of studies and to have clearly marked them;
7. to have acted in accordance with ethical principles during the preparation of this written final work of studies and to have, where necessary, obtained permission of the Ethics Committee;
8. my consent to use the electronic form of this written final work of studies for the detection of content similarity with other written works, using similarity detection software that is connected with the UL SEB Study Information System;
9. to transfer to the University of Ljubljana free of charge, non-exclusively, geographically and time-wise unlimited the right of saving this written final work of studies in the electronic form, the right of its reproduction, as well as the right of making this written final work of studies available to the public on the World Wide Web via the Repository of the University of Ljubljana;
10. my consent to publication of my personal data that are included in this written final work of studies and in this declaration, when this written final work of studies is published;
11. that I have verified the authenticity of the information derived from the records using artificial intelligence tools.

Ljubljana, September 1st, 2025 Author's signature: 

ABSTRACT

Artificial intelligence (AI) is increasingly positioned as a driver of service innovation, yet its role in well-being contexts remains insufficiently researched. This thesis examines how AI can be integrated as an operant resource in service ecosystems that support human well-being and meaningful engagement, with a focus on the yoga and mindfulness start-up Graceful Motion. The study followed a Design Science Research (DSR) methodology to design, demonstrate, and evaluate the Graceful AI Framework and the M[OTIO]N heuristic within the contextual use case of Graceful Motion. The research was guided by Service-Dominant Logic and Human-Scale Development and combined six expert interviews, reflective summaries, and document analysis to iteratively refine the artifacts. This process ensured that both theoretical insights and practitioner perspectives shaped the framework's development. Findings show that AI can act as a partner that enhances personalization, reflection, and engagement while safeguarding human-centered values and agency. Enabling factors include transparent onboarding, tailored personalization, and nurturing support; constraints involve risks of bias, technological "bloating," and erosion of relational quality. Ethical principles such as trust, autonomy, and authenticity are best safeguarded when explicitly embedded into design heuristics. The thesis contributes theoretically by extending Service-Dominant Logic with an AI-enabled well-being orientation and practically by offering a framework to guide responsible AI use in well-being services. It provides pathways for further research and practice on aligning technology-enabled service innovation with human well-being.

KEY WORDS: AI-enabled services, Well-Being, Service-Dominant-Logic, Human-Scale-Development, Design Science Research, Service Innovation, Graceful AI

SUSTAINABLE DEVELOPMENT GOALS



POVZETEK

Umetna inteligenca (UI) se vse bolj umešča kot gonilna sila inovacij storitev, vendar je njena vloga v kontekstu dobrega počutja premalo raziskana. Magistrsko delo preučuje, kako je mogoče UI integrirati kot operativni vir v storitvene ekosisteme, ki podpirajo dobro počutje ljudi in smiselno sodelovanje, s poudarkom na zagonskem podjetju za jogo in čuječnost Graceful Motion. Študija je sledila metodologiji Design Science Research (DSR) za načrtovanje, demonstracijo in vrednotenje ogrodja Graceful UI in hevristike M[OTIO]N v kontekstualnem primeru uporabe Graceful Motion. Raziskavo je vodila logika, ki prevladuje v storitvah, in razvoj v človeškem merilu ter je združila šest intervjujev s strokovnjaki, refleksivne povzetke in analizo dokumentov za iterativno izboljšanje artefaktov. Ta proces je zagotovil, da so razvoj ogrodja oblikovali tako teoretični vpogledi kot perspektive praktikov. Ugotovitve kažejo, da lahko UI deluje kot partner, ki izboljšuje personalizacijo, refleksijo in sodelovanje, hkrati pa varuje vrednote in delovanje, osredotočene na človeka. Ključni dejavniki vključujejo pregledno uvajanje, prilagojeno personalizacijo in negovalno podporo; omejitve vključujejo tveganja pristranskosti, tehnološke »napihnjenosti« in erozije kakovosti odnosov. Etična načela, kot so zaupanje, avtonomija in avtentičnost, so najbolje zaščitena, če so eksplicitno vključena v oblikovalsko hevristiko. Teoretični prispevek magistrskega dela je razširitev logike, ki prevladuje nad storitvami, z usmeritvijo v dobro počutje, ki ga omogoča UI, praktični pa okvir za vodenje odgovorne uporabe UI v storitvah dobrega počutja. Zagotavlja poti za nadaljnje raziskave in prakso pri usklajevanju inovacij storitev, ki jih omogoča tehnologija, z dobrim počutjem ljudi.

KLJUČNE BESEDE: Storitve, ki jih omogoča umetna inteligenca, dobro počutje, logika, ki prevladuje v storitvah, razvoj na človeški ravni, raziskave oblikovalske znanosti, inovacije storitev, Graceful AI

CILJI TRAJNOSTNEGA RAZVOJA



TABLE OF CONTENTS

1 Introduction: The Call for Graceful Innovation 1

1.1 The Problem Space: AI and Well-being Service Innovation 1

1.2 Research Gap and Significance 2

1.3 Research Gaps, Objectives, and Approach 2

1.4 A Practice-Informed Perspective 3

1.5 Structure of the Thesis 4

2 Theoretical Foundations: Anchoring Graceful AI 4

2.1 Service Dominant Logic: Value Co-creation in Service Ecosystems 4

2.1.1 Origins and Axioms of SDL 5

2.1.2 Resource Integration and Actor Engagement in Well-Being Service 6

2.1.3 Mutual Actor Engagement and AI as a Participatory Resource 6

2.1.4 Implications for Graceful AI 7

2.2 Artifical Intelligence as an Operant Resource in Service Ecosystems 8

2.2.1 Service Innovation in Service Ecosystems 8

2.2.2 AI as an Operant Resource 10

2.2.2.1 Capabilities and Potentials of AI in Well-Being Services 10

2.2.2.2 Limitations and Design Risks 11

2.2.3 Actor Engagement and the Role of AI in Value Co-Creation 11

2.2.3.1 Value Creation and Value Capture 11

2.2.3.2 Actor Engagement 12

2.2.4 Service Design Process 13

2.2.5 Implications for Framework Design 13

2.3 Well-Being Theories and Value Creation for AI-Enabled Services 14

2.3.1 Defining Well-Being 14

2.3.2 Human Scale Development 16

2.3.2.1 Conceptual Foundations 16

2.3.2.2 The Typology of Satisfiers and Needs Mapping Matrix 17

2.3.3 Implications for Framework Design 19

2.4 Towards Graceful AI: Synthesizing Theoretical Insights 19

2.4.1 Integrative Perspective 19
2.4.2 The Behavioural Character of Human-AI Interaction 20
2.4.3 Pre-Conceptualizing Graceful AI 20
3 Research Design 21
3.1 Research Framing 21
3.2 Research Paradigm: Design Science Research 21
3.3 Research Setting: Graceful Motion as Embedded Case 23
3.4 Data Collection 23
3.5 Data Analysis 24
3.6 Validity & Limitations 25
3.7 Use of Generative AI Tools 25
4 Graceful AI Framework Artifacts 26
4.1 Overview of the Graceful AI Artifacts 26
4.2 Objectives & Principles 27
4.2.1 Design Objectives 27
4.2.2 Application Principles 28
4.3 Artifact Components 29
4.3.1 The Needs Mapping Tool 29
4.3.2 The M[OTIO]N Heuristic 30
4.3.3 Representation and Symbolism of Graceful AI 32
4.3.4 The Reflective Cycle of M[OTIO]N 33
4.4 Application Overview 34
5 Evaluation (Demonstration & Reflection) 36
5.1 Evaluation Strategy 36
5.2 Interview Insights in Realtion to Literature 37
5.2.1 Well-being as Relational and Dynamic 37
5.2.2 Value and Service Co-Creation 37
5.2.3 Embodiment and Positive Friction 37
5.2.4 Trust and Critical Oversight 38
5.3 Evaluation and Framework Refinement 38

5.3.1 Visual Representation 38
5.3.2 Language Adjustments 39
5.3.3 Clarity in Articulation 39
6 Discussion & Conclusion 39
6.1 Discussion 39
6.1.1 Recap of Findings 39
6.1.2 Implications & Contributions 40
6.1.3 Limitations 40
6.1.4 Furture Research Directions 40
6.2 Conclusion 41
LIST OF KEY LITERATURE 42
REFERENCE LIST 42
APPENDICE 46

LIST OF TABLES

Table 1 Axioms of Service Dominant Logic 5
Table 2: Types of Satisfiers According to Max-Neef et al. (1991) 18
Table 3: Design Objectives of the Graceful AI Framework 28

LIST OF ABBREVIATIONS

AI – Artificial Intelligence

IS – Information System

DSR – Design Science Research

SDL – Service-Dominant Logic

FP – Foundational Premise

HSD – Human Scale Development

FHN – Fundamental Human Needs

HCD – Huamn-Centered Design

GAI – Generative Artificial Intelligence

1 INTRODUCTION: THE CALL FOR GRACEFUL INNOVATION

In a world increasingly shaped by Artificial Intelligence (AI), we find ourselves at a crossroads: Will technology serve us, or will we serve it? This study responds to that paradox by designing, demonstrating, and evaluating a human-centered, AI-enabled service innovation framework that aligns with the principles of well-being and the foundational logic of SDL. The aim is not to create a perfect AI solution but to cultivate a model that teaches, supports, and enables individuals, communities, and well-being service providers to answer a timeless yet urgent question: "What serves [u]s?"

AI is increasingly embedded in human-facing services. While its benefits in automation, prediction, and personalization are well-documented, its role in supporting holistic well-being particularly in relational, trust-dependent contexts remains under-researched. As AI continues to shape how services are designed and delivered, a central question arises: how can these technologies serve human flourishing rather than simply optimize efficiency? This thesis addresses the question by proposing a human-centered, AI-enabled service innovation framework grounded in Service-Dominant Logic (SDL) and Human Scale Development (HSD). It responds to the growing need for frameworks that support ethical, participatory, and meaning-centered innovation in emerging well-being ecosystems. This thesis is guided by the assumption and belief that innovation in service is meaningful only if it enables our collective capacity to serve fundamental human needs.

1.1 The Problem Space: AI and Well-being Service Innovation

The rapid development of AI technologies has generated unprecedented possibilities for service delivery across sectors. In the well-being industry spanning domains such as yoga, mindfulness, coaching, and digital therapeutics AI promises to enhance personalization, improve accessibility, and support scalable engagement (García-Madurga, et al., 2024). However, its integration into these domains has also raised concerns about dehumanization, overreliance on automation, and the erosion of trust, presence, and authenticity (Crawford, 2021; Floridi et al., 2018).

This tension underscores a growing research gap in how AI-enabled service innovations can be meaningfully aligned with human flourishing. In most digital well-being contexts, AI continues to be framed through a delivery logic; optimizing content, reminders, or feedback loops without adequately supporting the relational and reflective dimensions that define well-being experiences (Calvo & Peters, 2014; Sinha & Sinha, 2024). Such systems risk treating users as passive recipients, rather than as active participants and co-creators of the valued experience. This is especially problematic in settings like yoga or mindfulness services, where the lived experience of the individual is central to the development and perception of transformation.

1.2 Research Gap and Significance

Current literature in Information Systems and service innovation emphasizes the importance of actor engagement, value co-creation, and contextual design (Storbacka et al., 2016; Lusch & Nambisan, 2015; Chandler & Lusch, 2014). From a SDL perspective, AI is best understood not as a deliverer of value but as an operant resource, describing a co-creative actor that participates in service ecosystems through contextual, adaptive interactions (Vargo & Lusch, 2016; Akaka & Vargo, 2014). Yet, existing service design approaches often lack a structured method for aligning AI functionalities with the core principles of human well-being. A deeper reflection would guide down a path asking; whether the point of any service is to serve, fundamentally the needs of the individuals involved. Moreover, while frameworks such as Human-Centered Design (HCD) and Positive Computing provide guiding values (Calvo & Peters, 2014), they stop short of offering systemic mechanisms for how AI functionalities are aligned to serve the fundamental needs of humans.

The framework aims to support value co-creation, personalization, and ethical engagement in early-stage service ecosystems, with Graceful Motion serving as the embedded case.

1.3 Research Gaps, Objectives, and Approach

Building on the recognition that actor engagement, value co-creation, and contextual design are central concerns in Information Systems and service innovation (Storbacka, Brodie, Böhmann, Maglio, & Nenonen, 2016, p. 3009; Chandler & Lusch, 2014, p. 9), this thesis positions artificial intelligence (AI) as more than a technical enabler. From a Service-Dominant Logic perspective, AI is best understood as an operant resource—a co-creative actor that contributes to service ecosystems through adaptive and context-sensitive interactions (Vargo & Lusch, 2016, p. 7; Akaka & Vargo, 2014, p. 370). Despite this conceptual foundation, current service design approaches often remain limited in offering structured mechanisms for aligning AI functionalities with human well-being. Frameworks such as Human-Centered Design and Positive Computing provide valuable guiding principles (Calvo & Peters, 2014, pp. 30–32), yet they fall short of operationalizing how AI can be embedded to address the fundamental needs of individuals in practice. This thesis addresses that gap.

The aim is to design and evaluate a framework that supports value co-creation, personalization, and ethical engagement in early-stage service ecosystems. The core artifact is the Graceful AI Framework, developed through a Design Science Research (DSR) methodology (Hevner et al., 2004; Peffers et al., 2007). The framework synthesizes three theoretical domains:

1. Service-Dominant Logic: as the ontological basis for value co-creation;
2. Human Scale Development: as the normative foundation for defining well-being;
3. Well-being and embodied service traditions: such as yoga, which bring ethical and experiential depth into design.

The research reconceptualizes AI not as a surrogate for human presence, but as a context-sensitive, adaptive partner in the value co-creation process. It addresses the following research questions:

— RQ1: How can AI be integrated as an operant resource in well-being services to support value co-creation while maintaining a strong human-centric focus?
— RQ2: Which factors enable or constrain AI-driven personalization, scalability, and meaningful engagement in the context of a yoga/mindfulness start-up?
— RQ3: In what ways can ethical and human-centered well-being principles (e.g., authenticity, user autonomy, trust) be safeguarded when AI is introduced into yoga services?
— RQ4: How can Design Science Research guide the design, demonstration, and evaluation of an AI-based service framework for a well-being start-up, illustrated by the Graceful Motion case?

Each question is addressed through the conceptual development, contextual demonstration, and qualitative evaluation of the Graceful AI framework.

The contribution of this thesis is twofold. Theoretically, it extends SDL by modeling how AI can act as an operant resource in a context-sensitive, ethically aligned way. Practically, it offers a usable framework for innovators in the well-being sector—especially start-ups—seeking to integrate AI into their services without undermining the integrity of human experience.

1.4 A Practice-Informed Perspective

This thesis approaches the challenge from a dual perspective: that of an information systems researcher and that of a founder-practitioner in the digital and well-being domain. The author serves as both researcher and practitioner, operating as the founder of Graceful Motion and a yoga educator deeply engaged in well-being service delivery. This insider-researcher perspective allows unique access to organizational data, use-case contexts, and iterative feedback, while also demanding critical reflexivity to mitigate bias and ensure analytical rigor. The conceptual framework proposed in this thesis reflects design insights that have meaningfully served the author in practice and may offer guidance to others operating in similar contexts. Data sources include expert interviews, documented service use cases, and feedback collected during framework demonstrations. The DSR methodology supports iterative artifact development and qualitative evaluation grounded in real-world conditions (Peffers et al., 2007; Gregor & Hevner, 2013). DSR is particularly suitable for this study, as it bridges conceptual theory-building with applied innovation in early-stage, value-driven service ecosystems.

1.5 Structure of the Thesis

The remainder of the thesis is structured in segments. Chapter 2 presents the theoretical foundations and synthesizes the core concepts that inform the Graceful AI framework. Chapter 3 outlines the DSR methodology and describes the research context, data collection methods, and content analysis procedures. Chapter 4 introduces the conceptual artifact and explains its components and application logic. Chapter 5 reports the demonstration and feedback from expert participants, analyzing how the framework was received and refined. Chapter 6 concludes with key findings, outlines contributions, discusses limitations, and suggested directions for future research.

By investigating how AI can serve—not substitute—human well-being, this research aspires to offer more than a technical solution. It aims to initiate a deeper inquiry into what kind of innovation truly serves [U]S.

2 THEORETICAL FOUNDATIONS: ANCHORING GRACEFUL AI

This chapter establishes the theoretical scaffolding upon which the Graceful AI framework is built. It presents and synthesizes three central pillars: (1) Service-Dominant Logic (SDL), (2) AI as an Operant Resource, and (3) Well-Being and Human Scale Development (HSD). These pillars frame the design and evaluation of the conceptual artifact by grounding it in human-centered, value-oriented, and service-aware theories. The chapter concludes by synthesizing the insights from each domain into guiding principles for the design and evaluation of AI-driven service innovation in well-being contexts.

2.1 Service Dominant Logic: Value Co-creation in Service Ecosystems

This section introduces Service-Dominant Logic (SDL) as the ontological foundation for understanding value co-creation in service ecosystems. Developed by Vargo and Lusch (2004, 2008), SDL represents a paradigmatic shift from a goods-based view of value creation to one grounded in service, interaction, and mutual exchange. Rejecting the assumptions of Goods-Dominant Logic, SDL asserts that service—not goods—is the fundamental basis of exchange (Vargo & Lusch, 2004, p. 2). In this view, value is not embedded in outputs but co-created by multiple actors through dynamic interactions, always including the beneficiary (Vargo & Lusch, 2016, p. 8). This systemic and relational understanding provides the ontological backbone for the Graceful AI framework, where AI is positioned not as a product to be consumed, but as an actor embedded in the co-creation of service experiences.

2.1.1 Origins and Axioms of SDL

Table 1 presents the five axioms of SDL, developed by Vargo and Lusch (2016). Each of these axioms contributes to a multi-level understanding of service systems and reflect the prespective where value creation depends on contextual resource integration, relational dynamics, and institutional arrangements. In the context of AI-enabled well-being services, these axioms guide how both human and artificial actors participate in designing and realizing meaningful service experiences.

Table 1 Axioms of Service Dominant Logic

Axiom	**Description**
Axiom 1/ FP1	Service is the fundamental basis of exchange.
Axiom 2/ FP6	Value is cocreated by multiple actors, always including the beneficiary.
Axiom 3/ FP9	All social and economic actors are resouce integrators.
Axiom 4/ FP10	Value is always uniquely and phenomeonologically determined by the beneficiary.
Axiom 5/ FP11	Value co-creation is coordinated through actor-generated instituions and institutional arrangements.

Source: Own illustration based on (Vargo & Lusch, 2016, S. 18)

Particularly important to this research are several foundational premises (FPs) that extend the axioms into actionable conceptual principles. Each of the FP relevant are elaborated on. For example, FP4 asserts that *"Operant resources are the fundamental source of strategic benefit."* (Vargo & Lusch, 2016, p. 7). Unlike operand resources (e.g., infrastructure or data), operant resources (such as knowledge, empathy, and adaptive capacity) act upon other resources to create value (Vargo & Lusch, 2004, p. 2) In the context of well-being services, both human and artificial agents, such as yoga teachers and AI systems, must be understood as operant resources that co-create value through relational interaction, not as passive carriers of pre-defined benefits (Akaka & Vargo, 2014, p. 372). This FP is presented in more detail in Chapter 2.2.

FP6 which states that *"Value is co-created by multiple actors, always including the beneficiary"* , underscores the necessity of participatory engagement in realizing value (Vargo & Lusch, 2016, S. 8). This is exemplified in yoga and mindfulness-based instruction, where the teacher provides structure and guidance, but the value of the session is realized through the participant's experiential engagement, interpretation, and intention. Similarly, an AI system designed for well-being cannot unilaterally generate value; it can only propose affordances that must be acted upon by the user.

FP7 further develops this perspective by emphasizing that *"Actors cannot deliver value but can offer value propositions."* (Vargo & Lusch, 2016, S. 8) This premise challenges the assumption that technologies or instructors can ensure transformation. Instead, it reinforces that well-being is co-constructed through shared agency and situated practice. In the context of Graceful AI, value propositions may include reminders for mindful breathing, reflective

journaling prompts, or guided decision pathways—but their utility depends on how they are integrated by the user into their lived experience.

Finally, FP8 affirms that *"A service-centered view is inherently beneficiary-oriented and relational."* (Vargo & Lusch, 2016, S. 9). This view calls attention to the ethical and relational dimensions of service design. Particularly in well-being domains, where trust, embodiment, and presence are key, systems must be designed not to extract engagement but to cultivate dignity, autonomy, and mutual respect.

Together, these premises inform the design logic of Graceful AI is not to deliver well-being as a product, but to support the emergence of value through co-created, situated experience.

2.1.2 Resource Integration and Actor Engagement in Well-Being Service

A central proposition of SDL is that *all actors are resource integrators* (Axiom 3/ FP9), implies that value creation arises through integration as the mechanism through which service systems operate (Chandler & Vargo, 2011, p. 36). Every actor, including the AI, the teacher, and the participant, brings and integrates their own resources whether emotional, cognitive, technological, experiential to co-create value in phenomenologically unique ways. Each brings different operant resources: the teacher contributes embodied expertise and intuitive guidance; the participant contributes attention, motivation, and interpretation through self-awareness; the AI system contributes adaptive intelligence and contextual feedback. Through these interactions, value is not delivered but emergently co-constructed.

These interactions are not linear but emergent, meaning value arises through engagement, adaptation, and meaning-making rather than delivery. From a design perspective, this demands a shift in focus from static content delivery to supporting actor engagement at the micro level, enabling and enhancing the specific interactions through which participants derive meaning, agency, and transformation (Storbacka et al., 2016, p. 300). As a yoga teacher, the researcher not only facilitates such integration but also designs the environments in which micro-level engagement can occur: the pace of breath, the language of cues, the presence of silence. These small but potent interactions are critical for value co-creation in well-being services, where transformation is incremental, personal, and emergent.

> *"AI's role is not to manufacture well-being but to participate in designing the pathways through which it becomes possible."* —Author's synthesis

2.1.3 Mutual Actor Engagement and AI as a Participatory Resource

Within the SDL framework, actors are not passive recipients of services but are simultaneously producers and beneficiaries of value. (Vargo & Lusch, 2016, p. 8; Chandler & Vargo, 2011, p. 36). In service ecosystems, such as those found in the well-being contexts, this co-creation process is both dynamic and recursive: actors contribute to and reshape the system over time through mutual engagement, feedback loops, and evolving institutional

arrangements (Akaka et al., 2013). This understanding is central to how Graceful AI is conceptualized in this thesis. Artificial intelligence is not treated as an isolated operant resource but as one actor among many participating in a wider value co-creation process, where roles are fluid and reciprocal.

For example, in the development of well-being services at Graceful Motion, the yoga teacher engages with AI tools to construct class formats, receive user feedback, and derive new insights for future lesson planning. In this context, AI offers affordances such as adaptive prompts or reflective feedback mechanisms, but these remain value propositions until they are acted upon, interpreted, and re-integrated by the teacher into the next iteration of service delivery. Importantly, the yoga teacher here is not only facilitating value co-creation for students but is also a beneficiary of value co-creation through their interaction with AI. The teacher integrates AI-supported insights to enrich their pedagogical practice, refine service delivery, and respond more attunedly to participant needs. This recursive engagement highlights the multi-directional nature of resource integration and supports the SDL axiom that all actors are resource integrators and co-creators of value (FP9, FP6).

Moreover, when these newly adapted services are delivered to students, the co-creative loop continues: the students interact with the structure, adapt it to their own embodied experience, and through feedback (formal or tacit), contribute again to the evolution of the service system. In this way, AI becomes a mediating actor—not central or autonomous—but a facilitator that connects and enhances the ongoing interplay between human actors. This perspective also aligns with Axiom 5 / FP11, which emphasizes that value co-creation is coordinated through actor-generated institutions and arrangements (Vargo & Lusch, 2016, p. 10). In practice, this includes the norms, rituals, and pedagogical patterns that emerge over time within yoga teaching communities, AI–teacher interactions, and digital platform guidelines. The act of integrating AI into a studio's practice is thus not merely technical, it is institutional, embodied, and relational.

Ultimately, this section illustrates that the co-creation of value in well-being services is not the result of AI functionality alone, but of mutual engagement across the ecosystem: between teachers, students, AI systems, and the social norms that guide interaction. Designing for such a system requires attentiveness to how operant resources are exchanged and transformed across time, as well as sensitivity to the reflective practices and human intentions that shape the emergence of meaningful service experiences.

> *"To design services that truly serve us, we must understand not just how value is co-created, but for whom, in what context, and toward what end."* —Author's synthesis

2.1.4 Implications for Graceful AI

The insights and perspectives of SDL provide the conceptual foundation for designing AI-enabled well-being services that are context-sensitive, participatory, and relational. Rather than treating AI as a deliverer of value, Graceful AI reframes it as an actor that enables the

emergence of value through service interactions within the service ecosystem. Instead of centering functionality or output, the focus shifts toward interactional fit, participation, and user-defined value. This reframing lead to the following design implications:

— Context-aware: AI must be responsive to user rhythms and preferences, and environments.
— Relationally oriented: It must supporting continuity, presence, and care,
— Reflectively designed:It should enable rather than dictate the conditions that support the mindful and autonomous user experience.

Ultimately, SDL provides the conceptual architecture for understanding how AI can participate in value co-creation, not by delivering well-being, but by co-constructing the conditions for it to emerge. This perspective also justifies the inclusion of well-being practitioners such as yoga teachers as co-designers and system actors within the broader service ecosystem.

2.2 Artifical Intelligence as an Operant Resource in Service Ecosystems

Over the past decade, SDL has expanded its perspective from dyadic provider–consumer relationships to service ecosystems, defined as "relatively self-contained, self-adjusting systems of resource-integrating actors connected by shared institutional logics and mutual value creation through service exchange" (Vargo & Lusch, 2016, p. 10). This shift reframes technological artefacts, including AI, not as passive tools, but as actors embedded within relational and institutional structures that shape and are shaped by service processes.

This conceptual expansion is especially relevant in well-being contexts, where service delivery depends heavily on trust, personal engagement, and adaptive responsiveness. Understanding AI within this systemic and relational frame is essential for evaluating how it can contribute to meaningful, human-centered value co-creation. In this chapter, we first establish the theoretical foundations of service ecosystems and service innovation, then examine AI's role as an operant resource—a resource capable of acting upon others to generate value (Akaka & Vargo, 2014). The discussion connects these foundations to the concepts of value creation, value capture, and actor engagement, setting the stage for the Graceful AI framework.

2.2.1 Service Innovation in Service Ecosystems

Innovation takes many forms, including technological, organizational, and social (Edwards-Schachter, 2018, p. 67). In SDL, service ecosystems are "relatively self-contained, self-adjusting systems of resource-integrating actors connected by shared institutional logics and mutual value creation through service exchange" (Vargo & Lusch, 2016, p. 10). This definition carries three important implications:

1. Multi-level structure: Service ecosystems span micro-level interactions (e.g., individual practitioner–student), meso-level organisational contexts (e.g., yoga studios, wellness

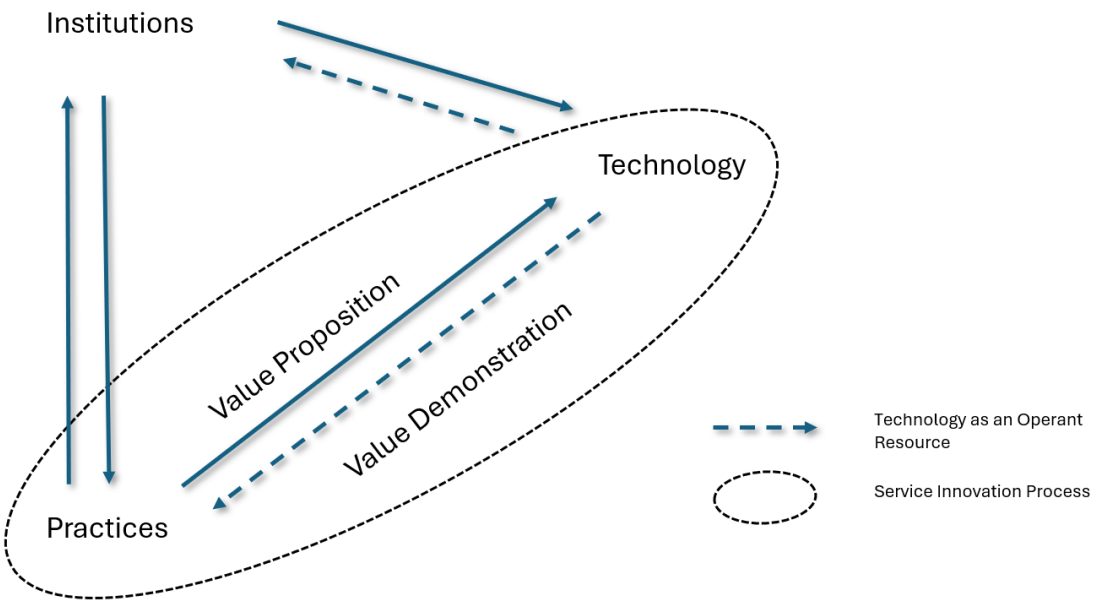
platforms), and macro-level societal systems (e.g., cultural norms, policy frameworks) (Chandler & Vargo, 2011).
2. Resource integration: Value emerges when actors combine operand resources (e.g., physical spaces, tools) with operant resources (e.g., knowledge, skills, relationships) in ways that are meaningful within their context (Vargo & Lusch, 2004).
3. Institutional arrangements: Formal and informal rules, norms, and shared meanings structure how actors interact and what forms of value are recognised as legitimate (Scott, 2001).

In this framing, technology including AI is not an external add-on but an embedded element of the ecosystem, shaped by and shaping the practices and institutional structures it participates in (Akaka & Vargo, 2014). In a well-being service ecosystem, AI might be integrated into daily yoga practice via posture-correction tools, or into mental well-being services via reflective journaling prompts. Its effects are mediated by the norms and expectations that govern how technology is used, trusted, and evaluated.

Service innovation within this context refers to changes in these value co-creation processes (Lusch & Nambisan, 2015). Innovation is thus less about "adding features" and more about reconfiguring relationships between actors, resources, and institutions to better support value-in-use (Grönroos & Voima, 2013). For AI in well-being services, this could mean enabling new forms of engagement (e.g., combining synchronous group practice with asynchronous AI-guided feedback), altering institutional arrangements (e.g., introducing transparency guidelines for algorithmic recommendations), or reconfiguring resource integration (e.g., augmenting teacher expertise with AI analytics to tailor sessions). This perspective is visualised in Figure 1, which positions technology as an operant resource embedded within the interplay of practices and institutions. The arrows illustrate how technology contributes to and is shaped by both value propositions and value demonstrations in the ongoing service innovation process. (Akaka & Vargo 2014, p. 378),

In the context of well-being services, this lens prompts a key research question: How can AI, as an embedded actor in service ecosystems, be designed to enhance well-being without displacing the relational, human-driven qualities that define its value?

Figure 1: Technology as an Operant Resource in Service Ecosystems



Source: own illustration adapted from (Akaka & Vargo, 2014, S. 378)

2.2.2 AI as an Operant Resource

Within SDL, operant resources are those that act on other resources to create value (Vargo & Lusch, 2004, p. 2). They are typically intangible such as knowledge, skills, or relationships and are the primary source of competitive advantage (FP4). While technology has historically been viewed as an operand resource (a tool acted upon by humans), Akaka and Vargo (2014) argue that when it demonstrates adaptivity, interactivity, and context sensitivity, it can be conceptualised as an operant resource.

This reframing is significant for well-being services. Rather than functioning solely as a backend enabler or data processor, AI can participate in shaping experiences, mediating relationships, and adapting service propositions in real time. In a service ecosystem, this means AI is not external to value co-creation processes but embedded within them — influencing both the practices actors engage in and the institutions that structure those engagements

2.2.2.1 Capabilities and Potentials of AI in Well-Being Services

AI's integration in well-being services brings both transformative potential and considerable risk. Its affordances for adaptive engagement, data-driven personalization, and automated insight generation have led to widespread optimism about its role in improving access, effectiveness, and user experience. In well-being service ecosystems, AI can act as an operant resource in several ways; (1) Facilitating reflection – e.g., offering tailored

journaling prompts to deepen self-awareness; (2) Augmenting human expertise – e.g., analysing movement data to support personalised feedback in yoga; (3) Enabling contextual adaptation – e.g., adjusting practice intensity based on user energy levels. (García-Madurga et al., 2024). These capabilities align with service innovation principles by reconfiguring resource integration allowing human actors (teachers, therapists, clients) to operate with enhanced insight and flexibility.

2.2.2.2 Limitations and Design Risks

Positioning AI as an operant resource also brings critical challenges. Calvo and Peters (2014, pp. 63–77) argue that technology for well-being should advance human flourishing by supporting autonomy, competence, and relatedness, cautioning against designs that induce passivity. Key risks include:

— Dehumanization: When AI displaces meaningful human contact, especially in relational or embodied practices like yoga or therapy, it can diminish emotional safety and connection (Crawford, 2021).
— Opacity and mistrust: Machine learning systems often lack explainability, creating black-box effects that erode user trust (Pasquale, 2015),
— Automation bias and disengagement: Overreliance on AI may lead users to outsource reflection or decision-making, diluting their own agency and responsibility (Calvo & Peters, 2014)

These limitations are not simply technical problems, they are conceptual. When AI is framed as a "solution provider" rather than a co-creative partner, design choices tend to reinforce passivity, uniformity, or compliance, rather than autonomy, diversity, and growth. Without intentional framing, AI's inclusion in well-being services may unintentionally replicate extractive logic: maximizing time-on-platform or compliance rather than supporting human flourishing. Empirically, emerging applications in yoga therapy show AI assisting assessment and personalisation while remaining complementary to practitioner judgment and presence (Sinha & Sinha, 2024). In digital well-being ecosystems, AI performs functions that support service processes without replacing human actors. For example, Sinha and Sinha (2024) describe emerging use cases of AI in yoga therapy, including systems that analyze alignment in postures, provide personalized recommendations, and support real-time biofeedback. Importantly, the authors emphasize that such systems must complement rather than replace the practitioner's embodied expertise and therapeutic presence

2.2.3 Actor Engagement and the Role of AI in Value Co-Creation

2.2.3.1 Value Creation and Value Capture

Within SDL, value creation refers to the process by which actors integrate resources to realise benefits in context, whereas value capture concerns how those benefits are

appropriated, sustained, or redistributed among actors in the service ecosystem (Storbacka et al., 2016, p. 300). In well-being services, value creation is often experiential and relational emerging from embodied practices, reflective insights, and supportive interpersonal exchanges. This means that AI's potential value lies not in the technical sophistication of its outputs, but in how it supports and enriches these experiential processes (Grönroos & Voima, 2013, p. 138)

From a business model perspective, the integration of AI into service ecosystems has the capacity to reshape both value creation and value capture mechanisms. Innovation within service ecosystems is context secific, and emerges through exchanges in institutional arrangements and how resources are integrated in practice. (Koskela-Huotari et al., 2016) For instance, the authors Kunz & Wirtz (2023, p. 8) note that AI can enable highly personalised offerings and predictive services, thereby enhancing user satisfaction and retention. However, they also caution that without appropriate governance, AI can centralise control and disproportionately benefit platform owners or technology providers, leading to inequitable value capture.

In the context of Graceful AI, the priority is to design for distributed value creation ensuring that AI supports "value for us" rather than "value for one" (i.e., only the provider). This requires mapping the institutional and practice-level interactions that shape AI use, ensuring that governance structures, data practices, and feedback loops maintain the autonomy and agency of all participating actors.

2.2.3.2 Actor Engagement

Actor engagement is increasingly recognised as a core mechanism for value co-creation in service ecosystems (Brodie et al., 2011; Chandler & Lusch, 2015). In the SDL framework, engagement is not limited to transactional exchanges but encompasses the behavioural, cognitive, and emotional investment of actors in service interactions (Storbacka et al., 2016, p. 301). Engagement is inherently dynamic, evolving through feedback loops and role reconfigurations in response to changing contexts. In well-being ecosystems, engagement is not a mere outcome but a continuous process in which meaning is co-constructed through active participation. This reconceptualisation shifts the focus from value delivery to the relational processes through which value emerges, underscoring that actors are resource integrators who co-create value in context (Vargo & Lusch, 2016).

Within AI-enabled well-being services, this perspective introduces a design imperative: actor engagement must be facilitated in ways that respect and enhance human agency, rather than replace or diminish it. Well-being-oriented services—such as yoga, meditation, or therapeutic practices—are inherently experiential. The primary outcomes sought are not efficiency or entertainment, but presence, self-awareness, meaning, and transformation (Helkkula et al., 2012). These outcomes are not embedded in the service artefact itself;

instead, they are emergent properties arising from the dynamic interplay between the actor, the context, and the affordances provided by the service (Chandler & Vargo, 2011).

The concept of emergent value aligns closely with SDL's principle of value-in-context (FP10). Value cannot be pre-determined or embedded in the service offering; it takes form through the actor's engagement with the service and the integration of their own resources (Chandler & Vargo, 2011, p. 41). In this sense, AI functions optimally not as a prescriptive authority, but as an operant resource that facilitates conditions for emergent value creation (Akaka & Vargo, 2014). For example, in a yoga setting, a well-timed AI-generated journaling prompt in a yoga context. The value of that prompt does not reside in its content alone, but in how the practitioner interprets and internalizes it. In this sense, AI becomes a facilitator of engagement rather than a controller of behavior.

2.2.4 Service Design Process

Alongside Service-Dominant Logic, the service design literature provides a methodological foundation for understanding how innovations are conceived, developed, and embedded within practice. Stickdorn et al. (2018) conceptualize service design as an iterative and human-centered process that unfolds through distinct yet overlapping phases, including research, ideation, prototyping, implementation, and evaluation. Each phase structures how actors explore needs, generate concepts, and refine offerings, while maintaining flexibility to adapt to context and emerging insights. The service design process has been widely applied across industries as a means of supporting collaborative innovation, particularly in contexts where multiple stakeholders and experiential outcomes are central (Wetter-Edman et al., 2014). Its strength lies in its ability to integrate diverse resource (i.e. human, institutional, and technological) into coherent service experiences through iterative cycles of exploration and reflection.

In the context of well-being services, the relevance of this process is pronounced. Service delivery in domains such as yoga, mindfulness, and digital health requires a balance between technical functionality and experiential resonance. By situating technological resources such as AI within the structured yet adaptive phases of service design, it becomes possible to conceptualize their role not only as enablers of efficiency but as participants in shaping meaningful service interactions. This perspective aligns with the systemic view of SDL, while offering a processual lens through which innovations can be developed, tested, and iteratively refined.

2.2.5 Implications for Framework Design

The theoretical foundations introduced in this chapter position AI as an operant resource within service ecosystems, with implications for how it should be designed and applied in well-being contexts. Service-Dominant Logic and service ecosystems theory frame AI not as an external add-on but as an embedded actor shaping, and shaped by, institutional

arrangements and value co-creation processes. The service design process provides a structured lens through which this role can be operationalised, clarifying how AI can support exploration, ideation, prototyping, implementation, and iterative refinement in practice. Actor engagement theory emphasises that value creation is contingent on sustained behavioural, cognitive, and emotional involvement, requiring AI to enhance rather than diminish agency, relatedness, and meaning. Finally, the perspective of AI as an operant resource highlights its capacity to act adaptively and interactively, while also underscoring the risks of dehumanisation, opacity, and automation bias if not carefully designed.

Together, these perspectives provide a foundation for the Graceful AI framework by articulating how AI can serve as a co-creative resource within well-being service ecosystems. They clarify both the opportunities and the risks of embedding AI in reflective, human-centred services and provide criteria for ensuring that technological innovation remains aligned with the relational, contextual, and dynamic qualities of value co-creation.

2.3 Well-Being Theories and Value Creation for AI-Enabled Services

This section develops the normative and theoretical foundation for defining value in well-being service systems. While SDL positions value as co-created and phenomenologically determined by the beneficiary (Vargo & Lusch, 2016), it does not specify what should be valued. In human-facing, reflective service systems such as yoga, coaching, or digital well-being platforms this ambiguity must be addressed. The aim of service is not simply to fulfill functional goals, but to support the flourishing of individuals, understood through both subjective and systemic lenses.

Drawing on psychological and human development theories, this chapter argues that value creation in well-being services must be rooted in a comprehensive understanding of what it means to live well. It integrates Self-Determination Theory (Ryan & Deci, 2001), Positive Computing (Calvo & Peters, 2014), and Human Scale Development (Max-Neef et al., 1991), then synthesizes these perspectives with yogic philosophies of embodied presence and service. These provide both a normative anchor and a design-relevant framework for the Graceful AI approach to service innovation.

2.3.1 Defining Well-Being

Well-being is an inherently complex and contested construct, shaped by cultural, societal, and individual interpretations (Dodge, et. al, 2012, p. 223-230). No single definition can capture its full breadth, yet for the purposes of designing AI-enabled well-being services, it is necessary to adopt a clear working definition. This thesis draws on two principal philosophical traditions, namely, hedonic and eudaimonic well-being which together provide a balanced foundation for understanding the human outcomes that services should aim to support (Tov, 2018).

From a hedonic standpoint, well-being is associated with the attainment of pleasure and the avoidance of pain. It emphasises subjective happiness, positive affect, and life satisfaction (Kahneman, Diener, & Schwarz, 1999). In service contexts, hedonic design might focus on creating enjoyable, aesthetically pleasing, or emotionally uplifting experiences. For example, in technology design, this could include personalisation features that elicit positive emotions or reduce negative stimuli (Calvo & Peters, 2014, p. 31). In contrast, the eudaimonic perspective views well-being as the realisation of one's potential and the pursuit of meaning, virtue, and personal growth (Ryff & Keyes, 1995). This orientation is especially relevant in well-being services where the goal is sustained behavioural change or deepened self-awareness. Yoga has long been studied as a contributor to personal excellence and well-being. (Chaundhry, Bhandari, & Gaur, 2023) Calvo and Peters (2014, p. 31) emphasise that "in the long term it's eudaimonic well-being that promotes health," underscoring its relevance for interventions that aim to support lasting behavioural change.

To integrate these perspectives in a way that can be meaningfully applied in technology and service contexts, this thesis draws on Self-Determination Theory (SDT) by Ryan and Deci (2000). SDT identifies three universal psychological needs:

- Autonomy – the ability to act in alignment with one's values and interests,
- Competence – the feeling of mastery and capability,
- Relatedness – the feeling of connection, belonging, and mutual care (Ryan & Deci, 2001, p. 146).

It is selected here because it is empirically well-supported, culturally robust, and relatively straightforward to operationalise (Calvo & Peters, 2014, p. 22). Meeting these needs supports intrinsic motivation and engagement, both of which are critical in well-being-oriented service ecosystems.

This definition acknowledges that well-being is not reducible to a single measure or state but is the result of multiple, interacting factors in a dynamic process. It also recognises that any attempt to support well-being whether through AI-enabled services or other means must consider both the experiential (hedonic) and developmental (eudaimonic) dimensions, as well as the underlying psychological needs that sustain them.

> "*Flourishing requires not just functionality but meaning. Digital systems should be able to support awareness, autonomy, and self-congruence—not merely consumption*" —(Calvo & Peters, 2014, p. 35).

2.3.2 Human Scale Development

Human Scale Development (HSD), formulated by Max-Neef, Elizalde, and Hopenhayn (1989), emerged in response to development paradigms that prioritized economic growth over the satisfaction of human needs. It proposes that the purpose of development—and by extension, innovation—should be to create systems that sustainably fulfill the Fundamental Human Needs (Max-Neef et al., 1991, p. 18) In contrast to growth-oriented models that equate development with increased consumption, HSD posits that true development is the process by which people's fundamental human needs are adequately and sustainably satisfied (Max-Neef et al., 1989, p. 17). The framework distinguishes between needs, which are universal and finite, and satisfiers, which are culturally and contextually specific. This distinction is critical for service innovation: whereas needs remain constant across time and culture, how needs are met through satisfiers are highly adaptable and can be creatively redesigned through services, practices, and technologies.

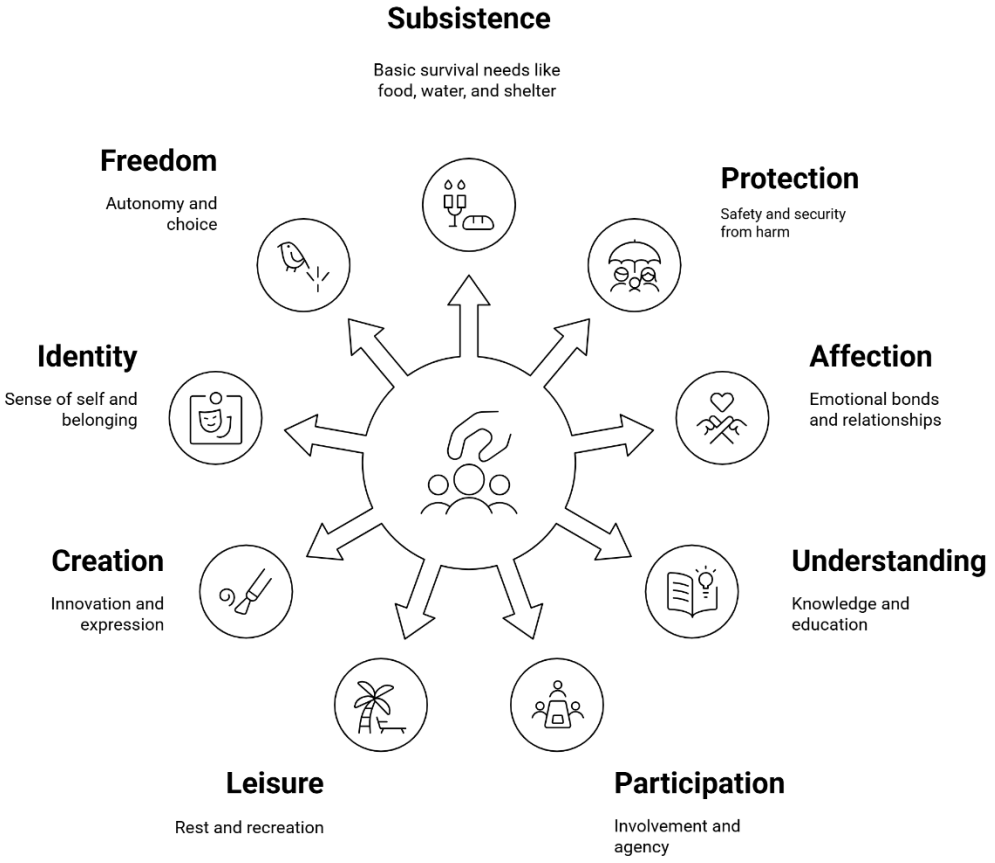
This makes HSD particularly relevant for AI-enabled well-being services, where innovation is often driven by technological possibilities rather than human priorities. By integrating HSD into the design process, service ecosystems can evaluate not only whether a service works, but how it works to enhance well-being. In this sense, the framework acts as a lens for assessing and guiding innovation by focusing attention on whether AI-enabled services promote synergistic satisfiers that enhance multiple needs without undermining others, or risk introducing pseudo- or inhibiting satisfiers that compromise human flourishing.

2.3.2.1 Conceptual Foundations

HSD provides a human-centred, needs-based framework for understanding and fostering well-being. Figure 2 presents the Nine Fundamental Human Needs identified by Max-Neef et al. (1991): Subsistence, Protection, Affection, Understanding, Participation, Leisure, Creation, Identity, and Freedom. These are not to be confused with material desires or economic wants; rather, they represent existential categories that apply across cultures, geographies, and historical periods. (Max-Neef, et al., 1991, S. 26-30). Crucially, Max-Neef et al. distinguish clearly between needs (universal and constant) and satisfiers (contextual and dynamic). The same need may be met through different satisfiers depending on historical and cultural circumstances. Conversely, the same satisfier may fulfill different needs depending on the actor and situation (Max-Neef, Elizalde, & Hopenhayn, 1991, S. 26- 29) For example, the need for protection might be satisfied by legal structures in one context, or by community belonging in another. Similarly, the same satisfier, such as dialogue, might serve needs of understanding, identity, or participation depending on the context.

This recognition supports a relational, contextual, and pluralistic view of value creation and aligns conceptually with SDL's phenomenological understanding of value (Vargo & Lusch, 2016, p. 8) but adds the normative content missing from SDL's value-neutral framework.

Figure 2: Nine Fundamental Human Needs



Source: own illustration based on (Max-Neef, Elizalde, & Hopenhayn, 1991, S. 31-33)

This distinction encourages designers and service innovators to shift their focus from "providing products" to "facilitating conditions" that enable need satisfaction. (Max-Neef et al., 1991, p. 38). In the context of AI-enabled well-being services, this operationalisation is vital: AI systems cannot directly create well-being, but they can support or hinder the conditions under which needs are satisfied. Rather than a deterministic tool but can be internalized and implemented through a praxis that is in itself a process in constant motion (Max-Neef et al., 1991, p. 16).

2.3.2.2 The Typology of Satisfiers and Needs Mapping Matrix

Fundamental human needs matrix model (1991, pg 33) is presented in a two-dimensional matrix (Appendix 1 which organises satisfiers within a grid defined by existential categories (Being, Having, Doing, Interacting) and axiological categories (the nine needs). This matrix is "neither normative nor conclusive" (p. 35) but serves as a diagnostic and creative tool.

Max-Neef et al. (1991) propose a Typology of Satisfiers classifying them into five types: (1) Synergistic satisfiers are the most desirable, fulfilling one need while promoting the satisfaction of others. (2) Singular satisfiers meet one specific need without affecting others

positively or negatively. (3) pseudo-satisfiers, which provide the illusion of fulfillment without meeting the actual need; (4) inhibiting satisfiers, which fulfill one need while suppressing others; and (5) violators, which actively undermine needs. These categories are summarized and illustrated in Table 2 below. This typology is instrumental for critically assessing the impact of services and technologies on well-being.

In service innovation, applying this framework in participatory design workshops, it enables stakeholders to co-create culturally relevant and context-specific satisfiers, revealing gaps and opportunities for innovation. (Max-Neef et al. 1991, p. 38) This becomes particularly important in AI-enabled services, where design decisions can scale rapidly and amplify both benefits and harms.

Table 2: Types of Satisfiers According to Max-Neef et al. (1991)

Type of Satisfier	**Description**	**General Example**
Synergistic	Fulfill one need while promoting the satisfaction of others. Often participatory, empowering, and non-authoritarian.	Community education programs fulfilling multiple needs (understanding, participation, identity).
Singular satisfiers	Meet only one specific need and are neutral regarding others. Typically institutionalized.	Food banks fulfill subsistence but do not engage participation or creativity.
Pseudo-satisfiers	Provide a false sense of need satisfaction. Though less aggressive than violators, they may inhibit real need fulfillment over time. Typically induced by social norms or propaganda	Expensive consumer goods sold as fulfilling status or identity needs.
Inhibiting satisfiers	Over-satisfy a specific need in a way that limits the satisfaction of others. Often rooted in habits, customs, or rituals.	Overprotective parenting satisfies protection but limits freedom, affection, participation and identity.
Violators	Paradoxical satisfiers that are imposed with the intention of satisfying a need but ultimately destroy it and obstruct other needs.	Mass surveillance to ensure "protection" erodes freedom and trust.

Source: Own illustration adapted from (Max-Neef, Elizalde, & Hopenhayn, 1991, S. 32-36)

Importantly, Max-Neef et al. emphasize that the matrix and its satisfiers are neither fixed nor exhaustive: “this matrix of satisfiers, if completed by individuals or groups from diverse cultures and in different historical moments, might vary considerably” (1991, p. 32). This dynamic orientation supports its use as a reflective and adaptive tool in contemporary service innovation contexts.

Accordingly, in this thesis, the matrix is used across multiple levels of analysis. At the micro-level, individual users can reflect on whether a given service supports or inhibits their well-being. At the meso-level, well-being providers such as teachers and studios can examine the

broader cultural and relational effects of their offerings. And at the design-level, the Graceful AI framework uses this model to evaluate AI-enabled features as potential satisfiers, ensuring that the technological design remains grounded in human-scale, ethical intentions.

2.3.3 Implications for Framework Design

The theoretical perspectives reviewed in this chapter provide a foundation for understanding what constitutes value in well-being service ecosystems. Hedonic and eudaimonic theories of well-being highlight that service outcomes must be considered in both their immediate affective qualities and their contribution to long-term growth and meaning. Self-Determination Theory specifies autonomy, competence, and relatedness as universal psychological needs that are essential for sustained engagement and flourishing and guide that should guide the design of AI-enabled well-being services. Positive Computing translates these insights into digital contexts, emphasising the role of technology in supporting awareness, agency, and meaningful interaction rather than reinforcing passivity. Finally, Human Scale Development introduces a systemic lens through the matrix of fundamental human needs and satisfiers, enabling reflection on how services contribute to or undermine human flourishing across cultural and contextual boundaries.

Taken together, these foundations clarify what constitutes "value" in the context of Graceful AI. They complement the service ecosystem perspective developed in Chapter 2.2 by specifying the content of value creation. In doing so, they directly inform the design of the framework by ensuring that service innovation is evaluated not only in terms of engagement and resource integration, but also in terms of its contribution to sustainable need satisfaction and human flourishing.

2.4 Towards Graceful AI: Synthesizing Theoretical Insights

The preceding sections outlined three complementary foundations; SDL, AI as an operant resource, and HSD that together provide the conceptual scaffolding for the Graceful AI framework. This section synthesizes their insights to articulate a pre-conceptualization of Graceful AI, clarifying its purpose and positioning within service innovation for well-being.

2.4.1 Integrative Perspective

From SDL, Graceful AI integrates an ontological commitment to value co-creation as emergent, relational, and context dependent. In this perspective, AI is not understood as an autonomous deliverer of well-being, but as one actor embedded within service ecosystems, shaping and being shaped by human engagement and institutional arrangements. Value thus emerges through interaction, and the central implication is that AI contributes meaningfully only when it supports the conditions for interaction, trust, and sustained engagement.

From the perspective of AI as an operant resource, Graceful AI integrates the understanding that technology, when adaptive, interactive, and context-sensitive, can participate actively in resource integration processes. Rather than functioning as a passive operand tool, AI contributes through enabling reflection, augmenting expertise, and adapting to situational contexts. This potential, however, is contingent on careful design that acknowledges risks such as dehumanisation, opacity, or automation bias. The integrative perspective therefore emphasizes that AI must be positioned as a collaborator that nurtures rather than replaces human capacity.

Adopted from HSD, Graceful AI integrates a framework for evaluating the outcomes of service innovation in terms of fundamental human needs and satisfiers. While needs are universal and finite, satisfiers remain culturally and contextually specific. This distinction provides an operational lens for assessing whether AI-enabled services generate synergistic satisfiers that contribute positively across multiple needs, or whether they risk pseudo- or inhibiting satisfiers that undermine human flourishing.

To integrate these theoretical perspectives into actionable guidance, Appendix 2 synthesizes the literature into institutional guidelines. These guidelines draw from SDL, HSD, service ecosystems theory, and reflective design, translating conceptual principles into practical implications for applying GracefulAI in service design. In doing so, the appendix provides a bridge between theory and practice, offering orientation for how the framework can be critically and reflectively embedded into evolving well-being ecosystems

2.4.2 The Behavioural Character of Human-AI Interaction

Synthesizing these insights highlights that the interaction between AI and human actors cannot be understood as one-directional. Instead, Barad (2006, p. 139) describes intra-action as the mutual constitution of entangled agencies which is a concept that can be extended here to AI-human interaction. AI systems and human agents co-shape service experiences through iterative feedback, mutual adaptation, and evolving practices. In this view, AI is not external to the process of well-being but is integrated into the very dynamics of resource exchange, interpretation, and meaning-making. This perspective emphasizes that value in Graceful AI emerges not from functional outputs alone, but from the situated interplay between technological affordances, human intentions, and contextual conditions.

2.4.3 Pre-Conceptualizing Graceful AI

The synthesis of SDL, AI as an operant resource, and HSD yields several guiding insights for the subsequent framework design:

— AI as a Participatory Actor: AI participates in co-creation rather than delivering predefined value, requiring its role to be understood relationally and institutionally.

— Well-Being as Need Satisfaction: Human-scale development provides an evaluative lens to ensure that AI-enabled services are aligned with conditions for sustainable need satisfaction, not merely functional efficiency.
— Value as Emergent: The value of Graceful AI is not embedded in technical capabilities but arises through situated actor engagement and phenomenological determination by the beneficiary
— Human–AI Intra-Action**:** Interactions are co-constitutive, with both AI and humans influencing and being influenced in the process of value co-creation.

In sum, Graceful AI is pre-conceptualized as an AI-enabled service innovation framework that positions AI as an operant, participatory resource embedded in human-centered ecosystems. Its purpose is to enable service interactions that support the satisfaction of fundamental human needs, while safeguarding the relational, reflective, and contextual qualities that define well-being.

3 RESEARCH DESIGN

3.1 Research Framing

This study adopts a Design Science Research approach to address a practical and theoretical gap: how AI can be integrated into well-being service ecosystems in ways that strengthen, rather than undermine, authenticity, trust, and user autonomy. The research focuses on the development and evaluation of the Graceful AI Framework, a conceptual model designed to guide AI-enabled service innovation in alignment with SDL and HSD principles.

The DSR approach was selected because it enables a systematic process for creating and refining artifacts that are both theoretically grounded and practically useful. The framework was developed in cycles, beginning with the synthesis of relevant literature, followed by the creation of an initial design, and then evaluated through expert feedback. Each evaluation cycle informed iterative improvements to ensure the artifact's clarity, relevance, and applicability. (Gregor & Hevner, 2013).

3.2 Research Paradigm: Design Science Research

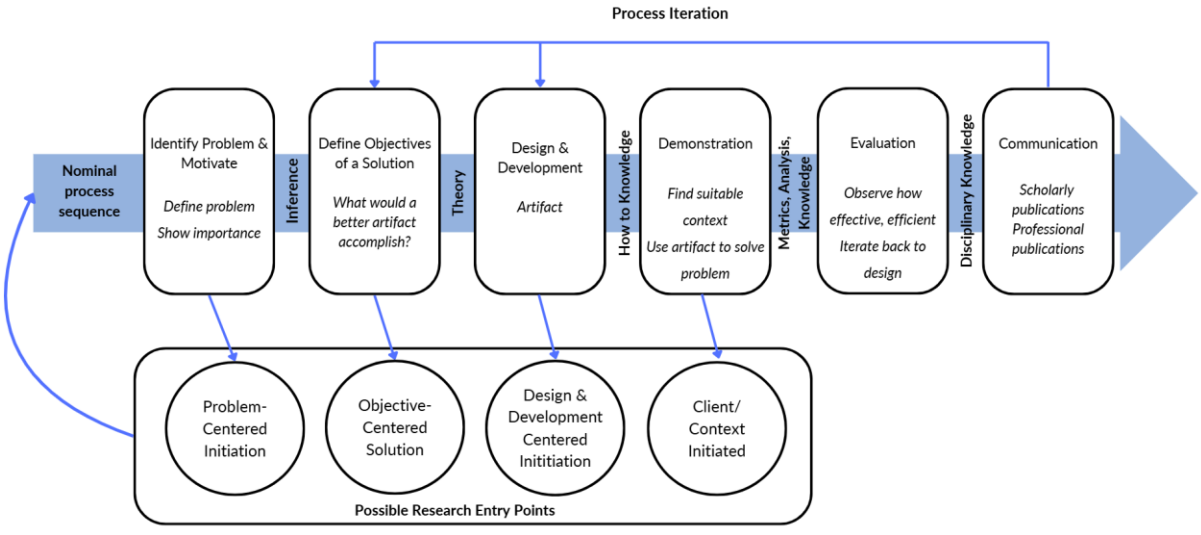
Design Science Research is a problem-solving research paradigm that aims to create innovative artifacts that address identified problems while contributing to theoretical knowledge (Hevner et al., 2004). In Information Systems research, DSR is well-suited to contexts where conceptual and practical innovation are intertwined. (Gregor & Hevner, 2013). DSR provides a systematic approach to construct, demonstrate, and evaluate artifacts that embody both rigor and relevance (Hevner et al., 2004). Hevner et al. (2004) position DSR as a cornerstone of IS research, highlighting that its primary goal is to "create and evaluate IT artifacts intended to solve identified organizational problems" (p. 77). This

aligns with the present study, which identifies the gap in how AI can be integrated meaningfully and ethically into well-being service ecosystems especially in domains where human-centered care and personalization are critical. The well-being industry, particularly in the context of yoga and mindfulness-based services, is undergoing rapid digital transformation. Yet, most existing technological solutions fail to center human flourishing and ethical engagement as core design principles. This disconnection between technological affordances and human-scale development presents a compelling problem space suitable for DSR.

The process model of Peffers et al. (2007) was adopted as the structural backbone of this study (Figure 3). This model defines six core activities:

1. *Problem Identification and Motivation*: The absence of structured guidance for aligning AI with well-being principles in service design.
2. *Define Objectives of the Solution*: Translating theoretical principles into explicit design objectives: authenticity, trust, autonomy support, co-creation, contextual adaptivity.
3. *Design and Development:* Producing the initial Graceful AI conceptual framework and visual representation.
4. *Demonstration*: Presenting the framework within the Graceful Motion case setting for use in scenario-based discussions and stakeholder reflection.
5. *Evaluation:* Using qualitative content analysis of expert feedback to assess conceptual clarity, relevance, and applicability, leading to iterative refinement.
6. *Communication:* Documenting the results in this thesis and through practitioner-oriented outputs.

Figure 3: Design Science Research Process Model



Source: Own illustration based on (Peffers, Tuunanen, Rothenberger, & Chatterjee, 2007, S. 54)

Gregor and Hevner (2013) emphasize that DSR is particularly powerful when seeking both utility and truth by designing for usefulness in practice while simultaneously deepening understanding in theory (p. 338). This duality is essential to the present research, which aims

to develop a deployable artifact for well-being service innovation while also contributing to theretical knowledge. Given its ability to bridge the design of solutions with the generation of knowledge, DSR offers the most coherent and impactful methodological fit for this study. It not only enables the creation of an actionable framework but also facilitates a contribution to the evolving field of human-centered information systems and ethical AI integration.

The artifact in this study is a conceptual framework functioning as a heuristic (Gregor & Hevner, 2013, p. 346) as a design-oriented model intended to support structured reflection and design decisions in AI-enabled well-being services.

3.3 Research Setting: Graceful Motion as Embedded Case

This study followed a Design Science Research (DSR) methodology (Peffers et al., 2007; Hevner et al., 2004), in which Graceful Motion—a well-being focused start-up founded by the researcher—served as the contextual environment for the demonstration and evaluation of the developed artifact. Rather than constituting a case study in the strict methodological sense (Yin, 2018), Graceful Motion functioned as a use case, providing a situated and practice-informed setting in which the Graceful AI framework could be applied, tested, and iteratively refined. The organization is exploring AI-enabled personalization to strengthen participant engagement and tailor service delivery. This makes it a relevant context for the research problem, as it exemplifies a service ecosystem in which trust, relational quality, and authenticity are critical value drivers (Grönroos & Voima, 2013).

The researcher's embedded position as founder enabled unique access to organizational processes, participants, and internal documentation, facilitating a depth of contextual understanding. At the same time, such an insider role carries the risk of bias (Coghlan & Brannick, 2014). To mitigate this, systematic documentation of decisions, transparent coding of qualitative data, and the inclusion of verbatim interview excerpts were employed, ensuring rigor and credibility in the interpretive process.

3.4 Data Collection

Data collection followed a multi-method qualitative strategy:

1. Literature Review: establishing theoretical grounding for SDL, AI in service ecosystems, and well-being principles.
2. Semi-structured expert interviews: six purposefully selected participants from fields including yoga and mindfulness instruction, service design, AI ethics, well-being coaching, and community-based service delivery. Interviews lasted 35–60 minutes and were conducted online.
3. Reflective summaries: compiled immediately after each interview to capture researcher insights, affective responses, and preliminary interpretationsReflective Summary of I….

4. Document analysis: review of Graceful Motions' service documentation, event designs, and early prototypes.

An interview protocol guided discussions in two phases:

Phase 1: Exploration of participant perspectives on well-being, AI, and value creation.

Phase 2: Evaluation of the two framework artifacts (M[OTIO]N heuristic and Needs Mapping Tool)

All interviews were audio-recorded with informed consent, transcribed verbatim, and anonymized. These evaluations served both formative (design iteration) and summative (validation) functions. In line with Gregor & Hevner (2013) recommendation, the descriptive evaluation strategy used includes informed argumentation, scenario-based illustration, and qualitative feedback analysis.

3.5 Data Analysis

Analysis followed qualitative content analysis (Mayring, 2000), combining deductive and inductive coding.

First-cycle coding applied main categories deductively derived from the interview guide and theoretical constructs. Examples include:

1. Participant Background and Expertise
2. Understanding and Definition of Well-being
3. Current AI Usage and Perceptions
4. AI Integration into Well-being Services
5. Value Creation in Services
6. Framework Evaluation
7. Future Outlook and Broader Implications

Second-cycle coding identified inductive subcategories emerging from participant responses (e.g., AI as reflective partner, Nurture vs. Nudge debate, systemic influences on well-being).

The codebook (Appendix 3) details each category and subcategory, with short descriptions, coding type (deductive/inductive), and theoretical sources. The coded dataset (Appendix 4) includes all segmented excerpts, assigned codes, and researcher memos, ensuring an audit trail for transparency.

Reflective summaries were revisited during coding to enhance interpretive depth, linking raw data to emergent themes. Codes were refined iteratively, ensuring both conceptual alignment with theory and fidelity to participant meaning.

3.6 Validity & Limitations

Several measures were taken to ensure the rigor and credibility of this DSR study. First, triangulation was achieved through the use of complementary qualitative sources, including expert interviews, reflective summaries, and organizational documents. While not a full case study protocol in the sense described by Yin (2018), these sources provided a sufficiently rich basis for evaluating and refining the artifact within a situated service context. Second, an audit trail was maintained, with all coding definitions, excerpts, and category structures documented in the appendices, ensuring transparency in how the analysis was conducted. Third, the design of the Graceful AI framework was refined iteratively, with each evaluation cycle informing subsequent modifications to enhance its clarity and relevance.

Member checking, a process where thematic interpretations are shared with participants for feedback, was not implemented within this study. Instead, credibility was supported through transparent coding, the use of verbatim excerpts, and systematic documentation. While additional participant feedback might have further strengthened the analysis, the measures employed were sufficient to ensure interpretive rigor. Other limitations should also be acknowledged. The focus on Graceful Motion as the use case context means that while the findings are rich in situated detail, they may require adaptation before being applied in other organizational settings. The relatively small number of expert participants allowed for in-depth qualitative insights but limits the breadth of perspectives represented. Finally, the researcher's dual role as both founder of Graceful Motion and primary investigator introduces the potential for bias. This was mitigated through systematic data analysis, transparent reporting, and the inclusion of verbatim excerpts to ground interpretations in the participants' own words.

3.7 Use of Generative AI Tools

In line with the ethical guidelines of the University of Ljubljana School of Economics and Business, this thesis acknowledges the use of generative artificial intelligence (GAI) tools as supportive instruments during the research and writing process. Tools such as ChatGPT were used selectively to (1) support the generation and refinement of ideas during the early stages of framework design, (2) improve text clarity, coherence, and conciseness in drafts of Chapters 2, 4, and 5, (3) assist in structuring tables and summaries of coded data and provide language suggestions for consistent academic style.

At no point were GAI tools used to generate primary data or literature. All insights derived through GAI were critically reviewed and verified against peer-reviewed sources and the relevant academic literature. The responsibility for the accuracy, validity, and interpretation of all information presented in this thesis rests solely with the author.

4 GRACEFUL AI FRAMEWORK ARTIFACTS

This chapter presents the outcome of my design research, namely Graceful AI Framework which is a conceptual and heuristic tool for guiding AI enabled well-being service design.

Graceful AI in this research is defined as: An AI-enabled service system designed to support human well-being through adaptive, context-sensitive interaction that respects autonomy, enhances reflection, and contributes as an operant resource in value co-creation.

The purpose of this chapter is to present the framework in its final design state before empirical demonstration and evaluation. It details the design objectives (Section 4.2), defines Graceful AI as a design ideal (Section 4.3), introduces the framework components (Section 4.4), articulates the guiding design principles (Section 4.5), and outlines its intended application within service design conftexts (Section 4.6).

4.1 Overview of the Graceful AI Artifacts

The outcome of this study is the Graceful AI Framework, a conceptual artifact developed through iterative design science research. The framework addresses the need for service systems that integrate artificial intelligence (AI) in ways that enhance, rather than compromise, human well-being. Its design rests on two interconnected artifacts:

1. The MOTION heuristic: a reflective method for guiding interaction and service design (Meaning, Openness, Trust, Integration, Orientation, and Nurture).
2. The Needs Mapping Tool: an operationalization of Max-Neef's (1991) fundamental human needs as a lens for evaluating and innovating well-being-oriented services.

Together, these artifacts function as complementary perspectives: while the M[OTIO]N heuristic articulates the principles of interaction and engagement, the Needs Mapping Tool offers a diagnostic structure for situating services within a broader human-scale development perspective.

The framework positions AI as an operant resource within service ecosystems (Vargo & Lusch, 2004, 2016). Rather than treating technology as a passive input, Graceful AI conceptualizes AI as a co-creative agent that activates and extends the knowledge, skills, and practices of human actors. This aligns with Service-Dominant Logic (SDL), where value emerges from the integration of resources through interaction, rather than from one-sided delivery (Chandler & Lusch, 2015). Within this framing, the Graceful AI artifacts serve as institutional scaffolds that shape how AI can participate in service exchanges in ways that are authentic, transparent, and supportive of human flourishing.

From a systemic perspective, the framework contributes at three levels of analysis:

— Micro-level (individuals and practitioners): Supports reflection and service design grounded in fundamental human needs and experiential well-being.

— Meso-level (organizations and communities): Provides shared principles for aligning AI-enabled services with organizational culture and user trust.
— Macro-level (ecosystems and governance): Offers a potential certification or standard for evaluating the authenticity and integrity of AI-enabled well-being services (see Interview Reflection, Speaker 2, in Appendix; cf. Gregor & Hevner, 2013).

By connecting these layers, the Graceful AI framework seeks to bridge the gap between conceptual ideals and practical service design. The interviews conducted as part of this research confirmed the resonance of the MOTION values with practitioner experience (Reflective Summaries, S1, S3, S5) and highlighted the diagnostic and strategic potential of the Needs Mapping Tool (Reflective Summaries, S2, S6).

The framework is thus not presented as a fixed solution, but as a living heuristic: a way of guiding AI-enabled service innovation that remains adaptable, dialogical, and responsive to the evolving interplay between humans, technologies, and institutions.

4.2 Objectives & Principles

The Graceful AI framework was developed with the dual ambition of academic rigor and practical relevance. In line with DSR, it serves as a purposeful artifact that addresses a real-world problem: *how to integrate artificial intelligence into well-being–oriented services without displacing human value.* The objectives and principles outlined here articulate the framework's intended contribution and guide its application in practice.

4.2.1 Design Objectives

The design objectives articulate the intended outcomes of the framework. They serve as criteria that shaped the artifact's structure and provide guidance for its application in practice. Each objective is grounded in established literature on service ecosystems, human-scale development, well-being, and reflective design.

Table 3 summarizes the five key objectives of Graceful AI, linking each to its theoretical source and its purpose in guiding design and evaluation.

By articulating these objectives, the framework sets out both a normative stance (what services should strive for) and a practical orientation (how services should be designed and evaluated). This duality aligns with the DSR principle of addressing both rigor and relevance, ensuring that Graceful AI is theoretically coherent while responsive to real-world challenges.

Table 3: Design Objectives of the Graceful AI Framework

Design Objective	Description	Literature Ref
Support Human-Scale Well-Being	Services should not only optimize efficiency or convenience but also contribute to the satisfaction of fundamental human needs, promoting synergy while avoiding pseudo-satisfiers or violators (Max-Neef, 1991).	Max-Neef (1991); Ryan & Deci (2001); Calvo & Peters (2014)
Frame AI as an Operant Resource	Rather than replacing human actors, AI is positioned as a collaborator that enhances reflection, creativity, and service co-creation (Vargo & Lusch, 2016)..	Vargo & Lusch (2004, 2016); Akaka & Vargo (2014)
Enable Reflective Service Design	The framework should help practitioners and organizations intentionally evaluate and refine their services in light of well-being principles.	Hevner et al. (2004); Peffers et al. (2007)
Foster Trust and Authenticity	Service innovation must preserve openness, transparency, and agency in human–AI interactions, ensuring that technology supports rather than undermines trust. (Calvo & Peters, 2014)	Floridi et al. (2018); Yogic ethics (Chaudhry, Bhandari, & Gaur, 2023)
Provide Multi-Level Applicability	The framework should function across individual (micro), organizational (meso), and systemic (macro) levels, supporting alignment between practice, culture, and governance.	Chandler & Lusch (2015)
Remain Adaptable and Evolving	Recognizing the evolving nature of the framework, it is designed to be open-ended and iterative, inviting further refinement through application and dialogue.	Gregor & Hevner (2013); Design Thinking (Brown, 2009)

Source: Own illuatration

4.2.2 Application Principles

Building on the design objectives outlined in the previous section, the GracefulAI framework is further articulated through a set of application principles. While the objectives describe what the framework aims to achieve, the application principles specify how these aims are to be enacted in practice. They reflect the translation of the theoretical foundations into orientations that guide the framework's use.

These principles are not intended as rigid prescriptions but as reflective anchors that support the alignment of AI-enabled services with human flourishing. They emphasize that value emerges relationally and systemically, and that AI must operate as an adaptive and trustworthy actor within service ecosystems. Table 4 summarizes these application principles, highlighting their orientation and practical significance for embedding GracefulAI into service design.

Table 4: Application Principles of the Graceful AI Framework

Principle	Description
Human-Centered Orientation	Begin with the lived experience of users and their fundamental needs as the reference point for evaluating services.
Co-Creation as Default	Treat service innovation as a co-evolutionary process, where humans, AI, and institutions continuously adapt to one another.
Realtional Transparency	Encourage transparency not only in technical function but also in the relational dynamics of service delivery, supporting dialogue and mutual trust.
Adaptive Service Evolution	Ensure that service systems remain dynamically responsive, adapting to emerging needs, feedback, and contextual shifts over time.
Ecosystem Attunement	Attune service design to the dynamics of the surrounding ecosystem, recognizing the interdependence of actors, institutions, and technologies.
Graceful Innovation	Pursue innovation in ways that integrate AI subtly and supportively, ensuring technology complements human agency and aligns with fundamental well-being outcomes.

Source: Own illuatration

Taken together, these objectives and principles form the backbone of the Graceful AI framework. They provide a normative orientation for what the framework seeks to achieve and a practical orientation for how it may be applied in diverse contexts of well-being service innovation.

4.3 Artifact Components

The Graceful AI framework materializes in two complementary artifacts: the Needs Mapping Tool, adapted from Max-Neef et al. (1991), and the M[OTIO]N Heuristic, which synthesizes design objectives and principles into a reflective model. Together, these artifacts translate the philosophical and heuristic levels of the framework into practical instruments for service innovation.

4.3.1 The Needs Mapping Tool

The first artifact is the Needs Mapping Tool, adapted from Max-Neef's (1991) framework of fundamental human needs. Originally, Max-Neef conceptualized the matrix to distinguish between universal needs and their context-specific satisfiers, arranging them along the existential categories of Being, Having, Doing, and Interacting and the axiological needs of Subsistence, Protection, Affection, Understanding, Participation, Idleness, Creation, Identity, and Freedom. Importantly, Max-Neef cautioned that "this matrix is neither normative nor conclusive. It merely gives an example of possible types of satisfiers" (1991, p. 32) and further emphasized that it should be used as "a participative exercise of self-diagnosis" rather than an imposed model (1991, p. 37).

The Graceful AI adaptation extends this spirit of participatory reflection by positioning the matrix as a reflective compass for service design rather than a prescriptive checklist. In practice, the tool encourages designers and organizations to examine how a service offering aligns with or neglects human well-being. It emphasizes the identification of satisfiers within the ecosystem and encouraging design of synergestic-satisfiers and avoiding services that pseudo satisfy or even violate fundamenal human needs.

In line with Max-Neef's principle that development cannot be imposed "by law or by decree" but must "emanate directly from the actions, expectations and creative and critical awareness of the protagonists themselves" (1991, p. 37), the Needs Mapping Tool supports dialogical reflection in the design process. Within the Graceful AI framework, it provides a way to integrate AI as a co-creative resource, enabling human–AI interaction to assist in mapping user needs, identifying potential satisfiers, and surfacing blind spots.

Thus, the Needs Mapping Tool serves as both a diagnostic instrument and a reflective guide for embedding human-scale development into service innovation. It operationalizes the normative orientation of Graceful AI: AI-enabled services should be evaluated not merely by efficiency or convenience, but by how they contribute to the satisfaction of fundamental human needs and the flourishing of individuals and communities.

4.3.2 The M[OTIO]N Heuristic

The second artifact of the Graceful AI framework is the M[OTIO]N heuristic, which embodies its central design philosophy. MOTION is both an acronym and a symbolic metaphor, aligned with the brand identity of Graceful Motion. The term conveys the idea of well-being and innovation as processes of movement, flow, and continual evolution, rather than fixed endpoints.

Each of the six dimensions of M[OTIO]N is not to be understood as a rigid category or criterion, but as an open reflective lens. They provide orientation for design and evaluation while also expressing the values and stance that govern how humans and AI engage one another in the creation of well-being services. In this sense, the heuristic is as much about cultivating a way of being in interaction as it is about guiding how services are designed.

MEANING (M)

Meaning draws attention to the purpose and significance of a service, beyond immediate functionality. In human–AI interaction, this dimension calls for services to resonate with what people find valuable, authentic, and fulfilling. Yet meaning is not uniform: it may take shape differently for different individuals, cultures, or contexts.

Reflective Prompt: "*How might this service open pathways to deeper meaning, and in whose terms is that meaning defined?"*

OPENNESS (O)

Openness refers to the dialogical and adaptive quality of services and their underlying systems. It implies transparency in how AI operates, but also a willingness to adapt and evolve through interaction. This dimension resists closure: what counts as openness depends on the cultural, institutional, and relational setting.

Reflective Prompt*:"In what ways does this service remain open to dialogue, adaptation, and co-creation with its users and environment?"*

TRUST (T)

Trust is the condition that enables engagement in the first place. It encompasses reliability, credibility, and transparency, but also authenticity and care in how services are delivered. Trust is relational and must be continuously cultivated; it cannot be reduced to compliance or technical accuracy.

Reflective Prompt: "*How does this service demonstrate that it is trustworthy, and how is that trust sustained over time?"*

INTEGRATION (I)

Integration recognizes that well-being and innovation emerge not from isolated domains but from their interconnection between body and mind, individual and community, human and technology, practices and institutions. The meaning of integration is context-sensitive, always negotiated within an ecosystem.

Reflective Prompt: *"What domains does this service bring together, and how does it integrate them into a coherent whole?"*

ORIENTATION (O)

Orientation emphasizes directionality and intentionality. It is less about prescribing a destination than about clarifying movement: toward growth, resilience, or shared flourishing. Orientation can shift as ecosystems change; its role is to provide a compass rather than a map.

Reflective Prompt: *"What direction does this service set, and how does it orient both humans and AI toward flourishing?"*

NURTURE (N)

This dimension draws on the idea of nudging (Thaler & Sunstein, 2008), reinterpreted here as nurturing conditions for motion. It highlights the small design choices that remove barriers (negative friction) or create gentle momentum (positive friction), helping people stay engaged in ways that feel supportive rather than manipulative. Nurture is thus both a design strategy and a stance of care.

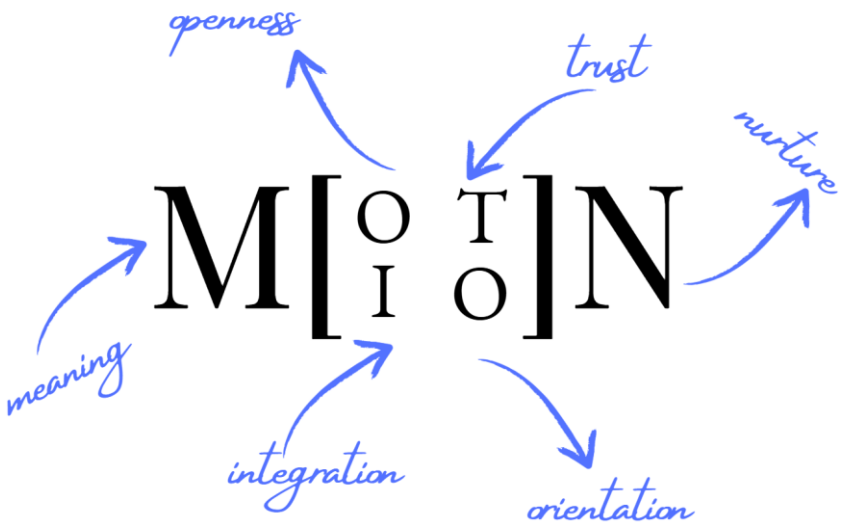
Reflective Prompt: *"How does this service reduce barriers and cultivate gentle supports that sustain meaningful engagement over time?"*

Together, the six dimensions of the M[OTIO]N heuristic provide a reflective orientation for the design, evaluation, and iteration of AI-enabled services. Rather than prescribing fixed criteria, the heuristic functions as a compass for interpretation and dialogue, inviting practitioners to reflect on how meaning, openness, trust, integration, orientation, and nurture might be embodied in specific contexts. In this way, it supports the alignment of service innovations with human flourishing, while acknowledging that such alignment must always remain open to negotiation and reinterpretation. By framing design as an evolving interaction between human intention and technological possibility, the heuristic helps guard against technological solutionism, where AI generates services detached from lived experience. Instead, it encourages a co-evolutionary stance, in which human practices and technological development move forward in relation to one another, shaping service ecosystems that are both adaptive and oriented toward well-being.

4.3.3 Representation and Symbolism of Graceful AI

The Graceful AI framework is not only conceptual but also symbolic in how it is represented. Its visual and linguistic form conveys an epistemological stance: that service innovation for well-being is dynamic, interpretive, and relational. The framework's representation through the acronym M[OTIO]N serves multiple functions. It communicates the heuristic dimensions in a memorable and accessible way, while simultaneously embedding values of flow, transformation, and continuity that are central to both well-being practices and the entrepreneurial vision of Graceful Motion. Figure 4 below illustrates the six dimensions of the M[OTIO]N heuristic, highlighting how each forms part of the interpretive structure that guides reflection and design.

Figure 4: Representation of the M[OTIO]N heuristic



Own illustration.

The six dimensions (Meaning, Openness, Trust, Integration, Orientation, and Nurture) are depicted as interconnected values that function as a reflective lens for service design. The visual representation highlights how M[OTIO]N supports the interpretation and co-creation of AI-enabled services aligned with well-being. The square brackets in M[OTIO]N emphasize the centrality of openness, trust, integration, and orientation, positioning these as the connective core of reflective service design. This typographic choice underscores the framework's structural logic, symbolizing how design principles and human practices interact with institutional arrangements and technological resources in a service ecosystem. The brackets also allude to the matrix structure of the Needs Mapping Tool, creating a visual resonance between the two artifacts. In this way, M[OTIO]N does not merely label a set of dimensions but functions as a reflective lens that links the heuristic to its practical application in service design.

Beyond its acronymic function, M[OTIO]N operates as a lens for interpretation and reflection. It draws attention to how relationships between humans and technology can be understood, framed, and evaluated within service ecosystems. As a lens, it highlights multiple possible perspectives rather than prescribing a singular path, encouraging practitioners to explore how meaning and direction emerge through continuous reflection, experimentation, and dialogue. At the same time, the symbolic resonance of motion reflects the embodied nature of well-being practices, particularly in traditions such as yoga, mindfulness, and functional movement. By grounding a technological framework in a metaphor of embodiment and flow, Graceful AI foregrounds the need to integrate human values and lived practices into the development of AI-enabled services. This symbolic grounding serves as a reminder that innovation is never purely technical but always cultural, relational, and interpretive.

Taken together, the representation of Graceful AI as M[OTIO]N communicates both practical utility and philosophical stance. It anchors the heuristic in a recognizable form while simultaneously embodying its core message: that AI-enabled service innovation for well-being must be understood as a process of motion which is inherently emergent, adaptive, and co-created rather than as a fixed or finalized system.

4.3.4 The Reflective Cycle of M[OTIO]N

Beyond its function as a set of heuristic dimensions, the M[OTIO]N framework can also be understood as a reflective cycle that supports service innovation as an ongoing, iterative process. This cycle unfolds through six interrelated stages, each corresponding to one of the dimensions:

1. Clarify Meaning and Purpose: establishing the intrinsic significance of a service concept and ensuring its alignment with well-being as an intended outcome.
2. Invite Open Perspectives and Dialogue: engaging diverse voices, viewpoints, and experiences in order to broaden the scope of possibilities.

3. Establish Trust through Transparency and Safe Conditions: creating the conditions for honest interaction, credibility, and mutual accountability.
4. Foster Integration of Resources, Knowledge, and Experiences: bringing together diverse capabilities, technologies, and practices into a coherent whole.
5. Define Orientation toward Intentional Outcomes and Development: directing services toward growth and resilience rather than narrow efficiency goals.
6. Nurture Resilience and Sustainability: embedding care, adaptability, and long-term well-being into the service lifecycle.

These stages are not linear steps but iterative entry points into a cyclical process of reflection and adjustment. In practice, designers may begin at any stage depending on the context, re-entering the cycle as needs, opportunities, or challenges emerge. This reflects both the emergent character of service ecosystems and the iterative nature of Design Science Research (Peffers et al., 2007), where artifacts are continuously refined through cycles of design, evaluation, and reflection.

By framing M[OTIO]N as a reflective cycle, the framework underscores its role not merely as a set of values but as a methodological lens through which the dynamics of service innovation can be navigated. This orientation strengthens its utility during prototyping and beyond, helping designers and organizations sustain alignment between human well-being and AI-enabled service development.

4.4 Application Overview

While the objectives and principles of the Graceful AI framework articulate its reflective stance, its application demonstrates how these ideals can be enacted in practice. The framework is designed not as an abstract addition but as a practical instrument that can be directly integrated into established service design processes. In doing so, it enriches conventional approaches by embedding principles of human-scale well-being and AI-enabled reflection into the entire lifecycle of service development.

To illustrate this applicability, this chapter adopts the service design process articulated by Stickdorn, Hormess, Lawrence, and Schneider (2018). Service design is widely recognized for its structured yet flexible methodology, progressing through exploration, ideation, prototyping, implementation, and evaluation. Its strength lies in addressing the complexity of multi-actor ecosystems while maintaining a human-centered orientation. Positioning Graceful AI within this process underscores its practical relevance: the framework is not conceived as an abstract overlay but as a reflective lens guiding each stage of service innovation.

1. Exploration and Research: Mapping Human Needs

At the outset of service design, the Needs Mapping Tool situates offerings in relation to fundamental human needs (Max-Neef, 1991). This stage is not about achieving completeness

but about surfacing intentions and blind spots: Which needs are currently being satisfied? Which remain underserved? Which risks of pseudo-satisfiers or violators exist? By framing exploration in terms of well-being, the design process is grounded in human-scale development rather than market-driven assumptions.

2. Ideation and Conceptualization: Orienting with M[OTIO]N

During concept development, the M[OTIO]N heuristic provides orientation for how proposed services embody values such as meaning, openness, trust, integration, orientation, and nurture. At this stage, M[OTIO]N functions as a design filter, helping ensure that emerging service concepts resonate with both human flourishing and the reflective stance of Graceful Motion. For example, the design of a digital support tool is not conceived solely in terms of its functionality, but also in terms of how it fosters trust, supports integration across physical and digital practices, and nurtures resilience in long-term use.

3. Prototyping and Development: Testing Against Needs and MOTION

In the prototyping phase, both artifacts are used iteratively. Prototypes, whether yoga class formats, community workshops, or AI-enabled applications are assessed using the Needs Mapping Tool to reveal their alignment with fundamental needs, while the M[OTIO]N heuristic provides reflection on their value orientation. This dual reflection ensures that prototypes are not only technically functional but also responsive to human needs and experiential values. Importantly, AI is positioned here as a co-creative resource rather than an autonomous solution generator.

4. Implementation and Delivery: Embedding Reflective Practice

In the delivery phase, the framework continues to provide ongoing orientation. The Needs Mapping Tool helps situate each offering within the broader ecosystem of satisfiers, while the M[OTIO]N heuristic informs the quality of interaction whether in-person or mediated by AI. This prevents fragmentation between human practices and technological development, ensuring continuity of values across the service portfolio.

5. Evaluation and Iteration: Ecosystem Evolution

Finally, the framework supports iterative improvement by emphasizing feedback loops. Data can be collected and insights gathered from participant experiences, instructor reflections, and AI-enabled insights feed back into both the Needs Mapping Tool and the MOTION heuristic. This cyclical process reflects the iterative character of both service ecosystems and Design Science Research (Peffers et al., 2007), allowing services to evolve in step with human practice. Over time, this cyclical process allows services to evolve in harmony with human practices, avoiding the deployments of AI olution that are deatached from lived realities while fostering adaptive, co-created well-being innovations.

By embedding Graceful AI into the established stages of service design, the framework demonstrates its practical utility as a reflective lens that supports diagnosis, reflection, and iteration throughout the innovation process. This positions Graceful Motion not only as a provider of services but also as a laboratory for graceful service innovation, where human well-being and technological development co-evolve in harmony.

5 EVALUATION (DEMONSTRATION & REFLECTION)

The purpose of this chapter is to evaluate the Graceful AI framework in terms of its theoretical grounding, practical relevance, and iterative refinement. Evaluation within Design Science Research is not a single summative test but a process of demonstrating and reflecting on the artifact's utility, consistency with theory, and responsiveness to stakeholder feedback (Gregor & Hevner, 2013). Accordingly, this chapter proceeds in three steps. Section 5.1 outlines the evaluation strategy, including the use of expert interviews, researcher reflections, and document analysis. Section 5.2 synthesizes insights from the interviews, highlighting how participants' perspectives on well-being, AI, and service design align with or diverge from the literature reviewed in Chapter 2, and what this implies for evaluating Graceful AI. Section 5.3 presents the refinement of the framework, showing how feedback informed changes to the articulation and presentation of its artifacts.

5.1 Evaluation Strategy

The evaluation of the Graceful AI framework followed a blended rationale, combining descriptive and formative elements (Gregor & Hevner, 2013). Descriptive evaluation was used to examine whether the framework and both of the artifacts are viable and meaningful to practitioners. Formative evaluation complemented this by keeping the process open to feedback on how the framework could be clarified and iteratively refined for future application. The dual aim was thus to test conceptual resonance and to identify directions for improvement.

Three sources of evidence were used. First, six semi-structured expert interviews engaged practitioners from fields including service design, coaching, entrepreneurship, and well-being. The interviews invited both general reflections on well-being and AI, and specific feedback on the Graceful AI framework. Second, researcher memos captured impressions and implications after each interview, adding reflexivity to the evaluation process. Third, document analysis of workshop structures, pilot class outlines, and framework drafts provided contextual evidence of applicability.

Analysis followed category-based qualitative content analysis (Mayring, 2000), combining deductive categories from theory with inductive insights from the interviews (see Appendix 3). This ensured rigor in connecting theory and data, while allowing new themes to emerge. The evaluation thus balanced rigor and relevance: rigor through structured coding and triangulation, and relevance by engaging practitioners as co-reflectors on the framework's

meaning and use. Its purpose was not to validate universally, but to surface alignments, tensions, and opportunities for refinement.

5.2 Interview Insights in Relation to Literature

The evaluation of Graceful AI drew on participants' reflections about well-being, AI, and service design. Their perspectives not only confirmed several assumptions from the theoretical foundations outlined in Chapter 2 but also revealed tensions and blind spots that inform further refinement. Four key themes emerged: well-being as relational and dynamic, value as co-created, the role of embodiment and positive friction, and the centrality of trust.

5.2.1 Well-being as Relational and Dynamic

Participants consistently described well-being as a shifting and contextual experience, echoing Max-Neef's (1991) conception of human needs as universal but satisfied in diverse ways. Speaker 3 observed: "everybody has the same pillars, but they are always shifting depending on context". This aligns with the Human Scale Development perspective that well-being is not a fixed state but is continually shaped by circumstances, relationships, and available resources. Similarly, Speaker 6 emphasized that "well-being is not one-size-fits-all… it is about the constant recalibration between the self and the environment". Such reflections support positioning Graceful AI as a flexible framework able to adapt to context rather than prescribing static interventions.

5.2.2 Value and Service Co-Creation

Consistent with Service-Dominant Logic (Vargo & Lusch, 2016), participants described value as emerging in interaction and through relationships. For example, Speaker 5 stressed that "the company is only as good as the team—the more well-being there is in the team, the more there will be for the company". This insight emphasizes the multi-level character of service ecosystems: individual well-being practices shape team dynamics, which in turn influence organizational health. Speaker 1 similarly noted that "when people come together with a shared purpose, the service itself becomes the container for value". These accounts reinforce the need for Graceful AI to address micro, meso, and macro layers of value co-creation.

5.2.3 Embodiment and Positive Friction

A recurring point of divergence concerned the role of effort and embodied practice. Whereas much of the AI literature emphasizes seamless personalization and efficiency, participants cautioned against outsourcing all forms of effort. Speaker 2 stated: "maybe it's just better to do the push-ups yourself", underscoring the irreplaceable value of direct, embodied engagement. He described this as a kind of "positive friction" that supports growth and

meaning, rather than a barrier to overcome. This perspective suggests that Graceful AI should not be designed as a frictionless system but should incorporate intentional moments of challenge and participation, consistent with the view that meaningful services often require effortful engagement (Calvo & Peters, 2014)

5.2.4 Trust and Critical Oversight

Trust emerged as a cross-cutting condition for both service interactions and AI-enabled support. Participants repeatedly emphasized that without trust, no meaningful engagement is possible. As Speaker 3 put it: “this is not possible if you feel you’re not safe”. Similarly, Speaker 6 cautioned against overreliance on AI, suggesting that “a friend who both challenges and supports me” best captured how technology should act in service contexts. These reflections resonate with concerns in the literature about the risks of over-trust in AI (Floridi & Cowls, 2019) and point to the importance of transparency, accountability, and clear boundaries in the design of Graceful AI. To illustrate the analytic process, see Appendix 4 for the full dataset of coded interviews.

Overall, the interviews confirmed that the Graceful AI framework resonates with practitioners’ lived experiences, particularly in framing well-being as dynamic and value as co-created. At the same time, participants highlighted critical considerations (embodiment, trust, and contextual adaptability) that must temper how AI is integrated into service innovation. Rather than being viewed as validation, these insights serve as dialogical feedback, positioning Graceful AI as both theoretically grounded and open to ongoing refinement.

5.3 Evaluation and Framework Refinement

The evaluation process did not aim to confirm the Graceful AI framework as final, but to iteratively refine its articulation and usability in light of stakeholder feedback. Participants’ comments and the researcher’s own reflections led to several adjustments, particularly in how the framework’s artifacts are presented and described. Three refinements stand out: visual representation, language, and clarity of articulation.

5.3.1 Visual Representation

Feedback highlighted the need for greater accessibility and intuitive engagement with the framework. The M[OTIO]N heuristic was therefore re-designed as a symbolic figure, moving beyond an acronym to a visual compass. This change aimed to make the framework easier to recall and to convey its reflective rather than prescriptive intent. The symbolic design also responded to participants’ calls for a more embodied way of relating to the concepts, aligning with the emphasis on meaning emerging in practice rather than through abstraction.

5.3.2 Language Adjustments

Terminology was refined to resonate more closely with the values expressed in the interviews. A prominent example is the transition from Nudge to Nurture. While nudge implied a rational correction or external push, participants emphasized care, support, and sustainability as central to well-being. Speaker 2 described this as a process of "rational override" that reflects not only movement but also service and care. Reframing the dimension as Nurture better captured this orientation, shifting the framework from subtle behavioral correction toward relational support.

5.3.3 Clarity in Articulation

Participants expressed a need for concepts to be made more accessible and concrete. This feedback prompted revisions in how the framework is described throughout this thesis, including the use of simpler language, illustrative examples, and metaphors that bridge technical and experiential perspectives. As Speaker 6 summarized, "a friend who both challenges and supports me" encapsulated the ideal role of AI in well-being services. This description inspired a reframing of M[OTIO]N not as a checklist to be applied stepwise, but as a reflective compass guiding ongoing cycles of service innovation.

These refinements underscore that evaluation in Design Science Research is not a matter of acceptance or rejection, but of co-creation (Gregor & Hevner, 2013). The framework has become clearer, more resonant, and more usable because of the dialogue with practitioners and the reflective stance of the researcher. While the artifacts remain conceptual, the process of iteration has strengthened their alignment with both theoretical grounding and stakeholder expectations. The outcome is a framework that is better positioned for application in practice initially within Graceful Motion, and potentially more broadly in well-being service ecosystems.

6 DISCUSSION & CONCLUSION

6.1 Discussion

6.1.1 Recap of Findings

This thesis explored how AI can be integrated into well-being service ecosystems through the design and evaluation of the Graceful AI Framework and the M[OTIO]N heuristic. The findings show that AI, when conceptualized as an operant resource, can support value co-creation by enhancing personalization and engagement without displacing human actors. The framework demonstrates that safeguarding ethical values such as trust, autonomy, and authenticity requires embedding them explicitly into design principles. Interviews further revealed enabling factors (personalization, transparency, nurturing engagement) and

constraining factors (bias, technological “bloating,” and risks of overreliance), especially in the context of yoga and mindfulness services. Finally, the Design Science Research (DSR) methodology proved effective in guiding the iterative development and contextual demonstration of the artifact.

6.1.2 Implications & Contributions

The study advances theory by extending Service-Dominant Logic with an AI-enabled, well-being-oriented framework, and by linking ethical principles with design heuristics for service innovation. Practically, it contributes a deployable framework for start-ups like Graceful Motion to guide responsible AI use in service delivery. More broadly, it illustrates how DSR can be applied to human-centered digital transformation.

6.1.3 Limitations

Several limitations must be acknowledged. The scope of this study was necessarily constrained. The evaluation relied on six expert interviews and contextual document analysis, providing depth but limiting generalizability. While reflective memos added transparency, the researcher’s embedded role carried potential bias. Moreover, the artifacts were primarily tested conceptually rather than through longitudinal field implementation in service environments. This means that while the framework demonstrates theoretical and practical resonance, its long-term effectiveness in guiding real-world AI adoption remains to be empirically validated. Finally, the focus on Graceful Motion as the contextual use case provided rich insights but also narrows the applicability of findings to broader organizational and cultural contexts

6.1.4 Furture Research Directions

Future studies could deepen the empirical foundation of Graceful AI. One avenue is to conduct longitudinal case studies in diverse well-being contexts, testing how the framework performs when implemented across different organizational scales and cultural environments. Another is to develop quantitative measures of well-being impact, complementing the qualitative evaluation with more systematic evidence of outcomes. Further research might also explore how the M[OTIO]N heuristic can be integrated with emerging standards for ethical AI governance, positioning it as a bridge between philosophical ideals and operational guidelines. Finally, participatory co-design workshops with users and practitioners could expand the framework’s usability, ensuring that Graceful AI continues to evolve as a collective through broader practitioner and user involvement, rather than a solely academic construct.

6.2 Conclusion

In conclusion, this thesis demonstrates that AI-enabled service innovation in the well-being domain cannot be reduced to questions of efficiency or automation. Instead, AI can be integrated into well-being services in ways that reinforce human-centered values, provided that these values are explicitly embedded into design. The contextual application to Graceful Motion highlights both the opportunities and the tensions of using AI in yoga and mindfulness services. The Graceful AI framework contributes to theory by extending perspectives on service innovation, to practice by offering a guiding tool for implementation, and to method by showing how Design Science Research can support the development of responsible, context-sensitive artifacts. Although still at an early stage, the framework offers both theoretical and practical contributions to service innovation for human well-being and opens pathways for continued exploration of how technology can be designed to support human flourishing.

LIST OF KEY LITERATURE

1. Akaka, M. A., & Vargo, S. L. (2014). Technology as an operant resource in service (eco)systems. Information Systems and e-Business Management, 12(3), 367–384. https://doi.org/10.1007/s10257-013-0220-5
2. Chandler, J. D., & Lusch, R. F. (2014). Service systems: A broadened framework and research agenda on value propositions, engagement, and service experience. Journal of Service Research, 18(1), 6–22. https://doi.org/10.1177/1094670514537709
3. Calvo, R., & Peters, D. (2014). Positive computing: technology for wellbeing and human potential. Cambridge: MIT Press.
4. García-Madurga, M.-Á., Gil-Lacruz, A.-I., Saz-Gil, I., & Gil-Lacruz, M. (2024). The Role of Artificial Intelligence in Improving Workplace Well-Being: A Systematic Review. Businesses, 4(3), 389-410. https://doi.org/10.3390/businesses4030024
5. Hevner, March, Park, & Ram. (2004). Design Science in Information Systems Research. MIS Quarterly, 28(1), 75. doi:10.2307/25148625
6. Lusch, R. F., & Nambisan, S. (2015). Service innovation: A service-dominant logic perspective. MIS Quarterly, 39(1), 155–175. http://doi.org/10.25300/MISQ/2015/39.1.07
7. Max-Neef, M. A., Elizalde, A., & Hopenhayn, M. (1991). Human scale development: conception, application and further reflections. New York: The Apex Press. Retrieved from https://www.daghammarskjold.se/wp-content/uploads/1989/05/89_1.pdf
8. Peffers, K., Tuunanen, T., Rothenberger, M. A., & Chatterjee, S. (2007). A design science research methodology for information systems research. Journal of Management Information Systems, 24(3), 45–77.

REFERENCE LIST

1. Andrejvic, M. (2014). Big Data, Big Questions| The Big Data Divide. International Journal of Communication, 8, Online. Retrieved 07 17, 2025, from https://ijoc.org/index.php/ijoc/article/view/2161/1163
2. Barad, K. (2006). Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning. Durham & London: Duke University Press. doi:10.1215/9780822388128
3. Brodie, R., Hollebeek, L., Jurić, B., & Ilić, A. (2011). Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research. Journal of Service Research, 252-271. doi:10.1177/1094670511411703
4. Chandler, J. D., & Lusch, R. F. (2015). Service Systems: A Broadened Framework and Research Agenda on Value Propositions, Engagement, and Service Experience. Journal of Service Research, 18(1), 6-22. doi:10.1177/1094670514537709

5. Chaundhry, N., Bhandari, R., & Gaur, V. (2023). Yoga perspective on personal excellence and well-being. Journal of Ayurveda and Integrative Medicine, 100717. doi:10.1016/j.jaim.2023.100717
6. Childress, T., & Cohen, H. (2016, 2 1). What is yoga service? A working definition. Retrieved 06 17, 2025, from Yoga Service Collective: https://yogaservicecollective.org/wp-content/uploads/2016/03/YSC_CRP-WhatIsYogaService.pdf
7. Crawford, K. (2021). The Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence. New Haven, London: Yale University Press. doi:https://doi.org/10.2307/j.ctv1ghv45t
8. Dignum, V. (2019). Responsible Artificial Intelligence: How to Develop and Use AI in a Responsible Way. Cham: Springer International Publishing AG. doi:https://doi.org/10.1007/978-3-030-30371-6
9. Dodge, R., Daly, A., Huyton, J., & Sanders, L. (2012). The challenge of defining wellbeing. International Journal of Wellbeing, 222-235. doi:10.5502/ijw.v2i3.4
10. Edwards-Schachter, M. (2018). The nature and variety of innovation. International Journal of Innovation Studies, 65-79. doi:10.1016/j.ijis.2018.08.004
11. Floridi, L., Cowls, J., Beltrametti, M., Chazerand, P., Chatila, R., & et al. (2018). AI4People—An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations. Minds and Machines, 28(4), 689-707. doi:10.1007/s11023-018-9482-5
12. Friedman, B., Kahn, P., Borning, A., & Huldtgren, A. (2013). Value Sensitive Design and Information Systems. In B. Friedman, P. Kahn, A. Borning, & A. Huldtgren, Early engagement and new technologies: Opening up the laboratory (pp. 55-95). Dordrecht: Springer Netherlands. doi:10.1007/978-94-007-7844-3_4
13. García-Madurga, M.-Á., Gil-Lacruz, A.-I., Saz-Gil, I., & Gil-Lacruz, M. (2024). The Role of Artificial Intelligence in Improving Workplace Well-Being: A Systematic Review. Businesses, 4(3), 389-410. doi:10.3390/businesses4030024
14. Gregor, S., & Hevner, A. (2013). Positioning and Presenting Design Science Research for Maximum Impact. MIS Quarterly, 337-355. doi:10.25300/MISQ/2013/37.2.01
15. Grönroos, C., & Voima, P. (2013). Critical service logic: making sense of value creation and co-creation. Journal of the Academy of Marketing Science, 133-150. doi:10.1007/s11747-012-0308-3
16. Helkkula, A., Kelleher, C., & Pihlström, M. (2012). Characterizing Value as an Experience: Implications for Service Researchers and Managers. Journal of Service Research, 59-75. doi:10.1177/1094670511426897
17. Kahneman, D., Diener, E., & Schwarz, N. (1999). Well-being: the foundations of hedonic psychology. New York: Russell Sage Foundation.
18. Kunz, W., & Wirtz, J. (2024). Corporate digital responsibility (CDR) in the age of AI: implications for interactive marketing. Journal of Research in Interactive Marketing, 18(1), 31-37. doi:10.1108/JRIM-06-2023-0176

19. Koskela-Huotari, K., Edvardsson, B., Jonas, J., Sörhammar, D., & Witell, L. (2016). Innovation in service ecosystems—Breaking, making, and maintaining institutionalized rules of resource integration. Journal of Business Research, 2964-2971. doi:10.1016/j.jbusres.2016.02.029
20. March, S., & Smith, G. (1995). Design and natural science research on information technology. Decision Support Systems, 251-266. doi:10.1016/0167-9236(94)00041-2
21. Noble, S. (2018). Algorithms of oppression : how search engines reinforce racism. New York: New York University Press. doi:10.18574/9781479833641
22. Pasquale, F. (2015). The black box society: the secret algorithms that control money and information. Cambridge: Harvard University Press.
23. Ries, E. (2017). The lean startup: how today's entrepreneurs use continuous innovation to create radically successful businesses. New York: Currency. doi:http://doi.org/10.1111/j.1540-5885.2012.00920_2.x
24. Ryan, R., & Deci, E. (2001). On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being. Annual Review of Psychology, 141-166. doi:10.1146/annurev.psych.52.1.141
25. Ryff, C., & Keyes, C. (1995). The structure of psychological well-being revisited. Journal of Personality and Social Psychology, 719-727. doi:10.1037/0022-3514.69.4.719
26. Seli, P., Risko, E., Smilek, D., & Schacter, D. (2016). Mind-Wandering With and Without Intention. Trends in Congnitive Sciences, 20(8), 605-617. doi:10.1016/j.tics.2016.05.010
27. Sinha, N., & Sinha, R. (2024). Harnessing the Potential of Artificial Intelligence in Yoga Therapy. International Journal of Yoga, 242-245. doi:10.4103/ijoy.ijoy_124_24
28. Soatto, S. (2021, 05 13). Graceful AI. (Amazon Science) Retrieved 10 06, 2025, from Amazon Science: https://www.amazon.science/latest-news/graceful-ai
29. Stickdorn, M., Hormess, M. E., Lawrence, A., & Schneider, J. (2018). This Is Service Design Doing: Applying Service Design Thinking in the Real World. O'Reilly Media, Inc.
30. Storbacka, K., Brodie, R. J., Böhmann, T., Maglio, P. P., & Nenonen, S. (2016). Actor engagement as a microfoundation for value co-creation. Journal of Business Research, 69(8), 3008-3017. doi:10.1016/j.jbusres.2016.02.034
31. Tai, M. (2020). The impact of artificial intelligence on human society and bioethics. Tzu Chi Medical Journal, 32(4), 339. doi:10.4103/tcmj.tcmj_71_20
32. Thaler, R., & Sunstein, C. (2021). Nudge: the final edition. New York: Penguin Books, an imprint of Penguin Random House LLC.
33. Tov, W. (2018). Well-being concepts and components. In E. Diener, S. Oishi, L. Tay, & S. O. E. Diener (Ed.), Handbook of well-being (pp. 1-15). Salt Lake City: DEF Publishers. Retrieved 06 22, 2025, from https://ink.library.smu.edu.sg/soss_research/2836

34. Varambally, S., & Gangadhar, B. (2012). Yoga: A spiritual practice with therapeutic value in psychiatry. Asian Journal of Psychiatry, 186-189. doi:10.1016/j.ajp.2012.05.003
35. Vargo, S. L., & Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. Journal of Marketing, 68(1), 1-17. doi:10.1509/jmkg.68.1.1.24036
36. Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. Journal of the Academy of Marketing Science, 1-10. doi:10.1007/s11747-007-0069-6
37. Vargo, S. L., & Lusch, R. F. (2012). The Nature and Understanding of Value: A Service-Dominant Logic Perspective. In S. L. Vargo, & R. F. Lusch, Review of Marketing Research (pp. 1-12). Emerald Group Publishing Limited. doi:10.1108/S1548-6435(2012)0000009005
38. Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: an extension and update of service-dominant logic. Journal of the Academy of Marketing Science, 5-23. doi:10.1007/s11747-015-0456-3
39. Vargo, S., Wieland, H., & Akaka, M. (2015). Innovation through institutionalization: A service ecosystems perspective. Industrial Marketing Management, 63-72. doi:10.1016/j.indmarman.2014.10.008
40. Walker, R., Dillard-Wright, J., & Iradukunda, F. (2023). Algorithmic bias in artificial intelligence is a problem—And the root issue is power. Nursing Outlook, 71(5), 102023. doi:https://doi.org/10.1016/j.outlook.2023.102023
41. Wetter-Edman, K., Sangiorgi, D., Edvardsson, B., Holmlid, S., Grönroos, C., & Mattelmäki, T. (2014). Design for Value Co-Creation: Exploring Synergies Between Design for Service and Service Logic. Service Science, 106-121. doi:10.1287/serv.2014.0068
42. Zuboff, S. (2019). Surveillance Capitalism and the Challenge of Collective Action. New Labor Forum, 28(1), 10-29. doi:10.1177/1095796018819461
43. Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). SAGE Publications

APPENDICE

Appendix 1: Matrix of Needs and Satisfiers

	BEING	HAVING	DOING	INTERACTING
SUBSISTENCE	Physical health, mental health, equilibrium, sense of humour, adaptability	Food, shelter, work	Feed, procreate, rest, work	Living environment, social setting
PROTECTION	Care, adaptability, autonomy, equilibrium, solidarity	Insurance systems, savings, social-security, health systems, rights, family, work	Cooperate, prevent, plan, take care of, cure, help	Living space, social environment, dwelling
AFFECTION	Self-esteem, solidarity, respect, tolerance, generosity, receptiveness, passion, determination, sensuality, sense of humour	Friendships, family, partnerships, relationships with nature	Make love, caress, express emotions, share, take care of, cultivate, appreciate	Privacy, intimacy, home spaces of togetherness
UNDERSTAND-ING	Critical conscience, receptiveness, curiosity, astonishment, discipline, intuition, rationality	Literature, teachers, methods, educational policies, communication policies	Investigate, study, experiment, educate, analyse, meditate	Settings of formative interaction, schools, universites, academies, groups, communities, family
PARTICIPATION	Adaptability, receptiveness, solidarity, willingness, determination, dedication, respect, passion, sense of humour	Rights, responsibilities, duties, privileges, work	Become affiliated, cooperate, propose, share, dissent, obey, interact, agree on, express opinions	Settings of participative interaction, parties, associations, churches, communitites, neighbourhoods, family
IDLENESS	Curiosity, receptiveness, imagination, recklessness, sesnse of humour, transquility, sensuality	Games, spectacles, clubs, parties, peace of mind	Day-dream, brood, dream, recall old times, give way to fantasies, remember, relax, have fun, play	Privacy, intimacy, spaces of closeness, free time, surroundings, landscapes
CREATION	Passion, determinations, intuition, imagination, boldness, rationality, autonomy,	Abilities, skills, methods, work	Work, invent, build, design, compose, interpret	Productive and feedback settings, workshops, cultural groups, audiences, spaces for expression,

	invetiveness, curiosity			temporal-freedom
IDENTITY	Sense of belonging, consistency, differentiation, self-estemm, assertiveness	Symbolds, language, religion, habits, customs, reference groups, sexualit, values norms, historical memory, work	Commit oneself, integrate oneself, confront, decide on, get to know oneself, actualize oneself, grow	Social rhythms, everday settings, settings in which one belonds to, maturation stages
FREEDOM	Autonomy, self-esteem, determination, passion, assertiveness, open-mindedness, boldness, rebelliousness, tolerance	Equal rights	Dissent, choose, be different from, run risks, develop awareness, commit oneself, disobey	Temporal/spatial plasticity

Source: own illustration based on (Max-Neef, Elizalde, & Hopenhayn, 1991, S. 32-33)

* The column of BEING registers attributes, personal or collective, that are expressed as nouns. The column of HAVING registers institutions, norms, mechanisms, tools (not in a material sense), laws, etc. that can be expressed in one or more words. The column of DOING registers actions, personal or collective, that can be expressed as verbs. The column of INTERACTING registers locations and milieus (as times and spaces). It stands for the Spanish ESTAR or the German BEFINDEN, in the sense of time and space. Since there is no corresponding word in English, INTERACTING was chosen 'a faut de mieux'.

.

Appendix 2: Institutional Guidelines for Applying the Needs Mapping Tool in Service Design

Guideline	Literature Basis	Implication for Graceful AI
Not Every Service Must Fulfill Every Need	Human-Scale Development emphasizes that needs are universal, but satisfiers vary by culture, context, and service (Max-Neef, 1991). SDL further highlights that value is co-created across multiple actors (Vargo & Lusch, 2016).	A single service is not expected to meet all needs; rather, it contributes selectively within a broader ecosystem of satisfiers. The framework positions services as complementary roles in an evolving landscape.
Use the Matrix as a Reflective Lens, Not a Scorecard	Reflective design and positive computing stress that tools should support awareness, not rigid measurement (Calvo & Peters, 2014). SDL also argues that value emerges through interpretation rather than objective metrics (Chandler & Vargo, 2011).	The Needs Mapping Tool is used to guide critical reflection on alignment with human needs. It surfaces strengths, blind spots, and ethical tensions, supporting intentional service design rather than quantitative scoring.
Accept That Service Ecosystems Evolve	Service ecosystems theory emphasizes adaptability and feedback loops (Chandler & Lusch, 2014). Human-Scale Development suggests satisfiers shift across time and context (Max-Neef, 1991).	Well-being services are recognized as dynamic, adapting through feedback and co-creation. Needs are fulfilled progressively across time and touchpoints, rather than comprehensively from the outset.

Source: own illustration

Appendix 3: Codebook for Qualitative Content Analysis

Main Category	Subcategory	Short Description	Type	Source / Link to Theory
1. Participant Background and Expertise	BACK_ROLE	Role, education, and primary field of expertise	Deductive	Interview setup; Yin (2018) on case context
	BACK_EXP	Years and scope of experience in service innovation/design	Deductive	Storbacka et al. (2016); SDL microfoundations
	BACK_INDUSTRY	Industry domains and contexts worked in	Deductive	Chandler & Lusch (2014); case-based research
2. Understanding and Definition of Well-being	WELL_DEF_PERS	Participant's personal concept of well-being	Deductive	Ryan & Deci (2001); Max-Neef (1991)
	WELL_DEF_PROF	Definitions of well-being in their organizational context	Deductive	García-Madurga et al. (2024)
	WELL_PILLARS	Mention of dimensions like physical, mental, social, etc.	Inductive	Max-Neef (1991); WHO definition of well-being
	WELL_DYNAMIC	Whether needs are viewed as static or context-dependent	Inductive	Max-Neef (1991); HCD/DSR iteration
	WELL_SYSTEMIC	Systemic influences: digital burnout, work culture, etc.	Inductive	Sinha & Sinha (2024); societal well-being

	WELL_NEEDS_VS_WANTS	Reflections on fundamental vs. superficial needs	Deductive	Max-Neef (1991); Human-Scale Development
3. Current AI Usage and Perceptions	AI_USE_PERSONAL	Use of AI for personal tasks (e.g., journaling, summarizing)	Inductive	Graceful AI interviews; Ryan & Deci (2001)
	AI_USE_PROF	AI in teaching, admin, design, etc.	Deductive	Vargo & Lusch (2016); SDL operant resource
	AI_BENEFITS	Perceived strengths like personalization, speed	Deductive	Akaka & Vargo (2014); Sinha & Sinha (2024)
	AI_CONCERNS	Fears around bias, ethics, accuracy, dependency	Deductive	Floridi et al. (2018); Ziegelmayer & James (2024)
4. AI Integration into Well-being Services	AI_PARTNER	Views on AI as a collaborator or agent in service delivery	Deductive	Vargo & Lusch (2016); AI as operant resource
	AI_CO_CREATION	Reflections on AI-human co-creation processes	Deductive	SDL; Chandler & Lusch (2014)
	AI_ETHICS	Ethical principles AI should follow (e.g., non-harm)	Deductive	Floridi et al. (2018); AI4People
	AI_BOUNDARIES	Responsibility for AI governance and boundaries	Inductive	Floridi et al. (2018); policy discussions
	AI_EMPATHY	Tensions between tech use and maintaining empathy	Inductive	Sinha & Sinha (2024); yogic philosophy

	AI_CUSTOM_VS_GEN	Individualization vs. generic automation	Inductive	Graceful AI framework design tensions
5. Value Creation in Services	VALUE_DEF	What makes a service valuable (from user perspective)	Deductive	SDL: value co-creation; Vargo & Lusch (2016)
	VALUE_TRUST	What creates or breaks trust in service interactions	Deductive	Yogic ethics; AI ethics (Floridi et al., 2018)
	VALUE_FEEDBACK	How user feedback is gathered and used	Inductive	DSR evaluation loop; Yin (2018)
	VALUE_MEASURE	Metrics or indicators for well-being impact	Inductive	Max-Neef (1991); qualitative feedback
	VALUE_PERSONAL	Value as personalized relevance and resonance	Deductive	HCD; Ryan & Deci (2001); yoga-based self-study
6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	Positive feedback on MOTION or visual design	Inductive	Graceful AI interviews; DSR artifact feedback
	FRM_IMPROVE	Suggestions for clarity, naming, visuals	Inductive	User testing & iterative refinement
	FRM_USABILITY	Perceived usefulness in real-world settings	Deductive	DSR: Utility (Hevner et al., 2004)
	FRM_NUDGE_NURTURE	Reflections on changing “N” from Nudge to Nurture	Inductive	Evolved during interview reflection cycles

	NEEDS_INSIGHTS	How the Needs Tool helped surface insights	Deductive	Max-Neef (1991); Graceful AI artifact 2
	NEEDS_USABILITY	Ease of use, visual layout, matrix mapping	Inductive	Interview feedback on practical tool
	NEEDS_RELATION	Perceived relationship to MOTION	Deductive	DSR construct alignment
	NEEDS_MATRIX_FEEDBACK	Specific input on layout, flexibility, completion	Inductive	Interview design feedback
7. Future Outlook and Broader Implications	FUTURE_AI	Hopes and predictions for AI in well-being	Inductive	Participant visions and concerns
	FUTURE_SOCIETY	Broader systemic/cultural reflections	Inductive	Max-Neef (1991); human-tech philosophy
	FUTURE_HUMAN_SKILLS	Skills that humans should retain despite AI growth	Inductive	Human-centered service design ethics
	FUTURE_RECS	Advice or ideas for improving Graceful AI	Inductive	Practical next steps from interviewees
	FRM_CERTIFICATION	Opinions on Graceful AI as a certification tool	Inductive	Forward-looking visioning

Appendix 4: Dataset of Coded Transcript Excerpts

Purpose: These excerpts illustrate how raw data segments were coded into categories and subcategories during analysis.

Speaker ID	*Participant Role*	*Excerpt / Data Segment*	*Main Category*	*Subcategory*	*Notes / Design Insights*
S1	Coach, Mentor, Content Creator	For coaching I don't use AI... but I use it for email marketing, social media, content creation.	4. AI Integration into Well-being Services	AI_USE_PERSONAL, AI_USE_PROF	Views AI as process-enhancer, not a relational actor in emotional services.
S1	Coach, Mentor, Content Creator	"For my coaching and well-being work, I usually don't use AI too much... I would use AI to make processes easier like for email marketing."	3. Current AI Usage and Perceptions	AI_USE_PERSONAL, AI_USE_PROF	Differentiates operational vs. relational roles of AI in practice.
S1	Coach, Mentor, Content Creator	"AI needs to give me a whole picture... developing with me, kind of like a digital partner."	3. Current AI Usage and Perceptions	AI_PARTNER, AI_CUSTOM_VS_GEN	Values adaptability and AI that mirrors human growth—like a partner.
S1	Coach, Mentor, Content Creator	"It depends on where the AI comes from... it needs to be neutral to me, and that's a big value."	4. AI Integration into Well-being Services	AI_ETHICS	Concerns over origin-based bias and developer influence on neutrality.

S1	Coach, Mentor, Content Creator	"AI tends to give me answers I want to hear instead of answers I need to hear... I wish it would give me a neutral point of view."	3. Current AI Usage and Perceptions	AI_ETHICS, AI_CONCERNS	Calls for objectivity over personalization in well-being services.
S1	Coach, Mentor, Content Creator	"It means inner peace... acceptance for everything... avoiding conflict... time for myself... learning just for me."	2. Understanding and Definition of Well-being	WELL_PILLARS, WELL_DEF_PROF	Defines well-being as peace, autonomy, emotional and intellectual freedom.
S1	Coach, Mentor, Content Creator	"Yes, absolutely I do think AI can act as a true service partner."	4. AI Integration into Well-being Services	AI_PARTNER	Confirms openness to AI in human-centered service contexts.
S1	Coach, Mentor, Content Creator	"Make it look like it communicates with me... not just pop-ups... make it transparent."	4. AI Integration into Well-being Services	AI_ETHICS, AI_CO_CREATION	Prefers intuitive, dialogic design over static legalese for user communication.
S1	Coach, Mentor, Content Creator	"You could measure... all of the prompts people type in... maybe AI could alert the individual... anonymously share to improve society."	5. Value Creation in Services	VALUE_MEASURE, VALUE_FEEDBACK	Suggests reflective prompts as a proxy for well-being sentiment at personal/societal level.
S1	Coach, Mentor, Content Creator	"Alert to me personally... not to the government... I would feel that’s very cool."	5. Value Creation in Services	VALUE_PERSONAL	Favors individual alerts over institutional control for sensitive issues.

S1	Mentor Coach, Creative	"Absolutely... I said all of these things that are here, so absolutely 100% agree... I would feel more trust into the AI... maybe having some kind of onboarding with the MOTION model and then you're onboarded and now AI can function in this way..."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS, FRM_USABILITY	Positive alignment with participant values. Highlights need for onboarding design to integrate model with trust-building.
S1	Mentor Coach, Creative	"Would you agree with the statement that what we do to serve our own well-being also serves well-being of those around us...?" → “Sure absolutely 100% yes.”	5. Value Creation in Services	VALUE_DEF	Reinforces relationality and systems thinking: individual well-being contributes to collective well-being.
S3	Researcher & Yoga Teacher	I'm working at the IBR... combination with people.	1. Participant Background and Expertise	BACK_ROLE	Highlights professional context: tech-human integration focus, relevant to service innovation in AI/well-being.
S3	Researcher & Yoga Teacher	So we are... focus on Betriebliche Gesundheits Management (BGM)... well-being aspects for sure.	1. Participant Background and Expertise	BACK_INDUSTRY	Identifies institutional link between digital innovation and well-being (BGM) at organizational level.
S3	Researcher & Yoga Teacher	And besides that, I'm also working as a yoga teacher.	1. Participant Background and Expertise	BACK_EXP	Complements technical background with embodied, service-centered practice—key for AI-human integration.

S3	Researcher & Yoga Teacher	You get a lot of these videos on Instagram... ChatGPT as their health consultant.	3. Current AI Usage and Perceptions	AI_USE_PERSONAL, AI_USE_PROF	Describes a growing real-world use case—AI as informal health/mental support—illustrating blurred service roles.
S3	Researcher & Yoga Teacher	At the same time... ChatGPT answers rated higher than actual health consultants.	3. Current AI Usage and Perceptions	AI_BENEFITS, VALUE_TRUST	Raises reflection on trustworthiness and perception—AI credibility surpassing human experts in some evaluations.
S3	Researcher & Yoga Teacher	It feels kind of weird... we're not used to doing these kinds of things.	3. Current AI Usage and Perceptions	AI_EMPATHY	Expresses ambivalence and unease toward AI replacing human interactions, even in functional roles.
S3	Researcher & Yoga Teacher	Where's the emotional connection, where's the human connection?... there's something missing.	4. AI Integration into Well-being Services	AI_EMPATHY	Concern over erosion of relational and emotional presence in AI-mediated care.
S3	Researcher & Yoga Teacher	The concern maybe is also that... you cannot already see what kind of long-term outcomes there will be.	4. AI Integration into Well-being Services	AI_BOUNDARIES	Raises risk of short-term success vs. long-term consequences in AI use for well-being.
S3	Researcher & Yoga Teacher	Yeah. I mean, I think it it needs to be really specific to a person's need... But actually to have a really value, it really needs to fit the needs of the person.	5. Value Creation in Services	VALUE_PERSONAL	Emphasizes user-centric design; value is subjective and individualized.

		...there must be a lot of data privacy issues... you have to have all this data to generate something.	4. AI Integration into Well-being Services	AI_BOUNDARIES	
S3	Researcher & Yoga Teacher	AI can really help us... to customize it. (well-being)	4. AI Integration into Well-being Services	AI_CO_CREATION, AI_CUSTOM_VS_GEN	Raises tension between value creation and data ethics—key concern in AI-supported well-being services.
S3	Researcher & Yoga Teacher	I guess everybody has these the same pillars... but it's kind of like shifting all the time.	2. Understanding and Definition of Well-being	WELL_PILLARS, WELL_DYNAMIC	Sees AI as a potential enabler for personalized service delivery.
S3	Researcher & Yoga Teacher	...maybe well-being has to do something with relationships... and then other needs kind of pop up.	2. Understanding and Definition of Well-being	WELL_DEF_PERS, WELL_PILLARS	Describes well-being as fluid and evolving depending on context and life phase.
S3	Researcher & Yoga Teacher	Right now... the workplace... to have a workplace where you feel really confident and really well...	2. Understanding and Definition of Well-being	WELL_DEF_PROF	Prioritizes relationships as foundational but shifting according to satisfaction levels.
S3	Researcher & Yoga Teacher	I feel like in my own services... a lot about giving a safe space.	5. Value Creation in Services	VALUE_DEF, VALUE_TRUST	
S3	Researcher & Yoga Teacher	People with kind of like mental issues... come up to my classes.	5. Value Creation in Services	VALUE_FEEDBACK	Emphasizes the importance of psychological safety as a foundational aspect of service design.

S3	Researcher & Yoga Teacher	They feel accepted... they get a space to create... they leave happier.	5. Value Creation in Services	VALUE_DEF	Reflects on client demographics and the implicit trust placed in her service environment.
S3	Researcher & Yoga Teacher	So I would say... maybe the mental value they get... it's not so much about posture or progressing hardcore.	5. Value Creation in Services	VALUE_PERSONAL	Illustrates how subtle emotional shifts represent service value from the client's perspective.
S3	Researcher & Yoga Teacher	It's more on a subtle subtle value creation... they feel safe and they feel better.	5. Value Creation in Services	VALUE_DEF	Contrasts physical achievement with mental/emotional outcomes—emphasizing well-being over performance.
S3	Researcher & Yoga Teacher	Yeah.	5. Value Creation in Services	WELL_DYNAMIC	Confirms that subjective transformation and emotional acceptance are core to defining value in well-being.
S3	Researcher & Yoga Teacher	Yes. Yeah.	5. Value Creation in Services	VALUE_PERSONAL	Affirms that value is not unidirectionally delivered but co-constructed through relational interaction.
S3	Researcher & Yoga Teacher	I even use it sometimes for generating topic specific classes... deeper knowledge about specific like like like for example... Yin-yoga...	3. Current AI Usage and Perceptions	AI_USE_PROF	Confirms experiential, dialogic view of value creation—underscores intersubjective service dynamics.

S3	Researcher & Yoga Teacher	Last time I had one student... she had a panic attack... and then she said the breathing techniques were really good...	5. Value Creation in Services	VALUE_FEEDBACK	AI is used to augment teaching preparation—quick, targeted knowledge generation that enhances emotional intelligence of service.
S3	Researcher & Yoga Teacher	Now I will look up some postures... techniques for especially tackling these emotional issues.	3. Current AI Usage and Perceptions	AI_USE_PROF, AI_CO_CREATION	Reflects feedback loop between user experience and service adaptation—AI supports reflective responsiveness.
S3	Researcher & Yoga Teacher	I think if you say that you're offering a service... it means you are in service of something greater than yourself...	5. Value Creation in Services	VALUE_DEF	Illustrates AI-supported intentional design of emotional healing experiences—relationally anchored and preparatory.
S3	Researcher & Yoga Teacher	It could be connected to something spiritual... it's kind of a giving act...	2. Understanding and Definition of Well-being	WELL_DEF_PERS, WELL_DYNAMIC, WELL_PILLARS	Explores future possibility: AI tutors offering personalizable support—bridging digital and emotional presence.
S3	Researcher & Yoga Teacher	I think this is not possible if you are really disconnected... or if you feel that you're not safe...	2. Understanding and Definition of Well-being	WELL_PILLARS, WELL_DEF_PERS	Aligns with ethical AI perspective: co-creating personalized service through human–AI collaboration.
S3	Researcher & Yoga Teacher	This is for me the core of well-being... if you feel you’re loved and you are able to love.	2. Understanding and Definition of Well-being	WELL_DEF_PERS, WELL_PILLARS	Warns about the risk of users over-trusting AI responses without critical engagement or verification.

S3	Researcher & Yoga Teacher	This is what I try to do in my courses... trying to find where this block is... working with people in a deep way.	5. Value Creation in Services	VALUE_DEF, VALUE_PERSONAL	Highlights how superficial responses in emotionally sensitive domains can lead to harm.
S3	Researcher & Yoga Teacher	Sometimes I have students coming to me and saying I feel so open after this... and then they cry.	5. Value Creation in Services	VALUE_FEEDBACK, VALUE_PERSONAL	Reflects fear of emotional data exploitation and unregulated accumulation of personal information.
S3	Researcher & Yoga Teacher	I think that if you are working in this kind of field, you're kind of holding space.	5. Value Creation in Services	VALUE_DEF, VALUE_TRUST	Emphasizes uncertainty and the ethical fragility of emerging AI systems—who controls and how it's used matters deeply.
S3	Researcher & Yoga Teacher	They have a space where they can breathe, they can feel... then they go back into this world... and they are a bit stronger.	5. Value Creation in Services	VALUE_DEF, VALUE_PERSONAL	Personalizes the tension around privacy—relational boundaries in digital sharing become emotionally loaded.
S3	Researcher & Yoga Teacher	It's almost like we try to bring them back to their core... connect to themselves again...	5. Value Creation in Services	VALUE_MEASURE, VALUE_DEF	Demonstrates a self-aware desensitization to AI risks due to over-familiarity.
S3	Researcher & Yoga Teacher	I think this is a kind of subtle transformation... people becoming more in tune with what they want and need.	5. Value Creation in Services	VALUE_MEASURE, NEEDS_RELATION	Asserts need for external rule-making to ensure ethical integrity—market logic seen as insufficient.
S3	Researcher & Yoga Teacher	I think AI could be like an assistant... if it’s only automated, it loses this depth.	4. AI Integration into Well-being Services	AI_PARTNER, AI_CO_CREATION	Approves of hardcoded constraints to prevent harm—design boundaries should reflect ethical intent.

S3	Researcher & Yoga Teacher	If I imagine AI doing this (well-being services)... maybe it would feel cold, because it's not really living.	4. AI Integration into Well-being Services	AI_CONCERNS, AI_EMPATHY	Suggests positive nudging: AI responses should steer people toward help, not harm.
S3	Researcher & Yoga Teacher	But maybe if it can be used to inspire or bring some ideas... to help me as a teacher...	4. AI Integration into Well-being Services	AI_CO_CREATION, AI_PARTNER	Summarizes foundational ethical stance: AI should be a tool for human support, never for harm.
S3	Researcher & Yoga Teacher	I think your framework could help structure how AI interacts... like giving it a value compass.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS, FRM_USABILITY	Suggests measuring success based on real-life implementation and perceived benefits of AI advice.
S3	Researcher & Yoga Teacher	It’s important that AI knows the intention... so that it doesn't just throw out data.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_IMPROVE, FRM_NUDGE_NURTURE	Warns of AI narrowing pathways—missed alternatives may limit outcomes.
S3	Researcher & Yoga Teacher	I think this framework is like a guide for that... especially if it learns together with the teacher.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY, NEEDS_MATRIX_FEEDBACK	Refers to using tools like the "well-being wheel" to evaluate individual progress across multiple dimensions.
S3	Researcher & Yoga Teacher	You could even integrate feedback loops... the AI could adapt to what students need over time.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_IMPROVE, FRM_USABILITY	Raises provocative point: AI sometimes perceived as more emotionally attuned than human therapists.

S3	Researcher & Yoga Teacher	So the way you structured it with the MOTION steps... makes it more like a journey.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS, FRM_USABILITY	Acknowledges the existential disruption AI introduces to human roles and support systems.
S3	Researcher & Yoga Teacher	Maybe the AI itself could have checkpoints... to evaluate how aligned it is with the model.	6. Framework Evaluation (Graceful AI/MOTION)	NEEDS_MATRIX_FEEDBACK, FRM_POS	Warns that overreliance on AI might impair social functioning and human relational skills.
S3	Researcher & Yoga Teacher	That would make me feel safer... because it's then not just a black box.	4. AI Integration into Well-being Services	AI_ETHICS, AI_BOUNDARIES	Highlights contrast between AI enthusiasm and neglected reflection on long-term societal consequences.
S3	Researcher & Yoga Teacher	Transparency is key... otherwise we are just assuming good intentions.	4. AI Integration into Well-being Services	AI_ETHICS	Recognizes AI's surprising strength in emotional reasoning vs. its relative inaccuracy in technical tasks.
S3	Researcher & Yoga Teacher	So if it’s co-designed, that’s a huge plus... I think that’s the way forward.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Expresses optimism toward AI’s rapid improvement and relevance for professional use.
S3	Researcher & Yoga Teacher	Like a yoga teacher wouldn’t just throw random poses... the AI shouldn’t just throw random advice.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY, FRM_IMPROVE	Advocates for purpose-built AI tailored to well-being—highlighting use-case specificity as a design priority.

S3	Researcher & Yoga Teacher	Even if AI is super powerful, it still needs a kind of moral anchor.	6. Framework Evaluation (Graceful AI/MOTION)	AI_ETHICS, NEEDS_RELATION, NEEDS_USABILITY	Offers an example of targeted AI supporting educational and interpersonal skills development.
S3	Researcher & Yoga Teacher	Maybe this model becomes the standard... like a yoga alliance certification for AI.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_CERTIFICATION	Suggests tuning general models for well-being-specific contexts to deepen ethical and emotional fit.
S3	Researcher & Yoga Teacher	That could build trust... if people see that an AI follows these principles.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS, FRM_CERTIFICATION	Concern about stunted social skill development in future generations due to AI overuse in emotional contexts.
S3	Researcher & Yoga Teacher	So I would say I really see the potential in this... but it has to be handled with care.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS, FRM_IMPROVE	Raises systemic governance concerns—AI's role in societal structure, equity, and long-term shifts in human agency.
S3	Researcher & Yoga Teacher	It’s about presence... and presence can’t be faked, even by AI.	4. AI Integration into Well-being Services	AI_EMPATHY	Participant positively affirms the MOTION framework; initial impression is supportive.
S3	Researcher & Yoga Teacher	You can feel if the guidance is real... if it’s embodied knowledge.	4. AI Integration into Well-being Services	AI_EMPATHY	Suggests creating a visual representation to enhance user understanding.

S3	Researcher & Yoga Teacher	"Maybe add a bit more detailed description... maybe with examples."	6. Framework Evaluation (Graceful AI/MOTION)	VALUE_MEASURE, FRM_USABILITY	Recommends improving accessibility and uptake through clear descriptions and applied examples.
S3	Researcher & Yoga Teacher	"The NUDGING aspect is really interesting... this really stands out for me."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_NUDGE_NURTURE	Nudging resonated strongly; seen as the most compelling and distinctive aspect of the framework.
S3	Researcher & Yoga Teacher	"Do you have to have ethics in there somehow... it's such a big aspect."	6. Framework Evaluation (Graceful AI/MOTION)	AI_ETHICS, FRM_IMPROVE	Raises concern that ethics should be explicitly addressed, particularly in the Trust component.
S3	Researcher & Yoga Teacher	"Maybe describing more the ethics on what I mean with trust and transparency."	6. Framework Evaluation (Graceful AI/MOTION)	AI_ETHICS, FRM_IMPROVE	Suggests clarifying ethical dimension within the Trust component more explicitly.
S3	Researcher & Yoga Teacher	"I think this framework is really good... but I think it can be really helpful to make it more tangible."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS, FRM_USABILITY	Encourages concrete, applied format to support clearer understanding and easier implementation.
S3	Researcher & Yoga Teacher	"Maybe even just with an example... like a yoga lesson... and so people can go through it..."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_IMPROVE, FRM_USABILITY	Recommends providing a use case walkthrough—especially in a yoga context—for easier grasp of the MOTION principles.

S4	Student & Sports Program Organizer	"I'm basically the sole person responsible... providing the halls... and trainers..."	1. Participant Background and Expertise	BACK_ROLE	Reveals a dual role as both service provider and participant; relevant for actor mapping.
S4	Student & Sports Program Organizer	"They support the physical part of it... less health problems down the line."	2. Understanding and Definition of Well-being	WELL_PILLARS	Affirms physical well-being as baseline benefit of participation; links to preventive care.
S4	Student & Sports Program Organizer	"More important... is the opportunity of connecting with other students..."	2. Understanding and Definition of Well-being	WELL_PILLARS	Emphasizes social connection as a key well-being factor; highlights community-building.
S4	Student & Sports Program Organizer	"A satisfied feeling in your own body and psyche."	2. Understanding and Definition of Well-being	WELL_DEF_PERS	Reflects an integrated mental-physical view of well-being; could guide AI health metrics.
S4	Student & Sports Program Organizer	"Primarily this service should be really directed at providing what the student wants, so it should be really goal oriented..."	2. Understanding and Definition of Well-being	VALUE_DEF	Reveals intention-driven service design—students want focused, purposeful offerings tailored to their needs.
S4	Student & Sports Program Organizer	"...should also be easy to navigate... it should be on the cheaper side."	6. Framework Evaluation (Graceful AI/MOTION)	VALUE_FEEDBACK, WELL_DEF_PERS	Practical suggestions highlight orientation needs: affordability and usability in student services.

S4	Student & Sports Program Organizer	"Needs are the basic necessities... wants are the ones that are optional..."	2. Understanding and Definition of Well-being	VALUE_FEEDBACK, WELL_NEEDS_VS_WANTS, VALUE_DEF	Offers functional definition of needs vs. wants; useful for designing need-based vs. luxury service tiers.
S4	Student & Sports Program Organizer	"We try to go for surveys... people don't participate... I try to keep in contact with the trainers..."	5. Value Creation in Services	VALUE_FEEDBACK	Reveals difficulties in traditional feedback loops; suggests opportunity for improved engagement mechanisms.
S4	Student & Sports Program Organizer	"...sometimes the courses are cancelled or relayed... if there was a service... that shows you when something changes instantly..."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Points to integration needs—live scheduling & real-time communication features as core to usability.
S4	Student & Sports Program Organizer	"...we are currently stuck using Teams... we cannot use other services like WhatsApp... due to data protection laws..."	4. AI Integration into Well-being Services	AI_BOUNDARIES	Institutional constraints (GDPR) affect service delivery—important for realistic AI system design.
S4	Student & Sports Program Organizer	"If there was like an easy way to collect feedback... that would greatly help..."	5. Value Creation in Services	VALUE_FEEDBACK, WELL_DEF_PROF	Reiterates need for low-friction engagement—AI could improve user interaction and adaptability.
S4	Student & Sports Program Organizer	"...should be easy to engage... intuitive... targeted specifically to what the students or the leaders require..."	5. Value Creation in Services	VALUE_PERSONAL, BACK_INDUSTRY	Calls for task-oriented, role-sensitive personalization—useful for Graceful AI tailoring.

S4	Student & Sports Program Organizer	"...they just acquire different functionalities... they become bloated..."	4. AI Integration into Well-being Services	AI_BOUNDARIES	Flags long-term design risk of service bloat—important warning against mission drift.
S4	Student & Sports Program Organizer	"...if it would start to like bleed into other things... that would be a problem."	4. AI Integration into Well-being Services	AI_BOUNDARIES	Warns against overreach—AI should not extend beyond its intended function.
S4	Student & Sports Program Organizer	"...pressure of having many different appointments... deadlines... creates unnecessary pressure..."	2. Understanding and Definition of Well-being	WELL_SYSTEMIC	Identifies cognitive load and scheduling complexity as major well-being inhibitors.
S4	Student & Sports Program Organizer	"...check-in regularly and then... track how it develops over time... tailored to the person..."	4. AI Integration into Well-being Services	AI_CO_CREATION, BACK_ROLE	Positive example of AI-enabled self-reflection; echoes Graceful AI intent for gentle monitoring.
S4	Student & Sports Program Organizer	"...constant analysis of physical and mental well-being... then provided tips or suggestions..."	4. AI Integration into Well-being Services	AI_CO_CREATION, BACK_ROLE	Describes ideal future use of AI for well-being—real-time, adaptive, insight-driven.
S4	Student & Sports Program Organizer	"...culture of understanding... different origin points... relying on AI too much becomes a crutch..."	7. Future Outlook and Broader Implications	FUTURE_SOCIETY	Emphasizes empathy and cultural nuance in human-AI systems; warns of societal overreliance.

S4	Student & Sports Program Organizer	"...people just accept outputs unquestioningly... lose the ability to acquire information independently..."	7. Future Outlook and Broader Implications	FUTURE_HUMAN_SKILLS	Strong critique of passive consumption; calls for human-AI balance in knowledge development.
S4	Student & Sports Program Organizer	"...to create something... I for myself did that... interactive exchange is what I think makes us human."	5. Value Creation in Services	VALUE_DEF, WELL_DYNAMIC	Values self-expression and connection—supports Co-creation design with human-centric focus.
S4	Student & Sports Program Organizer	"...as long as it's like an assistant... that is fine... but takes over... we have to draw the line."	4. AI Integration into Well-being Services	AI_PARTNER, AI_BOUNDARIES, BACK_ROLE	Accepts AI as co-creator—up to a boundary; supports Graceful AI design as a collaborative, not controlling tool.
S4	Student & Sports Program Organizer	"...for Europe... the European Council government... must push these decisions..."	7. Future Outlook and Broader Implications	FUTURE_RECS, FRM_CERTIFICATION, BACK_ROLE	Positions macro-level institutions as accountable for AI governance—relevant for Graceful AI certification.
S4	Student & Sports Program Organizer	"...as a leader... constraints you're working with may not be seen from the outside..."	1. Participant Background and Expertise	BACK_ROLE	Calls for framework to include system-side limitations—critical insight for DSR artifact realism.
S4	Student & Sports Program Organizer	"Yeah, I think the framework covers pretty much all the things that I talked about... I think it's a good framework."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	Affirms alignment of MOTION framework with participant's prior experiences and values—positive validation.

S4	Student & Sports Program Organizer	"...it would lead to a better development of more human oriented services... good potential."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Perceives strong applicability in real-world service contexts—supports framework's design relevance.
S4	Student & Sports Program Organizer	"...the only thing that was like the touchy point was... integration... the load."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_IMPROVE	Reiterates earlier concern about system “bloat”—integration must stay purpose-bound and lightweight.
S4	Student & Sports Program Organizer	"...as long as it's controlled and very specifically tied to the service..."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_IMPROVE	Recommends clear scope limits and specificity—supportive of modular AI or user-configurable options.
S5	Somatic & Mindset Coach	"I noticed that just being in the office isn't giving me or I'm not giving the people what I could give them... you're really changing my life... you're having a positive impact on how I'm feeling."	1. Participant Background and Expertise	BACK_ROLE	Defines well-being through emotional impact, recognition, and meaningful human contribution—an awakening from corporate limitation.
S5	Somatic & Mindset Coach	"We are merging... everything that is looking at the body... to be pain free without needing anything outside of yourself... merging with mindset... integrating everything in a business strategy."	1. Participant Background and Expertise	BACK_EXP, BACK_INDUSTRY	Emphasizes autonomy, embodiment, and mental strategy as satisfiers—highlighting body-mind-business integration as key to holistic well-being.

S5	Somatic & Mindset Coach	"...you're not only learning how to lead yourself, but also everyone around you... transform businesses... leading from a place of independence and self-trust."	2. Understanding and Definition of Well-being	WELL_DEF_PROF, WELL_SYSTEMIC	Describes well-being systemically across individual and organizational levels—self-leadership as a ripple effect to company culture and performance.
S5	Somatic & Mindset Coach	"So I was working at an office in the management area..."	1. Participant Background and Expertise	BACK_ROLE	Provides background transition from HR/office management to human-centered service leadership—critical to understanding applied knowledge in framework evaluation.
S5	Somatic & Mindset Coach	"Well-being means to be fully, authentically, and to be in your full power... having met their needs and pushing them into their strengths... the company is only as good as the team. So the more well-being there is in the team, the more well-being there will be for the company."	2. Understanding and Definition of Well-being	WELL_DEF_PERS, WELL_DEF_PROF	Emphasizes authentic expression, strength-based leadership, and systemic flourishing. Links team well-being directly to company success.
S5	Somatic & Mindset Coach	"Well-being feels like feeling good in your own body... full of energy... full of inspiration, and you feel fully met. Your potential level instead of... needing to recover... fulfilled from what you do."	2. Understanding and Definition of Well-being	WELL_DEF_PERS, WELL_PILLARS	Links well-being to physical and emotional states, vitality, and a sense of meaningful productivity. Satisfaction = energy, not depletion.

S5	Somatic & Mindset Coach	"The more you build your whole company on your own values... people around you can feel your personality in your business and our values are independence, freedom, love and support."	2. Understanding and Definition of Well-being	WELL_SYSTEMIC	Values are the foundation of service and organizational culture. Alignment between personal and business values enhances authenticity and relational trust.
S5	Somatic & Mindset Coach	"Love that."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	First spontaneous positive feedback to the statement that “systems perform because they are well-aligned.” Validates core claim of Artifact 1.
S5	Somatic & Mindset Coach	"Do you know just one question when you have all these values integrated into your AI..."	4. AI Integration into Well-being Services	FRM_IMPROVE, AI_ETHICS	Brings in an ethical concern—how values are currently integrated into AI systems—indicates awareness of real-world limits and contextualizes framework ambition.
S5	Somatic & Mindset Coach	I love how thoughtful the whole, your whole motion idea. Like we're doing it outside the M & N because it's coming from the outside and everything we can do like it's really on the inside and up to you. I love it.	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	Strong validation of the visual and symbolic design of the MOTION framework. Emphasizes personal agency and systemic relation.
S5	Somatic & Mindset Coach	I love that because I think that for a company one of the most important things is to know their values... this whole system is bringing companies to	6. Framework Evaluation	FRM_POS, FRM_USABILITY	Participant confirms that framework supports systemic human awareness in companies. Strong philosophical

		think bigger and to think more human, and this alone already creates a change.	(Graceful AI/MOTION)		alignment with their own methodology.
S5	Somatic & Mindset Coach	Can I still integrate my own values into my work or is it everything from the framework predefined?	6. Framework Evaluation (Graceful AI/MOTION)	FRM_IMPROVE, AI_CUSTOM_VS_GEN	Raises concern on whether the framework respects personal values in contrast to company-defined ones. Insightful for AI configuration flexibility.
S5	Somatic & Mindset Coach	It's just a beautiful experience to see people actually rethinking their life. Yeah, yeah. It's becoming a little bit aware. Self aware. Yeah, it's beautiful.	2. Understanding and Definition of Well-being	VALUE_PERSONAL	Confirms depth of personal impact and alignment of Graceful AI with their own transformation methods. Reinforces emotional resonance.
S5	Somatic & Mindset Coach	Using your framework would like... it's still like your own personality in the product still. What I feel is kind of missing right now in the people using AI.	6. Framework Evaluation (Graceful AI/MOTION)	VALUE_PERSONAL	Identifies key differentiator: retention of individuality in AI outputs. Reinforces the branding value of Graceful AI.
S5	Somatic & Mindset Coach	People most often feel disconnected... they're just reacting to the outer world... we're just guiding them towards finding who they are on the inside...	2. Understanding and Definition of Well-being	WELL_DEF_PERS, WELL_NEEDS_VS_WANTS	Reinforces value of reflection and slowing down. Adds insight into key emotional needs (identity, participation, understanding).
S5	Somatic & Mindset Coach	Our services feel real because they are actually working with the whole human... reflect on their own lives...	5. Value Creation in Services	VALUE_DEF	Highlights why their service feels transformative—high emotional attunement, values-based, physically grounded.

		their values... their own pain... stress protectors...			
S5	Somatic & Mindset Coach	I have a mixed feeling about it... it can help you reflect... but it's just not a human being...	3. Current AI Usage and Perceptions	AI_PARTNER, AI_EMPATHY	Nuanced stance: AI as helpful mirror, but lacks lived experience. Confirms space for hybrid models (AI + Human).
S5	Somatic & Mindset Coach	Really practical, is when the people working at the office... regularly revisit... the mapping exercise... always tune in with the company.	5. Value Creation in Services	FRM_USABILITY, FRM_NUDGE_NURTURE	Suggests embedding framework into rhythm of organizational life. Emphasizes value of periodic reflection.
S5	Somatic & Mindset Coach	I think AI can do a lot of these check-ins... efficiently... not make it more cost effective and not a huge time consuming thing...	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Supports AI-enabled check-ins. Validates MOTION's use as a regular service assistant tool in hybrid format.
S6	Founder, Natural Cosmetics, Physiotherapist	“I'm the founder of a sustainable natural cosmetic brand... your skin is the mirror of your soul.”	1. Participant Background and Expertise	BACK_ROLE, BACK_INDUSTRY	Describes health-oriented personal history and grounding in physiotherapy, revealing both professional background and experiential knowledge in service design.
S6	Founder, Natural Cosmetics,	“So in a way of service... your fundamental need of like hygiene kind of thing... your skin is the mirror of your soul.”	2. Understanding and Definition of Well-being	WELL_NEEDS_VS_WANTS, WELL_PILLARS	Frames hygiene, sensory nourishment, and emotional-physical connection through skin as layered

	Physiotherapist				satisfiers of well-being needs—mirroring Max-Neef categories.
S6	Founder, Natural Cosmetics, Physiotherapist	"I think I want to plant a seed in the next process of change... this is the service you get beyond products and is like a real benefit for your health in general."	5. Value Creation in Services	VALUE_DEF, VALUE_PERSONAL	Vision emphasizes transformative, nature-connected well-being; brand is a trigger for nature-based healing beyond just physical product use.
S6	Founder, Natural Cosmetics, Physiotherapist	"Well-being... is like a situation where I am well... being in peace with this your situation."	2. Understanding and Definition of Well-being	VALUE_DEF, VALUE_PERSONAL	Defines well-being as balance in personal/social roles, safety, contribution, impact; blends existential and relational needs.
S6	Founder, Natural Cosmetics, Physiotherapist	"I'm serving with trust and transparency... young people want to relearn the skills their grannies had before... aroma therapy..."	5. Value Creation in Services	VALUE_TRUST, VALUE_DEF	Emotional, sensory, ancestral, and trust-based factors are central to service experience; emphasizes reflective routines and emotional care.
S6	Founder, Natural Cosmetics, Physiotherapist	"Try and look for people who don't have this mindset... constant focusing on those who match your mindset... I don't know my target group yet..."	7. Future Outlook and Broader Implications	FUTURE_RECS	Encourages value-aligned community-building; acknowledges challenge of audience fit and positioning; potential use case for AI in segmentation or persona discovery.

S6	Founder, Natural Cosmetics, Physiotherapist	"Especially ChatGPT is a tool I use all the time… I would say my marketing person is Chatty (ChatGPT)."	3. Current AI Usage and Perceptions	AI_PARTNER, AI_USE_PROF	Regular use of AI as a business collaborator and support system; emphasizes human-AI teaming in marketing, finance, and social media.
S6	Founder, Natural Cosmetics, Physiotherapist	"...not trusting that the AI is [reliable] when it comes to recipes or the ingredients… I have to double check it all the time."	3. Current AI Usage and Perceptions	AI_CONCERNS, AI_ETHICS	Expresses mistrust of AI-generated content in safety-critical, technical domains like medical/phytochemical knowledge.
S6	Founder, Natural Cosmetics, Physiotherapist	"...so that I don't lose the vision... I have to write a huge prompt... I feel that it's reflecting my thoughts... I still double-check... but it helps me reorient."	3. Current AI Usage and Perceptions	AI_CO_CREATION, AI_CUSTOM_VS_GEN	Uses AI for reflection and maintaining alignment with values and vision; co-creative use pattern balancing autonomy and control.
S6	Founder, Natural Cosmetics, Physiotherapist	"Input into the AI you provide it with meaning and context… at the same time providing AI with the big orientation... where your knowledge is the trusted source."	3. Current AI Usage and Perceptions	AI_CO_CREATION	Reflects a shared agency between human and AI where context, values, and human input are central to meaningful output.
S6	Founder, Natural Cosmetics,	"The outcome of the answers of ChatGPT are much more precise… but it's difficult to switch roles and	3. Current AI Usage and Perceptions	AI_USE_PROF, AI_CUSTOM_VS_GEN	Values precision and productivity gains from AI but highlights difficulty of adapting tone and personal branding across diverse outputs.

	Physiotherapist	languages… wish I could be more precise for better results.”			
S6	Founder, Natural Cosmetics, Physiotherapist	“...would love that Chatty understands when I'm in a certain situation... like a consultant... forecast me a topic... remind me… say 'I’m having your back'... that's what friends are doing...”	3. Current AI Usage and Perceptions	AI_PARTNER, AI_EMPATHY	Strong emotional-relational framing of AI; desires contextual awareness, proactivity, and reliability. Mirrors human support roles like a friend or consultant.
S6	Founder, Natural Cosmetics, Physiotherapist	“...which pops up by itself within the rhythm of my own individual routine scheduling.”	4. AI Integration into Well-being Services	AI_CUSTOM_VS_GEN	Hints at adaptive, context-sensitive prompt delivery and timing; desire for embedded, invisible UX.
S6	Founder, Natural Cosmetics, Physiotherapist	“...should be individually growing with you. I don't think you will find any one solution fitting to everyone's business and life.”	4. AI Integration into Well-being Services	AI_CUSTOM_VS_GEN	Emphasizes the need for personalization and evolutionary design logic in AI-supported services.
S6	Founder, Natural Cosmetics, Physiotherapist	“I'm using it already... but it would be nicer to know that it's really secure.”	4. AI Integration into Well-being Services	AI_BOUNDARIES	Implicit trust in existing systems, but wishes for stronger reassurance and transparency around data privacy.

S6	Founder, Natural Cosmetics, Physiotherapist	“I would use it everywhere... but I don’t know how... I’d love to have an automatic newsletter... data system for my webshop... automatization of processes...”	3. Current AI Usage and Perceptions	AI_USE_PROF	Views AI as highly desirable across business functions, but lacks access and know-how; strong perceived utility.
S6	Founder, Natural Cosmetics, Physiotherapist	“I’m planning... to offer workshops in cooperation with yoga teachers... this underlines my brand... phytotherapy... direct contact with customers...”	5. Value Creation in Services	VALUE_DEF	Physical interaction, phytotherapy, and embodied learning framed as key satisfiers for meaningful connection and brand mission.
S6	Founder, Natural Cosmetics, Physiotherapist	“...can imagine having a digital education portal... clients can get a course... skincare, herbs, oils...”	4. AI Integration into Well-being Services	VALUE_MEASURE, NEEDS_INSIGHTS	Envisions digital augmentation of service delivery (hybrid model) that preserves core brand value and expands reach.
S6	Founder, Natural Cosmetics, Physiotherapist	“...develop and evaluate this conceptual artifact that supports the ethical human centered design...”	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS, FRM_USABILITY	Validates the ethical, iterative approach; recognizes purpose
S6	Founder, Natural Cosmetics,	“Amazing.”	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	Positive immediate reaction

	Physiotherapist				
S6	Founder, Natural Cosmetics, Physiotherapist	“Yeah. Nice.”	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	Supports example of AI integration as flow
S6	Founder, Natural Cosmetics, Physiotherapist	“Beautiful.”	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	Affirms aesthetic-philosophical fit
S6	Founder, Natural Cosmetics, Physiotherapist	“...rely on that it's whole and that it serves your vision...”	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Sees framework as actionable tool in workshops
S6	Founder, Natural Cosmetics, Physiotherapist	“Meaning is a personal value of mine... openness... integration...”	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	Feels represented in MOTION elements
S6	Founder, Natural	“AI should not fulfill human needs directly...”	6. Framework Evaluation	FRM_NUDGE_NURTURE	Reflects central Graceful AI principle of agency

	Cosmetics, Physiotherapist		(Graceful AI/MOTION)		
S6	Founder, Natural Cosmetics, Physiotherapist	"...super powerful tool which every company should use..."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Acknowledges practical value
S6	Founder, Natural Cosmetics, Physiotherapist	"Yes. I would say yes."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS	Confirms alignment with brand's vision
S6	Founder, Natural Cosmetics, Physiotherapist	"A good-hearted AI... knows what's really good for you..."	7. Future Outlook and Broader Implications	FRM_POS	Expresses poetic, idealistic future vision
S6	Founder, Natural Cosmetics, Physiotherapist	"I would love to try the framework..."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_POS, FRM_USABILITY	Open to collaboration and real-life testing

S2	Service Design Educator & Consultant	"I'm working as a service design as a colleague for the Service Design Master program of the NHS... I've worked within agencies both in Switzerland and in the UK... even before when back in the days as a teenager, I helped my parents build a church and discovered that there is an experiential bit that you can design..."	1. Participant Background and Expertise	BACK_EXP, BACK_ROLE	Reflects rich cross-sectoral experience in service design—professional and personal domains intersect here.
S2	Service Design Educator & Consultant	"People come to me at the more early stages where they are not sure yet what they want to do or they have many competing ideas... I come more as the kind of facilitator that help bring many stakeholders who disagree together on an idea."	1. Participant Background and Expertise	BACK_ROLE	Emphasizes facilitation role and early-phase innovation work, important for contextualizing framework feedback.
S2	Service Design Educator & Consultant	"...there is an experiential bit that you can design, but I didn't have the words back then for what we were doing."	5. Value Creation in Services	VALUE_PERSONAL, VALUE_DEF, WELL_DEF_PROF	Early recognition of experiential value ties into human-centered design and lived meaning-making processes.
S2	Service Design Educator & Consultant	"The journey started well before I knew what service design was... We had to build the church... starting really a new community of faith..."	1. Participant Background and Expertise	VALUE_DEF, VALUE_PERSONAL	Emergence of service design in religious community settings—pre-formal understanding, grounded in lived experience.

S2	Service Design Educator & Consultant	"A lot of our conversations, a lot of what my volunteering work was back then was... helping on the visual communication... we did a lot of service work without knowing it around the experience of the newcomers..."	5. Value Creation in Services	VALUE_FEEDBACK	Highlights the importance of designing for emotional safety, cultural nuance, and social inclusion in service entry points.
S2	Service Design Educator & Consultant	"Give something in the hands of people so that they have something to fiddle... give them food... put the music loud... so that it's OK we don’t speak because the music is loud."	5. Value Creation in Services	VALUE_DEF	Rich example of ambient design to reduce anxiety—practical interventions for comfort before service engagement.
S2	Service Design Educator & Consultant	"...we optimized within it things based on what we observed... and the conversations that we then had with people... was lovely to have you... was there something making you uncomfortable?"	5. Value Creation in Services	VALUE_FEEDBACK	Illustrates iterative feedback collection through human touchpoints, not formal metrics—human-centered evaluation loop.
S2	Service Design Educator & Consultant	"...usually people talking use very complex words for these things (service). But you know it's like just being a good host."	5. Value Creation in Services	AI_BOUNDARIES, AI_EMPATHY	Simple principle: hospitality and care as foundational well-being design—demystifies complexity in design language.
S2	Service Design	"In my work I'm using more AI to support my own work... but not to create	3. Current AI Usage and Perceptions	AI_BOUNDARIES, AI_EMPATHY	Sees AI as enabling tool for reducing friction in back-end processes, not a

	Educator & Consultant	AI driven services... more of the human job and less of the administrative job."			front-stage actor in well-being service delivery.
S2	Service Design Educator & Consultant	"Not replacing humans... not replacing empathy... I think the work to get to the insights is as important as the insights themselves."	3. Current AI Usage and Perceptions	AI_CO_CREATION, AI_BENEFITS	Emphasizes process over output—empathy and relational labor are irreplaceable; highlights ethical boundary of tech delegation.
S2	Service Design Educator & Consultant	"...you see these ads, those people having electrodes to move the muscles... Maybe it's just better to do the pushups yourself."	2. Understanding and Definition of Well-being	AI_ETHICS WELL_NEEDS_VS_WANTS	Clear analogy of embodied experience and meaningful challenge over mechanized ease—strong argument for mindful friction.
S2	Service Design Educator & Consultant	"Prototyping services more faster with that... making the unenjoyable work... quicker... I think there is some real beauty in that."	3. Current AI Usage and Perceptions	WELL_DYNAMIC, WELL_DEF_PROF	Acknowledges value of AI for iterative experimentation—supports DSR methodology and design feedback loops.
S2	Service Design Educator & Consultant	"...we are in a bit of a gray zone... but I'm hopeful seeing AI models trained on open source, fair use content..."	3. Current AI Usage and Perceptions	WELL_SYSTEMIC, WELL_DEF_PROF	Points to ethical concerns with model training data—trust contingent on provenance and openness.
S2	Service Design Educator & Consultant	"...we figured out, if we remove all the so-called friction, we're designing a world of Wally... there are valuable frictions in life... AI can add beautiful friction... smart difficult questions instead of giving the answer."	4. AI Integration into Well-being Services	FRM_POS	Highly reflective idea of "valuable friction" offers rich conceptual ground for MOTION elements like Meaning or Openness.

S2	Service Design Educator & Consultant	"...this sacred space has specific values... that help you to select which technologies you bring in... or how you bring in the technology."	4. AI Integration into Well-being Services	FRM_NUDGE_NURTURE	Emphasizes value-driven gatekeeping—sacredness not as tech rejection, but as context-aware inclusion guideline.
S2	Service Design Educator & Consultant	"...very old practices that have values that help you... totally makes sense."	2. Understanding and Definition of Well-being	FRM_USABILITY	Draws connection between ancient well-being traditions and tech-integration principles—suggests grounding future design in timeless values.
S2	Service Design Educator & Consultant	"I think the first five I'm very on board with... the acronym... the visual is supporting the way you're teaching it."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Affirms clarity and alignment of visual storytelling with personal practice (yoga)—adds pedagogical value.
S2	Service Design Educator & Consultant	"If I had to express one wish, it would be to look into the nudging... should it be a nudge or a rational override?"	6. Framework Evaluation (Graceful AI/MOTION)	FRM_IMPROVE	Introduces design philosophy tension: subtle guidance vs deliberate constraint—nudge vs override = ethical nuance.
S2	Service Design Educator & Consultant	"If it’s helping you, then it’s a very good tool... What matters is that you have one because it gives you a sense of direction."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Highlights that frameworks work if they support sense-making and reflection, regardless of universality.
S2	Service Design	"It can go from very simple... each of the aspects having a question... then	7. Future Outlook and Broader Implications	FRM_IMPROVE	Suggests scaffolded formats: prompt-based, canvas style, or structured like

	Educator & Consultant	somewhere in the middle... or even a recipe book."			Design Sprint—scalable workshop adaptability.
S2	Service Design Educator & Consultant	"Is it an assessment tool, a creation tool, or a workshop plan? For me now it feels like a theoretical framework... not yet a tool I could work with."	7. Future Outlook and Broader Implications	FRM_IMPROVE	Differentiates between concept and actionable tool—suggests adding usage instructions for workshop facilitation.
S2	Service Design Educator & Consultant	"A quality I see is... feels practical... reflection prompts... gives a bit of an idea of how to use it."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_IMPROVE	Sees potential for guided introspection—positive feedback on initial usability, especially with prompt-based engagement.
S2	Service Design Educator & Consultant	"Would need a little bit more again... having an example... definitions under the words..."	6. Framework Evaluation (Graceful AI/MOTION)	FRM_USABILITY	Requests examples, workshop definitions for shared understanding—highlights problem of ambiguous terms like "subsistence."
S2	Service Design Educator & Consultant	"Not sure how it relates to AI... feels like it could be used outside AI... maybe that was your goal?"	6. Framework Evaluation (Graceful AI/MOTION)	FUTURE_RECS	Questions contextual integration—asks for stronger connective thread between needs mapping and AI-enabled service design.
S2	Service Design Educator & Consultant	"How does it link to your MOTION model... visual that shows how these tools connect is missing..."	6. Framework Evaluation (Graceful AI/MOTION)	FUTURE_RECS	Calls for integration map—how does needs mapping feed into or inform MOTION steps; link unclear.

S2	Service Design Educator & Consultant	"Feels like I have to fill it out... maybe it’s about choosing key needs... help me focus..."	6. Framework Evaluation (Graceful AI/MOTION)	FUTURE_RECS	Offers great insight: tool may overwhelm unless clear guidance is given on how to scope/refine input.
S2	Service Design Educator & Consultant	"If that’s the goal, then my feedback changes... it's a very different mindset."	7. Future Outlook and Broader Implications	FUTURE_RECS	Recognizes shift from workshop tool to a certification-oriented service model; prompts new evaluation criteria.
S2	Service Design Educator & Consultant	"If you tell me this is the certification thing... based on some big T... and a workshop beside to it... that helps move the needle..."	7. Future Outlook and Broader Implications	FUTURE_RECS	Suggests a dual model: assessment + supportive services—aligns with DSR evaluation/application cycles.
S2	Service Design Educator & Consultant	"Most certifications want perfection... your needs assessment tool doesn’t... it wants a few things meaningfully well."	7. Future Outlook and Broader Implications	FUTURE_RECS	Contrasts dominant 'checklist culture' with graceful imperfection—celebrates yoga-informed philosophy.
S2	Service Design Educator & Consultant	"Then there's the whole branding question... is it 'Graceful Motion certified'? 'Graceful AI'? Is it a percentage, stars, color rating?"	7. Future Outlook and Broader Implications	FUTURE_RECS	Opens conversation around symbol, badge, rating style—draws from real-world analogs like B-Corp, TripAdvisor, TrustPilot.
S2	Service Design Educator & Consultant	"So if it’s an iceberg... the certification is the shiny thing... the assessment comes next... and then Chantelle supports with services... your award	7. Future Outlook and Broader Implications	FRM_CERTIFICATION	Offers vivid narrative metaphor for business logic: certification (tip), assessment (middle), support (foundation).

		acknowledges the imperfections of a circus."			
S2	Service Design Educator & Consultant	"Continue to work on it. Know that you are now in a difficult transition... from building to selling. And it’s not the same skillset."	7. Future Outlook and Broader Implications	FRM_IMPROVE	Critical moment—emphasizes need to shift from academic depth to clear messaging, especially for public/market acceptance.
S2	Service Design Educator & Consultant	"You want to simplify to a shiny object... B Corp of AI stuff... You have everything in your hands... but you may need help transforming and taking distance."	7. Future Outlook and Broader Implications	FRM_IMPROVE	Advice to outsource storytelling/branding to simplify and visualize—supports thesis-to-business transformation.
S2	Service Design Educator & Consultant	"B Corp is one of those labels... you want to be the B Corp of AI well-being services... not fulfilling empty calorie wishes, but something meaningful."	7. Future Outlook and Broader Implications	FRM_POS	Participant summarizes Chanti's vision as ethical seal of trust for AI services, linking to sustainable business practices.

Appendix 5: Reflective Summary Interview: Element 1

Interviewee: Speaker 1 (S1), Coach/Mentor/Content Creator

Interviewer: Chantelle Henn, Student, SEB LU, Hochschule Pforzheim

Date: 06.06.2025

Duration: 00:34:45

Reflective Summary

Talking with S1 felt like a turning point in this first round of evaluating the Graceful AI framework. She's a mentor, coach, and self-employed creator working at the intersection of content production and women's empowerment. What struck me right away was how she effortlessly bridged the technical and the emotional — she knows what it takes to run creative work, but she also deeply understands the human side of service.

Her view on AI was grounded and nuanced. She sees it as a helpful tool, especially in content workflows, but draws a clear line when it comes to emotionally sensitive work like coaching. "It shouldn't replace human connection," she said — and I could feel how much she meant it. Still, she gave a brilliant example of using AI as a kind of "mirror": when she was refining her communication style online, AI offered her feedback without judgment. That image stuck with me it's exactly the kind of reflective, growth-supporting partnership I imagine in the "Trust" and "Nudge" elements of MOTION.

When I showed her the MOTION model, her face lit up. "I said all of these things that are here," she laughed. That was an important moment not because it validated my work in a self-congratulatory way, but because it told me that these principles already live in the thinking of people who work in well-being every day. It felt like I'd captured something that was already real and just given it a name.

Her feedback didn't stop at affirmation. She suggested an onboarding moment, a way to introduce people to the MOTION values before they even start interacting with AI. That idea instantly made sense to me. It reframes MOTION not just as a reflective tool, but as the "container" that sets the tone for the whole experience

She also pushed me to think about bias and neutrality. AI, she said, often gives people what they want to hear, not what they need to reflect on. She even noticed how a request for "random" travel suggestions led only to European countries — a small example, but one that says a lot about hidden bias in algorithms. This made me reconsider the Orientation and Nudge components: they can't just be about comfort, they also have to gently challenge.

Interestingly, she could also see MOTION being useful at an institutional level, maybe even for governments or organizations but only if it's used with integrity. That reinforced my sense that MOTION isn't just for individuals or teams, it could align decision-making across bigger systems too.

Her own philosophy of well-being was inspiring; autonomy, spaciousness, and ethical communication. She spoke about taking time off without guilt, and how well-being shouldn't be tied only to economic productivity. Listening to her, I kept hearing echoes of Max-Neef's needs and the co-creation lens of Service-Dominant Logic.

By the end of our conversation, I felt more certain that Graceful AI isn't about making AI the hero. It's about creating conditions where interaction with AI feels intentional, empowering, and human-first. S1 didn't just give me feedback she co-shaped the next iteration of MOTION with her insights.

Appendix 6: Reflective Summary Interview: Element 2

Interviewee: Speaker 3 (S3), Researcher & Yoga Teacher

Interviewer: Chantelle Henn, Student, SEB LU, Hochschule Pforzheim

Date: 20.06.2025

Duration: 01:19:45

Reflective Summary

Talking with S3 was grounding in a completely different way. She's a yoga teacher, and you can feel that embodied presence in the way she speaks. From the start, she framed well-being as something co-created and not something you give to someone, but something you build together. "The space has to be used and filled by the participant," she said. I immediately connected that to SDL's view of value as something made in interaction.

She shared examples from her own teaching, like when a student had a panic attack. She'd turned to AI, not to replace her own judgment, but to gather information, get a fresh angle, and then adapt the class to that student's needs. It was such a clear example of AI as an enhancer, not a substitute. I kept thinking of her line about breathwork: "It only helps when it's practiced, not just Googled." That's exactly why Nudge belongs in MOTION, value isn't in the static knowledge, it's in what we do with it.

Her reflections on trust were sharp. She's worried about AI priming us in one direction, quietly narrowing perspective. She's also concerned that over-reliance on AI for emotional engagement might dull our ability to be present with others especially for younger generations. Those concerns made me think harder about how Trust and Orientation should work in MOTION. It's not just about transparency, it's about safeguarding our ability to stay human in the loop.

She liked the framework's intent, especially the idea of nudging as mindful facilitation instead of manipulation. But she also told me, frankly, "It's not self-explanatory yet." That stung a little, but it was true. I realised I'd been so focused on conceptual design that I hadn't made it easy to grasp quickly. Her feedback pushed me toward creating visuals, examples, and use cases for the next iteration.We also touched on ethics. She suggested making them more visible, not just implied under Trust. That's a point I can't ignore — if we're working in emotionally sensitive spaces, the ethical foundation can't be hidden; it needs to be part of the first thing people see.

By the end, she was encouraging about the bigger vision for Graceful AI as long as it stays real, relational, and grounded. Her closing thought stayed with me: focus the communication, make the entry points clear, and keep refining until it lands in the real

world. This wasn’t just feedback, it was a quiet nudge to stay humble in the design process and let the next version speak more clearly than the last.

Appendix 7: Reflective Summary Interview: Element 3

Interviewee: Speaker 4 (S4), Student & Student Body President/Sports Program Organizer

Interviewer: Chantelle Henn, Student, SEB LU, Hochschule Pforzheim

Date: 22.06.2025

Duration: 00:37:55

Reflective Summary

My conversation with S4 had a very grounded, practical feel to it. He's both a student and the lead coordinator of the university's sports program, so he's living on both sides of the service equation as a participant and as a provider. That gave his perspective a balance I don't often get: he could speak to his own well-being needs but also to the constraints of delivering those services at scale.

When I asked him to define well-being, his answer was short but it landed: "a satisfied feeling in your own body and psyche." It was simple, but it captured both the physical and psychological dimensions without overcomplicating it. He kept coming back to the importance of connection, accessibility, and low-barrier participatio especially in university life, where students can easily drift into isolation. He sees sports and movement not just as fitness, but as a way to build social bonds.

From a service design angle, his mantra was clear: goal-oriented, easy to navigate, financially accessible. Those three qualities came up again and again. He talked about how hard it is to get feedback from students ("surveys don't work, emails get ignored") and it made me think about the apathy we sometimes design into systems by relying on passive feedback channels. It's a challenge that ties directly to co-creation: without engagement, the loop breaks.

When we shifted to AI, he was cautiously optimistic. He could see the potential for real-time feedback and tracking physical and mental well-being, but he also warned about scope creep, how services "just acquire different functionalities of other apps" until they're bloated and unfocused. That was a reality check for MOTION: Integration and Orientation have to be intentional, not just "add everything because we can."

His reaction to MOTION itself was positive. "If following this framework, I think it would lead to better development of more human-oriented services," he said. But he also reinforced the need for boundaries. Data and functionalities should stay tied to the core purpose of the service. That's essentially a call for modularity, something I realise I need to make clearer in the framework guidance.

One of his strongest points was about critical thinking. He worries that people "just accept the outputs unquestioningly" and lose their ability to evaluate for themselves. His own measure of well-being "being able to create something and just see that I, for myself, did that" couldn't be more in line with Meaning in MOTION. It's a reminder that autonomy and ownership are non-negotiable in human flourishing.

For him, AI works best as a co-creative assistant, never the lead. He also sees the need for strong macro-level governance, especially at a European policy level, to keep boundaries in place. And in closing, he reminded me of something I don't always think about as a designer, the invisible constraints. Users rarely see the structural and administrative limits that service providers operate under, but those limits shape everything. His point left me thinking: empathy in design has to extend to the people delivering the service, not just those receiving it.

Appendix 8: Reflective Summary Interview: Element 4

Interviewee: Speaker 5 (S5), Somatic & Mindset Coach

Interviewer: Chantelle Henn, Student, SEB LU, Hochschule Pforzheim

Date: 24.06.2025

Duration: 00:55:05

Reflective Summary

S5's perspective was fascinating because she moves so comfortably between two worlds the corporate HR and leadership space, and the embodied, well-being-focused work of yoga and somatic coaching. That combination gave her an unusually broad lens for looking at Graceful AI. She's seen what happens when leadership culture is out of alignment with individual needs, and she's equally familiar with what it feels like when people are fully in their own power.Her definition of well-being was expansive but clear: being "in your full power," feeling energized, and having your personal values in sync with your work and environment. I couldn't help thinking how closely that mirrors the underlying assumption of Graceful AI that systems perform best when they are aligned, not forced.

This was one of the first interviews where I showed the new MOTION visually the M[OTIO]N structure with its epistemological layer built into the design. She immediately called it "thoughtful" and "empowering," and I could tell she wasn't just being polite. She connected with the symbolism, especially the way the [U] sits in relationship to the rest of the system. Her take on "Nurture" (what I'd previously called "Nudge") was particularly interesting she likened it to a "mom of service," a metaphor that really captures the care-oriented role I want AI to play in well-being contexts.

What I appreciated most was how she kept toggling between the philosophical and the practical. She could see MOTION being useful at so many levels for individual reflection, for designing a service, or for an organization to check in on whether its culture is living its stated values. But she also posed a question that stopped me in my tracks: what happens when personal and organizational values don't align? That's a huge design challenge. It means the framework can't just hand people a fixed set of values, it has to make room for dialogue, interpretation, and even disagreement

She also outlined a few specific use cases that hadn't occurred to me using the needs mapping and MOTION components for regular organizational check-ins, cultural alignment processes, and iterative product development. She saw AI as a great tool for quick, efficient reflection cycles, especially when budgets and time are tight. But she was equally clear that AI isn't a replacement for the kind of deep emotional processing that only happens in human-to-human interaction.

One of her strongest points came right at the end: “Everything is starting to sound the same” in AI-generated content. For her, the beauty of Graceful AI is that it could actually do the opposite preserve the individuality of the service and the user. That’s exactly the kind of differentiation I want to build into the framework. Talking to her was a reminder that authenticity isn’t just a nice-to-have in design it’s what makes the work worth doing.

Appendix 9: Reflective Summary Interview: Element 5

Interviewee: Speaker 6 (S6), Founder, Natural Cosmetics/Physiotherapist

Interviewer: Chantelle Henn, Student, SEB LU, Hochschule Pforzheim

Date: 20.06.2025

Duration: 01:00:50

Reflective Summary

S6 came into the conversation with this beautifully integrated perspective; part physiotherapist, part holistic health practitioner, and now founder of a sustainable, values-driven cosmetics company. You could feel that her way of thinking is rooted in systems, not silos. For her, a good service should nourish the whole human (physically, emotionally, socially, spiritually) and that belief ran through everything she shared. Her definition of well-being was poetic in its simplicity: "a situation where I am well… when I'm in balance with all of the goals and personal networks I'm woven in." She sees it as a dynamic state not just about inner peace or personal security, but also about being connected, doing meaningful work, and contributing to "a better version of our Earth." I loved that. It was a clear reminder that well-being in service design has to acknowledge both the inner and the outer the person and the planet.

She uses AI daily in her business (e.g. marketing, finance, planning) but she's deliberate about it. "The outcome is much more precise if you provide it with meaning and context," she said, which made me smile because it's exactly what MOTION is about. She's cautious, though, especially in areas like ingredient formulation where trust is everything. Her point was clear: AI has to be transparent and supportive, not intrusive.

When I showed her the MOTION model, she lit up. She called it a "compass", something to guide alignment between vision, service delivery, and ethics. Meaning, Openness, and Integration stood out for her, and she connected them directly to her own values and teaching philosophy. The Needs Mapping Tool also landed well she could easily see how AI might help satisfy needs like subsistence, protection, affection, and participation. But she drew a line at embodied presence. "There is much more going on… things we cannot prove… but I think it's important," she said, reminding me that not everything meaningful can be digitized.

Her vision of Graceful AI was almost personal like a friend who helps you stay aligned with your vision, spots risks you might overlook, and reminds you of your intentions. She added that it should "grow with you," which is such a rich design cue: adaptability isn't a bonus, it's part of what makes AI truly supportive over time.

By the end, I felt her feedback was less about changing the framework and more about deepening it. She affirmed the core but challenged me to think about growth not just the AI learning from the user, but the relationship between them evolving, just like any good human partnership.

Appendix 10: Reflective Summary Interview: Element 5

Interviewee: Speaker 2 (S2), Service Design Educator & Consultant

Interviewer: Chantelle Henn, Student, SEB LU, Hochschule Pforzheim

Date: 19.06.2025 | 27.06.2025

Duration: 00:17:57 | 01:23:54

Reflective Summary

S2 was my final participant, but the conversation actually happened in two parts. The first time, we had technical issues that cut us short. At the time, it felt a little frustrating — I wanted the flow of a complete conversation — but in hindsight, the pause gave me a chance to reflect on our opening exchange and come back sharper for the second round. That gap actually made the discussion richer; I'd had time to sit with their first impressions and think about what I still wanted to explore.

S2 is a seasoned service design educator and coach, so I went into the conversation expecting it to push me out of my comfort zone, and it did. They immediately connected with MOTION, calling it "a beautiful way" to communicate values like meaning, openness, trust, and integration. But they also challenged it. The "N" (Nudge/Nurture) became a point of debate. Was subtle encouragement always right, or could there be moments where a firmer "rational override" might serve the user better? That's when they introduced the idea of positive friction that sometimes a little resistance, a pause, or a pushback can create the space for more thoughtful, intentional choices. It clicked for me. I started to see "N" not as one thing, but as a spectrum — Nudge when gentle prompting is enough, and Nurture when the situation calls for care, support, and even rationally overriding what doesn't serve us. Nurturing isn't passive; it can be an active, deliberate act of guidance that protects and strengthens.

They were equally generous and sharp with their thoughts on the Needs Mapping Tool. They saw the value in using Max-Neef's framework to surface deeper user needs, but they called it out for being too abstract in its current form. Their advice was clear: add practical definitions, prompts, and example scenarios. They pointed me toward inspiration like Strategyzer canvases or Nesta tools — the kind of formats that make ideas tangible and easy to apply. That gave me a concrete next step for the next design iteration: shift it from a static matrix to something more like a facilitated experience.

Across both conversations, they also shared examples from their own service design work, moments where designing the environment made all the difference for the people in it. It wasn't just about providing tools, they said, but shaping the touchpoints, cultural cues, and support structures so that each actor in the system could succeed. That struck me hard. It

made me think about MOTION not just as a set of values, but as a guide for creating the right conditions for those values to actually happen.

Then came the reframing moment that I'm still carrying with me. When I explained my long-term vision for Graceful Motion, they described it as "the B Corp of AI" kind of like a trustmark or certification for AI-enabled services that support emotional and relational well-being. That was it. The phrase I'd been searching for. They saw the framework not as a fixed checklist, but like a DJ mixer where the aim isn't to max out every dial, but to find a meaningful, intentional balance that fits the context.

From there, the conversation shifted into the territory of measurement and market alignment. They suggested I look at how ecosystems like B Corp, TripAdvisor, and other certification systems structure their evaluations, and they encouraged me to think about storytelling formats like Billy Bro's "5 Lightbulbs" or Guy Kawasaki's 10-slide deck to bridge the gap between research language and public understanding.

Their closing metaphor is one I'll remember: "You're like a mom who gave birth to the most beautiful child… now you have to let someone else teach it." Across both sessions, that message was the same, that part of my role is to let go just enough for others to help carry this forward.