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Agile and value co-destruction in intensive knowledge projects

Case of: SDG group

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Abstract

Value co-destruction can be the mechanism, that leads ERP implementation projects to fail or result in dissatisfaction for one or both parties involved. This study aims to understand the principal causes of value co-destruction in ERP implementation projects. In order to reach this objective, the qualitative Delphi method was employed, through two rounds of questionnaires containing value co-destructing practices. Responses were gathered from two expert's teams, one representing the ERP implementation team and the other representing the client team, with the aim of identifying the key factors contributing to value co-destruction. The study reveals that value co-destruction in ERP implementation projects primarily stems from communication breakdowns, lack of user involvement, and misaligned expectations between clients and implementation teams. In addition to the absence of application of co-creation practices, which is a key incentive for value co-destruction. The current research contributes to both academic literature and practical applications, as it addresses the negative side of ERP implementation and provides insights to help organizations avoid value co-destruction and guarantee both parties satisfaction.

Key words : value co-destruction, Enterprise resource planning (ERP), value co-creation, agile projects, ERP implementation.

Résumé

La co-destruction de valeur peut être le mécanisme qui peut conduire à l'échec des projets d'implémentation ERP ou engendrer l'insatisfaction de l'une ou des deux parties prenantes. Cette étude vise à comprendre les principales causes de co-destruction de valeur dans les projets d'implémentation ERP. Elle utilise la méthode Delphi qualitative, au moyen de deux séries de questionnaires portant sur les pratiques de co-destruction de valeur. Les réponses ont été recueillies auprès de deux équipes d'experts, l'une représentant l'équipe d'implémentation ERP, l'autre l'équipe client, afin d'identifier les facteurs clés contribuant à cette co-destruction. Cette étude révèle que la co-destruction de valeur dans les projets d'implémentation ERP résulte principalement de problèmes de communication, d'un manque d'implication des utilisateurs et d'un décalage des attentes entre les clients et les équipes d'implémentation. Outre l'absence de mise en œuvre des pratiques de co-crédation, qui constitue un facteur clé de co-destruction de valeur, cette recherche contribue à la fois à la littérature académique et aux applications pratiques, car elle aborde les aspects négatifs de la mise en œuvre ERP et fournit des pistes pour aider les organisations à éviter la co-destruction de valeur et garantir la satisfaction des deux parties.

Mots clés : co-destruction de valeur, Entreprise ressource planning (ERP), co-crédation de valeur, projets agiles, implémentation ERP.

ملخص

يمكن أن يكون التدمير المشترك للقيمة هو الآلية التي يمكن أن تؤدي إلى فشل مشاريع تنفيذ تخطيط موارد المؤسسة أو تؤدي إلى عدم الرضا لأحد طرفي المشروع أو كليهما. تهدف هذه الدراسة إلى فهم الأسباب الرئيسية للتدمير المشترك للقيمة في مشاريع تنفيذ تخطيط موارد المؤسسة. تستخدم هذه الدراسة طريقة دلفي النوعية، من خلال جولتين من الاستبيانات التي تحتوي على ممارسات التدمير المشترك للقيمة. تم جمع الردود من فريقين من الخبراء، أحدهما يمثل فريق تنفيذ تخطيط موارد المؤسسة والآخر يمثل فريق العميل، لتحديد العوامل الرئيسية التي تساهم في التدمير المشترك للقيمة. تكشف هذه الدراسة أن التدمير المشترك للقيمة في مشاريع تنفيذ تخطيط موارد المؤسسة ينبع في المقام الأول من انقطاع الاتصالات، ونقص مشاركة المستخدم، والتوقعات غير المتوافقة بين العملاء وفرق التنفيذ. بالإضافة إلى غياب تطبيق ممارسات الإنشاء المشترك، وهو حافز رئيسي للتدمير المشترك للقيمة. يُسهم هذا البحث في الأدبيات الأكاديمية والتطبيقات العملية، إذ يتناول الجوانب السلبية لتطبيق تخطيط موارد المؤسسة، ويُقدم رؤى لمساعدة المؤسسات على تجنب التدمير المشترك للقيمة وضمان رضا الطرفين.

الكلمات المفتاحية : التدمير المشترك للقيمة، تخطيط موارد المؤسسة، المشاركة في خلق القيمة، المشاريع الرشيقية، تطبيق تخطيط موارد المؤسسة

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Contents

Abstract	I
ACKNOWLEDGEMENTS	IV
CONTENTS	V
List of Tables.....	VII
List of Figures	IX
Abbreviations list	X
General introduction	2-3
Chapter I : Problematic	4
Section 01 : Context of the study	5
1-1 The objectives of the study	5
1-2 Choosing the topic	6
1-3 Research epistemology	6
1-4 Epistemological approach	7
1-5 Research methodology	7
Chapter II : Theoretical framework	9
Section 01 : Literature review	10
1-1 Value co-creation and agile method	13
1-2 Value co-destruction in intensive knowledge projects	15
Section 02 : Conceptual framework	17
2-1 Definition of agile project management	17
2-2 Agile in ERP	18
2-3 Core Principles and Values of Agile Project Management	18
2-4 Agile Methodologies : Scrum Vs Waterfall method	18
2-5 The agile process	20
2-6 Origin and definition of value co-creation	21
2-7 The Benefits of value Co-Creation	22
2-8 The steps of value co-creation in an ERP system	23
2-9 Definition of value co-destruction	27
2-10 Comparison between Agile, Co-creation and Co-destruction of value in ERP systems implementation	29

Chapter III : Methodology	33
Section 01 : Methodology	34
1-1 The first step : the step of designing the initial questionnaire	34
1-2 The second step : Experts Selection	35
1-3 The third step : The two rounds of data collection	36
Section 02 : Organizational context	41
2-1 Internship location	41
2-2 Company presentation	41
2-3 History and positioning	41
2-4 Vision	41
2-5 Mission	41
2-6 Organizational structure	41
2-7 Visual identity of SDG	42
2_8 Client presentation	42
2-9 Project overview	43
2-10 Role of SDG in Helios project	43
Chapter IV : Results and discussion	45
Section 01 : Results	46
1-1 Round 1 results	46
1-2 Round 2 results	54
1-3 Round 3 results	66
Section 02 : Discussion of results	68
General conclusion	73-75
Bibliography	77-86
Annexes	88-104

List of tables

Table 1 : scrum vs waterfall principles	19
Table 2 : scrum principles and ERP implementation project success factors	19
Table 3 : Comparison of the roles of the internal team and the client in the Agile ERP implementation process	20
Table 4 : Review of Co-Creation Steps in ERP System: A Comparison between Two Models	23
Table 5 : Comparative Analysis of Agile, Co-Creation, and Co-Destruction in ERP Implementation	30
Table 6 : ERP implementation team experts of the SDG group “implementation project for Sonatrach	35
Table 7 : ERP implementation client team experts from Sonatrach	36
Table 8 : possible value co-destructing practices in each phase of the ERP implementation process for the implementation team	37
Table 9 : possible value co-destructing practices in each phase of the ERP implementation process for the client team	38
Table 10 : Schmidt interpretation table for Kendall’s coefficients	40
Table 11 : implementation phases and corresponding value co- destructing propositions for the implementation – Round 1	46
Table 12 : implementation phases and corresponding value co- destructing propositions for the client team- Round1	50
Table 13 : ERP implementation team propositions	52
Table 14 : clients team propositions	53
Table 15 : implementation phases and value co-destructing propositions for the implementation team –Round 2	54
Table 16 : implementation phases and value co-destructing propositions for the client team –Round 2	57
Table 17 : implementation phases and implementation team-formulated value co-destructing propositions –Round 1	60
Table 18 : implementation phases and client team-formulated value co-destructing propositions –Round1	63
Table 19 : Kendall’s Tau-B correlation between round 1 and round 2 for the implementation team	66
Table 20 : Kendall’s Tau-B correlation between round 1 and round 2 for the client team	66

Table 21 : value co-destructing practices in each phase of the ERP implementation process	67
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List of figures

Visual identity of SDG group	42
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Abbreviations list

ERP: Enterprise resource planning

SDL: service dominant logic

CDL: customer dominant logic

GDL: goods dominant logic

APM: Agile project management

TPM: traditional project management

B2B: business to business

SDG : Strategic decisions group

Sonatrach : Société Nationale de transport et de la Commercialisation des Hydrocarbures

SPSS: Statistical Package for the Social Science

GENERAL INTRODUCTION

ERP developers now leverage Agile methodologies and co-creation to optimize customer satisfaction. (Damodaran & Ramakrishnan, 2020)

Agile relies on intensive planning and dividing the project into sequential batches to adapt and respond to an increasingly competitive environment (Charbi & Guesmi, 2021). It emphasizes agile and iterative development (Noor, Rabiser, & Grunbacher, 2008), continuous feedback, and close communication with stakeholders, which enables effective response to evolving requirements (Dugbartey & Kehinde, 2025). Additionally, it enables organizations to enhance product innovation and customer satisfaction by establishing a culture of continuous improvement and responding quickly to market feedback (Amajuoyi, Benjamin, & Adeusi, 2024).

However, organizations have not only implemented agile management, but have also integrated co-creation with it to enhance innovation and deliver added value to customers (Parida, Kohtamaki, Wincent, & Sjodin, 2020). Agile management focuses on improving responsiveness to rapid change and close collaboration between teams (Kohtamaki, Parida, Patel, & Wincent, 2020), while co-creation enhances collaboration between companies, customers, and suppliers in designing joint solutions (Frow, Nenonen, Payne, & Storbacka, 2015). This combination of co-creation and agile management enhances innovation and increases companies' ability to deliver innovative solutions quickly and efficiently (Gustafsson, Kristensson, & Witell, 2020).

Moreover, the concept of co-creation enables as well the involvement of stakeholders (Permatasari, Dhewanto, & Dellyana, 2021), and provides great opportunities for innovation as each actor provides access to new resources through the process of merging resources (Frow, Nenonen, Payne, & Storbacka, 2015).

ERP developers have used these methods to respond to changes “change management” (Lohva, 2020), and also to improve and enhance cooperation between customers and service providers, which enables the development of a competitive strategy (Pathak, Ashok, & Tan, 2022).

Despite the growing use of Agile and co-creation in ERP implementation, there is limited understanding of how these collaborative practices might inadvertently lead to value co-destruction, a situation that arises when involved parties engage in interactions that fail to

effectively integrate their resources for mutual benefit, thereby causing a reduction in value for one or both parties (Yi & Gong, 2013). This destruction can arise due to several reasons, (Engen, Fransson, Quist, & Skalen, 2021) such as resource misuse, misalignment of expectations, resource shortages, inadequate coordination or inadequate communication (Jarvi, Kahkonen, & Torvinen, 2018), subjective practice interpretation and misalignment of practices (Ogunbodede & Olabode, 2022), resulting in either partial or total value loss.

In recent years, Algeria has witnessed a significant rise in the adoption of Enterprise Resource Planning (ERP) systems by local companies aiming to enhance operational efficiency and modernize their digital infrastructure (Belkacem Bouzida & Merzougui, 2021). However, ERP implementers continue to face numerous challenges, including poor change management, lack of training, and user resistance, all of which contribute to reduce customer satisfaction (Menon, Muchnick, Butler, & Pizur, 2019). Research indicates that unclear strategic objectives and weak project management are key factors leading to ERP implementation failure, ultimately resulting in the co-destruction of value between companies and their customers (Akron, Shao, & Owusu, 2020). Furthermore, limited user-system interaction and a lack of trust in the system's effectiveness are additional elements that negatively impact the success of ERP implementations (Marei, Almaiah, & Al-Khasawneh, 2022).

Accordingly, this research aims to identify the practices and dynamics that contribute to value co-destruction during ERP implementation, with the objective of understanding the causes and contributing factors of mutual value destruction. On the same context, the study also seeks not only to prevent its recurrence, but also to offer practical guidance to ERP system users in order to help them avoid such situations.

CHAPTER I : PROBLEMATIC

Section 01 : The context of the study

Enterprise resource planning ERP systems have become essential for enhancing the efficiency and competitiveness of modern organizations (Al-Mashari, Al-Mudimigh, & Zairi, 2003). Despite their strategic value, the implementation of ERP systems often faces significant obstacles, particularly in developing economies such as Algeria, where there are recurring problems such as insufficient system customization, weak stakeholder engagement, and resistance to digital transformation (Boukadi & Kamoun, 2018). Also, the misalignment of goals between implementers and users leads to operational inefficiencies and customer dissatisfaction (Vargo & Lusch, 2008). To manage these problems, the researchers used the agile methods, which give priority to repetitive development and user comments, as well as common creativity methods that include customers directly in the system design (Prahalad & Ramaswamy, 2004); (Schwaber & Sutherland, 2020). However, misuse of these mechanisms may lead to dissatisfaction on both sides, which researchers refer to as “co-destruction of value,” (Plé & Caceres, 2010). As result, there is a need for sources that validate implementation in emerging contexts, especially regarding the adaptation of these frameworks to local environments such as in Algeria, where institutional barriers and cultural dynamics complicate implementation (Bouras, Khelfaoui, & Boudjabi, 2021). In this context, we pose the following research question: **“What are the sources of co-destruction of value that occur in ERP implementation when using agile management methods?”**

1-1 The objectives of the study

The main objective of this research is to identify the sources of value co-destruction in ERP implementation projects and focusing on agile B2B projects. Meanwhile the study seeks to understand how value co-destruction can occur between both project parties (implementation team and client team), and analyze its sources to minimize them. Specifically, this study aims to achieve the following objectives:

- Identify the main sources of value co-destruction in ERP implementation projects
- Understanding the factors that lead to value co-destruction
- Assess the differences between the implementation team and the client team, regarding their recognition of value co-destructing practices

Through these objectives, the research contributes to a better understanding of the value co-destructing practices influencing ERP implementation projects, by investigating project teams' perspectives and the impact of value co-destruction on the implementation projects.

1-2 Choosing the Topic

1-2-1 Objective reason :

ERP systems are crucial for business efficiency, but their implementation often leads to unintended consequences, including value co-destruction where stakeholders experience losses rather than gains. Investigating this phenomenon provides insights into mitigating risks, improving implementation strategies, and ensuring better alignment between business needs and ERP functionalities.

1-2-2 Personal Reason :

Our choice of this research topic is mainly related to our specialization in project management. As students of entrepreneurship and project management, we find that agile management methodologies and co-creation are essential to support innovation and ensure success in a changing environment. However, we noticed that their poor application leads to co-destruction, especially in enterprise resource planning (ERP) systems. This prompted us to study the reasons that lead to co-destruction in this context.

1-3 Research epistemology

In the course of our research, we adopt an interpretivist epistemological stance, that emphasizes understanding the meaning and subjective experiences behind human actions, rather than focusing solely on observable phenomena. Interpretivism as discussed by (Ryan, 2018) debates that truth and knowledge are subjective, as well as culturally and historically situated, based on people's experiences and their understanding of them. Researchers cannot be wholly divided from their own values and beliefs, so these will undoubtedly affect the way in which they collect, interpret and analyse data.

Interpretivism developed through critique of positivism with subjective perspective. Interpretivism is more focused on in-depth variables and factors related to a context, it views humans as distinct from physical phenomena, emphasizing their ability to create deeper

meanings and operating on the premise that human beings cannot be studied in the same way as physical phenomena. Therefore, research in the social sciences requires this distinction, and must differ from natural sciences research. Interpretivism is different from positivism as it aims to include richness in the insights gathered rather attempting to provide a definite and universal laws that can be universally applied to all individuals, irrespective of certain key variables and factors. (Alharahsheh, 2020)

1-4 Epistemological approach

The interpretivist epistemological approach received in this inquire is about especially well-suited to the nature of the think about, which centers on analyzing the variables, sources, and causes of shared esteem annihilation inside the setting of Undertaking Asset Arranging (ERP) frameworks. These marvels are intrinsically social and organizational, requiring a profound understanding of individuals' lived encounters and their subjective recognitions of reality.

By embracing an interpretivist viewpoint, this study emphasizes the lived experiences of ERP clients and implementers, empowering a nuanced understanding of how esteem is co-created or frequently diminished among diverse performing artists. Besides, this approach encourages the investigation of organizational and social measurements that impact these dynamics particularly inside the Algerian setting, where organizational practices and usage contexts often deviate from standardized global models.

1-5 Research methodology

To address the research objectives, the study commenced with an extensive review of existing literature and theoretical frameworks, aiming to identify established sources of value co-destruction in ERP implementations. This foundational review provided a solid theoretical grounding and guided the design of the subsequent research phase. To further explore and in order to validate these findings, the Delphi method was employed, engaging a panel of experts with substantial experience in ERP systems. Experts were asked a set of structured questions derived from the theoretical insights gathered during the literature review.

Their responses were carefully analyzed to determine which sources of value co-destruction were already recognized in existing literature and which emerged as new ones, previously

undocumented insights. This qualitative, iterative process allowed for the refinement and expansion of the theoretical framework, ensuring that the study captured both well-established and emerging challenges in ERP implementation contexts.

CHAPTER II :

THEORETICAL FRAMEWORK

Section 01 : Literature review

In today's fast-changing, complex and uncertain environment, agile management has become essential for organizations. It improves the operational capacity of teams by breaking projects into manageable chunks, helps visualize and share task progress and maximizes the likelihood of project success. (Kaledio & Favour, 2024) confirmed that it enhances teams' operational efficiency by breaking projects into manageable segments, making it easier to track and communicate progress, while also increasing the likelihood of successful project outcomes. (Layton, 2012) also validated that, operational efficiency is improved in the context of agile because the methodology encourages breaking down projects into smaller manageable tasks, often called "sprints".

Agile principles and frameworks began to be applied to software development in early 2001 and have since expanded to other organizational contexts (Hidalgo, 2019). (Cohen, Lindvall, & Costa, 2003) stated that Agile methods appeared in the mid 1990 when some practitioners in software development found difficulty in using traditional methods in such a dynamic environment. That's what (Barlow, et al., 2011) confirmed, developers often face challenges with changing requirements during a project, and even that traditional methods are effective they are also time-consuming and costly, that's why many developers have adopted more agile approaches, which are characterized by their ability to quickly adapt to changes and deliver value through flexibility and continuous learning. On the other hand, according to (Brhela, Methb, Maedchea, & Werder, 2015) Agile software development emerged in the period from 2005 to 2015 , during this time the shift toward agile methods in software development became more pronounced, moving away from traditional phase-based approaches. This evolution highlights how agile methodologies have become a strategic response to complex, ever-changing environments, not just within software development but also across multiple organizational contexts. (Highsmith, 2009) also explains that agile methodologies, which originated in software development in the 1990s, began to be recognized as effective for other organizational contexts as marketing and product development in the early to mid-2000s.

The concept of "agile" originates from fields such as sociology, education, and manufacturing, and means the ability to adapt quickly and flexibly, emerging in management through software development, where methods such as Scrum allow greater

flexibility to adapt to constant changes (Prange & Heracleous, 2018). In this context, the term "agile" reflects the ability to adapt and respond, emphasizing the ability to thrive in an environment characterized by constant change and uncertainty (Madi, Dahalin, & Baharom, 2013). Whereas Embracing agility offers businesses a path to navigate uncertainty, capitalize on fleeting opportunities, and ultimately achieve sustainable competitive advantage in a world where the only constant is change (Khan, 2023). That is why Strategic agility is a complex, varied construct that can take multiple forms but captures an organization's ability to develop and quickly apply flexible, nimble, and dynamic capabilities (Lengnick-Hall & Beck, 2009). In addition, Organizational agility is an important factor that can enable companies to succeed in an uncertain and ever-changing environment (Cakmak, 2023)

Although agile methodologies have traditionally proven to be beneficial for small teams located in a single location, they encounter difficulties when teams are geographically distributed, this is due to the lack of immediate communication and smooth coordination, which reduces the effectiveness of cooperation. Also, managers face several barriers, both real and perceived, when they attempt to bring agile approaches into traditional organizations, it faces resistance to change and difficulties in adopting a flexible and decentralized work culture (Boehm & Turner, 2005). Agile projects face unique challenges and issues that differ from those encountered in traditional methodologies. Approximately fifty challenges have been identified when introducing Agile methodologies into organizations or working with Agile projects. These challenges include communication and shifting cultural and mindset paradigms, managing daily operational issues, securing support from management, clients, and team members, and developing the expertise required to ensure the successful implementation of these methodologies (Miller, 2013).

Agile methodology faces numerous challenges that stem from its inherent complexity and interdependence. These challenges range from persistent issues, such as the need for cultural change, to evolving concerns, such as adoption. Additionally, certain aspects of Agile remain underexplored, particularly in areas like governance and contracts (Gregory, Barocca, Sharp, Depande, & Taylor, 2016). Furthermore, other significant challenges include organizational structure, sustainability, team dynamics, scaling, value delivery, claims, and constraints (Gregory, Barroca, Taylor, Salah, & Sharp, 2015).

Moreover, Agile development is vulnerable to failure due to various factors, which can be categorized into four key dimensions: organizational, human, process and technical (Kunda,

[Mulenga, Seninda, & Chama, 2017](#)). In addition to these challenges, the success of an agile transformation within an organization is often hindered by several factors. These include the failure to appropriately adapt agile practices to the unique organizational context, the adoption of agile alternatives without adhering to suitable standards, and a general lack of understanding regarding the complexities and challenges associated with the transformation process. It is important to note that not all organizations fully acknowledge these critical factors ([Reginaldo & Santos, 2020](#)).

([Mc Avoy & Butler, 2009](#)) confirm that while Agile methods foster team cohesion, this emphasis can create pressures for conformity, potentially suppressing dissenting opinions. ([Tanner & Willingh, 2014](#)) argue that failing to successfully adopt Agile at first does not indicate its ineffectiveness; rather, a thorough retrospective should be conducted to understand the reasons for failure and extract lessons to improve future outcomes.

As a result, companies need to rethink the ways they create value and become more responsive to consumers' experiences, since the balance of power in value creation has shifted in favor of the customers ([Prahalad & Ramaswamy, The co-creation of value, 2002](#)).

In this context, Vargo and Lush proposed SDL in 2004, as a new perspective that is different from the traditional Goods-DL ([Ng, Parry, Smith, Maull, & Briscoe, 2012](#)). According to ([Anker, Sparks, Moutinho, & Gronroos, 2015](#)) CDL sees consumer value as driven by independent consumer agency, with businesses invited into consumer-led activities that may evolve into co-creation. In contrast, SDL views value as co-created through consumer-brand collaboration, with consumers as active co-agents in a dynamic, dialogical marketing relationship. ([Michitaka, Shirahada, Nguyen, & Kosaka, 2012](#)) state that in SDL, all economics are service economics and customers are the value co-creators. SDL led to the introduction of the idea of value co-creation for the individuals involved, sometimes extended into a network arrangement ([Mencarelli & Rivi re, 2015](#)). From the service science perspective, co-creation is central to the development of service systems science, which is rooted in service-dominant logic (SDL) ([Galvagno & Dalli, 2014](#)).

SDL emphasizes collaboration between suppliers, clients, and other actors in the service ecosystem, integrating concepts like co-production and co-creation ([Fuentes & Smyth, 2016](#)).

1-1 Value co-creation and agile method

Both agile and co-creation approaches aim to involve users in development, but with different purposes and methods, while Agile aims to quickly translate customer needs into products. The purpose of co-creation is to explore the needs for a product or service by enabling users to express these needs (Fiorini, et al., 2024).

The term value co-creation was introduced by Prahalad and Ramaswamy, who proposed that consumers should play an active role in designing their own experiences, shifting away from traditional consumption models (Indriasari, Prabowo, Gaol, & Purwandari, 2022).

Value co-creation is an innovative approach to open collaboration where individuals share their unique ideas and experiences, working together to create something they could not have achieved alone, offering a new perspective in the development process (Madi, Dahalin, & Baharom, Towards a user value co-creation model for agile web development approach, 2017). According to (Rabkamp, Digmayer, & Jakobs, 2023), co-creation is an approach that systematically integrates the user's perspective in the innovation process. It fosters user involvement throughout the development process, which leads to understanding and responding to user needs, thereby achieving high acceptability, usability, and satisfaction (Tessarolo, et al., 2024). This means that value is jointly created by the firm and the customer through their interactions, with the experience gained from this collaboration forming the basis of value.

Thus, the customer becomes a partner in the value creation process, which not only strengthens the relationship between the customer and the supplier but also facilitates continuous interaction and effective dialogue. This enhances cooperation and helps in better meeting market needs (Payne, Storbacka, & Fru, 2008). Ultimately, this process deepens the firm's understanding of customer needs and motivations, leading to personalized experiences that go beyond standard practices and focus on the unique interaction between the firm and the consumer (Corvera-Stimeling, 2015).

Additionally, co-creation, which involves the active engagement of end users in the product development process, has been identified as a reliable approach to mitigate the risk of misinterpreting user requirements and to foster product success, which makes co-creation as an equally valuable and effective strategy (Rasool, Besut, Komsaab, Migla, & Costa, 2017).

Agile project management and co-creation are underpinned by several core principles, which make their integration a seamless and effective approach in diverse contexts. Agile emphasises team collaboration and it leads to creating value (Madi, Dahalin, & Baharom, 2011). In addition to that, according to (Al-Omoush, Simon-Moya, & Sendra-Garcia, 2022) co-creation draws attention to interaction and collaboration among networks of individuals, working groups, and organizations. Which confirms their shared principles. Furthermore, Co-creation and Agile were found to be effective and feasible when applied together in projects (Tessarolo, et al., 2022).

(Parida, Kohtamaki, Wincent, & Sjodin, 2020) assert that the Agile co-creation process is successful. In a later study, (Sjodin & Parida, 2021) confirm that this approach enables the development of customized, modular, and scalable digital solutions through micro-services, fostering trust and facilitating progressive value delivery for both customers and providers. (Tabeau, et al., 2024) acknowledge that while combining Agile and co-creation approaches is effective, it also presents challenges, and the success of this integration depends on addressing these challenges.

The involvement of customers in product or service testing is widely regarded as beneficial by most companies, reflecting the effectiveness of the Agile methodology (Kokot, Majid, & Maciaszczek, 2024). Agile practices when adopted by organizations have been shown to positively influence project success while enhancing customer satisfaction (Moloto, Harmse, & Zuva, 2020).

Combining Agile and Co-creation faces challenges like gathering user insights, integrating engineers' ideas, and managing project changes. The Agile Co-Creation model addresses these by engaging stakeholders, bridging gaps between engineers and researchers, and enhancing collaboration through playful materials, visits, and weekly meetings (Tabeau, et al., 2024).

The challenges faced by practitioners of Agile practices are complex and interrelated. Some of these challenges include constraints, organization, culture, and teams (Gregory, Barocca, Sharp, Depande, & Taylor, 2016). In the same vein, the challenges related to co-creation also include customers, organization, constraints, and culture (Ajmal, Jan, Khan, Hussain, & Salameh, 2023). Moreover, during 2013 and 2014, challenges related to Agile were identified by separate authors and summarized into seven key themes, including:

organization, culture, teams, and constraints (Gregory, Barroca, Taylor, Salah, & Sharp, 2015). Furthermore, some authors have also identified challenges related to co-creation, including stakeholder engagement, organization, and teams (Franke, Schreier, & Kaiser, 2010). Additionally, others have stated that agile projects involve a range of challenges and issues, including stakeholder engagement (Miller, Going agile: Project management practices, 2013). Likewise, others have stated that one of the challenges of co-creation is culture and knowledge (Sjodin, Pareda, & Lindstrom, 2017).

1-2 Value co-destruction in intensive knowledge projects

Agile and Co-Creation methodologies are complementary, enhancing innovation and flexibility. Agile focuses on iterative development and continuous feedback (DiCesare, 2024), while Co-Creation involves collaboration with stakeholders, including customers, to ensure the product meets actual needs (Lloyd, 2024). However, these methodologies can lead to Co-Destruction if challenges such as misalignment, conflicting priorities, and poor communication are not effectively managed (Jarvi, Kahkonen, & Torvinen, When value co-creation fails: Reasons that lead to value co-destruction, 2018). In addition, in some projects, the failure to create value leads to its destruction (Elliott & Angel Fuentes, 2020), and the absence of co-creation and the failure to create value lead to value destruction (Makkonen & Olkkonen, 2017).

(Echeverri & Skalén, 2011) argue that value is not only co-created but can also be co-destroyed, meaning that interactions between providers and customers can result in both positive and negative outcomes. Similarly, (Plé & Chumpitaz Caceres, 2010) highlight that these interactions can lead to both value co-creation and co-destruction, emphasizing the importance of considering value co-destruction. (Jarvi, Kahkonen, & Torvinen, When value co-creation fails: Reasons that lead to value co-destruction, 2018) further suggest that managers should acknowledge the simultaneous existence of both co-creation and co-destruction in their strategies.

Value co destruction describes a phenomenon in which the value perceived by a customer from a service or product is reduced or eliminated due to a variety of factors, resulting from interactions between the customer and the service provider (Vianna & Nascimento Cunha, 2023). According to (Echeverri & Skalen, 2011) co-destruction can be an interactive mechanism between service systems that results in a decline in at least one of the systems'

well-being. Value co-destruction can occur from a failure of the resource integration process to co-create value, which can result negatively and affect customer satisfaction (Corsaro, 2020).

The destruction of shared value occurs due to several factors. Including inadequate information, insufficient trust, errors, service delivery failures, resistance to change, unclear expectations, customer misconduct, and the tendency to shift blame (Jarvi, Kahkonen, & Torvinen, *When value co-creation fails: Reasons that lead to value co-destruction*, 2018). It also arises through negative participation behaviors, including rude and indifferent attitudes of employees, confrontations with company representatives, technological failures, lack of complaint channels, and customers' desire for retaliation (Zhang, LU, Torres, & Chen, 2018).

Moreover, the lack of resources, their insufficient integration, and their ineffective use in agile projects lead to value destruction (Lintula, Tuunanen, Salo, & Kari, 2017). Similarly, negative interactions between stakeholders in the co-creation process also lead to value destruction (Echeverri & Skalén, 2011). Furthermore, the lack of communication between stakeholders and the insufficient integration of expectations and requirements into work processes in both Agile and co-creation processes lead to value destruction (Jurgen, 2020).

According (Matthew & Vallstrom, 2023), co-destruction can also stem from the incompatible use of resources and the misuse of company resources. Furthermore, (Sahaym, Vithayathil, Sarker, Sarker, & Bjorn-Andersen, 2023) suggest that opportunism, evasion, exploitation of unequal power, and unjustified dependence can trigger the value destruction process. Co-destruction can also occur through poor resource integration and in practice, when the beneficiary's expectations exceed the service level provided by the provider (Ogunbodede & Olabode, 2022). It also occurs when a service system misuses its own resources and/or those of another service system, either intentionally or unintentionally by acting in an inappropriate or unexpected manner (Plé & Chumpitaz Caceres, 2010).

The consequences of value co-destruction can include manageable drop in wellbeing or even severe damage to reputation and financial assets like revenue, which can lead to a lack of trust in future dealings and engagements (Nascimento Cunha, Chuchu, & Tafadzwa Mazirirt, 2021). Additionally, negative word-of-mouth, as (Lv, Zhang, & Li, 2021) states, can further damage the community's reputation, amplifying these adverse effects. In addition to this, co-destruction can lead to dissatisfaction among the affected parties, which can resume in increased tensions within the business relationships (Corsaro, *Value co-destruction and its*

effects on value appropriation, 2019). Moreover, according to (Sthapit, Garrod, Stone, Bjork, & Song, 2023) co-destruction can also cause customers to switch to competitors, reducing retention and market share, and may lead to business discontinuance, impacting all stakeholders.

Section 02 : Conceptual framework

2-1 Definition of agile project management

Agile Project Management (APM) combines the principles of traditional project management (TPM) with flexible, lightweight, and collaborative methods. These methods are adaptable to frequent changes while maintaining a high level of discipline. APM emphasizes short delivery cycles and continuous learning, focusing on managing projects by assessing and prioritizing requirements based on their value (Salameh, 2014).

APM merges traditional project management with flexible, collaborative, and disciplined practices that adapt to frequent changes. Rooted in Agile software development principles such as Scrum, Extreme Programming, and Lean, APM emphasizes principle-based practices that define roles, relationships, and activities in development processes (Dong, Dacre , Baxter, & Ceylan, 2024). APM prioritizes managing inevitable changes over avoiding them and considers project failure as the most costly aspect of software development. It prioritizes delivering functional features to customers as quickly as possible with minimal necessary planning, design, and documentation. APM iteratively builds and refines supporting subsystems to accommodate these features, focusing on efficiency and adaptability throughout the development process (Karlesky & Vander Voord, 2008).

APM is an iterative and incremental approach that fosters collaboration and maintains a necessary level of formality. It aims to produce high-quality products by continuously integrating features throughout the project lifecycle, ensuring customer satisfaction and meeting evolving needs. Each iteration functions as a mini-project with its own analysis, design, coding, testing, and project management activities, culminating in an operational subset of the final system (Rota Vèronique, 2009).

2-2 Agile in ERP

Agile methodologies in ERP implementation focus on incremental and iterative approaches, breaking the project into smaller functions. This results in shorter development cycles and improved communication efficiency, ultimately enhancing the success of ERP implementation by managing the complexity and reducing the risk of failure ([Fernandi Wijaya, Prabowo, & Kosala, 2018](#)).

Agile methodologies in ERP implementation involve delivering value incrementally through multiple releases. This approach reduces implementation costs, accelerates time-to-value, and minimizes risks compared to traditional big-bang implementations. Agile methods provide flexibility and adaptability, catering to changing business expectations and requirements ([Lohva, The role of agile approach in ERP implementations, 2020](#)).

2-3 Core Principles and Values of Agile Project Management

The agile approach is based on several fundamental principles, with customer satisfaction as a primary focus, achieved through the continuous delivery of value and the collaborative engagement of all project partners ([Todorović, Toljaga-Nikolić, & Bjelica, 2018](#)).

Agile methodologies are inherently adaptive, enabling constant reassessment and adjustments throughout the project lifecycle. This adaptability can result in higher customer satisfaction, as the final product is better aligned with stakeholders' evolving needs ([Nwasike, Daraojimba, Adegbite, Ezeigweneme, & Gidiagba, 2024](#)).

The Agile approach ensures customer satisfaction through timely and consistent delivery of valuable software, and embracing changes in requirements even late in the development process ([Younus, Alaghaa, Alshuaibi, & Abumandi, 2022](#)).

2-4 Agile Methodologies : Scrum Vs Waterfall method

While the Waterfall model is a sequential development process where each phase, is completed before moving on to the next. Each phase is scheduled with specific timeframes, and documentation and testing occur at the end of each phase to ensure project quality ([Balaji & Murugaiyan, 2012](#)).

In contrast, Scrum is designed to address the limitations of defined and repeatable processes by breaking projects into 30-day iterations called sprints. At the start of each sprint, the required functionality is defined, and the team is tasked with delivering it. This approach

aims to stabilize requirements during the sprint and emphasizes project management principles. The term “Scrum” is derived from rugby, where players work closely together to advance the ball down the field ([Mnkandla & Dwolatzky, 2004](#)).

Table 1 : scrum vs waterfall principles

Scrum	Waterfall
Teams involved in specific iterations called sprints (high flexibility)	Low flexibility No iterations
Requirements are defined at the beginning of each sprint	Requirements are fully defined at the beginning of the project
Testing throughout the entire process	Testing at the end of each phase
The team include The product owner , the scrum master , the scrum team	Traditional management Project manager overseeing the project
Continuous client involvement	Low client involvement after initial phase
Daily stand up meetings to monitor performance	Formal milestone reviews and scheduled status meetings

Source : Self-developed based on ([STOICA, GHILIC-MICU, MIRCEA, & USCATU , 2016](#)); ([Senarath,, 2021](#)) and others

Scrum in ERP implementation involves completing development in short iterations called sprints. This methodology emphasizes a simple and user-friendly design, a small but multi-skilled team, and a focus on meeting user needs. The goal is to ensure that ERP development is efficient, adaptable, and free of delays, requiring team members to possess multiple skills for analysis and development ([Amini & Tjakrawala, 2022](#)).

Table 2 : scrum principles and ERP implementation project success factors

ERP implementation project success factors	Scrum principles
ERP teamwork and composition	Self-organizing teams, Team collaboration, Team size 5-9 people
Effective communication	Product Owner, Stand-up meeting, Scrum Board
Project management	Burn down chart, Definition of Done, Planning poker, Product and sprint backlog, User stories
Project champion	Scrum Master
Change management program and culture	High team flexibility and creativity

Software development, testing, Troubleshooting	Delivery of working software
Monitoring and evaluation of performance	Sprint demo

Source : (Tuijtelars, 2013)

2-5 The Agile process

According to (Wijaya, Prabowo, Kosala, & Meyliana, 2019) the agile method for ERP implementation consists of three main steps as following:

Envision: this phase involves a complete understanding of the purpose of the ERP system, defining the goals and the expected outcomes.

Iterate: at this stage, the focus is on recognizing the ERP solution that satisfies user requirements. It is an iterative process where feedback is continuously used to refine the system.

Decide: this stage involves selecting the appropriate ERP solution, and the framework to evaluate post-implementation process to prove the trial system, checking reliability, data integrity, system utilization, and examine the benefits of ERP implementation.

Table 3 : Comparison of the roles of the internal team and the client in the Agile ERP implementation process

	The role of the team	The role of the client
Envision	- Identify key goals and gather requirements - Analyze needs - Communicate the envisioned system to the client	- Provide detailed input and requirements - Clarify expectations for the ERP implementation
Iterate	- develop the ERP system in iterative cycles, continuously refining and enhancing the system based on feedback - Test and validate the ERP solution - collect feedback from the client after each iteration to make necessary adjustments and improvements	- review the developed ERP solution at each iteration - participate in the testing process - provide continuous feedback and suggestions for improvement

Decide	• evaluate different ERP solutions based on the client's requirements and feedback from iterative cycles • present the evaluated options to the client, highlighting the pros and cons of each • recommends the most suitable ERP solution	• assess options • make the decision • provide approval
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Source : developed by ourselves based on (Wijaya, Prabowo, Kosala, & Meyliana, 2019)

This Agile-based model was chosen for its flexibility and customer-centricity, which enhances the success of ERP system implementation through iterative processes. Its reliability and effectiveness have been proven by numerous researchers and through multiple practical applications (Stepanov, 2021) ; (Isetta & Sampietro, 2018) ; (Kubba, 2024).

2-6 Origin and definition of value co-creation

Before the adoption of the concept of co-creation, a traditional approach based on innovation closed was followed, in which decisions were made internally without involving customers (Al-Nashash, 2022). Later, the open innovation model emerged, incorporating the concept of dual use and characterized by co-creation and customer involvement (Merindol, 2022). This collaborative approach encourages external participation, including cooperation with customers and suppliers (Gennaro, 2023). The focus then shifted from creating value within the company to the perspective of creating value through cooperation with customers, thus creating long-term competitive value (Glassner, 2017). In this context, the concept of co-creation first appeared in 1986 when Kotler introduced the term "consumer as producer". After 2000, co-creation began to gain attention (Terblanche , 2014). The concept first emerged in the 1970s, driven by the demand for workers to participate in the design of information technology. Then, in the 1980s, it developed into areas such as user-centered design, later transitioning to human-centered design in the 1990s. By the early 21st century, co-creation had become a major innovation approach, emphasizing collaboration between customers and companies. In 2010, it was adopted as a global standard, reinforcing its role in design and innovation (Gioia, 2015) .

As for the applications of co-creation in information systems, in the 1990s, user was considered an essential part of the ERP system design process. During this period, user satisfaction was seen as an indicator of the success and effectiveness of information systems,

and a relationship between user satisfaction and system success was proven ([Wu & Wang, 2007](#)).

Based on this approach, value co-creation is defined as open innovation that integrates relevant knowledge, information, and skills within diverse organizational environments ([Ramirez & Benalfo, 2018](#)). This approach promotes the participation of different stakeholders, making it an essential element in achieving sustainable competitive advantages for organizations.

([Prahalad & Ramaswamy, 2004](#)) define co-creation as a joint initiative between suppliers and beneficiaries to generate value collaboratively.

It has also been defined by ([Leclercq , Hammedi, & Poncin, 2016](#)) as the creation of a mutual process in which value is jointly determined by both the supplier and the beneficiary.

Moving on to the role of co-creation in ERP systems, it is defined as the process of developing and improving the system through collaboration between the system owner and external developers (customers, partners, and suppliers), where value creation becomes a shared responsibility between different parties, rather than being limited to a single entity ([Fuentelsaz , Jarillo , & Maicas , 2015](#)).

Moreover, co-creation in ERP systems allows users (customers, partners, and suppliers) to participate in customizing and developing the system, which leads to improved alignment with the organization's needs ([Schrieck, Wiesche, & Krcmar, 2021](#)).

As a result, consultants and client companies collaborate in creating value through specific behaviors. These co-creation behaviors are crucial in enhancing the outsourcing partnership and determining the level of success in ERP implementation ([Sultana, Shah, Sattar, & Khalid, 2018](#)).

2-7 The Benefits of value Co-Creation

Co-creation in ERP offers several significant benefits, including cost reduction, inventory management, and improved business operations, all of which contribute to a competitive advantage ([Koh, Gunasekaran , & Rajkumar, 2008](#)). Co-creation also assists users in achieving their ERP-related objectives ([Lucas, Babaian, & Topi, 2008](#)). The collaboration between users and the system leads to the development of interfaces that enhance ERP performance ([Babaian, Lucas, & Topi , 2006](#)). Moreover, effective collaboration and communication between partners and ERP systems provide new insights and greater control

over business processes (Othmani & Pellerin, 2010). One of the key benefits of co-creation in ERP is that it fosters the development of dormant business and technical skills through hands-on, interactive experiences, ultimately working towards a shared goal (Foster & Hopkins, 2011). Additionally, it is believed that users will be more productive when system usage is mandatory during ERP implementation (Wu & Wang, 2007).

2-8 The steps of value co-creation in an ERP system

The steps of co-creation in an ERP system may vary from one author to another, as each author focuses on specific aspects of the process based on their experience and perspective.

Table 4 : Review of Co-Creation Steps in ERP System: A Comparison between Two Models

Article (Sarker, Sarker, Sahaym , & Bjørn-Andersen, 2012)		Article (Sultana, Shah, Sattar, & Khalid, 2018)		The difference between the two steps
Building the Business Case	ERPCo and its partner collaboratively identify a new module or functionality that has the potential to enhance ERP solutions, ensuring its alignment with business needs and technological advancements.	Preparation and Planning Stage	Engaging users early to ensure ERP system alignment with their needs, improving adoption and reducing resistance to change.	building the business case focuses on determining the feasibility of the new feature in the ERP system and ensuring that it aligns with business and technology needs, while the preparation and planning phase aims to prepare users and the system for the implementation process, facilitating effective adoption and reducing resistance to change.

Co-Marketing the Module	To assess market demand and reception, ERPCo and the partner jointly promote the module, leveraging co-marketing strategies to gather feedback and validate its relevance.	Solution Design Stage	Involving users in defining operational requirements and providing feedback on initial designs to ensure system compatibility with actual business processes.	The co-marketing of the unit focuses on promoting it and testing its market acceptance through joint marketing strategies, while the solution design phase is concerned with involving users in defining operational requirements and ensuring that the design is compatible with actual business processes.
Obtaining Management Approval	ERPCo's management evaluates the feasibility and strategic value of the proposal, approving the transfer of intellectual property (IP) rights if deemed viable.	Implementation and Development Stage	Training users, collecting feedback for adjustments, and conducting iterative testing to ensure system quality before launch.	The first focuses on ERPCo management's assessment of the feasibility and strategic value of the proposal, as well as approval of the transfer of intellectual property rights if appropriate. The second focuses on training users, gathering feedback for modifications, and conducting iterative testing to ensure the quality of the system before launch.
Negotiating Pricing and Revenue Sharing	ERPCo and the partner establish mutually beneficial pricing terms and revenue-sharing agreements, ensuring financial sustainability and value distribution.	Post-Implementation and Evaluation Stage	Providing continuous technical support, analyzing issues, and involving users in refining the system based on real-world use.	The first focuses on establishing mutual pricing terms and revenue sharing agreements to ensure financial sustainability and value distribution between ERPCo and partner. The second focuses on providing ongoing technical support, problem analysis, and user engagement in improving the system based on actual usage after implementation.

Managing Intellectual Property (IP) Rights Acquisition	ERPCo formally acquires the legal rights to the module from the partner, ensuring compliance with regulatory and contractual obligations.	Continuous Improvement Stage	Measuring performance and implementing periodic improvements based on user feedback to sustain ERP system development.	The first focuses on obtaining legal rights to the product from the partner to ensure compliance, while the second focuses on measuring performance and implementing improvements based on user feedback to ensure the sustainability of the system development.
Knowledge Transfer to Internal Teams	The partner facilitates the transfer of both technical and functional expertise to ERPCo's internal development team, ensuring effective implementation and integration.			After Managing Intellectual Property (IP) Rights Acquisition comes the stage of Knowledge Transfer to Internal Teams However, there is no corresponding stage in the other steps.
Developing and Standardizing the Model	ERPCo enhances and refines the module by incorporating ERP industry standards and optimizing its functionalities to improve overall system performance.			After Knowledge Transfer to Internal Teams comes the stage Of Developing and Standardizing the Model But there is no corresponding stage in the other steps.

Sustaining Collaboration and Trust	ERPCo and the partner engage in continuous coordination and iterative refinements to maintain long-term collaboration, ensuring the module's success and adaptability to evolving market needs optimizing its functionalities to improve overall system performance			After Developing and Standardizing the Model comes the stage Of Sustaining Collaboration and Trust But there is no corresponding stage in the other steps.
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Source : Self developed based on ([Sarker, Sarker, Sahaym , & Bjørn-Andersen, Exploring value cocreation in relationships between an ERP vendor and its partners: A revelatory case study, 2012](#))and ([Sultana, Shah, Sattar, & Khalid, 2018](#))

The proposed models ([Sultana, Shah, Sattar, & Khalid, 2018](#)) and ([Sarker, Sarker, Sahaym , & Bjørn-Andersen, Exploring value cocreation in relationships between an ERP vendor and its partners: A revelatory case study, 2012](#)) were selected because they have been widely utilized in studies related to ERP system development. Their frequent application by researchers highlights their significance in the field. Additionally, the models provide complementary perspectives on the co-creation process, which enhances the understanding of the critical factors that influence the success of ERP system development.

Both processes share a focus on collaboration and iterative feedback to improve the ERP system or module. In both cases, the success of the project relies on the active involvement of key stakeholders, whether they are internal users or external partners. This collaboration helps ensure that the final product whether it is an ERP system or a new module aligns with business needs, operational processes, and user requirements. Furthermore, both approaches prioritize continuous improvement, where feedback is gathered throughout the process and adjustments made based on real-world use or market reception. Additionally, both processes

aim for long-term success, ensuring that the product remains adaptable to changes and continues to deliver value.

Additionally, the differences lie in the scope and the parties involved. One process focuses on internal development and implementation of the ERP system, where user feedback plays a central role in shaping the system's functionality and ensuring its alignment with business operations. This process includes stages such as training, gathering feedback, and post-implementation evaluation to improve system performance.

In contrast, the other process focuses on external collaboration with a partner to create a new ERP module. This process involves stages like building the business case, co-marketing, negotiating pricing, and managing intellectual property rights. Unlike the internal feedback in the first process, this approach emphasizes market validation, strategic value, and external coordination to launch a new product. It also includes a more formal structure for knowledge transfer and intellectual property rights management ([Sarker, Sarker, & Sahaym , EXPLORING VALUE COCREATION IN RELATIONSHIPS BETWEEN AN ERP VENDOR AND ITS PARTNERS, 2018](#)) and ([Sultana, Shah, Sattar, & Khalid, 2018](#)).

2-9 Definition of value co-destruction

Co-destruction is a process in which value loss occurs because of interactions between different systems. In some cases, the misuse of resources, either intentionally or unintentionally, undermines the efficiency of a service system or negatively affects the other system ([Plé & Caceres, 2010](#)). In addition, value co-destruction can be the result of negative engagement behaviors, where behaviors such as employee rudeness, indifference, confrontation with company representatives, and technological failures, as well as the absence of complaint channels and customers' desire for revenge, affect the quality of the interaction, resulting in value loss for both consumers and providers ([Zhang, LU, Torres, & Chen, 2018](#)). Moreover, value co-destruction can occur through the misuse of customer resources by organizations, which highlights the inefficiency of some companies in managing their relationship with consumers ([Smith , 2013](#)). In this context, value co-destruction is seen as a potential occurrence in every interaction between companies and consumers, occurring because of poor integration of resources and mismatch between beneficiaries' expectations and the level of service provided by the provider ([Ogunbodede, Papagiannidids, & Alamanos, 2022](#)).

Value co-destruction may result from unsuccessful interaction between actors, resulting in a decline in well-being and performance rather than creating added value. This is due to several factors, including lack of information, lack of trust, making mistakes, inability to provide service or adapt to change, lack of clear expectations, poor customer behavior, and mutual blame. The accumulation of these factors hinders cooperation between parties, negatively affecting the quality of the results and the achievement of shared goals (Jarvi, Kahkonen, & Torvinen, When value co-creation fails: Reasons that lead to value co-destruction, 2018).

In addition, value co-destruction can arise as a result of interactions between actors in an organizational relationship, where resource integration leads to negative interactions that undermine value for all parties involved. In some cases, mutually destructive interaction loops can lead to a continuous decline in value creation or even a complete absence of value creation. This concept is one of the least studied aspects of service systems and resource integration research, as it is considered a failure to achieve shared value due to unproductive interactions between actors (Makkonen & Olkkonen, 2017).

Furthermore, value co-destruction can occur when actors fail to demonstrate expected behaviors that contribute to resource integration within service systems, resulting in negative impacts on value creation. This co-destruction depends on the individual values and personality traits of actors, with values related to self-enhancement and openness to change, along with neurotic traits, increasing its likelihood. In contrast, values related to self-transcendence and relationship preservation, as well as conscientious and agreeable traits, decrease its likelihood (Ogunbodede, Papagiannidids, & Alamanos, 2022). Value co-destruction can also be conceptualized as a negative outcome of interactions between actors, where misunderstandings, goal inconsistencies, or performance deficits lead to value loss rather than value creation. This co-destruction manifests itself through mechanisms such as goal blocking and net loss, which negatively impact the actors' experience within the service ecosystem. However, these negative effects can be reduced by enhancing the engagement behaviors of actors and improving the quality of interactions between them (Prior & Marcos-Cuevas, 2016).

In the context of business-to-business (B2B) relationships, value co-destruction arises when opportunistic behaviors of actors, coupled with technological disruptions and challenges of new business models, lead to negative outcomes such as relationship termination, conflicts,

and business divestment. This co-destruction occurs when actors seek to maximize their strategic gains without taking into account effective collaboration, resulting in value depreciation rather than value creation. It can also lead to failure to share knowledge, poor trust building, and inability to adapt to market challenges, which hinders the realization of mutual benefits between business partners (Pathak, Ashok, & Tan, Value co-destruction: Exploring the role of actors' opportunism in the B2B context, 2020).

A relevant example of this phenomenon can be observed in Enterprise Resource Planning (ERP) systems, where value co-destruction emerges when actors within the ecosystem, such as focal firms and complementors, engage in opportunistic behaviors. These include unfair rent-seeking, shirking responsibilities, and exploiting asymmetric power dynamics, leading to value degradation instead of creation. Such behaviors disrupt the balance in collaborative relationships between companies, resulting in deteriorating value within the ecosystem rather than fostering productive cooperation. Additionally, partner firms may respond unexpectedly, such as forming alliances with competitors to counteract these opportunistic behaviors, further exacerbating value deterioration in the system (Sahaym, Vithayathil, Sarker, Sarker, & Bjorn-Andersen, 2023). Finally, value co-destruction can be defined as a reduction in the value that is co-created between the consumer and the company during the collaborative service process. This occurs when the company and consumers' resources are not used appropriately or in an efficient manner, resulting in poor service quality and loss of value for both parties (Xie, Liu, Guo, & Li).

2-10 Comparison between Agile, Co-creation and Co-destruction of value in ERP systems implementation

ERP systems are essential for integrating and managing core business processes. The success of ERP implementation relies on various approaches, including agile methodology, co-creation, and co-destruction.

The following table compares Agile, co-creation, and co-destruction in the context of ERP implementation, highlighting their key characteristics, benefits, and challenges.

Table 5 : Comparative Analysis of Agile, Co-Creation, and Co-Destruction in ERP Implementation

Agile	Co-creation	Co-destruction
Envision : Understanding of the purpose of the ERP system, and defining the goals and the expected outcomes of the users.	Preparation and Planning Stage : Engaging users throughout the preparation to ensure ERP system alignment with their needs and requirements.	False Expectations: Agreements based on assumed cooperation can create unrealistic expectations. Unanticipated Opportunism: when there is expected opportunistic behavior, one party might take advantage of the other. Initial Cheating: Early opportunistic actions by one party can provoke reprisal, which can result in mutual losses later on. (Sahaym, Vithayathil, Sarker, Sarker, & Bjørn-Andersen , Value destruction in information technology ecosystems: A mixed-method investigation with interpretive case study and analytical modeling, 2022)
Iterate : Recognizing the ERP solution that meets user needs. While continuously using user's feedback to refine the system.	Solution Design Stage : Involving users in choosing the right solution and providing feedback on initial designs to ensure system compatibility with actual business processes.	Conflicting Interests: contrasting priorities can possibly cause disputes. Governance Issues: mistrust might slow down collaboration and commitment. Power and Politics: Competitive behaviors interrupt progress. Technology and Knowledge Transfer Challenges: the lack of knowledge exchange and feedback defensiveness could cause misunderstandings and delays. (Sarker, Sarker, Sahaym , & Bjørn-Andersen, Exploring value cocreation in relationships between an ERP vendor and its partners: A revelatory case study, 2012)
Decide : Selecting the appropriate ERP solution, and the framework to evaluate post-implementation process, and examine the benefits of ERP implementation.	Implementation and Development Stage : Collecting user's feedback for adjustments, and conducting iterative testing to ensure system quality before launch.	Resources mismanagement: inefficient resource allocation or opting for an inappropriate ERP solution. Ineffective Use of Interaction Platforms: Inadequate communication and decision-making processes. Service Failure: selecting an ERP system that does not satisfy business requirements, might lead to malfunctions. Lack of Communication: inadequate communication between stakeholders might cause conflicts. (Amjad & Azhar, 2023)

	Post-Implementation and Evaluation Stage : Following the implementation, employing user's reviews to analyse issues and refine the system.	Misalignment with Business Needs: ERP advancements that do not suite the company's improving processes can result in complicated operations. Increased Complexity and Resistance: Frustration and ineffectiveness might be caused due to complex systems and poor training. Over-reliance on Standardization: Excessive standardisation to default processes might decrease flexibility and innovation. Poorly Managed improvements: Introducing new features without a well-defined plan can lead to confusion. Integration Issues: integrating new improvements deficiently might disturb workflows and cause inefficiencies. Competitive Disadvantages: Struggling with post-implementation challenges can lead to a loss of competitive edge. Misuse of Analytics and Collaboration Features: inadequate implementation of tools can generate misleading insights. ((Ruivo, Oliveira, & Neto, 2014)
	Continuous Improvement Stage : Utilizing user's assessments to measure the system's performance and implement periodic improvements.	Resource Misuse: When data is entered incorrectly, it might cause inefficiencies and production delays. Relational Co-Destruction: Mistakes and misstatements might be caused due to ineffective communication and collaboration between departments. Knowledge-Based Co-Destruction: deficient training could possibly cause errors and ineffective use of the ERP system. Temporal Co-Destruction: lengthy implementation leads to employee fatigue and disengagement, resulting in delays and inefficiencies. (Chau & Chan, 2002)

Source : developed by ourselves based on (Chau & Chan, 2002);(Ruivo, Oliveira, & Neto, 2014)and more

The comparative table illustrates the distinctions between the agile process and the co-creation process in ERP implementation, as well as the possible co-destruction scenarios at each stage. The first stage of the agile process, which is “envision ”meets the first stage of the co-creation process“ preparation and planning, which both encompass the definition of the ERP solution and its goals, based on users' needs and requirements. At this stage, co-destruction can take different forms varying from false expectations to unanticipated

opportunism, or even initial cheating. The second stage of both processes consist of designing the appropriate ERP system based on the planning done in the first stage while including users feedback from start to finish . Conflicting interests, governance issues or the lack of knowledge exchange might cause co-destruction of value at this stage. Following up, the decision and implementation stage, in which happens the collection of user's feedback to adjust the system before the final launch. At this phase, the implementation could encounter some challenges including resources mismanagement or service failure that could lead to the co-destruction of value. Building upon the previous stages, the next steps involve post-implementation and evaluation stage followed by the continuous improvement stage, which are both, included in the co-creation process while the agile process ended at the decision stage. This reveals that the agile process of ERP implementation is more concise compared to the co-creation process, which expands to after implementation. The Post-Implementation and Evaluation Stage is executed to analyze issues and refine the system based on users insights , followed by the Continuous Improvement Stage which could be explained as a continuously reviewing the system after implementation . These last stages might as well run into some obstacles that could lead to co-destruction as in misalignment with business needs, integration issues, over-reliance on standardization, in addition to ineffective use of the ERP system due to deficient trainings.

**CHAPTER III : METHODOLOGICAL
AND ORGANIZATIONAL
FRAMEWORK**

Section 01 : Methodology

This study aims to analyze the reasons that lead to the co-destruction of value during the stages of agile management and co-creation during the implementation of ERP systems. The main purpose is to understand how the improvement and collaboration processes can become obstacles that lead to the loss of value instead of its creation.

To achieve this goal, a qualitative research approach was adopted, utilizing the Delphi method, as it is a flexible, iterative research technique for gathering and eliciting the anonymous judgments of experts using a series of data collection and analysis techniques interspersed with feedback (Skulmoski & Hartman, 2007).

The Delphi technique involves a panel of anonymous experts, who are provided with extensive questionnaires and comments, in order to obtain consensus on a particular topic (Crisp & Pelletier, 1997). Its purpose is to obtain a collective view from individuals on issues where there is little or no conclusive evidence and where opinion matters, and to allow participants to re-evaluate their views in light of the responses of the group as a whole (Thangaratinam & Redman, 2005). Its advantages include anonymity of participants, reduced group pressure to conform, and less time spent by participants than traditional methods of gathering opinions (Fish & Busby, 1996).

The Delphi process in this research involved the following key stages: (Fallery, Girard, & Rodhain, 2013)

1-1 The first step : the step of designing the initial questionnaire

The objective of the first round is to identify possible sources of co-destruction of value in the ERP implementation phases, according to both experts from the implementation team and the client team.

We developed the survey guide based on three phases of Agile Management in ERP systems, as mentioned in our conceptual framework. In each phase, we identified the causes of co-destruction of value and transformed them into analytical elements to gain a deeper understanding of their impact. In the final stages of the guide, we extracted questions from the co-creation phase in ERP systems, allowing for a balanced analysis. Two versions of the guide were prepared: one aimed at clients and the other at implementers. The methodology is based on the Delphi approach, with questions using a Likert scale ranging from “strongly disagree” to “strongly agree”, facilitating a comparative analysis of different perspectives.

The questions are structured in a table, where each phase includes statements reflecting the potential factors leading to co-destruction of value.

1-2 The second step : Experts Selection

In this study, a Delphi questionnaire was conducted with stakeholders, who are implementers and customers, in order to identify the sources of co-destruction of value. In a project titled (SAP S/4HANA project for Helios).

The reason why the questionnaire were conducted with both parties is that according to (Zhang, LU, Torres, & Chen, 2018) value co destruction can affect both parties. They both have a role in the value destruction process. The implementers are responsible for delivering the services, while the customers are the beneficiaries of these services, so both must be involved to capture the potential sources of value destruction.

Table 6 : ERP implementation team experts of the SDG group “implementation project for Sonatrach

Implementation team	The role	Experience
Expert 1 BOUNEDJAR Fedwa	ERP project manager	10 years
Expert 2 KHELALFA Oussama	ERP functional consultant	7years
Expert 3 BEKHCHI Mohamed Yacine	ERP technical consultant	6 years
Expert 4 MEZIANI Mamoune	System architect	12 years
Expert 5 GAOUAR Adil	Support and training manager	8 years
Expert 6 KORIECHI Sofiane	Business analyst	5 years

Source : Sdg group

Table 7 : ERP implementation client team experts from Sonatrach

The client team	The role	Experience
Expert 1 BENSALEM Amine	Chief information officer	12 years
Expert 2 MEZDAD Yacine	Finance manager	10 years
Expert 3 BOUKERCHA Samira	Human ressources manager	8 years
Expert 4 KHELLADI Rachid	Logistics manager	9 years
Expert 5 BENALI Nadia	Operations manager	7 years
Expert 6 OULD ALI Karim	Digital project manager	6 years

Source : Sdg group

1-3 The third step : The two rounds of data collection

Round 1 : the first round of questionnaires

In the initial round, the questionnaires to all experts from both parties. Each expert responded independently.

The first round was meant to collect initial judgments and open feedback.

Experts were asked to rate their agreement on each proposition from “strongly disagree” to “strongly agree”, and to add comments if they have them. Some experts chose not to provide comments.

Survey guide :

To address our study, we relied on the agile ERP implementation phases in the survey structure.

This model, based on Agile management, was chosen over other models due to its flexibility in handling changes and its reliance on continuous interaction with the client to ensure that all requirements are met accurately. It also allows for the project to be implemented gradually through short iterations, which reduces risks and increases the chances of successful ERP system implementation, unlike traditional models that are characterized by rigidity and poor responsiveness to changes.

Moreover, the robustness and effectiveness of this iterative process have been widely recognized in the literature. (Stepanov, 2021) demonstrated its applicability in large-scale ERP-system projects, (Isetta & Sampietro, 2018) analyzed its performance impact on implementation success (Kubba, 2024) proposed a hybrid-Agile framework that has been extensively applied and validated across multiple industry case studies.

The proposed value co-destructing practices are derived from theoretical frameworks and are grounded in existing research conducted by (Sahaym , Vithayathil , Sarker, Sarker, Bjørn-Andersen 2022); (Sarker, Sarker, Sahaym , & Bjørn-Andersen, Exploring value cocreation in relationships between an ERP vendor and its partners: A revelatory case study, 2012) and others. These practices have been systematically identified based on established studies, providing a conceptual foundation for analyzing the mechanisms through which value erosion occurs in ERP implementation projects.

For the implementation team :

To what extent do you think these practices may destroy value in each phase of the implementation?

Table 8 : possible value co-destructing practices in each phase of the ERP implementation process for the implementation team

Implementation phase	Possible value destructing practices	The source
Envision	The clients have false expectations	((Sahaym, Vithayathil, Sarker, Sarker, & Bjørn-Andersen , Value destruction in information technology ecosystems: A mixed-method investigation with interpretive case study and analytical modeling, 2022)
	Unforeseen client exploitation incident. (the client takes unfair advantage of the service provider or situation)	
	Client demands unpaid work.	
	Absence of users involvement	
	Based on your experience, what other sources of co-destruction do you identify at this stage?	
Iterate	Client team members have different priorities.	(Sarker, Sarker, Sahaym , & Bjørn-Andersen, Exploring value cocreation in relationships between an ERP vendor and its partners: A revelatory case study, 2012)
	Mistrust between client team members.	
	Client prioritizes competition over effectiveness	
	Shortage of users feedback	

	Based on your experience, what other sources of co-destruction do you identify at this stage?	
Decide	Inefficient resource allocation regarding the chosen project.	(Amjad & Azhar, 2023)
	inadequate communication between stakeholders, when selecting the ERP solution	
	unavailability of client review in iterative testing	
	Based on your experience, what other sources of co-destruction do you identify at this stage?	
	Absence of feedback in post-implementation evaluation	
	Non-existence of continuous improvement based on users assessment	
	Based on your experience, what other sources of co-destruction do you identify at this stage?	

For the client team:

To what extent do you think these practices may destroy value in each phase of the implementation?

Table 9: possible value co-destructing practices in each phase of the ERP implementation process for the client team

Implementation phase	Possible value destructing practices	Evaluation
Envision	Team prioritizing their own benefits	(Sahaym, Vithayathil, Sarker, Sarker, & Bjørn-Andersen , Value destruction in information technology ecosystems: A mixed-method investigation with interpretive case study and analytical modeling, 2022)
	Misrepresented costs	
	Misstated timelines	
	Absence of users involvement	
	Based on your experience, what other sources of co-destruction do you identify at this stage?	
Iterate	the lack of knowledge exchange	(Sarker, Sarker, Sahaym , & Bjørn-Andersen, Exploring value
	Mistrust between the team members	

	Implementation delays	cocreation in relationships between an ERP vendor and its partners: A revelatory case study, 2012)
	feedback defensiveness.	
	Excluding users in selection.	
	Based on your experience, what other sources of co-destruction do you identify at this stage?	
Decide	Implementation team opts for an inappropriate ERP solution.	(Amjad & Azhar, 2023)
	Inadequate communication between stakeholders.	
	nonexistence of iterative testing	
	Implementation team ignores client review	
	Based on your experience, what other sources of co-destruction do you identify at this stage?	
	exclusion of post-implementation evaluation	
	deficiency of continuous improvement based on users assesement	
	Based on your experience, what other sources of co-destruction do you identify at this stage?	

Round 2 : The second round of questionnaires

After the reception of the responses from both parties, with the use of the Delphi method an initial analysis will be conducted.

The weight, the median and the absolute average gap at the median are expected to be calculated, for the need to reclassify the items of each implementation phase ranging from the most important to the least important.

The calculated median helps calculate the median absolute deviation :

$$MAD = \frac{\sum_i^n |x_i - M|}{n} \quad (\text{Fallery, Girard, \& Rodhain, 2013})$$

X_i : degree of agreement with the proposition as assessed by expert i

M : median of the proposition

n : total number of experts

The comments of the experts from both parties are planned to be used as new items for each phase.

Then the experts shall reanswer the new questionnaires without adding comments, only ranking the propositions from “strongly disagree” to “strongly agree”.

Considering the agreements, priority ratings, and numerous comments, we get quantitative and qualitative data to use for the analysis.

Round 3 : The comparison between the results of the first and second round of questionnaires.

The objective of this last round is to compare the results of both previous rounds.

To measure the overall level of consensus, Kendall coefficient of concordance is intended to be used through the SPSS software: Kendall's W allows us to measure this level and assess its robustness (statistically significant). ([Fallery, Girard, & Rodhain, 2013](#))

Kendall's W ranges between 0 (no agreement) and 1 (total agreement)

In order to evaluate the results, the Schmidt table will be used:

Table 10 : Schmidt interpretation table for Kendall's coefficients

W	Interpretation
0,1	Very low consensus
0,3	Low consensus
0,5	Moderate consensus
0,7	Significant consensus
0,9	Highly significant

Source : ([Fallery, Girard, & Rodhain, 2013](#))

Section 02 : Organizational framework

2-1 Internship location :

Our study was conducted at the SDG group (Strategic Decisions Group), a consulting firm specializing in information management processes, business analysis and transformation through information systems, decision-making, and improving corporate governance.

2-2 Company presentation :

SDG Group is an ERP and IT solutions consulting and integration firm operating in Algeria and internationally. It specializes in the implementation, support, and development of information systems in various sectors (energy, industry, finance, and utilities).

2-3 History and Positioning :

Founded in 2013, SDG Group Consulting Algeria is a consulting and integration firm specializing in management information systems. Based in Algiers, SDG was born from the desire to support Algerian public and private companies in their digital transformation by providing them with qualified local skills and world-class technologies. In just a few years, SDG Group has established itself as a major player in the integration of ERP solutions in Algeria, particularly in the energy, industry, utilities, and telecommunications sectors.

2-4 Vision :

To be a national and regional leader in information systems consulting recognized for its operational excellence, commitment to customer success, and contribution to the sustainable digital development of organizations.

2-5 Mission :

To support companies in the digitalization of their business processes through innovative, reliable, and high-performance ERP and IT solutions, while ensuring skills transfer, customer proximity, and agility in project management.

2-6 Organizational Structure :

SDG Group is organized around functional and technical expertise centers, enabling an integrated and responsive approach to each client project:

1. General Management: Oversees corporate strategy and business development.

2. ERP – SAP & Oracle Center: Responsible for implementing SAP ECC, SAP S/4HANA, Oracle EBS, and Oracle Fusion solutions. Includes functional (FI/CO, MM, SD, PM, HCM) and technical (ABAP, Basis, Fiori) teams.
3. Business Intelligence & Data Center: Specializes in reporting, visualization, and analytics tools (Power BI, SAP BO, Oracle BI).
4. HR & Payroll Solutions Center: Dedicated to human resources and payroll management solutions: SAP HCM, Success Factors, and local tools.
5. Development & Integration Department: Development of specific solutions, middleware, connectors, and web portals integrated with ERPs.
6. Support & TMA (Third-Party Application Maintenance) Department: Ensures the scalable and corrective maintenance of information systems already in production.
7. Human Resources Department: Manages the recruitment, ongoing training, and skills development of consultants.

2-7 Visual identity :



The logo of the SDG group

2-8 Client Presentation :

As part of the digital transformation of its subsidiaries, Sonatrach, Algeria's national hydrocarbons company has undertaken a major program to modernize its information systems. Among its strategic subsidiaries is Helios, a joint venture created between Sonatrach and Air Liquide, a joint-stock company incorporated under Algerian law. It was created in April 1991, following the signing of a Memorandum of Understanding in July 1990 between SONATRACH (Algeria), AIR LIQUIDE (France), and AIR PRODUCTS AND CHEMICALS (United States). It is currently 51% owned by SONATRACH and 49%

by HELAP Sa, a French company wholly owned by AIR PRODUCTS. In 2016, Air Liquide separated from its partner Air Products, which bought out its shares and became a 100% shareholder of HELAP. The company's project was launched in 1992 and began operations in 1995. We produced the first drop of helium in March 1995 and also shipped helium to the European market in 1995.

Helios specializes in the production and marketing of industrial gases derived from natural gas processing, such as helium, nitrogen, and other rare gases. It operates state-of-the-art facilities located in western Algeria, in close collaboration with Sonatrach's production units.

2-9 Role of SDG in the Helios project :

As part of the SAP S/4HANA project for Helios, SDG Group acted as the lead integrator. Its mission covered:

- Functional scoping and definition of business needs.
- Configuration of SAP modules (Finance, Logistics, Maintenance, HR, etc.).
- Development of specific interfaces and customized reports.
- Change management and user training.
- Start-up assistance and post-go-live support.

Thanks to a rigorous approach, proven methodology, and close collaboration with the Helios teams, SDG Group enabled the success of this strategic digital transformation

2-10 Project Overview :

To improve the performance of its operational management, strengthen the reliability of its business processes, and comply with international standards, Helios decided to implement a next-generation ERP solution: SAP S/4HANA. The primary objective of this implementation project was to migrate to SAP S/4HANA to centralize and automate key management processes, particularly in the areas of finance, logistics, purchasing, maintenance, and human resources. The approach adopted was based on industry best practices (SAP Best Practices) to enable a rapid, structured implementation that complied with the regulatory and operational requirements of the gas industry.

The project was carried out using an agile methodology in several phases: scoping, design, implementation, testing, training, and go-live.

It mobilized a multidisciplinary team composed of functional and technical consultants, as well as Helios business managers, in a collaborative approach aimed at gradually ensuring end users adopt the solution.

This implementation represents a key step in Helios' strategic alignment with the Sonatrach Group's digital objectives, laying the foundations for an integrated, scalable, and performance-oriented information system.

CHAPTER IV :

RESULTS AND DISCUSSIONS

Section 01 : Results

The qualitative study conducted among the project stakeholders enabled us to identify a set of elements, which can lead to value co-destruction in the ERP implementation process. These elements were subsequently categorized and analyzed to better understand the emergence of value co-destruction in this type of projects.

1-1 Round 1 results

The first round of the questionnaire includes the different implementation phases along with the corresponding value co-destructing propositions formulated for each phase. These propositions were evaluated by members of the ERP implementation team and client team, who responded using a Likert scale ranging from, 5 (strongly agree) to 1 (strongly disagree). The collected responses were then used to calculate key statistical indicators for each proposition, including the weight, the median and the median absolute deviation MAD (EAM) in order to assess the level of consensus among respondents regarding the relevance and effectiveness of each proposition during the implementation process.

The following table represent the results obtained in the first round of the study, in addition to the calculated weight, median and the median absolute deviation MAD for each proposition.

The implementation team :

Table 11 : implementation phases and corresponding value co- destructing propositions for the implementation – Round 1

Respondents	Propositions	01	02	03	04	05	06	The weight	The median	EAM
Envisison	The clients have false expectations	5	5	5	5	5	5	5	5	0
	Unforeseen client exploitation incident	4	4	4	5	4	4	4.16	4	0.16
	Client demands unpaid work	5	5	5	4	5	5	4.83	5	0.16

	Absence of users involvement	5	5	4	5	5	5	4.83	5	0.16
Iterate	Client team members have different priorities	5	4	4	5	5	4	4.5	4.5	0.5
	Mistrust between client team members	4	4	4	4	4	5	4.16	4	0.16
	Client prioritizes competition over effectiveness	4	5	5	4	4	4	4.33	4	0.33
	Shortage of users feedback	5	5	5	5	5	5	5	5	0
Decide	Inefficient resource allocation regarding the chosen project	5	5	4	4	4	4	4.33	4	0.33
	inadequate communication between stakeholders, when selecting the ERP solution	4	4	5	5	5	5	4.66	5	0.33
	unavailability of client review in iterative testing	4	4	4	4	4	4	4	4	0
	Absence of feedback in post-implementation evaluation	5	5	5	5	5	5	5	5	0
	Non-existence of continuous improvement based on users assesement	4	5	4	4	4	4	4.16	4	0.16

Source : developed by ourselves based on survey data

The table above presents the four main stages of the agile ERP implementation process. The following analysis focuses on examining each step in detail:

The weight was calculated to highlight the most important item form each stage.

- **The first stage : Envision**

In terms of its relative weight , the first proposition “The clients have false expectations” emerged as the most important (weight = 5) according to the ERP implementation team , which means that the whole implementation team agrees that when the client has false expectations , it will affect the project and can cause value co-destruction between the implementation team and the client .

Followed by both the third and fourth proposition “Client demands unpaid work” and “Absence of user’s involvement”. According to the calculated weight (weight= 4, 83) the majority 5/6 of the implementation team agrees that when the client demands unpaid work it is likely going to cause value co-destruction. Moreover, the absence of user’s involvement, and by extension; the lack of value co-creation between the implementation team and the client, substantially heightens the risk of value co-destruction.

Lastly, the second proposition “Unforeseen client exploitation incident” has the least important weight, which still holds a high assigned weight (weight= 4, 16) since the answers of the implementation team are mostly “agree”. The weight of the last proposition explains that also when the client takes unfair advantage of the service provider or situation, this can cause value co-destruction and affect the ERP implementation process negatively.

- **The second stage : Iterate**

Regarding the calculated weight of the propositions, the last proposition “Shortage of users feedback” is the important one (weight = 5) according to the ERP implementation team, demonstrating that the absence of the value co-creation process leads to value co-destruction.

Furthermore, the second proposition “Client team members have different priorities” is the second most important one (weight = 4, 5), thereby indicating that when the client team members have different priorities, it can affect the work of the implementation team and can also lead to value co-destruction between both parties.

The third proposition “Client prioritizes competition over effectiveness” ranks third in importance, but is still important (weight = 4, 33) since the implementation team mostly agrees that when the client prioritizes competition over what is suitable for their business, the result can cause value co-destruction.

The second proposition “Mistrust between client team members” is the least important one however; most of the implementation team agree that when mistrust between client team members occurs, this can lead to value co-destruction between the implementation team and client team.

- **The third stage : Decide**

The second proposition “inadequate communication between stakeholders, when selecting the ERP solution” is the most important one (weight = 4, 66), which implies that the stakeholders do not communicate efficiently when selecting the ERP solution for them; this can lead latter to value co-destruction since it can cause conflicts between both parties.

The first proposition “Inefficient resource allocation regarding the chosen project” ranks second in importance according to the implementation team, which means that the inefficient allocation of resources can cause value co-destruction.

The third proposition “unavailability of client review in iterative testing” is the least important one with significant weight (weight= 4), meaning that the absence of value co-creation in the implementation process leads to value co-destruction.

- **The last stage :**

The first proposition “Absence of feedback in post-implementation evaluation” is the most important proposition, indicating that the absence of the co-creation process step represented by post- implementation evaluation is an important phase and should be done after each ERP implementation project, and the opposite of this leads definitely to value co-destruction. This is also confirmed via the last proposition “Non-existence of continuous improvement based on users assessment” which represents the last step of the co-creation ERP implementation process, given that it is an important proposition (weight 4, 16) and most of the implementation experts strongly agree that the absence of this step leads to value co-destruction.

The client team :

The table below represents the results of the first round of the study, in addition to the calculated weight, median and the median absolute deviation MAD for each proposition.

Table 12 : Implementation phases and corresponding value co- destructing propositions for the client team- Round1

Respondents Client team	Propositions	01	02	03	04	05	06	The weight	The median	EAM
Envision	Team prioritizing their own benefits	5	4	4	5	4	5	4.5	4.5	0.5
	Misrepresented costs	4	5	5	4	5	4	4.5	4.5	0.5
	Misstated timelines	5	5	4	5	5	5	4.83	5	0.16
	Absence of users involvement	5	4	5	5	4	4	4.5	4.5	0.5
Iterate	the lack of knowledge exchange	5	5	5	5	5	5	5	5	0
	Mistrust between the team members	4	4	4	4	4	4	4	4	0
	Implementation delays	5	5	4	5	5	5	4.83	5	0.16
	feedback defensiveness.	4	4	5	4	4	4	4.16	4	0.16
	Excluding users in selection.	5	5	5	5	5	5	5	5	0
Decide	Implementation team opts for an inappropriate ERP solution.	4	5	5	5	5	5	4.83	5	0.16
	Inadequate communication between stakeholders.	5	4	4	4	4	4	4.16	4	0.16
	Non-existence of iterative testing	4	4	4	4	4	4	4	4	0
	Implementation team ignores client review	5	4	5	5	5	5	4.83	5	0.16
	Exclusion of post-implementation evaluation	5	5	5	5	5	5	5	5	0
	Deficiency of continuous improvement based on users assessment	4	4	4	4	4	4	4	4	0

The table above presents the four main stages of the agile ERP implementation process, the following analysis focuses on examining each step in detail

The weight was calculated to highlight the most important item form each stage.

- **The first stage : Envision**

Regarding the weight of the propositions, the third proposition “Misstated timelines” is the most important proposition (weight =4.83) ,This indicates that the client team agrees that

inaccurate scheduling negatively affects the projects and contributes to mutual co-destruction value between the client and the implementation team.

the first, second and fourth propositions, “Team prioritizing their own benefits”, “Misrepresented costs” and “Absence of users involvement ”, according to their calculated weight (weight= 4.5), similarly rank second in importance. Which means that when the implementation team prioritizes its own benefits and gives them priority, it can lead to co-destruction of value, and the lack of user involvement and also distorted costs are likely to cause co-destruction value as well.

- **The second stage : Iterate**

In terms of the calculated weight of the proposition, the first proposition “the lack of knowledge exchange” and the last one “Excluding users in selection.” are the most important (weight = 5) according to the customer team. This implies that a lack of knowledge sharing between customers and the implementation team and also excluding users from choice leads to co-destruction value.

According to its calculated weight (weight= 4, 83) the third proposition, “Implementation delays”, is highly likely to cause co-destruction value.

Then comes the fourth proposition of “feedback defensiveness.” which is considered a rather important suggestion (weight= 4.16), as the client team sees the defensive reaction of the implementation team, among the main reasons of value co-destruction.

The second proposition, “Mistrust between the team members,” is less important but still significant (weight = 4), as the customer team sees a lack of trust among team members as a cause of joint value destruction.

- **The third stage : Decide**

The first and fourth propositions “Implementation team opts for an inappropriate ERP solution.”, and “Implementation team ignores client review”, are the most important (weight= 4.83). Meaning that when the implementation team chooses the wrong ERP solution, and also ignores customer review, they are likely to lead to joint co-destruction of value.

The second proposition, “Inadequate communication between stakeholders” with a weight of (weight= 4.16), is the third most important suggestion, as the customer team considers that difficulty and insufficient communication between customers also leads to co-destruction of value.

Finally, the third proposition “non-existence of iterative testing”, with a weight of (weight=4), is the third most important suggestion, as the customer team believes that the absence of iterative testing can lead to co-destruction value.

- **The last stage :**

The first proposition “exclusion of post-implementation evaluation”, is the most important proposition. Meaning that the absence of post implementation evaluation as a step of the co-creation process is an important phase and should be done after each ERP implementation project, and the opposite of this leads definitely to value co-destruction. This is also confirmed via the last proposition “deficiency of continuous improvement based on users assessment” which represents the last step of the co-creation ERP implementation process , due to the fact that it is an important proposition (weight= 4). Most experts strongly agree that the absence of this step leads to the destruction of shared value.

In addition to the initial set of propositions, ERP implementation experts and client experts introduced new practices for each of the four-implementation stages. These newly proposed practices were incorporated into a second round of data collection. During this second phase, participants not only assessed the newly introduced propositions but also re-evaluated the original propositions from the first round, thereby enabling a comparative and comprehensive evaluation of value co-destruction dynamics across the ERP implementation lifecycle.

Table 13 : ERP implementation team propositions

The implementation phase	The team propositions
Envision	• Poor definition of the project scope • Frequent changes in direction by the client without consulting experts • Unrealistic expectations regarding implementation timelines • Inconsistency between business needs and ERP capabilities
Iterate	• Lack of real-world testing before deployment • Frequent changes in requirements without validating previous stages • Insufficient testing before going live in production • Poor management of patches and updates • Lack of alignment between the company's strategy and the ERP functionalities
Decide	• Lack of a structured steering committee • Underestimation of post-deployment maintenance needs

	• Underestimation of the time required for full ERP adoption
	• Lack of clear KPIs to measure project success • Resistance to change and low adoption of the ERP system by internal teams • Training perceived as a burden rather than an investment

Source : ERP implementation team

Table 14 : clients team propositions

The implementation phase	The team propositions
Envision	• Poor planning of IT resources needed for the ERP • Lack of synchronization between IT teams and business teams • Poor anticipation of hidden costs for ERP maintenance and evolution • Regulatory compliance issues poorly accounted for during implementation
Iterate	• Conflicts of interest among stakeholders • Lack of documentation on the validation processes for project phases • Lack of training sessions tailored to employees' needs • Poor adaptation of the ERP to field requirements
Decide	• Lack of system adaptability to HR-specific needs • Insufficient performance evaluation tools integrated into the ERP • Lack of in-depth analysis of specific digital needs before choosing the solution • Difficulty aligning the ERP with digital market trends
	• Low responsiveness of support teams to incidents encountered after deployment • Lack of feedback mechanisms to optimize the system after its launch • Weak integration of feedback from operational teams into updates • Workflow optimization issues post-deployment

Source : client team

Certain propositions provided by both the clients team and implementation team were eliminated from further consideration for two main reasons. Firstly, several propositions were found to be redundant, having occurred multiple times in the expert's responses. Secondly, they were not related enough to the focus of the study, as they did not align with the core objectives of the study. The decision of eliminating these propositions reflects an effort to streamline the analysis, maintain focus on pertinent contributions, and ensure the integrity and coherence of the overall evaluation process.

Some of the eliminated propositions of the client team are as follow:

- low participation of HR teams in the design of dedicated modules
- poor prioritization in optimizing logistics flows
- Poor estimation of task automation needs
- Lack of automatic optimization for delivery routes

Some of the eliminated propositions of the implementation team are as follow:

- Poor understanding of business challenges by the technical team
- Lack of user training
- Lack of a dedicated validation committee
- Resistance to change from users
- Lack of technical support after implementation

1-2 Round 2 results

The following tables represents the results of the second round of questionnaires, conducted with the same implementation and client teams. It includes the updated responses for each proposition, along with the recalculated weight, median and median absolute deviation, allowing for comparison with the initial round to observe any changes or trends in the team's evaluations.

Table 15 : implementation phases and value co-destructing propositions for the implementation team –Round 2

Respondents Implementation phases	Propositions	1	2	3	4	5	6	The weight	The median	EAM
Envisison	The clients have false expectations	5	5	4	4	5	5	4.66	5	0.33
	Unforeseen client exploitation incident	4	4	5	5	4	4	4.33	4	0.33
	Client demands unpaid work	4	4	4	3	4	4	3.83	4	0.16
	Absence of users involvement	5	5	4	4	5	5	4.66	5	0.33
	Client team members have different priorities	4	5	4	4	4	5	4.33	4	0.33

Iterate	Mistrust between client team members	4	4	3	3	4	4	3.66	4	0.33
	Client prioritizes competition over effectiveness	3	4	3	3	3	4	3.33	3	0.33
	Shortage of users feedback	4	4	4	4	5	5	4.33	4	0.33
Decide	Inefficient resource allocation regarding the chosen project	4	4	4	4	4	4	4	4	0
	inadequate communication between stakeholders, when selecting the ERP solution	5	5	4	4	4	5	4.5	4.5	0.5
	unavailability of client review in iterative testing	4	4	4	4	4	4	4	4	0
	Absence of feedback in post-implementation evaluation	4	4	4	4	5	5	4.33	4	0.33
	Non-existence of continuous improvement based on users assessment	4	5	4	4	5	5	4.5	4.5	0.5

Source : developed by ourselves based on survey data

The table above illustrates the four stages of the agile ERP implementation process; the propositions of each stage are organized based on their importance as determined by the implementation team.

- **The first stage : Envision**

According to the team, the proposition “The clients have false expectations” is still always the most important one (weight = 4, 66). What differentiates the first round from the second is that the proposition of the second round “Absence of user’s involvement” is as important as the first proposition, contrary to the first round when the “Absence of user’s involvement” proposition was second in place of importance.

The proposition “Unforeseen client exploitation incident” ranks third in importance contrary to the first round when it was the least important proposition.

Lastly, the least important proposition in this second round is “Client demands unpaid work” with a quite low weight (weight= 3, 83) compared to the first round when it was (weight= 4.83).

The analysis of the first stage of the table reveals that while some experts maintained consistent responses across both rounds, others adjusted their answers. This variation indicates a potential shift in perspectives or a re-evaluation of their initial positions, possibly influenced by additional reflection, discussion, or new insights gained between the rounds.

- **The second stage : Iterate**

According to the team’s answers, the first and last proposition “Client team members have different priorities” and “Shortage of users feedback”, rank first in importance with a weight of (weight= 4, 33). Indicating that some of the experts changed their mind from ranking the proposition “Shortage of user’s feedback” as the least important in this stage, to ranking it as the most important which makes it as important as the first proposition.

Furthermore, the second proposition “Mistrust between client team members” still ranks second in importance meaning that the experts did not significantly change their responses, although they leaned more to the “neutral” answer.

Lastly, the third proposition “Client prioritizes competition over effectiveness” ranks third and last in importance, signifies a slight variation in experts answers but still approximately the same.

In the second stage, a slight shift in responses was observed, with some experts opting for the neutral position on the Likert scale, an option that was not selected during the first round. This subtle change suggests a possible hesitation or reconsideration, yet the overall responses remained approximately the same. The emergence of the neutral choice may reflect a nuanced adjustment rather than a significant change in perspective, indicating relative consistency in expert’s opinions across both rounds.

- **The third stage : Decide**

According to the team, the second proposition “inadequate communication between stakeholders, when selecting the ERP solution” is the most important proposition. While both the first and last propositions “Inefficient resource allocation regarding the chosen project” and “unavailability of client review in iterative testing” rank second in importance

(weight = 4). This reveals a slight change in experts answers which is not necessarily considerable.

The findings of the third stage revealed that, the responses remained approximately the same across both rounds. This consistency suggests a stable level of agreement and reinforces the reliability of their initial evaluations, indicating that no significant change in perspective occurred between the two rounds.

- **The last stage :**

The responses of the team concerning the two propositions of the last stage, “Absence of feedback in post-implementation evaluation” and “Non-existence of continuous improvement based on user’s assessment” are still approximately the same with a slight change in weight. Since the answers regarding the first proposition were all 5 (strongly agree) in the first round, then leaned more towards 4 (agree) in the second round. While the answers regarding the second proposition showed minimal variation.

Table 16 : implementation phases and value co-destructing propositions for the client team
–Round 2

Implementation phases	Propositions	01	02	03	04	05	06	The weight	The median	EAM
Envisison	Team prioritizing their own benefits	4	3	4	4	2	4	3,5	4	0,5
	Misrepresented costs	4	5	4	5	4	5	4,5	4,5	0,5
	Misstated timelines	5	4	4	5	3	4	4,16	4	0,5
	Absence of users involvement	5	4	5	4	4	5	4,5	4,5	0,5
Iterate	the lack of knowledge exchange	5	4	4	4	5	5	4,5	4,5	0,5
	Mistrust between the team members	4	4	4	4	3	4	3,83	4	0,16
	Implementation delays	5	4	4	5	4	4	4,33	4	0,33

	feedback defensiveness.	4	4	4	4	4	4	4	4	0
	Excluding users in selection.	4	3	4	4	4	4	3,83	4	0,16
Decide	Implementation team opts for an inappropriate ERP solution.	4	4	4	4	4	4	4	4	0
	Inadequate communication between stakeholders.	4	4	4	4	5	4	4,16	4	0,16
	nonexistence of iterative testing	4	4	4	4	4	4	4	4	0
	Implementation team ignores client review	4	4	4	4	4	4	4	4	0
	exclusion of post-implementation evaluation	4	4	4	4	4	4	4	4	0
	deficiency of continuous improvement based on users assesment	4	4	4	4	4	4	4	4	0

Source : developed by ourselves based on survey data

This table represents the four stages of the agile ERP implementation process; the propositions of each stage are organized based on their importance as determined by the client team.

- **The first stage : Envision**

According to the team, assumptions " Misrepresented costs" and "Absence of users involvement" are the most important (weight = 4.5), while in the first round they were less important.

Assumption "Misstated timelines» ranked second in importance, unlike in the first round, where it was the most important.

Finally, the least important assumption in this second round is "Team prioritizing their own benefits ", with a relatively low weight (weight= 3.5) compared to the first round, when it was (weight= 4.5).

An analysis of the first stage of the table reveals that while some experts maintained their answers consistent across the two rounds, others modified their answers. This variation suggests a possible shift in perspectives or a reassessment of their initial positions, perhaps influenced by additional reflections, discussions, or new insights gained between the two rounds.

- **The second stage : Iterate**

According to the team, the proposition "the lack of knowledge exchange" remains consistently the most important (weight = 4.5), but they have changed their opinion about proposition "Excluding users in selection", which they considered less important, along with proposition "Mistrust between the team" compared to the other propositions at this stage. Furthermore, the second proposition "Implementation delays" remains ranked second in importance, indicating that the experts' responses remained largely unchanged.

Finally, the fourth proposition "feedback defensiveness" ranked third in importance, unlike in the first stage, which was ranked last, indicating that there was a revision of the experts' answers, but they were still close together.

In the second stage, a slight shift in responses was observed, with some experts choosing the neutral position on the Likert scale an option not chosen during the first round. This slight change suggests the possibility of hesitation or reconsideration, but the overall responses remained roughly the same. The emergence of the neutral option may reflect a subtle adjustment rather than a fundamental change in perspective, indicating relative consistency in the experts' opinions across the two rounds.

- **The third stage : Decide**

According to the team, the second proposition, «Inadequate communication between stakeholders", is the most important. While the first and last propositions "Implementation team opts for an inappropriate ERP solution" and "Implementation team ignores client review", ranked second in importance (weight = 4), unlike the first stage, where they were the most important. This reveals a change as the experts revise their answers and priorities. The third proposition "nonexistence of iterative testing" remained unchanged, receiving a weight of (weight= 4).

In this third stage, some answers remained similar in both rounds, with some priorities differing, indicating a shift in the experts' priorities.

- **The last stage :**

The responses of the team concerning the two propositions of the last stage , “exclusion of post-implementation evaluation” and “deficiency of continuous improvement based on users assessment”, are still close with a slight change in weight, with all responses to the first proposal being 5 (strongly agree) in the first round, then leaning towards 4 (agree) in the second round.

Teams propositions

The tables below represent the proposed value co-destructing actions from both the implementation and client teams. Along with the calculated weight, median and median absolute deviation for each proposition of each implementation phase.

Table 17 : Implementation phases and implementation team-formulated value co-destructing propositions –Round 1

Respondents Implementation phases	Team propositions	1	2	3	4	5	6	The weight	The median	EAM
Envisison	Poor definition of the project scope	5	5	4	4	4	5	4.5	4.5	0.5
	Frequent changes in direction by the client without consulting experts	4	5	4	4	4	4	4.16	4	0.16
	Unrealistic expectations regarding implementation timelines	5	5	4	4	5	5	4.66	5	0.33
	Inconsistency between business needs and ERP capabilities	5	5	4	4	5	5	4.66	5	0.33
Iterate	Lack of real-world testing before deployment	5	5	5	5	4	4	4.66	5	0.33
	Frequent changes in	5	5	4	4	4	4	4.33	4	0.33

	requirements without validating previous stages									
	Insufficient testing before going live in production	4	4	5	5	4	4	4.33	4	0.33
	Poor management of patches and updates	4	4	5	5	4	4	4.33	4	0.33
	Lack of alignment between the company's strategy and the ERP functionalities	5	5	4	4	4	5	4.5	4.5	0.5
Decide	Lack of a structured steering committee	5	5	4	4	4	4	4.33	4	0.33
	Underestimation of post-deployment maintenance needs	4	4	5	5	5	4	4.5	4.5	0.5
	Underestimation of the time required for full ERP adoption	4	4	4	4	5	5	4.33	4	0.33
	Lack of clear KPIs to measure project success	4	4	4	4	4	4	4	4	0
	Resistance to change and low adoption of the ERP system by internal teams	4	5	4	4	5	5	4.5	4.5	0.5
	Training perceived as a burden rather than an investment	3	4	3	3	2	3	3	3	0.33

Source : ERP implementation team propositions; statistical analysis by ourselves

As mentioned in the table, the new propositions of the ERP implementation team were added in the second round of the questionnaire. After that, they were evaluated by the team as they re-evaluated the previous propositions. The weight is calculated to help evaluate their answers about their own propositions.

- **The first stage : Envision**

In this first stage, the third and fourth propositions “Unrealistic expectations regarding implementation timelines” and “Inconsistency between business needs and ERP capabilities” are the most important ones with the highest weight (weight= 4, 66). Reflecting the general agreement of the experts, this explains that the proposed practices lead to value co-destruction in the ERP implementation process.

Followed by the second proposition “Poor definition of the project scope” which ranks second in importance (weight = 4, 5).

Lastly, the least important proposition is the second one “Frequent changes in direction by the client without consulting experts” with the lowest weight (weight= 4, 16). While still an important proposition, regarding the agreement of the experts.

- **The second stage : Iterate**

According to the experts answers and the calculated weight, the first proposition “Lack of real-world testing before deployment” is the most important one (weight = 4, 66).

Followed by the last proposition of this stage “Lack of alignment between the company's strategy and the ERP functionalities” which ranks second in importance (weight = 4, 5).

Furthermore, the propositions “Frequent changes in requirements without validating previous stages”; “Insufficient testing before going live in production” and “Poor management of patches and updates” are similar in importance, while still carrying a significantly high weight (weight= 4, 33).

- **The third stage : Decide**

The most important proposition of this stage, regarding its weight (weight= 4, 5) is the second proposition “Underestimation of post-deployment maintenance needs”.

Followed by both the first and last propositions “Lack of a structured steering committee” and “Underestimation of the time required for full ERP adoption” with a similar weight (weight= 4, 33).

- **The last stage :**

In this last stage, the second proposition “Resistance to change and low adoption of the ERP system by internal teams” is the most important one with a high weight (weight= 4, 5).

Followed by the first proposition “Lack of clear KPIs to measure project success” ranking second in importance (weight = 4).

Lastly, the least important proposition is the last one “Training perceived as a burden rather than an investment” with a significantly low weight (weight= 3), compared to the other answers. That is due to the variety of answers regarding this proposition, which vary from 2 (disagree) an option that was not often chosen, to 4 (agree). Meaning the variation of opinions concerning this proposition.

Table 18 : Implementation phases and client team-formulated value co-destructing propositions –Round1

Respondents Implementation phases	Team propositions	01	02	03	04	05	06	The weight	The median	EAM
Envisison	Poor planning of IT resources needed for the ERP	5	4	4	4	4	5	4,33	4	0,33
	Lack of synchronization between IT teams and business teams	4	4	4	4	4	5	4,16	4	0,16
	Poor anticipation of hidden costs for ERP maintenance and evolution	4	5	4	4	4	4	4,16	4	0,16
	Regulatory compliance issues poorly accounted for during implementation	5	4	4	4	4	5	4,33	4	0,33
Iterate	Conflicts of interest among stakeholders	4	4	3	4	4	4	3,83	4	0,16
	Lack of documentation on the validation processes for project phases	4	4	4	4	4	4	4	4	0
	Lack of training sessions tailored to employees' needs	5	4	5	4	5	5	4,6	5	0,33

	Poor adaptation of the ERP to field requirements	4	4	4	4	4	4	4	4	0
Decide	Lack of system adaptability to HR-specific needs	4	4	5	3	5	4	4,16	4	0,5
	Insufficient performance evaluation tools integrated into the ERP	4	4	4	4	5	4	4,16	4	0,16
	Lack of in-depth analysis of specific digital needs before choosing the solution	4	4	4	4	4	4	4	4	0
	Difficulty aligning the ERP with digital market trends	4	3	4	3	4	4	3.66	4	0.33
	Low responsiveness of support teams to incidents encountered after deployment	4	4	4	4	4	4	4	4	0
	Lack of feedback mechanisms to optimize the system after its launch	4	4	4	4	4	4	4	4	0
	Weak integration of feedback from operational teams into updates	4	4	4	4	4	4	4	4	0
	Workflow optimization issues post-deployment	4	4	4	4	4	4	4	4	0

Source : clients' team propositions; statistical analysis by ourselves

As mentioned in the table, the new propositions of the client team were added in the second round of the questionnaire. After that, they were evaluated by the team as they re-evaluated the previous propositions. The weight is calculated to help evaluate their answers about their own propositions.

- **The first stage : Envision**

In this first stage, the first and fourth propositions “Poor planning of IT resources needed for the ERP ” and “Regulatory compliance issues poorly accounted for during implementation” are the most important ones with the highest weight (weight= 4,33).

Reflecting the general agreement of the experts, this explains that the proposed practices lead to value co-destruction in the ERP implementation process.

Followed by the second and third propositions “Lack of synchronization between IT teams and business teams” and “Poor anticipation of hidden costs for ERP maintenance and evolution” which ranks second in importance (weight = 4, 16).

- **The second stage : Iterate**

According to its weight (weight= 4,66), the proposition " Lack of training sessions tailored to employees' needs" is the most important, highlighting the experts' agreement on the importance of conducting training sessions tailored to employee needs.

The remaining propositions in the second phase, “Lack of documentation on the validation processes for project phases” and “Poor adaptation of the ERP to field requirements” are similar in weight (weight= 4), showing that all experts attribute a moderate degree of importance to them.

The proposition “Conflicts of interest among stakeholders” is the least important of all the suggestions.

- **The third stage : Decide**

At this stage, the propositions “Lack of system adaptability to HR-specific needs” and “Insufficient performance evaluation tools integrated into the ERP” are very similar in importance (weight= 4, 16). This indicates general agreement on their importance among experts.

Secondly, the third proposal “Lack of in-depth analysis of specific digital needs before choosing the solution” with a significant weight (weight= 4).

Finally, the propositionn “Difficulty aligning the ERP with digital market trends” is the least important (weight = 3, 66).

- **The last stage :**

At this stage, the experts took a different view, considering all proposals “Low responsiveness of support teams to incidents encountered after deployment” and “Lack of feedback mechanisms to optimize the system after its launch”, “Weak integration of feedback from operational teams into updates” and “Workflow optimization issues post-deployment” to be of equal importance, without noting any significant differences between them.

1-3 Round 3 results

Table 19 : Kendall's Tau-B correlation between round 1 and round 2 for the implementation team

Correlations			Tour2	Tour1
Tau-B de Kendall	Tour2	Coefficient de corrélation	1,000	,132
		Sig. (bilatéral)	.	,603
		N	13	13
	Tour1	Coefficient de corrélation	,132	1,000
		Sig. (bilatéral)	,603	.
		N	13	13

Source: SPSS software

According to the SPSS result table and regarding the Schmidt scale, the coefficient of 0,132 indicates a very low level of consensus between the two rounds.

Moreover, the p-value (0,603) is greater than 0,05, revealing that the correlation is not statistically significant. Therefore, there is no real convergence of opinions or responses between the two rounds.

Table 20: Kendall's Tau-B correlation between round 1 and round 2 for the client team

Corrélations			tour2	tour1
Tau-B de Kendall	tour2	Coefficient de corrélation	1,000	,430
		Sig. (bilatérale)	.	,069
		N	58	15
	tour1	Coefficient de corrélation	,430	1,000
		Sig. (bilatérale)	,069	.
		N	15	15

Source : SPSS software

According to the SPSS results table and Schmidt's scale, a correlation coefficient of 0.430 indicates a low level of agreement between the two rounds. Furthermore, the p-value (0.069) is less than 0.05, meaning that the correlation is statistically significant. Thus, there is a true convergence of opinions or responses between the two rounds.

Outcomes :

As a result of the research, we observed that there are a set of practices primarily driven by the client that harm the implementation team. At the same time, other practices primarily driven by the implementation team also harm the client, and cause dissatisfaction. While there are some shared practices driven by both the implementation team and the client team, they lead to value co-destruction.

The following table represents the practices that are only driven by either the client or the implementation team, in addition to the value co-destructing practices driven by both parties in each phase of the ERP implementation process.

Table 21 : value co-destructing practices in each phase of the ERP implementation process

Phases	Implementation team	Client team	Both teams
envision	- The clients have false expectations - Unforeseen client exploitation incident - Client demands unpaid work	- Team prioritizing their own benefits - Misrepresented costs - Misstated timelines	Absence of users involvement
iterate	- Client team members have different priorities - Client prioritizes competition over effectiveness - Shortage of users feedback	- the lack of knowledge exchange - Implementation delays - feedback defensiveness - Excluding users in selection	Mistrust between the team members
decide	- Inefficient resource allocation regarding the chosen project - unavailability of client review in iterative testing	- Implementation team opts for an inappropriate ERP solution - nonexistence of iterative testing - Implementation team ignores client review	Inadequate communication between stakeholders
			- Absence of feedback in post-implementation evaluation - Non-existence of continuous improvement based on users assessment

Source : developed by ourselves

The analysis reveals that certain practices, when driven jointly by both the client and the implementation teams, tend to result in value co-destruction rather than value co-creation. For example, inadequate communication such as unclear instructions, inconsistent updates,

or assumptions made without verification that can lead to misunderstandings and conflicts. In addition, the feedback in post-implementation evaluation is an important step of the ERP implementation co-creation process, and its absence causes value co-destruction. These findings highlight the importance of mutual agreement and understanding between the teams to prevent value co-destruction, and the significance of the value co-creation in ERP implementation process.

Section 02 : Discussions

The findings of the SAP S/4HANA project for Helios are based on a study conducted over two rounds of questionnaires, engaging a total of twelve experts. This panel comprised six representatives from the implementation team and six from the client team, ensuring a balanced perspective on the evaluation process.

A key insight from this study lies in the identification of value co-destruction practices that were uniquely reported by either the client or the implementation team. These divergent perceptions reveal important blind spots and suggest that certain harmful dynamics may go unnoticed or unaddressed in ERP implementation projects due to differing perspectives or priorities. For example, the implementation team specifically highlighted internally driven challenges such as "The clients have false expectations", "unforeseen client exploitation incident", and "Client demands unpaid work", which reflect organizational dysfunctions that may hinder project success but are not perceived as critical by the client side. These are confirmed by the literature. As, ([Sahaym, Vithayathil, Sarker, Sarker, & Bjorn-Andersen, Value Destruction in Information Technology Ecosystems: A Mixed-Method Investigation with Interpretive Case Study and Analytical Modeling, 2023](#)) suggest that opportunism, evasion, exploitation of unequal power, and unjustified dependence can trigger the value destruction process. In addition, according to ([Ogunbodede & Olabode, 2022](#)) co-destruction can also occur in practice, when the beneficiary's expectations exceed the service level provided by the provider. Conversely, the client team identified practices such as "lack of knowledge exchange», «implementation team opts for an inappropriate ERP solution», and «implementation delays», indicating potential shortcomings in collaboration processes and user-centered design approaches that were not mirrored in the implementation team dataset. These results align with the theoretical framework by ([Plé & Caceres, 2010](#)) who affirmed that value co-destruction also occurs when a service system misuses its own resources and/or

those of another service system, either intentionally or unintentionally, by acting in an inappropriate or unexpected manner. These variations suggest that while both parties experience value co-destruction, they often attribute it to different causes and may fail to recognize how their own behaviors contribute to the other's difficulties.

Furthermore, Common value co-destruction practices were identified across both client and implementation team perspectives, revealing systemic challenges that affect ERP implementation outcomes. These include communication breakdowns, insufficient user involvement, misaligned expectations, behavioral tensions, and a lack of post-implementation learning. These ongoing problems reveal fundamental flaws in collaboration and process management that affect ERP implementations broadly. The following discussion explores these shared practices in depth and in comparison to the theory, examining how these practices influence project outcomes and what they suggest for enhancing cooperation between stakeholders in ERP implementations.

Communication Breakdowns and Stakeholder Misalignment :

One of the most frequently reported sources of value co-destruction was inadequate communication between stakeholders. Both clients and implementation teams identified this as a significant challenge, particularly during the “Decide” stage. The findings align with prior studies such as (Amjad & Azhar, 2023), who argue that poor communication leads to misinterpretation of requirements, delays, and ultimately, dissatisfaction.

The mismatch in how each party perceives its role can also be attributed to weak communication structures. An example of this, clients often reported frustration over perceived cost or timeline misrepresentations by the implementation team, while the latter cited false expectations and exploitative behaviors from clients.

From a practical standpoint, this suggests that joint governance models, such as cross-functional steering committees could help mitigate communication failures. This aligns with the implementation teams' insight that “Lack of a structured steering committee” leads to value co-destruction.

User Involvement Gaps and Their Impact on Value Creation :

The absence or shortage of user involvement is a repetitive theme across both datasets throughout the ERP implementation. Users were frequently excluded from critical stages such as the “Envision” stage, and post-implementation evaluation. This absence significantly

increases the risk of implementing systems that do not align with actual business needs, leading to resistance, low adoption rates, and eventual value co-destruction as confirmed by [\(Ruivo, Oliveira, & Neto, 2014\)](#) and [\(Chau & Chan, 2002\)](#) who highlight the importance of user participation throughout the implementation process as a key determinant of system success. Furthermore, agile methodologies stress the necessity of continuous user feedback to refine solutions iteratively.

Misaligned Expectations and Scope Creep :

The implementation team often cited false expectations, unforeseen exploitation incidents, and demands for unpaid work coming from the client as major contributors to value co-destruction. While the client team pointed to misrepresented costs, misstated timelines, and prioritization of self-interest as problematic behaviors causing value co-destruction. These findings indicate mutual misunderstanding, as clients sometimes expect more than was agreed upon, while vendors occasionally understate the complexity in order to secure contracts.

The findings on misaligned expectations and scope creep reflect theoretical concepts such as unanticipated opportunism and governance issues, where both parties perceive exploitation and mistrust ([Sahaym, Vithayathil, Sarker, Sarker, & Bjørn-Andersen, Value destruction in information technology ecosystems: A mixed-method investigation with interpretive case study and analytical modeling, 2022](#)); ([Sarker, Sarker, Sahaym, & Bjørn-Andersen, Exploring value cocreation in relationships between an ERP vendor and its partners: A revelatory case study, 2012](#)). Client perceptions of cost and timeline misrepresentation, alongside vendor reports of false expectations ([Jarvi, Kahkonen, & Torvinen, When value co-creation fails: Reasons that lead to value co-destruction, 2018](#)) and unpaid demands, illustrate relational co-destruction, highlighting how poor communication and conflicting interests lead to mutual dissatisfaction ([Chau & Chan, 2002](#)).

Behavioral and Relational Issues :

Both clients and implementation teams reported relational challenges, including mistrust, internal poor coordination, and defensiveness toward feedback. These behavioral issues have been shown in prior literature to significantly hinder collaboration and innovation.

([Sarker, Sarker, Sahaym, & Bjørn-Andersen, Exploring value cocreation in relationships between an ERP vendor and its partners: A revelatory case study, 2012](#)) note that mistrust

between team members reduces willingness to share knowledge and collaborate effectively. Similarly, when implementation teams respond defensively to feedback, they miss opportunities to learn and improve.

The findings suggest that soft skills training, including conflict resolution, active listening, and feedback handling, should be integrated into ERP project planning. Additionally, fostering a psychologically safe environment where honest feedback is welcomed can help reduce defensiveness and promote constructive dialogue.

Absence of Post-Implementation Evaluation and Continuous Improvement :

Ultimately, both groups highlighted the lack of mechanisms for post-implementation review and continuous improvement based on user assessments, which are two crucial steps of the co-creation in ERP implementation ([Sultana, Shah, Sattar, & Khalid, 2018](#)). Despite their importance, these phases are often overlooked in ERP implementations, leading to stagnant systems that fail to evolve with organizational needs.

([Ruivo, Oliveira, & Neto, 2014](#)) argue that ongoing evaluation and adaptation are crucial for long-term system success. Without these mechanisms, organizations cannot identify areas for optimization, nor can they assess whether the implemented solution continues to meet strategic goals.

GENERAL CONCLUSION

This study aimed to understand and explore the dynamics of value co-creation and value destruction in Enterprise Resource Planning (ERP) implementations, with a particular focus on the role of Agile methodologies and collaborative practices between implementation teams and client organizations. Drawing on qualitative data collected through two rounds of questionnaires involving twelve experts, six per team, this research sheds light on how stakeholder interactions can enhance, improve, or undermine project outcomes.

The findings reveal that although Agile methodologies and value co-creation aim to improve collaboration, transparency, and iterative value creation, they can also unintentionally lead to value co-destruction when mismanaged, misguided, or misunderstood by one or both parties. This aligns with theoretical foundations such as the logic of service dominance (Plé & Caceres, 2010), which emphasizes the dual nature and duality of stakeholder interactions, where value is not only created but can also be destroyed through inappropriate actions. One of the key contributions of this research is the identification of key and common practices of value co-destruction between the two stakeholder groups. The implementation team highlighted various issues, including misplaced expectations, unpaid work requirements, and incidents of exploitation, while the client team reported problems related to inadequate ERP solutions, including lack of knowledge sharing and delays. These divergent perceptions suggest that stakeholders often fail to recognize how their behaviors contribute to mutual dissatisfaction and inefficiency. Furthermore, several common sources of value co-destruction were identified, including communication breakdowns, poor user engagement, misaligned expectations, scope creep, behavioral and relational tensions, and a lack of post-implementation evaluation. These systemic challenges reflect deeper flaws in the collaboration processes and governance structures within ERP projects. They underscore the need for more balanced and structured approaches to managing stakeholder relationships throughout the project lifecycle. Practically speaking, the findings suggest that implementing shared governance models, enhancing soft skills training, and incorporating continuous feedback and post-implementation learning mechanisms can significantly reduce the risk of co-destruction processes and mechanisms.

Furthermore, incorporating these principles into Agile-based ERP implementation frameworks can help reconcile flexibility and accountability, ultimately enhancing long-term success rates.

Theoretically, this study contributes to the expanding body of literature on value co-destruction in service systems, particularly in the context of digital transformation and enterprise software deployment. It also increases understanding of how co-destruction manifests not only at the organizational level but also through interpersonal and team dynamics.

In conclusion, effective ERP implementation requires more than just technical proficiency and methodological rigor; it requires a deep understanding of human interactions, communication patterns, and value exchange dynamics. By recognizing and addressing the hidden risks of co-destruction, organizations can move beyond system deployment and toward generating sustainable value for all stakeholders involved.

Suggestions :

A number of practical suggestions for the SDG group can be made to improve the results of ERP implementation by strengthening and enhancing collaboration and interaction among stakeholders, as well as understanding the perspectives of both the client and the provider across the various project phases. This should also include establishing open communication channels and integrating continuous feedback mechanisms into the agile workflow. Priority should also be given to skills training, particularly in the areas of negotiation, empathy, and conflict resolution, along with technical training, to address the causes of value creation and destruction. We also recommend conducting a post-implementation evaluation to resolve problems and promote long-term collaboration.

Study Limitations :

- One of the most significant limitations of this study is that it was based on only one case, representing the interaction during the implementation phase between the implementer and the client. This narrow scope limits the comprehensiveness of the results, as they may not reflect the full range of other cases, sectors, or project types.
- Another significant limitation is the time period over which the study was completed.
- Furthermore, the study focused solely on identifying the factors that lead to shared value destruction, without addressing or attempting to explore solutions, mitigation strategies, or preventive measures that might improve future practices and reduce the causes of shared value destruction.

Recommendations for further Research :

Regarding future research, this study opens avenues for future research to find methods and techniques to mitigate and reduce value co-destruction, and effective strategies to help mitigate the causes of value co-destruction. It is also recommended to improve communication and enhance interaction between stakeholders, expand the scope of the study to include examining the cultural and organizational influences on ERP implementations, and integrate artificial intelligence into risk management within ERP systems.

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ANNEXES

Annexe 01 : Survey guide of the first round:

Implementation team questionnaire :

L'objectif de l'enquête :

Nous sommes deux étudiantes à l'école nationale supérieure de management "ENSM», spécialité Entrepreneuriat et management des projets.

Dans le cadre de la réalisation de notre Pfe Projet de fin d'études, nous réalisons cette recherche dont le but est d'identifier les sources de co-destruction de valeur possibles dans les phases d'implémentation ERP.

Identification des experts du projet

Le nom de l'expert	
Le role dans l'équipe	
L'expérience (années)	

Dans quelle mesure pensez-vous que ces pratiques peuvent détruire de la valeur à chaque phase de mise en œuvre ?

Phase d'implémentation	Pratiques destructrices de valeur possibles	Evaluation
Envisager	Les clients ont des attentes fausses.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Incident d'exploitation imprévu par le client. (le client profite indûment du prestataire de services ou de la situation)	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Le client demande du travail non rémunéré	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence d'implication des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Selon votre expérience, quelles autres sources de co-destruction identifiez-vous dans cette étape ?	
Itérer	Les membres de l'équipe client ont des priorités différentes.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de confiance entre les membres de l'équipe client.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	L'équipe priorise la compétition au détriment de l'efficacité	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de retours des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Selon votre expérience, quelles autres sources de co-destruction identifiez-vous dans cette étape ?	
Decider	allocation inefficace des ressources par rapport au projet choisit.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	communication inadéquate entre les parties prenantes, lors de la sélection de la solution ERP	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	indisponibilité d'avis client lors des tests itératifs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Selon votre expérience, quelles autres sources de co-destruction identifiez-vous dans cette étape ?	
	Absence de retours dans l'évaluation post-mise en œuvre	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Non-existence d'amélioration continue basée sur l'évaluation des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Selon votre expérience, quelles autres sources de co-destruction identifiez-vous ?	

Client team questionnaire :

L'objectif de l'enquête :

Nous sommes deux étudiantes à l'école nationale supérieure de management "ENSM», spécialité Entrepreneuriat et management des projets.

Dans le cadre de la réalisation de notre Pfe Projet de fin d'études, nous réalisons cette recherche dont le but est d'identifier les sources de co-destruction de valeur possibles dans les phases d'implémentation ERP.

Identification des experts du projet

Le nom de l'expert	
Le role dans l'équipe	
L'expérience (années)	

Dans quelle mesure pensez-vous que ces pratiques peuvent détruire de la valeur à chaque phase de mise en œuvre ?

Phase d'implémentation	Pratiques destructrices de valeur possibles	Evaluation
Envisager	L'équipe donne la priorité à ses propres avantages	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Coûts mal représentés	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Délais mal exprimés	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Absence d'implication des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Selon votre expérience, quelles autres sources de co-destruction identifiez-vous dans cette étape ?	
Itérer	le manque d'échange de connaissances	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de confiance entre les membres de l'équipe	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Retards dans l'implémentation	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Défensivité face aux retours	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Exclusion des utilisateurs dans la sélection.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Selon votre expérience, quelles autres sources de co-destruction identifiez-vous dans cette étape ?	
Décider	L'équipe d'implémentation opte pour une solution ERP inadaptée	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	communication inadéquate entre les parties prenantes.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	non-existence de tests itératifs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	opter pour une solution ERP inadaptée	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	L'équipe d'implémentation ignore l'avis du client	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Selon votre expérience, quelles autres sources de co-destruction identifiez-vous dans cette étape ?	
	exclusion d'évaluation post-mise en œuvre	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	déficience d'amélioration continue basée sur l'évaluation des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Selon votre expérience, quelles autres sources de co-destruction identifiez-vous ?	

Annexe 02 : Survey guide for the second round :

Implementation team questionnaire :

Dans ce document, nous avons classé les principaux facteurs influençant la co-destruction de valeur à chaque étape de l'implémentation, en les hiérarchisant du plus important au moins important (indiqués en noir).

Les pratiques en bleu représentent les propositions formulées par l'équipe d'implémentation.

Nous vous prions de répondre au questionnaire sans fournir de justification ni ajouter de nouvelles propositions.

Nom de l'expert :

Phase d'implémentation	Pratiques destructrices de valeur possibles	Evaluation
Envisager	Les clients ont des attentes fausses	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Le client demande du travail non rémunéré	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence d'implication des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Incident d'exploitation imprévu par le client. (le client profite indûment du prestataire de services ou de la situation)	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise définition du périmètre du projet	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Changements fréquents de direction par le client sans consultation des experts	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Attentes irréalistes sur les délais de mise en œuvre	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre

		☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de compatibilité avec les systèmes existants	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence de validation technique approfondie avant le déploiement	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise évaluation des capacités des serveurs et du réseau	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Sécurité des données souvent sous-estimée	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Incohérence entre les besoins métiers et les capacités de l'ERP	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise compréhension des enjeux métier par l'équipe technique	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
Itérer	Manque de retours des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Les membres de l'équipe client ont des priorités différentes.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	L'équipe priorise la compétition au détriment de l'efficacité	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de confiance entre les membres de l'équipe client.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence de tests en conditions réelles avant le déploiement	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de formation des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre

		☐ Pas d'accord ☐ Pas du tout d'accord
	Changements fréquents de demandes sans validation des étapes précédentes	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise coordination entre consultants et équipes métier	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Tests insuffisants avant le passage en production	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise gestion des correctifs et mises à jour	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Problèmes d'interfaçage avec d'autres systèmes déjà en place	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'accompagnement après le lancement	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'alignement entre la stratégie d'entreprise et les fonctionnalités de l'ERP	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
Décider	communication inadéquate entre les parties prenantes, lors de la sélection de la solution ERP	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	allocation inefficace des ressources par rapport au projet choisit	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	indisponibilité d'avis client lors des tests itératifs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvais choix de la solution ERP sans évaluer les besoins réels de l'entreprise	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence de comité de pilotage structuré	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre

		☐ Pas d'accord ☐ Pas du tout d'accord
	Absence de documentation claire sur les processus et décisions prises	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'implication de la direction dans les choix stratégiques	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Dépendance excessive aux intégrateurs externes sans transfert de compétences	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise priorisation des fonctionnalités critiques	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Sous-estimation des besoins en maintenance après déploiement	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Sous-estimation du temps nécessaire à l'adoption complète de l'ERP	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de flexibilité dans les décisions de configuration de l'ERP	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence d'un comité de validation dédié	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence de retours dans l'évaluation post-mise en œuvre	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Non-existence d'amélioration continue basée sur l'évaluation des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de support technique post-implémentation	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence de KPI clairs pour mesurer la réussite du projet	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre

		☐ Pas d'accord ☐ Pas du tout d'accord
	Résistance au changement et faible appropriation de l'ERP par les équipes internes	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Formation perçue comme une charge au lieu d'un investissement	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Difficulté à motiver les employés à suivre les formations à long terme	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Résistance au changement de la part des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

Client team questionnaire :

Dans ce document, nous avons classé les principaux facteurs influençant la co-destruction de valeur à chaque étape de l'implémentation, en les hiérarchisant du plus important au moins important (indiqués en noir).

Les pratiques en Bleu représentent les propositions formulées par l'équipe client.

Nous vous prions de répondre au questionnaire sans fournir de justification ni ajouter de nouvelles propositions.

Ce questionnaire correspond au deuxième tour de l'étude Delphi. Vos réponses sont essentielles pour valider les résultats du premier tour et affiner l'analyse. Votre participation contribue de manière significative à la fiabilité et à la pertinence des conclusions de ce travail de recherche.

Nom de l'expert :

Phase d'implémentation	Pratiques destructrices de valeur possibles	Evaluation
Envisager	Absence d'implication des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Coûts mal représentés	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Délais mal exprimés	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	L'équipe donne la priorité à ses propres avantages	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise planification des ressources informatiques nécessaires à l'ERP.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de synchronisation entre les équipes IT et métiers.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise anticipation des coûts cachés de maintenance et d'évolution de l'ERP.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Problèmes de conformité réglementaire mal pris en compte lors de l'implémentation.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'accompagnement dans la gestion du changement.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Faible participation des équipes RH dans la conception des modules dédiés.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de compatibilité entre l'ERP et les systèmes de gestion d'entrepôt existants.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Absence d'une stratégie claire pour la transition des anciens systèmes vers le nouvel ERP.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de visibilité sur la gestion des ressources après implémentation.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Incompatibilité entre l'ERP et les outils déjà utilisés par les équipes opérationnelles.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise synchronisation entre l'ERP et les plateformes digitales existantes.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence d'un plan de conduite du changement adapté.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
Itérer	Le manque d'échange de connaissances	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Exclusion des utilisateurs dans la sélection.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Retards dans l'implémentation	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Défensivité face aux retours	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de confiance entre les membres de l'équipe	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Conflits d'intérêts entre les parties prenantes.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de documentation sur les processus de validation des phases du projet.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'adéquation entre les capacités de l'ERP et les exigences fiscales locales.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Problèmes d'intégration entre l'ERP et les autres outils financiers existants.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de sessions de formation adaptées aux besoins des employés.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence de référents internes pour l'accompagnement au changement	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise gestion des priorités dans l'optimisation des flux logistiques.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de formation des équipes sur les nouvelles méthodes de gestion des stocks	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Incompatibilité des workflows digitaux avec les fonctionnalités standard de l'ERP.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de formation spécifique sur l'interopérabilité entre l'ERP et les autres outils digitaux	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Absence de formation sur l'utilisation des nouveaux processus opérationnels	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise adaptation de l'ERP aux exigences du terrain.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
Decider	L'équipe d'implémentation opte pour une solution ERP inadaptée	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	. opter pour une solution ERP inadaptée	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	communication inadéquate entre les parties prenantes.	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	non-existence de tests itératifs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de transparence sur les objectifs du projet	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence d'un comité de pilotage réunissant toutes les parties prenantes.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence d'un contrôle qualité spécifique aux modules financiers	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise gestion des flux de trésorerie dans l'ERP.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Manque d'adaptabilité du système aux besoins spécifiques des RH.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Insuffisance d'outils d'évaluation de la performance intégrés à l'ERP.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence d'un module de suivi en temps réel des expéditions.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Difficulté d'intégration avec les partenaires logistiques et fournisseurs.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Non-adéquation des flux de production avec les capacités du nouvel ERP.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Mauvaise estimation des besoins en automatisation des tâches.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'analyse approfondie des besoins spécifiques du digital avant le choix de la solution.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Difficulté à aligner l'ERP avec les tendances du marché numérique.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	exclusion d'évaluation post-mise en œuvre	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	déficience d'amélioration continue basée sur l'évaluation des utilisateurs	☐ Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Manque de formation continue pour les utilisateurs.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Faible réactivité des équipes support face aux incidents rencontrés après le déploiement.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Non-adaptation des outils de reporting aux nouvelles normes comptables.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'accompagnement sur l'analyse des données financières après implémentation.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Faible engagement des employés envers les nouvelles technologies.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque de suivi sur l'impact du nouvel ERP sur la gestion des ressources humaines.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence d'optimisation automatique des tournées de livraison.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'alertes en cas de rupture de stock non anticipée	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Manque d'analyse des performances de l'ERP en lien avec la stratégie digitale.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Absence de mécanismes de retour d'expérience pour optimiser le système après son lancement.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord

	Faible intégration des retours des équipes opérationnelles dans les mises à jour.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord
	Problèmes d'optimisation des flux de travail post-déploiement.	Tout à fait d'accord ☐ D'accord ☐ Neutre ☐ Pas d'accord ☐ Pas du tout d'accord