

Resolving System-Organizational Misfits: Literature Review and a Framework

Anna Jegorova* and Janis Grabis

Institute of Information Technology, Riga Technical University,
6A Kipsalas Str., LV-1048, Riga, Latvia

Anna.Jegorova_1@edu.rtu.lv, Janis.Grabis_1@rtu.lv

Abstract. Despite the increasing adoption of off-the-shelf ERP systems and the accumulation of industry experience, implementation failure rates remain high. One of the key causes is the persistent misalignment between standardized ERP processes and the specific processes of adopting organizations, which are commonly referred to as system-organizational gaps or misfits. While numerous studies acknowledge these misfits, only a few offer clear classifications of misfits and structured resolution frameworks. This article presents a systematic literature review of peer-reviewed academic studies from 2005 to 2025, aimed at identifying and synthesizing strategies for resolving ERP-related misfits. Given the methodological diversity of these sources, a mixed-method synthesis was employed: tabular analysis summarized key study features, while thematic synthesis uncovered recurring patterns in resolution strategies. The review identifies a wide variety of misfit types and corresponding resolution strategies. While conceptually rich, the literature lacks empirical comparisons of strategy effectiveness and remains fragmented across industries and phases of the ERP lifecycle. These gaps underline the need for future research to bridge theoretical insight with actionable, cross-contextual resolution models. The article concludes with recommendations for future research aimed at bridging the gap between conceptual understanding and practical application.

Keywords: ERP Misfits, Fit-Gap Analysis, System-Organization Gap, Misfit Resolution Strategy.

1 Introduction

The growth in Enterprise Resource Planning (ERP) adoption has led to an expansion of academic research on ERP implementation. Researchers explore not only implementation frameworks, governance structures, and methodologies for measuring implementation benefits, but also the factors influencing successful implementation or failure [1]–[3]. Current studies focus on analyzing reasons for ERP implementation issues and proposed structured classifications and

* Corresponding author

© 2025 Anna Jegorova and Janis Grabis. This is an open-access article licensed under the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>).

Reference: A. Jegorova and J. Grabis, “Resolving System-Organizational Misfits: Literature Review and a Framework,” *Complex Systems Informatics and Modeling Quarterly*, CSIMQ, no. 45, pp. 123–135, 2025. Available: <https://doi.org/10.7250/csimq.2025-45.06>

Additional information. Author’s ORCID iD: J. Grabis – <https://orcid.org/0000-0003-2196-0214>. PII S225599222500252X. Received: 18 October 2025. Accepted: 8 December 2025. Available online: 31 December 2025.

possible resolution strategies, covering various perspectives, including IT, organizational, and cultural challenges [4]–[6]. While the off-the-shelf ERP systems come with pre-defined system processes, data models, and workflows, implementation partners often face enterprises with well-established and mature business practices, regulations, and procedures. This creates a natural gap between ERP system processes and organizational processes and workflows. Multiple studies have noted that this system-organizational gap, often referred to as system-organizational misfit, is one of the primary reasons projects fail to meet their timelines, budgets, or planned business benefits [6]–[9]. Ignoring this gap in the early project stages often leads to costly consequences.

There are several definitions of the ‘misfit’ concept across studies, reflecting the absence of a unified theoretical foundation. Early studies tend to define misfits as objective, structural deviations between ERP system design and organizational processes (e.g., [10]), whereas other contributions emphasize subjective, user-experienced misalignments such as workflow disruptions, perceived inefficiencies, or cultural tensions (e.g., [4], [11]). This lack of common terminology complicates comparative synthesis and the development of unified resolution frameworks. Nevertheless, multiple studies propose different misfit classification frameworks based on different dimensions. One of the first comprehensive classifications was introduced in a widely cited study by Strong and Volkoff [10], which identified six misfit domains (functionality, data, usability, role, control, and organizational culture), and within each, two types of misfit (deficiencies and impositions). However, given the significant evolution of standard ERP functionality since then, this classification may now be considered partially outdated or in need of re-evaluation for current use. Another example is a structured framework proposed by Yen et al. [12], which classifies ERP misfits classification along two dimensions: (1) the source of the misfit (enterprise-, industry-, or country-specific requirements) and (2) the impact of the misfit (input data, process, output/interface, or system environment). Similarly, Lahlou et al. [13] propose a misfit classification grounded in Task-Technology Fit theory, distinguishing between perceived and real misfits; real misfits are further divided into imposed and voluntary types, and the framework differentiates between deep misfits (input and process) and surface misfits (output/interface). The introduction of the distinction between ‘perceived’ and ‘actual’ misfits was empirically validated in their study.

Within the provided classifications, several studies also aim to determine appropriate misfit resolution strategies based on the classified types of misfit. While various resolution strategies have been proposed, no comprehensive review systematically consolidates and evaluates these approaches. For instance, Wijaya et al. [14] listed seven articles in their literature review on ERP misfits. Three of them may be outdated due to extensive developments in ERP functionality (publication year before 2005). A detailed examination of these classification dimensions is presented in Section 4.

Despite ongoing academic research, ERP implementation failure rates remain high, resulting in significant financial costs and ongoing maintenance challenges for organizations. No widely adopted industry practices exist to effectively address and resolve system-organizational misfits.

This literature review aims to fill the gap by analyzing existing research work on misfits and the proposed resolution strategies. The main objective is to analyze and evaluate academic research on strategies for resolving misfits between standard off-the-shelf system processes and organizational processes and workflows. It seeks to identify existing resolution approaches, assess their practical effectiveness (if any), and highlight gaps in current methodologies by considering the following research questions:

RQ1: What types of system-organizational misfits and corresponding resolution strategies are discussed in ERP literature?

RQ2: How has the effectiveness of these strategies been assessed across different ERP lifecycle phases and industry contexts?

RQ3: What are the empirically supported or commonly adopted resolution strategies for resolving system-organizational misfits?

This review keeps a narrow focus on the ERP implementation, rather than broader categories of enterprise systems or digital transformation initiatives. The ERP systems are unique in their standardized, cross-functional architecture and high degree of organizational embeddedness, which create distinct misfit dynamics. Focusing on the ERP systems allows for a rigorous and context-specific synthesis of resolution strategies that would be obscured in a broader systems review.

Alongside synthesizing existing academic knowledge on ERP misfit resolution strategies, this review is the basis for the proposed evidence-based Misfit Resolution Framework derived inductively from the systematic literature analysis. As a result, an initial version of a novel misfit analysis framework [15] is elaborated. This article extends the initial paper [15] by presenting the complete literature review, motivating the framework development. The article therefore contributes (1) a synthesis and categorization of system- and organizational-level resolution strategies, and (2) an integrative framework that organizes these insights into a structured, repeatable decision process.

The rest of the article is organized according to the PRISMA 2020 statement guidelines [16]. Section 2 defines key concepts. Section 3 outlines the methodology for the literature review. Section 4 explores and analyzes the selected papers. Section 5 discusses the findings, and Section 6 introduces the proposed misfit analysis framework based on the findings of the literature review. Section 7 discusses the limitations of the study and concludes the article.

2 Definitions of Basic Concepts

The term “misfit” is widely used in ERP literature, yet its meaning varies considerably across studies. In some works, misfit is treated as an objective structural deviation between ERP system design and organizational processes, often classified along technical dimensions such as functionality, data, and control [10], [17]. In contrast, other studies define misfit as a subjective perception experienced by users when ERP systems do not support their work routines or organizational culture (e.g., [4], [11]). This literature review adopts a broad working definition of misfit as a “***misalignment*** – either perceived or structural – between the built-in structures of an ERP system (data, processes, outputs, roles, norms) and those of the adopting organization”. This inclusive definition allows for the synthesis of studies using both technical and socio-cognitive approaches, while also highlighting the need for future research to clarify and standardize the concept.

The terms “gap” and “misfit” are often used interchangeably in ERP discourse, yet they carry distinct connotations and are rooted in different communities. The term *gap* is predominantly used in practitioner contexts, especially within the “fit-gap analysis” process during ERP implementation planning. It typically refers to a functional or technical discrepancy between the standard ERP capabilities and the specific business requirements of the organization [18]. In contrast, the term ***misfit*** is more prevalent in academic literature and extends beyond technical functionality to include deeper organizational, cultural, and socio-technical dimensions of misalignment [4], [7], [8]. While *gaps* are often framed as configuration or development tasks, *misfits* are conceptualized as systemic mismatches between ERP systems and organizational realities, which often involve values, routines, roles, and power structures. This review adopts the term *misfit* in alignment with the academic literature it synthesizes, while acknowledging that many practitioners facing sources may refer to similar issues as *gaps*.

In this review, the term “***resolution strategy***” refers to the overall process or approach adopted to address ERP system-organizational misfits. This may include organizational adaptation, system customization, or hybrid approaches, and can vary depending on the misfit type, context, and implementation phase. The term “***framework***” is used in this study in accordance with its definition in information systems methodology literature as a *structured, repeatable set of concepts, classifications, and steps that guide the identification, diagnosis, and resolution of misfits* [19], [20]. Frameworks in research frequently provide classificatory schemes and

procedural steps that assist practitioners in decision-making [21]. In this sense, the proposed misfit resolution framework is a mid-range artefact that integrates classifications (misfit types, resolution strategies) with a repeatable process model. Frameworks typically formalize resolution strategies, making them more systematic and transferable across cases.

3 Methodology for the Literature Review

The research presented in the article was performed in accordance with the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines [16]. Scopus, Elsevier, Springer, JSTOR, Google Scholar, and Research Gate databases were used to search for relevant papers. References and citations from key papers and the Connected papers platform were used for an extended search. The search strategy was based on the following keywords: ERP implementation misfits, system-organizational misfits, and misfits resolution strategy. Keywords were combined into predefined search strings (e.g., ERP AND (misfit OR “fit-gap” OR misalignment) AND (resolution OR workaround OR customization OR adaptation)). These strings were adjusted slightly per database to fit their syntax.

The selection of studies was based on the following inclusion criteria:

- studies focused on off-the-shelf ERP system implementation, failure factors based on system-organizational misalignment, and proposed resolution strategy;
- studies published between 2005 and 2025;
- peer-reviewed articles, conference papers, and reports from reputable institutions and organizations;
- studies discussing both theoretical frameworks and empirical evidence related to system-organizational misalignment.

The following exclusion criteria were applied:

- studies related to off-the-shelf ERP system implementation, but not covering system-organizational misfits topics;
- discussions on system-organizational misfits not linked to resolution strategies;
- non-peer-reviewed sources. Non-peer-reviewed sources were included only when they met ‘significant relevance’ criteria: (1) high citation in peer-reviewed ERP research or (2) grounded on extensive empirical experience not available in peer-reviewed literature;
- articles written in languages other than English.

The screening and selection process was performed in three steps. The first step was Title and Abstract Screening. All articles retrieved from the databases and sources were first screened based on their titles and abstracts. Studies that did not clearly relate to ERP system implementation failure factors based on organizational process misalignment and proposed a resolution strategy were excluded. During the second step, the Full-Text Screening was performed. The full-text articles were reviewed to ensure they met the inclusion criteria. Studies that had limited relevance were excluded at this stage. Papers were excluded if they did not address ERP types and classification, or misfit-resolution strategies, or if they focused on unrelated domains. Finally, the Quality Assessment step was performed. Studies that met the inclusion criteria underwent a quality assessment. This assessment evaluated: (1) relevance of the research data, design, and methodology; (2) strength and reliability of the proposed methodology; and (3) empirical application of the proposed methodology.

Following the literature review methodology, 170 papers were initially identified, 120 were screened based on their titles and abstracts, and then 23 papers were selected based on full-text screening. As a result, the 11 most relevant papers were selected for further analysis (see Figure 1).

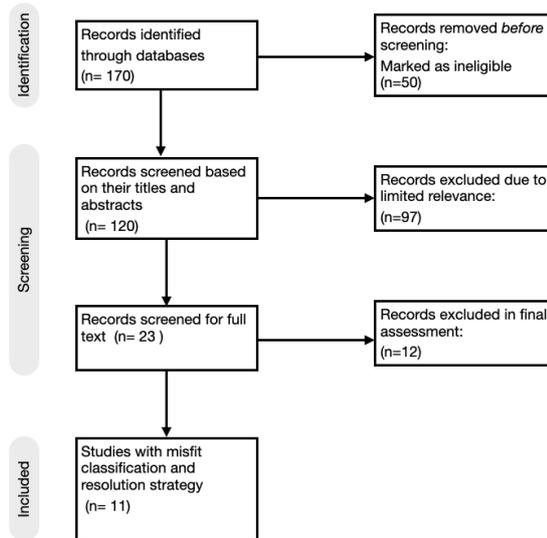


Figure 1. PRISMA 2020 flow diagram for the literature search process

4 Literature Review Results

This section examines the selected papers and analyzes them according to the types of misfits considered and approaches used to address the misfits.

4.1 Review of Papers: Identifying the Misfit Resolution Strategies

The list of misfit resolution strategies identified in selected sources is presented in Table 1. For each strategy (and corresponding literature source), its strengths and limitations are also presented. Table 1 serves as the background for further analysis.

Table 1. Misfit resolution strategies in selected papers

No.	Ref.	Resolution strategy	Strengths	Limitations
1.	[7]	Adaptation + Add-ons	A widely cited article concentrates on cultural misfits and stresses the necessity to adjust misfits at an early project stage.	The article may not reflect modern ERP functionality, flexibility, and localization options introduced after publication.
2.	[22]	Minimal Customization + Business Process Redesign + Training	The authors advocate low system customization. As an alternative, options include user training, business process redesign, and change management.	The proposed resolution method is not presented as a formal framework, but rather as a context-specific set of strategies derived from practice.
3.	[4]	Categorization of misfit dimensions	The resolution strategy follows an adaptive approach, meaning organizations do not rely on a single fix but instead apply different resolution patterns depending on the misfit type and stage of ERP implementation.	Research is based on a single case study, which limits generalizability.
4.	[23]	System Modification vs. Organizational Adaptation	The article presents a structured, generalizable framework for ERP misfit resolution, based on misfit classification types.	Authors rely on user-perceived performance and therefore lack cross-validation with objective system metrics.

Table 1. Continued

No.	Ref.	Resolution strategy	Strengths	Limitations
5.	[24]	Perceived vs. Actual Misfit Filtering	The article proposes a decision framework for resolving ERP misfits in SMEs by categorizing misfits and selecting an appropriate resolution strategy.	The study is based on only four Dutch SMEs using Microsoft Dynamics Navision, limiting its applicability to other industries, ERP systems, and regions.
6.	[8]	ERP Tailoring (6 types)	Based on the empirical case, the authors propose to avoid heavy customization in addressing misfit resolution. The listed alternatives include user training, business process redesign, and change management.	The study concentrates purely on misfit tailoring through enhancements. The case underscores the need for structured governance and strategic justification before approving such tailoring.
7.	[18]	Optimization of Gap Resolution Strategy	The article proposes a well-structured misfit resolution model.	The study mostly concentrates on measurable technical misfits, paying less attention to perceived and culture-related gaps.
8.	[25]	Workaround as Learning	This article provides a valuable contribution to the understanding of ERP misfit resolution by framing workarounds as an adaptive process rather than resistance.	The study is based on a single case study and lacks comparative analysis.
9.	[13]	Pre-Fit-Gap Diagnostic Tool	The article emphasizes the importance of the pre-Fit-Gap Analysis phase as a decision point to address the misfit resolution strategy.	The study is based on a literature review; it does not provide an empirical application and post-implementation validation.
10.	[6]	Participatory Misfit Resolution	Methodology includes a structured path of actions to follow for misfit resolution.	The proposed framework was validated in a single hospital case study. Also, authors rely on extensive user involvement.
11.	[11]	Workaround Aggravation Mapping	This article makes a valuable contribution to the study of misfits by revealing how workarounds can worsen system-organizational misalignment.	The misfit resolution strategy is limited to recognizing workarounds.

4.2 Analysis

The full-text screening was performed for the selected papers to assess the clarity of research questions and to confirm compliance with selection criteria, the presence of a well-structured framework, and application in real implementation cases. As this literature review primarily focuses on conceptual and processual strategies for resolving ERP system-organization misfits, no statistical effect measures (e.g., risk ratios or mean differences) were applicable. Instead, the described frameworks were systematically assessed based on the misfit classification and proposed resolution strategy class. Outcomes of the studies were reported in the form of case narratives, conceptual models, or strategic recommendations. Therefore, studies were compared based on the proposed framework concept, the misfit types the framework addressed, and whether any theory for framework classification was used. The results are presented in Table 2.

Table 2. Analysis of the selected papers

No.	Study	Misfit Type	Formal Framework	Theory
1.	[7]	Data, Functional, Output	Partially structured	Cultural Fit / Practice-based
2.	[22]	Business, IS, Human Resources	Context-specific strategies	Practice-based, ERP Adoption in a Developing Context
3.	[4]	Functional, Data, Output, Role, Control, Cultural	Conceptual framework	Structural Dimensions of Enterprise Systems (ES)
4.	[23]	Input, Process, Output	Tested Structural Equation Model (SEM)	Task-Technology Fit (TTF)
5.	[24]	Actual/Perceived	Decision Matrix	Conceptual/Pragmatic
6.	[8]	Deep/Surface Misfits	Descriptive Typology	Institutional Ontology
7.	[18]	Functional, Timing-based Gaps	Optimization Model	Strategic Fit-Gap
8.	[25]	Behavioral, Cultural, Role	Emergent Model	Activity Theory
9.	[13]	Functional, Process	Decision Support Model	Decision Science / Fit-Gap
10.	[6]	Affordance-Based Misfits	4-Phase Structured Method	Affordance Theory / Change Agency
11.	[11]	System-Work Practice Misfits	Pattern-Based	Work System Theory

A comprehensive misfit classification is essential for addressing misfits and proposing resolution strategies. While all studies propose misfit classification, the general conclusion is that not only is the “misfit” definition inconsistent in the studies, but also its classification varies. The introduction of a generally accepted misfit classification in academic literature would facilitate joint discussions.

The contents of Table 1 and Table 2 combined show a diverse range of ERP misfit resolution strategies. Several studies, such as [13], [18], [23], provide formally structured frameworks that link specific misfit types to appropriate resolution strategies using theoretical models like Task-Technology Fit or optimization logic. Others, such as Hustad et al. [8] and Liu et al. [4], focus on classifying misfit characteristics (e.g., deep/surface, functional, control) and use these classifications to explain or guide tailoring decisions.

More recent contributions, such as Morquin et al. [6] and van Offenbeek et al. [11] shift the research toward participatory, affordance-based, or workaround-centric approaches, highlighting the organizational cultural nature of misfit resolution in real-world settings. These emphasize user resistance and adaptation during post-implementation and highlight the role of change management. The study by Wahid & Setyono [22] adds an important dimension by showcasing misfit resolution in a developing country university with low IT maturity. Their approach focuses on minimizing customization, enhancing user literacy, and aligning business processes to the system through training and communication.

Very few studies conduct comparative evaluations of resolution strategies across similar misfit types. For instance, the trade-off between organizational adaptation and system modification is often presented as a theoretical preference (e.g., [23]) rather than empirically benchmarked. Without standardized outcome metrics (e.g., cost, user satisfaction, time-to-stabilization), it is difficult to assess which strategies are truly effective for adoption.

Only a limited number of studies, primarily the more recent and methodologically advanced [13], [18], [23], fully translate misfit classifications into structured, decision-support frameworks suitable for practical implementation. This indicates the need for future research to consolidate existing conceptual findings to develop an actionable, scalable framework for ERP misfit resolution.

5 Discussion on the Literature Review Results

To synthesize the reviewed ERP misfit resolution frameworks, two key dimensions are used:

- Strategic orientation – what drives the resolution strategy (e.g., decision logic, user participation);
- Level of formalization – how structured and transferable is the proposed approach.

Based on these dimensions, three groups of frameworks emerge (Table 3):

- The first group includes studies that propose clearly defined, structured decision-support frameworks that directly link misfit types to resolution strategies through flowcharts, matrices, or optimization models. These are often grounded in Task-Technology Fit or decision theory and are suited to formal implementation environments.
- The second group consists of context-sensitive and participatory frameworks, which emphasize user involvement, organizational learning, and cultural fit. Often designed for pluralistic, resource-constrained, or rapidly evolving environments, these approaches assume that misfit resolution is iterative and locally defined. They recognize misfit resolution as a social negotiation process, not just a technical alignment task.
- The third group includes descriptive frameworks without formal resolution pathways. The studies provide useful analytical classifications of misfit types or tailoring mechanisms, but do not recommend structured resolution strategies. These studies are valuable for understanding the problem space but require further development for practical application.

Table 3. Classification of ERP misfit resolution frameworks by strategy type and formalization

Group One. Structured, Decision- Support Frameworks	Group Two. Context-Sensitive and Participatory Frameworks	Group Three. Descriptive Typologies Without Formal Resolution Pathways
[13], [18], [23], [24]	[6], [7], [22], [25]	[4], [8], [11]

The methodological diversity of the included studies poses challenges for generalization. Most rely on single-case qualitative studies, often without external validation or follow-up evaluation. Only a few (e.g., [18], [23]) offer testable models or apply formal metrics. As a result, it remains unclear whether observed outcomes are generalizable or context-specific.

The following observations are made concerning *RQ1* stated in Section 1. There is an obvious need to develop a common system-organizational misfits classification to be used for further research and to be adopted by practitioners. Several earlier recognized classifications are outdated and lack up-to-date verification needed due to the extensive development of off-the-shelf systems. While several studies underline so-called perceived misfits (caused by traditional organizational culture or user mindset), across the literature, misfits are most commonly classified along the following dimensions:

- data misfits – incompatible data structures, missing fields, or inconsistent semantics [4], [7];
- usability/interface misfits – poor system design, difficult-to-navigate interfaces [24];
- role/control misfits – misalignments between system roles and organizational responsibilities [4], [13], [18].

While analysis shows a diverse range of misfit resolution strategies, the most common approaches include:

- organizational adaptation based on Business Process Reengineering (BPR), training, and change management to align the organization to the ERP “vanilla” process [22], [25];
- system modification based on ERP customization, add-ons, or integration of third-party solutions to fit organizational needs [13], [18];

- hybrid approaches, which combine customization with targeted organizational change (most commonly advocated in practice) [6], [11].

Only a few studies fully translate misfit classifications and resolution strategies into structured, decision-support frameworks.

Regarding *RQ2*, the studies mostly focus on a couple of ERP lifecycle phases and rarely cover the full end-to-end cycle. There is an obvious lack of systematic, empirical, effectiveness measurements and comparisons of different applied strategies, as well as easily applicable metrics. Few studies are limited to only one industry and lack cross-industry analysis. The provided industry context includes the following data:

- Healthcare: emphasis on user workarounds, usability issues, and pluralistic governance challenges [6];
- Manufacturing/Supply Chain: Focus on process misfits, data integration, and performance impact of system customization [10].

Regarding *RQ3*, most studies provide descriptive case-based evidence or theory-driven proposals with limited linkage to specific misfit types. Empirically supported best practices are mostly puzzling, covering either an isolated implementation phase or a poor link to a misfit type. The main conclusion could be summarized as follows:

- Pre-implementation Fit-Gap analysis: Helps proactively avoid unnecessary misfits. Lahlou (2022) [13] provides a structured BPMN-based decision model to support this.
- Balanced adaptation strategy: Shiang-Yen [23] and Morquin [6] argue that the type of misfit should guide whether to customize or adapt the organization.
- Participatory misfit diagnosis: Morquin's method [6] includes structured stakeholder input to avoid over-reliance on expert assumptions.
- Minimal customization philosophy: Encouraged to avoid high long-term costs and maintenance issues. Grabis [18] suggests following the off-the-shelf system development roadmap to avoid unnecessary customization.
- Early workaround monitoring: Workarounds should be tracked and analyzed to prevent the evolution of harmful patterns [25].

Furthermore, while case studies provide valuable contextual insight, the field still lacks a coherent body of predictive theory for ERP misfit dynamics. Most contributions remain descriptive, providing typologies or post-hoc analysis. There is a need to transition from observational work to explanatory or design-oriented research that can inform intervention planning in advance.

6 Misfit Resolution Framework

The literature review reveals that, although many studies discuss individual misfit types or isolated resolution mechanisms, the field lacks an integrated, actionable model that links misfit identification, classification, prioritization, and strategy selection into a coherent process. Existing research provides fragmented guidance, often focusing on specific phases, methods, or misfit categories, without offering a structured end-to-end approach that practitioners can follow. This gap makes it difficult for organizations to translate academic insights into practical decision-making during ERP implementation. To address this issue, a misfit resolution framework is proposed to consolidate the findings of the literature review into a structured, repeatable sequence of steps and supporting practices. This section introduces an initial version of the proposed misfit resolution framework aimed at addressing practical issues arising during implementation of the ERP systems.

The misfit resolution framework was developed using a synthesis approach commonly applied in systematic literature review (SLR) based conceptual model development [26]. Following the PRISMA-based literature selection, all included studies were coded for (1) misfit types and (2)

resolution strategies. Through iterative comparison of these codes across studies [7], [10], [24], recurring patterns in how misfits are identified, classified, prioritized, and resolved were distilled. These insights were complemented by the authors’ empirical experience from ERP implementation projects, which supported the interpretation of patterns and informed the structuring of practical decision steps. The resulting sequential process model is therefore grounded both in the synthesized evidence and practitioner insight. The framework (Figure 2) combines formal and participatory approaches and aims to clearly define checkpoints for ensuring successful collaboration among all stakeholders (i.e., process owners, end-users, management, and implementation partners). It uses the end-user input to identify misfits. Mainly, participatory methods and business process management methods are used for this step, and the process proceeds if the stakeholders agree on the list of misfits identified. The misfit classification and prioritization step is performed by combining analytical multi-criteria decision-making methods and participatory methods to validate the priorities. The classification dimensions are presented in Table 4. If some of the misfits cannot be clearly classified and prioritized, they are deferred to monitoring to gather more insights about the nature of the misfits.

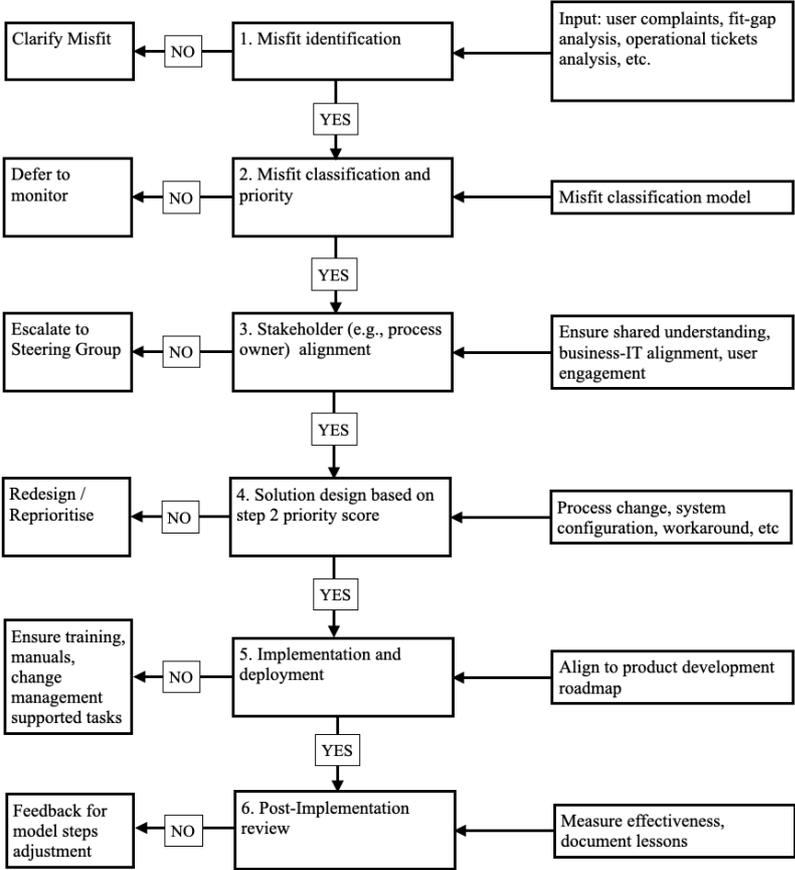


Figure 2. Misfit resolution framework process flow

The stakeholder alignment is achieved using participatory techniques to ensure that stakeholders accept the prioritized list of the misfits and the steering group. The solution design is performed using formal methods such as optimization to identify the most suitable misfit resolution strategies. It identifies what mechanisms, such as process change, systems modification, or third-party solutions, should be used to remedy the misfits. The solution is again validated with the stakeholders to initiate the redesign cycle if necessary. The accepted solution is implemented at the organization, and the post-implementation review is performed to assess the implementation success.

Table 4. Misfit classification dimensions

Dimension	Classification
Nature	Actual/Perceived
Source	Imposed/Voluntary
Depth	Surface/Deep Structure
System Object	Data, process, output, role, control, usability
Timing	Pre-implementation/Post-implementation
Perspective	Technical, Organizational, Cognitive, Cultural

The application of the formal methods allows for a transferable and potentially automated approach to the misfit resolution, while the participatory methods allow achieving the stakeholder engagement and consensus. That also allows accounting for context-sensitive responses to organizational needs. The current representation focuses on the main path through the decision-making process. However, feedback loops and iterative refinement are considered following every checkpoint. The framework is aimed at supporting various ERP systems and at application in different industries. Decision-making factors and methods, and solution designs can be tailored to specific ERP vendors and implementation contexts.

The further elaboration and refinement of the framework will be undertaken by its application in real-world ERP projects by using action design science research.

7 Conclusions and Limitations

This literature review has several limitations, both in the evidence base and the review process itself. First, the literature shows inconsistency in the conceptualization of ERP misfits. Some studies define misfits as objective technical deviations from business requirements, while others emphasize user perceptions and organizational friction. This conceptual divergence complicates synthesis and limits the comparability of resolution strategies. Second, most studies are based on single-case designs, offering limited generalizability and no longitudinal insight into the effectiveness of misfit resolution over time. The concentration of studies in specific sectors, particularly healthcare, may also limit transferability to other industries. Third, few studies provide empirical comparisons of resolution strategies across the misfit types. Most frameworks are conceptual, and direct evaluations of customization versus organizational adaptation remain scarce. Organizational structure, though proven to influence misfit dynamics, is not systematically addressed; therefore, this review could not categorize findings accordingly.

Regarding the review process, while the PRISMA framework was followed, the review protocol was not pre-registered, and inter-rater reliability was not assessed due to the single-reviewer model. To support consistency, inclusion criteria were predefined and documented, and a structured, multi-phase screening process was used. English-language peer-reviewed sources were prioritized, which may have excluded relevant practitioner insights or non-English academic work. Due to the qualitative nature of the evidence, meta-analysis was not feasible; findings were synthesized descriptively.

One of the insights emerging from this review is the substantial inconsistency in how ‘misfit’ is defined and classified across studies. This fragmentation limits cumulative knowledge building and complicates the comparison of empirical findings. The analysis reveals that while most studies propose a misfit classification structure, the underlying definitions, boundaries, and categorization principles differ considerably. Establishing a more standardized, academically accepted misfit classification would therefore advance the field by enabling more coherent dialogue, theory development, and practical guidance. The Misfit Resolution Framework proposed in this article

addresses this need by consolidating recurrent classification dimensions and aligning them with resolution processes.

Future research should focus on comparative and longitudinal studies and explore how organizational context influences misfit resolution. Higher methodological consistency and more robust empirical validation of frameworks would strengthen the field.

References

- [1] A. Elragal and M. Haddara, "The Impact of ERP Partnership Formation Regulations on the Failure of ERP Implementations," *Procedia Technology*, vol. 9, pp. 527–535, 2013. Available: <https://doi.org/10.1016/j.protcy.2013.12.059>
- [2] M. Chadhar and F. Daneshgar, "Organizational learning and ERP post-implementation phase: A situated learning perspective," *Journal of Information Technology Theory and Application*, vol. 19, no. 1, pp. 138–156, 2018.
- [3] T. Brugger, "ERP software implementation – definition and key components of the implementation success," *IADIS International Conference on Applied Management Advances in the 21st Century 2020*, pp. 102–106, 2020. Available: https://doi.org/10.33965/ama2020_202003C017
- [4] G. H. W. Liu, E. T. G. Wang, and J. C. F. Tai, "ERP misfit: A multidimensional concept and misfit resolution," *PACIS 2011 Proceedings*, article 118, 2011.
- [5] P.-F. Hsu, "One Size Fits All? How Does Firm Heterogeneity Affect ERP Adaptation and Firm Performance?" *Open Journal of Business and Management*, vol. 8, no. 6, pp. 2597–2622, 2020. Available: <https://doi.org/10.4236/ojbm.2020.86161>
- [6] D. Morquin, R. Ologeanu-Taddei, G. Pare, and G. Wagner, "A method for resolving organisation-enterprise system misfits: An action research study in a pluralistic organization," *Information Systems Journal*, vol. 33, no. 5, pp. 995–1028, 2023. Available: <https://doi.org/10.1111/isj.12433>
- [7] C. Soh, S. S. Kien, and J. Tay-Yap, "Enterprise resource planning: cultural fits and misfits: is ERP a universal solution?" *Communications of the ACM*, vol. 43, no. 4, pp. 47–51, 2000. Available: <https://doi.org/10.1145/332051.332070>
- [8] E. Hustad and B. Kalvenes, "ERP and Organizational Misfits: An ERP Customization Journey," *Procedia Computer Science*, vol. 100, pp. 429–439, 2016. Available: <https://doi.org/10.1016/j.procs.2016.09.179>
- [9] T. Winkler, S. Krogh, U. Plesner, L. Justesen, T. B. Jensen, "A Real 'Killer' Application? Organization-System Misfits of the Danish Health Platform," *Proceedings of the 41st International Conference on Information Systems (ICIS)*, 2020.
- [10] D. Strong and O. Volkoff, "Understanding Organization-Enterprise System Fit: A Path to Theorizing the Information Technology Artifact," *MIS Quarterly*, vol. 34, no. 4, pp. 731–756, 2010. Available: <https://doi.org/10.2307/25750703>
- [11] M. A. G. van Offenbeek, J. F. J. Vos, B. van den Hooff, and A. Boonstra, "When workarounds aggravate misfits in the use of electronic health record systems," *Information Systems Journal*, vol. 34, no. 2, pp. 293–326, 2023. Available: <https://doi.org/10.1111/isj.12478>
- [12] T. S. Yen, R. Idrus, and U. K. Yusof, "A Framework for classifying misfits between enterprise resource planning (ERP) systems and business strategies," *Asian Academy of Management Journal*, vol. 16, no. 2, pp. 53–75, 2011.
- [13] I. Lahlou, N. Motaki, D. Sarsri, and H. L'Yarfi, "Fit-Gap Analysis: Pre-Fit-Gap Analysis Recommendations and Decision Support Model," *International Journal of Advanced Computer Science and Applications*, vol. 13, no. 7, 2022. Available: <https://doi.org/10.14569/IJACSA.2022.0130749>
- [14] M. I. Wijaya, Suzanna, D. Utomo, "Enterprise Resource Planning Modification: A Literature Review," *ComTech: Computer, Mathematics and Engineering Applications*, vol. 12, no. 1, pp. 33–43. Available: <https://doi.org/10.21512/comtech.v12i1.6610>
- [15] A. Jegorova, "Resolving system-organisational misfits: development and assessment of a misfit resolution framework for off the-shelf ERP systems," *Joint Proceedings of the BIR 2025 Workshops and Doctoral Consortium, co-located with 24th International Conference on Perspectives in Business Informatics Research (BIR 2025)*, vol. 4034, pp. 61–69, 2025. Available: <https://ceur-ws.org/Vol-4034/paper96short.pdf>
- [16] M. J. Page et al., "The PRISMA 2020 statement: an updated guideline for reporting systematic reviews," *BMJ*, 2021. Available: <https://doi.org/10.1136/bmj.n71>

- [17] S. K. Sia and C. Soh, "An assessment of package–organisation misalignment: institutional and ontological structures," *European Journal of Information Systems*, vol. 16, no. 5, pp. 568–583, 2007. Available: <https://doi.org/10.1057/palgrave.ejis.3000700>
- [18] J. Grabis, "Optimization of Gaps Resolution Strategy in Implementation of ERP Systems," in *Proceedings of the 21st International Conference on Enterprise Information Systems*, vol. 1, pp. 84–92, 2019. Available: <https://doi.org/10.5220/0007710000840092>
- [19] S. Gregor, "The Nature of Theory in Information Systems," *MIS Quarterly*, vol. 30, no. 3, pp. 611–642, 2006. Available: <https://doi.org/10.2307/25148742>
- [20] M. B. Miles and A. M. Huberman, *Qualitative Data Analysis*. Sage Publications, 1994.
- [21] J. vom Brocke, A. Simons, B. Niehaves, K. Riemer, R. Plattfaut, and A. Clevén, "Reconstructing the Giant: On the Importance of Rigour in Documenting the Literature Search Process," in *ECIS 2009 Proceedings*, article 161, 2009. Available: <https://aisel.aisnet.org/ecis2009/161>
- [22] F. Wahid and P. Setyono, "Dealing with the misfits in and ERP implementation: experiences from a university context in Indonesia," *Seminar Nasional Aplikasi Teknologi Informasi 2010 (SNATI 2010)*, pp. D13–D20, 2010.
- [23] T. Shiang-Yen, W. W. Peng, and R. Idrus, "ERP Misfit-Reduction Strategies: A Moderated Model of System Modification and Organizational Adaptation," *Developing Business Strategies and Identifying Risk Factors in Modern Organization*, pp. 109–141, 2014. Available: <https://doi.org/10.4018/978-1-4666-4860-9.ch008>
- [24] J. A. A. van Beijsterveld, and W. J. H. van Groenendaal, "Solving misfits in ERP implementations by SMEs," *Information Systems Journal*, vol. 26, no. 4, pp. 369–393, 2016. Available: <https://doi.org/10.1111/isj.12090>
- [25] J. Malaurent and S. Karanasios, "Learning from Workaround Practices: the Challenge of Enterprise System Implementations in Multinational Corporations," *Information Systems Journal*, vol. 30, no. 4, pp. 639–663, 2019. Available: <https://doi.org/10.1111/isj.12272>
- [26] G. Paré, M.-C. Trudel, M. Jaana, and S. Kitsiou, "Synthesizing information systems knowledge: A typology of literature reviews," *Information & Management*, vol. 52, no. 2, pp. 183–199, 2015. Available: <https://doi.org/10.1016/j.im.2014.08.008>