

Agile Adoption and its Impact on Inter-team Technical Coordination and Delivery Perception in Hybrid IT Organisations

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Master's thesis

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This study investigates how agile adoption influences inter-team technical coordination and stakeholder perception of delivery in hybrid IT organisations where agile and traditional methodologies coexist. Through a single case study within a multinational cosmetics company, seven semi-structured interviews were conducted with stakeholders across different coordination interfaces, using an integrated framework combining Thompson's Interdependence Theory and Freeman's Stakeholder Theory.

The findings reveal that hybrid IT environments develop sophisticated coordination mechanisms beyond traditional approaches: standardisation through documentation and quality standards, planning through release-based coordination and roadmapping, and mutual adjustment through over-communication strategies and small-group meetings. Emergent hybrid-specific mechanisms include Product Owner translation roles, branch-based integration strategies, and definition of done alignment processes.

Regarding stakeholder perception, timeline adherence emerges as the dominant success factor across all stakeholder groups, transcending methodological preferences. Stakeholders develop multi-criteria quality assessment frameworks while requiring transparency about progress and risk to maintain confidence in hybrid environments.

This research extends Thompson's theory by identifying hybrid-specific coordination mechanisms and contributes to Stakeholder Theory by examining perception formation across multiple delivery methodologies. The findings provide practical guidance for coordination design and stakeholder management in hybrid IT organisations.

Key words: Agile Delivery, Hybrid IT Environments, Technical Coordination, Delivery Perception, Interdependence Theory, Stakeholder Theory

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1 Introduction

1.1 Background

Since the publication of the Manifesto for Agile Software Development (Beck et al., 2001), agile practices have gained widespread adoption across the information technology industry. The Agile Manifesto promised to revolutionise IT project management, emphasising on individuals and interactions over processes and tools, working software over comprehensive documentation, customer collaboration over contract negotiation, and responding to change over following a plan (Beck et al., 2001).

The fundamental characteristic of agile project management lies in its iterative processes with incremental releases, contrasting sharply with traditional approaches that favour complete project deliveries (Zasa et al., 2020). This iterative approach places stakeholder needs and expectations at the centre of development processes, with agile teams maintaining regular communication with external stakeholders, including business users, through regular meetings called ceremonies (Williams, 2012). Such increased visibility throughout the development lifecycle has demonstrated significant impact on overall project success perception and stakeholder satisfaction.

Despite extensive research examining the performance outcomes of agile projects (Bechtel, Kaufmann & Kock, 2022), a critical gap remains in understanding how inter-team coordination in agile contexts influences stakeholder perception of project success. This gap is particularly significant given that inter-team coordination has been identified as the most pertinent large-scale agile challenge requiring immediate research attention, according to Dingsøy et al.'s paper (2013).

Contemporary organisational reality reveals that companies rarely implement pure methodological approaches. Instead, organisations typically select and combine methodological elements to suit their specific operational needs and contextual constraints (Fitzgerald et al., 2006; Conboy & Fitzgerald, 2010). This pragmatic approach has led to the emergence of hybrid methodologies, particularly in large, mature organisations where agile practices are combined with traditional plan-driven methods to leverage the strengths of both approaches (Barlow et al., 2011). The prevalence of hybrid implementations reflects the recognition that different organisational contexts, project types, and stakeholder groups may benefit from different methodological approaches. However, this methodological diversity introduces complex coordination challenges when teams using different delivery logics must collaborate to achieve shared organisational objectives (Bick et al., 2018).

1.2 Problem Statement and Motivation

The increasing adoption of hybrid IT delivery approaches has created a critical research and practical gap in understanding how coordination mechanisms function when agile and traditional methodologies must coexist and collaborate. While existing literature extensively documents coordination within homogeneous methodological environments, limited research examines the specific coordination challenges and stakeholder perception dynamics that emerge when different delivery approaches operate simultaneously within the same organisational context.

This research problem is particularly relevant given the growing complexity of modern IT delivery environments, where organisations must balance agile responsiveness with traditional predictability requirements while managing diverse stakeholder expectations. The coordination challenges extend beyond simple process integration to encompass fundamental differences in planning horizons, quality definitions, communication patterns, and success metrics between agile and traditional approaches. From a stakeholder perspective, hybrid environments create additional complexity in success evaluation. Stakeholders must navigate different progress demonstrations, quality indicators, and completion definitions simultaneously, potentially leading to conflicting perceptions of project health and success. Understanding how stakeholders form perceptions of delivery success in these complex environments is essential for effective project management and organisational success.

The practical motivation for this research stems from organisational needs to improve inter-team coordination effectiveness and enhance stakeholder satisfaction with IT delivery outcomes. Organisations implementing hybrid approaches require evidence-based guidance for coordination mechanism design and stakeholder expectation management to maximise the benefits of methodological diversity while minimising coordination overhead and stakeholder confusion.

1.3 Research question

The study addresses the research question: *How does agile adoption influence inter-team technical coordination and stakeholder perception of delivery in hybrid IT organisations?*

To comprehensively examine the phenomenon, three specific research questions guide the investigation:

RQ1: *What technical coordination mechanisms emerge when traditional and agile teams collaborate in hybrid IT environments?*

RQ2: *How do the differences in delivery logic between agile and traditional teams affect technical coordination and project outcomes?*

RQ3: *What factors influence stakeholder perception of delivery success in hybrid IT environments where both agile and traditional methods coexist?*

The following conceptual model illustrates the relationship between the three key constructs of the research questions.

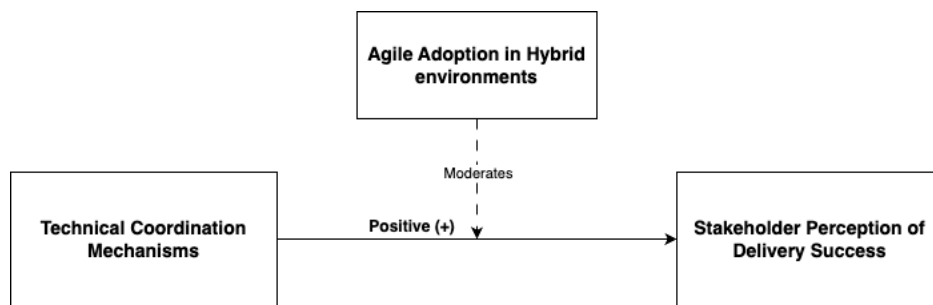


Figure 1. Conceptual Model

1.4 Research Method

This study employs a single revelatory case study design within a large multinational cosmetics organisation operating hybrid IT environments. The qualitative approach enables deep investigation of complex coordination dynamics and stakeholder perception processes that cannot be separated from their organisational context.

Data collection consists primarily of semi-structured interviews with seven key stakeholders representing different coordination interfaces and organisational roles. The purposive sampling approach ensures coverage of major coordination challenges while maintaining analytical depth. Interview data is supplemented by document analysis and observational data to provide methodological triangulation.

The analysis follows a systematic grounded theory approach, progressing through open coding, axial coding, and selective coding to identify coordination mechanisms, stakeholder perception factors, and their relationships. This approach helps build on existing theory using real practitioner experiences as the foundation.

1.5 Thesis Structure

This thesis is structured as follows: Chapter 2 Literature Review systematically examines existing research on agile adoption, hybrid implementation, and stakeholder perception. The literature review is followed by Chapter 3 Theoretical Framework that provides elaboration on Thompson's Interdependence Theory and Freeman's Stakeholder Theory with relevance to this study. Chapter 4 Research Methodology elaborates on the steps in the research process for this study, detailing the case study design and data collection procedures. This will be followed by Chapter 5 Data Analysis where the findings from seven key stakeholders in a large multinational cosmetics organisation will be presented. The concluding sections of this thesis are Chapter 6 Discussion and Chapter 7 Conclusion, providing results, theoretical and practical implications, limitations encountered, and suggestions for future work in the field of hybrid IT coordination.

2 Literature Review

2.1 Agile Adoption and Implementation in Hybrid Organisations

2.1.1 The Rise of Hybrid Approaches in Practice

Contemporary organisations increasingly adopt hybrid methodologies rather than pure agile or traditional approaches, reflecting the practical challenges of implementing single methodologies across complex organisational structures. Papadakis and Tsironis (2018) found that while 71% of organisations use agile approaches, one in five projects employ hybrid combinations, with Scrum dominating individual methodology adoption (72% of studies). Scrum has been described as a “lightweight framework that helps people, teams and organizations generate value through adaptive solutions for complex problems” (Schwaber & Sutherland, 2020). This widespread hybrid adoption suggests that organisations naturally recognise the limitations of pure methodological approaches when facing diverse project requirements, stakeholder expectations, and organisational constraints.

Recent systematic literature review evidence further confirms this trend toward hybrid implementation. Cimini et al. (2024) conducted a comprehensive analysis of 1,509 studies using the PRISMA 2020 framework, ultimately identifying 38 relevant studies specifically focused on hybrid scaling of agile methodologies. Their findings indicate that “the majority of studies are from 2021 onwards and that qualitative methodologies supported by case studies predominate, making it possible to characterize tailoring processes in these organizations” (Cimini et al., 2024). This recent surge in hybrid research reflects the growing practical importance of these approaches, Table 1 presents a brief overview of previous studies on agile and hybrid IT settings.

This trend toward hybrid implementation is further supported by Berntzen et al. (2023), who observed that large-scale agile environments commonly combine agile methods at the team level with traditional project management approaches at the inter-team level. This multi-level approach reflects the practical reality that while agile methodologies excel at team-level coordination and rapid iteration, they may require supplementation with traditional approaches for managing complex inter-team dependencies and stakeholder expectations across larger organisational contexts.

These findings suggest that practitioners naturally recognise the need to leverage different methodological strengths depending on context and scale, challenging the assumption that organisations should commit to single methodological approaches. However, multiple studies

identify that existing research has not adequately examined how different delivery logics affect inter-team coordination when both approaches must coexist within the same organisational context (Zasa et al., 2020; Daneva et al., 2013; Berntzen et al., 2023).

Table 1. Overview of related and relevant literature on Agile and Hybrid IT settings

Author(s)	Title	Journal (year)	Objective
Gemino, A., Horner Reich, B., & Serrador, P. M.	Agile, traditional, and hybrid approaches to project success: is hybrid a poor second choice?	Project Management Journal (2021)	Examine project success factors across agile, traditional, and hybrid methodologies using large-scale empirical data
Zasa, F.P., Patrucco, A., & Pellizzoni, E.	Managing the hybrid organisation: how can agile and traditional project management coexist?	Innovation Research Interchange (2020)	Investigate coordination challenges and solutions when agile and traditional methodologies coexist within the same organisation
Barlow, J.B., Giboney, J.S., Keith, M.J., Wilson, D. W., Schuetzler, R. M., Lowry, P.B., & Vance, A	Overview and guidance on agile development in secure environments	Communications of the Association for Information Systems (2011)	Develop framework for understanding interdependencies between agile and traditional approaches using Thompson's coordination theory
Berntzen, M., Hoda, R., Brede Moe, N., & Stray, V.	Coordination in large-scale agile: a systematic literature review	IEEE Transactions on Software Engineering (2023)	Systematically examine coordination mechanisms in large-scale agile environments and identify research gaps
Dingsøy, T., Bjørnson, F.O., & Schrof, J., Sporse, T.	What do we know about knowledge management and distributed agile development	Empirical Software Engineering (2022)	Investigate knowledge coordination challenges in distributed agile environments and their impact on project outcomes
Bick, S., Spohrer, K., Hoda, R., Scheerer, A., & Heinzl, A.	Coordination challenges in large-scale software development: a case study of planning misalignment in hybrid settings	IEEE Transactions on Software Engineering (2018)	Investigation coordination effectiveness challenges in large-scale development teams and identify dependence awareness as key factor for effective coordination

2.1.2 Fundamental Differences in Delivery Logics

The challenge of hybrid implementation stems from fundamental philosophical differences between agile and traditional approaches that extend beyond simple process variations. Zasa et al. (2020) highlighted that Stage-Gate methodologies, which use sequential phase-gate reviews where projects must meet specific criteria before proceeding, rely on hierarchy and operate by combining different

functional perspectives (the “silos” view), while Agile challenges these structural boundaries through cross-functional teams. These contrasting approaches create tensions around resource allocation, decision-making authority, and progress measurement.

Quality approaches further illustrate these philosophical differences. Nader-Rezvani (2019) noted that built-in quality is expected in Agile, while traditional approaches often treat quality as an afterthought. This distinction creates different expectations about when and how quality is addressed in project workflows, representing a core delivery logic difference that extends beyond mere process variations.

2.1.3 Coordination Challenges in Hybrid Environments

The coordination implications of these different delivery logics are significant. Barlow et al. (2011) identified that plan-driven methodologies assume interdependencies are mostly sequential and manageable through planning, while agile methodologies assume most interdependencies are reciprocal, requiring mutual adjustment coordination. Their analysis revealed that using planning for reciprocal interdependencies creates unnecessary costs, while using planning for reciprocal interdependencies proves inadequate.

Contemporary research on inter-team coordination provides deeper insight into these coordination challenges. Wagner (2024) demonstrates that coordination requirements become particularly complex in hybrid environments where teams operate under different assumptions about interdependence management. His literature review confirms that the three basic coordination mechanisms, mutual adjustment, direct supervision, and standardisation, remain relevant in contemporary multi-team contexts, directly echoing Thompson’s original framework.

Building on this understanding, Berntzen et al. (2023) noted that coordination mechanisms must address different types of dependencies, knowledge, processes, and resource dependencies, which align with different delivery approaches. The challenge intensifies because these dependency types may require different coordination mechanisms simultaneously, creating coordination complexity that pure methodological approaches may not adequately address. However, current research has not examined how teams reconcile conflicting approaches to managing these dependencies when operating within the same programme.

2.1.4 Bridging Mechanisms between Different Methodologies

Some research indicates that organisations develop specific mechanisms to bridge methodological differences, though these solutions remain limited in scope and application. Daneva et al. (2013) identified that vendor organisations developed “delivery stories” as novel artefacts that complement user stories with technical implications, effort estimation, and associated risk. These delivery stories serve as translation mechanisms, structured approaches that convert information and requirements between different methodological frameworks. In this case, they bridge client-focused user stories and vendor-focused implementation requirements.

Similarly, Conboy and Fitzgerald (2010) found that Extreme Programming (XP)’s practices are “daisy-chained” and “synergistic”, creating a “self-referential safety net” where practices cannot be removed due to interdependencies. Their framework revealed that different delivery approaches have fundamentally different logics that resist simple coordination. Most teams conduct method tailoring in ad hoc ways based on intuition rather than systematic analysis. Despite these insights into individual methodology characteristics and some translation mechanisms, existing research has not investigated how specific technical coordination mechanisms function when teams using different methodologies must collaborate, nor how stakeholder perceptions are affected by these different delivery approaches operating simultaneously.

2.2 Technical Coordination in Hybrid Settings

2.2.1 The Prevalence and Structure of Hybrid Coordination

Evidence suggests that hybrid coordination is now the norm rather than the exception in contemporary IT environments. Gemino et al. (2021) found that 52% of projects in their 477-project international study could be categorised as hybrid approaches, with waterfall methods (51% of hybrid projects) commonly combined with Scrum practices (59% of hybrid projects). This widespread adoption indicates that organisations naturally integrate different methodological frameworks, though their study measured approaches at a high level without examining specific coordination mechanisms.

Organisations attempt to address hybrid coordination through deliberate structural interventions. Zasa et al. (2020) identified three categories of corrective actions: integration actions (gradual introduction, managerial focus), cultural change actions (team workshops, hybrid team establishment), and perception management actions (expectation alignment). Their findings

revealed that successful hybrid implementations require “mapping and identifying possible interdependencies between the development team and the day-to-day processes” and establishing formal work agreements to govern cross-team relationships.

2.2.2 Types of Dependencies and Coordination Mechanisms

Research has identified multiple dependency types that require coordination in hybrid environments, building from foundational theoretical frameworks to comprehensive empirical taxonomies. Daneva et al. (2013) found that large outsourced agile projects require understanding six types of dependencies: inter-domain, intra-domain, downstream activities, team-based, user story, and delivery story dependencies. Building on this understanding, Barlow et al. (2011) developed a framework based on Thompson’s interdependency theory, identifying pooled interdependencies (managed through standardisation), sequential interdependencies (managed through planning), and reciprocal interdependencies (managed through mutual adjustments). This theoretical foundation provides essential conceptual grounding for understanding how different types require different coordination approaches, though the application to hybrid environments where multiple methodological assumptions coexist remains underexplored.

The complexity of coordination in contemporary IT environments has led to increasingly sophisticated taxonomy from large-scale studies. Berntzen et al. (2022) developed a taxonomy of 27 inter-team coordination mechanisms categorised into meetings (scheduled and unscheduled), roles (individual and team roles), and tools and artefacts (tangible and intangible). Similarly, Dingsøyr et al. (2022) identified 27 coordination mechanisms, including both formal mechanisms (scrum of scrums meetings, technical architecture forums) and informal mechanisms (pair programming, ad hoc meetings, instant messaging). However, these comprehensive studies focused on coordination within consistent methodological environments rather than examining how different coordination mechanisms function when agile and traditional teams must collaborate (Berntzen et al. 2022, Dingsøyr et al. 2022).

2.2.3 Coordination Challenges and Breakdown Points

Empirical studies reveal specific coordination challenges in hybrid environments. Zasa et al. (2020) found that hybrid organisations face coordination challenges including “different planning cycles, management skepticism, lack of support to dedicated teams, and the difficulty of producing a modular product to be completed within a short sprint”. These coordination barriers specifically arise from integrating Agile practices within existing Stage-Gate systems. These challenges reflect

deeper tensions between methodological assumptions about planning horizons, decision-making authority, and deliverable granularity that create systematic friction points when different approaches must coordinate their interdependencies.

The coordination breakdown extends beyond structural challenges to encompass dependency awareness that emerges as a critical challenge. Bick et al. (2018) identified lack of dependency awareness as the key explanation for ineffective coordination in their case study of 13 development teams. Their study revealed that teams frequently experienced blocking situations caused by unidentified dependencies, with coordination challenges emerging from misaligned planning activities between team and inter-team levels, specifically in specification, prioritisation, estimation, and allocation phases.

Similarly, Dingsøyr et al. (2022) found that knowledge coordination presents friction points. They found that business stakeholders were overloaded with meetings and experienced significant delays between solution descriptions and actual development work, with teams experiencing long feedback loops and limited learning across organisational lines when coordination relied heavily on formal handovers and documentation. These coordination failures demonstrate that hybrid environments create information processing challenges that extend beyond individual team capabilities to affect inter-team knowledge flows and stakeholder engagement effectiveness.

2.2.4 Specialised Coordination Roles and Artefacts

Organisations develop specialised coordination mechanisms to bridge methodological differences. Daneva et al. (2013) found that large outsourced agile projects require five distinct vendor-side roles for collaborative requirements decision-making: business analyst, tech lead, domain owner, delivery team head, and test scenario team lead. These roles work alongside client-side product owners and subject matter experts to manage coordination complexity. Bass et al. (2018) identified that product owners perform eight core activities, including Groom, Prioritiser, Release Master, Communicator, Traveller, Intermediary, Gatekeeper, and Customer Relationship Manager, demonstrating how these roles “require experience and high-status in order to be able to exert influence over other project stakeholders” and bridge methodological differences through multifaced coordination activities.

The specialisation extends beyond roles to encompass specific coordination artefacts and ceremonies. Neelu and Kavitha (2021) proposed incorporating sprint kick-off meetings, daily scrum meetings, sprint planning meetings, and scrum review meetings with defined participants from

different methodological backgrounds. Similarly, Nader-Rezvani (2019) found that successful quality transformation required establishing cross-functional Quality Steering Committees including Support Leaders, DevOps Leaders, PM Leaders, Development Leaders, and Test Architects working together weekly. These formal coordination structures represent organisational attempts to systematically bridge methodological differences through structured interaction mechanisms.

Despite these insights into coordination roles and artefacts, existing research has not examined how these specialised coordination mechanisms function at the operational level when teams with different delivery logics must collaborate daily, nor how they manage the integration of deliverables across methodological boundaries.

2.3 Project Success and Quality Perceptions

2.3.1 Evidence for Superior Stakeholder Satisfaction in Hybrid Approaches

Empirical evidence suggests that hybrid approaches achieve strong stakeholder satisfaction outcomes. Gemino et al. (2021) measured project success using three distinct factors: budget and time success, scope and quality success, and stakeholder success (combining sponsor, client, and team satisfaction). Their regression analysis found that both agile and hybrid approaches significantly outperformed traditional approaches on stakeholder success measures, with hybrid approaches achieving nearly the same stakeholder satisfaction levels as fully agile approaches. Notably, while agile and hybrid approaches showed no significant differences from traditional approaches on budget, time, scope, and quality outcomes, they delivered superior stakeholder satisfaction.

This finding is supported by smaller-scale studies. Neelu and Kavitha (2021) achieved an average of 93% customer satisfaction across four sprints in their hybrid case study, with individual sprint ratings ranging from 86% to 97%. Their analysis found that understandability had the greatest impact on quality perception (impact score of 24), followed by performance, usability, and availability.

2.3.2 Different Success Criteria Across Methodological Approaches

The superior stakeholder satisfaction in hybrid approaches may stem from different methodological strengths addressing varied stakeholder preferences. Barlow et al. (2011) noted that agile methods promote focus on customer needs through availability that allows customer-requested changes in subsequent iterations, while traditional methods provide structure and format communication that

some stakeholders prefer. Their framework suggests that stakeholder expectations and organisational culture significantly influence methodology success, with some teams being better suited to clearly defined roles and policies rather than agile flexibility.

However, this methodological diversity creates potential alignment challenges. Nader-Rezvani (2019) documented significant variations in how different stakeholders perceived project success, finding that customers focused on total customer experience while internal teams often measured success through technical metrics like defect counts and automation coverage. The author noted that customers make key business investment decisions based on their perception of quality, while development teams measured success differently, suggesting that stakeholder roles influence success perception criteria.

2.3.3 Perception Challenges in Hybrid Implementation

Hybrid environments create specific perception management challenges due to conflicting expectations between methodological approaches that extend beyond simple communication problems to encompass fundamental differences in how project success is defined and demonstrated. Zasa et al. (2020) found that hybrid implementations create perception challenges where Agile teams must collaborate with managers to align expectations and project outcomes due to conflicts between top-down expectations and bottom-up implementation. Their research revealed that managers typically expect radically faster schedules, while Agile's iterative nature benefits most from interactions and collaboration, creating misaligned success criteria.

These perception challenges manifest at operational levels as well. Bick et al. (2018) noted that coordination effectiveness was perceived differently across hierarchical levels, with central teams believing coordination worked adequately while development teams experienced significant blocking issues. Teams experienced frequent frustrations, with product owners describing the development process as delivering to a "black box" and developers reporting unclear requirements and priorities.

2.3.4 Limited Understanding of Hybrid-Specific Perception Formation

Despite evidence of superior stakeholder satisfaction in hybrid approaches, current research has not adequately examined how stakeholder perceptions of delivery success are formed in hybrid environments where different teams may demonstrate progress and quality differently based on their methodological approaches. This gap becomes particularly significant when considering that

agile and traditional methodologies demonstrate value through fundamentally different mechanisms: agile through working software and iterative improvement and traditional through milestone completion and documentation quality, yet stakeholders must evaluate integrated deliverables that combine outputs from both approaches. Furthermore, existing studies have not investigated how different stakeholder groups form perceptions of project success when multiple delivery approaches are used simultaneously or how these different success perceptions are formed and negotiated when agile and traditional approaches must deliver integrated solutions to the same stakeholder groups (Barlow et al., 2011; Nader-Rezvani, 2019).

The research gap is particularly notable given that studies examining perception differences have focused on teams transitioning to similar methodologies or working within single methodological approaches, rather than exploring how stakeholders using different delivery logics perceive and evaluate coordination success when working with counterparts using contrasting methodological approaches (Dingsøyr et al., 2022; Bick et al., 2018). This limitation means that while research documents coordination mechanisms and stakeholder outcomes separately, the critical relationship between coordination effectiveness and stakeholder perception formation in hybrid environments remains unexplored.

3 Theoretical Framework

3.1 Introduction to the Theoretical Framework

This study employs an integrated theoretical framework combining Thompson's Interdependence Theory (1967) and Stakeholder Theory (Freeman, 1984) to examine coordination mechanisms and stakeholder perceptions in hybrid IT environments. This combination provides a comprehensive lens for understanding both the structural coordination challenges that arise when agile and traditional methodologies coexist and how different stakeholders perceive and evaluate project success in these complex environments.

The theoretical framework addresses three critical dimensions of hybrid IT coordination: structural interdependencies that require coordination mechanisms (Thompson, 1967), stakeholder relationships that influence project success perceptions (Freeman, 1984), and interaction effects between coordination approaches and stakeholder evaluations. This integrated approach enables a nuanced analysis of how technical coordination mechanisms function in practice and how they shape stakeholder experiences of hybrid project delivery.

3.2 Thompson's Interdependence Theory

3.2.1 Foundations of Interdependence Theory

James D. Thompson's seminal work "Organizations in Action" (1967) provides a foundational framework for understanding how organisations coordinate work across different units and methodologies. Thompson's theory is particularly relevant to hybrid IT environments because it addresses the fundamental challenges of managing different types of work dependencies through appropriate coordination mechanisms.

Thompson identified three distinct types of interdependence, each requiring different coordination approaches. His theory posits that organisational effectiveness depends on matching the appropriate coordination mechanism to the type of interdependence present. This matching principle is especially critical in hybrid environments where teams using different methodologies must collaborate despite having fundamentally different approaches to managing dependencies.

3.2.2 Types of Interdependence

Pooled Interdependence represents the loosest form of interdependence, where units contribute independently to the overall organisational output without direct interaction. In hybrid IT environments, pooled interdependence might occur when agile and traditional teams work on separate system components that eventually integrate at the final delivery stage. Each team operated according to its preferred methodology without requiring ongoing coordination with teams using different approaches.

Sequential Interdependence occurs when the output of one unit becomes the direct input for another unit, creating a linear dependency chain. This type of interdependence is common in hybrid IT environments when agile teams must deliver components that traditional teams then integrate into large system architectures or when traditional requirements analysis feeds into agile development sprints.

Reciprocal Interdependence represents the most complex form, where units exchange outputs cyclically, with each unit's work serving as input for others in an ongoing, iterative process. In hybrid IT contexts, reciprocal interdependence emerges when agile and traditional teams must continuously exchange information, feedback, and deliverables throughout the project lifecycle. This creates the highest coordination demands, as teams must reconcile different planning cycles, review processes, and quality standards.

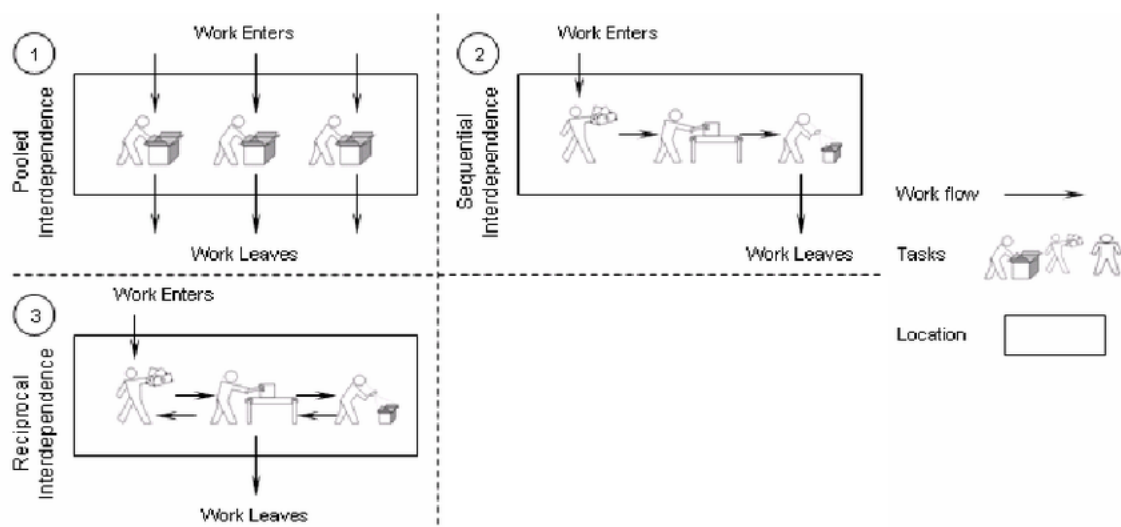


Figure 2. Types of task interdependence (based on Thompson, 1967; Vand de Ven et al., 1976)

3.2.3 Coordination Mechanisms

Thompson's theory prescribes specific coordination mechanisms for each type of interdependence, arranged in order of increasing coordination intensity and cost.

Standardisation serves as the primary coordination mechanism for pooled interdependence. This involves establishing common rules, procedures, and standards that enable independent units to contribute coherently to organisational outcomes. In hybrid IT environments, standardisation might include common documentation formats, shared quality criteria, or unified interface specifications that allow agile and traditional teams to work independently while ensuring their outputs integrate effectively.

Planning and Scheduling coordinate sequential interdependence by establishing predetermined workflows, timelines, and handoff procedures. This mechanism requires advance specification of what outputs each unit will produce, when they will be delivered, and how they will interface with subsequent work. For hybrid IT projects, planning mechanisms must accommodate the different planning horizons and iteration cycles of agile versus traditional approaches while maintaining overall project coherence.

Mutual Adjustment addresses reciprocal interdependence through ongoing communication, negotiation, and real-time problem-solving between interdependent units. This mechanism relies on continuous information exchange and collaborative decision-making to manage the complex, dynamic dependencies that characterise reciprocal interdependence. In hybrid IT environments, mutual adjustment mechanisms must bridge different communication styles, decision-making processes, and feedback cycles between agile and traditional teams.

3.3 Freeman's Stakeholder Theory

3.3.1 Foundations of Stakeholder Theory

R. Edward Freeman's stakeholder theory, introduced in "Strategic Management: A Stakeholder Approach" (1984), fundamentally reconceptualises how organisations understand success and value creation. Rather than focusing solely on shareholder value maximisation, stakeholder theory posits that organisational success depends on effectively managing relationships with all parties who can affect or are affected by organisational activities.

Freeman's original definition of stakeholders as "any group or individual who can affect or is affected by the achievement of the organisation's objectives" has evolved to encompass a broader understanding of stakeholder relationships as the fundamental source of organisational value creation. This perspective is particularly relevant to hybrid IT environments, where projects involve multiple stakeholder groups with different backgrounds, expectations, and evaluation criteria.

3.3.2 Stakeholder Perception and Success Evaluation

Stakeholder theory recognises that different stakeholders hold varying and sometimes conflicting definitions of project success based on their roles, priorities, and organisational positions. Technical stakeholders might prioritise system performance and maintainability, business stakeholders focus on ROI and strategic alignment, while end users emphasise usability and functionality. Mitchell, Agle, and Wood (1997) suggest that stakeholders with greater power, legitimacy, and urgency in their claims will have stronger influence on how project success is defined and evaluated.

In hybrid IT contexts, stakeholder perceptions become particularly complex because agile and traditional methodologies demonstrate and measure progress differently. Agile approaches emphasise working software, user feedback, and iterative improvement, while traditional approaches focus on milestone completion, documentation quality, and adherence to original specifications. These different progress demonstrations can lead to conflicting stakeholder perceptions of project success and health.

Furthermore, hybrid environments complicate stakeholder evaluation because different methodologies prioritise different stakeholder groups. Agile methodologies typically emphasise direct user involvement and frequent feedback, while traditional approaches may prioritise formal sponsor approval and compliance stakeholders. This creates situations where the same coordination mechanisms or project outcomes may be perceived positively by stakeholders accustomed to one methodological approach while being viewed negatively by those expecting different communication patterns, involvement levels, or success metrics.

3.4 Integrated Theoretical Framework

The integration of Thompson's Interdependence Theory and Freeman's Stakeholder Theory creates a comprehensive framework for understanding hybrid IT coordination from both structural and relational perspectives. Thompson's theory explains the technical coordination challenges that arise

from different types of work dependencies, while Stakeholder Theory explains how different groups perceive and evaluate the coordination solutions implemented to address these challenges.

This integration recognises that coordination mechanisms are not merely technical solutions but social processes that affect stakeholder relationships and perceptions. The choice of coordination mechanism influences how stakeholders experience project communication, decision-making, and progress demonstration. Conversely, stakeholder expectations and preferences influence the feasibility and effectiveness of different coordination approaches.

Building on these theoretical foundations, this study integrates both theories to examine hybrid IT coordination. Figure 3 illustrates this integration, synthesising Thompson's three types of interdependence with their corresponding coordination mechanisms and explicitly links these to different stakeholder perception processes. This diagram represents an original contribution of this research, connecting two previously separate theoretical domains to understand hybrid IT coordination.

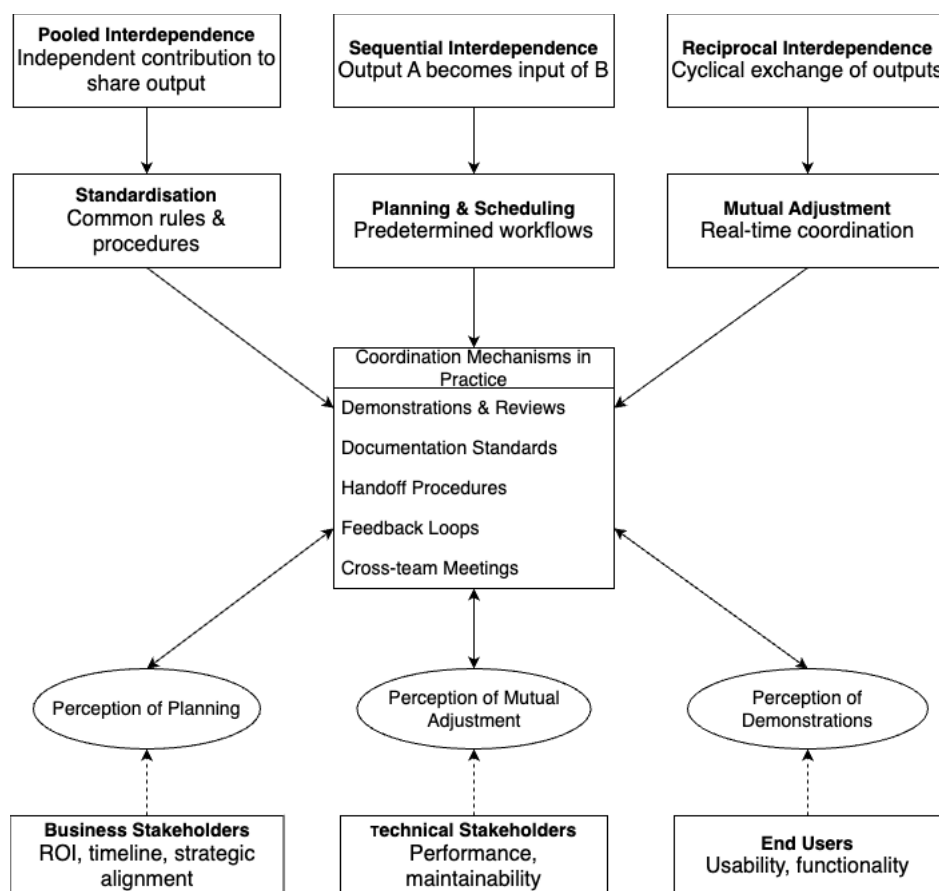


Figure 3. Integrated Theoretical Framework: Coordination Mechanisms and Stakeholder Perceptions in Hybrid IT Environments

4 Research Methodology

4.1 Research Design and Philosophical Approach

This study adopts a positivist case study approach to investigate the relationship between coordination mechanisms and stakeholder perceptions in hybrid IT environments. The positivist paradigm is appropriate for this research as it seeks to identify causal relationships between technical coordination mechanisms, agile practices implementation, and perceived project success through systematic data collection and analysis.

The choice of a positivist approach is justified by the study's objective to develop measurable constructs and testable propositions about both coordination effectiveness and stakeholder perception formation in hybrid environments, building upon the established theoretical foundations of Thompson's Interdependence Theory and Freeman's Stakeholder Theory.

4.1.1 Single Revelatory Case Study Design

This research employs a single, revelatory case study design within a large multinational organisation that operates hybrid IT environments combining agile and traditional methodologies. The case study approach is particularly appropriate for this research because:

- **Contemporary phenomenon:** Hybrid IT coordination represents a current organisational challenge requiring real-world investigation.
- **Complex context:** The integration of different methodological approaches creates intricate coordination dynamics that cannot be separated from their organisational context.
- **Exploratory nature:** Limited existing theory on hybrid coordination mechanisms and particularly the absence of literature examining stakeholder perception formation in hybrid environments, requiring in-depth investigation to develop new theoretical insights.

4.1.2 Unit of Analysis

The primary unit of analysis is the inter-team coordination interface between agile and traditional methodology teams within the same programme or project delivery structure. This includes:

- Coordination mechanisms implemented between teams using different methodologies
- Stakeholder perception formation processes across methodological boundaries
- Integration points where different delivery approaches must collaborate

Sub-units of analysis include individual teams, specific coordination mechanisms (meetings, roles, and artefacts), and stakeholder groups with different methodological preferences.

4.2 Research Constructs and Propositions

Based on the integrated theoretical framework and literature review, this study investigates three primary constructs:

Table 2. List of Constructs

	Definition	Measurement (Attribute)
Technical Coordination Effectiveness (A)	The degree to which coordination mechanisms successfully manage interdependencies between agile and traditional teams within inter-team interfaces	<ul style="list-style-type: none"> • Frequency and effectiveness of coordination mechanisms used • Quality of dependency identification and resolution • Time to resolve cross-team issues • Stakeholder satisfaction with information flow
Perceived Project Success (B)	Stakeholder evaluations of project delivery quality, timeline adherence, and outcome satisfaction when agile and traditional approaches collaborate on the same deliverable	<ul style="list-style-type: none"> • Stakeholder satisfaction ratings across methodological boundaries • Alignment between different success criteria definitions • Consistency of success perceptions across stakeholder groups • Quality perception of integrated deliverables
Agile Practices degree (C)	The extent to which teams implement agile practices within the hybrid environment and their ability to adapt these practices when coordinating with traditional teams	<ul style="list-style-type: none"> • Level of agile practice adoption (ceremonies, artefacts, roles) • Degree of practice modification for hybrid coordination • Flexibility in adapting agile practices to interface requirements • Integration of agile practices with traditional coordination mechanisms

4.3 Data Collection

4.3.1 Primary Data Collection: Semi-Structured Interviews

The primary data collection method consists of semi-structured interviews with key stakeholders involved in hybrid IT coordination. This approach allows for systematic construct investigation while maintaining flexibility to explore emergent themes. Multiple criteria were used to select participants.

Inclusion Criteria:

- Active involvement in projects combining agile and traditional methodologies within the past 12 months
- Direct experience with inter-team coordination mechanisms

- Role responsibility for either coordination implementation or stakeholder communication
- Minimum 2 years' experience in IT project delivery

Exclusion Criteria:

- Involvement solely in pure agile or pure traditional projects
- Limited exposure to cross-methodological coordination challenges

Data collection was conducted in two rounds using different interview guides to capture diverse perspectives while avoiding redundancy. The first round focused on regional actors (P1, P2, P3) who coordinate between their regional agile teams and the central core team. The second round targeted central team members (P4, P5, P6, P7) who manage coordination across multiple regional interfaces and provide oversight of hybrid coordination processes. This two-round approach enabled exploration of coordination mechanisms from both the regional implementation perspective and the central coordination management perspective.

Table 3. Description of Interviewees

	Unit of Analysis	UoA Description	Roles of interviewees	Length of the interview
P1	EU – Central Interface	Inter-team coordination between EU regional agile team and central core team	Product Owner (European Squad)	49 min
P2	NA – Central Interface	Inter-team coordination between NA regional agile team and central core team	Product Owner (North America)	30 min
P3	APAC – Central Interface	Inter-team coordination between APAC regional agile team and central core team	Product Owner (Asia-Pacific squad)	36 min
P4	Central – Regional Interface	Inter-team coordination oversight across multiple regional teams and central core	Digital IT Domain Leader (Central team)	34 min
P5	Central – Regional Interface	Inter-team coordination between central core team and regional teams	Product Owner (Central Team)	31 min
P6	Central – Regional Interface	Inter-team coordination between central core team and regional/ business teams	Product Analyst (Central Team)	45 min
P7	Central – Development Interface	Inter-team coordination between core development and regional implementation	Developer (Central Team)	47 min

4.3.2 Secondary Data Collection

Document Analysis: Project documentation, coordination artefacts (meeting minutes, workflow diagrams, integration plans), and organisational process documentation will provide contextual validation for interview findings. This include analysis of numerous documents in Confluence over 6 months, including 12 sprint review presentations, 12 cross-team Path-to-Promotion meeting minutes and 3 roadmaps.

Observational Data: Non-participant and participant observation of coordination meetings, cross-team planning sessions, and integration activities will provide behavioural validation of reported coordination mechanisms. Observations include daily stand-up meetings (30 minutes each), cross-teams weekly meetings (3 per week), backlog refinement and grooming meetings every 2 weeks (1h each), 12 sprint planning meetings (30min each), 12 demo sessions (1h each), totaling more than 100 hours of observational data over a 6-month period.

4.4 Data Analysis Approach

4.4.1 Grounded Theory Analysis Process

Grounded theory analysis is “a methodology for developing theory that is grounded in data systematically gathered and analyzed” (Strauss & Corbin, 1998). For this research, a systematic grounded theory approach was employed to analyse the interview data, following the iterative coding process recommended by Strauss and Corbin (1998):

- **Data Familiarisation:** All seven interview transcripts were read multiple times to understand the content deeply and identify initial patterns related to coordination mechanisms and stakeholder perceptions. This step involved becoming familiar with participants’ experiences of working across different methodological boundaries to grasp the context and nuances of hybrid coordination challenges.
- **Open Coding:** In this step, meaningful segments of data were identified and labelled through line-by-line analysis. NVivo 15 software was used to organise these codes systematically, generating 31 initial codes across all interviews. Codes were assigned to specific pieces of text that represented important concepts related to coordination mechanisms, stakeholder perception formation, and agile practice adaptation in hybrid environments. This step proved crucial as it established the foundation for category development.

- **Axial Coding:** After open coding, relationships among codes were identified through constant comparison to generate four main categories. These categories represent broader conceptual groupings that capture the primary coordination and perception phenomena expressed in the data: Coordination Mechanisms (8 codes), Stakeholder Perception Factors (9 codes), Agile Hybrid Adaptation (7 codes), and Cross-Methodology Challenges (7 codes). This step involved examining how codes related to each other and to the core research constructs.
- **Findings Integration:** The final step involved integrating the categories and relationships to provide comprehensive understanding of how coordination mechanisms influence stakeholder perceptions in hybrid IT environments. This step organized the empirical findings to address the research questions about coordination effectiveness and perception formation.

4.5 Validity and Reliability

4.5.1 Internal Validity

To ensure construct validity and reliability, this study employs multiple forms of triangulation. Person triangulation involves conducting multiple interviews from each unit of analysis to capture diverse perspectives within the same organisational context. Method triangulation combines interviews as the primary data source with document analysis and non-participant observation to validate reported coordination mechanisms. Time triangulation collects data across multiple project phases to capture the dynamic nature of coordination processes and stakeholder perception formation.

4.5.2 External validity

External validity focuses on analytical generalisation to theoretical propositions rather than statistical generalisation to populations. The coordination mechanisms and stakeholder perception patterns identified can be examined in other hybrid IT environments. Detailed organisational context description enables transferability assessment to similar contexts. Construct definitions support replication across different organisations, while documented procedures enable future replication studies. Boundary conditions specify applicability limits, including organisational size, hybrid maturity, and stakeholder diversity.

4.6 Ethical Considerations

All participants provided informed consent with clear explanations of the study purpose, data usage, and potential risks. Organisational and participant anonymity is maintained throughout the research process and in all publications. Data security measures include encrypted storage and secure transmission protocols for all research data. Participants were informed of their right to withdraw from the study at any time without consequence and to request deletion of their contributed data.

4.7 Use of AI

In accordance with academic transparency requirements, I acknowledge the use of several AI tools throughout this research process. For writing assistance, I utilised Claude 4 and ChatGPT to help refine my writing style, improve clarity, and enhance the overall flow of certain sections. These tools were particularly helpful in brainstorming ideas, restructuring sentences for better readability, and ensuring consistency in academic tone. All content generated through these interactions was carefully reviewed, fact-checked, and integrated thoughtfully into my own analysis and argumentation.

Additionally, Quillbot was employed for paraphrasing assistance, helping to vary sentence structure and improve expression while maintaining the original meaning and intent of my work. For transcription purposes, I used an AI transcription service provided by Turku University to convert interview recordings into text format. All transcripts were subsequently reviewed against the original audio recordings to ensure accuracy, correct any transcription errors, and properly attribute statements to the appropriate participants.

It is important to note that while these AI tools assisted with language refinement and technical processes, all research design, data analysis, theoretical insights, and conclusions presented in this thesis are entirely my own work. The AI tools served as writing and technical aids rather than sources of substantive content or analytical thinking.

5 Data Analysis

5.1 Case description

This section presents the findings from seven semi-structured interviews conducted with IT professionals across different coordination interfaces within a multinational organisation operating hybrid IT environment. The case organisation, a leading European beauty and cosmetic company, operates a complex distributed IT architecture supporting e-commerce platforms across multiple geographical regions, including Europe, North America, and Asia-Pacific.

The organisation transitioned to agile methodologies beginning in 2018, with implementation occurring progressively across different IT domains. The digital IT department, responsible for e-commerce platform development and maintenance, serves as a primary context for this study. This department operates through a hub-and-spoke model, with a central core team providing shared platform components and regional teams (Europe, North America, Asia-Pacific) handling market-specific implementations and customisations.

The organisation employ varied agile implementations across different teams, reflecting the hybrid nature of their IT environment:

Central Core Team: Operates using Scrumban methodology, combining Scrum ceremonial structure with Kanban workflow management. The team maintains two-week sprint cycles with modified retrospective schedules (monthly rather than bi-weekly) and flexible story completion across sprint boundaries.

Regional Teams: Primarily follow Scrum methodology with two-week sprint cycles, though with some variation in ceremony implementation. As P1 explained: “We’re doing Scrum. But I feel that we’re twisting it a little bit, we don’t finish all the user stories we put at the beginning at the end of each Sprint, it’s more a continuous way of working.”

Business and Supporting Teams: Demonstrate varying levels of agile adoption, with some teams maintaining traditional waterfall approaches while other have adopted agile-inspired practices without full methodological implementation.

Regarding the agile ceremonies, teams maintain standard ceremonies including daily standups, sprint planning, sprint reviews, and retrospectives, though with frequency adaptations based on team maturity. Regular coordination enhancing cross-team communication also occur through

multiple mechanisms: bi-weekly sprint demonstrations to stakeholders, weekly coordination meetings between regional and central teams, monthly business alignment sessions, and quarterly prioritisation and planning cycles.

5.2 Coding Process and Category Development

Using grounded theory analysis (Strauss & Corbin, 1998), the data was systematically coded to identify coordination mechanisms, stakeholder perception factors, and agile adoption patterns. The analysis process generated 31 initial codes, organised into four main categories, and integrated around the core phenomenon of “Hybrid Coordination Effectiveness”.

The grounded theory analysis followed a systematic three-stage coding process (Strauss & Corbin, 1998) applied to seven semi-structured interviews totalling 267 minutes of recorded data. The analysis was conducted using NVivo 15 software to ensure systematic organisation and retrieval of coded segments.

The following table presents the 31 initial codes organised by frequency of mention across the seven interviews, demonstrating the relative importance of different coordination and perception phenomena in hybrid IT environments.

The following table demonstrates how the 31 open codes were systematically grouped into four theoretical categories through axial coding analysis, showing the conceptual relationships that emerged from the data.

Table 4. Category Development Through Axial Coding

Category	Category Definition	Theoretical Relationship to Core Phenomenon
Coordination Mechanisms (8 codes)	Technical and social processes that enable effective collaboration between teams using different methodologies, ranging from formal documentation standards to informal communication practices	Direct causal relationship: These mechanisms directly influence the effectiveness of hybrid coordination by managing the three types of interdependence (pooled, sequential, reciprocal) identified in Thompson’s theory
Stakeholder Perception Factors (9 codes)	Elements that influence how different stakeholder groups evaluate delivery success and form perceptions of project quality, timeline adherence, and team effectiveness	Outcome relationship: These factors represent the stakeholder evaluation criteria that are influenced by the effectiveness of coordination mechanisms, directly relating to Freeman’s stakeholder theory
Agile Hybrid Adaptation (7 codes)	Modifications and adaptations to standard agile practices that emerge when agile teams must	Moderating relationship: The degree and quality of agile

Category	Category Definition	Theoretical Relationship to Core Phenomenon
	coordinate with non-agile teams or operate within hybrid organisational contexts	adaptation moderates the relationship between coordination mechanisms and stakeholder perceptions, enabling more effective hybrid coordination
Cross-Methodology Challenges (7 codes)	Tensions, conflicts, and integration difficulties that arise specifically when different methodological approaches must collaborate, representing the fundamental coordination challenges in hybrid environments	Contextual relationship: These challenges represent the environmental conditions that coordination mechanisms must address, creating the need for specialised hybrid coordination approaches

5.3 Research Question 1: Technical Coordination Mechanisms in Hybrid Environments

What technical coordination mechanisms emerge when traditional and agile teams collaborate in hybrid IT environments?

The analysis of coordination mechanisms across seven interviews reveals that hybrid IT environments develop sophisticated coordination approaches that extend beyond traditional agile or waterfall practices. These mechanisms align closely with Thompson's (1967) three types of interdependence but demonstrate novel adaptations specific to managing methodological diversity. Teams develop layered coordination strategies that simultaneously address different types of dependencies while managing stakeholder expectations across methodological boundaries. Figure 4 synthesizes the empirical findings by mapping the coordination mechanisms identified in the interviews to Thompson's theoretical framework, revealing how hybrid IT environments require distinct coordination approaches for each type of interdependence.

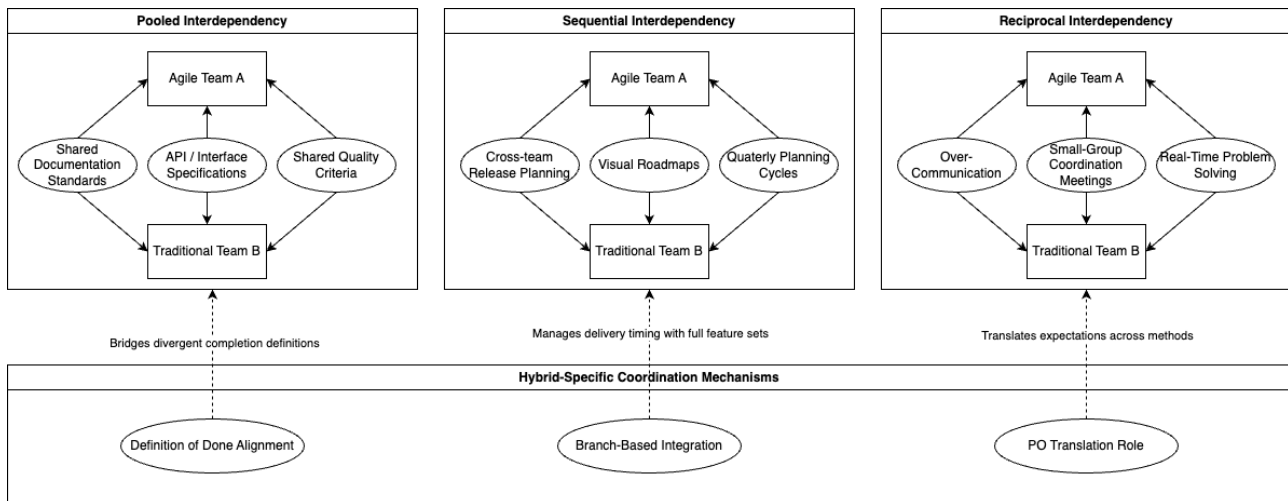


Figure 4. Technical Coordination Mechanisms in Hybrid IT Environments

5.3.1 Standardisation Mechanisms for Pooled Interdependence

Documentation and Interface Standards

The analysis reveals that teams establish common documentation formats and interface specifications to enable independent work while ensuring integration compatibility. This standardisation approach allows teams to work autonomously using their preferred methodologies while maintaining coherent organisation outputs.

“We have Confluence for all the documentation and the user guides with also technical and design documentation... For the daily work with the team we have our JIRA board with the backlog and everything.” (P1, EU Product Owner)

Teams develop standards in response to coordination challenges rather than through predetermined planning. This emergent approach to standardisation suggests that effective coordination mechanisms arise from practical coordination needs. The documentation and interface standards exemplify this organic development process, where teams initially worked with informal or ad-hoc documentation practices until coordination failure necessitated standardisation. The evolution toward formal documentation standards reflects learning from coordination breakdowns. Teams discovered that information loss and miscommunication occurred when spanning methodological boundaries. As P3 explained, teams learnt to formalise critical communications:

“For all our projects, I try to keep our business users involved as much as possible to avoid this situation... you have to make things official through email instead of using Teams. There are different tricks to do that communication as well” (P3, APAC Product Owner)

Similarly, interface specifications emerged from technical integration challenges rather than architectural planning. Teams working independently with different methodological approaches initially encountered integration difficulties when their work needed to connect. The standardised Application Programming Interface (API) contracts and data formats that P7 described developed as solutions to these practical integration problems:

“We have about 10 repositories for each platform... all developers... will submit PRs”
(P7, Central Developer)

This reactive standardisation process differs fundamentally from traditional top-down standardisation approaches. Rather than imposing uniform practices, teams developed standards that accommodate methodological diversity while ensuring integration capability. The documentation templates mentioned by P2 illustrate this accommodation, they provide structure for consistency while remaining flexible enough to support different development approaches:

“we have templates, every time you open a bug or every time you open a change request, you can chose from one of these templates to write your ticket” (P2, NA Product Owner)

Quality Standards Across Teams

Teams implement shared quality criteria and testing standards to maintain consistency across methodological approaches. These quality standards function as coordination mechanisms by establishing common expectations regardless of development methodology. The approach preserves team autonomy while ensuring integration quality through shared quality gates.

The development of shared quality standards addresses a fundamental challenge in hybrid environments: how to ensure consistent output quality when teams follow different development processes. Agile teams typically emphasise built-in quality through continuous testing and frequent feedback, while traditional teams may rely more on formal quality assurance phases. The quality standards that emerged at Company X bridge these different approaches by focusing on output criteria rather than process requirements.

“When you have so many teams involved and so many other systems, you need to find ways to communicate with each other and to have dedicated time slots to discuss on the topics” (P1, EU Product Owner)

The technical implementation reveals how quality standards accommodate methodological differences rather than enforce uniform practices. The pull request review process described by P7 demonstrates this accommodation, teams can develop using their preferred methodologies, but all

codes must pass through shared quality checkpoints that evaluate technical merit regardless of how the code was produced.

“At Company X, there are about 10 repositories for each platform... As central developers, we review all these PRs and make comments. We can block certain points because things aren’t done correctly. We also provide guidance and advice to optimise and improve the code” (P7, Central Developer)

The central team acts as a coordination mechanism, providing technical guidance and maintaining quality standards without dictating development processes. The “guidance and advice” function P7 described illustrates how quality standards serve not only as gatekeeping mechanisms but as knowledge transfer and coordination learning opportunities.

5.3.2 Planning and Scheduling for Sequential Interdependence

Cross-Team Release Coordination

Teams develop planning mechanisms that accommodate different sprint cycles and planning horizons while maintaining delivery coherence. This coordination approach represents a hybrid solution that accommodates both agile iterative development and traditional milestone-based planning through releases as integration points.

“Since we function more on the release as such, generally we say it’s included in such release and people look at it, instead of saying we did it in such sprint which is not the same for every team” (P6, Central Product Analyst)

The release-based coordination enables methodological flexibility while ensuring coordinated delivery. However, this approach creates communication challenges when teams operate in different temporal frameworks.

“We don’t really care finally about the duration of each other’s sprints. But it’s true that sometimes when you have discussions saying ‘ah yes so that’s going to be on this sprint.’ But acutally this sprint doesn’t mean the same thing for all the other teams.” (P6, Central Product Analyst)

Dependency Management Through Roadmapping

Teams employ visual roadmaps and quarterly planning to manage dependencies across different methodological approaches. This planning mechanism enables dependency anticipation and capacity coordination while balancing structure with flexibility.

“So that’s why I think the road map part, it’s really useful too. So you can visually see which could be the dependencies and pinpoint them” (P1, EU Product Owner)

The roadmapping process involves collaborative planning with interdependency identification and capacity coordination. This approach differs from traditional project planning by assuming change while explicitly planning for cross-team dependencies.

“Because you identify at the beginning for your project who is going to be involved. Then you can discuss with them and so then you evaluate the priority... So when you build your road map, you try to build it around that constraint.” (P1, EU Product Owner)

Quarterly Alignment Processes

Teams implement quarterly planning cycles that provide long-term coordination capability while preserving agile responsiveness within quarters. This temporal structuring addresses the tension between agile short-term planning and traditional longer-term coordination requirements.

5.3.3 Mutual Adjustment for Reciprocal Interdependence

Over-Communication Strategies

Teams deliberately increase communication frequency and redundancy to manage complex, dynamic dependencies. This approach prioritises information redundancy over communication efficiency, acknowledging that information loss creates more significant problems than communication overhead in hybrid environments. The over-communication strategy emerges from the recognition that hybrid environments are particularly vulnerable to information loss due to methodological differences in communication patterns and planning cycles. Agile teams rely on frequent, informal communication within team boundaries, while traditional approaches may emphasise formal documentation and structured handoffs. When these different communication styles must interface, critical information often fails to transfer effectively across methodological boundaries.

“I tend to over-communicate. Because I know that information gets lost so quickly... I prefer to repeat myself. And if we see each other every week, for example, in weekly meetings, I say what I have said during demo meetings once again but face to face this time” (P5, Central Product Owner)

The over-communication strategy involves deliberate progress tracking and explicit documentation rather than casual repetition. This systematic approach ensures that important coordination information is captured and repeated through multiple channels, creating redundancy that

compensates for the communication gaps that naturally occur when different methodologies interface.

“We have the PTPs of course but we also have the newsletter in which we can have everything we worked or are working on written down” (P5, Central Product Owner)

Small-Group Coordination Meetings

Teams establish formal, small-group coordination mechanisms to ensure effective information transfer across methodological boundaries. This approach emerged from learning that large-scale demonstrations and formal meetings often fail to transfer important information effectively. The small-group meeting approach addresses a specific coordination failure observed in hybrid environments: the inability of traditional agile ceremonies and formal project meetings to effectively communicate across methodological boundaries. Large demonstrations tend to be one-way information flows that don't ensure understanding, while formal meetings often involve participants with different contextual frameworks for interpreting information.

“I tend to over-communicate, but, and that's the little asterisk, in small committees... To be sure that, I'm talking, you're listening to me and I'm transmitting the information to you. I tell them directly, did you understand? Yes, OK. So I know the information was listened to.” (P5, Central Product Owner)

The effectiveness derives from the intimate scale enabling direct confirmation of understanding. This approach recognises that effective coordination in hybrid environments requires not just information transmissions but verification that information has been received and understood within the appropriate methodological context. The small-group mechanism serves as a critical bridge between formal coordination ceremonies and informal team communication. It provides a space where participants can ask questions, clarify misunderstandings, and ensure that coordination information is properly contextualised for their specific methodological framework. This personal confirmation process is particularly important when coordinating between teams that interpret progress, quality, and completion differently.

Real-Time Problem Solving

Teams develop capabilities for immediate coordination adjustment when dependencies or requirements change unexpectedly. This mechanism enables rapid response to coordination breakdowns without waiting for formal planning cycles. Real-time problem solving becomes essential in hybrid environments because coordination breakdowns can cascade across multiple teams operating on different planning cycles. When an agile team encounters an issue that affects a

traditional team's planned work, or when business requirements change in ways that impact multiple methodological approaches, the ability to coordinate immediate responses becomes critical for maintaining delivery coherence.

“If we have an issues because let's say we released something that created an issue on the website, we always are pretty reactive and able to fix it and work on it.” (P1, EU Product Owner)

This real-time adjustment capability complements the planning mechanisms by providing organisational agility that transcends individual team methodologies. While teams may follow different internal planning cycles, the organisation develops the capability to rapidly coordinate across these cycles when unexpected coordination needs arise. This represents a hybrid-specific coordination capability that goes beyond either pure agile responsiveness or traditional change management processes.

5.3.4 Emergent Hybrid-Specific Mechanisms

Definition of Done Alignment

Teams develop mechanisms to bridge different definitions of completion and readiness across methodological boundaries. This represents a coordination challenge specific to hybrid environments where teams must integrate work meeting different completion criteria.

“For, me the most complicated thing is undoubtedly the definition of done... you end up with multiple teams and multiple definitions of done. This has impacts later on” (P7, Developer)

The challenges reflect fundamental differences in how different methodologies conceptualise work completion, creating practical integration difficulties when teams attempt to coordinate deliverables across methodological boundaries.

Branch-Based Integration Strategies

Teams increasingly employ integration branches to balance agile iterative delivery with business expectations for complete features. This technical coordination mechanism addresses the tension between agile's preference for continuous integration and business stakeholder expectations for complete, tested features before release.

“We can do the delivery in a separate development branch. And while we complete everything in the development branch, we finish the testing and we merge the coding

from development branch to our current branch and do the release for the whole feature altogether” (P3, APAC Product Owner)

The branch-based approach provides a technical solution to a coordination problem, enabling iterative development while coordinating release timing with business requirements and traditional team planning cycles.

Product Owner Translation Role

Product owners emerge as critical coordination mechanisms, serving as translators between different methodological approaches and stakeholder expectations. This role evolution addresses the communication gaps that naturally occur when teams with different development philosophies must coordinate. The translation function becomes essential because technical teams and business stakeholders often operate with different assumptions about planning, progress, and completion.

“When you have product owners or product analysts who come from IT and understand developers’ problems, the benefit is that you get better estimation. You’ll have profiles who can speak to both dev teams and business teams.” (P7, Central Developer)

The translation role encompasses both technical translation and expectation management across methodological boundaries, requiring product owners to bridge not only language differences but fundamental differences in how success is measured and progress is demonstrated.

5.4 Research Question 2: Impact of Delivery Logic Differences

How do the differences in delivery logic between agile and traditional teams affect technical coordination and project outcomes?

Analysis of delivery logic differences reveals that methodological diversity creates systematic coordination challenges that extend beyond simple process variations. The fundamental differences in how agile and traditional approaches conceptualise planning, quality, and communication create friction points that require active management and adaptation. Figure 5 illustrates how these methodological differences converge across four critical dimensions, planning logic, delivery expectations, capacity management, and communication style, to create interconnected coordination challenges that amplify each other when not properly managed. These differences impact not only technical coordination but also stakeholder expectations and project outcome evaluation.

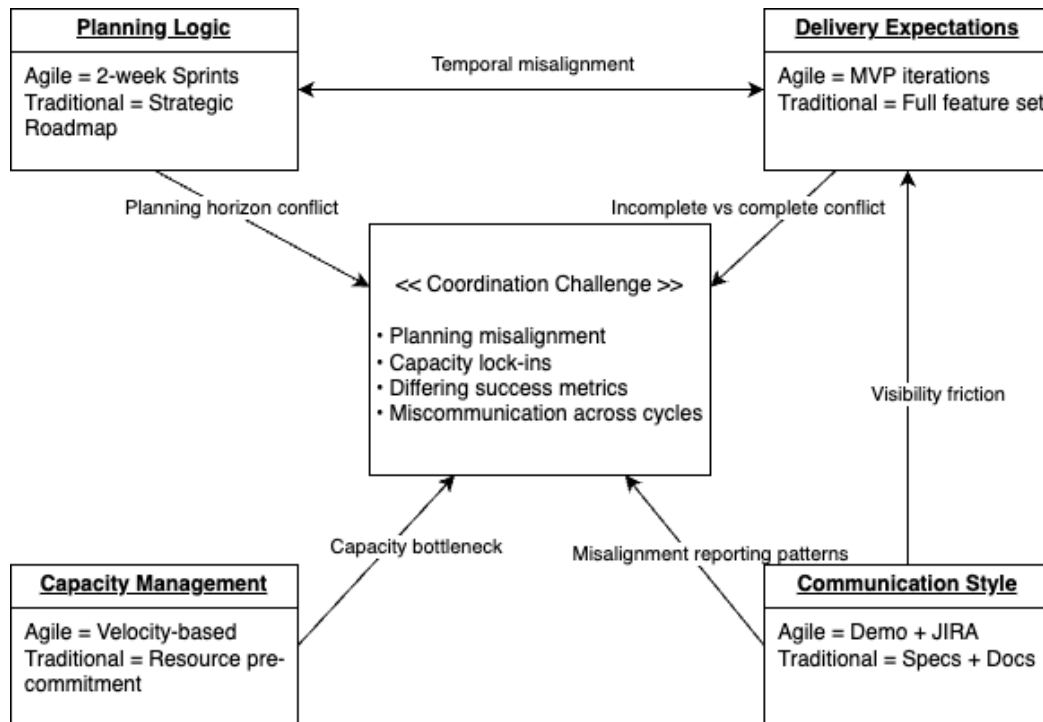


Figure 5. Methodological Differences and Coordination Friction Points

5.4.1 Planning Horizon Conflicts

Sprint-Level vs. Strategic Planning

The analysis reveals tensions between agile teams' short-term planning cycles and traditional teams' longer-term strategic planning requirements. Agile teams typically plan in two-week increments with limited forward visibility, while traditional teams often require longer-term capacity commitments and strategic alignment. This temporal mismatch creates coordination challenges when teams must integrate their work or share resources.

“Because you need to make sure every team can have their own priorities and their own road map and stuff if you know that you will need them at some point, you need to make sure to anticipate everything.” (P1, EU Product Owner)

The planning horizon conflicts manifest as difficulties in coordinating dependencies across different temporal frameworks. Agile teams prefer just-in-time planning that adapts to changing requirements, while teams with traditional planning cycles need advance notice to incorporate dependencies into their scheduled work. This created fundamental tension between agile responsiveness and traditional predictability requirements. The coordination challenge intensifies when business stakeholders expect strategic planning capabilities that span multiple agile planning cycles. Teams must develop mechanisms to provide strategic visibility while preserving agile

flexibility, often requiring translation between short-term agile planning and longer-term business planning requirements.

Capacity Alignment Challenges

Teams struggle to align capacity planning across different methodological approaches, creating bottlenecks and delays. The capacity alignment challenge emerges because agile and traditional teams assess and commit capacity differently. Agile teams typically use velocity-based capacity planning with sprint-level commitments, while traditional teams may plan capacity allocation across longer time horizons with more detailed resource specifications.

“Sometimes, maybe you will have a project that you know your team has the capacity to take but maybe not the team you’re working on this project with. Then you know that you can’t do this specific project for now because they don’t have capacity” (P1, EU Product Owner)

The capacity misalignment creates projects bottlenecks when teams with available capacity cannot proceed because dependent teams lack capacity within their planning frameworks. This interdependency challenge requires sophisticated coordination to align capacity across different planning methodologies and time horizons.

5.4.2 Quality and Completeness Expectations

MVP vs. Complete Feature Delivery

Fundamental differences in approaches to feature completeness create stakeholder confusion and dissatisfaction. Agile methodologies emphasise minimum viable product (MVP) delivery with iterative enhancement, while traditional approach typically focus on comprehensive feature delivery that meets complete specifications before release. This philosophical difference creates coordination challenges when stakeholders accustomed to complete deliveries interact with agile teams delivering MVP-focused iterations.

“There’s a real subject with MVP, I find it’s a limit of agile because it’s what we are supposed to do when we lack time, but we always lack time. The thing is if you tell business teams that you’re releasing something that’s half finished, they’ll consider it bad quality” (P5, Central Product Owner)

The MVP approach creates perception challenges when stakeholders interpret iterative delivery as incomplete or poor-quality work. Business stakeholders and traditional teams may view MVP

delivery as failure to meet requirements rather than as an intentional iterative development strategy. This perception difference affects stakeholder satisfaction and project success evaluation.

Business Stakeholder Adaptation

Business teams gradually adapt to agile principles but retain preferences for complete deliveries. The adaptation process involves learning to evaluate and utilise iterative deliveries while adjusting expectations about feature completeness and delivery timing. However, this adaptation is incomplete and varies across stakeholder groups.

“I feel like they are more and more OK, compared to before, to have maybe more of an MVP and not to have everything complete. I think meeting the timeline is really important for them, even more than having the release really complete.” (P1, EU Product Owner)

The gradual adaptation creates coordination complexity because teams must manage varying levels of stakeholder understanding and acceptance of agile delivery approaches. Some stakeholders embrace iterative delivery while others continue to expect complete features, requiring teams to tailor their coordination and communication approaches to different stakeholder preferences.

5.4.3 Communication Pattern Differences

Demonstration vs. Documentation

Agile teams emphasise working software demonstrations, while traditional approaches rely more heavily on comprehensive documentation. This communication preference difference creates coordination challenges when teams must share information across methodological boundaries. Agile demonstrations provide concrete evidence of functionality but may lack the detailed specifications that traditional teams require for integration planning.

The demonstration preference reflects agile values of working software over comprehensive documentation, but this approach can create information gaps for teams that rely on detailed documentation for coordination and integration planning. Traditional teams may need specifications, interface definitions, and detailed behaviour descriptions that demonstrations alone cannot provide.

Progress Reporting and Visibility

Different methodological approaches create varying expectations about progress reporting and project visibility. Agile teams typically progress through velocity metrics, burndown charts, and working software demonstrations, while traditional stakeholders may expect milestone-based progress reports, percentage completion metrics, and detailed project status documentation.

“Because we have so many iterations and demonstrations every two weeks, weekly meetings, we have validations along the way. We also use the demos to say that we’ve progressed on that or that other part. So they see how it is going every step if the way.”
(P1, EU Product Owner)

The transparency requirements demonstrate the tensions between agile adaptive planning and business needs for predictable progress reporting. Teams must balance agile flexibility with stakeholder demands for advance visibility into project timing and scope. They address these differences through dual reporting mechanisms that provide both agile metrics and traditional progress indicators, but this duplication adds coordination overhead and may create conflicting progress narratives that require reconciliation.

5.5 Research Question 3: Stakeholder Perception Factors

What factors influence stakeholder perception of delivery success in hybrid IT environments where both agile and traditional methods coexist?

The analysis of stakeholder perception formation reveals that success evaluation in hybrid environments operates through multiple, sometimes conflicting criteria depending on stakeholder background and methodological familiarity. Unlike homogeneous environments where stakeholders share common success frameworks, hybrid environments require stakeholders to navigate different progress demonstrations, quality indicators, and completion definitions simultaneously. This complexity creates both opportunities for broader stakeholder satisfaction and risks of misaligned expectations.

Figure 6 illustrates the four primary factors that influence stakeholder perception of delivery success in hybrid environments. The analysis reveals that while timeline adherence is prioritised by all stakeholder groups, each factor serves different functions in stakeholder evaluation processes, transparency builds trust through visibility, quality assessment operates through multi-criteria evaluation frameworks, and business impact drives priority decisions for business-focused stakeholders.

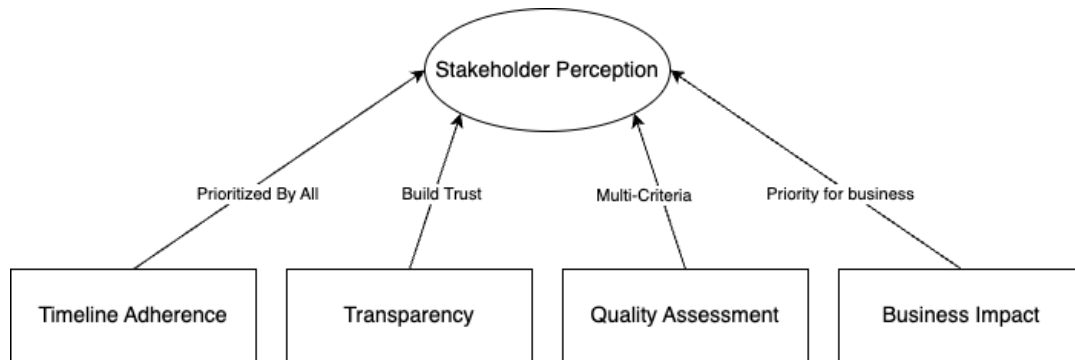


Figure 6. Stakeholder Perception Factors Hybrid IT Environments

5.5.1 Primary Success Criteria

Timeline Adherence as Dominant Factor

Across all interviews, meeting deadlines emerges as the most critical factor in stakeholder evaluation of delivery success. This finding transcends methodological boundaries, with stakeholders from both agile and traditional backgrounds consistently prioritizing timeline adherence over other success dimensions. The temporal pressure reflects business environment constraints rather than methodological preferences.

“There’s something that always comes back; it’s deadlines. This question is asked every week. When does it come out? And it’s a question we can never answer because we’re always adding subjects that we have to work on in parallel. We also work with other teams who might not have the capacity to work on a subject, creating unexpected blockers for us.” (P1, EU Product Owner)

The timeline dominance creates perception challenges because agile methodologies emphasise adaptive planning that resists firm deadline commitments, while stakeholder evaluation heavily weights timeline predictability. This tension requires teams to balance agile flexibility with stakeholder deadline expectations, often leading to creative solutions that provide timeline visibility without compromising methodological integrity.

The business calendar constraints demonstrate that timeline pressure often originates from external factors such as seasonal campaigns, regulatory requirements, or competitive pressures rather than internal project management preferences. Teams must accommodate these external timeline constraints while maintaining methodological integrity.

“I feel like the most important factor is the speed, they want everything done really quickly. Because of the agenda throughout the year, they have some deadlines they need to meet.” (P1, EU Product Owner)

Transparency and Predictability Requirements

Stakeholders highly value transparency about progress, risks, and potential impacts over perfect execution. This preference for transparency reflects the uncertainty that methodological diversity creates in hybrid environments. When stakeholders cannot predict how different methodological approaches will affect project outcomes, transparency becomes essential for maintaining confidence and enabling informed decision-making.

“I think for business stakeholders, the most important thing is really to stay transparent. What they care about the most is the stability, which means they have to know, prior our deployment, what changes we will make and what kind of risk there potentially is.” (P3, APAC Product Owner)

The transparency requirement extends beyond simple progress reporting to include risk communication and change impact assessment. Stakeholders need advance visibility into potential disruption or changes that might affect their own planning and coordination activities. This requirement reflects the interdependent nature of work in hybrid environments where changes in one methodological context can cascade across multiple teams and stakeholder groups.

5.5.2 Quality Perception Dimensions

Multi-Criteria Quality Assessment

Stakeholders evaluate quality across multiple dimensions, requiring absence of failures rather than excellence in specific areas. This evaluation approach reflects the complexity of hybrid environments where different methodologies may excel in different quality dimensions. Stakeholders develop holistic quality assessments that consider technical, functional, and experiential quality aspects simultaneously.

The multi-criteria approach suggests that stakeholders in hybrid environments develop sophisticated quality evaluation frameworks that accommodate the different quality strengths that various methodological approaches provide. Rather than applying uniform quality standards, stakeholders learn to evaluate integrated deliverables that may demonstrate quality differently across different dimensions. This quality assessment complexity requires teams to help stakeholders understand how different methodological approaches contribute to overall quality outcomes. Teams must translate quality indicators across methodological boundaries to enable coherent stakeholder evaluation.

Business Impact vs. Technical Excellence Trade-offs

Business stakeholders prioritise functional outcomes and business impact over technical implementation quality. This priority reflects stakeholder role responsibilities rather than methodological preferences. Business stakeholders are held accountable for business outcomes and therefore evaluate project success primarily through business impact measures.

“For business, what’s important is that we deliver something on time, within deadlines, and without bugs. If you break it down in a non-exploitable way, it creates frustrations.”
(P4, Central Domain Leader)

The business impact focus creates perception alignment challenges when technical quality and business impact priorities conflict. Technical teams may prioritise code quality, architectural consistency, or technical debt management, while business stakeholders focus on functional deliverables that enable business outcomes. Hybrid environments must coordinate these different quality priorities across methodological boundaries. The exploitation focus that P4 described highlights the business stakeholder expectation that deliverables should enable immediate business value creation. This expectation affects how stakeholders evaluate MVP approaches and iterative delivery strategies that agile methodologies employ.

5.6 Theoretical Integration and Relationships

Figure 7 illustrates the theoretical model that emerged from the analysis, demonstrating the complex relationships between technical coordination mechanisms and stakeholder perception of success in hybrid IT environments. The model reveals three critical pathways through which coordination mechanisms influence stakeholder perceptions, mediated by hybrid-specific adaptations and challenges by delivery logic conflicts.

The left side of the model shows how traditional coordination mechanisms, aligned with Thompson’s interdependence theory, address different coordination challenges in hybrid environments. These coordination mechanisms directly influence stakeholder perception of success (right side) through multiple pathways.

The central section reveals emergent coordination mechanisms that are unique to hybrid environments. These hybrid-specific mechanisms serve dual functions: they “solve” coordination challenges created by methodological diversity while simultaneously “triggering adaptation” in traditional coordination approaches. The “improves” pathway shows how these mechanisms enhance stakeholder perception by addressing perception challenges specific to hybrid

environments while the “adapts” feedback loop demonstrates how stakeholder perception requirements drive further coordination mechanism refinement.

The bottom section illustrates how fundamental differences in delivery logic create ongoing coordination challenges that drive the need for sophisticated coordination mechanisms. These conflicts “introduce tension” into stakeholder perception formation while simultaneously “triggering” the development of hybrid-specific coordination mechanisms.

The model demonstrates that delivery logic conflicts are not problems to be eliminated but rather organisational realities that require ongoing coordination management. The “triggers” arrow shows how these conflicts drive coordination innovation, suggesting that methodological diversity, while challenging, enables organisational learning and coordination capability development. The analysis reveals that hybrid coordination effectiveness emerges from the intersection of traditional coordination theory, hybrid-specific adaptations, and stakeholder perception management, creating organisational capabilities that transcend the limitations of any single methodological approach while requiring sophisticated coordination orchestration to realise their potential benefits.

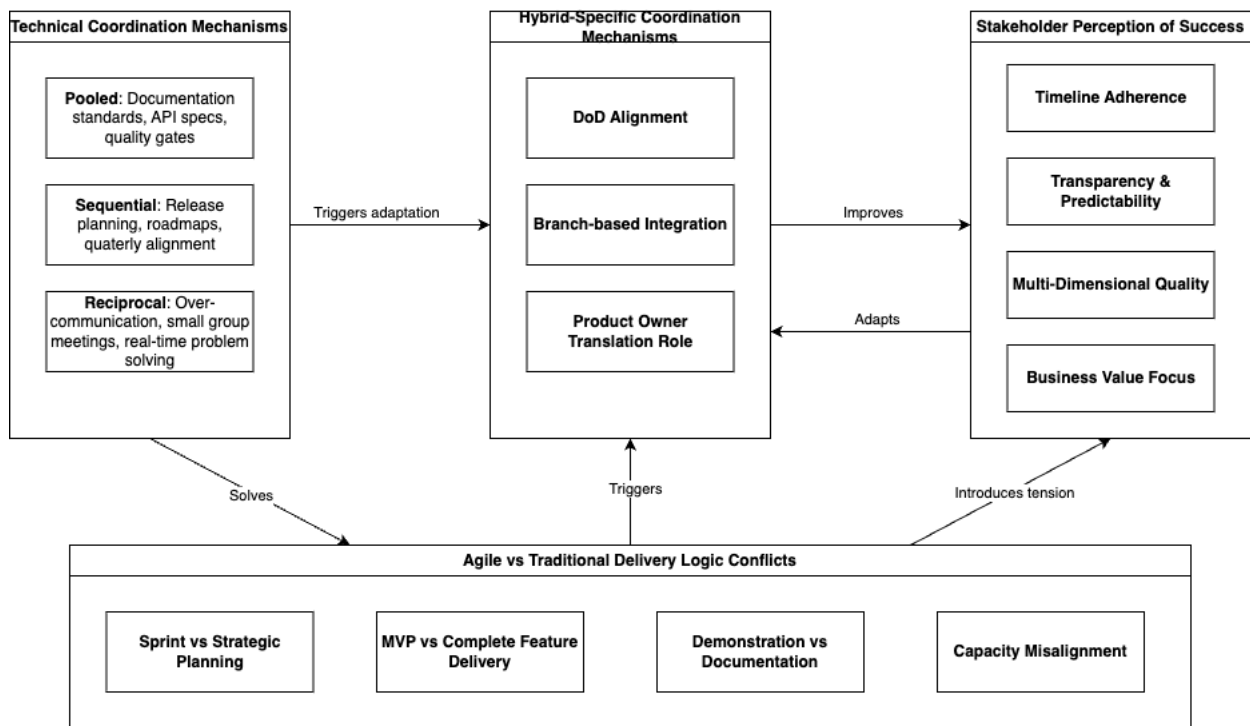


Figure 7. Hybrid Coordination – Perception Relationship

6 Discussion

6.1 Research Questions Answered

The research addressed three primary research questions:

RQ1 identified sophisticated coordination mechanisms that enable methodological coexistence, including standardisation through documentation standards, planning through release-based coordination, and mutual adjustment through over-communication strategies and Product Owner translation roles.

RQ2 revealed that delivery logic differences create systematic challenges requiring active management, particularly around planning horizon conflicts, quality expectations, and communication patterns that teams navigate through temporal structuring and adaptive coordination approaches.

RQ3 demonstrated that stakeholder perception formation operates through multi-criteria frameworks with timeline adherence as the dominant success factor, while transparency requirements become essential for maintaining stakeholder confidence across methodological boundaries.

6.2 Theoretical Contributions

6.2.1 Extension of Thompson's Interdependence Theory to Hybrid IT Environments

This study extends Thompson's (1967) Interdependence Theory by identifying novel coordination mechanisms that emerge specifically in hybrid IT environments. While Thompson's framework addressed coordination within homogeneous organisational contexts, our findings reveal hybrid-specific mechanisms such as "over-communication strategies" and "Product Owner translation roles" that bridge methodological boundaries, coordination challenges not anticipated in Thompson's original work.

The branch-based integration strategies identified represent a technological evolution of Thompson's mutual adjustment mechanism, enabling teams to maintain methodological autonomy while coordinating integration timing. This finding addresses Brentzen et al.'s (2023) call for research on coordination mechanisms in large-scale agile environments by demonstrating how teams reconcile conflicting approaches to managing dependencies within the same programme.

Our findings reveal that reciprocal interdependence in hybrid environments exhibits greater complexity than Thompson's theory anticipated, requiring translation between fundamentally different conceptual frameworks for planning, quality, and completion. This extends Barlow et al's (2011) observation that agile and traditional methodologies assume different interdependency types by demonstrating the coordination mechanisms that enable their coexistence.

6.2.2 Stakeholder Theory Application to Hybrid IT Delivery

This research extends Freeman's (1984) Stakeholder Theory by examining stakeholder perception formation when multiple delivery methodologies operate simultaneously. Previous stakeholder theory applications in IT contexts have focused on homogeneous methodological environments (Michell et al., 1997), leaving unexplored how stakeholders evaluate success across methodological boundaries. Our findings reveal that stakeholders develop multi-criteria evaluation frameworks that accommodate different methodological success demonstrations, extending Gemino et al's (2021) finding of superior stakeholder satisfaction in hybrid approaches by examining the perception formation mechanisms underlying this satisfaction. The timeline adherence dominance identified across stakeholder groups provides empirical support for Nader-Rezvani's (2019) observation that stakeholder roles influence success perception criteria.

6.2.3 Framework Limitations and Boundaries

The integrated framework acknowledges several limitations. Thompson's theory was developed for traditional organisational contexts and may not fully capture the dynamic, iterative nature of modern IT development. The theory's assumption of stable interdependence patterns may not apply to agile environments where requirements and dependencies evolve continuously.

Stakeholder Theory's emphasis on stakeholder value creation may not fully address situations where stakeholder interests are fundamentally incompatible or where resource constraints prevent satisfying all stakeholder needs. The theory also provides limited guidance for prioritisation among competing stakeholder demands in resource-constrained environments.

The integration of these theories assumes that coordination problems can be resolved through better stakeholder management and appropriate mechanism design. However, some coordination challenges may stem from fundamental incompatibilities between methodological approaches that cannot be resolved through better stakeholder engagement or coordination mechanism selection.

6.3 Empirical Contributions

6.3.1 Coordination Mechanisms in Practice

This study provides the first systematic examination of coordination mechanisms that emerge when agile and traditional methodologies must collaborate, addressing the research gap identified by Zasa et al. (2020), Daneva et al. (2013), and Berntzen et al. (2023) regarding inter-team coordination in hybrid environments. The layered coordination strategy identified, simultaneously addressing pooled, sequential, and reciprocal interdependencies, represents a more sophisticated solution than previously documented. This finding extends Dingsøy et al.'s (2022) taxonomy of 27 coordination mechanisms by identifying mechanisms specific to cross-methodological coordination rather than intra-methodological coordination.

6.3.2 Stakeholder Perception Formation Processes

This research addresses the literature gap identified by Barlow et al. (2011) and Nader-Rezvani (2019) regarding how stakeholder perceptions are formed when multiple delivery approaches are used simultaneously. The systematic differences in success criteria prioritisation between business and technical stakeholders provide empirical evidence for theoretically anticipated but not systematically documented stakeholder role-based evaluation differences.

6.4 Practical Contributions

6.4.1 Coordination Mechanism Design

The over-communication strategies and small-group coordination meetings identified provide implementable solutions for the information transfer challenges documented by Dingsøy et al. (2022), who found that teams experienced long feedback loops and limited learning across organisational lines when coordination relied on formal handovers. The release-based coordination approach offers a practical solution for organisations needing to coordinate delivery timing across different methodological planning horizons, addressing the coordination challenges identified by Berntzen et al. (2023) regarding misaligned planning activities between team and inter-team levels.

6.4.2 Stakeholder Management Strategies

The transparency requirements and multi-criteria quality assessment approaches provide practical guidance for the expectation alignment challenges identified by Zasa et al. (2020). The Product

Owner translation role evolution offers specific competency guidance for bridging methodological boundaries, addressing the coordination complexity documented by Daneva et al. (2023) in large outsourced agile projects.

7 Conclusion

This study investigated how agile adoption influences inter-team technical coordination and stakeholder perception of delivery in hybrid IT organisations. Through a single revelatory case study employing semi-structured interviews with seven key stakeholders, the research provides new insights into the complex dynamics that merge when agile and traditional methodologies must collaborate within the same organisational context.

7.1 Limitations

Although this research has contributed to the literature on hybrid IT coordination, the results contain several limitations. First, the single-case design limits statistical generalisability, though it enables deep theoretical insights into coordination mechanisms. Temporal constraints provide a snapshot view of dynamic coordination process, potentially missing evolutionary aspects of coordination development. Self-reporting bias may influence findings due to reliance on participant perceptions and recollections, though triangulation with documents and observations helps mitigate this concern.

Furthermore, organisation specificity means findings may reflect unique organisational culture and may not transfer directly to other contexts. The organisation's advanced hybrid experience may not represent typical implementations, potentially limiting relevance for organisations in earlier stages of hybrid adoption.

Additionally, sampling limitation affect the study's scope. Eight participants were primarily selected, while one participant cancelled at the last minute, theoretical saturation was already achieved across the primary coordination interfaces. The sample included representatives from each major coordination interface (EU-Central, NA-Central, APAC-Central) and different organisational roles (Product Owners, Domain Leader, Product Analyst, Developer). This purposive sampling approach prioritised depth of insight over breadth of representation, enabling detailed examination of coordination mechanisms and perception formation processes within the bounded case context.

Finally, confidentiality constraints limited the depth of analysis in certain areas. The researcher signed a non-disclosure agreement requiring the anonymisation of organisational details and participant identities. This confidentiality requirement prevented inclusion of specific organisational context details that might have provided richer theoretical insights or enabled more nuanced analysis of coordination mechanisms within their specific business environments.

7.2 Implications for Future Research

This research opens important avenues for future investigation. The coordination maturity evolution identified suggests longitudinal research examining how coordination mechanisms develop over time would provide valuable insights into hybrid implementation trajectories. The technology-enabled coordination mechanisms documented, particularly branch-based integration strategies, suggest examining how emerging technologies might enable new forms of hybrid coordination that reduce coordination overhead.

Future research should examine how these coordination mechanisms work across different organisations. Many IT projects today involve multiple vendors or partners who use different methodological approaches, but current literature has not studied how teams coordinate in these multi-vendor contexts. Additionally, longitudinal studies could examine how stakeholder evaluation criteria evolve as organisations gain hybrid experience, and whether the multi-criteria assessment frameworks documented in this study become standardised across industries.

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Appendices

Appendix 1 Interview Guide Round 1/2

Introduction on the guide (objective of the interviews) + how many times it was revised

Introduction:

- **About Me:** I am currently completing a master's in information technologies at the IAE d'Aix-Marseille, Turku University and Tilburg University, for which I am writing this thesis. I am conducting these interviews in my internship company, which is comprised of Agile and Non-Agile teams collaborating.
- **Purpose:** The purpose of this research is to understand how Agile adoption by one team influences collaboration and delivery perception across other teams, particularly when those teams follow different delivery approaches (e.g., tradition, plan-driven)
- **Definitions:**
 - Hybrid delivery environments refer to settings where Agile teams collaborate with teams that use different methodologies (e.g., tradition, plan-driven).
 - Perceived delivery success refers to how external teams perceive the quality, completeness, and readiness of deliveries from Agile teams.
 - Coordination means the technical, informational, and process-based mechanisms that align work across team boundaries.
- **Use of Data:** The data gathered for this interview will inform academic research and practical recommendations. Interviews will be audio-recorded (with permission), transcribed and anonymized. You may review the transcript upon request.

Practical Information:

- **Duration:** This interview will last around 45 minutes.
- **Audio Recording:** With your consent, this conversation will be recorded for transcription and analysis purposes.

- **Nature of Responses:** All responses are confidential and anonymized; you can respond naturally and don't have to prepare the questions beforehand.

About the interviewee

- Can you briefly describe your current role and responsibilities?
- What delivery model does your team follow (Agile, if so Scrum or Kanban; traditional; mixed)?

Agile Team dynamics and Delivery information

- What types of information does your team share with other teams during or after sprints?
- How do you ensure that collaborating teams are aware of what your teams is delivering?
- Are there specific ceremonies or tools used to communicate progress or issues?

Inter-team Coordination

- Which teams do you regularly coordinate with? What is the nature of this coordination?
- Are there challenges caused by differing delivery models or cadences (e.g., Agile vs. Waterfall)?
- How do handovers, dependencies, or shared deliverables get managed?

Communication Channels & Tools

- What tools or platforms are most important for managing cross-team communication?
- Are there situations where information gets “lost” or misunderstood?
- Do external teams participate in your Agile ceremonies (e.g., sprint review)?

Perception and Delivery Success

- How do collaborating teams respond to what your team delivers?
- Have you encountered misalignment between what your team considers “done” vs. what others expect?

- What do you think other teams care about most when evaluating what your team delivers, speed, clarity, completeness, meeting timelines, or something else?

Value Alignment & Expectation Management

- Do you feel external teams understand your delivery goals and cadence?
- Can you give an example of how major delivery changes (like delays or added scope) are communicated to other teams?
- How do you handle feedback or dissatisfaction from external teams?

Reflection and Improvements

- In your view, what works well in your current cross-team collaboration?
- Are there practices you think should be improved to enhance delivery alignment?
- What would help non-Agile teams better understand Agile delivery practices? → depends on if there are non-Agile teams in the company

Conclusion

- Is there anything else you'd like to share about working across delivery models?
- Would you like to review your transcript later?

Appendix 2 Interview Guide Round 2/2

Introduction:

- **About Me:** I am currently completing a master's in information technologies at the IAE d'Aix-Marseille, Turku University and Tilburg University, for which I am writing this thesis. I am conducting these interviews in my internship company, which is comprised of Agile and Non-Agile teams collaborating.
- **Purpose:** The purpose of this research is to understand how Agile adoption by one team influences collaboration and delivery perception across other teams, particularly when those teams follow different delivery approaches (e.g., tradition, plan-driven)
- **Definitions:**

- Hybrid delivery environments refer to settings where Agile teams collaborate with teams that use different methodologies (e.g., tradition, plan-driven).
 - Perceived delivery success refers to how external teams perceive the quality, completeness, and readiness of deliveries from Agile teams.
 - Coordination means the technical, informational, and process-based mechanisms that align work across team boundaries.
- **Use of Data:** The data gathered for this interview will inform academic research and practical recommendations. Interviews will be audio-recorded (with permission), transcribed and anonymized. You may review the transcript upon request.

Practical Information:

- **Duration:** This interview will last around 45 minutes.
- **Audio Recording:** With your consent, this conversation will be recorded for transcription and analysis purposes.
- **Nature of Responses:** All responses are confidential and anonymized; you can respond naturally and don't have to prepare the questions beforehand.

About the Interviewee:

- Can you briefly describe your current role and responsibilities within your team?
- How long have you been working with the current team structure and delivery model?

Technical Coordination Mechanisms

- What specific coordination mechanisms do you use when working with teams that follow different delivery models?
- How formal or informal are these coordination practices? How did they develop?
- What tools and artifacts are most critical for maintaining alignment between your team and others?
- Can you describe a recent successful coordination experience and what made it work well?

- Can you describe a coordination challenge your team faced and how it was addressed?

Delivery Logic Differences

- How would you describe the fundamental differences in how your team approaches delivery compared to teams using other methodologies?
- What timing or cadence conflicts arise when coordinating with teams using different delivery approaches?
- How do differences in planning horizons (agile's shorter vs. traditional's longer planning) affect coordination?
- How do you handle documentation expectations when working across teams with different delivery models?
- What adjustments has your team made to accommodate working with teams using different methodologies?

Stakeholder Perception Factors

- How do you believe stakeholders evaluate delivery success?
- What aspects of delivery seem most important to stakeholders when judging success (timeliness, completeness, readiness)?
- Have you noticed differences in how stakeholders perceive deliveries since you adopted the agile method?
- How do you manage stakeholder expectations about what "complete" or "done" means?
- What communication strategies have proven most effective for improving stakeholder perception?

Hybrid Environment Dynamics

- How has your team's agile practices evolved since you have adopted agile?
- What balance between agile and traditional practices seems to work best for coordination in your experience?

Reflective Questions:

- What do you think is most commonly misunderstood about working in hybrid delivery environments?
- What advice would you give to teams transitioning to a hybrid delivery model?

Conclusion

- Is there anything else you'd like to share about working across delivery models?
- Would you like to review your transcript later?

Appendix 3 Initial Open Coding Results

Code	Definition	Frequency	Interview Sources
Timeline Pressure Management	Strategies for managing stakeholder expectations around delivery deadlines	23	P1, P2, P3, P4, P5, P6
Over-Communication Strategies	Deliberate redundant communication to prevent information loss	19	P1, P4, P5, P6
Sprint Ceremony Adaptation	Modifications to standard agile ceremonies for hybrid coordination	17	P1, P2, P3, P6, P7
Definition of Done Conflicts	Misalignments in completion criteria across teams	15	P1, P6, P7
Cross-Team Documentation Standards	Common documentation formats and requirements	14	P1, P3, P6, P7
MVP vs Complete Feature Tension	Conflicts between agile MVP approach and business completeness expectations	13	P1, P2, P5, P6
Dependency Visualisation Tools	Roadmaps, boards, and other tools for managing interdependencies	12	P1, P3, P4
Stakeholder Transparency Requirements	Business stakeholder needs for progress visibility and risk communication	11	P2, P3, P4
Small Group Coordination Meetings	Informal coordination mechanisms with limited participants	11	P4, P5, P6
Release-Based Integration	Coordination around release cycles rather than sprint cycles	10	P3, P6, P7
Quality Standards Alignment	Establishing shared quality criteria across methodological boundaries	9	P4, P6, P7
Product Owner Translation Role	PO as intermediary between technical and business stakeholders	9	P1, P2, P4, P7
Branch-Based Development Strategies	Use of integration branches to manage incomplete features	8	P5, P6, P7

Code	Definition	Frequency	Interview Sources
Capacity Planning Across Teams	Coordination team availability and resource allocation	8	P1, P4
Business Stakeholder Education	Teaching business teams about agile principles and limitations	7	P3, P4, P5
Pull Request Review Processes	Technical coordination through code review mechanisms	7	P6, P7
Demonstration Cycle Management	Using regular demos for stakeholder alignment and feedback	7	P1, P2, P3
Cross-Regional Coordination	Managing coordination across geographical and organisational boundaries	6	P1, P3, P4
Retrospective Evolution	Adaptation of retrospective frequency and format based on team maturity	6	P1, P2, P6
Information Loss Prevention	Strategies to prevent communication breakdowns	6	P1, P5, P6
Planning Horizon Conflicts	Tensions between short-term agile planning and long-term traditional planning	5	P1, P4, P5
Technical Debt Management	Coordination around technical debt in multi-team environments	5	P6, P7
Stakeholder Escalation Protocols	Formal and informal escalation mechanisms for coordination failures	5	P2, P3, P4
Agile Practice Standardisation	Efforts to standardise agile practices across teams	4	P4, P6
External Vendor Coordination	Managing coordination with non-agile external partners	4	P4, P5
Cultural Change Management	Organisational transformation to support hybrid coordination	4	P4, P6
Team Maturity Assessment	Recognition of varying agile maturity levels across teams	4	P5, P6, P7
Continuous Integration Challenges	Technical coordination issues in shared development environments	3	P6, P7
Performance Monitoring Coordination	Shared approaches to system performance and quality monitoring	3	P4, P7
Knowledge Transfer Mechanisms	Formal and informal knowledge sharing across teams	3	P6, P7
Resource Constraint Communication	Managing stakeholder expectations around capacity limitations	3	P1, P4