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Developing the Pre-Development Signoff in SaaS Projects: A Financial Sector Case Study

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Abstract

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With the case company's shift to SaaS solutions for core systems, the complexity of pre-development signoff processes has grown, requiring coordination to ensure alignment with strategic goals, regulatory standards, and operational readiness. This thesis addresses inefficiencies in the existing signoff process—such as prolonged approvals, role ambiguity, and communication gaps—and aims to improve these.

A thorough current state analysis using surveys and workshops with key stakeholders identified critical weaknesses in the process. Based on these insights and learnings from the literature study, a refined proposal was developed, featuring role definitions and improved communication protocols. Stakeholder workshops further refined and validated this proposal to meet the company's operational needs.

The improved signoff process is expected to streamline approvals, reduce delays, and improve cross-functional collaboration. This should enable the company to efficiently launch SaaS projects and maintain competitive agility in a rapidly evolving industry.

Keywords:	SaaS, signoff process, RACI, ITIL, COBIT, role clarity, stakeholder engagement

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Yrityksen siirtyessä ydinjärjestelmissään SaaS-ratkaisuihin, kehitystä edeltävien signoff-prosessien monimutkaisuus on kasvanut, mikä vaatii koordinaatiota strategisten tavoitteiden, sääntelyvaatimusten ja operatiivisen valmiuden varmistamiseksi. Tämä opinnäytetyö käsittelee nykyisessä signoff-prosessissa esiintyviä tehottomuuksia – kuten pitkät hyväksymisajat, roolien epäselvyydet ja viestinnän puutteet – ja tähtää näiden parantamiseen.

Perusteellinen nykytilan analyysi, jossa käytettiin kyselyitä ja työpajoja keskeisten sidosryhmien kanssa, tunnisti prosessin keskeiset heikkoudet. Näiden havaintojen ja kirjallisuustutkimuksesta saatujen oppien pohjalta kehitettiin ehdotus, joka sisältää selkeästi määritellyt roolit ja parannetut viestintäkäytännöt. Sidosryhmien työpajojen avulla ehdotusta hiottiin ja validoitiin edelleen yrityksen operatiivisia tarpeita vastaavaksi.

Parannetun signoff-prosessin odotetaan sujuvoittavan hyväksyntöjä, vähentävän viivästyksiä ja parantavan poikkifunktionaalista yhteistyötä, mikä voi mahdollistaa yritykselle SaaS-projektien tehokkaan käyttöönoton ja kilpailukykyisen ketteryyden ylläpitämisen nopeasti kehittyvässä toimialassa.

Avainsanat: SaaS, hyväksyntäprosessi, RACI, ITIL, COBIT, roolien selkeys, sidosryhmien osallistaminen

AI Usage Disclaimer

In this thesis, AI served as a supportive tool across all chapters, contributing to text organization, wording refinement, and preliminary analysis of survey data. While AI helped with structuring and editing, all final decisions, interpretations, and written content were made by me.

AI assisted in structuring and organizing chapters and suggesting suitable titles, subtitles, and section names. For example, questions such as "What are appropriate titles and subtitles for the theory section of the thesis?" or "Would you recommend alternative titles if this part were called 'Literature Study'?" yielded lists of potential titles and topics. Each title included justifications for its relevance, which I then reviewed and adapted, ultimately selecting titles that aligned with the thesis.

AI also provided feedback on coherence, flow, and sentence structure throughout the drafting process. For example, I posed questions like "Is this text coherent, and how might I improve it?" or "How can transitions be made smoother in this section?" AI responses included general guidance on improving clarity, as well as specific sentence structure suggestions. Where appropriate, I adapted these suggestions to enhance the flow and cohesion of the text, carefully revising each incorporation to maintain the intended academic tone.

Additionally, I consulted AI for guidance on figure placement and naming within the text. AI recommendations on ideal figure placements and suggested titles helped me create a logical flow within the document. I reviewed and selected the placements and names that best fit the context, ensuring each addition aligned with the overall readability and structure of the thesis.

AI was also used to support the preliminary analysis of open-ended survey responses by identifying initial themes. I posed questions like "What main ideas emerge in these survey responses?" and "Are there common themes across

different responses?" While AI-generated outputs provided a helpful starting point, I found that some suggestions did not fully align with the given data. As a result, I conducted a thorough manual review, validating and refining each theme to ensure accuracy and relevance. This process enabled me to ensure that all themes accurately represented the data, with the final categorizations and interpretations conducted independently.

Throughout the writing process, I also used AI-based grammar checkers and rewriting tools to refine sentence structure, grammar, and spelling. Each suggestion was carefully reviewed and accepted only if it aligned with my intended meaning and improved clarity.

All AI contributions were critically assessed, refined, and integrated by me, ensuring that each element was coherent with the thesis's content according to Metropolia thesis instructions. I am responsible for all content, conclusions, and interpretations presented in this thesis.

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Key Concepts and Abbreviations

COBIT (Control Objectives for Information and Related Technologies)	A framework for developing, implementing, monitoring, and improving IT governance and management practices. COBIT focuses on IT governance and is complementary to ITIL in contexts that require stringent controls and regulatory compliance.
ITIL (Information Technology Infrastructure Library)	A set of best practices for IT service management that align IT services with business needs. ITIL emphasizes structured processes, clear roles, and continuous improvement, making it essential for managing the signoff process and maintaining service quality.
Jira and Confluence	Collaborative tools widely used in software development. Jira supports task management and tracking, while Confluence serves as a documentation hub. These tools facilitate the transparency and coordination necessary for an efficient signoff process.
RACI Chart	A role assignment tool defining each role's responsibility within a project. RACI stands for Responsible, Accountable, Consulted, and Informed, helping clarify roles in cross-functional teams and ensure accountability throughout the signoff process.
Role Clarity	The clear definition of roles and responsibilities within a team or project. In complex, collaborative environments like SaaS projects, role clarity minimizes conflicts and improves team performance, especially in the context of the signoff process.
SaaS (Software as a Service)	A software distribution model in which applications are hosted by a service provider and made available to customers over the internet. SaaS allows businesses to access software solutions without maintaining the underlying infrastructure, enhancing flexibility and scalability.
Signoff Process	A formal approval mechanism in software development, particularly for SaaS projects in regulated sectors. This process ensures each project phase meets regulatory standards, quality requirements, and stakeholder expectations before progressing to the next stage.
Stakeholder Engagement	The involvement of relevant stakeholders throughout the project lifecycle to align project outcomes with business objectives. Effective stakeholder engagement ensures all parties are informed and accountable, reducing misunderstandings and enhancing decision-making during the signoff process.

1 Introduction

In the highly regulated financial industry, the development of new systems and features is a complex process that requires thorough planning and coordination. For Company Y (later case company), a leading institution in its business market, adopting Software as a Service (SaaS) platforms for its core systems has introduced new opportunities for innovation and efficiency. However, these advancements also bring challenges, one being ensuring that the pre-development signoff process is both effective and streamlined. This chapter introduces the context, challenges, and objectives related to refining the signoff process within a case company's SaaS-driven financial environment.

1.1 Business Context

The case company is a major player in their sector, offering services to businesses and individuals. The company increasingly relies on SaaS solutions to enhance its systems and deliver new or updated products to customers as they move on with their digital transformation. In the company, SaaS based systems and products require a pre-development signoff process to ensure that all proposed initiatives align with the company's strategic goals, release roadmaps, and supplier contracts.

The signoff process at the case company is a necessary step before any development work begins. It ensures all necessary approvals are obtained from all necessary people, and that the scope, risks, and impacts of new projects and products are fully understood. This process involves multiple stakeholders, including various business and technical teams. Due to the complexity and scale of the case company's operations, the signoff process must be clear and coordinated, so possible issues later in the development lifecycle can be avoided.

However, the current signoff process at the case company faces some challenges. Initial analysis points to problems with timing, roles and

responsibilities, flow of information and frequent unforeseen changes. These challenges lead to delays, miscommunication, and potential risks in aligning projects with business objectives and compliance requirements.

1.2 Business Challenge, Objective and Outcome

The main challenge this thesis addresses is the need to develop a more efficient and effective signoff process at the case company. Several significant issues hinder the current pre-development signoff process. These include prolonged approval times, which delay the start of development; unclear roles and responsibilities among stakeholders, leading to confusion and inefficiencies; poor flow of information, resulting in critical details being missed or misunderstood; and frequent changes that impact other teams and stakeholders, creating additional complications. Moreover, key personnel often further delay the process, unable to dedicate the necessary time to the signoff process due to their other responsibilities, e.g. parallel meetings.

Given these challenges, the objective of this thesis is to develop, improve, and refine the current signoff process. This will involve creating more comprehensive and transparent guidelines that clarify the signoff process for all stakeholders through analysis and workshops.

The expected outcome of this research is an improved signoff process that better supports the case company’s objectives, e.g. releases. Improving the current signoff process should help to ensure all necessary approvals are secured before development begins, aligning projects with the case company's objectives and release roadmaps, strengthening the case company's development processes.

2 Methods and Material

This chapter outlines the research design, project schedule, and data collection methods employed in this study to develop an improved signoff process for the case company. The chapter is divided into three sections: Research Design, Project Schedule, and Data Collection and Analysis.

2.1 Research Design

The research design for this study follows a systematic approach to developing and validating a signoff process model that aligns with the case company's operational requirements and challenges. The research design is visualized in Figure 1, which outlines the key steps involved in the study.

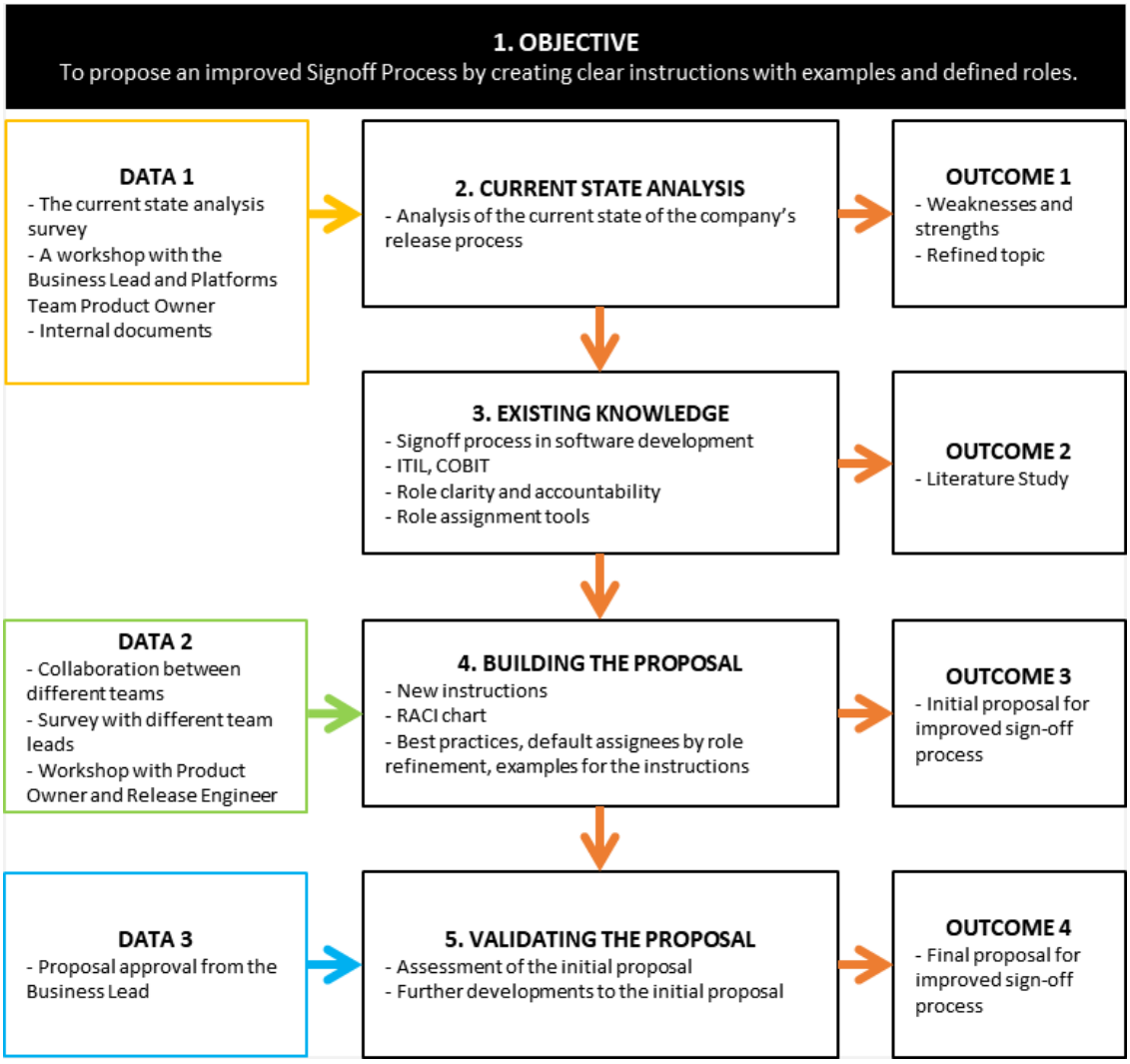

Figure 1. Research Design of the study

As depicted in Figure 1, the research begins with an analysis of the current state of the case company's release process, incorporating data from a survey and a workshop with the Business Lead and Platforms Team Product Owner. This step identifies the strengths and weaknesses of the existing process and helps refine the research focus. The second phase involves exploring existing knowledge, including signoff processes in software development, ITIL and COBIT and role assignment tools.

Building on this foundation, the third phase focuses on developing a proposal for the new signoff process instructions. This phase includes collaboration between

different teams, role clarification survey, as well as proposal-building workshops with the Product Owner and Release Engineer.

The final phase involves validating the proposal through feedback from the Business Lead. The purpose of this step is to ensure that the proposal is both practical and aligned with the company's needs. The research design culminates in the development of a final proposal, refined based on the feedback received.

2.2 Project Schedule

A project schedule was created to ensure the execution of each phase outlined in the research design, from initial analysis to final validation. The study was conducted within a duration of five months, from May 2024 to October 2024 as illustrated in Figure 2.

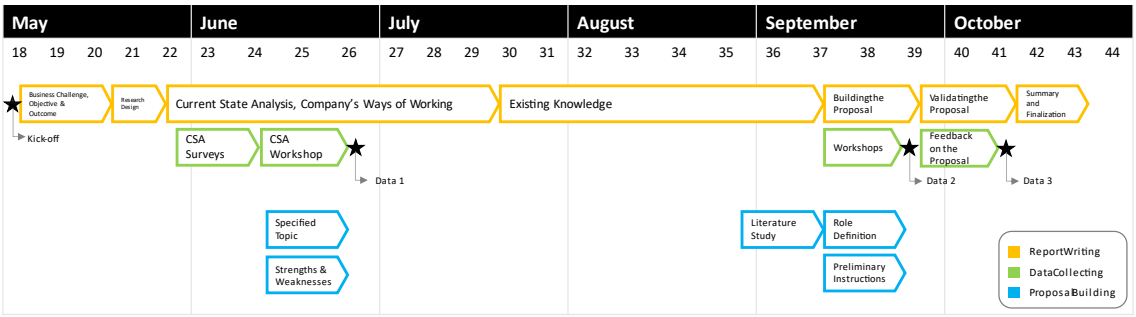

Figure 2. Timeline of the Study

As shown in Figure 2, the timeline of the study is divided into three main categories of activities: Report Writing, Data Collecting, and Proposal Building. These activities illustrate the progression of the project, starting with the "Current State Analysis" in May and June, moving through "Existing Knowledge" and "Building the Proposal" stages in the summer, and concluding with "Validating the Proposal" and "Summary and Finalization" in October.

Key milestones in the project schedule included completing the current state analysis, reviewing existing knowledge, drafting the initial proposal, and conducting a final validation of the proposed process changes. Throughout the

project, regular meetings and workshops were held with key stakeholders to ensure alignment and gather necessary input. The timeline was crafted to accommodate the schedules of essential personnel, particularly those involved in the signoff process, whose availability was a critical factor in the success of the study.

This provided a clear roadmap for achieving the study's objectives, ensuring that each phase was thoroughly planned and executed in alignment with the overall research goals.

2.3 Data Collection and Analysis

Data collection is a crucial component of this study, providing the foundation for both the analysis of the current state and the development of the new signoff process model. The plan is to gather data through a combination of surveys, workshops, and collaborative sessions, organized into three data collection phases, as shown in Table 1.

Table 1. Details of interviews, workshops, and discussions, in Data 1-3

	Participant / Role	Data Type	Topic, Description	Date, Length	Documented as
	Data 1: for the Current State Analysis				
1	Multiple roles, see appendix 1	Survey, see appendix 1	Current state of the company's release process	7th June 2024	Survey results
2	Business Lead and Product Owner, Platforms Team	Workshop	Going through the CSA survey results and specifying the research topic	12th June 2024 1 hour	Notes
	Data 2: for the Proposal Building				
3	Multiple roles, see appendix 2	Survey, see appendix 2	Recording each team's responsibilities and actions for signoff and gathering	18th October 2024	Survey results
4	Release Engineer and Product Owner, Platforms Team	Workshop	Defining the Platforms team's responsibilities and actions in signoff	21st October 2024 1 hour	Notes
	Data 3: for the Validation				
5	Release Engineer and Product Owner, Platforms Team	Workshop	Validating the roles and responsibilities in RACI chart	21st October 2024 1 hour	Notes
6	Business Lead	Workshop	Validating the Initial Proposal	28th October 2024 1 hour	Notes

The first phase, Data 1, focuses on the Current State Analysis, where initial data is collected through a survey distributed among stakeholders involved in the release process. This survey, conducted in the beginning of June 2024, aims to capture a broad understanding of the existing strengths and weaknesses of the current release process. Complementing the survey, a workshop with the Business Lead and the Platforms Team Product Owner in June 2024 provides a

place for discussion on specific issues and identifying areas needing improvement.

In the second phase, Data 2, data collection focuses on building the proposal for the new signoff process. A survey conducted in October 2024 gathers details from various roles on their specific responsibilities and actions within the signoff process. This survey provides a comprehensive view of each team's expectations, pain points, and needs regarding role clarity and collaboration in the signoff process. Additionally, a workshop with the Release Engineer and Platforms Team Product Owner in October 2024 allows further definition of the Platforms team's responsibilities within the signoff framework.

The third and final phase, Data 3, concentrates on validating the proposal. A workshop about the Platforms team's responsibilities with the Release Engineer and Platforms Team Product Owner is continued with validating the proposed roles and responsibilities. Further validation occurs during a workshop in late October 2024, with the Business Lead, which provides higher level approval of the proposal's key components.

Table 2. Internal documents used to describe the company's ways of working

	Name of the Document	Extent	Description
A	Release Process Confluence page	Web page	Describes the current release process
B	Signoff – Confluence page	Web page	Describes the current signoff process

Internal documents were also a significant source of data for understanding existing workflows and company practices. These documents, including the "Release Process" and "Signoff" Confluence pages, provided detailed

descriptions of the current release and signoff processes, respectively. These resources offered a foundational understanding of the company's established workflows, which was essential for analyzing the existing processes and identifying areas for improvement.

The internal documents were used throughout the study to contextualize findings from the surveys and workshops. By mapping the survey and workshop insights against these established processes, the study was able to pinpoint specific gaps and misalignments in the current practices, which the proposed signoff improvements aim to address.

In conclusion, the combination of survey data, workshops, collaborative discussions, and internal documentation created a robust basis for understanding the current state and designing the proposal. Each phase of data collection contributed specific insights that informed the recommendations for the improved signoff process. This ensured that the proposal is grounded in real organizational needs and aligned with best practices.

3 Current State Analysis and Company's Ways of Working

This chapter provides an in-depth analysis of the current state of the release process at the case company and examines the company's operational methods. By evaluating existing processes and identifying key strengths and weaknesses, this analysis set the foundation for developing a more effective signoff process. The chapter is divided into four sections: an overview of the current state analysis, an examination of the signoff process within the release process, a detailed look at the current signoff process, and key findings from the analysis.

3.1 Signoff Process as Part of the Release Process

Earlier in spring 2024, the case company initiated the renewal and development of its release process for SaaS products. Utilizing Jira and Confluence to document every step, the company leveraged more Jira functionalities, such as sub-tasks, to better track schedules and necessary tasks. A comprehensive list of sub-tasks was created for each SaaS product release, including:

1 Dependencies identified,

2 Signoff completed,

3 Non-Functional Requirements (NFRs) implemented and documented,

4 Security Testing,

5 Deployment to Common Testing Environment (env.),

6 Common Test env.: Smoke Tests,

7 Common Test env.: Functional Approval and Regression Testing,

8 Deployment to Performance Test Environment,

9 Perf: Performance and Failover Testing,

10 Deployment to Acceptance Environment,

11 Acceptance: Functional Approval and Regression Testing,

12 Deployment Plan Created,

13 Production Verification,

14 Deployment to Staging Environment

This list of sub-tasks helps divide tasks across teams, making sure the right people handle the right steps. With everything tracked in Jira and Confluence, it's easy to gather all the info in one place and keep an eye on progress. Adding due dates keeps the release on schedule, ensuring each task, like testing and approvals, gets done on time. Overall, it makes the whole process smoother and more organized.

3.1.1 Integration of Jira and Confluence

Jira and Confluence are integral tools used by the case company to manage and document the release process. Jira is used for ticket tracking and project management, allowing teams to create and manage tasks, sub-tasks, and workflows. Each task in the release process is tracked through Jira, providing real-time visibility into the status and progress of each step. Confluence, on the other hand, is used for documentation and collaboration. It serves as a central repository where all relevant project documents, meeting notes, and instructional guides are stored and easily accessible.

By integrating information on Jira and Confluence, all information related to the e.g. release process is centralized and accessible. This integration allows for better communication and collaboration between teams, as changes and updates in Jira are automatically reflected in Confluence documentation. The use of these tools enhances transparency, accountability, and efficiency in managing the release process.

3.1.2 Role of Signoff in the Release Workflow

The signoff process is positioned early in the release workflow, immediately after dependencies are identified. This placement ensures that all relevant

stakeholders approve the project scope, requirements, and design before significant resources are allocated to development. By incorporating signoff early, the process helps identify and mitigate potential risks, align team expectations, and ensure that all necessary compliance with supplier agreements is met. This facilitates smoother subsequent stages and reduces the likelihood of changes or delays later in the release cycle.

3.2 Current Signoff Process

The current signoff process at the case company plays a critical role in ensuring approvals are in place before moving forward with SaaS product releases. The process is designed to coordinate multiple stakeholders, track approvals, and maintain accountability. It can be simplified to four main phases: Pre-Signoff Preparation, Stakeholder Approvals, Official Signoff Meeting, and Post-Signoff Actions. These phases ensure a structured flow from planning to final implementation.

Figure 3 below provides a simplified view of the current process, highlighting its sequential nature and the key phases involved.

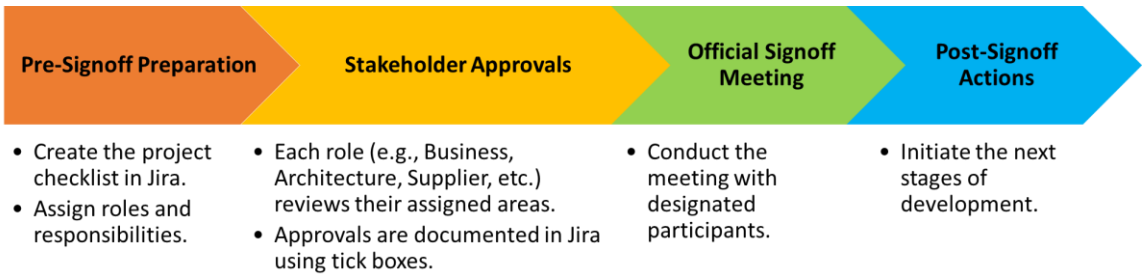

Figure 3. Simplified Process Flow of the Current Signoff Process

The figure 3 shows how the process begins with Pre-Signoff Preparation, during which tasks are planned, and roles are assigned. This is followed by Stakeholder Approvals, where each role reviews and approves the content of the signoff. These approvals feed into the Official Signoff Meeting, where final alignments are

made across all stakeholders. Finally, Post-Signoff Actions focus on documentation, follow-up tasks, and ensuring the approved deliverables are implemented.

The visualization highlights key strengths of the current process, such as its structured approach and transparency of tracking. However, challenges remain, particularly in Stakeholder Approvals, where delays can occur, and which can lead to a delay of the official signoff. These issues emphasize the need for clearer guidelines and more distributed accountability to streamline the process and reduce inefficiencies.

3.2.1 Evolution of the Signoff Process

The signoff process at the case company has evolved over time to address growing complexities in project management and regulatory compliance. Initially, the process involved only high-level approvals between the case company and the supplier. As the need for more detailed oversight became apparent, the process was expanded to include additional stakeholders and specific areas of responsibility. This evolution aimed to improve accuracy and accountability in project approvals, although it also introduced new challenges in managing the process efficiently.

3.2.2 Current Roles and Responsibilities

In the current signoff process, several key roles are involved in providing necessary approvals. These roles include representatives from Business, Architecture, Supplier, Integrations, DATA Business, DATA Technical, Quality Team, and Platforms Team. Each role is responsible for reviewing and approving specific aspects of the project relevant to their domain. However, the responsibilities associated with each role often lack clarity, leading to confusion and delays. The recently introduced "Signoff - Responsible" role aims to streamline this process by ensuring proper company and assignment of responsibilities.

3.2.3 Utilization of Jira for Signoff

Jira is extensively used to support the signoff process at the case company. Project checklists and tick boxes are created in Jira to track the completion of signoff tasks. Each task is assigned to the relevant stakeholder for approval, providing a clear and organized method for tracking progress. However, while Jira facilitates task management, it does not inherently address the ambiguity in roles and responsibilities, nor does it fully resolve communication inefficiencies. These limitations highlight the need for further enhancements to the process.

3.3 Overview of the Current State Analysis Survey and Workshop

The initial analysis of the case company's release process involved gathering data through a survey and workshop with key stakeholders. The survey aimed to gather perspectives on the strengths, weaknesses, and areas for improvement of the current process. The strengths highlighted, e.g. improved transparency and documentation through tools such as Jira and Confluence.

However, several weaknesses were also identified. The release process was described as too supplier-centric, which has led to a misalignment with the case company's internal strategic goals, often prioritizing supplier needs over the company's own requirements. Unclear roles and responsibilities in the signoff process were another significant issue, leading to confusion, delays, and inefficiencies, as it is often unclear who is accountable for specific tasks, resulting in overlapping duties or missed steps. Inefficiencies in communication and coordination were also noted, which have hindered effective collaboration among teams.

These weaknesses have collectively impacted the efficiency of the signoff process, prompting the need for improvements. The workshop with the Business Lead and the Platforms team Product Owner further refined these insights, focusing on enhancing the signoff process as the primary area for improvement. The CSA survey questions and roles are available in Appendix 1.

3.3.1 Survey Methodology and Participant Demographics

The survey methodology involved distributing a questionnaire to stakeholders across various departments participating in the release process at the case company. The survey aimed to gather data on their satisfaction with the current signoff process, perceived strengths, challenges, and suggestions for improvement. Participants represented a diverse range of roles, providing a sufficient view of the process from different perspectives. The survey as a method was chosen to accommodate the busy schedules of the survey respondents to make the process as accurate and effective as possible.

Survey participants included key roles such as Product Owners, Test Engineers, Business Leads, Quality Team Representatives, Integration Specialists, members of the Data Team (both DATA Business and DATA Technical), and the Platforms Team. Each of these roles contributed unique insights based on their involvement in the release process, offering a broad understanding of the strengths and areas for improvement of the current signoff process.

By gathering feedback from this diverse group, the survey provided an understanding of the current signoff process, highlighting both its strengths and challenges faced by different teams. This diverse input was essential in identifying the key areas that require improvement, and in ensuring that any proposed changes would address the needs of all stakeholders involved.

3.3.2 Workshop Insights and Discussions

The workshop was held with the Business Lead and the Platforms Team Product Owner. Initially, the discussion aimed to find improvement actions for the entire release process. However, as many survey respondents emphasized issues with the signoff process, the focus shifted to this area. The workshop involved discussing the survey results in detail and identifying specific areas within the signoff process that required improvement.

Despite these challenges, the workshop also highlighted some strengths of the current process. The signoff process ensures all necessary checks are conducted, and the use of Jira and Confluence enhances transparency and documentation across teams. This, combined with cross-departmental involvement, was seen as a positive aspect that ensures thoroughness in the review process.

The workshop concluded with a consensus on the need to clarify roles, improve communication channels, and develop more comprehensive instructions to make the signoff process more efficient.

3.4 Key Findings from the Current State Analysis

The current state analysis highlighted the strengths and weaknesses of the existing signoff process at the case company. The strengths of the process include its structured nature and compliance with regulations, as well as improved transparency and documentation facilitated by tools like Jira and Confluence. However, notable weaknesses were also identified, including a supplier-centric focus, unclear roles and responsibilities, lack of comprehensive instructions and guidelines, and inefficiencies in communication and coordination. These findings were gathered through the CSA survey and are summarized in Table 3 below.

Table 3. Summary of the Current State Analysis Survey Results

	Findings	Details
Strengths	Structured approach and regulatory compliance	The current signoff process is well-structured and ensures compliance with relevant regulations, providing a clear framework for decision-making.
	Enhanced transparency and documentation	Utilization of Jira and Confluence has improved transparency and documentation across teams, making information more accessible and ensuring accountability.
Weaknesses	Supplier-centric focus	The process tends to prioritize supplier needs over internal business requirements, leading to potential misalignment with the case company's strategic objectives.
	Unclear roles and responsibilities*	There is a lack of clarity around roles and responsibilities within the signoff process, causing confusion and delays.
	Inefficiencies in communication and coordination*	Inefficient communication channels and coordination between teams have led to delays and misunderstandings during the signoff process.
	Lack of comprehensive instructions and guidelines*	The absence of clear and detailed guidelines for the signoff process leads to inconsistencies and increases the learning curve for new team members.

As depicted in Table 3, the survey results reveal both strengths and weaknesses in the current signoff process. However, the weaknesses, particularly those marked with an asterisk (*), highlight critical areas for improvement. These issues were identified as key focus areas for further research.

Additionally, the analysis indicated that while some stakeholders appreciated the transparency and structured approach, others found the process bureaucratic and time-consuming, particularly in obtaining timely approvals. Addressing these

weaknesses by clarifying roles and writing comprehensive instructions will be crucial in making the process more efficient. These improvements will help ensure that the signoff process supports rather than hinders the release process, enabling more effective and timely product releases.

The findings from the Current State Analysis point to areas where improvements can be made. To explore the best practices and methodologies for addressing these challenges, the Literature Study—will examine relevant literature on signoff processes, role clarity, and communication protocols. This study will provide the theoretical foundation for the proposed solutions to the issues identified in the current state.

4 Existing Knowledge on Role Clarity, Frameworks, and Signoff Processes

This section searches solutions from existing knowledge to the weaknesses revealed by the CSA in the previous section to provide a comprehensive analysis of theoretical frameworks and practical applications related to role clarity, accountability, and stakeholder engagement in the context of software development and project management. Given the complexity of modern organizational environments and the critical role of effective collaboration, understanding the dynamics of signoff processes and the tools available for enhancing role clarity is essential for ensuring project success.

This chapter is divided into three major sections: 4.1 Overview of Signoff Processes in Software Development, 4.2 ITIL and COBIT Frameworks in Process Management, and 4.3 Role Clarity and Accountability in Organizational Processes. The choice of these topics reflects the importance of various foundational components of software development and IT service management. Table 4 below summarizes the topics, their subsections, and the rationale behind choosing each of them.

Table 4. Overview of Topics on the Existing Knowledge

Section	Topic	Reason for Inclusion
4.1	Overview of Signoff Processes in Software Development	The signoff process is critical for ensuring the quality and success of software development projects. Understanding the historical context, best practices, and challenges of signoff processes helps provide a comprehensive view of how to effectively manage project milestones and ensure quality compliance.
4.1.1	Signoff in Software Development: A Historical Perspective	This subsection provides context on how the signoff process has evolved, helping to understand its current application and best practices.
4.1.2	Signoff in SaaS Development: Ensuring Quality and Compliance	SaaS has distinct challenges, and understanding signoff in this context is essential for maintaining service quality and meeting regulatory requirements.

4.1.3	Challenges in Signoff Processes for Financial Institutions	Financial institutions have specific regulatory requirements and high compliance standards, making it necessary to explore the unique challenges they face during signoff.
4.1.4	The Role of Stakeholder Engagement in Signoff Processes	Stakeholder engagement is critical in aligning project outcomes with expectations, thereby improving decision-making and accountability throughout the signoff process.
4.2	ITIL and COBIT Frameworks in Process Management	ITIL and COBIT play a crucial role in structuring IT service management and ensuring consistency, efficiency, and quality in software development and service delivery.
4.2.1	ITIL	Provides an overview of ITIL's key processes, showcasing its influence on effective IT service management and alignment with organizational goals.
4.2.2	COBIT	Provides an overview of COBIT as an IT governance framework focused on aligning IT processes with business objectives, enhancing risk management, and ensuring compliance in regulated sectors.
4.2.3	ITIL vs. COBIT: A Comparative Review	ITIL and COBIT are two prominent frameworks used in process management. A comparative review highlights their strengths, limitations, and applications in different contexts.
4.2.4	ITIL and Continuous Improvement in Signoff Processes	Continuous improvement is central to ITIL, and this subsection explores how ITIL practices can enhance the signoff process and lead to better project outcomes.
4.3	Role Clarity and Accountability in Organizational Processes	Clearly defined roles and accountability mechanisms are essential for effective teamwork and minimizing conflicts within companies. This section examines these concepts from both theoretical and practical perspectives.
4.3.1	Theoretical Perspectives on Role Clarity	A theoretical overview of role clarity helps to understand how defined roles impact employee performance, satisfaction, and organizational effectiveness.
4.3.2	Addressing Role Ambiguities in Cross-functional Teams	Cross-functional teams often face role ambiguity. This subsection addresses methods for mitigating role ambiguities to enhance teamwork and project success.
4.3.3	Role Assignment Tools in ITIL and Other Frameworks	This subsection focuses on practical tools, such as RACI charts, used in ITIL and other frameworks to ensure role clarity and improve accountability.
4.3.4	Practical Applications of Role Clarity Frameworks	Examines real-world applications of role clarity frameworks to illustrate how theoretical concepts can be effectively implemented to reduce ambiguities and enhance accountability.

As depicted in Table 4, the topics covered in the literature study provide a view of software development and process management. Signoff processes (section 4.1) ensure quality and regulatory compliance at different stages of the software development lifecycle. This section is crucial to understanding how approval

methods can contribute to project success. The ITIL framework and other process management frameworks (section 4.2) provide a foundation for maintaining consistent, high-quality service delivery. By comparing ITIL with other frameworks, this section aims to present different approaches to IT service management and process efficiency. Finally, role clarity and accountability (section 4.3) are explored in depth because they are fundamental for effective collaboration, reducing ambiguity, and ensuring accountability in cross-functional teams.

Together, these topics offer a comprehensive view of how different frameworks, effective stakeholder engagement, and well-defined roles contribute to the success of software projects. They are interlinked, emphasizing that successful software development is dependent on clear processes, stakeholder alignment, and the ability to adapt to organizational and regulatory demands.

4.1 Overview of Signoff Processes in Software Development

The signoff process is a critical checkpoint in software development, especially in regulated industries such as finance, where it ensures that projects comply with both business and regulatory requirements (Gozman & Currie, 2015). Signoff is a formal approval step that certifies the completion of various stages of a software project, ensuring alignment with predefined goals, quality standards, and regulatory obligations (Beaumier & Reese, 2023). As SaaS platforms have become more common, signoff processes have adapted to address the unique challenges of compliance and scalability (Sabharwal, et al., 2022). This section explores the evolution of signoff processes, particularly in SaaS development, and identifies the challenges faced by financial institutions in managing signoff effectively.

4.1.1 Signoff in Software Development: A Historical Perspective

Historically, signoff processes have been deeply integrated into traditional software development methods, especially the waterfall model, which

emphasized a linear, sequential approach. The waterfall method required formal signoff at the completion of each stage, including requirements gathering, design, development, testing, and deployment, to ensure that the project's objectives were met before moving on to the next phase. This process was essential for managing risk, preventing delays, and ensuring alignment between stakeholders and the development team. (Pressman, 2010)

With the rise of iterative development models, such as agile, the nature of signoff evolved. Agile methodologies prioritize continuous delivery and collaboration, reducing the need for formal signoff at every phase (Trasi, 2015). Instead, agile teams rely on frequent feedback loops and ongoing stakeholder involvement to ensure that development remains aligned with business objectives (Trasi, 2015). However, even in agile environments, critical approval points remain necessary, particularly during major releases or when regulatory oversight is involved (Trasi, 2015). Signoff processes have adapted to include continuous feedback alongside formal checkpoints, allowing for flexibility while ensuring project alignment and compliance (Sabharwal, et al., 2022).

4.1.2 Signoff in SaaS Development: Ensuring Quality and Compliance

SaaS development is characterized by a continuous delivery model that allows for rapid updates and scalable services. However, these advantages pose significant challenges in ensuring quality and regulatory compliance, especially in industries such as finance where data security and legal obligations are essential (Miguel, 2023). The signoff process in SaaS development is crucial for verifying that each iteration meets predefined quality and compliance standards before release (Tang & Liu, 2015).

To ensure quality in SaaS, companies often integrate automated testing tools within CI/CD (Continuous Integration/Continuous Delivery) pipelines. These pipelines automatically test every change for issues such as performance degradation, security vulnerabilities, and scalability concerns (Cusick, et al., 2022; Sabharwal, et al., 2022). Automated dependability assessments,

particularly focused on non-functional requirements like system reliability and performance, help ensure the consistency and quality of each release (Cusick, et al., 2022; Sabharwal, et al., 2022). By reducing reliance on manual testing, these automated tools accelerate the signoff process, especially in fast-paced environments that require frequent updates (Miguel, 2023).

However, automation alone is insufficient in regulated industries like finance. Compliance with various regulatory frameworks is necessary for financial institutions, particularly when using cloud services for SaaS applications. As financial services move to the cloud, institutions must navigate complex regulatory requirements related to data security, operational resilience, and risk management (Strachan, et al., 2023). These regulations, along with industry-specific guidelines, require controls on data processing, storage, and governance. Strachan et al. (2023) highlight the regulatory challenges financial institutions face when transitioning to cloud services, emphasizing the need for formal signoff processes to ensure compliance and alignment with industry standards.

Additionally, selecting a trusted cloud service provider (CSP) is essential for ensuring compliance. Tang and Liu (2015) propose the FAGI model—Function, Auditability, Governability, and Interoperability—as a framework for evaluating CSPs. This model ensures that CSPs meet the security, governance, and compliance needs of financial institutions, making it integral to the signoff process (Tang & Liu, 2015). Incorporating regulatory compliance checks within the signoff process ensures that both internal development standards and external obligations are met before release (Mahalle, et al., 2021).

4.1.3 Addressing Signoff Process Inefficiencies in Financial Institutions

Financial institutions face unique challenges in managing signoff processes, primarily due to the complexity of the regulatory environment in which they operate. Regulatory frameworks such as GDPR and the European Banking Authority's guidelines impose stringent requirements on financial services,

making signoff processes critical for ensuring compliance with both internal quality standards and external regulations (Currie & Gozman, 2014). These regulations require robust governance, risk management, and compliance mechanisms, which must be integrated into the signoff process to prevent non-compliance (Gozman & Currie, 2015).

One of the major challenges within financial institutions is the fragmentation of responsibility across different departments. Compliance, IT, legal, and operational teams often work in silos, resulting in delays, miscommunication, and misalignment when obtaining necessary approvals for product releases (Currie & Gozman, 2014). This siloed structure complicates the signoff process and increases the risk of non-compliance, as different stakeholders may have conflicting priorities (Beaumier & Reese, 2023). To streamline the signoff process, financial institutions must foster greater collaboration across teams, which often requires changes to organizational structure and communication flows (Gozman & Currie, 2015).

The growing dependence on cloud-based SaaS platforms further complicates signoff processes. Financial institutions must ensure that their cloud providers comply with stringent regulatory standards related to data protection, operational resilience, and cybersecurity (Hon & Millard, 2018). The shared responsibility model, where both the institution and the cloud provider are accountable for compliance, makes signoff processes more complicated. Institutions must verify not only their own internal processes, but also the compliance of their cloud providers (Tang & Liu, 2015). This extended scope of responsibility introduces additional steps into the signoff process to ensure compliance is maintained across the entire service delivery chain (Strachan, et al., 2023).

Automation and AI offer both opportunities and challenges for managing compliance within signoff processes. Automation can streamline routine compliance checks and generate regulatory reports more efficiently. However, automation alone is inadequate, as regulatory bodies often require formal human oversight to ensure that AI-generated outputs align with broader institutional risk

management strategies. Balancing the efficiency gains from automation with the need for human oversight adds complexity to the signoff process. (Beaumier & Reese, 2023)

In addition to internal challenges, external pressures from evolving regulatory frameworks further complicate the signoff process for financial institutions. As regulations change, institutions must continuously update their compliance practices and internal signoff procedures to remain compliant with new requirements (Strachan, et al., 2023). Failure to adapt to these changes can lead to non-compliance, leading to financial penalties and reputational damage (Beaumier & Reese, 2023).

4.1.4 The Role of Stakeholder Engagement in Signoff Processes

Stakeholder engagement plays a central role in the effectiveness of the signoff process. In order to ensure that all aspects of quality, compliance, and business requirements are considered before approving a project milestone, effective signoff processes should involve key stakeholders, such as IT teams, compliance officers, and business representatives (Beaumier & Reese, 2023; Currie & Gozman, 2014).

Involving stakeholders early in the development lifecycle can prevent misunderstandings and conflicts during the signoff phase. Regular communication and collaboration help stakeholders stay informed about project progress, changing requirements, and potential risks. This proactive approach enables teams to address issues before they escalate, facilitating a smoother signoff process (Pressman, 2010; Trasi, 2015). Additionally, clear and well-defined criteria for signoff, agreed upon by all stakeholders, can reduce ambiguity and improve decision-making efficiency, thus minimizing delays (Beaumier & Reese, 2023; Strachan, et al., 2023).

The involvement of multiple stakeholders can sometimes lead to conflicting priorities, particularly in highly regulated sectors like financial services.

Compliance teams may prioritize regulatory compliance, while business representatives may focus on time-to-market or functionality. Effective stakeholder management is essential to balance these competing priorities and ensure that the signoff process does not become a bottleneck (Mahalle, et al., 2021; Currie & Gozman, 2014). In SaaS development, the shared responsibility model further complicates the stakeholder landscape, requiring close collaboration between internal teams and external service providers to achieve compliance and operational resilience (Tang & Liu, 2015).

Stakeholder engagement also supports the traceability and auditability of the signoff process, which are particularly important in regulated industries. Documenting stakeholder inputs and decisions helps create a clear audit trail, which is essential for demonstrating compliance with regulatory standards like GDPR and SOC 2 (Hon & Millard, 2018; Strachan, et al., 2023). Involving compliance and legal stakeholders ensures that signoff procedures align with these requirements, reducing the risk of penalties and improving overall accountability.

In conclusion, effective stakeholder engagement is fundamental to successful signoff processes, ensuring that quality, compliance, and business objectives are met. Early involvement, regular communication, and clear criteria are critical factors that facilitate smoother signoff, particularly in regulated environments where traceability and balanced decision-making are essential.

4.2 ITIL and COBIT Frameworks in Process Management

Nowadays, companies use frameworks like ITIL (Information Technology Infrastructure Library) and COBIT (Control Objectives for Information and Related Technologies) to manage complex IT processes while ensuring alignment with business objectives and compliance with regulations. ITIL focuses on IT service management (ITSM), providing practices for managing the lifecycle of IT services (Susnjara & Smalley, 2024). Conversely, COBIT emphasizes governance and

control, ensuring that IT operations align with overall business strategies while meeting regulatory requirements (Ashtari, 2023).

The implementation of these frameworks provides companies with tools to achieve stronger governance, enhanced service quality, and more efficient IT operations (Office of Government Commerce, 2007). By examining ITIL and COBIT, this section explores their unique strengths, contrasts their focus areas, and assesses how they can be integrated to support continuous improvement in IT services.

4.2.1 ITIL

ITIL is one of the most widely recognized frameworks for IT service management managing IT services throughout their lifecycle. The framework consists of five core stages: service strategy, service design, service transition, service operation, and continual service improvement (Office of Government Commerce, 2007). These stages help companies handle IT services well by ensuring operations match business goals, increasing efficiency, and improving service quality (Susnjara & Smalley, 2024).

ITIL ensures that IT services are always delivered to meet the needs of the business and customers. It provides a common language for IT service management across industries which helps with better communication and alignment between IT and business teams (Office of Government Commerce, 2007). This is especially useful for companies that need to be agile and quick in-service delivery, as ITIL will help strike a balance between speed and quality to keep IT services reliable and scalable (Susnjara & Smalley, 2024).

The effectiveness of ITIL in improving service management has been well documented. Potgieter, Botha, and Lew (2005) found that companies adopting ITIL experienced more consistent processes, faster incident resolution, and overall improvements in service levels. By implementing ITIL, companies can systematically handle incidents, problems, and service requests, thereby

reducing downtime and enhancing customer satisfaction. This establishes best practices that can be used for different IT services (Potgieter, et al., 2005).

However, ITIL is not without its limitations. One common criticism is that ITIL can be rigid and bureaucratic, making it difficult for companies to respond quickly to changing business needs (Simplilearn, 2024). The framework's focus on process standardization, while beneficial for maintaining consistency, may also slow down decision-making in dynamic environments. Many companies address this issue by integrating ITIL with more agile methodologies to balance structure and flexibility (Susnjara & Smalley, 2024).

ITIL has been particularly beneficial in industries requiring high levels of operational efficiency and regulatory compliance, such as financial services. Financial institutions rely on ITIL to ensure that IT services are reliable, secure, and compliant with regulatory standards (Ilori, et al., 2024). In these contexts, ITIL's emphasis on governance and risk management is critical for maintaining compliance with industry regulations.

4.2.2 COBIT

COBIT is a comprehensive IT governance framework developed to help companies manage and govern their IT environment in alignment with business objectives. Its primary focus is on ensuring that IT processes support and are integrated with organizational goals, particularly through risk management, compliance, and control mechanisms (Ashtari, 2023). COBIT provides practices that guide decision-making across the IT landscape, enabling companies to align IT and business strategies effectively. This framework is widely used in highly regulated sectors where compliance, such as data privacy and security, is essential (Ilori, et al., 2024).

COBIT's applicability is most evident in companies with complex IT environments and strict governance needs, such as those in the financial sector. The framework is most valuable for companies that need to align IT operations and regulatory

standards, emphasizing accountability, controlling objectives, and IT risk management. Ilori, Nwosu, and Naiho (2024) note that COBIT is often used alongside other frameworks, like ITIL, to provide a comprehensive governance structure that supports not only compliance but also operational efficiency. By focusing on governance and compliance, COBIT helps companies to establish strong internal controls and safeguards that are essential for managing risk in highly regulated industries.

Like ITIL, COBIT also has limitations. The framework can be complex and resource-intensive to apply, which may pose challenges for smaller companies or those with limited IT governance needs (Ashtari, 2023). Also, its heavy emphasis on compliance and control can also make it less flexible in environments where rapid change and innovation are prioritized. As such, while COBIT is highly effective for ensuring regulatory compliance and managing risks in regulated settings, companies in fast-paced or less-regulated industries may find it restrictive (Ilori, et al., 2024).

4.2.3 ITIL vs. COBIT: A Comparative Review

The differences between ITIL and COBIT are especially noticeable in their potential use in financial institutions. Financial institutions often require both strong governance and efficient service management. ITIL helps these companies manage the operational aspects of IT services, ensuring that incidents are resolved quickly, and services are delivered consistently (Susnjara & Smalley, 2024). COBIT ensures that IT services comply with governance frameworks and regulatory standards, offering a governance structure that supports business objectives (Ilori, et al., 2024).

Case studies highlight the complementary nature of ITIL and COBIT. For instance, Marchão, Silva, and Pedron (2020) describe how a multinational company used ITIL to manage daily IT operations while relying on COBIT for governance and compliance. By integrating both frameworks, the company was able to achieve both operational efficiency and strategic alignment. Utilizing both

ITIL and COBIT in industries like financial services can be highly beneficial, when compliance and operational performance must be balanced (Ilori, et al., 2024).

Despite the complementary nature of ITIL and COBIT, companies should consider their needs and requirements while deciding which framework to implement and when. ITIL is usually better suited for managing day-to-day IT operations, and COBIT is more effective managing governance and compliance. Therefore, companies prioritizing operational efficiency may find ITIL more useful, while those focused on governance and regulatory compliance may benefit more from the usage of COBIT (Ashtari, 2023).

4.2.4 ITIL Service Design and Continuous Improvement in Signoff

Continual service improvement (CSI) is one of ITIL's core strengths, which is crucial for enhancing processes like signoff. CSI is utilized throughout ITIL's service lifecycle, ensuring that IT services are continually evaluated, refined, and adapted to meet changing business needs (Simplilearn, 2024). For the signoff process maintaining quality assurance and compliance is essential for the smooth delivery of IT services, thus CSI approach is important.

The signoff process often involves coordination among multiple stakeholders, including IT, compliance, and legal teams. ITIL service management practices support this coordination, ensuring that all necessary approvals are obtained before a service or product is deployed. This not only minimizes the risk of non-compliance but also ensures that services are delivered in alignment with business objectives (Spremic, et al., 2008). By applying ITIL's systematic methods to signoff processes, companies can significantly reduce bottlenecks and enhance the quality and efficiency of the approvals.

Furthermore, integrating modern methodologies like AgileOps and DevOps with ITIL's continual improvement model has greatly enhanced the efficiency of signoff processes. These methodologies introduce automation and real-time feedback loops into the service management lifecycle, helping companies accelerate

approvals while maintaining accuracy (Sabharwal, et al., 2022). Automation not only speeds up the signoff process but also reduces human errors, leading to more reliable outcomes and allowing teams to focus on higher-level decision-making rather than routine administrative tasks.

Companies that have implemented ITIL's CSI model have reported significant improvements in their signoff processes. For instance, in the financial services sector, ITIL has been instrumental in reducing incidents, improving response times, and ensuring that IT services remain aligned with evolving business goals (Spremic, et al., 2008). These improvements not only boost operational efficiency but also enhance regulatory compliance, making ITIL a valuable framework for managing signoff processes.

By consistently applying ITIL's principles of continual service improvement, companies can create adaptive and resilient signoff procedures. These procedures help to meet the requirements of rapidly changing technological and regulatory landscapes, ultimately contributing to better service quality, higher customer satisfaction, and reduced risks associated with non-compliance.

4.3 Role Clarity and Accountability in Organizational Processes

Role clarity and accountability are critical components of organizational effectiveness, particularly in environments where cross-functional teams and collaborative work processes are prevalent. This section examines the theoretical perspectives on role clarity, addressing role ambiguities, tools for role assignment, and practical applications of role clarity frameworks in organizational settings. By synthesizing insights from various studies, this section aims to establish a foundational understanding of the implementation of clear roles in enhancing teamwork and productivity.

4.3.1 Theoretical Perspectives on Role Clarity

The significance of role clarity in organizational behavior and performance has been extensively studied across various disciplines. Role clarity refers to the individual's understanding of the extent of their responsibilities, expectations, and roles within a team or company (Kauppila, 2014). Research indicates improved job satisfaction, reduced anxiety, and enhanced performance outcomes are associated with role clarity (Jackson & Schuler, 1985). On the other hand, unclear roles can lead to negative outcomes, such as increased stress, decreased job satisfaction, and diminished organizational commitment (Jackson & Schuler, 1985).

Role dynamics theory emphasizes the changing nature of roles and the effect of external factors on role expectations. For example, organizational culture and individual perceptions both affect individual's role expectations. This theory highlights that role clarity is not only well-defined job descriptions but is also influenced by how individuals perceive their roles within the broader organizational context (Mafuba, et al., 2015).

Critical success factors for cross-functional teamwork include clarity of roles as a necessary precondition for effective collaboration (Holland, et al., 2000). These factors include task design, group composition, and organizational context (Holland, et al., 2000). Clearly defined roles enable team members to better understand their contributions, enhancing overall team performance.

In the context of information systems and requirement engineering, a role clarity framework utilizes theoretical concepts to reduce ambiguity in gathering business activities (Taghavi, 2015). This framework emphasizes the need for thorough analysis before defining roles within systems. It illustrates how frameworks are essential to ensure that role assignments align with organizational goals and facilitate effective collaboration.

Multilevel determinants of role clarity reveal that individual, group, and firm-level antecedents collectively influence role perceptions. Key findings indicate that organizational practices, such as managerial control styles and leader-member exchange, significantly impact role clarity. This underscores the multifaceted nature of role clarity, influenced not only by individual attributes but also by organizational culture and leadership dynamics. (Kauppila, 2014)

Theoretical perspectives on role clarity highlight the need for companies to actively cultivate environments that promote clear role definitions. Addressing the factors that contribute to role ambiguity enhances overall performance, increases job satisfaction, and fosters a collaborative culture. (Holland, et al., 2000; Jackson & Schuler, 1985)

4.3.2 Addressing Role Ambiguities in Cross-functional Teams

Cross-functional teams often face challenges related to role ambiguities, which can impact their effectiveness. Collaborative work environments require clear delineation of roles and responsibilities to minimize confusion and conflict in complex working environments (Hauptman & Hirji, 1999). Key success factors for cross-functional teamwork include clear goals, authority, and management support (Proehl, 1996). Without these factors, team members may struggle to understand their contributions, leading to frustration and decreased morale (Proehl, 1996).

To mitigate role ambiguities, organizations can employ frameworks such as the RACI model (Responsible, Accountable, Consulted, and Informed). By clearly defining responsibilities and accountability, frameworks like RACI reduce misunderstandings and conflicts in cross-functional settings (Jabbar & Malik, 2017; Smith, et al., 2005). However, RACI is just one of several tools available to clarify roles in collaborative teams.

Role analysis interventions offer another approach to addressing ambiguities. These processes are used to clarify and define roles within teams, particularly in

cross-functional environments where responsibilities often overlap. These interventions typically involve facilitated discussions, workshops, or exercises that encourage team members to express their role expectations, responsibilities, and perceptions of their tasks. By engaging in role analysis, team members are encouraged to reflect on their contributions and dependencies with others in the team, helping to reveal areas where roles may be unclear or overlapping. (Radhakrishnan, 2018).

Furthermore, employing optimization methods in role assignments can help prevent conflicts and enhance collaboration. Systematic role assignment involves using often data-driven approaches to determine the best fit for each role within a team. This approach considers each team member's skills, experience, and availability to ensure that roles are aligned with individual strengths and project requirements. By strategically allocating roles, companies can improve team dynamics and mitigate ambiguities, as team members have a clear understanding of their responsibilities and the contributions of others. (Zhu, 2016).

4.3.3 Role Assignment Tools in ITIL and Other Frameworks

Established frameworks like ITIL emphasize the importance of clearly defined roles and responsibilities in managing complex projects. Integrating role assignment tools, such as the RACI model, within these frameworks enables companies to systematically map out roles and ensure that all stakeholders understand their responsibilities. (Kofman, et al., 2009).

The RACI model serves as a powerful tool for clarifying responsibilities within teams and processes. Clarity is essential in complicated projects with multiple people involved. It helps avoid confusion about who's in charge of what and who to ask for decisions (Smith, et al., 2005). Overall, clearly defining roles through RACI charts can improve collaboration and reduce the likelihood of conflicts arising from role ambiguity (Jabbar & Malik, 2017).

The ARCI model (Accountable, Responsible, Consulted, and Informed), which is an adaptation of the RACI model, emphasizes the importance of defining roles in the change management processes. This tool allows teams to navigate change effectively while minimizing confusion and conflict. (Madani, et al., 2011). This approach ensures that all stakeholders are aligned, enhancing the effectiveness of change initiatives. Consequently, RACI and ARCI are similar, but the emphasis is either on the Responsible or Accountable.

The application of a role clarity framework is essential for enhancing clarity in business activity gathering (Taghavi, 2015). This framework incorporates elements from organizational theories and emphasizes the need for thorough analysis before defining roles within systems (Taghavi, 2015). Such approaches are crucial to ensure that role assignments align with organizational goals and facilitate effective collaboration.

Additionally, the advent of data-driven methods for role assignment has gained traction in recent years. Optimization techniques can solve role assignment problems, focusing on the necessity of avoiding conflicts through strategic role allocation (Zhu, 2016). By applying mathematical optimization methods, companies can enhance the clarity and effectiveness of role assignments, improving overall team dynamics (Zhu, 2016). This aligns with the growing trend of utilizing data analytics to refine role clarity and accountability, enabling companies to make informed decisions regarding role assignments based on empirical data.

Insights regarding the significance of leadership in role assignment further reinforce the effectiveness of these tools. Managerial control styles and leader-member exchange significantly impact role clarity within companies. Understanding the interplay between leadership practices and role assignments allows companies to better utilize frameworks like ITIL and RACI to enhance accountability. Leaders who actively promote role clarity and engage with team members to clarify expectations foster a culture of accountability and collaboration. (Kauppila, 2014).

The successful implementation of role assignment tools within frameworks like ITIL requires ongoing evaluation and adaptation. As organizational dynamics change and new challenges emerge, it is essential to continuously assess the effectiveness of role assignment tools. Companies must remain agile in their approach to role clarity, ensuring that frameworks adapt to meet evolving needs and promote accountability effectively (Kofman, et al., 2009).

4.3.4 Practical Applications of Role Clarity Frameworks

The practical application of role clarity frameworks, such as RACI, provides organizations with tools to streamline workflows and enhance accountability. For example, the RACI framework outlines specific responsibilities for each role: Responsible, Accountable, Consulted, and Informed. These categories help organize team interactions, ensuring clarity in complex projects (Smith, et al., 2005). Figure 4 below illustrates the definitions of these roles.

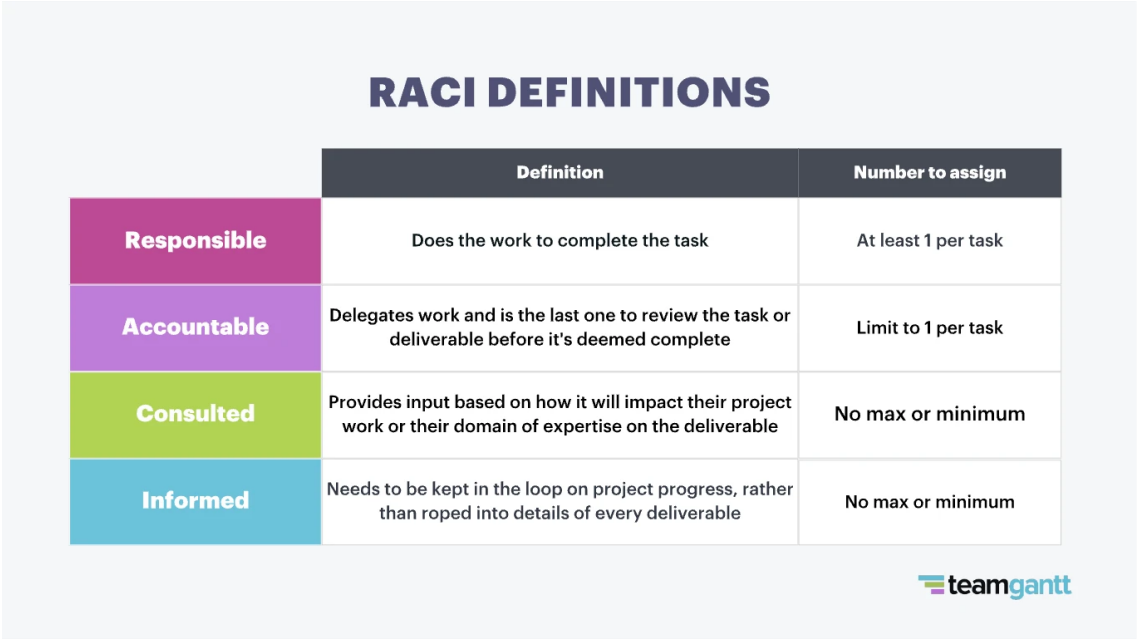

Figure 4. RACI Definitions (Harned, 2024)

As depicted in Figure 4, the RACI framework provides clear distinctions between the roles, ensuring that team members understand their specific responsibilities

within a project. This clarity is critical for reducing overlap, avoiding confusion, and promoting accountability in team interactions.

To demonstrate the practical application of the RACI framework, Figure 5 below presents a sample RACI chart. This chart illustrates how responsibilities are allocated across tasks in a project, offering a structured approach to assigning roles.

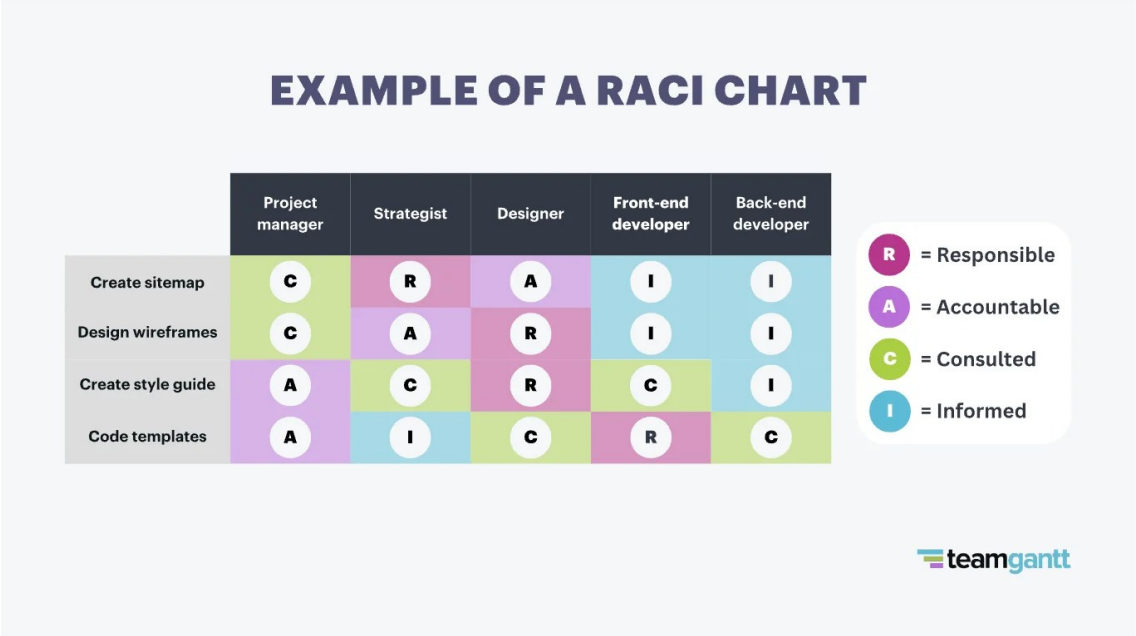

Figure 5. Example of a RACI Chart (Harned, 2024)

As shown in Figure 5, the sample RACI chart illustrates the allocation of roles across specific tasks. This example demonstrates how the framework helps organize responsibilities by clearly marking who is responsible, accountable, consulted, and informed for each project task. This approach reduces confusion between roles and tasks and enhances accountability within teams. (Harned, 2024).

Furthermore, governance tools that automate decision rights can enhance clarity in complex organizational processes (Kofman, et al., 2009). This application of role clarity frameworks supports effective decision-making and ensures that

accountability is built into the governance structure. Applying governance tools such as JIRA can help with automating responsibility tracking in similar ways.

Overall, the practical applications of role clarity frameworks highlight the significance of methods to defining roles and responsibilities. As companies continue to navigate increasingly complex collaborative environments, the implementation of these frameworks will be vital in promoting accountability and improving team performance (Kofman, et al., 2009; Madani, et al., 2011; Radhakrishnan, 2018).

4.4 Summary of Literature Study

The literature study has provided insights into key issues highlighted in the CSA, focusing on areas such as role clarity, communication inefficiencies, and the need for guidelines in the signoff process. The CSA identified that unclear roles and responsibilities led to confusion and delays during critical project phases. The literature on role clarity and accountability (section 4.3) stresses the importance of clearly defined roles to reduce ambiguity and ensure accountability. By implementing tools like RACI charts, teams can better understand their responsibilities, improving collaboration and efficiency.

The CSA also highlighted the lack of comprehensive instructions to ensure consistency in the signoff process. Literature on signoff processes (section 4.1) emphasizes the role of clear procedures in aligning stakeholders and ensuring that expectations are met at each project stage. Developing transparent guidelines can help standardize project execution and help with onboarding of new team members.

Moreover, communication gaps were noted as a source of delays and misaligned stakeholder expectations. Literature on stakeholder engagement (section 4.1.4) stresses the importance of clear communication channels to maintain alignment and transparency throughout the project lifecycle. Improved communication can

prevent misunderstandings and help keep projects on track by ensuring that all stakeholders are informed and involved when necessary.

Table 5 below summarizes the key findings from the CSA and links them to relevant literature, providing a clear pathway for how these insights can be used to improve the signoff process.

Table 5. Key Findings from Current State Analysis and Corresponding Literature Topics

Weaknesses from Current State Analysis (CSA)	**Addressed Topic from Literature**	**Reference in Section 4**	**How the Literature Source is Used**
Unclear roles and responsibilities	Role Clarity and Accountability - Emphasizes the need for clear definitions of roles in collaborative settings.	4.3 Role Clarity and Accountability in Organizational Processes	To create a RACI chart to bring more clarity to responsibilities
		4.3.2 Addressing Role Ambiguities in Cross-functional Teams	To create the proposal building survey based on the role analysis intervention.
Inefficiencies in communication and coordination	Stakeholder Engagement - Engaging stakeholders effectively can streamline communication and improve project outcomes.	4.1.4 The Role of Stakeholder Engagement in Signoff Processes	To improve the communication in managing stakeholder expectations during signoff.
Lack of comprehensive instructions and guidelines	Signoff Processes - Clear signoff procedures help in setting expectations and ensuring all parties are informed.	4.1 Overview of Signoff Processes in Software Development	To improve the instructions in the signoff process to facilitate project success.

As depicted in Table 5, the literature provides targeted solutions to address the weaknesses identified in the CSA. By linking these weaknesses to relevant literature, the table clearly shows how each issue can be resolved by implementing best practices from the literature, such as using RACI charts for role clarity, improving stakeholder engagement to streamline communication, and establishing comprehensive signoff procedures to ensure alignment and consistency.

In conclusion, the literature study offers solutions to address the role-related issues identified in the CSA. By focusing on role clarity, comprehensive signoff processes, and improved communication, companies can create a more efficient, accountable, and collaborative environment, leading to better project outcomes.

The next section focuses on proposal building, drawing from the findings of the CSA and existing knowledge to address key challenges in the signoff process. It builds on the issues and recommendations identified earlier, translating them into actionable improvements tailored to the organization’s needs.

5 Building Proposal for the Signoff Process Improvement

This chapter presents a proposal for improving the signoff process within the company, based on insights from the CSA, the Literature Study, the Proposal Building Survey, and the Proposal Building Workshop. The proposal addresses key issues identified across these sources, including unclear roles and responsibilities, lack of standardized signoff guidelines, and inefficiencies in communication. By targeting these areas, the proposal aims to create a more accountable, and efficient signoff process that will enhance project alignment, reduce delays, and ensure effective stakeholder engagement.

5.1 Steps for Proposal Building

The proposal for the signoff process improvement was developed through a structured and collaborative method. The process followed a systematic flow, integrating key insights from both the Current State Analysis and the Literature Study. Figure 6 below illustrates the main steps undertaken to build the proposal.

Figure 6. Steps for Building the Proposal for Signoff Process Improvement

As depicted in Figure 6, the workflow began with the Current State Analysis, which identified several weaknesses in the existing signoff process, particularly related to role ambiguity, communication breakdowns, and inconsistent signoff procedures. These findings established a clear direction for improvement. Following this, the Literature Study provided an in-depth examination of best practices, tools, and frameworks that could address these challenges effectively.

The proposal-building phase incorporated further stakeholder input through survey and workshop (discussed later in sections 5.2.1 and 5.2.2), ensuring that the recommended improvements reflect practical, real-world organizational needs. This collaborative process allowed proposal creation that integrates theoretical insights with the practical requirements of those involved in the signoff process.

The proposal's recommendations focus on the following key areas for improvement:

1 Clarifying Roles and Responsibilities: Addressing role ambiguity by introducing RACI chart to ensure that every participant has a clear understanding of their responsibilities throughout the signoff process.

2 Developing Comprehensive Signoff Guidelines: Standardizing the process through the creation of detailed signoff procedures with clear actions prior to the signoff.

3 Establishing Efficient Communication Protocols: Enhancing communication protocols to ensure that information flows smoothly between teams and stakeholders during the signoff process.

These steps provide a pathway for improving the signoff process, ensuring that the proposed changes are both practical and aligned with organizational goals.

5.2 Key Findings for Building the Proposal

The proposal development is informed by insights from the CSA, the Literature Study, and targeted input gathered through the Proposal Building Survey and Workshop. The CSA, detailed in section 3.4, identified critical areas requiring improvement, particularly regarding role clarity, communication, and process standardization, while the Literature Study in Chapter 4 provided theoretical guidance and best practices for addressing these challenges. Together, these sections establish a foundation for understanding the issues within the signoff process, setting the stage for effective improvements.

In addition to the foundational understanding offered by the CSA and Literature Study, the Proposal Building Survey and Workshop gathered practical insights from team members involved in the signoff process. The survey and workshop allowed for a closer look at team members' specific experiences and needs, clarifying role responsibilities and necessary actions before signoff. These practical perspectives help to tailor the proposal, ensuring it aligns with real-world requirements and addresses the concerns of those directly involved in the process and setting the stage for effective improvements.

5.2.1 Key Findings from the Proposal Building Survey

The Proposal Building Survey was designed to gather perspectives on the signoff process and determine where improvements might be most effective. Questions focused on understanding how team members perceive the signoff process, their views on its importance, and the stages in which their input is most needed. Further questions asked participants to outline specific actions their teams should complete before signoff and to share additional comments regarding visibility, communication, or clarifications needed in Jira. Participants included representatives from various departments integral to the signoff process, such as Business, Architecture, Supplier, Integrations, DATA Business, DATA Technical, Quality Team, and Platforms Team.

The survey results highlighted several recurring themes. Respondents largely emphasized the need for role-specific actions and clearer guidelines to reduce overlaps and prevent miscommunication. This need aligns closely with CSA findings, which identified role ambiguity as a significant contributor to confusion and project delays. Additionally, participants expressed a desire for improved visibility into requirements that impact their teams, advocating for more communication channels and clearer instructions within the Jira system.

The responses revealed that different teams require distinct levels of involvement depending on the stage and type of signoff process. For instance, Architecture and Integrations teams noted a need for early engagement to assess

dependencies and technical requirements, whereas the Quality Team indicated that their primary involvement should occur once requirements are established. These insights will be crucial in refining the proposal's role-specific instructions and communication protocols to reflect each team's unique needs and timing. The survey questions and respondents' roles results can be found in Appendix 2.

5.2.2 Key Findings from the Proposal Building Workshop

The Proposal Building Workshop focused on clarifying the Platforms Team's role in the signoff process. In previous signoffs, the Platforms Team was typically represented by the product owner. However, workshop discussions led to a consensus that the Release Engineer would represent the team going forward. This shift is intended to enhance the signoff process by ensuring that the person responsible for guiding the product into production is fully engaged and aware of critical dependencies, such as integrations and data components.

Workshop participants agreed that the Release Engineer would be responsible for ensuring that all relevant release components are properly linked within the Jira ticket and for following up with the correct stakeholders to add any missing items. Another responsibility discussed was the Release Engineer's role in coordinating decisions regarding feature activation, helping to clarify whether product features will be activated immediately upon deployment or at a later stage. By strengthening the oversight of the Release Engineer, the company can better prepare all technical and functional components before deployment, thereby reducing risks and streamlining the signoff process.

These findings from the survey and workshop provide a basis for shaping the proposal, particularly in refining role definitions, establishing clear signoff guidelines, and improving communication protocols. By incorporating this direct feedback, the proposal aims to address team-specific needs and improve alignment across the signoff process.

5.3 Initial Proposal

The proposal is formed from four core components. Role Definition (section 5.3.1) outlines the method for clarifying roles and responsibilities using role assignment tools, such as RACI charts, ensuring accountability and preventing role ambiguity. The Signoff Guidelines (section 5.3.2) present a framework for the development of signoff, which aims to ensure consistency and alignment throughout all stages of the project. Communication Protocols (section 5.3.3) focus on creating clear communication protocols and timeline for the process to ensure effective coordination among stakeholders and prevent misaligned expectations. Lastly, the Implementation Plan (section 5.3.4) provides a roadmap for rolling out these improvements across the company, ensuring smooth adoption and room for continuous improvement.

In conclusion, each component of the proposal is designed to address the specific challenges identified in the analysis and align with best practices from the literature. Together, these steps form a comprehensive strategy for enhancing the signoff process, ensuring it becomes more efficient, transparent, and aligned with the company's goals.

5.3.1 Role Definition

A central issue identified in both the Current State Analysis (section 3), and the Proposal Building Survey is the lack of clearly defined roles and responsibilities within the signoff process. This confusion has caused issues with tasks and project delays, making the signoff process less efficient. This proposal introduces a RACI chart to address these issues, clearly outlining the responsibilities of key stakeholders involved in the signoff process.

The literature study (sections 4.3.3 and 4.3.4) shows how tools like the RACI chart (Responsible, Accountable, Consulted, and Informed) can help define roles more clearly. A RACI chart helps map out who is responsible for completing tasks, who is accountable for the outcomes, who needs to be consulted, and who

must be informed. The RACI chart clarifies responsibilities, minimizes confusion, and ensures accountability. This RACI chart was developed based on input from the Proposal Building Survey, the Proposal Building Workshop (section 5.2.2), and the insights gathered from the literature study, specifically around role clarity and accountability. This was also validated at the workshop with Release Engineer and Platforms Team Product Owner.

Table 6 below illustrates the RACI chart for the signoff process, outlining key tasks and the associated roles for each task.

Table 6. RACI Chart for Signoff Process

Task	Project Lead	Signoff Responsible	Supplier	Release Engineer	Signoff Participants
Writing User Stories	C	A, R			
Providing Development Stories Based on User Stories	I	C	A, R		
Reviewing the Development Stories	I	R	C		
Doing the Signoff	I	A	R	I	R
Holding the Official Signoff Event	I	C	C	A, R	C

As depicted in Table 6, the RACI chart clarifies the distribution of responsibilities for each task in the signoff process. The roles include the Project Lead, Signoff

Responsible, Supplier, Release Engineer, and Signoff Participants, all of whom play a critical part in different phases of the signoff process. Each task, from writing user stories to holding the official signoff event, is allocated specific responsibilities, ensuring that all team members are aligned and that no steps are overlooked.

For instance, the Project Lead is consulted in writing user stories and providing input during key phases but is accountable for ensuring the official signoff event is conducted appropriately. The Signoff Responsible plays a pivotal role in overseeing tasks, such as reviewing development stories and ensuring that the final signoff is completed in accordance with all established guidelines. The Supplier and Release Engineer are accountable for providing necessary information and guiding the product into production, ensuring all relevant components are added and reviewed within the Jira system. Finally, the Signoff Participants are responsible for validating the work and contributing to the final decision-making process during the official signoff event.

The structure of this RACI chart was particularly informed by the feedback gathered during the Proposal Building Workshop, where participants emphasized the need for clear accountability regarding the role of the Release Engineer in ensuring all components related to production are included. The Proposal Building Survey results also highlighted gaps in communication and role clarity, leading to this formalization of responsibilities. The integration of these practical insights into the RACI chart ensures it addresses real-world concerns, prevents miscommunication, and ensures each task is completed by the appropriate team member, thus streamlining the entire signoff process.

5.3.2 Signoff Guidelines

The establishment of comprehensive signoff guidelines is essential to ensure that all participants understand their roles and responsibilities within the signoff process. These guidelines not only clarify when each participant’s involvement is necessary but also specify the actions each participant must complete before

signing off. This formalization of expectations helps prevent delays and miscommunication, two key issues identified in both the Current State Analysis (section 3) and the Proposal Building Survey.

Insights from the literature study (sections 4.1 and Section 4.3) further underscore the importance of role clarity, responsibility delineation, protocols within software development signoffs. In particular, section 4.1, which covers the historical and quality assurance perspectives in signoff processes, highlights how clear role definitions help avoid redundancy and foster collaboration among teams. Section 4.3 expands on specific roles and responsibilities, offering a framework that has informed these guidelines to meet practical needs and organizational expectations.

Table 7 below outlines the key signoff roles, their importance, core responsibilities, and the actions required before each participant grants signoff approval. These guidelines are informed by the feedback gathered in the Proposal Building Survey, crafted to reflect the needs of each team involved in the signoff process and aligned with the best practices identified in the literature study.

Table 7. Description of Signoff Roles

Signoff Role	Role Purpose	Key Responsibilities	Required Actions Before Signoff
Responsible	Ensure requirements meet team standards and coordinate with stakeholders for signoff approval.	Required for every signoff to oversee completion. Organize and lead reviews for user and development stories; confirm alignment with team needs and timing.	Verify content alignment with requirements, gather stakeholder approvals, link all relevant issues, organize user story reviews, and review development story and related documents.
Business	Ensure that new user stories align with business requirements and that all stakeholders have a chance to review and accept requirements.	Act as a primary stakeholder, often providing business requirements for user stories. Coordinate with other stakeholders to confirm that requirements meet business standards and ensure that all required user stories are properly linked to the development story.	Review user stories with all stakeholders before signoff, confirm all needed user stories are linked to a single dev story, and ensure user stories include the names of business representatives who provided signoff.
Architecture	Ensure alignment on design decisions across stakeholders, bridging business requirements with technical architecture.	Contribute to design-related decisions and confirm technical alignment with project goals. Engage with other stakeholders to ensure all architectural considerations are addressed and agreed upon before moving forward.	Carefully review all technical and architectural content before signoff, confirm that design decisions are finalized and agreed upon by stakeholders, and validate that the design aligns with business requirements. Signoff represents the final step in the design process, affirming consensus on architectural elements.
Supplier	Ensure all relevant teams are aligned on business requirements, design solutions, and scope of testing for delivery.	Facilitate understanding among stakeholders on how requirements are met and any compromises involved. Participate continuously in the signoff process, from scope agreement to story explanation, to ensure full clarity.	Manage and review the user and development story document with stakeholders, create development story tickets in Jira, and link these to user story tickets. Add necessary components, specify the project release and release version, and provide guidance on avoiding feature activation if the software is deployed.
Integrations	Ensure that all integration requirements are identified, documented, and linked, verifying that dependency teams are committed to required changes.	Verify that all integration needs are captured in the backlog and that integration requirements are understood and agreed upon. Engage in the signoff process for any requirement involving integration, ensuring dependencies are acknowledged by all relevant teams.	Review the requirement user story to confirm it includes integration details (e.g., systems to integrate, data flows, specifications). Create Jira tickets for the Integrations team as needed, link these tickets to the requirement's user story, and confirm that each ticket provides sufficient information. Sign off only when requirements are acknowledged by responsible team members and needed tickets are linked.

DATA Business	Ensure alignment on data requirements, development scope, and dependencies with other teams, especially for data storage and data warehouse modeling.	Provide clear data requirements to development and integration teams, facilitating alignment of timelines and scope. Confirm that any changes affecting data flows or storage are communicated and understood by all relevant teams.	Link development issues to DATA Business Jira tickets, review stories to ensure data-related requirements are clear, and verify that architectural or business changes impacting data flows are included. Ensure the Jira ticket includes links to additional material (e.g., Confluence page) to provide comprehensive context.
DATA Technical	Assess and manage the impact of new features on data systems and dependencies across teams, ensuring alignment with SaaS delivery plans.	Conduct impact analysis to identify inter-team dependencies and potential impacts on data systems. Coordinate with Solution Analysts and Architects for comprehensive understanding of requirements and plan releases accordingly.	Perform impact analysis on features to identify dependencies and raise any questions. Link DATA Technical stories to relevant requirements and raise necessary questions to clarify dependencies. Review user stories and related business requirements at least a week before signoff to allow thorough preparation and alignment with dependencies.
Quality Team	Ensure that acceptance criteria, testing requirements, and risk mitigation plans are established and understood before signoff.	Begin early test planning, review requirements for completeness, and prepare initial test cases and scenarios. Confirm that all necessary information for quality assurance is documented and assess potential security and performance considerations.	Review the story and perform an initial analysis to identify key testing needs. Develop preliminary test cases, prepare test data, and check Jira tickets for completeness. Confirm that acceptance criteria, performance, and security requirements are clearly defined and documented.
Platforms Team	Ensure a clear understanding of release implications on production, including dependencies, installation requirements, and timing of feature activation.	Confirm that changes impacting production are understood and that installation requirements are aligned with release processes. The team's involvement is essential for assessing impacts on current production functionality and ensuring that all production dependencies are addressed.	Review all relevant materials and Jira tickets to confirm that installation and activation implications are documented. Verify whether changes take effect immediately or are scheduled for later activation. Participate in signoff meetings to address any final questions on production implications.

These guidelines, depicted in Table 7, provide an approach to the signoff process, helping ensure that each team has a clear understanding of its responsibilities. The consistent application of these guidelines should streamline the signoff process, reduce miscommunication, and ensure that all requirements are met before the official signoff event.

5.3.3 Communication Protocols

Effective communication is essential for a smooth signoff process, ensuring stakeholders have timely information, address concerns early, and prevent delays or last-minute issues. It fosters alignment, preparation, and collaboration, reducing miscommunication and disruptions, as highlighted in both the Current State Analysis and Literature Study (section 4.1.4).

Figure 7 below illustrates the timeline for the proposed communication protocol before the official signoff meeting.

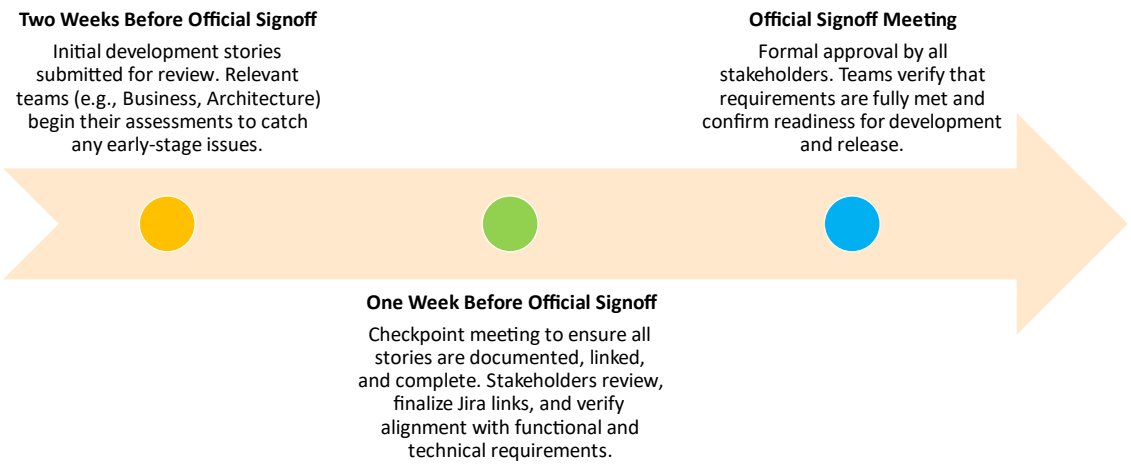

Figure 7. Signoff Communication Protocol Timeline Proposition

As depicted in Figure 7, the communication protocol is structured over a three-week period before the official signoff meeting. The timeline breaks down the

process into key stages, where specific tasks and expectations are outlined for each phase.

In the first stage, two weeks before the final signoff, all initial development stories must be submitted for review, enabling relevant teams—including Business, Architecture, Integrations, and DATA Technical—to perform their initial assessments. During this period, clear communication ensures that any early-stage issues or requirements gaps are identified, addressed, and shared with all relevant stakeholders.

In the second stage, one week before the official signoff meeting, a checkpoint meeting is held to confirm that all stories are documented, correctly linked, and contain sufficient details. By this point, each development story should be attached to the signoff page, complete with all necessary information for each team's review. The checkpoint allows stakeholders to raise any remaining questions, finalize linking of issues in Jira, and verify that all stories align with functional and technical requirements, thus establishing a shared understanding across all involved teams.

Finally, during the official signoff meeting, all stakeholders formally approve the requirements and stories, ensuring that they have had ample time to review and confirm all details. Each participant verifies that their team's requirements are fully met and that the project is prepared for subsequent development or release. This meeting represents the culmination of the communication protocol, where each role, as outlined in the signoff guidelines, affirms their agreement, ensuring final readiness.

Each phase of the communication protocol provides ample time for each team to review, question, and contribute to the signoff process. The formalized adherence to these protocols thus fosters a well-organized, proactive, and effective signoff process, minimizing the risk of disruptions, miscommunication, or last-minute changes.

5.3.4 Implementation Plan

The implementation of the proposed signoff process improvements will begin immediately, with the aim of swiftly integrating the newly defined roles, standardized guidelines, and enhanced communication protocols into the existing workflow. The Release Engineer will be responsible for distributing these changes and ensuring that they are understood and adopted by all signoff participants.

To initiate the process, the Release Engineer will formally introduce the updated signoff roles and guidelines during the next scheduled signoff meeting. They will ensure that all participants are fully aware of their responsibilities and the new structure. The Release Engineer will also provide access to the documentation (Confluence page).

In the initial phase, the focus will be on quickly integrating these improvements by addressing the changes in all upcoming signoff meetings. The Release Engineer will take the lead in reinforcing the updated procedures at every meeting, ensuring that the new signoff process is consistently followed. This repeated reinforcement will help prevent any confusion or reversion to outdated practices, and the clear communication of expectations will ensure smooth transitions during the signoff process.

Over the next few months, the Release Engineer will maintain momentum by regularly communicating the updated roles and guidelines, embedding these practices into daily operations and preventing backsliding. During this period, the Release Engineer will act as a primary advocate for the changes, supporting participants in adjusting to their roles within the improved process. This alignment effort will be further supported by the principles of continuous improvement outlined in the literature study (section 4.2.3), which emphasize the need for regular evaluation and iterative refinement of processes to ensure sustainable success.

Once the new process has been in effect for a few months, the company will begin collecting feedback from all involved participants. Feedback will focus on how well the new signoff process is functioning and whether the changes are effectively addressing the issues identified in the Current State Analysis. Following the feedback collection, additional refinements will be made, if necessary, to the process to ensure it continues to meet project and organizational objectives.

Figure 8 below illustrates the implementation timeline for the signoff process improvements, detailing each stage of the process from introduction through reinforcement, feedback collection, review, and potential adjustments.

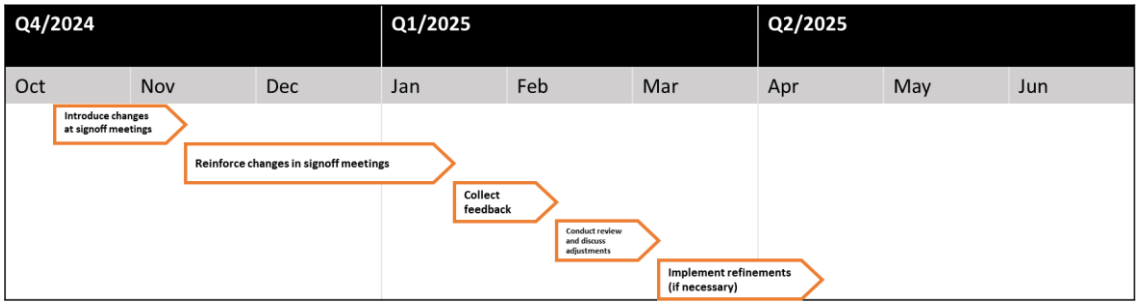

Figure 8. Implementation Plan for the Signoff Process Improvements and the Future Plans

As shown in Figure 8, the implementation plan spans several months, beginning in Q4 of 2024 and extending into Q2 of 2025. The timeline outlines key activities, including introducing the changes in signoff meetings, reinforcing them, collecting feedback, conducting reviews, and implementing refinements if necessary. This Gantt chart provides a clear visual summary of the rollout schedule and will guide the company in managing the changes efficiently.

Altogether, by following this implementation plan, the company aims to make the transition to the new signoff process as smooth as possible, while maintaining a commitment to continuous improvement. The incorporation of prompt implementation, continual promptings, and feedback gathering will guarantee the efficacy and longevity of the modifications.

5.4 Expected Benefits

The implementation of the improved signoff process is expected to yield some benefits by addressing current inefficiencies and enhancing collaboration. By establishing clear roles, guidelines, and communication protocols, this proposal will streamline the signoff process and reduce common delays and miscommunications. The improved clarity in roles and responsibilities helps prevent task overlaps and misaligned expectations, directly addressing challenges identified in the Current State Analysis.

One of the main benefits anticipated from this proposal is a more organized and efficient signoff process. Each team member will gain a comprehensive understanding of their assigned duties by complying to established protocols, thus minimizing delays caused by unclear expectations or sudden changes. With each signoff role having well-defined actions and timelines, tasks are less likely to be overlooked. Each participant is held accountable for their specific responsibilities, ensuring an aligned and collaborative effort across departments.

Enhanced communication, as outlined in the communication protocols, further minimizes the risk of late-stage disruptions. Teams will be consistently informed of project requirements and progress through planned checkpoint meetings and early-stage reviews, creating a shared understanding among all participants. This proactive communication framework promotes transparency and helps maintain alignment between teams, reducing the need for reactive changes and facilitating a smoother path to project completion.

Additionally, the integration of a feedback mechanism into the implementation plan fosters a culture of continuous improvement. As feedback is gathered and incorporated into the process, the company will be able to adapt the signoff process to evolving needs, ensuring it remains effective and relevant. This aligns with best practices outlined in section 4.2.3 of the literature study, which emphasizes the role of iterative improvements in achieving sustainable success.

Ultimately, this signoff process should lead to a better-quality, more reliable final product. By formalizing roles, reinforcing communication, and encouraging ongoing refinements, there might be a reduction in errors, a faster project timeline, and improved alignment between development, integration, and production teams. The expected benefits extend beyond individual projects, as the improved signoff process establishes a foundation for long-term efficiency and quality in project delivery.

The next section focuses on validating the proposed improvements to ensure their alignment with organizational goals and practical needs. This step is essential for refining the proposal and confirming its readiness for implementation.

6 Validation of the Proposal

The validation of the proposed signoff process improvements is essential to ensure that the suggested changes effectively address the issues identified in the Current State Analysis and meet the operational needs of all involved teams. Validation steps were conducted to assess the proposal's alignment with organizational objectives, ease of implementation, and potential for long-term sustainability. This validation allows for iterative refinement, ensuring the final proposal is robust and practical for real-world application.

The validation process followed a sequence of steps designed to gather targeted feedback, identify necessary adjustments, and arrive at a final proposal. Figure 9 illustrates the key steps of the validation process:

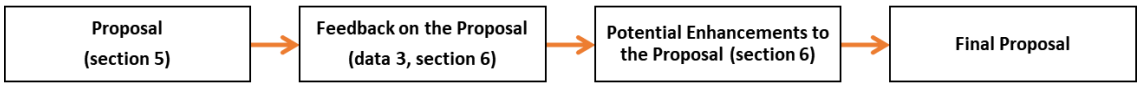

Figure 9. Validation Process

As depicted in Figure 9, the validation process involves several key stages. The process begins with the introduction of the proposed improvements in a workshop with the Platforms Team Product Owner and the Release Engineer. This collaborative session allowed for detailed discussion, ensuring that the proposed roles, guidelines, and communication protocols aligned with operational needs. Feedback gathered from this workshop led to refinements in the proposal, ensuring its practical applicability.

Following this workshop, the proposal was reviewed and subsequently approved by the Business Lead, confirming that the improvements aligned with broader business objectives and requirements. The Business Lead's approval marked a

critical milestone, validating that the proposed enhancements addressed both team-specific and organizational needs.

This feedback-driven validation process ensures that the final proposal is well-supported by those who will directly implement and benefit from it, while also receiving top-level approval for organizational alignment. Through these validation steps, the proposal has been refined to maximize efficiency, collaboration, and alignment with project objectives, resulting in an improved signoff process and setting a foundation for its successful integration into the company’s workflow.

7 Summary and Conclusions

This section provides a comprehensive summary of the research, evaluates the outcomes against the objectives, and presents recommendations for future research to further enhance the signoff process. It also reflects on the overall thesis journey, emphasizing its broader implications for both the case company and professional development.

7.1 Executive Summary

For the case company, the adoption of SaaS solutions has expanded the potential for agility and efficiency in meeting business needs. However, as the company increasingly relies on SaaS for its core systems, the complexity of managing pre-development signoff processes has grown, requiring thorough coordination to ensure alignment with strategic goals, regulatory standards, and operational readiness.

This thesis was conducted as part of a business-driven initiative to develop the pre-development signoff process at the case company. The objective was to improve this process, which serves as a critical checkpoint before project development begins, by addressing issues related to prolonged approval times, unclear roles and responsibilities, communication breakdowns, and frequent disruptions. By refining this process, the study aimed to establish a more and efficient workflow that supports timely, compliant project launches.

The research was carried out in a series of stages. The project commenced with a detailed current state analysis, examining the case company’s existing signoff practices through surveys and workshops involving key stakeholders. This initial analysis identified several critical weaknesses, such as role ambiguity, communication gaps, and process misalignments, which often led to delays and inefficiencies. Following this, an exploration of available knowledge and industry best practices was undertaken, primarily focusing on frameworks like ITIL and

COBIT for insights into process management and role clarity. This literature study provided a conceptual framework that guided the proposal's development.

Building on these insights, the initial proposal for an improved signoff process was developed, integrating best practices, role definitions, and standardized communication protocols to address the identified challenges. The proposal-building phase included a series of workshops with stakeholders, where collaborative discussions helped to refine the model and tailor it to the case company's specific operational needs. The initial proposal was subsequently validated with input from the Platforms Team Product Owner, Release Engineer and Business Lead.

The proposed signoff process, complete with role-specific guidelines and communication improvements, is expected to streamline project approvals, reduce delays, and enhance cross-departmental collaboration. This refined process strengthens the case company's operational readiness for new SaaS initiatives and contributes to the company's ability to remain agile and competitive in a rapidly evolving industry landscape.

7.2 Thesis Evaluation: Objective vs. Results

The primary objective of this thesis was to develop a refined pre-development signoff process for the case company, aiming to improve clarity, efficiency, and alignment in SaaS-driven project approvals. The study specifically sought to address prolonged approval times, role ambiguity, and communication gaps within the existing process.

The thesis successfully met this objective by identifying key inefficiencies and crafting a solution that directly targets these challenges. To ensure the reliability of the findings, the surveys involved a sufficient number of respondents, representing all essential stakeholder groups, to capture a comprehensive view of the current process and its pain points. Furthermore, the proposal was

validated through feedback from multiple stakeholders, reinforcing its applicability and alignment with operational needs.

In conclusion, this thesis provided a strategy to improving the signoff process at the case company. The proposed improvements are expected to foster a more cohesive and efficient workflow, supporting the company's objectives for timely, compliant project development.

7.3 Recommendations for Future Research

While this thesis has addressed critical areas in the signoff process, further research could enhance understanding and effectiveness in several aspects. First, a deeper exploration of the integration of automated tools for role assignment and communication tracking could help streamline approvals further, especially in complex, cross-functional projects. Investigating how automation impacts signoff efficiency and accountability could yield valuable insights, particularly within fast-paced SaaS environments.

Additionally, a comparative study on signoff practices across similar financial institutions may reveal best practices or alternative methods that could further optimize the case company's process. Understanding how other institutions address similar challenges might provide innovative strategies for enhancing compliance, efficiency, and alignment with strategic goals.

These areas for future research would build on the findings of this study, offering insights to help continuously improve the case company's project signoff and ensuring alignment with evolving industry standards and organizational needs.

7.4 Final Words

Writing this thesis has been a real eye-opener, and my newly gained knowledge pleasantly surprised me. I never expected this knowledge to have such a quick impact on my work. My expanded understanding has been invaluable in

deepening my grasp of the studied processes and frameworks and enhancing my approach to my role.

Doing surveys was really interesting, because I got to hear different perspectives and see how their work relates to mine. Seeing the bigger picture has really helped me understand how everything connects, which will definitely benefit me in my career going forward. I am excited to apply these learnings in future professional challenges and believe they will significantly influence my approach to similar projects.

I want to thank everyone who helped me with this project, whether by giving advice, cheering me on, or actually helping me out from my whole heart. Without you, this project wouldn't probably have succeeded.

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Appendix 1: Current State Analysis Survey questions and respondents

Respondent	How satisfied are you with the current release process (e.g., new signoff process and subtasks on Jira ticket)?	What are the strengths of the current process or what specific value/benefits does the current process add?	What are the biggest problems with the current process?	What are the threats or specific weaknesses in the current process?	What part of the process would you like to improve and how?
Product Owner, Platforms team					
Test Engineer, Performance Testing					
Test Engineer. Stakeholder group A					
Testing Manager					
Product Owner, Stakeholder group A					
Product Owner, Supplier					
Product Owner, Integrations					
Product Owner, Stakeholder group B					
Release Engineer					
Product Owner and team lead, Platforms team					
Business Lead					
Solution Analyst, Stakeholder group C					

Appendix 2: Proposal Building Survey questions and respondents

Role in signoff (team)	What is your perception on the signoff process? Why is it important? What does it mean for your team?	When do you think your input is needed for signoff? Describe the situations in which your team needs to be informed/included. Also, please write down any required information on the Jira ticket that is needed for your team's work.	What actions your team should take before signing off the development story? E.g. link Jira issues
Business			
Business			
Architecture			
Supplier			
Supplier			
DATA Business			
DATA Business			
DATA Technical			
DATA Technical			
Integrations			
Integrations			
Platforms team			
Responsible			

Responsible			
Responsible			
Responsible			
Quality team			
Quality team			
Quality team			