

Team 4

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## **Report ServiceNow Company**

### **Executive Summary**

ServiceNow, a prominent \$7 billion IT services company primarily operating in the USA, has expanded its scope beyond IT Service Management (ITSM) since its establishment in 2003. Within the domain of ITSM, existing challenges, such as limited flexibility, communication bottlenecks, and dependence on enabled plugins, result in inefficiencies and hinder the deployment of the ITSM feedback method. To address these issues, our proposed technological solution focuses on enhancing the Process Optimization dashboard with additional preconfigured key performance indicators and a more user-friendly experience.

The solution targets key performance indicators, such as average resolution times (% of problems fixed on the first assignment) and incident assignment percentages, through the integration of Google Cloud AI/ML Services, Dell Boomi, and Microsoft Teams. By strategically combining these technologies, our approach aims to boost ROI by fostering teamwork, improving operational efficiency, and providing predictive insights. This deliberate action aligns with ServiceNow's goal of sustaining leadership in the rapidly expanding digital market, achieved through cost reduction and enhancement of ITSM processes. Crucially, evaluating the recommended solution's cost and return on investment will play a pivotal role in determining its alignment with ServiceNow's strategic objectives.

### **Enterprise Analysis**

Currently, ServiceNow functions as part of a complicated organizational structure that includes numerous teams and departments. Nevertheless, cooperative efforts and overall operational agility are hampered by communication bottlenecks and compartmentalized information flows. The absence of unified communication platforms, dissimilar departmental systems, and a lack of established communication protocols are the main sources of these problems. The suggestion is

to use real-time collaboration systems such as Slack or Microsoft Teams to overcome these problems.

Addressing client feedback, ServiceNow's present techniques would not be able to obtain complex insights because of constraints in conventional survey software. Older technologies, constrained outreach tactics, and inadequate data analysis are blamed for the shortcomings. The suggested remedies entail putting sophisticated feedback mechanisms in place, such as customized surveys and sentiment analysis tools, to acquire deep insights into the wants and sentiments of customers. The goal of this strategy is to match ServiceNow's products with what customers expect.

Improved internal communication, speedier issue resolution, simpler procedures, and increased operational efficiency are among the anticipated benefits. Moreover, an advanced method of handling consumer feedback is expected to promote greater levels of satisfaction and fortify client connections. In order to ensure ServiceNow's continued success, this strategic strategy aims to improve external customer connections as well as internal operational difficult

### **Business Analysis Section**

ServiceNow, established in 2003 by software programmer Fred Luddy in Santa Clara, is a cloud-based workflow automation solution designed to streamline operational processes by automating repetitive tasks. While originally focused on IT service management (ITSM), ServiceNow has gained popularity beyond its initial target market due to its adaptable and scalable platform.

The platform's design, known for its slick and intuitive interface, facilitates collaboration on projects, allowing transparent communication and providing complete visibility into development progress. ServiceNow's suite of services, including IT Operations Management, Governance, Risk, and Compliance (GRC), IT Business Management, and Software Asset Management, promotes collaboration across various organizational functions.

ServiceNow, a leading player in the IT service management and digital workflow industry, relies on a robust database management system to handle vast amounts of data generated by its diverse range of clients. SQL, recognized for its versatility and efficiency in managing relational databases, emerges as a key element in ServiceNow's data management strategy. **Strategic Integration of SQL:** ServiceNow's adoption of SQL reflects a strategic approach to database management. SQL's declarative nature allows for efficient querying and manipulation of relational databases, aligning seamlessly with ServiceNow's need for organized and structured data storage. The language's widespread use in the industry ensures compatibility with a myriad of tools and applications. Another primary database used by ServiceNow is **MariaDatabase**. The MariaDB database is used for “various purposes such as data warehousing, e-commerce, enterprise-level features, and logging applications”.

The platform supports an organization's digital transformation and other activities by fostering

perspective in highlighting ServiceNow's capabilities without overemphasizing superlatives, as this report is not intended to promote ServiceNow to the company itself.

With completely automated, simple solutions accessible, ServiceNow shines in several sectors, including operations related to security, customer service management, human resources, facilities, and business applications. Its platform consolidates disparate IT systems into a cohesive framework, which is advantageous in today's networked workplace. While 57% of employees at a typical U.S.-based company feel the same way about their workplace, 91% of ServiceNow employees think the company's culture and working environment are great. Numerous "Best Workplaces" lists have recognized the company, including Fortune Best Workplaces for Women, Fortune Best Workplaces in Technology, Fortune 100 Best Companies to Work For, and many more. The company creates and disseminates digital workflow platforms that optimize people's working lives by enabling the generation of superior outcomes and pleasurable experiences.

### ServiceNow SWOT Analysis

Strengths Description
Robust and Scalable Platform Renowned for exceptional scalability and dependability, ServiceNow's platform enables adaptability to various business needs, ensuring resilience and flexibility in the dynamic technological landscape.
Focus on Innovation and Continuous Improvement ServiceNow's commitment to innovation and ongoing system development positions it as an industry leader. Proactive steps to meet current and future customer demands enhance brand loyalty
Widespread Adoption Across Industries ServiceNow's services are widely used across diverse industries, contributing to a strong market presence. The platform's effectiveness in meeting the varied demands of multiple sectors is evident.

In our project, we should leverage ServiceNow's robust and scalable platform to ensure adaptability to our evolving business requirements. Additionally, we can explore opportunities for innovation and continuous improvement by aligning with ServiceNow's commitment to staying at the forefront of industry developments. The widespread adoption of ServiceNow across industries suggests its suitability for addressing our diverse needs, providing a solid foundation for our project's success.

## Weaknesses/Problems:

- 1. Ineffective Feedback Mechanisms:** The absence of an efficient communication infrastructure inside the company is the primary root cause of the ineffective feedback mechanisms. Information sharing within internal teams is restricted by communication channels and siloed systems. Ineffective communication methods make it difficult for the organization to share insights and feedback promptly, hindering its ability to quickly adjust to changing consumer preferences and market demands, thus limiting change management. Information silos can be caused by departments operating independently, which can be made worse by the organizational structure of the business. Additionally, there may not be enough specialist resources to guarantee efficient internal collaboration and communication.
- 2. Dependence on Effective Integration:** The primary root cause of the difficulties in successfully integrating ServiceNow solutions is the complexity of the multiple IT environments they must handle. The crux of the issue lies in the complexity of integration demands. Compatibility issues, various system designs, and data formats are a few examples. The underlying factor is the absence of established integration methods across diverse IT environments exacerbates the issue. The constant changes and improvements in the technology landscape make integration more difficult.

## Opportunities:

- 1. Expansion of Product Portfolio:** Investing in improved collaboration technologies is a profitable potential for ServiceNow. If ServiceNow keeps developing and investing in its collaborative capabilities, it might become the go-to provider for improved processes. The company's platform may be enhanced even further by offering fresh solutions tailored to the requirements of specific sectors, building on its already remarkable reputation for substituting intelligent and automated procedures for disorderly labor patterns.
- 2. Enhanced Collaboration Tools:** Enhancing collaboration features would be a terrific investment for ServiceNow. By improving its collaborative capabilities, ServiceNow has the potential to emerge as a top provider of integrated solutions.
- 3. Leveraging AI and ML for Predictive Analytics:** Due to ServiceNow's use of AI and ML for predictive analytics, the company stands to gain even more ground in the market by 2023. With this newfound technological capability, the company can continue to cater to its clients' varying needs by giving them access to foresight.

## Current Process Analysis

### A. Process Overview

ServiceNow conducts ongoing process analysis to identify areas for improvement in its current procedures. The platform's features are designed to achieve short- and long-term goals, providing a strong foundation for future growth. To assess the effectiveness of ServiceNow solutions, the company recommends establishing a baseline and monitoring metrics, utilization KPIs, and

achieving transformative objectives. Continuous data collection in ServiceNow's business process management (BPM) assesses efficiency and informs decisions on implementing new protocols. The platform aims to streamline corporate processes, enhancing internal operations, productivity, and profitability by preventing bottlenecks and failures.

## B. Physical System Narrative

ServiceNow's current physical structure draws insights from diverse sources, including the ServiceNow Community and the ServiceNow Success Playbook. The design prioritizes supporting short- and long-term goals, laying the foundation for robust and rapid growth. The platform's configuration focuses on facilitating collaboration, automated processes, and streamlined workflows. Notable features, like the lifetime page, offer valuable information about hardware and software lifecycle phases for effective asset tracking.

However, a significant challenge lies in the feedback loop between internal teams and communication/feedback from customers, impacting the platform's performance. Despite this challenge, certain features, such as the lifecycle tab, stand out in providing insights into hardware and software lifecycle stages for effective asset management.

Exploring the Process Optimization dashboard reveals a primary barrier—the low adjustability of Key Performance Indicators (KPIs). This limitation, coupled with dependencies on activated plugins for ITSM work item applications, introduces complexities and uncertainties about seamless integration.

Still, there are chances for development. By adding metrics in line with new developments, the default set of KPIs may be expanded, giving businesses the ability to gain a deeper understanding of their IT service management practices. Furthermore, developing a user-friendly and adaptable interface for the Process Optimization dashboard offers a strategic advantage by removing the requirement for proficiency in complex programming languages.

To continue leading IT service management, ServiceNow must overcome obstacles and grasp possibilities as it moves through this crossroads. The way forward is to proactively embrace improvements that are in line with changing user wants and industry dynamics in addition to tackling current roadblocks.

## C. Summary of Problems & Opportunities

### Problems:

#### Communication Bottlenecks:

A notable challenge we discovered within the current physical system is the presence of communication bottlenecks, particularly in the feedback loop between internal teams and the

align with unique business objectives related to feedback and communication may be challenging for organizations.

### **Opportunities:**

"ServiceNow's communication challenges pose a significant hurdle in achieving seamless collaboration across teams. This extends to the feedback loop, affecting the understanding of customer sentiments and operational efficiency. Building on insights from Lori's discussions and the professor's comments, here are practical solutions:

#### **Expansion of Default KPIs:**

- ServiceNow can enhance its performance measurement framework by considering additional KPIs that reflect emerging industry trends. This broader scope ensures a more comprehensive assessment of ITSM work items.

#### **User-Friendly Customization Interface:**

- A key opportunity lies in creating a user-friendly interface within the Process Optimization dashboard. This allows organizations to easily tailor KPIs to their specific needs without the need for extensive technical expertise.

#### **Integration of Predictive Analytics:**

- ServiceNow can explore the integration of predictive analytics into KPIs. This involves leveraging advanced analytics and machine learning to help organizations forecast issues, anticipate trends, and proactively optimize their ITSM processes.

These solutions aim to address the current communication bottlenecks, offering practical ways to navigate complexity and foster effective communication, collaboration, and optimized ITSM processes.

### **A. Proposed Technical Solution**

**Communication and Collaboration Platform (ServiceNow Integration):** *Vendor: Microsoft Teams* Microsoft Teams will serve as the primary communication and collaboration platform, seamlessly integrated with ServiceNow. The integration will encompass the following features:

- **Real-time Messaging:**
  - Teams within ServiceNow can engage in instant communication, fostering quicker decision-making and issue resolution.
- **File Sharing:**
  - Seamless sharing of files and documents directly within ServiceNow's environment, enhancing collaboration and document management.
- **Video Conferencing:**
  - Integration of video conferencing capabilities, allowing ServiceNow teams to conduct virtual meetings and discussions effortlessly.
- **Integrated Task Management:**
  - ServiceNow tasks and projects can be seamlessly managed within Microsoft Teams, ensuring a cohesive workflow.
- **Collaboration on Documents:**

- Detailed collaboration on shared documents within ServiceNow, enhancing teamwork and document version control.

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### **Integration Solutions (ServiceNow Connectivity):**

*Vendor: Dell Boomi* Dell Boomi's integration solutions will enhance ServiceNow's connectivity across various applications and systems. The breakdown of features includes:

- **Cloud-based Integration Platform:**

- Utilization of Dell Boomi's cloud-based platform for efficient and scalable integration, ensuring ServiceNow's adaptability to evolving business needs.

- **Pre-built Connectors:**

- Ready-to-use connectors will facilitate seamless integration with a variety of applications, reducing development time and ensuring compatibility.

- **API Management:**

- Effective API management within ServiceNow, allowing for streamlined communication and data exchange between different IT service management processes.

- **Support for Various Data Formats:**

- Dell Boomi's support for diverse data formats ensures that ServiceNow can integrate with systems using different data structures, promoting interoperability.

### **AI and ML for Predictive Analytics (ServiceNow Enhancement):**

*Vendor: Google Cloud AI/ML Services* Integration with Google Cloud AI/ML Services will empower ServiceNow with advanced predictive analytics capabilities. The detailed breakdown includes:

- **Machine Learning Models:**

- Implementation of machine learning models within ServiceNow for predictive analytics, enabling insights into potential issues and trends.

- **Natural Language Processing:**

- Integration of natural language processing capabilities to enhance ServiceNow's ability to interpret and respond to user inputs in a more human-like manner.

- **Data Analysis Capabilities:**

- Advanced data analysis features within ServiceNow, leveraging Google Cloud AI/ML Services to gain valuable insights from large datasets, contributing to informed decision-making.

This detailed breakdown provides a more comprehensive understanding of the technical capabilities offered by each solution, aiding in a thorough assessment of their potential impact on the project.

### **Alternative Solutions:**

**Alternative Communication Platform:** "Slack" was also assessed because of its easy-to-use interface and broad usage. Here are details on how Slack can benefit ServiceNow: 1.

#### **Real-Time Communication:**

- **Benefit:** Slack facilitates real-time communication, allowing ServiceNow teams to communicate instantly and collaborate seamlessly.
- **Details:** ServiceNow teams can create dedicated channels for different projects, teams, or topics. This enables quick information sharing, discussions, and updates,

## 2. Integration Capabilities:

- **Benefit:** Slack integrates with a variety of third-party tools and applications,

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including ServiceNow.

- **Details:** By integrating Slack with ServiceNow, relevant updates, notifications, and alerts from ServiceNow processes can be automatically shared in Slack channels. This ensures that team members stay informed without having to switch between platforms.

## 3. Centralized Communication Hub:

- **Benefit:** Slack serves as a centralized hub for communication and collaboration.
- **Details:** ServiceNow teams can use Slack to centralize discussions, file sharing, and updates. This helps in reducing email clutter and streamlining communication, making it easier for team members to find and reference information.

**Alternative Integration Solution:** “MuleSoft” as an integration platform, can significantly enhance ServiceNow's capabilities by facilitating seamless connectivity, data flow, and process automation across various applications and systems. Here are some details on how MuleSoft can benefit ServiceNow.

### 1. Unified Data Integration:

- **Benefit:** MuleSoft acts as a comprehensive integration solution, connecting ServiceNow with diverse applications, databases, and systems across the organization.
- **Details:** MuleSoft enables ServiceNow to unify data from various sources, providing a consolidated view of information. This ensures that ServiceNow has access to real-time and accurate data for its IT service management processes.

### 2. Streamlined Business Processes:

- **Benefit:** MuleSoft facilitates the automation of end-to-end business processes, optimizing workflows within ServiceNow.
- **Details:** By leveraging MuleSoft's capabilities, ServiceNow can automate routine tasks, enhance operational efficiency, and improve the overall agility of IT service delivery. This includes integrating incident management, problem resolution, and change management processes seamlessly.

### 3. Enhanced Customer Experience:

- **Benefit:** MuleSoft enables ServiceNow to create a more personalized and responsive customer experience.
- **Details:** By integrating customer data from various touchpoints, MuleSoft allows ServiceNow to tailor its services based on individual preferences and historical interactions. This contributes to improved customer satisfaction and engagement.

## Proposed Physical Process Discussion

The proposed physical process is particularly noteworthy to ServiceNow because it provides a creative solution to the urgent issue of communication constraints in the current physical system. Effective communication and responsiveness are impeded by the current bottlenecks, particularly in the feedback loop between internal teams and customer data

collection. The ServiceNow Telecommunications Network Inventory software is a key component of the physical process that is recommended to address these communication problems.

Further, the suggested method offers a methodical framework for creating information

connected to different physical connections within the communications network by offering a comprehensive physical connection model. This facilitates more efficient customer feedback collection and provides internal teams with a standard information management and communication approach. The iterative process of converting logical entities into physical tables, choosing a data platform, defining columns and relationships, guaranteeing normalization, and putting indexes, partitions, and constraints in place are all emphasized as steps in this process. Businesses should utilize an all-encompassing approach to physical data modeling in order to enhance efficiency and productivity..

**E. Proposed System Physical Models: Bridging Conceptualization to Realization** In the journey from the current process narrative to the proposed system, understanding data processing and storage is paramount. The proposed Physical Data Models (PDM) form a pivotal link in this progression, seamlessly connecting the conceptual and functional models to the tangible implementation within the database environment.

**Evolution from Concept to Concrete:** Building upon the foundations laid by conceptual and logical modeling, the Physical Data Model (PDM) dives deeper, providing a granular description specific to the database implementation. It's the bridge where abstract ideas transform into tangible entities. This evolution ensures a direct alignment with the client's current process narrative, elucidating both commonalities and enhancements in the proposed system.

**Detailed Representation of Database-Specifics:** In the realm of physical data modeling, every element takes shape – tables, columns, data types, views, constraints, indexes, and methods. These become the tangible representations of the envisioned system. Constraints come to life, and decisions regarding the actual tables and columns unfold. Primary, secondary, and foreign keys materialize, embodying the intricacies of the proposed system's architecture.

**Aligning with the Current Process:** The proposed Physical Data Models serve not as a departure but as a continuation of the existing narrative. By aligning with the current process, the models ensure a seamless transition, retaining familiar aspects while introducing enhancements. Constraints and database specifics are shaped in consideration of the ongoing narrative, making the proposed system an organic evolution rather than a radical departure.

**Clarity in Design Decision-Making:** This phase of modeling provides unparalleled clarity in design decision-making. It is where the theoretical is translated into the practical – a blueprint where every data element finds its place. The client is guided through the intricacies of the proposed system's database, ensuring a comprehensive understanding of how data will be processed, stored, and retrieved.

**Transparency in Constraints and Keys:** Key decisions surrounding constraints, indexes, and

keys are laid bare. The client is presented with a transparent view of how data relationships will be maintained, ensuring the integrity of the system. Primary, secondary, and foreign keys are precisely defined, leaving no room for ambiguity in the implementation.

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## **VI. Solution Assessment Section**

### **Ineffective Feedback Mechanisms**

#### **Integration Protocols and Technologies:**

The proposed approach emphasizes robust integration protocols and leverages integration technologies, such as Dell Boomi, to optimize process efficiency. This ensures a seamless flow of data and communication.

#### **Data Standardization for Interoperability:**

Standardizing data formats and system designs becomes imperative to ensure interoperability across diverse IT environments. This addresses the root cause of integration problems and fosters a more cohesive system.

#### **Revolutionizing the Corporate Environment:**

In the enterprise environment, the solution focuses on standardizing integration processes, promoting an integrated IT infrastructure that revolutionizes the corporate environment. Breaking down communication silos and fostering a culture of efficient feedback and insights sharing are key aspects of this transformation.

#### **Control through Key Performance Indicators (KPIs):**

Control measures, represented by KPIs such as "Integration Success Rate" and "Time to Achieve Integration," provide oversight and ensure the effectiveness and efficiency of integration processes. These KPIs act as key performance drivers aligning with organizational success.

#### **Critical Success Factors (CSF) Analysis:**

- **Process (P):** The proposed solution strategically employs ServiceNow's BPM features, aligning with the critical success factor of operational efficiency. This ensures a streamlined process that enhances communication, directly impacting the organization's overall agility.
- **Information (I):** Real-time sharing and action on data, facilitated by collaboration technologies like Microsoft Teams, becomes a pivotal CSF. This aligns with the organization's need for nimble information flow, a cornerstone in addressing ineffective

feedback mechanisms.

- **Enterprise Environment (E):** Breaking down communication silos aligns with the CSF of fostering a collaborative culture. The transformation of the enterprise environment resonates with the organizational goal of promoting a culture of efficient feedback and

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insights sharing.

- **Control (C):** The implementation of KPIs such as "Average Time to Resolve Incidents" and "Percentage of Incidents Resolved on First Assignment" directly ties into the CSF of maintaining control over operational effectiveness.

## Dependence on Effective Integration: A Strategic Organizational Analysis

### Critical Success Factors (CSF) Analysis:

- **Process (P):** The proposed approach, emphasizing robust integration protocols, is strategically aligned with the CSF of technological innovation. This ensures that the integration process optimally contributes to organizational efficiency.
- **Information (I):** Standardizing data formats and system designs addresses the CSF of interoperability across diverse IT environments. This standardized approach ensures that the organization's systems seamlessly communicate, directly impacting integration success.
- **Enterprise Environment (E):** The solution's focus on standardizing integration processes aligns with the CSF of fostering an integrated IT infrastructure. This strategic alignment ensures a cohesive enterprise environment, fostering collaboration and efficiency.
- **Control (C):** KPIs such as "Integration Success Rate" and "Time to Achieve Integration" provide a critical control mechanism aligned with the CSF of maintaining optimal system performance. These KPIs directly contribute to the organization's overall success by ensuring the effectiveness and efficiency of integration processes.

This analysis looks deeply into how our proposed solutions align with the big goals of the organization, using what we call Critical Success Factors. It gives us a full picture of how these solutions not only fix particular problems but also play a big role in making the entire organization successful as a whole.

### Proposed System Benefits and Consequences

For every process, the average time to resolve incidents is a crucial KPIs. The technology expedites incident response, reducing the time required to address issues and yielding instantaneous efficiency gains. Better information flow and retrieval are shown by improved information accessibility, as demonstrated by the KPI of the Percentage of Incidents Resolved on the First Assignment. The (KPIs) provide a comprehensive assessment of the system's influence on several aspects of the company, such as corporate cooperation, successful integration, adaptability in modification, employee satisfaction, customer experience, and the uptake of AI/ML insights.

Simultaneously, the proposed system anticipates any negative impacts, which are methodically handled using KPIs. Employee Change Readiness Score: this gauge how resistant employees are to change; Number of Security Incidents: this tracks concerns about data security; Integration Downtime Duration KPI: this gauge how often interruptions occur. With this systematic approach, the implications of the system may be fully grasped, improving decision

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making and risk management.

## **Beneficiaries and Losers**

The proposed systems will have varied effects on different parties. More straightforward access and faster problem-solving will benefit end users, boosting their productivity and enjoyment. Less tedious labor and administrative chores increase the efficiency of IT support teams, providing them more time to focus on more demanding projects. Further, Developers can modify systems with less effort and more flexibility. Also, Clients enjoy services that react quickly to their needs. On the contrary, opponents of the current system may fear losing power or influence. Customization proponents may face difficulties due to a lack of possibilities. People who now act as gatekeepers in the communication process are likely to object. Because of transition security issues, IT security teams may be the first to complain, and there may be a momentary decline in demand for change management consultants. People often voice their dissatisfaction when their duties or status have altered.

The proposed systems promise a transformative journey, influencing various parties in distinct ways. A comprehensive analysis delineates the plausible beneficiaries and those facing potential challenges, ensuring a nuanced understanding of the system's impact on users, owners, developers, and other stakeholders.

### **Beneficiaries:**

#### **1. End Users:**

- *Impact:* More straightforward access and faster problem-solving.
- *Benefit:* Boosted productivity and enhanced user satisfaction.

#### **2. IT Support Teams:**

- *Impact:* Less tedious labor and administrative chores.
- *Benefit:* Increased efficiency, allowing more focus on demanding projects.

#### **3. Developers:**

- *Impact:* Modification of systems with less effort and more flexibility.
- *Benefit:* Streamlined development processes, fostering innovation.

#### **4. Clients:**

- *Impact:* Services that react quickly to their needs.
- *Benefit:* Improved responsiveness, enhancing overall client satisfaction.

### **Challenges and Potential Losers:**

#### **1. Opponents of the Current System:**

- *Concern:* Fear of losing power or influence.
- *Justification:* Resistance may arise due to perceived threats to established roles or

structures.

## 2. Customization Proponents:

- *Concern*: Difficulties due to a lack of possibilities.
- *Justification*: Those advocating for high customization might find constraints restricting.

## 3. Communication Gatekeepers:

- *Concern*: Potential objection to changes in the communication process.
- *Justification*: Individuals playing key roles in communication may resist

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alterations impacting their traditional functions.

## 4. IT Security Teams:

- *Concern*: Transition security issues.
- *Justification*: Initial resistance due to security concerns during the transition period.

## 5. Change Management Consultants:

- *Concern*: Momentary decline in demand.
- *Justification*: As the system evolves, there might be a temporary reduction in the demand for change management consultancy services.

## 6. Individuals Facing Altered Roles:

- *Concern*: Expression of dissatisfaction.
- *Justification*: Change often triggers resistance, particularly when duties or status undergo significant alterations.

## Financial/Economic Risk Analysis for the Proposed System

### Return on Investment (ROI) Calculation:

$$ROI = \left( \frac{\text{Net Profit}}{\text{Cost of Investment}} \right) \times 100$$

Calculation: Assuming a net profit of \$500,000 and a total investment cost of \$1,000,000, the ROI would be  $\left( \frac{500,000}{1,000,000} \right) \times 100 = 50\%$ .

### Spreadsheet Exhibit: ROI Calculation

Net Profit	Cost of Investment	ROI
\$500,000	\$1,000,000	50%

A	B	C
Cost per employee	Average # Of Employees	Rate of Return
\$100.00	\$ 2,500.00	99.00%
Average Monthly Cost	\$ 250,000.00	\$388.27
Average Contract Cost	\$ 9,000,000.00	
Income from Clients Before Retention Rate	\$ 278,100,000,000.00	\$1,000,000.00
Total Income from Clients	\$ 275,319,000,000.00	\$8,520,000,000.00
Total Loss	\$ 2,781,000,000.00	\$1,436,000,000.00
Cost of employee training	\$ 350,000.00	\$299.83
Software Development Cost	\$ 500,000.00	\$60,000.00
Potential Income from Clients	\$ 278,100,000,000.00	\$1,568,000.00
	\$ 275,319,000,000.00	
	\$ 2,781,000,000.00	
	\$ -	
	\$ (1,100,000.00)	
Total Cost for service now	\$ 850,000.00	100.00%

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**Payback Period:** The payback period is determined when cumulative benefits match the initial investment.

Calculation: If the annual benefits are \$200,000, the payback period would be  $\frac{1,000,000}{200,000} = 5$  years.

### Spreadsheet Exhibit: Payback Period Calculation (placeholder numbers) Year Cumulative Benefits Remaining Investment 1 \$200,000 \$800,000

2 \$400,000 \$600,000

3 \$600,000 \$400,000

4 \$800,000 \$200,000

5 \$1,000,000 \$0

### Costs vs. Benefits Analysis: (Placeholder numbers)

A detailed breakdown compares costs and benefits.

Assumption: Costs range from \$600,000 for setup and installation to \$100,000 for training and \$50,000 per year for upkeep. Increased productivity and savings are expected to result in yearly benefits of \$300,000.

### Spreadsheet Exhibit: Costs vs. Benefits Analysis

Category Amount

**Setup Costs** \$600,000

**Training Costs** \$100,000

**Annual Maintenance Cost** \$50,000 (per year) **Anticipated Benefits** \$300,000 (per year)

### **Key Findings:**

**Positive ROI:** The calculated ROI of 50% signifies a positive return on investment.

**Reasonable Payback Period:** The payback period of 5 years falls within an acceptable time frame.

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**Favorable Costs vs. Benefits:** Anticipated benefits outweigh costs, supporting economic feasibility.

### **Operational Risks**

The proposed system has several operational risks, such as potential unavailability of the system, challenges in people training, data security issues, integration issues, reliance on outside service providers, and scalability constraints. The mitigation process includes backup plans for service providers, training initiatives, security measures, and scalable architecture. A seamless handoff and long-term company performance depend on taking action to reduce these risks.

### **Technical / Technology Risk**

Potential technical risks with the proposed system include compatibility issues, system integration challenges, and the need for highly specialized technical expertise. When new technologies are brought to existing IT infrastructures, resistance or trouble adapting could occur. These risks may be minimized by carefully verifying compatibility, implementing the change gradually, and providing people with the tools they need to succeed. Careful preparation is required to enable a smooth integration with existing systems and to address any technical impediments to minimize disruptions and maximize the effectiveness of the suggested solution.

### **Security Risk**

The proposed system could provide security risks, particularly in the methods that data is delivered and kept. There are worries about the system's susceptibility to cyberattacks as new components and functions are added that enable data interchange. Securing data transmission methods, regular security audits, and efficient encryption technologies are required to counter these attacks. Implementing strict access controls and authentication processes and keeping up with evolving cybersecurity regulations could help protect the company's confidentiality and integrity of critical data.

## Implementation Plan

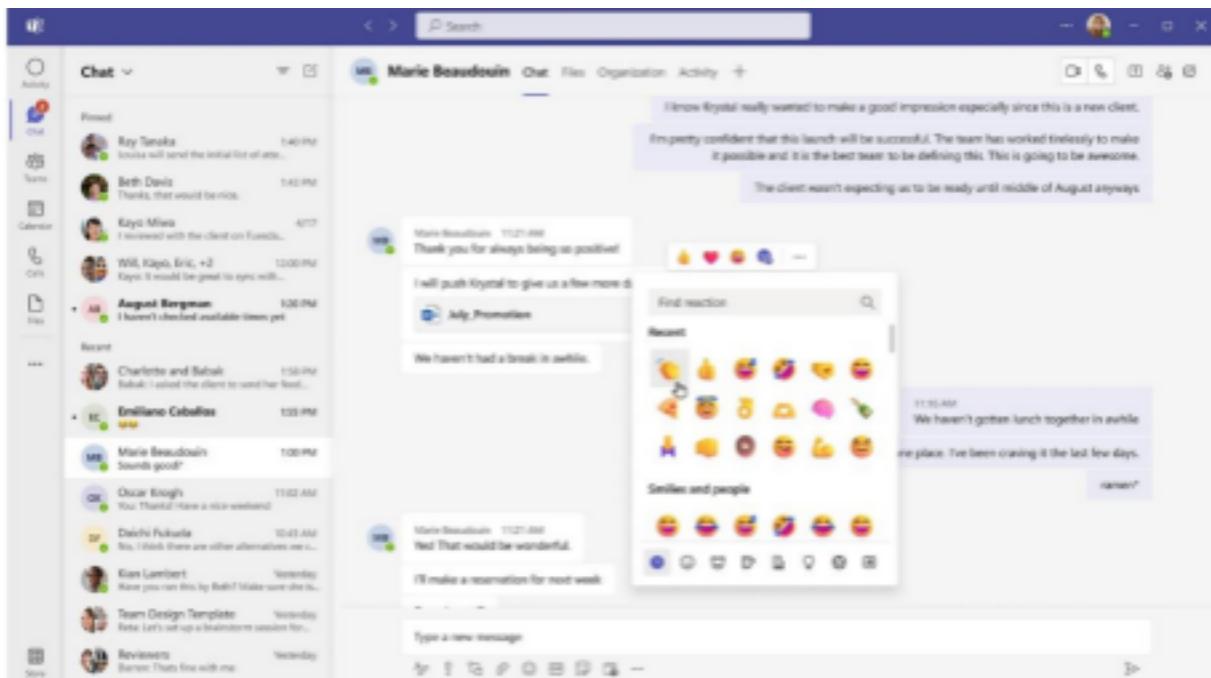
First, an extensive assessment of the organization's readiness for change is conducted, after which the implementation plan looks at the infrastructure in place, identifies key players, and forms an implementation team. Customer and ServiceNow experts will collaborate during individualized training to address the challenge of limited customization options. We'll create a detailed list of customization chores so that we may adapt to different industry needs while maintaining the stability of the infrastructure.

The plan outlines a communication strategy to address the problem of ineffective feedback mechanisms. A dedicated feedback site in ServiceNow and frequent town hall meetings and feedback sessions will be established. Prompt communication is essential, and the task list includes training sessions that will empower users.

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Together, the client and IT teams will thoroughly analyze the present IT infrastructure to identify areas of reliance and create mitigation plans. Integrity-related issues are addressed by the integration planning checklist, which also creates general best practices for integration. With a to-do list for gradually making changes in response to user feedback, the plan adopts an incremental rollout strategy. There are comprehensive timetables for training, significant events, and ongoing support. In order to fully use ServiceNow's capabilities and effectively address identified issues by coordinating task lists with overarching objectives, the client offers an organized and adaptable implementation approach.

## **Appendix 1- Microsoft Teams with instant feedback hub**



## **Appendix 2- Dell Boomi**



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## **Appendix 3- Google Cloud AI/ML Services**

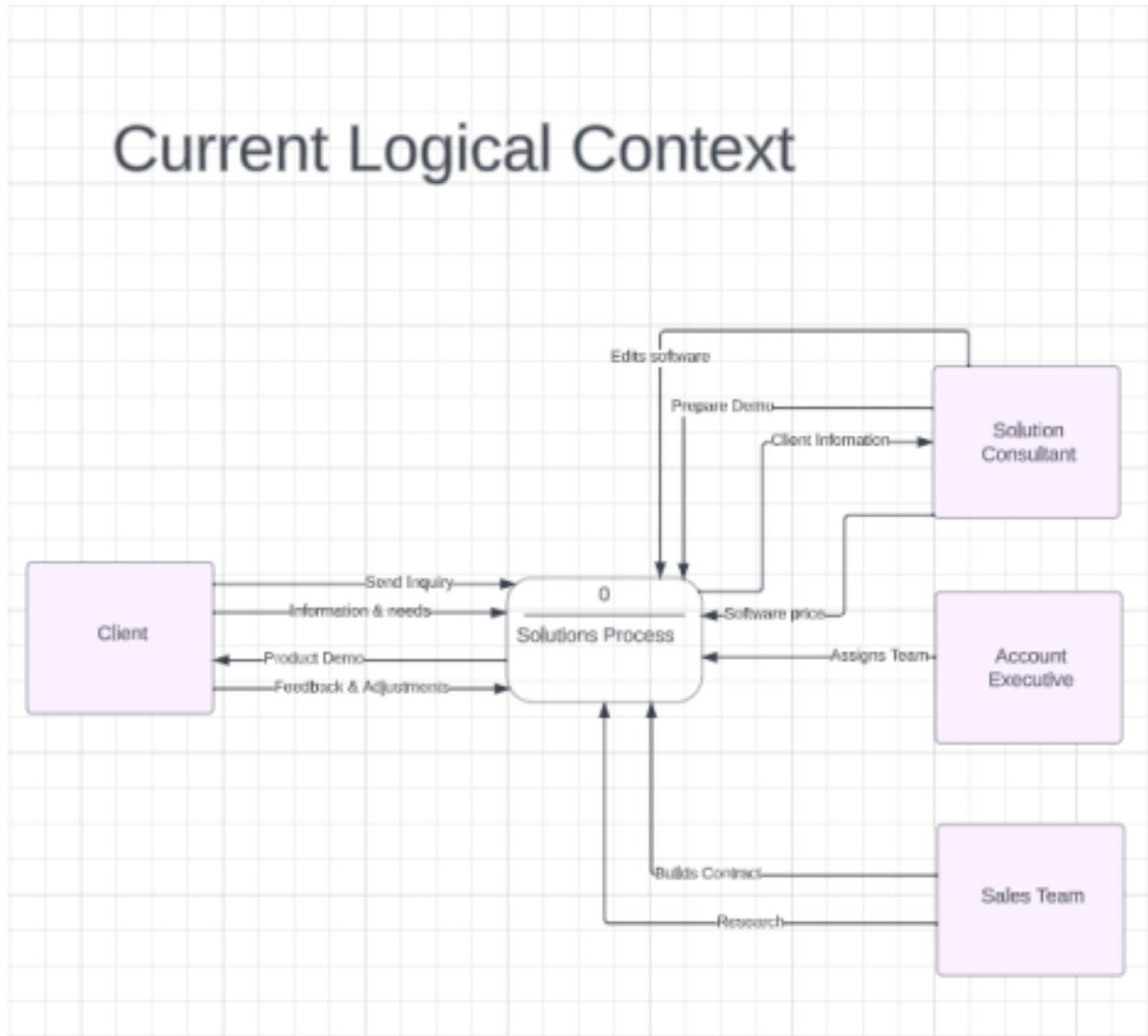
Solutions	Solutions				Collaboration	Services
	Contact Center AI	DialogFlow	Talent Solution	Document AI	AI Hub	Advanced Solutions Lab
Building Blocks	APIs	Eight	Language	Conversation	Structured Data	
	Pre-Trained Models	Vision	Video Intelligence	Natural Language	Translation	Speech-to-Text
	AutoML and BQML	AutoML, Eight	AutoML, Language	AutoML, Structured Data	BigQuery ML	Structured Data
	Custom-Trained Models	Vision	Video Intelligence	Natural Language	Translation	Tables
	AI Platform	Core Services and Tools				
	End to End Model Development	Data Labeling	Training	Built-in Algorithms	Prediction	Explanations
		Continuous Evaluation	Optimizer	Kubernetes	TensorFlow	Kubeflow Pipelines
Platform	AI Foundation	Hardware		Images		OSS Framework Support
	Hardware and Software	CPU	GPU	TPU	Deep Learning VMs	Deep Learning Containers
		MXNet	Keras	Caffe	TensorFlow	XGBoost

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## Exhibits

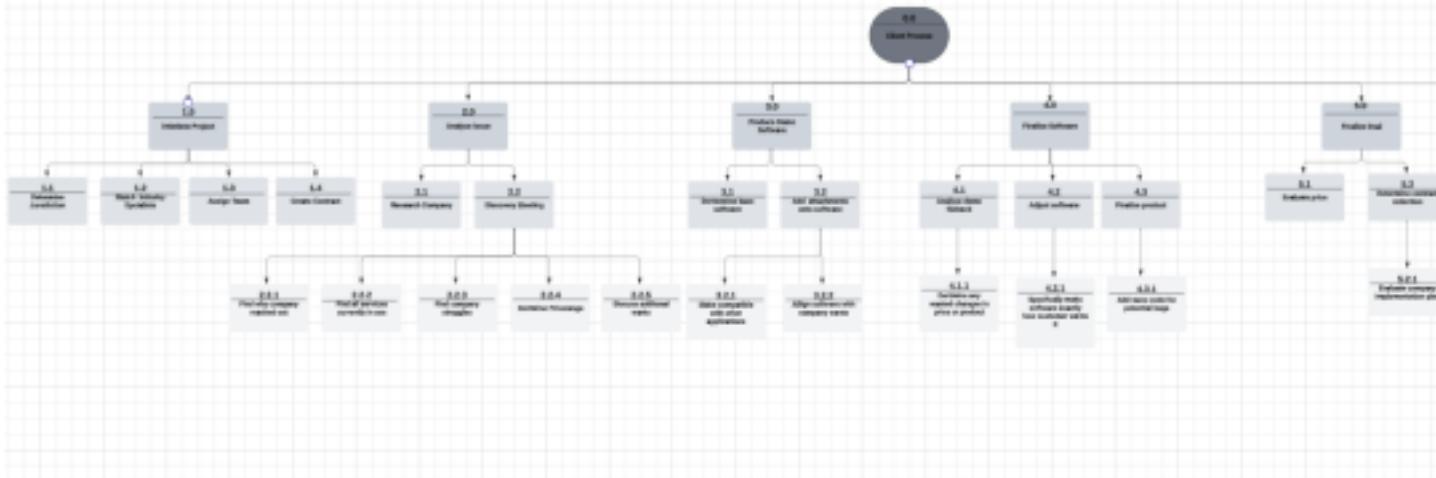
### Exhibit A : Current Logical Process Models

#### 1. Current Logical Context



#### 2. Current Logical Functional Decomposition

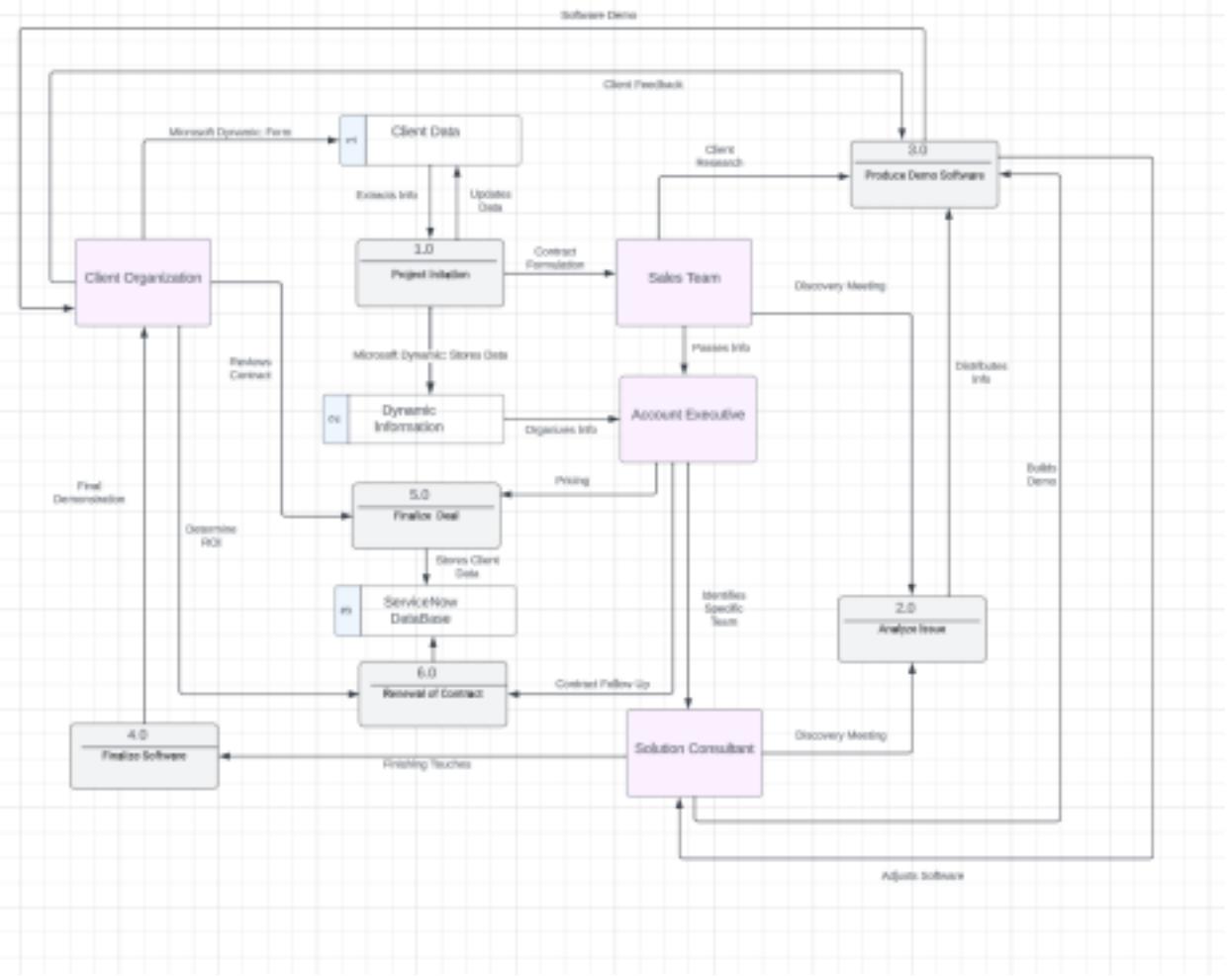
### Current Logical



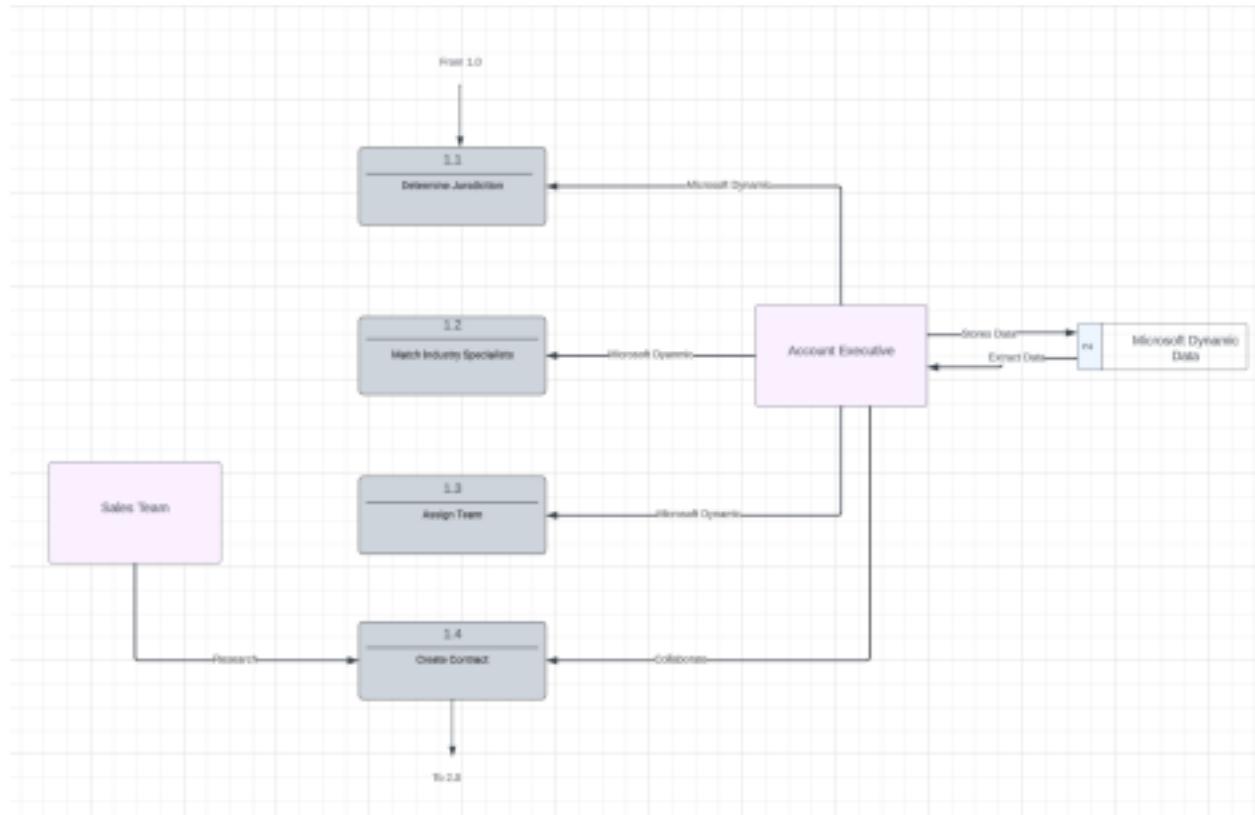
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### 3. Current Logical Level 0

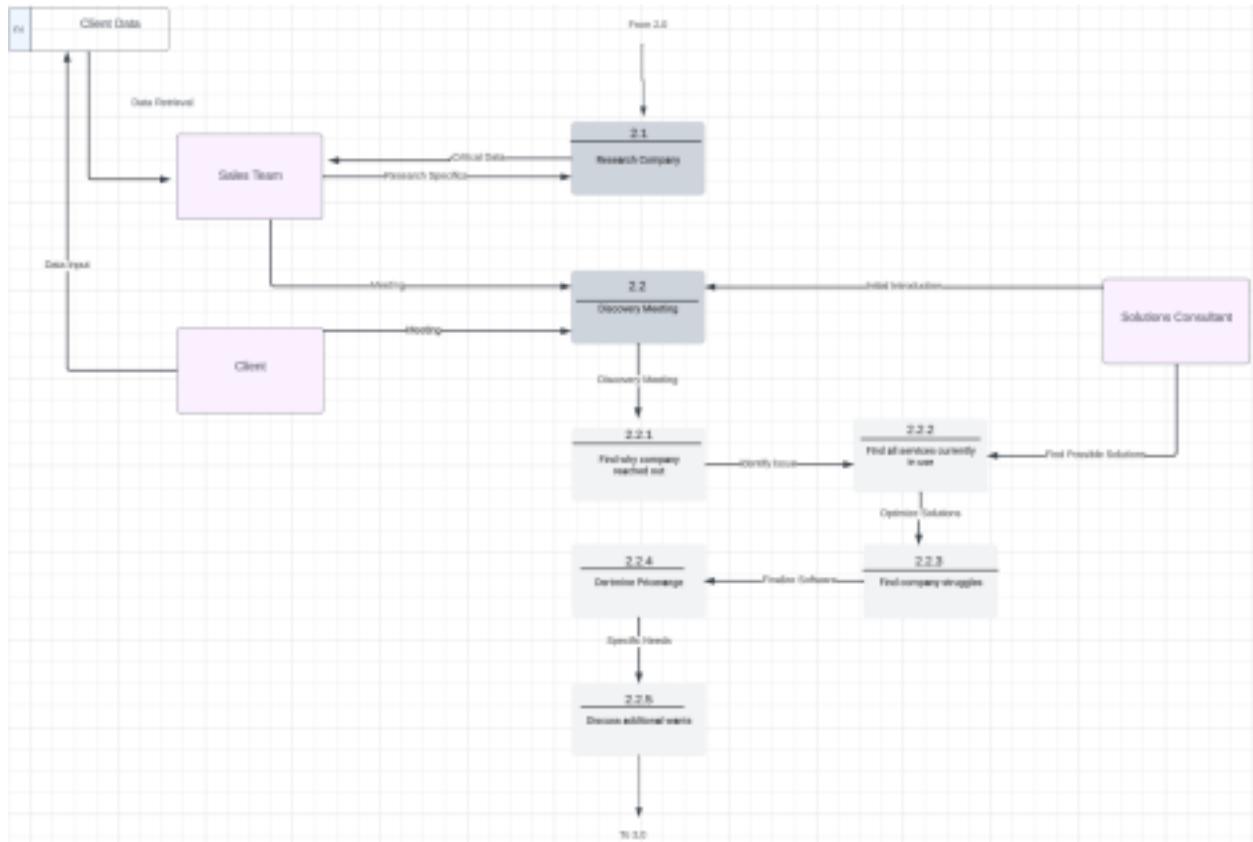
## Level 0 Current Logical



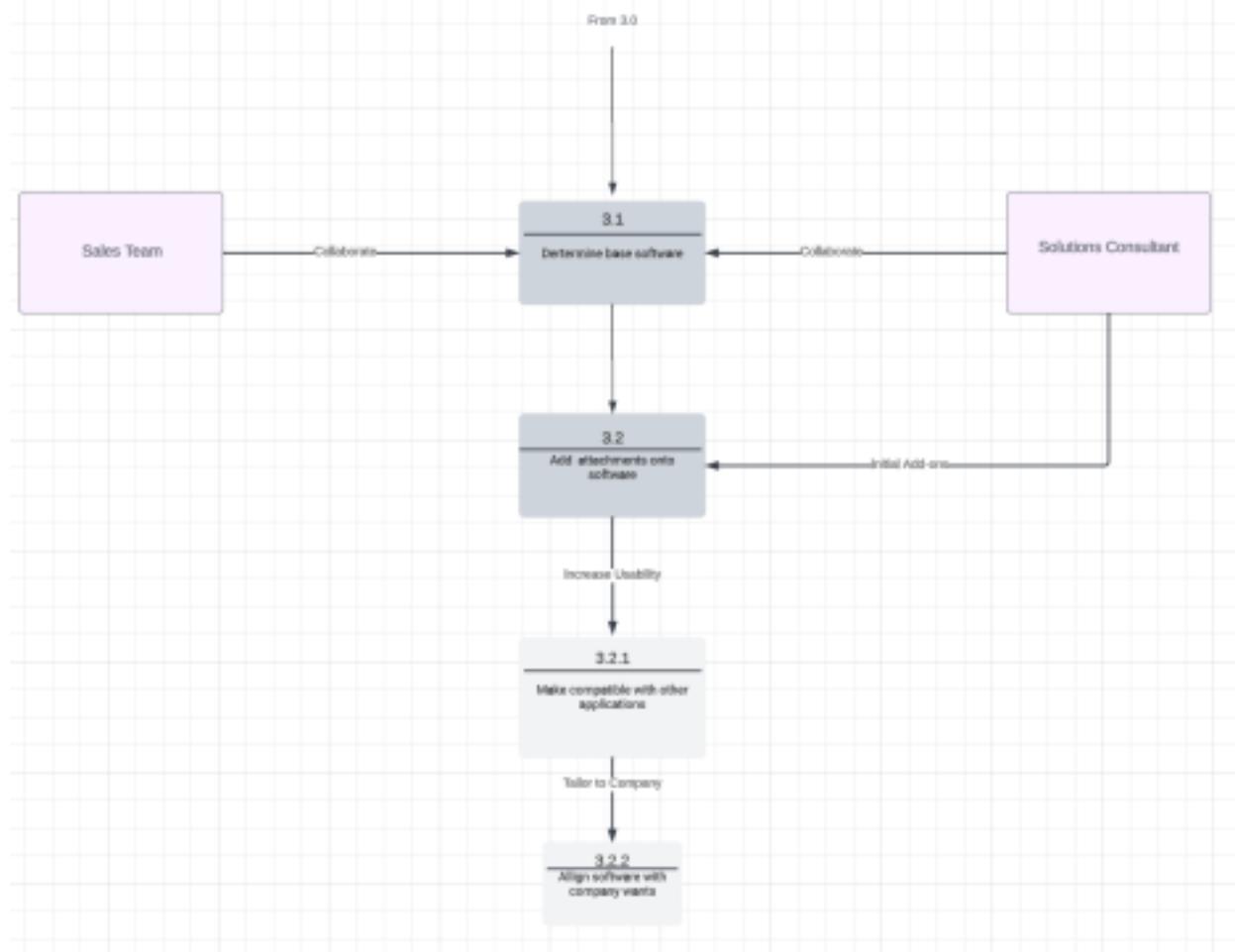
### 4. Current Logical Level 1 (from 1.0)



## 5. Current Logical Level 1 (from 2.0)

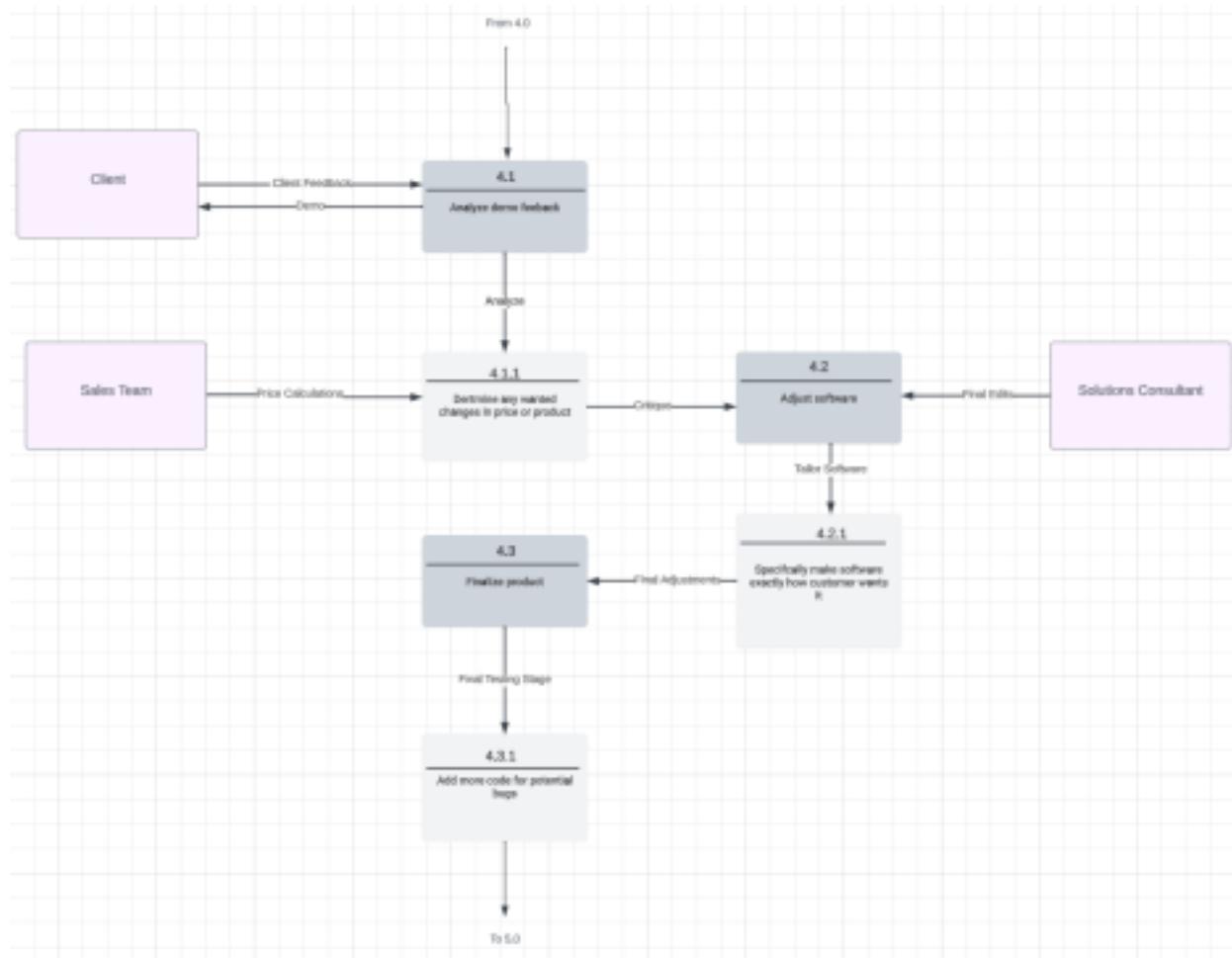


## 6. Current Logical Level 1 (from 3.0)

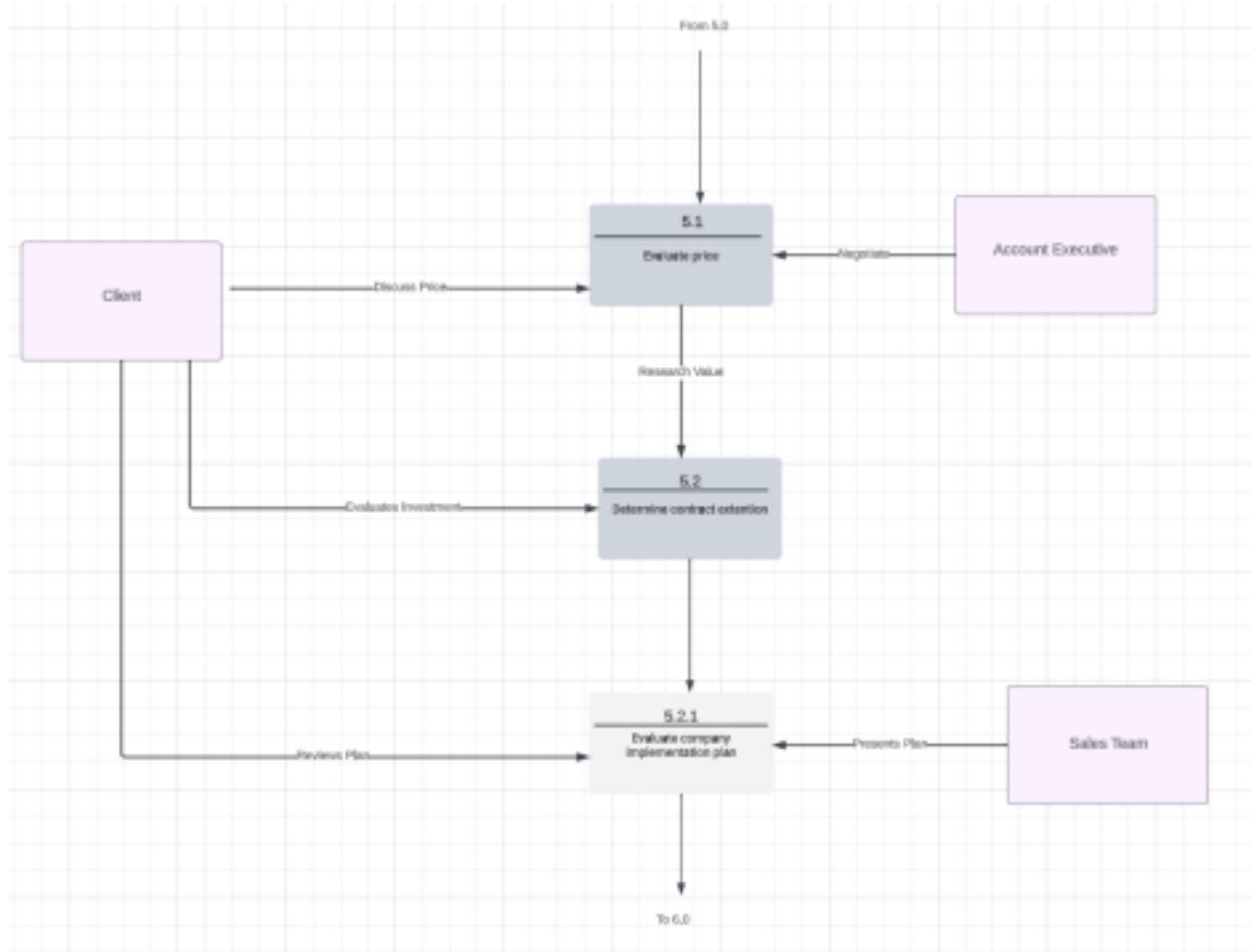


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## 7. Current Logical Level 1 (from 4.0)

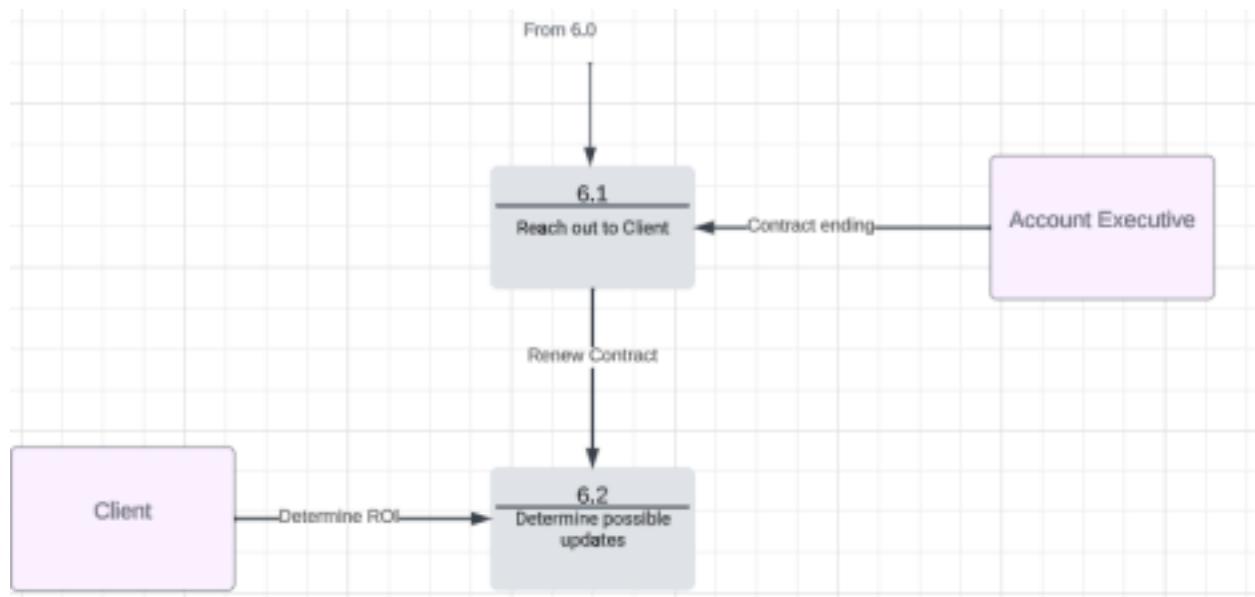


### 8. Current Logical Level 1 (from 5.0)



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## 9. Current Logical Level 1 (from 6.0)



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#### Exhibit B: Use Case: Current Logical Level 0



**Exhibit C: Current ERD**



## **Exhibit D: Proposed Data Flow Diagrams**

### *1. Proposed Logical Context*



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*2. Proposed Functional Decomposition*



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*3. Proposed Logical Design Level 0*



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*4. Proposed Logical Level 1 (from 1.0)*



*5. Proposed Logical Level 1 (from 2.0)*



*6. Proposed Logical Level 1 (from 3.0)*



7. *Proposed Logical Level 1 (from 4.0)*



*8. Proposed Logical Level 1 (from 5.0)*



*9. Proposed Logical Level I (from 6.0)*



**Exhibit E: Proposed Physical Level 0**



**Exhibit F: Proposed ERD**





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*PhysicalProposedModel2.0*





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*ProposedPhysicalModel4.0*



*ProposedPhysicalModel5.0*



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*ProposedPhysicalModel6.0*

