

**Haute Ecole
« ICHEC – ECAM – ISFSC »**



Enseignement supérieur de type long de niveau universitaire

Strategic Management of Technology Transitions in Humanitarian Organizations: A Case Study of MSF's Data Integration Migration

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Pour l'obtention du diplôme de :

**Master's degree in Management
Science**

Année académique 2024-2025

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Strategic Management of Technology
Transitions in Humanitarian Organizations:
A Case Study of MSF's Data Integration
Migration

Acknowledgment

I would like to express my deepest gratitude to all those who have supported me throughout the journey of completing this thesis. First and foremost, I am sincerely thankful to my promoter, Professor Etienne Cuvelier, for his invaluable guidance, encouragement, and insightful feedback, which have been instrumental in shaping this research. I also express my sincere appreciation to the thesis committee for their valuable input and constructive criticism.

I am profoundly grateful to the team at Médecins Sans Frontières (MSF) for their generosity in sharing their expertise and insights, especially during the Talend project transition. I offer special thanks to the members of the MSF Data Team and ICT Department, whose openness, availability, and insights provided essential real-world perspectives. Furthermore, I value the support and approval from MSF's Portfolio Manager and project PM, whose encouragement ensured the credibility of my proposed strategies .

Finally, I am profoundly thankful to my family and friends for their unwavering encouragement, patience, and belief in me throughout this process. Their support gave me the strength to persevere and complete this work.

This thesis would not have been possible without the contributions of each of these individuals , and I am truly honored to have had their support.

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Table of Contents

List of Figures	V
List of Tables	VI
Abstract	VIII
Chapter 1: Project Context	1
1.1 Introduction	1
1.2 Problem Statement	1
1.3 Research Question and Objectives	2
1.4 Significance of the Study	2
Chapter 2: Literature Review	4
2.1 Introduction	4
2.2 Change Management	4
2.2.1 Change Management Definition	5
2.2.2 Common Pitfalls in change initiatives	5
2.2.3 Principles for Effective Change Management	7
2.2.4 Models of Change Management	7
2.2.5 Comparative Analysis of Organizational Change Models	12
2.2.6 Special Considerations for Change Management in the Humanitarian Sector	12
2.3 Strategic Decision-Making	13
2.3.1 Classical Approaches	13
2.3.2 Beyond Classical Approaches	14
2.3.3 Toward Adapted Decision Frameworks	14
2.3.4 Research Gap	14
2.4 Project Management	15

2.4.1	Predictive Project Management	15
2.4.2	Agile Project Management: SCRUM	17
2.4.3	Comparative Analysis: Predictive PM vs. Agile in Humanitarian Con- texts	18
2.4.4	Research Gap	21
2.5	Data Governance	21
2.5.1	What Is Data Governance?	21
2.5.2	Why It Matters in Humanitarian Work	22
2.5.3	Key Principles and Frameworks	22
2.5.4	Challenges in Humanitarian Settings	24
2.5.5	Research Gap	24
2.6	Case Studies: Strategic Management of Transitions in Humanitarian Organi- zations	25
2.6.1	UN OCHA: United Nations Office for the Coordination of Humanitar- ian Affairs	25
2.6.2	International Federation of Red Cross and Red Crescent Societies (IFRC)	26
2.6.3	United Nations High Commissioner for Refugees (UNHCR)	28
2.7	Conclusion	30
Chapter 3: Research Methodology		32
3.1	Introduction	32
3.2	Research Design	32
3.3	Data Collection	33
3.4	Data Analysis	34
3.5	Triangulation	35
3.6	Ethical Considerations	35
3.7	Conclusion	35
Chapter 4: MSF Case Study: Strategic management of technological transition		36
4.1	Introduction	36
4.2	Change Management	37

4.2.1	Evaluation of Models for MSF's Context	37
4.2.2	Model Insights: Strengths and Gaps	38
4.2.3	Most Suitable Models for MSF	39
4.2.4	Implementation in Practice: The Hybrid Application	40
4.2.5	Summary of Change Management Lessons	41
4.3	Strategic Decision-Making	42
4.3.1	Application of Strategic Decision-Making Frameworks to MSF	42
4.3.2	Added Value of the Requirement-Feature Matrix in MSF's Context	46
4.4	Project Management	46
4.4.1	Context of the Project	47
4.4.2	Rationale for a Hybrid Approach	47
4.4.3	Predictive PM in Action: Structure and Risk Control	48
4.4.4	Agile Implementation: Iterative Delivery and Engagement	48
4.4.5	Challenges and Mitigation Strategies	49
4.4.6	Strategic Value of the Hybrid Approach	49
4.5	Data Governance	50
4.5.1	Governance Requirements and Transition Planning	50
4.5.2	Governance in Platform Evaluation	51
4.5.3	Stakeholder Engagement in Governance Planning	51
4.5.4	Lessons for Other Organizations	51
4.5.5	Long-Term Benefits	52
4.6	Conclusion	52
Chapter 5: Synthesis, implications, recommendations, and reflections		54
5.1	Introduction	54
5.2	Synthesis of Findings	54
5.3	Implications for Humanitarian Organizations	55
5.4	Recommendations	56
5.4.1	Change Management	56
5.4.2	Strategic Decision-Making	57

5.4.3	Project Management	57
5.4.4	Data Governance	57
5.5	Contributions to Theory and Practice	58
5.5.1	Theoretical Contributions	58
5.5.2	Practical Contributions	58
5.6	Limitations and Future Directions	59
5.7	Conclusion	60
	References	61

List of Figures

2.1	Kurt Lewin's Three-Step Change Model (Rizescu, n.d.)	8
2.2	Kotter's 8-Step Change Model(BiteSize Learning, n.d.)	9
2.3	ADKAR Model (Visual Paradigm, n.d.)	10
2.4	McKinsey 7-S Model (Miller, 2022)	11
2.5	Visual representation of the Predictive Project Management workflow.	17
2.6	SCRUM-based Agile Framework for Iterative Humanitarian Project Management	18
4.1	Requirement-Feature Matrix	45

List of Tables

2.1	Common Errors in Change Initiatives and their Relevance to Humanitarian Organizations	6
2.2	Comparative Analysis of Organizational Change Models	12
2.3	Comparative analysis of Predictive PM and Agile methodologies	20
4.1	Application of Lewin's Model	37
4.2	Application of Kotter's Model	38
4.3	Application of ADKAR Model	38
4.4	Application of McKinsey 7-S Model	38

List of Abbreviations

ADKAR : Awareness, Desire, Knowledge, Ability, Reinforcement
AI : Artificial Intelligence
API : Application Programming Interface
CBA : Cost-Benefit Analysis
CVA : Cash and Voucher Assistance
GDPR : General Data Protection Regulation
HDX : Humanitarian Data Exchange
HQ : Headquarters
ICT : Information and Communication Technology
IFRC : International Federation of Red Cross and Red Crescent Societies
IRR : Internal Rate of Return
IT : Information Technology
MoH : Ministry of Health
MSF : Médecins Sans Frontières (Doctors Without Borders)
NGO : Non-Governmental Organization
NPV : Net Present Value
OC : Operational Center
OCHA : United Nations Office for the Coordination of Humanitarian Affairs
PI : Product Increment
PM : Project Management / Project Manager
PMBOK : Project Management Body of Knowledge
PO : Product Owner
PRIMES : Profile Registration for Identity Management, Entitlements, and Statistics
RFM : Requirement-Feature Matrix
ROI : Return on Investment
SCRUM : (Not an acronym; a framework in Agile Project Management)
SOP : Standard Operating Procedure
TCO : Total Cost of Ownership
UNHCR : United Nations High Commissioner for Refugees
WeIterate : MSF's internal Agile Project Management framework
WePlan : MSF's internal Predictive Project Management framework

Contents

Abstract

This thesis explores how humanitarian organizations can strategically manage the transition to new data integration systems, with a focus on the case of Médecins Sans Frontières (MSF). Technological transitions in humanitarian contexts, where organizations operate in complex, high-stakes environments with limited resources, present numerous managerial challenges.

The study examines MSF's ongoing data integration transition as a case study, addressing the strategic, managerial, and operational complexities associated with adopting new technologies in the humanitarian sector. The research explores four key dimensions: change management, strategic decision-making, project management, and data governance.

The thesis applies well-established management frameworks, including various Models for Change Management, the Requirement-Feature Matrix for strategic decision-making, and project management methodologies (hybrid approach of Agile and Predictive methodologies) to understand MSF's approach. Additionally, data governance considerations are explored, emphasizing the critical importance of securing sensitive data during such transitions.

By analyzing MSF's process, this thesis contributes to both theoretical knowledge and practical recommendations for other humanitarian organizations undergoing similar technological shifts. It provides valuable insights into the challenges of managing technology transitions in resource-constrained environments and proposes a framework for navigating complex organizational change while aligning technological upgrades with strategic goals. Ultimately, this research enhances the understanding of how management theory could be applied to real-world humanitarian contexts, ensuring more efficient and impactful aid delivery.

Chapter 1

Project Context

1.1 Introduction

Humanitarian organizations work in challenging environments where managing resources, people, and data is critical to achieving their goals. Médecins Sans Frontières (MSF), a medical nonprofit operating in over 70 countries, uses digital systems to manage operations, such as medical interventions and logistics. In conflict zones, epidemics, and disasters, MSF handles sensitive data, from patient records to supply chains, to deliver timely aid. This work is carried out by field staff, such as doctors, nurses, and logisticians, who work directly in crisis-affected regions like conflict zones or disaster areas to deliver humanitarian aid under challenging conditions.

As part of its digital transformation, MSF is currently transitioning from its existing data integration system, Talend, to a cloud-based platform, with Microsoft Fabric and Azure Databricks as the primary options under evaluation. This change reflects efforts by nonprofits to adopt flexible, real-time data systems for urgent, decentralized needs. However, this transition involves more than technology; it would require careful management to guide organizational change, align decisions with mission goals, protect data responsibly, and coordinate complex projects with limited resources. As a Master's student in Management Science at ICHEC, cooperating with MSF, I draw on my involvement in this transition to study its management challenges. This thesis uses that experience to examine how humanitarian organizations could navigate such changes, focusing on the human, strategic, and data-related aspects of the process.

1.2 Problem Statement

The adoption of new data integration tools offers benefits like improved scalability and efficiency for humanitarian organizations. However, implementing these systems presents significant management challenges across four key areas. In change management, organizations often face resistance from staff accustomed to existing systems, requiring extensive support to ensure adoption across diverse, often decentralized teams. Strategic decision-making is com-

plicated by the need to select platforms that align with mission-driven goals while balancing operational constraints like limited budgets and the complexity of evaluating multiple options in high-stakes environments. Project management demands careful coordination to meet tight timelines and resource limitations, all while maintaining operational continuity during crises where disruptions can have severe consequences. Data governance poses challenges in maintaining data safety, adhering to ethical standards, and ensuring accessibility for non-technical users who need quick access to information in unstable settings. For example, MSF's transition from Talend to a new platform highlights these issues, as the organization would need to navigate these challenges to avoid disruptions in its aid delivery. Without careful attention to these areas, risks like delays, errors, or ethical lapses could hinder humanitarian organizations' ability to fulfill their life-saving missions effectively.

1.3 Research Question and Objectives

This study explores the following research question:

How can humanitarian organizations manage the transition to a new data integration system, integrating organizational change, strategic decision-making, project management, and data governance?

To address this, the thesis uses MSF's ongoing transition from Talend to a new platform as a case study, focusing on four key management dimensions:

- **Change management:** Applying practices to support smooth adoption, such as combining strategic and individual-focused models to address resistance.
- **Strategic decision-making:** Proposing and applying tools like the customized Requirement-Feature Matrix (RFM) to guide platform selection based on mission-driven criteria, as demonstrated in the workshop in chapter 4.
- **Project management:** Coordinating the transition through hybrid approaches to meet timelines and goals while adapting to uncertainties.
- **Data governance:** Ensuring data is secure, ethical, and useful.

The objectives are to analyze MSF's approach, propose and test the potential of management frameworks for humanitarian contexts, and provide practical recommendations for MSF and other organizations, contributing to both academic understanding and real-world practice.

1.4 Significance of the Study

This research contributes to academic knowledge and practical guidance in the nonprofit sector, where detailed case studies on technology transitions are limited. It advances understanding of

how change management, strategic decision-making, project management, and data governance could be tailored to humanitarian contexts, proposing insights through new tools and hybrid approaches. For MSF and similar organizations, it offers clear strategies for managing technology transitions. By focusing on management and strategy, this thesis highlights organizational behavior, decision processes, project coordination, and data ethics in complex nonprofit settings, emphasizing the importance of inclusive, mission-driven approaches to support life-saving operations.

Chapter 2

Literature Review

2.1 Introduction

The shift to new data integration systems in humanitarian organizations like MSF requires careful management of organizational change, strategic decision-making, project coordination, and data governance. This chapter reviews literature on these four key areas, as outlined in the research objectives, to address the question: How can humanitarian organizations manage the transition to a new data integration system, integrating change, decisions, projects, and data? Change management facilitates adoption, strategic decision-making informs appropriate tool selection, project management organizes the process, and data governance ensures sustainable data quality and security, all vital for MSF's mission. Additionally, this chapter examines case studies from other humanitarian organizations, such as UN OCHA, IFRC, and UNHCR, to identify best practices and gaps in managing technology transitions.

2.2 Change Management

Organizations face constant change, and the ability to adapt is a key requirement for achieving their goals. This requires a critical discipline: change management.

More than just implementing new processes or technologies, change management is a comprehensive strategy focused on the human side of transformation. Whether an organization like an NGO is undergoing a digital overhaul, restructuring its workforce, adopting new technologies, or responding to shifts in humanitarian needs, effective change management ensures better understanding of why changes are necessary, smoother transitions, supported employees, and the achievement of strategic objectives.

At its core, change management acknowledges that organizational change is fundamentally about people. It involves understanding human psychology, managing resistance, communicating effectively, and fostering an environment where employees not only accept change but actively participate in the transformation. By providing a systematic framework for navigating the human aspects of change, organizations can minimize disruption, maintain productivity, and

increase the likelihood of successful implementation (University of Arizona Global Campus, 2023).

2.2.1 Change Management Definition

To establish a clear understanding, let us examine the precise meaning of change management. Experts in the field characterize the approach to organizational transformation as:

“Change management is a systematic approach to addressing the transition or transformation of an organization’s objectives, processes, or technologies.” (Pivot Roadmaps, n.d.)

The primary aim of change management is to implement effective strategies for both enacting and controlling change, while simultaneously facilitating the adaptation of individuals to these new realities by often providing both an assessment of the new capabilities needs and offering the opportunities for people involved in the change to upgrade their skills to those new needs. The scope of change management activities can range from focused individual projects to extensive organizational programs, such as comprehensive digital transformations that introduce numerous novel processes and technological applications. Successful change initiatives invariably involve the management of teams and necessitate the active engagement and commitment of employees across all levels. In essence, change management is a structured and theoretically informed framework that guides organizational transitions, irrespective of whether these involve alterations to strategic goals, operational processes, or technological infrastructures. Its central focus lies in both the strategic execution of change initiatives and the facilitation of employee adaptation to evolving work practices and often tools. The scale of these efforts can vary considerably, from targeted project-level changes to overarching organizational transformations, with the ultimate success being heavily contingent upon securing robust support from both top Leaders and the broader employee base (Coursera, n.d.).

2.2.2 Common Pitfalls in change initiatives

Using research by John Kotter, his identification of eight common errors in change initiatives offers a framework to study the challenges faced by organizations, including humanitarian groups like MSF pursuing technological transitions such as the shift to a cloud-based data integration system. These errors, rooted in behavioral and organizational dynamics, often undermine even well-intentioned transformation efforts (Kotter, 1996).

Common Error	Theoretical Consequence	Relevance to Humanitarian Organizations' Technology Adoption
Allowing too much complacency	Weak perceived need for change; lack of motivational drive.	Can be exacerbated by operational urgency focusing on immediate crises, overshadowing the need for strategic adaptation.
Failing to form a guiding coalition	Insufficient leadership support and distributed responsibility.	Decentralized structures and NGOs' culture (particularly MSF's) inclusive culture often delay strategic decision-making, hindering a unified coalition.
Underestimating the power of vision	Lack of clear direction and shared understanding of the future.	Difficulty in articulating a compelling vision that resonates across diverse cultural contexts and operational realities.
Poor communication of vision	Fragmented understanding, resistance based on misinformation.	Communication barriers due to geographical dispersion, language differences, and varying levels of access to information.
Allowing obstacles to block the change	Empowerment deficits; failure to address systemic barriers.	Bureaucratic processes, ingrained organizational cultures, and resistance from established power structures can impede change.
Not generating short-term wins	Diminished motivation and perceived lack of progress.	The long-term nature of many humanitarian goals can make it difficult to demonstrate tangible early successes.
Declaring victory too soon	Premature relaxation of effort; failure to embed new practices.	The urgency of humanitarian crises can lead to a premature sense of accomplishment before changes are fully institutionalized.
Not anchoring changes in culture	Lack of integration into norms, values, and routines; unsustainability.	Insufficient integration or underestimation of beneficiary local culture and habits can result in unsustainable long-term adoption.

Table 2.1: Common Errors in Change Initiatives and their Relevance to Humanitarian Organizations

As Kotter argues, neglecting the human element of change through inadequate change management can negate the potential benefits of even the most strategically sound projects, leading to wasted resources and decreased organizational commitment.

2.2.3 Principles for Effective Change Management

A synthesis of academic and practitioner literature reveals several foundational principles that consistently contribute to successful organizational change initiatives (Burnes, 2017; Hiatt, 2006; Schein, 2010). These principles are most effective when applied in a structured sequence, as will be further explored in Chapter 4 through the application of the Kotter-ADKAR framework to MSF's technology transition:

- **Establishing a Clear and Compelling Rationale:** Change initiatives must be underpinned by a well-articulated “why” that resonates with stakeholders and creates a sense of urgency. This rationale should explicitly link the change to overarching strategic objectives or be driven by demonstrable external pressures (Lewin, 1947).
- **Cultivating Aligned and Empowered Leadership:** Effective change necessitates visible and consistent support from leaders at all levels of the organization (Yukl, 2013). Distributed leadership fosters broader ownership and facilitates cross-functional collaboration.
- **Implementing People-Centric and Transparent Communication Strategies:** Engaging stakeholders through clear, consistent, and empathetic communication is paramount (Hiatt, 2006). This involves active listening, using diverse communication channels, and assessing various stakeholder groups to categorize them for tailored communication strategies, optimizing efforts and increasing impact in managing change.
- **Generating and Celebrating Short-Term Wins:** Identifying and celebrating early successes provides tangible evidence of progress, boosts morale, reinforces commitment to the change process, and is a key element in reaching the critical mass effect to accelerate the change.
- **Embedding Change within the Organizational Culture:** For change to be sustainable, new practices and behaviors must become deeply ingrained in the organization's norms, values, and routines. This requires explicit efforts to integrate changes into training and performance management systems.

2.2.4 Models of Change Management

Several established theories provide frameworks for understanding and guiding organizational change and development. These models offer different perspectives on how change unfolds and what factors influence its success. In both the private and public sectors, these theoretical underpinnings are crucial for informing the design and implementation of change interventions.

Kurt Lewin's Model of Change

Originating from the work of Kurt Lewin in the 1940s, this foundational model posits that planned change occurs in three distinct stages (Sarayreh et al., 2013):

- **Unfreezing:** This initial stage involves preparing the organization for change by creating a sense of urgency and reducing resistance to the proposed shift. It requires challenging existing norms and beliefs to make the organization receptive to new ideas.
- **Change (Moving):** This is the implementation phase where the actual changes are introduced. Individuals begin to adopt new behaviors, processes, and ways of thinking. This stage often requires support, communication, and empowerment to navigate the transition.
- **Refreezing:** The final stage aims to stabilize the changes by embedding them into the organization's culture, norms, and routines. Reinforcement mechanisms are crucial to ensure that the new state becomes the new equilibrium.

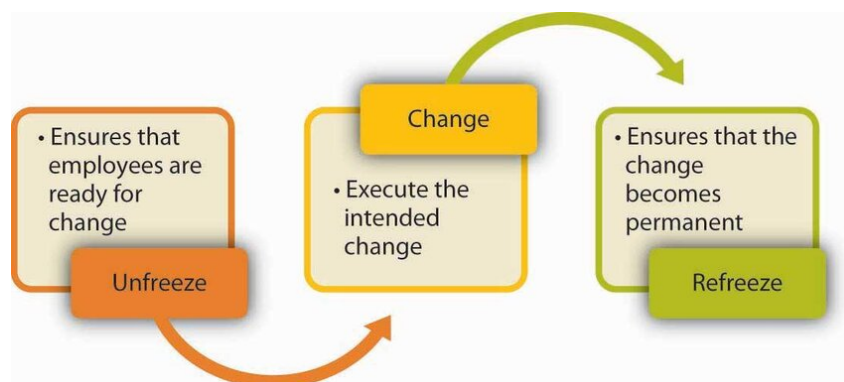


Figure 2.1: Kurt Lewin's Three-Step Change Model (Rizescu, n.d.)

Lewin's model emphasizes the importance of understanding the forces driving and restraining change within an organization and the need to address the human element for successful transformation.

John Kotter's 8-Step Model

Building on Lewin's work, Kotter developed a more detailed and prescriptive eight-step framework for leading transformational change (Kotter International, n.d.):

1. **Establish a sense of urgency:** Highlighting the need for change to motivate action.
2. **Form a powerful guiding coalition:** Assembling a team with the necessary influence and authority to lead the change.

3. **Develop a compelling vision and strategy:** Creating a clear picture of the desired future and a roadmap to achieve it.
4. **Communicate the vision widely:** Ensuring that all stakeholders understand and buy into the change vision.
5. **Empower others to act on the vision:** Removing obstacles and enabling individuals to contribute to the change.
6. **Generate short-term wins:** Creating visible successes to build momentum and reinforce belief in the change.
7. **Consolidate gains and produce more change:** Using the momentum from short-term wins to tackle larger and more complex changes.
8. **Anchor new approaches in the culture:** Embedding the changes into the organization's norms and values to ensure sustainability.

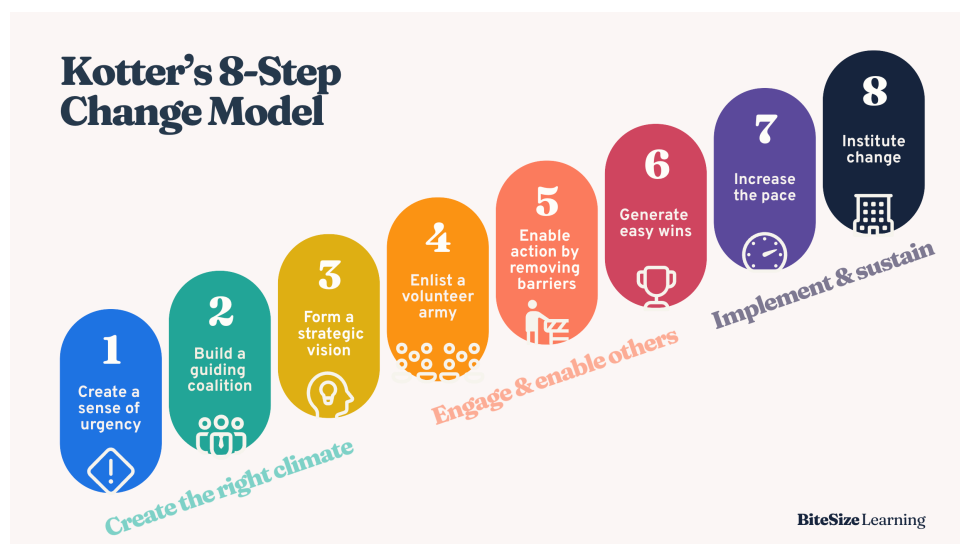


Figure 2.2: Kotter's 8-Step Change Model(BiteSize Learning, n.d.)

Kotter's model provides a structured framework that emphasizes the importance of leadership engagement, stakeholder communication, and cultural integration throughout the change process.

ADKAR Model

Created by Hiatt (2006) at Prosci, the ADKAR model is an individual-focused change management framework. It outlines five key outcomes an individual needs to achieve for change to be successful and is widely recognized as the most used change management framework globally due to its pragmatic, well-defined step-by-step approach, applicable to a diverse range of change management contexts and projects:

- **Awareness:** Understanding the need for the change.
- **Desire:** Wanting to participate in and support the change.
- **Knowledge:** Knowing how to change and what the change entails.
- **Ability:** Being able to implement the required skills and behaviors.
- **Reinforcement:** Sustaining the change over time.



Figure 2.3: ADKAR Model (Visual Paradigm, n.d.)

The ADKAR model provides a practical approach for managing change at the individual level, recognizing that organizational change is the sum of individual transitions.

McKinsey 7-S Model

The McKinsey 7-S Model, developed by Peters and Waterman, offers a holistic view of organizational effectiveness. The model suggests that seven interconnected elements need to be aligned for an organization to function well and undergo successful change:

- **Strategy:** The organization's plan for achieving its goals and maintaining a competitive advantage.
- **Structure:** The organizational framework and how different units and functions are organized.
- **Systems:** The formal and informal processes and procedures that govern daily activities.
- **Shared Values:** The core beliefs and principles that guide the organization and its employees.
- **Style:** The leadership approach and the way management interacts with employees.
- **Staff:** The organization's human capital, including their capabilities and development.

- **Skills:** The distinctive competencies and abilities of the organization and its people.

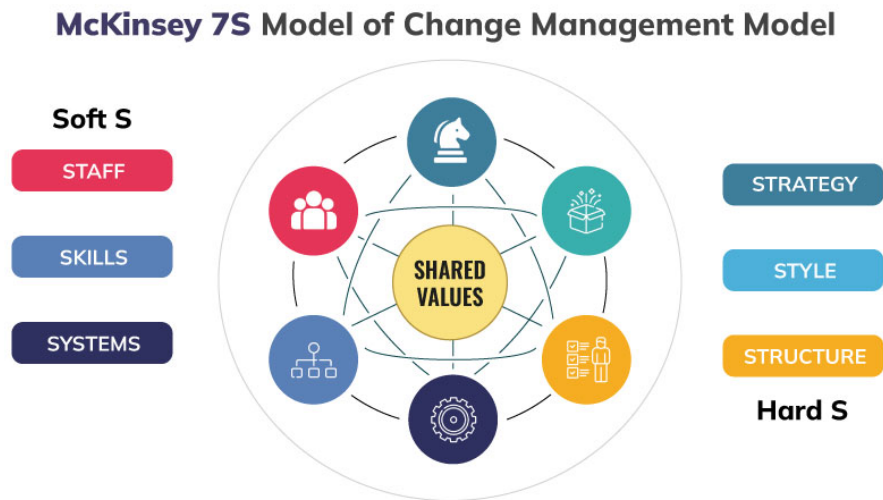


Figure 2.4: McKinsey 7-S Model (Miller, 2022)

The model highlights the interdependence of these elements and suggests that change in one area will likely impact others.

2.2.5 Comparative Analysis of Organizational Change Models

Table 2.2: Comparative Analysis of Organizational Change Models

Feature	Kurt Lewin's Model	Kotter's 8-Step Model	McKinsey 7-S Model	ADKAR Model
Focus	Basic stages of change	Leading large-scale change	Organizational alignment	Individual change
Number of Stages	3	8	7	5
Linearity	Generally linear	Sequential steps	Interdependent elements	Sequential outcomes
Emphasis	Psychological readiness, forces for/against change	Leadership, communication, urgency, short-term wins	Alignment of key organizational elements	Awareness, Desire, knowledge, ability, and reinforcement
Strengths	Simple, foundational, highlights human element	Practical, prescriptive, emphasizes leadership action	Holistic view of organization, highlights inter-connectedness	Action-oriented, focuses on individuals adoption, diagnostic
Limitations	Can be simplistic for complex change, assumes a degree of stability	Can be top-down, may not adequately address emotions	Less prescriptive on how to achieve alignment, lacks external focus	May underemphasize organizational context and politics

2.2.6 Special Considerations for Change Management in the Humanitarian Sector

The unique operational context of the humanitarian sector introduces several critical considerations for managing organizational change (Core Humanitarian Standard, n.d.) :

- **Navigating Staff Fatigue and High Turnover:** Humanitarian organizations often face high staff turnover due to the intense nature of crisis response, leading to fatigue and loss of institutional knowledge, which can hinder the adoption of new processes or technologies.
- **Challenges in Finding Alignment with Local Authorities and Forces While Maintaining Core Values:** Aligning with local authorities and forces (e.g government bodies, armed groups) in operational areas is essential, yet organizations must avoid compromising their strategy and core values (e.g neutrality, impartiality), while still delivering meaningful impact to beneficiaries and mitigating risks for personnel.

- **Operating Within Diverse Cultural Norms and Values:** Humanitarian operations span diverse cultural contexts, requiring change initiatives to be sensitive to local norms and values to ensure acceptance and sustainability among beneficiaries and local staff.
- **Adapting to Fragile and Conflict-Affected Zones with Limited Technological Infrastructure:** Operating in fragile and conflict-affected zones requires adapting to worst-case field realities, such as limited electricity, internet availability, and lack of safe, accessible storage, necessitating technological solutions that are resilient and independent of common infrastructure.
- **Balancing Centralized Innovation with Field-Level Autonomy:** Humanitarian organizations often centralize innovation (e.g. new tools or policies) at headquarters, but field teams require autonomy to adapt to local conditions, creating a tension that must be managed to ensure effective change implementation.

2.3 Strategic Decision-Making

Strategic decision-making involves selecting courses of action that align with an organization's long-term goals, balancing risks, resources, and outcomes to achieve sustainable impact (Mintzberg et al., 1976). In technology projects, it guides tool selection by ensuring solutions sustainably fit organizational needs and address practical limits. Effective decision-making here means assessing trade-offs, focusing on mission-driven priorities, and preparing for implementation challenges, especially in humanitarian organizations with limited resources and extremely volatile project's environment.

2.3.1 Classical Approaches

Organizations have historically relied on several classical approaches to guide strategic technology decisions:

Cost-Benefit Analysis (CBA) is one of the most traditional and widely used tools in project evaluation and investment decision-making (Drury, 2015). It aims to quantify all potential costs (licensing fees for purchased solutions or development costs for in-house solutions, personnel training, implementation time) and benefits (operational efficiency, increased data processing, automation) into a single evaluative metric, usually expressed in monetary terms. These costs are often consolidated into the Total Cost of Ownership (TCO), a key metric that captures the full lifecycle cost of a technology solution and informs decision-making.

In a humanitarian context, however, CBA often presents limitations. Many "benefits" such as improved crisis response, better coordination across borders, or increased staff morale are hard to quantify financially. Furthermore, decisions based purely on numerical optimization may overlook ethical dimensions, such as data sovereignty or inclusiveness. Therefore, while

CBA provides a structured financial lens, it may oversimplify the mission-critical variables that humanitarian organizations prioritize.

Metrics such as **Return on Investment (ROI)**, Internal Rate of Return (IRR), and Net Present Value (NPV) evaluate financial benefits relative to associated costs. ROI, for example, calculates the ratio of benefits to investment costs and is commonly used in commercial contexts to express profitability. However, in humanitarian organizations, returns are more often measured in non-financial terms such as lives saved, improved decision-making, or operational resilience. These non-monetary outcomes make traditional ROI frameworks less applicable, as they fail to capture the holistic impact of such initiatives (ESADE Business School, n.d.).

2.3.2 Beyond Classical Approaches

The limitations of purely financial approaches like CBA and ROI in capturing the multifaceted values and priorities of humanitarian organizations necessitate the exploration of alternative and complementary decision-making frameworks. Nonprofit decision-making often prioritizes operational impact, beneficiary needs, and ethical considerations over pure profit motives. Research has consistently highlighted the corporate bias in traditional decision-making models, underscoring the need for adapted tools that resonate with the unique context of NGOs (Langabeer, 2008).

2.3.3 Toward Adapted Decision Frameworks

To address these gaps, this thesis proposes a more contextually relevant decision-support approach: A Requirement-Feature Matrix (RFM), a tool uniquely customized in this thesis for humanitarian contexts, specifically for MSF's ongoing Talend project.

The RFM maps operational and strategic needs against the actual features offered by each technological tool. This could allow for a more mission-aligned and operationally grounded evaluation, particularly useful in resource-constrained and high-pressure environments.

The RFM was piloted at MSF in a multi-stakeholder workshop. The full structure, scoring logic, and stakeholder feedback from this workshop are analyzed in depth in Chapter 4.

2.3.4 Research Gap

Nonprofit decision-making, particularly within the unique context of humanitarian action, prioritizes operational impact and mission fulfillment over profit, rendering traditional corporate-centric models like CBA less directly applicable. Despite this fundamental difference, research in strategic decision-making often disproportionately focuses on corporate contexts, leaving a gap in the development and exploration of humanitarian-specific frameworks that adequately account for mission-driven criteria, resource limitations, and the imperative of timely action. This research gap highlights the significance of adapted tools like the customized Requirement-Feature Matrix, which this thesis aims to explore and propose its potential in the context of

MSF's specific decision-making needs.

2.4 Project Management

Project management (PM) is a structured discipline that applies processes, methods, skills, and knowledge to achieve specific project objectives within defined constraints of scope, time, cost, and quality (Project Management Institute, 2017). Project management methodologies provide structured frameworks to navigate the complexities of technology transitions in humanitarian organizations, where operational constraints, decentralized structures, and high-stakes environments create unique challenges. These organizations often operate in resource-scarce settings, requiring approaches that balance efficiency, adaptability, and mission alignment. This section examines two methodologies : Predictive Project Management (PM) and Agile Project Management (focusing on SCRUM) and conducts a comparative analysis to highlight their theoretical foundations and applicability to humanitarian contexts. The analysis draws on insights from MSF's internal "WePlan" and "Welterate" training programs, both adapted from globally recognized standards. I completed certified training in both WePlan and Welterate as part of my professional development

2.4.1 Predictive Project Management

Predictive Project Management, grounded in the Project Management Body of Knowledge (PMBOK V6), is a plan-driven methodology that emphasizes detailed upfront planning, structured execution, and control to achieve project objectives. It defines a project as a "temporary endeavor undertaken to create a unique product, service, or result," distinguishing it from ongoing operational work. Predictive PM follows a linear lifecycle, typically involving initiation, planning, execution, and closure phases, ensuring clarity and accountability. This structured approach is particularly valuable in humanitarian contexts, where projects often involve large-scale coordination across decentralized teams and must deliver reliable outcomes to support life-saving missions.

A core element of Predictive PM is the **Project Charter**, which formalizes project initiation by defining its purpose, objectives, scope, stakeholders, timeline, budget, and risks. This document ensures high-level alignment among all relevant parties particularly with critical external stakeholders such as Ministries of Health (MoH), whose endorsement may be essential for operational continuity, including the validation of staff visas. Predictive PM also prioritizes **defining scope and requirements**, starting with high-level objectives and drilling down to detailed needs, to prevent issues like scope creep and poor quality. In humanitarian organizations, where resources are limited, this clarity ensures that projects remain focused on mission-critical outcomes, such as enhancing operational efficiency .

Stakeholder management is another cornerstone of Predictive PM, recognizing that some stakeholder (Critical Stakeholder) can largely influence project's outcome. The Power-Interest

Grid categorizes stakeholders by their influence and interest, guiding engagement strategies (Alnhari Qureshi, 2024). In humanitarian contexts, this framework ensures that key actors including field operatives, local authorities, and community representatives are identified early, engaged meaningfully, and managed through timely communication and mutual agreement. This approach is not only essential for operational alignment but also a critical safeguard for the security personnel delivering aid in high-risk areas such as conflict zones or disaster-affected regions. Additionally, the **Kick-Off Meeting** fosters alignment by bringing stakeholders together to establish a shared understanding of objectives, scope, and risks, while setting the foundation for team collaboration.

Predictive PM excels in **risk management**, integrating structured processes to identify, assess, and adequate risk response strategies and plans throughout the project lifecycle. Predictive Project Management excels in risk management by embedding structured processes that identify, assess, and mitigate risks across the entire project lifecycle. A core component is the creation and continuous maintenance of a risk register, which not only documents potential threats but also informs proactive mitigation strategies. By integrating these mitigation actions directly into the project plan, Predictive PM enables early responses to issues such as resource shortages, personnel security breaches, or operational disruptions. In humanitarian settings, where project failures can have life-threatening consequences, this systematic focus on risk is especially critical. The ongoing updating of the risk register to reflect the evolving situation on the ground is often more vital than in any other project environment, ensuring real-time adaptation and informed decision-making. However, Predictive PM's rigidity can be a limitation in dynamic environments, where requirements may evolve due to shifting operational needs.

The Predictive PM workflow, as illustrated in Figure 2.5, follows a sequential process with defined phases: Initiation (Project Charter, Team and stakeholders, Kick-off Meeting), Planning (Requirement Statement & Scope, WBS, Risk Register Update, Budget & Baseline), Execution (Team Progress Meetings & Status Reports, Issue/Risk/Stakeholder Registers Update, Deliverables Validation, Transfer Plan), and Closing (Lessons Learned Document & Closure, Celebrate Success!) (extracted from WePlan training). This structured approach ensures clarity and accountability, making it well-suited for projects requiring predictability and regulatory compliance in humanitarian contexts.



Figure 2.5: Visual representation of the Predictive Project Management workflow.

2.4.2 Agile Project Management: SCRUM

Agile Project Management, originating from the Software Development ICT Consulting world (agile manifesto, 2001), offers a flexible, iterative approach to managing projects with uncertain or evolving requirements. Unlike Predictive PM's linear structure, Agile emphasizes adaptability, collaboration, and continuous delivery of value through iterative cycles. The SCRUM framework, a widely adopted Agile methodology, provides a structured yet flexible process for iterative development, making it suitable for humanitarian projects where requirements may evolve rapidly.

SCRUM principles drive its effectiveness in dynamic environments (extracted from WeIterate training):

- **Iterative Development:** Requirements are validated through continuous iterations, ensuring deliverables align with evolving needs.
- **Transparency, Inspection, and Adaptation:** These core values ensure that progress is visible, regularly evaluated, and adjusted as needed.
- **Self-Organization:** Teams are empowered to organize themselves, fostering ownership and accountability.
- **Collaboration:** Stakeholder and team collaboration is foundational, ensuring alignment with operational demands.

- **Value-Based Prioritization:** Features are prioritized to maximize business value, focusing on mission-critical outcomes.
- **Time Constraints:** Time-boxed sprints enhance efficiency by setting clear deadlines for deliverables.

This figure illustrates the Agile framework, adapted from the 'WeIterate' training program, structured into three phases: Initiating, Iterative Planning & Execution Cycle, and Closing, with eight key activities. It highlights the framework's focus on delivering high-value, customer-centric products for projects with evolving requirements and early delivery options.

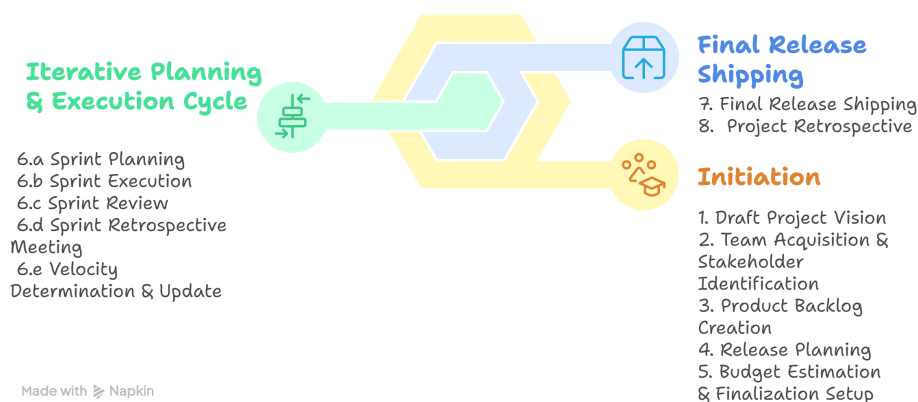


Figure 2.6: SCRUM-based Agile Framework for Iterative Humanitarian Project Management

2.4.3 Comparative Analysis: Predictive PM vs. Agile in Humanitarian Contexts

To further understand the applicability of Predictive and Agile methodologies, a comparative analysis highlights their distinct approaches in project management. These methodologies, while rooted in similar goals of delivering successful project outcomes, adapt their methods to suit different project nature, offering insights into their suitability for humanitarian technology transitions. Within Médecins Sans Frontières (MSF), Predictive PM and Agile are taught through the "WePlan" and "WeIterate" training programs, respectively. This section compares Predictive PM and Agile generally, drawing on MSF's training programs as examples to illustrate their practical application in humanitarian settings.

Specificities: Predictive PM vs. Agile :

A detailed comparison of Predictive PM and Agile reveals their distinct approaches to project management, as summarized in Table 2.3:

- **Emphasis:** Predictive PM focuses on processes, ensuring structured execution , while Agile prioritizes people, adopting a reinforced human-centered approach.
- **Documentation:** Predictive PM requires comprehensive documentation for clarity and alignment, whereas Agile uses minimal, dynamic documentation to promote agility .
- **Process Style:** Predictive PM is structured, ensuring predictability, while Agile is iterative, allowing for adjustments based on feedback .
- **Outplanning:** Predictive PM emphasizes fixed upfront planning, while Agile adopts low upfront planning for adaptability .
- **Prioritization of Requirements:** Predictive PM fixes requirements in the project plan, while Agile prioritizes based on business value with regular updates .
- **Quality Assurance:** Predictive PM uses a consistent quality management structure, while Agile ensures quality through iterative feedback and a binary “definition of done,” where deliverables are either accepted or revised .
- **Management Style:** Predictive PM is centralized, providing control, while Agile is decentralized, empowering teams .
- **Change Management:** Predictive PM uses a formal Change Management System, while Agile updates processes via the Product Backlog.
- **Performance Measurement:** Predictive PM adopts a command-and-control approach, while Agile emphasizes collaborative team feedback .
- **Return on Investment (ROI):** Predictive PM evaluates ROI at the project’s end, while In Agile, ROI is assumed to be achieved incrementally, as Product Increments (PIs) are prioritized by business value.
- **Control Method:** Predictive PM uses fixed guidelines, while Agile adopts a flexible approach based on context .

Aspect	Predictive PM	Agile
Emphasis	Processes (structured approach)	People (human-centered approach)
Documentation	Comprehensive, static	Minimal, evolving
Process Style	Structured, predictable	Iterative, adaptive
Outplanning	Fixed upfront planning	Low emphasis on upfront planning
Prioritization	Fixed in project plan	Based on business value, regular updates
Quality Assurance	Consistent, structured	Customer-centric, iterative
Management Style	Centralized	Decentralized
Change Management	Formal Change Management System	Product Backlog updates
Performance Measurement	Command-and-control	Collaborative team feedback
ROI Evaluation	At project's end	Evaluated continuously
Control Method	Fixed guidelines	Flexible, context-dependent

Table 2.3: Comparative analysis of Predictive PM and Agile methodologies .

Deep Comparative Analysis

Predictive PM, rooted in traditional project management frameworks like PMBOK, emphasizes structured planning and control to ensure predictability. In contrast, the Agile Manifesto, developed in 2001 by ICT consultants to address rigid, documentation-heavy processes, prioritizes adaptability and collaboration, though its consulting influence reveals flaws like weaker risk management for non-dedicated teams, particularly in complex humanitarian contexts .

Planning Approach: Predictive PM involves comprehensive upfront planning, fixing timelines, budgets, and scope to ensure predictability, making it ideal for humanitarian projects requiring regulatory compliance, such as standardized system implementation across regions. Agile develops plans incrementally, adapting to changes through regular feedback, which suits dynamic environments like emergency responses where operational needs shift rapidly .

Risk Management: Predictive PM proactively identifies and mitigates risks through a structured risk registry, though its fixed strategies can delay responses to new risks. Agile manages issues during sprints. Due to its consulting roots , agile focus on project deliverables over broader organizational or third-party impacts. This lack of formal risk processes can pose challenges in high-stakes humanitarian settings .

Stakeholder Engagement: Predictive PM uses formal communication channels (e.g scheduled meetings, status reports), ensuring structured stakeholder involvement but potentially limiting flexibility. Agile fosters collaborative engagement through constant feedback, ensuring alignment with evolving needs but heavily relying on the Product Owner's communication and collaboration skills, posing risks if the PO is not competent or effective.

Team Structure and Dynamics: Predictive PM's hierarchical structure defines roles, ensuring clarity but potentially stifling creativity. Agile's self-organizing teams promote empow-

erment and innovation, fostering motivation in high-pressure environments, though this requires mature, self-motivated teams willing to handle rework at the PO's request.

2.4.4 Research Gap

While Predictive PM and Agile offer distinct strengths for humanitarian projects, existing research often examines these methodologies in isolation, with limited exploration of how they can be effectively integrated in humanitarian contexts. Predictive PM's structured approach ensures alignment and risk management, but its rigidity can hinder responsiveness in dynamic settings. Conversely, Agile's iterative nature excels in adapting to change but focuses on resolving issues as they arise rather than proactively identifying and planning for potential risks upfront, as Predictive PM does with a structured risk registry, which is critical in humanitarian operations where failures can have severe consequences. MSF's "WePlan" and "WeIterate" training programs provide a starting point for applying Predictive PM and Agile in humanitarian contexts, but further research is needed to explore how these methodologies can be combined to address the unique challenges of humanitarian projects, such as ensuring operational continuity while adapting to evolving needs.

2.5 Data Governance

Imagine trying to keep track of medical records, supply deliveries, and staff schedules in a war zone or during a sudden disaster. For organizations like Médecins Sans Frontières (MSF), data is a lifeline; it helps them save lives by getting the right information to the right people fast. But managing that data isn't just about tech; it's about having clear rules to keep it safe, correct, and useful. That's what data governance is all about. This section explores what experts say about data governance, why it matters for humanitarian groups like MSF, what makes it tough, and where more research is needed, especially when upgrading systems like MSF's shift from Talend to a cloud platform.

2.5.1 What Is Data Governance?

Data governance is about ensuring an organization's data helps its team without causing problems like errors or leaks. Picture organizing a busy kitchen: everyone knows where things are, who can use them, and how to keep it clean. It's the rules, people, and tools that guide how data is gathered, stored, shared, and protected (Data Management Association, n.d.) . For MSF, this means keeping patient records private, making sure supply data is correct, and letting field teams access critical information despite unreliable internet connectivity.

Governance includes:

- **Keeping data safe:** Locking sensitive information securely to stop unauthorized access.
- **Making data reliable:** Checking that details are correct so decisions are trustworthy.

- **Following laws:** Meeting rules like GDPR, which protects personal information world-wide.
- **Making data easy to use:** Helping doctors or planners get information fast, without tech struggles.

In humanitarian contexts, governance extends beyond functionality to ethical imperatives. Mishandling data risks compromising the safety of vulnerable populations, such as displaced individuals whose personal details could be exposed (International Committee of the Red Cross, 2024).

2.5.2 Why It Matters in Humanitarian Work

For organizations like MSF, effective data governance can determine the timeliness of critical interventions, such as delivering medical supplies during emergencies. Historical examples demonstrate that inadequate data management delayed humanitarian responses due to challenges in sharing reliable information (OCHA, 2014). Governance establishes a framework where data is both readily accessible and securely protected against external threats. It's also about trust: communities rely on MSF to protect their personal details, especially in conflict zones where data leaks could be dangerous. Plus, with MSF working in over 70 countries, governance ensures everyone follows the same playbook, from headquarters to remote clinics, avoiding chaos when systems change.

2.5.3 Key Principles and Frameworks

Below, we outline core principles that shape data governance in humanitarian settings and frameworks that bring them to life.

Key Principles of Data Governance in Humanitarian Context :

Data Privacy and Protection:

- **Confidentiality:** Ensuring sensitive information, like personal details or health data, is kept private and used only for its intended purpose (European Union, 2018).
- **Informed Consent:** Communities must be clearly informed about what data is being collected, why it's being collected, and how it will be used (International Committee of the Red Cross, 2024).
- **Data Minimization:** Only the essential data needed for humanitarian interventions should be collected, minimizing risks of exposure .

Accountability and Transparency:

- **Clear Data Ownership:** Identifying who owns the data, who has access to it, and who is responsible for managing it is vital for maintaining trust (Dain Studios, 2023).
- **Transparency in Data Use:** Humanitarian organizations must openly communicate with affected communities about how their data will be stored, used, and shared, ensuring accountability at every step (OCHA, 2023).

Data Security:

- Protecting data from unauthorized access or misuse is fundamental. Robust security measures, like encryption and restricted access, must be in place to safeguard sensitive information (Palo Alto Networks, n.d.).

Ethical Use of Data:

- Data should always be used responsibly, ensuring that it does not harm individuals or communities. Humanitarian organizations must consider the ethical implications of data collection, especially when working with vulnerable populations in crisis (Inter-Agency Standing Committee, 2023).

Interoperability and Standardization:

- Data should be structured and standardized to ensure it can be easily shared between various organizations. Adopting consistent data formats helps improve coordination and enables faster, more effective decision-making during crises.

Inclusion and Participation:

- Affected populations should have a voice in how their data is collected and used. This can be achieved by seeking their consent and feedback, and ensuring that governance practices respect their rights and needs (Sphere Standards, 2018).

Frameworks for Data Governance in Humanitarian Context :

The 5 Safes Framework: This framework provides five key principles for managing data in a secure and ethical way (Wikipedia, n.d.):

- **Safe Projects:** Data collection must serve a clear, ethical purpose.
- **Safe People:** Only authorized and trained individuals should have access to data.
- **Safe Settings:** Data must be used in secure environments.
- **Safe Data:** Data should be anonymized or de-identified whenever possible.
- **Safe Outputs:** Outputs from data use should not expose individuals or communities to harm.

Data Responsibility Framework (DRF): The DRF emphasizes managing data responsibly across its entire lifecycle, from collection to disposal. It promotes ethical practices, fairness, and minimizing risks, ensuring that the data is used to benefit affected populations (United Nations Office for the Coordination of Humanitarian Affairs, 2019).

Core Humanitarian Standard (CHS): Although not specifically a data governance framework, the CHS encourages transparency, accountability, and community participation in humanitarian work. It underlines the importance of responsible information management and ensures that data use aligns with humanitarian principles (UNHCR, 2024).

2.5.4 Challenges in Humanitarian Settings

- **Security vulnerabilities:** In conflict zones, data is susceptible to cyberattacks or exploitation, posing risks to personnel and beneficiaries .
- **Regulatory compliance:** GDPR imposes stringent privacy requirements, yet aligning with these standards across jurisdictions with inconsistent legal frameworks is challenging (Kuner, 2015).
- **Connectivity constraints:** Field teams in remote areas frequently operate offline, necessitating governance models that permit data access without continuous network reliance, complicating security measures.
- **Skill limitations:** Field staff, often medical or logistical professionals, lack advanced technical training, making it difficult to implement complex governance protocols.
- **Operational trade-offs:** During emergencies, rapid data access is critical, yet haste can lead to errors, such as unintended data exposure.

These issues require balancing competing priorities: facilitating data flow to support interventions while minimizing risks of harm.

2.5.5 Research Gap

Extensive literature exists on data governance for corporate entities, yet humanitarian organizations like MSF face distinct challenges that remain underexplored. Research predominantly addresses technical aspects, such as encryption methods, rather than managerial dimensions, including stakeholder engagement or system selection in resource-scarce environments. The transition to cloud-based platforms in nonprofit settings, like MSF's current initiative, lacks comprehensive study. How governance could be effectively implemented amidst constrained budgets, dispersed teams, and urgent operational demands is a critical question that this thesis seeks to explore through proposing insights from MSF's experience.

2.6 Case Studies: Strategic Management of Transitions in Humanitarian Organizations

This section explores how humanitarian organizations strategically manage digital transformation, focusing on case studies to draw managerial insights for MSF's transition. Each subsection examines an organization's approach to managing the transition across change management, strategic decision-making, project management, and data governance, highlighting strategies that ensure operational continuity, stakeholder alignment, and data security in high-stakes environments.

2.6.1 UN OCHA: United Nations Office for the Coordination of Humanitarian Affairs

Presentation of the Organization :

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) coordinates global humanitarian responses, ensuring effective aid delivery. Through its Centre for Humanitarian Data, OCHA manages the Humanitarian Data Exchange (HDX), an open platform designed to facilitate the sharing of humanitarian data across crises and organizations. Launched in July 2014, HDX aims to make humanitarian data easy to find and use for analysis, thereby supporting disaster relief and recovery efforts.

Strategic Management of the HDX Notification System Transition :

OCHA strategically managed the migration of the HDX platform to a new notification system to improve how information is shared and accessed, enabling faster coordination during humanitarian responses. Launched in 2014, HDX aimed to address the challenge of fragmented information management among organizations, which often caused delays and inefficiencies. The notification system migration was a step to enhance communication and ensure timely updates for users .

- OCHA addressed resistance to adopting HDX by focusing on collaboration rather than forcing complete system changes..For the notification system, OCHA involved users early to understand their needs, reducing pushback and ensuring the system worked for diverse groups . In its broader HDX efforts, OCHA conducted interviews in 2014 across cities like Nairobi and Bogota, learning that trust and teamwork were key to encouraging organizations to share information . OCHA also set up teams (change agent who are locally present the change process and activities) in places like Nairobi, Dakar, and Jakarta to build local relationships, helping organizations of all sizes feel supported . Continuous engagement and training were critical to foster adoption across organizations of varying sizes and focuses.
- HDX supports better decision-making by providing a central place for information, helping leaders plan responses and allocate resources more effectively. The notification sys-

tem migration focused on features users wanted, ensuring the system met real needs . In the wider HDX initiative, OCHA prioritized users in crisis-affected areas, achieving significant growth in engagement from these regions between 2016 and 2020 . Tools were chosen to make information easier to access, but OCHA emphasized the importance of ensuring the information was reliable to avoid mistakes in planning.

- The HDX initiative, including the notification system migration, used a flexible, step-by-step approach to adapt to challenges. The notification system was rolled out in phases with clear goals to avoid disruptions for users worldwide, ensuring smooth operations . For HDX overall, OCHA adopted a “try, learn, improve” method, making adjustments based on feedback, and worked with partners to create tools that fit specific needs .
- OCHA established strong rules to ensure information shared on HDX was trustworthy and secure. A review process ensured information was checked before being shared, and for the notification system, access controls protected sensitive details to reduce risks. In its broader efforts, OCHA created ways to share only necessary details when full information was too sensitive, and by 2020, it was working to fill gaps in critical information for 29 locations . Challenges like ensuring privacy and avoiding errors in information collection remained, requiring constant attention . (United Nations Office for the Coordination of Humanitarian Affairs, 2020a, 2020b, 2020c; United Nations Office for the Coordination of Humanitarian Affairs Association for the Advancement of Artificial Intelligence, 2020)

Managerial Insights :

OCHA’s approach highlights the importance of collaboration and continuous stakeholder engagement in change management to overcome resistance, ensuring alignment across diverse groups. Strategic decision-making benefits from user-driven prioritization and real-time data visualization to maintain relevance, though validating data is crucial to avoid biases. An iterative approach in project management, with incremental rollouts to incorporate feedback, fosters stability and adaptability, minimizing disruptions. Strong rules and security measures in data governance are essential to protect sensitive information, ensuring trust and reliability in high-stakes environments.

2.6.2 International Federation of Red Cross and Red Crescent Societies (IFRC)

Presentation of the Organization :

The International Federation of Red Cross and Red Crescent Societies (IFRC) is the world’s largest humanitarian network, comprising 191 National Red Cross and Red Crescent Societies, operating in more than 191 countries, bringing together more than 16 million volunteers. Guided by seven fundamental principles : humanity, impartiality, neutrality, independence, voluntary service, universality, and unity, the IFRC coordinates global humanitarian efforts,

providing aid during disasters, health crises, and migration challenges . The IFRC supports vulnerable populations, including migrants and displaced persons, through programs that save lives, reduce suffering, and promote dignity .

Strategic Management of Technology-Enabled Cash and Voucher Assistance (CVA)

Transition : The IFRC has adopted technology-enabled Cash and Voucher Assistance (CVA) systems to deliver humanitarian aid, particularly for migrants and displaced persons, marking a significant transition in how it manages information processes. CVA involves using digital platforms to distribute financial aid, allowing recipients to purchase essential goods and services directly, which enhances dignity and flexibility in crisis response . This transition required shifting from traditional in-kind aid to digital systems, involving new tools and processes to manage information about beneficiaries, transactions, and program outcomes.

- Transitioning to CVA systems required the IFRC to address resistance from both staff and communities accustomed to physical aid delivery. The IFRC engaged National Societies early, offering training to build confidence in digital tools and emphasizing how CVA empowers recipients by giving them choice . For example, in programs across Colombia, Niger, and Kenya, the IFRC listened to migrants' voices to tailor assistance, ensuring the system met their needs . The IFRC also worked with host communities to promote understanding and reduce tensions, using local volunteers to explain the benefits of cash assistance. This collaborative approach helped overcome skepticism, though challenges persisted in areas with low digital literacy, requiring ongoing education efforts. MSF can adopt a similar strategy by involving field teams early and addressing local concerns to ease its transition.
- The shift to CVA enabled the IFRC to make faster, more responsive decisions in humanitarian crises by centralizing information on beneficiaries and their needs. The IFRC prioritized programs based on feedback from migrants, ensuring aid reached the most vulnerable, such as women and children . For instance, the Global Route-Based Migration Programme used CVA to support people along dangerous migratory routes, focusing on saving lives and restoring dignity . The IFRC also collaborated with partners like the European Union to fund and scale these initiatives, ensuring decisions aligned with operational goals . However, the IFRC had to ensure information accuracy to avoid errors in aid distribution.
- The IFRC managed the CVA transition using a phased approach to minimize disruptions across its global network. The IFRC worked with National Societies to test digital tools in smaller programs before scaling up, such as in Turkey, where the program grew to support over 1.5 million refugees . Partnerships with organizations like Data Friendly Space (DFS) helped the IFRC improve its processes, including creating platforms for assessment coordinators to manage surveys and analyze outcomes . The IFRC faced challenges in coordinating across diverse regions and securing consistent funding, but multi-stakeholder collaboration with donors and local societies ensured stability.

- The IFRC prioritized protecting sensitive information during the CVA transition, recognizing trust as critical in humanitarian work. The Digital Transformation Strategy emphasizes data responsibility, advocating for common standards and policies to safeguard information while respecting local laws. In Turkey, the IFRC implemented secure systems to manage cash assistance, protecting recipients' privacy. The strategy also calls for a common data model to enhance interoperability and ensure information accessibility across the network, addressing challenges like the "do-it-yourself" mentality among National Societies. The IFRC faced difficulties in regions with limited digital infrastructure, requiring constant monitoring. (International Federation of Red Cross and Red Crescent Societies, 2023a, 2023b; RAND Corporation, 2023; Cash Hub, 2023)

Managerial Insights :

The IFRC's CVA transition highlights the value of appointing digital advocates in change management to promote adoption and address resistance through collaboration and training. Strategic decision-making benefits from leveraging field feedback to prioritize the needs of vulnerable groups while ensuring information reliability to avoid errors in aid distribution. In project management, piloting new tools in select locations before scaling, using an incremental approach with multi-stakeholder collaboration, ensures stability and scalability across diverse regions. For data governance, adopting a common data model with strong security standards enhances interoperability and protects sensitive information, though challenges in regions with limited digital infrastructure require ongoing monitoring.

2.6.3 United Nations High Commissioner for Refugees (UNHCR)

Presentation of the Organization:

The United Nations High Commissioner for Refugees (UNHCR) is a global organization dedicated to protecting and assisting refugees, forcibly displaced communities, and stateless people. Established in 1950 by the United Nations General Assembly, UNHCR has been safeguarding the rights of refugees for 74 years. As the world's leading organization protecting those forced to flee, it operates in 136 countries, supporting at least 122.6 million forcibly displaced individuals worldwide as of mid-2024. Guided by its mandate to provide international protection and seek durable solutions for refugees, UNHCR delivers humanitarian aid, advocates for rights, and works with partners to address displacement challenges.

Strategic Management of PRIMES System Transition :

UNHCR has advanced its digital transformation through the Population Registration and Identity Management Ecosystem (PRIMES), a platform integrating all UNHCR registration and identity management tools, designed to operate in offline, online, and GSM environments. PRIMES includes existing tools like proGres v4, the Rapid Application (RApp), the Biometric Identity Management System (BIMS), the Global Distribution Tool (GDT), IrisGuard, and the Refugee Assistance Information System (RAIS), with plans for future tools to promote

direct access by persons of concern to personal data, entitlement accounts, and identity wallets. PRIMES ensures interoperability with systems used by governments and partners, such as WFP's SCOPE and UNICEF's Primero. ProGres, UNHCR's registration and case management system, was first developed in 2003 under Project PROFILE, with its fourth generation, proGres v4, evolving into a centralized, web-based platform built on Microsoft Dynamics CRM. It supports functions like registration, protection case management, interventions, documentation, and cash-based assistance, integrating with financial service providers for end-to-end data transmission and granting access to partners, including host governments, for collaboration. Unlike earlier versions of proGres, which relied on numerous local databases, PRIMES consolidates all data into a single, web-accessible database, enhancing coordination across UNHCR's global operations. For example, in Jordan, PRIMES facilitated secure registration for Syrian refugees, improving access to services like cash assistance through tools like IrisGuard, which validates identity for assistance via iris scans. Additionally, UNHCR's focus on digital inclusion, such as connected education programs reaching thousands of learners across multiple countries, complements this transition by building digital skills among refugees.

- The adoption of PRIMES required UNHCR to address resistance from staff accustomed to legacy systems and paper-based processes. UNHCR implemented extensive training programs to build staff capacity, emphasizing benefits like faster registration and improved service delivery. Dedicated PRIMES support was launched in 2018 for users, including UNHCR staff, NGOs, and governments. In Ecuador, a pilot messaging service on WhatsApp enabled two-way communication with communities, addressing their needs during the COVID-19 response and reducing resistance by demonstrating practical benefits. Co-design with communities ensured relevance and reduced skepticism. Challenges persisted in regions with low digital literacy, where UNHCR deployed field-based support teams and focused on capacity-building to provide ongoing guidance.
- PRIMES centralized information into a single database, replacing the fragmented local databases of earlier systems, to enable faster, more informed decisions. In Uganda, PRIMES data helped allocate resources effectively during refugee influxes, prioritizing vulnerable groups. The PRIMES Dataport, a “smart” inventory with real-time connectivity to proGres v4, organizes population data to enhance analytical insights for decision-making. Tools like the Help website provide translated protection information in multiple operations, strengthening accountability to affected people (AAP). However, ensuring information accuracy was critical to avoid misallocation, a lesson UNHCR learned through continuous validation processes.
- UNHCR managed the PRIMES rollout using a phased approach to minimize disruptions. The transition from proGres to PRIMES involved integrating tools like RApp, BIMS, GDT, IrisGuard, and RAIS, with a governance structure planned for finalization by mid-2018 to ensure coordinated implementation. An automated system for user access to PRIMES modules was introduced in 2018, allowing efficient permission management.

UNHCR discourages locally developed tools unless they fill a unique gap, ensuring documentation and training to sustain institutional memory, thus prioritizing corporate tools like PRIMES for consistency. The organization piloted new digital services in select countries, such as Ecuador's messaging service pilot in 2020, before scaling to other regions. A dedicated implementation team coordinated the transition, supported by a governance framework to align processes across diverse regions. Partnerships with technology providers and interoperability with systems like WFP's SCOPE enhanced coordination. Challenges included securing consistent funding and addressing connectivity gaps, which UNHCR tackled through collaborations with private sector partners.

- UNHCR prioritized protecting sensitive refugee information during the PRIMES transition, focusing on data protection. PRIMES adheres to UNHCR's data protection policy, with users encouraged to complete a data security training program. Tools like BIMS, rolled out in 2015, use biometrics to secure identities and reduce fraud, operating in varied conditions including weak internet availability. RAIS ensures effective tracking of assistance with offline capabilities and interoperability. PRIMES incorporates "privacy by design" principles, ensuring user control over personal data. In Jordan, secure systems protected Syrian refugees' privacy during registration. Interoperability through standardized information processes enables PRIMES to integrate with partner systems, while the Dataport ensures secure data access. Challenges in areas with poor digital infrastructure were mitigated through offline-capable tools like RApp for emergency contexts. (United Nations High Commissioner for Refugees, 2018, 2024a, 2024b)

Managerial Insights :

The UNHCR's PRIMES transition underscores the importance of co-designing solutions with users and providing dedicated support in change management to reduce resistance and ensure relevance. Strategic decision-making benefits from centralizing field data into a single repository to enable faster, more informed decisions, prioritizing vulnerable groups while ensuring data accuracy through continuous validation. In project management, an incremental rollout approach, piloting tools in select locations before scaling with a clear governance structure, minimizes disruptions and enhances coordination across regions. For data governance, adhering to robust data protection policies and interoperability standards, supported by privacy-by-design principles, ensures the security of sensitive information, even in areas with poor digital infrastructure.

2.7 Conclusion

This chapter has provided a thorough review of the strategic and managerial dimensions critical to successful technology transitions in humanitarian organizations, offering a conceptual foundation for MSF's ongoing Talend project within its broader data system migration. Through an interdisciplinary literature review and comparative case analysis, it is evident that data system

migrations are not merely technical challenges but deeply managerial ones, requiring deliberate change strategies, context-sensitive decision-making, strong governance structures, and flexible project execution methods.

The exploration of change management highlighted that traditional models often fall short in humanitarian contexts, where resource constraints, cultural diversity, and operational volatility demand adaptive, participatory, and mission-driven approaches. Stakeholder engagement, ongoing communication, and alignment with organizational values emerged as key enablers to overcome resistance and ensure successful transitions. Strategic decision-making revealed the limitations of classical approaches like cost-benefit analysis (CBA) and return on investment (ROI) in nonprofit environments, calling for adapted framework like the Requirement-Feature Matrix (RFM) that prioritize mission relevance and usability. This gap informs the customized framework applied in Chapter 4.

Project management discussions compared predictive and agile methodologies, noting that predictive approaches offer structure and risk planning, while agile methods, such as SCRUM, provide flexibility and responsiveness to uncertainty and changing needs. A hybrid approach, balancing structure with adaptability, emerged as particularly relevant for humanitarian technology projects, a finding further explored in the MSF case study. Data governance underscored that ethical data use, quality assurance, and privacy protection are foundational in humanitarian settings. Governance must be embedded from design through deployment, with platforms illustrating practical applications of principles such as transparency, accountability, and interoperability, especially when handling sensitive or cross-border data.

The case studies of UN OCHA (HDX), IFRC (CVA digitalization), and UNHCR (PRIMES ecosystem) demonstrated how leading organizations navigate complex transitions. UN OCHA showcased collaborative data-sharing platforms, IFRC highlighted agile adaptation in crisis response, and UNHCR's PRIMES transition emphasized phased implementation, data security, and user engagement. These cases illustrated strategic foresight, adaptive change leadership, and a commitment to responsible data use, offering MSF practical lessons in balancing innovation with accountability and technical constraints for data access and security matters.

Overall, this literature review establishes a solid analytical framework for understanding and guiding strategic technology transitions in humanitarian operations. However, research gaps remain, particularly in developing tailored frameworks that address ethical considerations, resource constraints, and operational volatility in humanitarian-specific data migrations. This thesis aims to bridge these gaps by analyzing MSF's transition through the lenses of change management, strategic decision-making, project management, and data governance, drawing on the managerial insights and lessons identified in this chapter to propose practical and impactful strategies in Chapter 4.

Chapter 3

Research Methodology

3.1 Introduction

This chapter outlines the research methodology used to explore how humanitarian organizations can strategically manage the transition to new data integration systems, focusing on the case of Médecins Sans Frontières (MSF). The study examines MSF's transition from Talend to Microsoft Fabric, addressing the strategic, managerial, and operational complexities associated with adopting new technologies in a humanitarian context. As outlined in the abstract, the research investigates four key dimensions: change management, strategic decision-making, project management, and data governance. By detailing the research design, data collection methods, data analysis approach, and ethical considerations, this chapter provides a framework for understanding how the findings in Chapter 4 were derived, building on the theoretical foundation established in Chapter 2. The methodology ensures a systematic examination of MSF's approach, contributing to theoretical knowledge and practical recommendations for humanitarian organizations undergoing similar technological transitions.

3.2 Research Design

The research adopts a qualitative case study design to investigate MSF's data integration transition, focusing on the strategic, managerial, and operational dimensions of change management, strategic decision-making, project management, and data governance. A case study approach is suitable for this study as it enables an in-depth exploration of a single, real-world instance of technological transition within a humanitarian organization, capturing the complexities of operating in a high-stakes, resource-constrained environment. The Talend Replacement Project at MSF was selected as the case due to its relevance to the research objectives: understanding how humanitarian organizations can navigate organizational change, make strategic decisions, manage projects, and ensure data governance during technological transitions. This design aligns with the theoretical frameworks in Chapter 2, which include models for change management (Section 2.2), the Requirement-Feature Matrix for strategic decision-making (Section

2.3), project management methodologies (Section 2.4), and data governance principles (Section 2.5).

The study employs a single-case design to provide a detailed understanding of MSF's transition process across the four dimensions. As (Yin, 2018) notes, a case study design is appropriate when the research seeks to answer "how" and "why" questions about a contemporary phenomenon within its real-world context, and when the boundaries between the phenomenon and its context are not clearly evident. This research seeks to understand how MSF is managing this transition and why certain strategic decisions were made, making the case study approach highly relevant.

The MSF case provides a rich context for understanding the interplay of organizational change, strategic decision-making, project management, and data governance in a technology transition within the humanitarian sector. The single case study design allows for a deep dive into the specific strategies, processes, and challenges encountered by MSF, providing valuable insights that can inform similar transitions in other humanitarian organizations.

3.3 Data Collection

Data were collected from multiple sources to ensure a comprehensive understanding of MSF's transition process across the four dimensions of change management, strategic decision-making, project management, and data governance, while also triangulating findings for validity. The primary data collection methods included semi-structured interviews, project documentation, and MSF training materials, supplemented by secondary data from theoretical literature.

Semi-Structured Interviews: Interviews were conducted with key individuals involved in the data integration system transition at MSF. This method allowed for a flexible yet focused exploration of their experiences, perspectives, and decision-making processes. The interviewees were selected based on their roles and involvement in the project, including project managers, data engineers, and IT leadership. The interviews aimed to gather in-depth information on the following:

- The drivers and motivations for the transition
- The strategic decision-making process involved in selecting the new data integration platform
- The project management methodologies and practices employed
- The challenges and opportunities encountered during the transition
- The impact of the transition on organizational processes and workflows

Project Documentation: The following documents were analyzed to provide context, identify key themes, and understand the project management practices employed by MSF:

- **Project Charter:** This document outlines the project’s objectives, scope, stakeholders, and planned approach to the data integration system transition.
- **“WeIterate”:** This training material details the Agile project management methodology.
- **“Weplan”:** This training document outlines the predictive project management methodology.

Observations: Observations were conducted during project meetings and workshops related to the data integration system transition. These provided firsthand insights into team dynamics, communication patterns, and decision-making in action. Detailed field notes were taken during these sessions.

Theoretical Literature: Secondary data from academic sources were used to ground the study in established frameworks, as outlined in Chapter 2. This included change management models, strategic decision-making tools, project management methodologies, and data governance principles.

3.4 Data Analysis

The data were analyzed using thematic analysis (Delve, n.d.), a qualitative method suitable for identifying and reporting patterns (themes) across the four dimensions of change management, strategic decision-making, project management, and data governance. This approach was chosen for its flexibility in analyzing qualitative data while allowing a systematic examination of the complexities involved in MSF’s transition. The analysis followed a six-phase process:

1. **Familiarization:** Becoming familiar with the data by transcribing interviews, reviewing project documents, and reading training materials.
2. **Coding:** Initial codes were generated by labeling data segments relevant to the research objectives.
3. **Theme Development:** Codes were grouped into themes within each dimension.
4. **Theme Review:** Themes were refined to ensure they accurately represented the data.
5. **Theme Definition:** Each theme was clearly defined to capture its essence.
6. **Reporting:** The themes were integrated into the narrative of Chapter 4, supported by direct quotes and documents.

Thematic analysis enabled the identification of key patterns, such as the importance of stakeholder communication in change management, the role of structured decision-making in tool selection, the balance of structure and flexibility in project management, and the prioritization of data security in governance.

3.5 Triangulation

To enhance the reliability of findings, data triangulation was used by comparing evidence from:

- Semi-structured interviews (diverse stakeholders across technical and managerial roles)
- Observations (real-time project dynamics and discussions)
- Internal documents (charter, tool assessments, training materials)
- Workshop data (Requirement-Feature Matrix scores)

This triangulated approach helped to reduce bias and ensure findings were cross-validated.

3.6 Ethical Considerations

Ethical considerations were integral to this research, given the sensitive nature of working with a humanitarian organization like MSF, where data and operations can impact critical missions. The following measures were taken:

- **Confidentiality and Anonymity:** No individual names were used; participants were referred to by their roles (e.g MSF Project Manager).
- **Data Security:** Interview materials were stored on a password-protected device.
- **Respect for Humanitarian Context:** Data collection was scheduled to avoid interfering with MSF's operations.
- **Transparency:** Findings were shared with MSF to ensure accuracy and reciprocity.

These ethical measures ensured the research was conducted responsibly, respecting participants and the humanitarian context while maintaining the integrity of the study.

3.7 Conclusion

This chapter has outlined the research methodology used to investigate MSF's transition to a new data integration system, focusing on the dimensions of change management, strategic decision-making, project management, and data governance. The qualitative case study design, supported by data from interviews, project documents, training materials, and theoretical literature, enabled a comprehensive analysis of the transition process. Thematic analysis identified key patterns across the four dimensions, while triangulation enhanced the validity of the findings by cross-validating data sources. Ethical considerations ensured the research was conducted responsibly in a humanitarian context. Collectively, this methodology provided a robust framework to address the research objectives, setting the stage for the detailed findings and analysis.

Chapter 4

MSF Case Study: Strategic management of technological transition

4.1 Introduction

This chapter provides an in-depth case analysis of Médecins Sans Frontières (MSF)'s data integration system transition as part of its broader digital transition initiative aimed at improving data integration and operational efficiency across its global missions. As a leading humanitarian NGO operating in over 70 countries, MSF faces unique challenges in managing technology transitions, given its decentralized structure, high-pressure operational contexts, and ethical obligations related to data and decision-making. The case study focuses on a specific project initiated by MSF in 2024 to select and implement a next-generation data integration tool. This project provides a rich empirical basis to examine how theoretical frameworks in change management, strategic decision-making, project management, and data governance, discussed in Chapter 2, translate into practice within a humanitarian setting. The aim is twofold: to critically assess MSF's real-world decision and implementation processes, and to validate or extend existing frameworks with tailored adaptations that reflect the specificities of the nonprofit humanitarian sector. The analysis draws from a triangulation of data sources: internal documents provided from MSF, observational insights from a multi-stakeholder workshop, anonymized feedback from internal meetings, and collaborative input from project stakeholders and decision-makers within MSF. These materials offer a comprehensive view of the dynamics behind MSF's strategic choices and operational execution. This case study also serves to test the practical value of the Requirement-Feature Matrix (RFM), customized in this thesis for humanitarian operational field decision-making as a complement to classical cost-benefit and ROI models. The detailed structure and performance of the RFM are analyzed later in this chapter. By grounding theoretical models in a real-world humanitarian context, this chapter aims to demonstrate both the limitations of existing approaches and the added value of adapted tools and hybrid methodologies for mission-driven organizations. Each of the four thematic pillars is examined in depth to extract lessons, gaps, and practical recommendations relevant to both scholars and practitioners

in humanitarian tech transformation.

4.2 Change Management

In the complex environment of Médecins Sans Frontières (MSF), where over 65,000 staff operate across more than 70 countries, effective change management is not a luxury, it is a necessity. Humanitarian missions are executed under conditions of high pressure, scarce resources, and constant disruption. Therefore, the organization's digital transition was not just a technical or procedural upgrade, it demanded a robust and context-sensitive approach to managing change. Among the most significant challenges faced were resistance from staff, significant variations in readiness across departments and regions, and the urgency of maintaining operational continuity. Choosing the appropriate change management framework, or a combination of frameworks, was thus essential.

4.2.1 Evaluation of Models for MSF's Context

To assess the suitability of leading change management models, four frameworks were evaluated: **Lewin's Model**, **Kotter's 8-Step Model**, **McKinsey 7-S**, and **ADKAR**. The analysis was guided by MSF-specific needs and pain points, using the following criteria:

- **Urgency and Mission Alignment:** Change must align with MSF's life-saving mission, particularly in high-stakes environments like Yemen, where delayed data directly impacts emergency responses.
- **Decentralized Workforce:** The model must accommodate operational realities, bridging the divide between central (HQ) governance and highly autonomous field teams.
- **Staff Resistance and Training Needs:** Early feedback revealed concerns about the complexity of the new data integration tools, underscoring the need for a model that directly addresses resistance and supports scalable training.
- **Cultural Embedding:** With its multicultural, multilingual, and globally dispersed workforce, MSF needs change initiatives to be deeply embedded across diverse cultural contexts.

Application Criteria	Lewin's Model
Urgency and Mission Alignment	Moderate: raises urgency but lacks continuity
Decentralized Workforce	Low: lacks structure to address workforce complexity
Staff Resistance and Training	Low: no direct mechanisms to address resistance or skill gaps
Cultural Embedding	High: 'Refreeze' concept stabilizes change

Table 4.1: Application of Lewin's Model

Application Criteria	Kotter's Model
Urgency and Mission Alignment	High: urgency and coalition-building align with crisis missions
Decentralized Workforce	Moderate: strong leadership focus, but HQ-centric
Staff Resistance and Training	Moderate: empowers action but doesn't resolve individual barriers
Cultural Embedding	High: cultural anchoring is a key step

Table 4.2: Application of Kotter's Model

Application Criteria	ADKAR Model
Urgency and Mission Alignment	Moderate: leverages urgency in Awareness to drive action
Decentralized Workforce	High: directly maps structural and staff-level decentralization
Staff Resistance and Training	High: explicitly targets Desire, Knowledge, and Reinforcement
Cultural Embedding	High: Reinforcement embeds culture for sustained change

Table 4.3: Application of ADKAR Model

Application Criteria	McKinsey 7-S Model
Urgency and Mission Alignment	Moderate: strategy element aligns, but urgency is underdeveloped
Decentralized Workforce	High: directly maps structural and staff-level decentralization
Staff Resistance and Training	Moderate: covers skills, but not emotional resistance
Cultural Embedding	High: Shared Values support cultural alignment

Table 4.4: Application of McKinsey 7-S Model

4.2.2 Model Insights: Strengths and Gaps

Lewin's Model

Lewin's model offers simplicity and emphasizes cultural stabilization through its "Refreezing" phase, which aligns with MSF's goal of sustaining long-term behavioral change. However, the linear nature of Lewin's model limits its ability to address complex, non-linear realities of change, particularly in dynamic environments like MSF's. The model's failure to deeply engage with individual readiness, resistance, or scalability makes it less effective in dealing with issues of workforce training and adoption. Lewin's model does not explicitly account for such gaps in preparation and skill development.

Kotter's 8-Step Model

Kotter's 8-Step Model aligns strongly with MSF's crisis-response culture, particularly through its ability to leverage urgency created by external pressures. It also proved effective in mobilizing support by capitalizing on visible crises. Kotter's structured approach supported vision-building, stakeholder buy-in, and the embedding of new practices into MSF's culture. However, its top-down design did not fully accommodate MSF's decentralized operations, signaling that Kotter's framework, while effective at the global level, needs adaptation to MSF's decentralized model to ensure local ownership and buy-in.

The ADKAR model could serve as an effective framework to manage human-related barriers.

ers in MSF's digital transitions. Based on expert validation, it appears well-suited to identifying and responding to individual resistance, particularly by targeting Desire and Knowledge, which emerged as anticipated barriers. Its structured approach to individual change makes it particularly relevant for capacity building across decentralized teams, where adoption rates may vary. However, ADKAR's focus on individual change lacks a broader organizational narrative, which limited its capacity to drive large-scale engagement in alignment with MSF's global mission. While ADKAR supports personal adoption, it may not be sufficient to align the broader organizational culture without complementary strategic leadership.

McKinsey's 7-S Framework

McKinsey's 7-S Framework proved effective in diagnosing organizational misalignments, particularly in clarifying structural and personnel barriers. However, the 7-S model lacks a clear action-oriented approach for driving urgency or overcoming resistance, key challenges in MSF's context. While the model is strong in promoting organizational coherence, its emphasis on alignment does not directly facilitate the urgency needed for crisis-driven change.

4.2.3 Most Suitable Models for MSF

Given the multidimensional challenges faced by MSF, such as urgency, decentralization, resistance, and cultural complexity, no single model is sufficient on its own. Instead, a combined application of Kotter's 8-Step Model and the ADKAR model provides a balanced and pragmatic framework for driving change.

Why Kotter?

Kotter's model provides a strategic, top-down roadmap that aligns well with MSF's mission and organizational needs. It offers a clear structure for sustaining urgency and ensuring stakeholder alignment across diverse teams, a crucial factor for MSF given its global operations. The model's phased approach, from vision-setting to cultural embedding, ensures that the transition is managed in manageable steps. For example, Kotter's initial steps help establish urgency, while later steps (like coalition-building and communicating the vision) align with MSF's goals of creating a sense of shared responsibility across the organization.

Why ADKAR?

ADKAR complements Kotter's model by focusing on individual adoption. While Kotter provides a top-level roadmap, ADKAR delves into the personal readiness required for successful change. MSF faced significant resistance among field staff, particularly in regions where fear of complexity and a lack of knowledge about the new system hindered adoption. ADKAR addresses these barriers directly by focusing on increasing Desire (through regional workshops and addressing personal concerns) and improving Knowledge (via localized training). The model's

reinforcement stage also helps sustain change over time, a critical aspect for MSF given the volatile and often changing nature of humanitarian environments.

Why Not McKinsey or Lewin?

McKinsey's 7-S model, while strong in diagnosing structural and personnel misalignments, is less practical in addressing immediate urgency or overcoming resistance. MSF's operational environment requires quick, actionable steps to drive change, and McKinsey's model lacks the urgency-driven framework necessary for such a setting. Lewin's model, on the other hand, focuses too heavily on cultural freezing, which doesn't provide the flexibility required for an organization like MSF that must adapt quickly to changing circumstances. Moreover, Lewin's linear structure lacks the scalability and depth needed for managing large-scale, decentralized operations.

4.2.4 Implementation in Practice: The Hybrid Application

The hybrid application of Kotter's 8-Step Model and ADKAR is already visible in MSF's approach to the Talend transition.

Kotter's Step 1: Create Urgency

The urgency for transitioning away from Talend was strategically framed as a response to the operational risk of maintaining unsupported technology. By making the urgency clear, MSF mobilized the necessary resources and focus on the transition.

Kotter's Steps 2–4: Build a Coalition, Form Vision, Communicate

These steps were implemented through the formation of a core project team, as well as internal workshops and stakeholder engagement. The workshops facilitated communication, ensuring that the vision was clear and that there was buy-in from key stakeholders across the organization.

ADKAR's Desire and Knowledge Stages

To foster Desire, MSF emphasized the operational benefits of adopting a more integrated data platform, particularly how improved usability and faster processing could support field operations. During internal workshops and Product Owner (PO) meetings, the project team linked the transition to MSF's broader mission, helping teams understand the value of the change beyond the technical shift. For Knowledge, localized training addressed the Knowledge gap, equipping staff with the necessary skills to transition to the new system.

Reinforcement (ADKAR) and Anchoring Change in Culture (Kotter)

MSF is exploring reinforcement strategies, such as quality gates and continuous documentation cycles, to ensure that new behaviors and tools become the organizational default. To further strengthen this, MSF could integrate these practices into Standard Operating Procedures (SOPs), aligning with Kotter's emphasis on cultural embedding by making the new practices a consistent part of the organization's operations.

4.2.5 Summary of Change Management Lessons

The hybrid application of Kotter's 8-Step Model and the ADKAR framework could enable MSF to manage its digital transition in a manner that would be both strategically aligned and individually focused. Rather than relying solely on top-down guidance, MSF could combine top-down vision with bottom-up behavioral alignment. This dual-model strategy would be essential given the organization's operational complexity, decentralized structure, and the life-saving importance of timely data access in humanitarian settings.

Kotter's model could provide the macro-level structure, setting urgency, building coalition support, and embedding change into MSF's organizational culture. This would help establish a clear sense of purpose, sequence, and structure, particularly important in aligning headquarters and field-level teams around a shared vision.

In contrast, ADKAR could facilitate the individual-level engagement needed to encourage behavioral changes at the individual and team level. Its emphasis on personal awareness, desire, and knowledge would address the varying needs across regions and technical roles. For example, targeted training and expert consultations could equip the Data Team with sufficient knowledge to make informed platform assessments, while workshops and staff-focused communications could build desire by presenting the benefits of the transition in practical, mission-relevant terms.

By layering these frameworks, MSF could address the risks of uneven implementation and resistance. The approach would create alignment between strategic urgency and individual engagement, a balance that is particularly important in humanitarian operations.

Key Lessons for MSF and Comparable Organizations:

- **Phased change is essential:** Sequencing change in stages, from awareness to reinforcement, enables organizations to manage complexity and avoid overwhelming stakeholders.
- **Critical stakeholder involvement matters:** Engaging key stakeholders like the Project Manager Referent (PMR), a designated lead for deployment, to initiate the process, using a series of sequential and adapted local projects to match individual site specificities, could ensure effective implementation while impacting the timeline for full completion.
- **Cultural anchoring matters:** Integration into Standard Operating Procedures (SOPs) and ongoing reinforcement could help ensure that the change is not only implemented but sustained.

- **Tailoring strategies to different stakeholders improves engagement:** Different levels of the organization require distinct approaches, field staff need usability and relevance, while technical teams require detailed understanding and autonomy.
- **Connecting the change to the mission encourages support:** Tying system migration to MSF’s humanitarian impact (e.g faster response, data reliability) could make the change perceived as mission-driven rather than technology-driven.

This proposed approach underlines the value of a flexible, integrated change management strategy. For humanitarian organizations undergoing digital transformation, the combination of a strategic blueprint and an individual behavior model addresses the challenging gap between centralized planning and decentralized execution. Looking forward, MSF could build on this hybrid approach by incorporating regular feedback from field staff to refine future change processes, ensuring that lessons from this transition would continue to prioritize both mission alignment and operational realities.

4.3 Strategic Decision-Making

Strategic decision-making aligns technology choices with an organization’s mission, operational constraints, and long-term sustainability. At Médecins Sans Frontières (MSF), the replacement of the legacy data integration tool Talend required not only technical evaluation but also a collaborative and structured management approach. Chapter 2 (section 2.3) introduced three frameworks for strategic decision-making: Cost-Benefit Analysis (CBA), Return on Investment (ROI), and the Requirement-Feature Matrix (RFM), noting the limitations of classical approaches (CBA, ROI) in humanitarian contexts and proposing the RFM as a mission-aligned alternative. This section applies these frameworks to MSF’s tool selection process, evaluates their effectiveness in addressing MSF’s operational and mission-driven needs, and highlights the RFM’s added value.

4.3.1 Application of Strategic Decision-Making Frameworks to MSF

MSF’s decision to phase out Talend followed the end of its open-source support in January 2025. The project charter highlighted a critical need for a new data integration platform that could handle growing data volumes without disrupting service. Beyond ensuring continuity, the selection process was framed as a strategic opportunity to advance data architecture, compliance, and integration with existing infrastructure.

Two candidates were shortlisted for evaluation: Microsoft Fabric and AZURE Databricks. The selection process involved applying CBA, ROI, and the RFM, with insights from Product Owner (PO) meetings and the RFM workshop I facilitated.

Cost-Benefit Analysis (CBA)

In the early stages of framing MSF's tool selection process, I considered applying a classical Cost-Benefit Analysis (CBA) to compare Databricks and Microsoft Fabric. This would have involved estimating total costs such as licensing, training expenses, and implementation time against anticipated benefits like improved data processing speeds. However, it quickly became clear that CBA's financial lens was insufficient for MSF's humanitarian priorities. The model struggles to capture mission-driven, non-monetizable outcomes such as improved crisis response capabilities. Additionally, PO feedback revealed that usability for non-technical staff (eg : nurses in South Sudan) was a top priority for participants, yet such qualitative dimensions are largely excluded from traditional CBA frameworks. Additionally, the CBA failed to address ethical concerns, such as data sovereignty (Wikipedia contributors, n.d.), further underscoring its limitations in this setting.

Return on Investment (ROI)

I also reflected on whether Return on Investment (ROI) could offer a useful framework for supporting MSF's tool selection, especially from a budgetary perspective. However, it became evident that ROI was even less aligned with MSF's mission than CBA. Humanitarian returns like lives saved or faster crisis intervention cannot be meaningfully captured as profit or financial value. This was reinforced during PO meetings, where participants emphasized that MSF's priority is operational impact, not economic gain. Moreover, ROI overlooks non-financial variables such as improved staff morale or ease of onboarding. These insights confirmed that ROI, while useful in corporate environments, is ill-suited to a nonprofit organization like MSF, where decision-making must account for ethical and operational complexities.

Requirement-Feature Matrix (RFM)

To address the limitations of traditional frameworks such as Cost-Benefit Analysis (CBA) and Return on Investment (ROI), particularly their inability to reflect MSF's mission-driven priorities, a new idea emerged: to test a more contextually relevant approach that could better align strategic technology decisions with operational realities. This led to the proposal and facilitation of a humanitarian adapted version of the Requirement-Feature Matrix (RFM) workshop involving critical stakeholders. The objective was to guide MSF's data team through a structured, participatory decision-making process tailored to the organization's humanitarian context.

Preparation and Design of the Workshop: Prior to the session, I conducted a preparatory meeting with the Product Owner to align the evaluation matrix with MSF's operational priorities. I also designed comprehensive materials, including:

- Detailed technical briefs on Azure Databricks and Microsoft Fabric

- Clear scoring guidelines (1 = none; 3 = weak; 6 = moderate; 9 = good)
- Definitions of each criterion to support consistent understanding and evaluation
- A PowerPoint summary and a pre-configured Excel matrix with automated scoring

Workshop Structure and Facilitation: The workshop followed an agenda:

- **Introduction:** Concept of RFM, its mission-driven logic, and relevance over financial-only models.
- **Tool Overview:** Comparative presentation of Azure Databricks and Microsoft Fabric.
- **Requirements Review and Weighting:** Group discussion and consensus on 11 weighted criteria.
- **Scoring and Discussion:** Interactive scoring for each tool against each criterion.
- **Wrap-Up and Feedback:** Stakeholders completed a Wooclap quiz for qualitative feedback.

The tools under evaluation were:

- **Azure Databricks:** A high-end analytics platform with real-time streaming, ML capabilities, and enterprise-grade governance (Delta Lake), yet with a high cost and steep learning curve.
- **Microsoft Fabric:** A Microsoft-native solution offering smoother Power BI integration, intuitive ETL pipelines, strong connectivity with MS 365, and ease of use for non-specialists.

Evaluation Criteria and Weights : The RFM was based on 11 strategic and operational criteria, weighted based on both the project charter and stakeholder input:

- **Scalability and Performance (15%):** Ability to handle growing data volumes (e.g., 100 pipelines by 2026).
- **Cost Efficiency (10%):** Fits MSF's nonprofit budget.
- **Connectivity & Compatibility (20%):** Connects to diverse data sources (SQL, APIs, cloud) with real-time sync, critical in low-connectivity areas like South Sudan.
- **Usability & Accessibility for Non-Technical Staff (10%):** Intuitive UI and low-code options for field staff like nurses.
- **Security & Compliance (10%):** Ensures data protection (encryption) and meets regulations (e.g., GDPR), vital in conflict zones like Nigeria or Haiti.

- **Collaboration with Other MSF OCs (5%):** Interoperability with other Operational Centers.
- **Vendor Locking (7.5%):** Risk of dependency on a single vendor.
- **Independence from Infra Team (5%):** Operation with minimal reliance on the infrastructure team.
- **CI/CD Option (2.5%):** Support for continuous integration/continuous deployment.
- **Support (External) (5%):** Availability of vendor support.
- **Learning Curve for Technical Staff (10%):** Ease of adoption for technical staff at HQ and field-level staff.

REQUIREMENT	Azure Databricks	Microsoft Fabric
Scalability & Performance (15%)	9	6
Cost Efficiency (10%)	3	9
Connectivity & Compatibility (20%)	6	9
Usability & Accessibility (10%)	3	9
Security & Compliance (10%)	6	6
Collaboration with MSF OCs (5%)	9	6
Vendor Locking (7.5%)	6	3
Infra Team Independency (5%)	3	6
CI/CD Option (2.5%)	6	3
External Support (5%)	6	6
Learning Curve (10%)	3	9
WEIGHTED SCORE	5.55	7.20

Requirement Feature Matrix					
Requirement	Weight	Azure Databricks	Fabric	Databricks Value	Fabric Value
Scalability and performance	0.15	Good	Moderate	9	6
Cost Efficiency	0.1	Weak	Good	3	9
Connectivity & Compatibility	0.2	Moderate	Good	6	9
Usability & Accessibility for non technical sta	0.1	Weak	Good	3	9
Security & Compliance	0.1	Moderate	Moderate	6	6
Collaboration with other MSF's OC's	0.05	Good	Moderate	9	6
Vendor Locking	0.075	Moderate	Weak	6	3
Independency from infra team and SITS	0.05	Weak	Moderate	3	6
CD/CI option	0.025	Moderate	Weak	6	3
Support (external)	0.05	Moderate	Moderate	6	6
learning curve for technical staff	0.1	Weak	Good	3	9
Weighted Score	1	5.55	7.2		

Figure 4.1: Requirement-Feature Matrix

Requirement-Feature Matrix Results : Microsoft Fabric, with a final weighted score of 7.20, came out on top over Databricks (5.55). Its strengths lay in:

- Superior usability and ease of adoption for field-level staff
- Better alignment with budget constraints
- Stronger integration capabilities for remote, low-bandwidth environments

During the scoring discussions, trade-offs were actively debated. While Databricks was praised for its advanced scalability and collaboration potential, Fabric's lower learning curve and real-time accessibility were consistently emphasized features, particularly critical in resource-constrained regions like South Sudan and Central African Republic (CAR).

4.3.2 Added Value of the Requirement-Feature Matrix in MSF's Context

The customized RFM addressed the limitations of CBA and ROI, validating its relevance as a humanitarian-specific framework:

- **Mission Alignment:** By prioritizing usability (15%) and integration (10%), the RFM highlighted Microsoft Fabric as the most aligned option with MSF's mission of delivering timely aid in crises. Its accessibility in low-connectivity areas, such as South Sudan, demonstrated strong potential to improve crisis response.
- **Operational Feasibility:** The RFM accounted for MSF's constraints, such as budget limits (cost at 10%) and field conditions (infrastructure at 10%), making the decision practical for implementation.
- **Stakeholder Inclusivity:** The workshop's diverse participation (data, IT, project management) and structured agenda ensured diverse perspectives were considered, balancing technical and operational priorities.
- **Replicability:** The RFM's structured approach, mapping needs to features with weighted criteria, offers a replicable model for other humanitarian organizations. It can be adapted to different contexts by adjusting criteria and weights based on mission-specific needs, such as prioritizing security in conflict zones or cost in budget-constrained settings.

The Requirement-Feature Matrix provided a transparent, collaborative environment for surfacing diverse viewpoints and weighing trade-offs, enabling the inclusion of user experience concerns (e.g., usability, training) and long-term strategic alignment (e.g., integration, vendor lock-in) alongside technical performance. Unlike top-down decisions or strictly financial evaluations, this participatory model fostered ownership and surfaced practical constraints, such as bandwidth limitations in the field or limited cloud readiness in certain regions.

4.4 Project Management

The transition to a new data integration system at Médecins Sans Frontières (MSF) represents a complex technology shift, requiring careful management to ensure the successful migration.

This section analyzes the project management (PM) approach adopted for this transition, focusing on the decision to implement a hybrid methodology that integrates Predictive PM and Agile practices. By drawing on the theoretical foundations established in Chapter 2 (Section 2.4), this analysis explores how the hybrid PM approach enabled the project team to balance structure and flexibility, effectively addressing the unique challenges of a humanitarian context during the technology transition.

4.4.1 Context of the Project

The Talend Replacement Project at Médecins Sans Frontières (MSF) was a complex organizational change with significant operational stakes, prompted by Talend, previously used as a free, reaching its end-of-support in January 2025. MSF aimed to improve efficiency, make data more accessible, and ensure scalability for future humanitarian needs by exploring alternatives, including Microsoft Fabric and Azure Databricks, both cloud-native platforms with varying degrees of complexity, cost, and customization.

The project, spanning headquarters and field teams, required not only planning the structured transfer of known data processes but also adapting the new system to uncertain operational needs, all while aligning stakeholders, managing risks, ensuring operational continuity, and supporting cultural adaptation across MSF's diverse global teams. This demanded a project management strategy that was both structured and adaptable to balance predictability with flexibility in a humanitarian setting where disruptions could impact critical missions.

4.4.2 Rationale for a Hybrid Approach

The choice of a hybrid methodology, combining Predictive PM and Agile practices, was driven by the project's dual nature: balancing known and unknown elements, and the need to manage risks while allowing for flexibility. The project was not starting from scratch; an existing system (Talend) needed to be migrated, with most elements already known, making a purely flexible approach unsuitable. Predictive PM was chosen for the data process transfer because we need to ensure a smooth transition from old to new environment without disruption of the service.

However, the customization of the new data integration tool introduced unknowns, as the final design and level of adjustments were not fully defined at the outset. Agile practices were introduced to handle this uncertainty, enabling iterative exploration and feedback to shape the system's features.

A key consideration was risk management, especially critical in a humanitarian context where operational disruptions could have severe consequences. Agile, particularly SCRUM, lacks strong formal risk management processes, which could compromise the project's stability. Predictive PM, on the other hand, provided robust tools, such as a risk register, to proactively address potential issues like delays or resource constraints. The hybrid approach thus leveraged Predictive PM's structure for risk control and data process transfer, while using Agile's flexibility for system adjustments, ensuring a balanced management strategy.

Chapter 2 (Section 2.4) established that Predictive PM excels in structured planning and risk management, while Agile, particularly SCRUM, offers adaptability for projects with changing needs. This theoretical framework supports the need for a balanced approach to address the project's unique challenges, aligning with the structured requirements of moving data processes and the uncertainty of system adjustments.

4.4.3 Predictive PM in Action: Structure and Risk Control

The Predictive PM component focused on the structured transfer of data processes from Talend to the new tool. This aligns with Predictive PM's strength in managing projects with defined goals, as discussed in Section 2.4.1. The process followed a traditional project lifecycle:

- **Initiation:** Defined business case and project charter ensuring a global common understanding of the major aspects of the project such as Why, What, When, Who, What cost as well as establishing the right team and establish the team dynamic are essential aspect of the initiation phase.
- **Planning:** Developed WBS, scope statements, milestones, and risk registers Detailing all aspects of the up coming implementation, determining risks, technical requirements and stakeholders needs; Communicate well on all aspects on the up coming work, getting commitments from the people in charge to act in the agreed timeframe, Assembling and checking the plan and finally giving the go to proceed further (implementation).
- **Execution:** Migrated pipelines in batches, monitored through predefined checkpoints.
- **Closure:** Ensuring that the project can close in the best possible conditions meaning Transfer of knowledge, Checking that all aspects have be validated (and signed), having lesson learned, eventually evaluating project and team performance and finally get the approval to close the project and dismiss the team

Predictive PM also supported strong risk governance, which was seen as essential given the mission-critical role of these data pipelines. As Agile doesn't natively structure risk ceremonies, Predictive risk reviews were adopted to maintain control.

This structured approach ensured the migration was predictable and controlled, minimizing risks to MSF's ongoing humanitarian work.

4.4.4 Agile Implementation: Iterative Delivery and Engagement

Agile practices were used for the customization of the new data integration tool, where uncertainty was higher due to the unknown level of adjustments needed. It was explained, "The only real reason why we should choose agile is that the data team doesn't know the level of customization that they want to have... it's a kind of configuration or customization of an product,

that's where agile is made for!" (MSF Project Manager). This aligns with Agile's strength in managing evolving needs, as discussed in Section 2.4.2.

The Agile component is structured into three phases: Initiating, Iterative Planning & Execution Cycle, and Closing. In the Initiating phase, the team developed a draft project vision, identified the team and stakeholders, created a task list*(item to develop), planned the rollout, and estimate the budget. The Iterative Planning & Execution Cycle involved short work cycles*, where each cycle included planning tasks, execution, carrying out adjustments (e.g. testing configurations of Microsoft Fabric or Databricks), reviewing progress with stakeholders, reflecting on improvements, and assessing team pace*, continuing until the adjustments met MSF's needs. The Closing phase involved delivering the final system and reflecting on the overall process.

Note: the "task list" corresponds to the SCRUM "Product Backlog," "short work cycles" to "Sprints," and "team pace" to "velocity," simplified here for a management focus.

Agile's flexibility allowed the team to explore the complexity of both Microsoft Fabric and Databricks, enabling quick prototyping and iteration to assess usability, performance, and fit with MSF's needs. The team valued Agile's approach to managing work effort, with daily check-ins and reflections fostering ownership and collaboration. This iterative process ensured the system adjustments aligned with field teams' evolving requirements, supporting adaptability in a high-pressure humanitarian environment.

4.4.5 Challenges and Mitigation Strategies

The hybrid approach faced several challenges, which were addressed through strategic management:

- **Tool Uncertainty:** At the project's start, the final choice between Microsoft Fabric and Databricks was unclear, creating uncertainty. So, we help the data team to take the best possible choice using the Requirement-Feature Matrix and testing features like usability and performance to reduce decision risks. However, the initial approach of "keeping both and we'll see" was viewed as unrealistic because of rework cost and a "choosing is loosing" mindset, highlighting the need for structured decision-making.
- **Cultural Shift and Team Readiness:** Agile was relatively new to some team members, who were more familiar with structured approaches. Introducing daily check-ins, reflections, and iterative cycles required a cultural shift. The team's interest in trying Agile was seen as an opportunity to build their skills, supported by progressive onboarding and training through MSF's "WeIterate" program.

4.4.6 Strategic Value of the Hybrid Approach

The hybrid approach offered several strategic benefits in the context of MSF's organizational change:

- **Balanced Risk and Flexibility:** Predictive PM ensured risk-aware execution and operational continuity, while Agile's iterative cycles allowed the team to adapt to customization uncertainties.
- **Stakeholder Alignment:** Predictive PM's formal stakeholder engagement (e.g project kick-off meetings) and Agile's continuous feedback loops ensure alignment between stakeholders.
- **Team Empowerment and Engagement:** Agile's focus on team autonomy and work effort management increased engagement, while Predictive PM provided the necessary structure to keep the project on track.

In a humanitarian context, the hybrid approach proved effective in balancing the need for structure (to ensure operational reliability) and flexibility (to adapt to evolving needs), aligning with theoretical insights that hybrid methodologies can improve project outcomes in complex settings. The success of this approach highlights the importance of tailoring project management strategies to the specific demands of humanitarian organizational changes, ensuring both certainty and discovery are addressed effectively.

4.5 Data Governance

Data governance, as explored in Chapter 2, creates a framework to keep data secure, trustworthy, and accessible, essential for humanitarian operations where information can mean the difference between life and death. For Médecins Sans Frontières (MSF), transitioning from Talend to a cloud-based platform, such as Microsoft Fabric or Azure Databricks, demands governance to manage vital data, patient health records, supply inventories, operational plans, across diverse and often unstable settings. This section examines MSF's approach to data governance during this ongoing transition, detailing its requirements, the role of governance in platform evaluation, stakeholder involvement, and early insights.

4.5.1 Governance Requirements and Transition Planning

MSF's operations span diverse settings, requiring governance to manage sensitive data carefully. The project charter outlined essential needs:

Data safety: Preventing unauthorized access, crucial in areas with unstable technology.

Legal compliance: Following global privacy laws, such as GDPR, to protect personal information.

Easy access: Allowing field staff, like a nurse checking supplies in Chad, to use data quickly while restricting others.

Clear processes: Designing rules that non-technical staff, such as doctors, can follow without difficulty.

MSF also emphasized maintaining data flow during the transition, using standard procedures to ensure accuracy and secure access across MSF's offices. This planning reflects a commitment to continuity and trust in MSF's decentralized structure.

4.5.2 Governance in Platform Evaluation

Data governance shapes the evaluation of potential platforms, including Microsoft Fabric and Azure Databricks. During a Requirement-Feature Matrix (RFM) workshop, as referenced in section 4.4.1, stakeholders assigned 10% weight to "Security & Compliance" to assess tools against governance needs. Criteria included encryption for data protection, controlled sharing (access rules), and usage tracking (audit trails), following standard practices (DAMA International, 2017).

GDPR compliance was critical for MSF's global operations. The tools were rated as follows:

Azure Databricks: Rated 6/10. It organizes data securely but requires technical skills for access settings, which may hinder field staff. Headquarters flagged challenges in remote areas.

Microsoft Fabric: Also 6/10. It offers simple, GDPR-compliant controls suited for non-technical users, but may lack flexibility for large tasks.

4.5.3 Stakeholder Engagement in Governance Planning

MSF's governance relies on teamwork among field staff, headquarters analysts, IT and security experts, and communities, reflecting Chapter 2's focus on inclusive systems.

Field Staff: Working in crises, like South Sudan, they need governance that lets them access data like medicine stocks quickly, with minimal training.

Headquarters Analysts: They seek systems to manage data across MSF's network, using tracking tools and standards to meet GDPR and avoid confusion.

Communities: In refugee camps, MSF explains data use, such as tracking health needs, and collects only essentials, building trust through ethical practices.

IT and Security Teams: In meetings, MSF's IT and security teams could collaborate with others to propose consistent data rules, potentially reducing duplicated efforts and supporting unified action in crises, such as adopting a standard format for patient records across regions during emergencies.

This approach balances clear oversight with field freedom, ensuring governance supports action without delays.

4.5.4 Lessons for Other Organizations

MSF's ongoing work suggests that humanitarian governance needs to balance safety with ease of use. Tools should help non-technical staff while meeting standards like GDPR. For organizations like Oxfam or the Red Cross, this means choosing platforms with simple controls, backed

by training to ensure proper use. Governance should stay flexible to avoid slowing down crisis response, and involving all stakeholders builds trust. MSF's collaborative approach offers a guide for nonprofits navigating data changes.

4.5.5 Long-Term Benefits

Governance builds a strong base for MSF's future:

Growth: Standard rules make adding new tools or programs easier.

Stability: Clear guidelines keep knowledge intact as staff come and go.

Trust: Systems that adapt to laws like GDPR reassure everyone involved.

This keeps MSF's data a dependable tool for its mission.

4.6 Conclusion

This chapter examined Médecins Sans Frontières (MSF)'s transition from Talend to a new data integration system, analyzing the process through the four thematic pillars of change management, strategic decision-making, project management, and data governance. The case study offers clear insights into how theoretical frameworks from Chapter 2 apply in a humanitarian setting, highlighting the need for tailored approaches to address MSF's unique challenges, such as its decentralized structure, high-pressure contexts, and ethical obligations.

In change management, MSF's experience showed that a combination of Kotter's 8-Step Model and ADKAR best addressed the organization's needs. Kotter provided a clear path for aligning the transition with MSF's mission, creating urgency, and securing stakeholder support, while ADKAR focused on individual adoption, tackling resistance through workshops and training. This dual approach balanced strategic direction with personal engagement, offering a practical model for managing change in decentralized humanitarian organizations where both mission alignment and field-level buy-in are essential.

Strategic decision-making revealed the shortcomings of classical frameworks like cost-benefit analysis (CBA) and return on investment (ROI), which failed to capture MSF's mission-driven priorities, such as usability for non-technical staff and ethical concerns like data sovereignty. The Requirement-Feature Matrix (RFM), piloted in a workshop, proved more effective by prioritizing operational and mission-aligned criteria. The RFM's inclusive, transparent process demonstrated its value as a decision-making tool for humanitarian contexts, where mission relevance and field realities must guide technology choices.

Project management findings supported the use of a hybrid approach, blending Predictive PM and Agile practices. Predictive PM ensured structure and risk control for the data process transfer, while Agile allowed iterative customization of the new system, addressing uncertainties through prototyping and feedback. Despite challenges like tool uncertainty and team readiness, the hybrid model balanced reliability with flexibility, ensuring operational continuity while adapting to MSF's evolving needs. This approach aligns with Chapter 2's insights on

the need for mixed methodologies in humanitarian tech projects, where both predictability and adaptability are vital.

Data governance in MSF's transition emphasized the importance of security, accessibility, and stakeholder collaboration. By prioritizing data safety and legal compliance (e.g. GDPR), MSF ensured data reliability across diverse settings. The involvement of non-technical staff, headquarters analysts, IT teams, and project managers built trust and maintained flexibility, offering a model for other humanitarian organizations to balance oversight with practical access during tech transitions. Governance also laid a foundation for long-term benefits like scalability and stability, supporting MSF's mission over time.

Overall, MSF's case study validates the need to adapt theoretical frameworks to humanitarian contexts, with hybrid approaches in change management, project management, and decision-making proving most effective. The RFM and combined Kotter-ADKAR model extend existing frameworks, providing practical tools for mission-driven organizations. These findings offer valuable lessons for humanitarian practitioners, emphasizing the importance of stakeholder involvement, mission alignment, and flexibility in tech transitions. For MSF, the transition highlighted the need for ongoing training, clear governance, and inclusive decision-making to sustain success, setting a strong foundation for future digital initiatives.

Chapter 5

Synthesis, implications, recommendations, and reflections

5.1 Introduction

This chapter synthesizes the findings from the literature review (Chapter 2) and the MSF case study (Chapter 4) to address the research question: How can humanitarian organizations manage the transition to a new data integration system, integrating organizational change, strategic decision-making, project management, and data governance? By linking theoretical frameworks with practical insights from MSF's ongoing Talend project transition to a new platform, this chapter discusses the potential implications for humanitarian organizations, offers detailed recommendations, and highlights the study's contributions to both academic theory and real-world practice. It also acknowledges limitations, suggests directions for future research, and concludes with reflections on the broader significance of this work. Through this analysis, the chapter aims to propose a clear path forward for MSF and similar organizations navigating the complexities of digital transformation in crisis settings, while emphasizing the value of this research in advancing management practices in the humanitarian sector.

5.2 Synthesis of Findings

The literature review in Chapter 2 established that technology transitions in humanitarian settings require tailored approaches across four key areas: change management, strategic decision-making, project management, and data governance. The MSF case study in Chapter 4 explored these ideas in practice, analyzing the organization's transition. The findings not only support the theoretical frameworks but also extend them by proposing practical insights into their application in a decentralized, mission-driven context.

In change management, Chapter 2 noted that traditional models like Kotter's 8-Step Process often need adaptation in humanitarian contexts due to resource constraints and operational volatility. MSF's experience highlighted the potential effectiveness of a hybrid approach com-

binning Kotter's strategic roadmap with ADKAR's focus on individual adoption, as approved by MSF's Portfolio Manager. Kotter could help align the transition with MSF's mission by creating urgency and securing stakeholder support, while ADKAR could address field-level resistance by fostering Desire through staff-focused communications that would highlight operational benefits (e.g faster data processing for patient care) and building Knowledge through targeted training for teams expected to work with the new platform. This dual approach extends Chapter 2's findings by showing how combining top-down and bottom-up strategies could address the unique challenges of decentralized humanitarian organizations.

For strategic decision-making, Chapter 2 highlighted the limitations of classical frameworks like cost-benefit analysis (CBA) and return on investment (ROI) in nonprofit settings, proposing the customized Requirement-Feature Matrix (RFM) as a mission-aligned alternative. MSF's case study supported this, as CBA and ROI failed to capture priorities like usability for field staff in remote areas and ethical concerns such as data sovereignty, which are critical in humanitarian operations. The RFM, piloted in a workshop, demonstrated potential suitability by prioritizing operational criteria (e.g connectivity, accessibility, compliance with GDPR), recommending Microsoft Fabric over Azure Databricks. This supports Chapter 2's call for humanitarian-specific tools and extends it by offering a practical, replicable framework that other organizations could adapt to their needs.

Project management discussions in Chapter 2 suggested that hybrid methodologies, blending Predictive PM and Agile, could be well-suited for humanitarian tech projects due to their balance of structure and flexibility. MSF's transition reinforced the potential of this approach, using Predictive PM for the structured migration of data processes and Agile for iterative customization of the new system. This approach could ensure operational continuity while adapting to uncertainties, though challenges like tool uncertainty and team readiness would require mitigation through training and iterative exploration. The case study supports Chapter 2's insights and highlights the proposed value of hybrid models in managing complex transitions.

Data governance in Chapter 2 emphasized the need for ethical data use, accessibility, and stakeholder collaboration in humanitarian settings. MSF's approach could align with this, prioritizing data safety, legal compliance (GDPR), and ease of use for field staff, while involving diverse stakeholders (e.g field teams, HQ analysts, Project managers) to build trust. The RFM workshop weighted security and compliance as key criteria, ensuring governance shaped tool selection. This reinforces Chapter 2's focus on inclusive, ethical governance and proposes practical insights on balancing oversight with field autonomy, a critical balance for humanitarian operations where field staff need quick access to data but must adhere to strict ethical standards.

5.3 Implications for Humanitarian Organizations

The findings suggest several implications for humanitarian organizations navigating technology transitions, particularly those operating in crisis settings with decentralized structures. First, the need for tailored approaches across all four pillars highlights that one-size-fits-all models,

whether in change management, decision-making, project management, or governance, are insufficient in humanitarian contexts. Organizations like MSF, which operate in high-pressure environments with limited resources, must adapt frameworks to address operational realities, such as varying technical readiness across regions, the urgency of crisis response, and the ethical stakes of data use. For example, MSF's experience indicates that strategic decision-making tools like CBA fail to account for mission-driven priorities.

Second, the potential success of hybrid approaches in MSF's case, as approved MSF's project Manager, underscores the value of balancing structure with flexibility. The Kotter-ADKAR model in change management could allow MSF to align the transition with its mission while addressing individual concerns, such as field staff resistance in regions with low technical readiness. Similarly, the hybrid Predictive-Agile approach in project management could ensure that structured data migration would not disrupt operations, while iterative customization could allow MSF to adapt to uncertainties. This balance is particularly important for humanitarian organizations where disruptions could delay life-saving interventions, such as delivering medical supplies during an epidemic.

Third, the emphasis on stakeholder involvement across all pillars highlights the importance of inclusivity in tech transitions. MSF's transition suggests that engaging field staff, headquarters teams, and IT experts not only could build trust but also ensure that solutions would be practical and relevant to diverse needs. Other humanitarian organizations could learn from this by prioritizing collaboration to avoid top-down decisions that might fail to address field realities, such as the need for offline data access in areas with poor connectivity.

Finally, the findings emphasize the critical role of mission alignment in tech transitions. MSF's potential success in framing the transition as a mission-driven initiative could help secure buy-in from stakeholders across the organization. This approach could be applied by other organizations to ensure that digital transformations are perceived as value-driven, potentially enhancing their impact on operational outcomes.

5.4 Recommendations

Based on the findings, the following detailed recommendations are proposed for MSF and similar humanitarian organizations to potentially manage tech transitions effectively across the four pillars:

5.4.1 Change Management

MSF could consider continuing the use of the hybrid Kotter-ADKAR approach to manage future transitions, combining strategic alignment with individual support. Kotter can guide strategic alignment by setting a clear vision and building coalitions, while ADKAR can address individual resistance through localized training and workshops. Additionally, MSF could establish regular feedback loops from field staff to identify and address resistance early, ensuring that

change processes would remain inclusive and responsive to on-the-ground realities.

5.4.2 Strategic Decision-Making

Humanitarian organizations could adopt the Requirement-Feature Matrix (RFM) for technology selection, prioritizing mission-driven criteria over financial metrics. For MSF, this could mean formalizing the RFM as a standard tool in its procurement processes, ensuring that future platform decisions prioritize usability, accessibility, and compliance with ethical standards like GDPR. For example, MSF could use the RFM to evaluate tools for offline functionality, a critical need for field operatives in remote areas with poor connectivity. Other organizations could adapt the RFM by adjusting criteria weights to fit their specific mission needs. Involving diverse stakeholders in the RFM process, as MSF did in the workshop, ensures that decisions reflect both technical and operational priorities, enhancing their relevance and impact.

5.4.3 Project Management

MSF could formalize its hybrid Predictive-Agile approach in project guidelines to ensure consistency across future tech initiatives. Predictive PM can be used for structured tasks, such as data migration, while Agile can address uncertainties through iterative cycles, as seen in the "WeIterate" program's framework. For instance, MSF could use Agile to pilot new features with field staff in a specific region before scaling them organization-wide, ensuring that customizations would meet practical needs. MSF could also expand programs like "WeIterate" to build broader team familiarity with Agile practices, incorporating tools like risk registers to manage uncertainties and feedback loops to refine processes based on field input. Other organizations could adopt this hybrid model by tailoring it to their operational contexts, for example, using Predictive PM for regulatory compliance tasks and Agile for rapid deployment in disaster response scenarios.

5.4.4 Data Governance

Humanitarian organizations should prioritize governance that balances security, accessibility, and ethical use, involving diverse stakeholders to build trust. MSF could continue developing clear, simple processes for non-technical staff, such as standard guidelines for data access in the field, while ensuring compliance with laws like GDPR. For example, MSF could create a checklist for field operatives to verify data security before sharing patient information, ensuring both accessibility and privacy in crisis zones. MSF could also deepen community engagement by regularly explaining data use to affected populations, particularly in conflict zones, where trust is critical to maintaining ethical standards. Other organizations could follow MSF's example by involving communities in governance planning, for instance, consulting refugee populations on data use in camps to ensure transparency and consent. Additionally, organizations could establish cross-functional governance committees, including field staff and IT experts, to ensure

that data practices remain inclusive and aligned with operational needs.

5.5 Contributions to Theory and Practice

This study makes significant contributions to both academic theory and humanitarian practice, advancing the understanding of technology transitions in complex, mission-driven settings.

5.5.1 Theoretical Contributions

The study extends existing frameworks by proposing the Requirement-Feature Matrix (RFM) as a decision-making tool uniquely customized in this thesis for humanitarian contexts, specifically for MSF's ongoing Talend project, addressing the limitations of classical models like CBA and ROI, which often overlook mission-driven priorities. The RFM's focus on operational criteria (e.g. accessibility, compliance) offers a new perspective on strategic decision-making, proposing a replicable framework for nonprofits where financial metrics alone are insufficient. Additionally, the combined Kotter-ADKAR approach in change management and the hybrid Predictive-Agile model in project management propose additions to the literature by demonstrating their potential to be adapted to humanitarian settings. For example, the Kotter-ADKAR model could balance strategic momentum with individual adoption, addressing the gap in traditional change management models that often fail to account for decentralized structures. These contributions could enrich academic understanding of how management theories can be applied in high-stakes, resource-constrained environments, offering a foundation for future research in nonprofit technology transitions.

5.5.2 Practical Contributions

The study proposes humanitarian organizations a set of potentially effective strategies for managing tech transitions, ensuring alignment with mission goals and field realities. The customized RFM provides a practical tool for mission-aligned decision-making, as demonstrated in MSF's workshop. The hybrid Kotter-ADKAR and Predictive-Agile models propose clear paths for balancing structure with flexibility, critical for high-pressure environments where disruptions could delay life-saving interventions. For instance, MSF's proposed use of Agile to customize features iteratively could be applied by other nonprofits to adapt tools to diverse field conditions, such as varying connectivity levels in disaster zones. MSF's governance practices, emphasizing stakeholder collaboration and ethical data use, could serve as a model for ensuring that data transitions support rather than hinder crisis response. For example, involving communities in data governance could help other organizations build trust with affected populations, ensuring ethical practices in sensitive contexts like refugee camps. These strategies propose a blueprint for humanitarian organizations to navigate digital transformations effectively, potentially enhancing their ability to deliver aid efficiently and ethically.

5.6 Limitations and Future Directions

This study has limitations that provide opportunities for future research. First, while this study draws on insights from case studies of other humanitarian organizations (e.g. UN OCHA, IFRC, and UNHCR) in Chapter 2 to inform its theoretical frameworks, the primary empirical analysis focuses on MSF case study, which may limit the generalizability of the findings to other humanitarian organizations with different structures or operational contexts. For example, organizations with more centralized structures, like UN agencies, may face different challenges in applying the Kotter-ADKAR approach, which was explored only in MSF's decentralized context.

Second, the customized Requirement-Feature Matrix (RFM) was used for one project, and its long-term effectiveness across diverse projects remains untested. While it demonstrated potential effectiveness for MSF, its adaptability to other contexts such as smaller nonprofits with limited technical expertise requires further exploration.

Finally, the study relied on data from internal documents, workshops, and feedback, which may introduce bias if perspectives from less vocal stakeholders, such as field staff in remote regions, were underrepresented due to logistical barriers like limited connectivity, or operational demands in crisis zones. However, an interview with the head of fields, representing the field staff, was conducted to better understand their perspectives and mitigate this limitation. Furthermore, the thesis's limited timeline restricted the full implementation and testing of the proposed strategies particularly as the Talend project remains ongoing, making it currently unfeasible to confirm the full application of the findings; however, this limitation is mitigated by the approval and support of the project Manager at MSF, ensuring the proposed approaches remain credible and promising. Despite these limitations, the study provides valuable insights into managing tech transitions in humanitarian settings, particularly for organizations with decentralized structures like MSF, and lays a foundation for further research to build upon.

Future research could address these gaps by testing the RFM and hybrid approaches in other humanitarian organizations, such as Oxfam or the Red Cross, to assess their adaptability across contexts. For instance, applying the RFM to a smaller nonprofit could reveal whether its criteria-weighting process would be feasible with limited resources. Longitudinal studies could evaluate the sustained impact of these strategies on operational efficiency and mission outcomes, such as measuring whether MSF's new platform would improve response times in future crises. Additionally, to address potential biases, future studies could employ more inclusive data collection methods, such as virtual interviews or surveys tailored for low-connectivity areas, to better capture perspectives from remote field staff. Finally, future studies could examine the role of emerging technologies, such as AI-driven data analytics, in humanitarian transitions, assessing how frameworks like the RFM might be adapted to evaluate such tools.

5.7 Conclusion

This study explored the strategic management of data integration system transitions in humanitarian organizations, using MSF's transition from Talend to a new platform as a case study. The findings support and propose extensions to the theoretical frameworks from Chapter 2, proposing that hybrid approaches in change management (Kotter-ADKAR), project management (Predictive-Agile), and decision-making (The customized Requirement-Feature Matrix) are effective in humanitarian contexts. These strategies, combined with inclusive data governance, propose a clear path for managing tech transitions in high-pressure settings, ensuring alignment with mission goals and field realities. MSF's experience suggests that balancing strategic oversight with individual engagement, tailoring approaches to operational constraints, and prioritizing ethical data practices could be key to successful digital transformations in the humanitarian sector.

The recommendations proposed in this chapter build on these findings, offering MSF and other organizations potentially practical steps to navigate future transitions. By formalizing tools like the RFM, adopting hybrid methodologies, and deepening stakeholder involvement, humanitarian organizations could enhance their ability to deliver aid effectively while maintaining ethical standards. The study's contributions, both theoretical and practical, propose a foundation for advancing management practices in the nonprofit sector, addressing a gap in the literature where detailed case studies on humanitarian tech transitions are limited.

References

References

1. Alnhari, A. A., & Qureshi, M. R. J. (2024). *Unified external stakeholder engagement and requirements strategy*. <https://doi.org/10.5121/ijsea.2024.15501>
2. Beck, K., Beedle, M., van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., Grenning, J., Highsmith, J., Hunt, A., Jeffries, R., Kern, J., Marick, B., Martin, R. C., Mellor, S., Schwaber, K., Sutherland, J., & Thomas, D. (2001). Manifesto for agile software development. <https://agilemanifesto.org/>
3. BiteSize Learning. (n.d.). Kotter's 8-step change model, explained. <https://www.bitesizelearning.co.uk/resources/kotters-8-step-change-model>
4. Burnes, B. (2017). Managing change. Pearson. https://www.researchgate.net/profile/Kwame_Ofori/post/How_do_I_get_peer_reviewed_articles_about_change_management_processes/attachment/5b692f8a3843b04aed78d8b5/AS%3A656864488480769%401533620106589/download/Burnes%2C+Bernard+-+Managing+change+%282017%2C+Pearson%29.pdf
5. Core Humanitarian Standard. (n.d.). Core humanitarian standard on quality and accountability. <http://corehumanitarianstandard.org/>
6. Coursera. (n.d.). Change management process. <https://www.coursera.org/articles/change-management-process>
7. Dain Studios. (2023). The importance of data ownership in data governance. <https://dainstudios.com/insights/importance-data-ownership-data-governance/>
8. DAMA International. (2017). The DAMA guide to the data management body of knowledge (DAMA-DMBOK). Technics Publications.
9. Data Management Association (DAMA). (n.d.). Body of knowledge (DMBOK). <https://www.dama.org/cpages/body-of-knowledge>
10. Delve. (n.d.). Thematic analysis guide. <https://delvetool.com/blog/thematicanalysis>
11. Drury, C. (2015). Management and cost accounting. <https://nibmehub.com/opac->

- [service/pdf/read/Management%20and%20Cost%20Accounting.pdf](#)
12. ESADE Business School. (n.d.). What is ROI and how to calculate return on investment. <https://www.esade.edu/beyond/en/what-is-roi-and-how-to-calculate-return-on-investment/>
 13. European Union. (2018). General data protection regulation (GDPR). <https://gdpr.eu/>
 14. Hiatt, J. M. (2006). ADKAR: A model for change in business, government and our community.
 15. Inter-Agency Standing Committee. (2023). Operational guidance on data responsibility in humanitarian action. <https://interagencystandingcommittee.org/sites/default/files/migrated/2023-04/IASC%20Operational%20Guidance%20on%20Data%20Responsibility%20in%20Humanitarian%20Action%2C%202023.pdf>
 16. International Committee of the Red Cross. (2024). Ethical content gathering and public communications. <https://www.icrc.org/en/article/ethical-content-gathering-public-communications>
 17. International Committee of the Red Cross. (2024). Lost in digital translation: The humanitarian principles in the digital age. <https://international-review.icrc.org/sites/default/files/reviews-pdf/2024-11/lost-in-digital-translation-the-humanitarian-principles-in-the-digital-age-925.pdf>
 18. International Federation of Red Cross and Red Crescent Societies. (2023a). Cash and voucher assistance (CVA). <https://www.ifrc.org/our-work/disasters-climate-and-crises/cash-and-voucher-assistance>
 19. International Federation of Red Cross and Red Crescent Societies. (2023b). Data protection – Our promise to do good. <https://www.ifrc.org/our-promise/do-good/data-protection>
 20. International Federation of Red Cross and Red Crescent Societies. (2023c). DIGID interoperability: Data sharing in humanitarian CVA – A look at risks, threats, and mitigation technologies. <https://interoperability.ifrc.org/wp-content/uploads/2023/11/DIGIDInteroperability-DatasharinginhumanitarianCVA-Alookatrisksthreatsandmitigationtechnologies.pdf>
 21. International Federation of Red Cross and Red Crescent Societies. (2023d). Global migration programmes. <https://www.ifrc.org/our-work/disasters-climate-and-crises/migration-and-displacement/migration-our-programmes/global>
 22. International Federation of Red Cross and Red Crescent Societies. (2023e). Migration and displacement. <https://www.ifrc.org/our-work/disasters-climate-and-crises/migration-and-displacement>
 23. International Federation of Red Cross and Red Crescent Societies. (2023f). Who we are –

REFERENCES

- About IFRC. <https://www.ifrc.org/who-we-are/about-ifrc>
24. Kotter, J. P. (1996). Leading change. Harvard Business Press.
25. Kotter International. (n.d.). 8 steps for leading change.
<https://www.kotterinc.com/methodology/8-steps/>
26. Kuner, C. (2015). Data protection and humanitarian emergencies. International Data Privacy Law, 5(3).
27. Lewin, K. (1947). Frontiers in group dynamics.
<https://edbatista.typepad.com/files/frontiers-in-group-dynamics-kurt-lewin.pdf>
28. Langabeer (2008). Decision making in non-profit organizations during times of turnaround.
https://www.researchgate.net/publication/237706807_DECISION_MAKING_IN_NON-PROFIT_ORGANIZATIONS_DURING_TIMES_OF_TURNAROUND
29. Miller. (2022). McKinsey 7S model of change management and its application.
<https://crowjack.com/blog/strategy/change-management-models/mckinsey-7s-model>
30. Mintzberg, H., Raisinghani, D., & Théorêt, A. (1976). The structure of ‘unstructured’ decision processes.
https://s2.q4cdn.com/299287126/files/doc_financials/annual/Mintzberg.pdf
31. OCHA. (2014). Humanitarianism in the cyberwarfare age: A policy paper.
https://internews.org/wp-content/uploads/legacy/resources/UNOCHA_Humanitarianism_CyberwarfareAge_Policy_Paper11.pdf
32. Palo Alto Networks. (n.d.). What is data security?
<https://www.paloaltonetworks.sg/cyberpedia/what-is-data-security>
33. Pivot Roadmaps. (n.d.). What is change management in your own words.
<https://www.pivotoroadmaps.com/what-is-change-management-in-your-own-words>
34. Project Management Institute. (2017). A guide to the project management body of knowledge (PMBOK Guide) (6th ed.). <https://trainupinstitute.com/wp-content/uploads/2022/03/Project-Management-Institute-A-Guide-to-the-Project-Management-Body-of-Knowledge-PMBOK%C2%AE-Guide%E2%80%936th-Edition-Project-Management-Institute-2017.pdf>
35. RAND Corporation. (2023). Digital transformation of humanitarian cash and voucher assistance. https://www.rand.org/pubs/research_reports/RR3192-5.html#document-details
36. Rizescu, M.-A. (n.d.b). Kurt Lewin’s change model.
https://www.researchgate.net/figure/Kurt-Lewins-change-model-Source_fig1_382006584

-
37. Sarayreh, B. H., Khudair, H. Y., & Barakat, E. A. (2013). A review on the Lewin's change model: A theoretical perspective. *International Journal of Computer and Information Technology*, 2(4), 670–674.
<https://ijcit.com/archives/volume2/issue4/Paper020413.pdf>
38. Schein, E. H. (2010). Organizational culture and leadership.
https://ia800805.us.archive.org/9/items/EdgarHScheinOrganizationalCultureAndLeadership/Edgar_H_Schein_Organizational_culture_and_leadership.pdf
39. Sphere Standards. (2018). The Sphere handbook: Humanitarian charter and minimum standards in humanitarian response grossly. <https://www.spherestandards.org/handbook/>
40. UN Office for the Coordination of Humanitarian Affairs (OCHA). (n.d.a). Humanitarian data exchange (HDX) framework. <https://data.humdata.org/about>
41. UN Office for the Coordination of Humanitarian Affairs (OCHA). (2019). Data responsibility framework. <https://www.unocha.org/publications/report/world/data-responsibility-guidelines-march-2019-working-draft>
42. UN Office for the Coordination of Humanitarian Affairs (OCHA). (2023). Template for transparent data use in humanitarian settings.
https://globalprotectioncluster.org/sites/default/files/2023-03/ocha_template.docx
43. United Nations High Commissioner for Refugees. (2018). PRIMES: Population registration and identity management ecosystem – Flyer.
<https://www.unhcr.org/blogs/wp-content/uploads/sites/48/2018/03/2018-03-16-PRIMES-Flyer.pdf>
44. United Nations High Commissioner for Refugees. (2024a). About UNHCR – Our mandate and work. <https://www.unhcr.org/about-unhcr>
45. United Nations High Commissioner for Refugees. (2024b). UNHCR registration tools – Guidance document (chapter 3). <https://www.unhcr.org/registration-guidance/chapter3/registration-tools/>
46. United Nations OCHA and AAAL. (2020). Signaling crisis events through data.
<https://cdn.aaai.org/ocs/10297/10297-45246-1-PB.pdf>
47. United Nations OCHA Centre for Humanitarian Data. (2020a). HDX case study: Building a platform for humanitarian data exchange. <https://centre.humdata.org/wp-content/uploads/2020/09/hdxcasestudy.pdf>
48. United Nations OCHA Centre for Humanitarian Data. (2020b). HDX signals: Alerting humanitarians to deteriorating crises. <https://centre.humdata.org/hdx-signals-alerting-humanitarians-to-deteriorating-crises/>

REFERENCES

49. United Nations OCHA Centre for Humanitarian Data. (2020c). The state of open humanitarian data 2020. <https://centre.humdata.org/the-state-of-open-humanitarian-data-2020/>
50. United Nations Office for the Coordination of Humanitarian Affairs (OCHA). (2024a). [View of Enhancing Humanitarian Operations Performance Through Logistics Preparedness: A Conceptual Review in Humanitarian Organizations](#)
51. UNHCR. (2024). Core humanitarian standard on quality and accountability. <https://emergency.unhcr.org/sites/default/files/2024-01/4.%20The%20Core%20Humanitarian%20Standard%20on%20Quality%20and%20Accountability.pdf>
52. University of Arizona Global Campus. (2023). What is change management? <https://www.uagc.edu/blog/what-is-change-management>
53. Visual Paradigm. (n.d.). Simple ADKAR change model template. <https://online.visual-paradigm.com/de/diagrams/templates/adkar/simple-adkar-change-model-template/>
54. Wikipedia. (n.d.). The 5 safes framework. https://en.wikipedia.org/wiki/Five_safes
55. Wikipedia contributors. (n.d.). Data sovereignty. https://en.wikipedia.org/wiki/Data_sovereignty
56. Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). SAGE Publications.
57. Yukl, G. (2013). Leadership in organizations. <https://nibmehub.com/opac-service/pdf/read/Leadership%20in%20Organizations%20by%20Gary%20Yukl.pdf>