Health Care: A Strategy for Supporting Change

Enrique L Von Rohr

Available at: https://works.bepress.com/enriquevonrohr/1/
Health Care:
A Strategy for Supporting Change

Figure 1. Cover image. Exploring the relationship between design, management, and transformational change. Author’s image.
Health Care: A Strategy for Supporting Change

Design management is the effective use of design strategy, operational constraints, and business objectives to generate innovations that enable a better quality of life. Design managers lead teams to consider viability, feasibility, and desirability of products, services, processes, and systems in order to implement business and organizational strategy.
Introduction

This project employed principles and methods of design management, the effective use of design strategy, operational constraints, and business objectives to generate a strategic approach that supports institutional health care managers and designers.

Health Care: A Strategy for Supporting Change showcases the development of MergeCare, an approach for facilitating the adoption of design-led methods into existing process improvement systems with the goal of supporting change activity during new initiatives. Research, prototype development, and testing were conducted over a ten-week period. The proposal demonstrates each step of the process as well as the final prototype. Interview subjects included managers and designers within two health care companies that provided rich insights into the culture of their organizations, how they currently manage change, and what they believe might support future initiatives. Common strengths were identified in both target audiences, such as the ability to translate, communicate, iterate, and synthesize. These organizations also have a strong culture of inquiry and a desire to adopt new methods that would improve their work and support clients. The heterogeneous systems and human factors within health care contribute to a need for integrating new approaches and methods into existing processes.

The MergeCare proposal is a manifestation of input from and collaboration with target stakeholders, analysis of the market and emerging trends, and validation of design criteria through prototype testing. The process resulted in a meaningful product and business opportunity that will support change activity for designers and managers in the institutional health care sector.

Although MergeCare is a case study specific to the St. Louis region, its application as a product and consulting opportunity has potential in other markets. Continued refinement, testing, and validation will prepare MergeCare for a market launch.
I dedicate this work to my friend, companion, advisor, and amazing life partner, Melissa Von Rohr. Thank you for your constant love, support, encouragement, and for giving me the space to take this long journey. Thank you also for the many reviews you have done to make this project complete. To my children, thank you for your patience and gift of time that I hope to return tenfold.

It is with great pleasure that I acknowledge and thank those who have helped me complete this project.

To my professors, particularly Regina Rowland, PhD: Thank you for your dedication, perseverance, and leadership in guiding my growth and instilling confidence in me to build a new future. You have changed my mind for the better and opened the door to an expansive chapter in my life.

To my classmates: Thank you for your constant support and encouragement, for stretching the boundaries of my comfort zone, and pushing me to explore the rich homes of this emerging field. A special thanks to my last quarter cohorts, Johan Verstraete and Kangjun Seo for your constructive reviews of my final project. And to my other classmates past and present, in the A Residency.

To the wonderful mentors, peers, and health care professionals I have had the privilege of working with, sharing experiences, and learning from over the years.

To my colleagues: Thank you to Douglas Bowes and Traci Hume for your ongoing support as I pivot into a new space, and to Jen Meyer for your continued encouragement.

To health care professionals: Thank you for the managers and designers I have met along the way who support the systems, processes, and changes to make institutional health care function for the long-term betterment of our collective health.
# Table of Contents

## M.A. Final Project

### Project Framing

- Project Title
- Problem Statement
- Target Audience Description
- Projected Project
- Scope of Project
- Significance of the Study

### Project Positioning

- Opportunity Statement
- Positioning
- ZAG Steps
- Value Proposition
- Onliness Statement

### Research Activities and Synthesis

- Research Activities
- Research Methodology
- Research Questions Matrix
- Consent Forms
- Research Protocols
- Research Activities
- Data Analysis & Synthesis
- Research Insights
- Research Findings & Balance

### Design Opportunities and Criteria, Reframing

- Design Opportunities & Criteria
- Design Opportunities & Criteria Reframing

### Prototype Development and Testing

- Prototype Development and Testing
- Concept Development Process
- Concept Testing with Target Audience
- Concept Testing Findings
- Validation

### Final Design to Market

- Final Design to Market
- Business Model Canvas
- Business/Implementation Plan

### Conclusions and Recommendations

- Conclusions
- Recommendations

### References

- Bibliography
- Addenda
- List of Tables

### Appendices

- Appendix A: Timeline
- Appendix B: Signed Consent Forms
- Appendix C: Interview Questions
- Appendix D: Working Wall in Progress
- Appendix E: Unique Method

### List of Figures

- List of Tables
Figure 2. Project framing section cover image. Exploration of key concepts in the project framing section. Author's image.
The research investigated how individuals in two institutional health care systems use design and management methods to support transformational change.

Problem Statement
John Halamka, MD, Chief Information Officer of Beth Israel Deaconess Medical Center in Boston states that health care in the United States is of poor value, significant cost and less than optimal outcomes (Jones, 2013). Halamka suggests that innovation and reconsideration of models of service and institutional practice are needed in order to create sustainable value and support.

Project Framing
The context for this project was the challenges faced by the institutional health care sector. These challenges include the process improvement methods and strategies that managers and designers use to support care in hospital settings.

Context
The project included design process, design management, business management, process improvement methods, and transformational change strategies.

Subjects
The subjects were designers that work for institutional health care systems and institutional health care professionals, such as decision makers and managers at operations.

Significance of the Study
Health care is a large sector with complex challenges in which many disciplines play significant roles. To affect change, design management has the opportunity to develop and integrate strategic approaches that support health care innovation (Jones, 2013). In my professional career, I seek to pivot into the health care sector while retaining my roots as a graphic designer and maker of visual forms. I have observed a growing need for designers, and more broadly design managers, to deeply understand the human, emotional, and complex cultural conditions of health care in order to effectively support the sector through design. I also see an opportunity for design managers to be integrated more seamlessly into health care systems at various leadership levels. The institutional health care sector, which is the strategic and management area of health care, needs human-centered and design thinking approaches for understanding patients and developing services that meet their needs while maintaining a strong process improvement system and business strategy. The field of design management has many of the needed approaches to support solving complex and system-level challenges in health care to support.

Location
The project investigated how individuals in two institutional health care systems use design and management methods to support transformational change.

Problem Statement
John Halamka, MD, Chief Information Officer of Beth Israel Deaconess Medical Center in Boston states that health care in the United States is of poor value, significant cost and less than optimal outcomes (Jones, 2013). Halamka suggests that innovation and reconsideration of models of service and institutional practice are needed in order to create sustainable value and support.

Project Framing
The context for this project was the challenges faced by the institutional health care sector. These challenges include the process improvement methods and strategies that managers and designers use to support care in hospital settings.

Context
The project included design process, design management, business management, process improvement methods, and transformational change strategies.

Subjects
The subjects were designers that work for institutional health care systems and institutional health care professionals, such as decision makers and managers at operations.

Significance of the Study
Health care is a large sector with complex challenges in which many disciplines play significant roles. To affect change, design management has the opportunity to develop and integrate strategic approaches that support health care innovation (Jones, 2013). In my professional career, I seek to pivot into the health care sector while retaining my roots as a graphic designer and maker of visual forms. I have observed a growing need for designers, and more broadly design managers, to deeply understand the human, emotional, and complex cultural conditions of health care in order to effectively support the sector through design. I also see an opportunity for design managers to be integrated more seamlessly into health care systems at various leadership levels. The institutional health care sector, which is the strategic and management area of health care, needs human-centered and design thinking approaches for understanding patients and developing services that meet their needs while maintaining a strong process improvement system and business strategy. The field of design management has many of the needed approaches to support solving complex and system-level challenges in health care to support.

Location
The project investigated how individuals in two institutional health care systems use design and management methods to support transformational change.

Problem Statement
John Halamka, MD, Chief Information Officer of Beth Israel Deaconess Medical Center in Boston states that health care in the United States is of poor value, significant cost and less than optimal outcomes (Jones, 2013). Halamka suggests that innovation and reconsideration of models of service and institutional practice are needed in order to create sustainable value and support.

Project Framing
The context for this project was the challenges faced by the institutional health care sector. These challenges include the process improvement methods and strategies that managers and designers use to support care in hospital settings.

Context
The project included design process, design management, business management, process improvement methods, and transformational change strategies.

Subjects
The subjects were designers that work for institutional health care systems and institutional health care professionals, such as decision makers and managers at operations.

Significance of the Study
Health care is a large sector with complex challenges in which many disciplines play significant roles. To affect change, design management has the opportunity to develop and integrate strategic approaches that support health care innovation (Jones, 2013). In my professional career, I seek to pivot into the health care sector while retaining my roots as a graphic designer and maker of visual forms. I have observed a growing need for designers, and more broadly design managers, to deeply understand the human, emotional, and complex cultural conditions of health care in order to effectively support the sector through design. I also see an opportunity for design managers to be integrated more seamlessly into health care systems at various leadership levels. The institutional health care sector, which is the strategic and management area of health care, needs human-centered and design thinking approaches for understanding patients and developing services that meet their needs while maintaining a strong process improvement system and business strategy. The field of design management has many of the needed approaches to support solving complex and system-level challenges in health care to support.

Location
The project investigated how individuals in two institutional health care systems use design and management methods to support transformational change.

Problem Statement
John Halamka, MD, Chief Information Officer of Beth Israel Deaconess Medical Center in Boston states that health care in the United States is of poor value, significant cost and less than optimal outcomes (Jones, 2013). Halamka suggests that innovation and reconsideration of models of service and institutional practice are needed in order to create sustainable value and support.

Project Framing
The context for this project was the challenges faced by the institutional health care sector. These challenges include the process improvement methods and strategies that managers and designers use to support care in hospital settings.

Context
The project included design process, design management, business management, process improvement methods, and transformational change strategies.

Subjects
The subjects were designers that work for institutional health care systems and institutional health care professionals, such as decision makers and managers at operations.

Significance of the Study
Health care is a large sector with complex challenges in which many disciplines play significant roles. To affect change, design management has the opportunity to develop and integrate strategic approaches that support health care innovation (Jones, 2013). In my professional career, I seek to pivot into the health care sector while retaining my roots as a graphic designer and maker of visual forms. I have observed a growing need for designers, and more broadly design managers, to deeply understand the human, emotional, and complex cultural conditions of health care in order to effectively support the sector through design. I also see an opportunity for design managers to be integrated more seamlessly into health care systems at various leadership levels. The institutional health care sector, which is the strategic and management area of health care, needs human-centered and design thinking approaches for understanding patients and developing services that meet their needs while maintaining a strong process improvement system and business strategy. The field of design management has many of the needed approaches to support solving complex and system-level challenges in health care to support.

Location
The project investigated how individuals in two institutional health care systems use design and management methods to support transformational change.

Problem Statement
John Halamka, MD, Chief Information Officer of Beth Israel Deaconess Medical Center in Boston states that health care in the United States is of poor value, significant cost and less than optimal outcomes (Jones, 2013). Halamka suggests that innovation and reconsideration of models of service and institutional practice are needed in order to create sustainable value and support.

Project Framing
The context for this project was the challenges faced by the institutional health care sector. These challenges include the process improvement methods and strategies that managers and designers use to support care in hospital settings.

Context
The project included design process, design management, business management, process improvement methods, and transformational change strategies.

Subjects
The subjects were designers that work for institutional health care systems and institutional health care professionals, such as decision makers and managers at operations.

Significance of the Study
Health care is a large sector with complex challenges in which many disciplines play significant roles. To affect change, design management has the opportunity to develop and integrate strategic approaches that support health care innovation (Jones, 2013). In my professional career, I seek to pivot into the health care sector while retaining my roots as a graphic designer and maker of visual forms. I have observed a growing need for designers, and more broadly design managers, to deeply understand the human, emotional, and complex cultural conditions of health care in order to effectively support the sector through design. I also see an opportunity for design managers to be integrated more seamlessly into health care systems at various leadership levels. The institutional health care sector, which is the strategic and management area of health care, needs human-centered and design thinking approaches for understanding patients and developing services that meet their needs while maintaining a strong process improvement system and business strategy. The field of design management has many of the needed approaches to support solving complex and system-level challenges in health care to support.
Project Positioning

- Design
- Develop
- Explore
- Implement
- Discover
- Create
- Explore
- Synthesize
- Explain
- Visualize
- Draw
- Iterate
- Play
- Synthesize
- Develop
- Negotiate
- Structure
- Ensure
- Negotiate
- Balance
- Structure
- Transformational Change
- Implement
- Play
- Explain
- Visualize
- Draw
- Iterate
- Synthesize
- Develop
- Negotiate
- Structure
- Ensure
- Negotiate
- Balance
- Structure
- Transformational Change
- Implement
- Play
- Explain
- Visualize
- Draw
- Iterate
- Synthesize
- Develop
- Negotiate
- Structure
- Ensure
- Neg
Opportunity Statement

An opportunity existed to conduct research in the institutional health care sector of St. Louis. The study investigated what strategies were being used by design and management to support transformational change.

Positioning: Overview

The research contributed to the field of design management by:

1. Demonstrating how a design-led method can be used to foster effective collaboration and sustain change.
2. Helping health care managers and designers integrate design-led strategic approaches into daily management activities.
3. Clarifying how health care professionals can support change by embedding design expertise into their processes.

The health care sector has many specialized components. Designers often bring a variety of backgrounds and approaches to support specific product or service needs in the health care field. In order to effectively manage change, design managers need to develop models and tools that support health care innovation from within the system itself.

There is a growing need for designers and, more broadly, design management to understand the complex emotional and cultural conditions of the health care field in order to support sector-wide change. Design managers are looking to design management for new strategies to develop and sustain many activities (Jones, 2013). The abstract and health care context, tools, and innovations change, needs new models and approaches for implementing change initiatives.

Competitor/Collaborator Analysis

The market analysis reviewed a range of institutional health care structures at the national level. These structures, of varying size, incorporated either transformation or innovation into their current systems. UnitedHealth Group, for instance, was one company that focused on transformational change strategies. Additionally, not-for-profit organizations were evaluated that focused on health care, including one company that focused on transformational change strategies. These organizations were evaluated based on the terminology used and the types of activities associated with them, looking at the transformation and innovation processes that are used to improve the sector and the impact of their innovative activities on the field.

Regional Health Care Systems

Eight health care systems of varying scales were analyzed in the St. Louis region. Websites were reviewed for the words “transformation” and “innovation” to evaluate if they had people, centers, or initiatives that address these areas and what tools they might be using to effect change.

M.A. Final Project
Changefirst

Changefirst is a consulting company that supports all types of businesses with change initiatives. They use six steps that are guided by what they call a “learn, apply, embed” process. These stages are: understanding, prioritizing, planning, delivering, implementing, and maintaining (http://www.changefirst.com).

**Objective:** What is their network’s value?

**Members:** What categories do they fall into?

**Channel:** What is the entry point to their network?

**Collaboration Opportunities:** Where do we overlap?

**Approach:** How do they create value?

- Online portal
- On-ground site visits
- Coaching
- E-learning

- Their method serves other sectors as well as healthcare
- Clear process in place
- Publications
- Research papers
- May adopt their ideas or methods of transformational change
- Possible channel for dissemination

**Lessons:** What can they teach us for our network?

- High-level strategies may not always translate into best practice on the ground
- Knowledge to leaders
- Patient-centered approach

---

**Table 1. Changefirst competitor/collaborator analysis.**

Adapted from “Workshops,” “Our change management methodology,” “Key features of e-change,” “Our clients,” and “Really embedding PCI® in your organization,” 2015, Changefirst.

**Table 2. Cornell University: Healthcare Transformation Project competitor/collaborator analysis.**

Adapted from “Who we are,” “What we do for you,” “Work we’ve done,” “News and events,” 2015, Cornell University: Healthcare Transformation Project.

---

**Cornell University: Healthcare Transformation Project.**

The Healthcare Transformation Project at Cornell University provides consulting services to health care leaders in the areas of needs assessment, delivery of best practices, strategic planning, and leadership development. They stress on partnerships that lead to a holistic approach to change. Many of their practices appear to be in areas of process improvement methods (http://www.changefirst.com).
Healthcare Transformation Institute

The Healthcare Transformation Institute is a not-for-profit affiliated with the University of Arizona and Arizona State University. The institute provides knowledge about how to transform and improve health care systems, focusing on the health care system’s role in delivering innovation. The institute is composed of five core components: structure, method, and criteria for working with health care systems, in order to affect change at a high level (http://healthcaretransformationinstitute.org).

Objectives:
- What is their network’s value?

Members:
- What categories do they fall into?

Channel:
- What is the entry point to their network?

Lessons:
- What can they teach us for our network?

Collaboration Opportunities:
- Where do we overlap?

Approach:
- How do they create value?


Independence Blue Cross Center for Health Care Innovation

The Center primarily facilitates innovation based activities for employees of Independence Blue Cross. They are looking for outside opportunities to import into their structures to support innovation activities (http://www.ibx.com/company-info/innovation).

Objectives:
- Internally, support changes that may help change external innovation best practices

Members:
- In-house health care teams
- Health care professionals in their system

Channel:
- What is the entry point to their network?

Collaboration Opportunities:
- Where do we overlap?

Approach:
- How do they create value?

Adapted from “The Center for Health Care Innovation at Independence Blue Cross,” “Addressing the challenges of health care innovation,” “Innovation at work,” 2015, Independence Blue Cross: Center for Health Care Innovation.
ProjectVisioning

M.A. Final Project

Institute for Healthcare Improvement

The Institute for Healthcare Improvement (IHI) is an independent not-for-profit organization providing resources to the health care community. It functions as a clearinghouse of innovation science, linking to many articles as well as producing a step-by-step guide called “A Guide to Idealized Design.” In addition, IHI has developed the “Triple Aim” model, which addresses the health of a population, experience of care, and per capita cost. The Institute also provides coursework at various levels for transformational change leadership (http://www.ihi.org).

Joint Commission Center for Transforming Healthcare

This not-for-profit organization is supported by leading national health care systems with the mission of transforming health care through a set of process improvement tools such as Robust Process Improvement, which includes Lean and Targeted Solutions Tool (http://www.joint.com/transforminghealthcare.org).

| Table 6. Joint Commission Center for Transforming Healthcare competitor/collaborator analysis. Adapted from “About the Center,” “Projects,” “FAQs,” “Targeted Solutions Tool®,” 2015, Joint Commission Center for Transforming Healthcare. |
Kaiser Permanente: Garfield Innovation Center

Kaiser Permanente is one of the largest health systems in the country. The Garfield Innovation Center leads the way in testing new ideas and implementing them through large-scale prototyping in actual hospital environments. Kaiser is the only large-scale health system offering a facility where you can test ideas in the physical conditions and see how operations might be impacted. The physical environment allows for a human-centered design approach to exploring problem-solving methods. In addition it provides the opportunity for stakeholder buy-in from all team members. (https://xnet.kp.org/innovationcenter/index.html).

Objectives:
What is their network's value?
Members:
What categories do they fall into?
Channel:
What is the entry point to their network?
Lessons:
What can they teach us for our network?
Collaboration Opportunities:
Where do we overlap?
Approach:
How do they create value?

Table 7. Kaiser Permanente: Garfield Innovation Center competitor/collaborator analysis.

Mayo Clinic: Center for Innovation

The Center for Innovation at Mayo Clinic began in 2008 and bridges medical practice with human-centered design. They have been the leader in using design thinking to facilitate the transformation of health care thinking at all levels of the organization. They use a “Connect, Design, Enable” approach to initiate and deliver their projects (http://www.mayo.edu/center-for-innovation).

Objectives:
What is their network's value?
Members:
What categories do they fall into?
Channel:
What is the entry point to their network?
Lessons:
What can they teach us for our network?
Collaboration Opportunities:
Where do we overlap?
Approach:
How do they create value?

Table 8. Mayo Clinic: Center for Innovation competitor/collaborator analysis.

Adapted from “Who we are,” “What we do,” and “How to start,” 2015, Kaiser Permanente: Garfield Innovation Center.

Adapted from “What We Do,” “Projects,” and “Transform,” 2015, Mayo Clinic: Center for Innovation.
### UCLA Health: Institute for Innovation in Health

The Institute is charged with identifying new opportunities and advancing transformative change in health care. They have a seven-step process for evaluating innovation. The Institute focuses on creating and implementing solutions that improve the patient experience and the delivery of care.

**Objectives:**
- What is their network's value?
- Members: What categories do they fall into?
- Channel: What is the entry point to their network?
- Lessons: What can they teach us for our network?
- Collaboration Opportunities: Where do we overlap?

**Approach:**
- Online website
- Their toolkit/process
- Knowledge to their system
- Knowledge to broader health care industry on best practices

**Collaboration Opportunities:**
- Online website
- Events and workshops

**Table 9. UCLA Health: Institute for Innovation in Health competitor/collaborator analysis.**

<table>
<thead>
<tr>
<th>UCLA Health: Institute for Innovation in Health</th>
<th>Sutter Health: The David Druker Center for Health Systems Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives:</strong></td>
<td><strong>Objectives:</strong></td>
</tr>
<tr>
<td>What is their network's value?</td>
<td>What is their network's value?</td>
</tr>
<tr>
<td>Members: What categories do they fall into?</td>
<td>Members: What categories do they fall into?</td>
</tr>
<tr>
<td>Channel: What is the entry point to their network?</td>
<td>Channel: What is the entry point to their network?</td>
</tr>
<tr>
<td>Lessons: What can they teach us for our network?</td>
<td>Lessons: What can they teach us for our network?</td>
</tr>
<tr>
<td>Collaboration Opportunities: Where do we overlap?</td>
<td>Collaboration Opportunities: Where do we overlap?</td>
</tr>
</tbody>
</table>

**Table 10. Sutter Health: The David Druker Center for Health Systems Innovation competitor/collaborator analysis.**

**Adapted from** "Key Activities," "Innovation at UCLA," "Resources," and "Econsult Deep Dive" 2015, UCLA Health: Institute for Innovation in Health.

**Adapted from** "Home," "linkAges," and "Personalized Health Care Programs," 2015, Sutter Health: The David Druker Center for Health Systems Innovation.
**Positioning: 2x2 Axis of Organizations**

**Location vs. Size**

The 2x2 axis shown in Figure 4 plots the relative size of the healthcare organizations and if transformational change was supported within the entity. Larger organizations had more in-house or independent teams with specialized skills. They also had clear methodologies that were more likely to be documented within the organization. Smaller healthcare systems ranged in the complexity of methods and strategies used to support transformational change.

An opportunity area was identified, indicating the need for a strategic approach that could support smaller healthcare organizations in achieving transformational change.

Organizations included in Figure 4 are:
1. Changefirst
2. Cornell University: Healthcare Transformation Project
3. Healthcare Transformation Institute
4. Independence Blue Cross Center for Health Care Innovation
5. Institute for Healthcare Improvement
6. Joint Commission Center for Transforming Healthcare
7. Kaiser Permanente: Garfield Innovation Center
8. Mayo Clinic: Center for Innovation
9. UCLA Health: Institute for Innovation in Health
10. Sutter Health: The David Druker Center for Health Systems Innovation

**Design-led vs. Process Improvement**

Many of the organizations reviewed used a variety of methods for creating transformational change. Some took a design-led approach with a focus on human-centered innovation for transforming part of or a whole system. Others leaned toward process improvement under a Six Sigma approach to make incremental change within units. A few offered strategies that reflected both methods, suggesting there might be an opportunity for developing a meta-method that combines design-led and process improvement strategies.

Organizations included in Figure 5 are:
1. Changefirst
2. Cornell University: Healthcare Transformation Project
3. Healthcare Transformation Institute
4. Independence Blue Cross Center for Health Care Innovation
5. Institute for Healthcare Improvement
6. Joint Commission Center for Transforming Healthcare
7. Kaiser Permanente: Garfield Innovation Center
8. Mayo Clinic: Center for Innovation
9. UCLA Health: Institute for Innovation in Health
10. Sutter Health: The David Druker Center for Health Systems Innovation

**Figure 4.** 2x2 Axis of Organizations: Identifies structures supporting transformational change across the United States. Author’s image.

**Figure 5.** 2x2 Axis of Approaches to Transformation: Identifies institutions that use design-led versus process improvement practices. Author’s image.
Positioning: Regional Health Care Systems

1. Ascension Health

Ascension Health is a health care system based in Springfield, Missouri with five hospitals under its management. CoxHealth does not have transformational support agents or teams as part of their corporate structure (http://www.coxhealth.com).

2. BJC HealthCare

BJC HealthCare includes 10 hospitals across the Kansas City region. It does not lack a transformation support structure; however, a team of change management consulting experts is dedicated to supporting change at all levels of the organization through a mixed-method approach (https://www.ascensionhealth.org).

3. Blessing Health System

Blessing Health System is a for-profit system with six facilities in the Quincy, Illinois region. They do not have transformational support staff and are not interested in innovative approaches to support teams. (http://www.blessinghealthsystem.org).

4. CoxHealth

CoxHealth is a health care system based in Springfield, Missouri with five hospitals under its management. They have a transformational support structure (http://www.coxhealth.com).

5. HealthCare System

HealthCare System is a health care system based in the St. Louis area with six hospitals. They have a center for innovation and improvement that is charged with supporting transformation at all levels of the organization. They have improved their clinical care through innovation sciences (http://www.lyc.io).


Saint Luke’s Health System is a not-for-profit organization that was created to support change for US-based institutional health care systems. A toolkit may provide a solution to support teams that do not have staff dedicated to the transformation process. (https://www.ascensionhealth.org).

7. Southern Illinois Healthcare

Southern Illinois Healthcare is a nonprofit, three-hospital system in southern Illinois. The organization does not have a transformational change support team, but they have individuals who are not aware of innovative approaches. The organization supports transforming the service offering and other initiatives who are interested in clinical transformation and innovation (http://www.sih.net).

8. SSM Health

SSM Health is a Catholic, not-for-profit health care system based in St. Louis with 18 hospitals and affiliations with 40 rural hospitals. They have a center for innovation and improvement that is charged with supporting change for smaller health care systems. A toolkit may provide a solution to support teams that do not have staff dedicated to the transformation process. (http://www.ssmhealth.com).

Zag Steps

1. Who am I?

MergeCare is a strategic method for supporting institutional health care managers, care managers, and stakeholders, and designers who are seeking to facilitate better operational changes today and in the future through a combined approach to solving challenges. (http://www.ssmhealth.com)

2. What wave am I riding?

Health care looking to design for innovation. (http://www.ssmhealth.com)

3. What is my vision?

The vision of MergeCare is to empower health care professionals when facilitating operational changes today and in the future through a combined approach to solving challenges. (http://www.ssmhealth.com)

4. What should I add or subtract?

MergeCare will continue to add the best methods that strengthen its transformation approach with qualitative and quantitative methods. (http://www.ssmhealth.com)

5. Who shares the brandscape?

Large health care systems that incorporate design-thinking strategies may be an opportunity area for MergeCare to position themselves. (http://www.ssmhealth.com)

6. What makes me the only me?

MergeCare is the only design-led and process improvement strategy that was created to support change for US-based institutional health care systems. A toolkit may provide a solution to support teams that do not have staff dedicated to the transformation process. (http://www.ssmhealth.com)

7. What is the enemy?

Existing, well-established change methodologies in the health care market may be part of the competition for.Where are we going with MergeCare?

8. Health care professionals can purchase the designengagement with partners that will advocate within health care systems. (http://www.ssmhealth.com)

11. How do I explain myself?

We inspire health care teams to take a path of change by enhancing the approach that they have with design-led approaches (http://www.ssmhealth.com).

12. How do I spread the word?

We market within the health care industry at conferences and trade shows, but most importantly we demonstrate the approach through the methods they already have with design-led approaches. (http://www.ssmhealth.com)

13. How do people engage with me?

Health care professionals can purchase MergeCare through online engagement with partners that will advocate within health care systems. (http://www.ssmhealth.com)

14. What do they experience?

Health care professionals experience a visually engaging method that was not intended to support large health care-based institutional health care professionals and patients are offered an approach with large and small hosts, which can evolve into a custom approach that is driven by their unique needs. (http://www.ssmhealth.com)

15. How do I earn their loyalty?

By demonstrating our strategic method, clients will see firsthand how team members align around challenges and change initiatives. They can also retain our consulting services to walk through the strategic approach with their teams. (http://www.ssmhealth.com)

16. How do I extend my success?

Our approach has the capacity to integrate with many other change methodologies and situations. (http://www.ssmhealth.com)

Figure 6 plots the relative size of the health care company activity (http://www.ssmhealth.com).

Positioning: Regional Health Care Systems

[Diagram placeholder]

Figure 6. 2x2 axis of regional healthcare systems. Identifies where healthcare organizations are positioned relative to the relative size of the health care company activity (http://www.ssmhealth.com).
MergeCare is for institutional health care managers and designers who need to support change in complex functional and operational environments. Our strategic approach integrates an intuitive and logical process for evaluating, understanding, and implementing change initiatives. We do this by facilitating a set of design-led visual sessions that clarify opportunities, imagine futures, and codify processes for participants to implement. Unlike other change strategies that are primarily data-driven, our approach is based on research that revealed an opportunity to combine a human-centered design and process improvement methods to deliver greater outcome and adoption success. As a result, health care professionals are better equipped to facilitate innovative change programs because people are at the core of our strategy.

MergeCare is the only design-led and process improvement strategy that was created to support change for US-based institutional health care managers and designers who seek to collaboratively improve overall operational and patient outcomes in an era when both large and small systems need new ways to lower costs and manage resources.
Research Activities and Synthesis
The methodology for this research was a qualitative case study.

This approach was appropriate for a number of reasons. The case study focused on two subject groups: health care designers and health care managers at various job levels. The case was bounded by two large institutional health care systems in which the two subject groups work. The method facilitated exploring phenomenon within the bounded areas in order to understand the subjects' opinions about operational logistics, successes, challenges, opportunities, and current processes used to achieve transformational change.

Research Questions

Primary
1. How might the application of design management methodologies support transformational change within the institutional health care sector?

Secondary
1. What are the successes in institutional health care?
2. What are the challenges in institutional health care?
3. What is the definition of transformational change in the context of institutional health care?
4. What are the techniques used to foster transformational change?
5. How is transformational change sustained in institutional health care?
6. What are management methods used in institutional health care?
7. What is the definition of design management in the context of institutional health care?
8. Who are leaders of design management activity in institutional health care?

See research question matrix on page 38 for additional exploration of sub-research questions.
### Research Questions Matrix

<table>
<thead>
<tr>
<th>Sub-Questions</th>
<th>Purpose of the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the barriers to enacting transformational change? (1IH)</td>
<td>Why do we need to know?</td>
</tr>
<tr>
<td>Who are the leading designers in health care? (4DM)</td>
<td>To compare against what might DMGT support it? Set to apply to others. Can it be replicated?</td>
</tr>
<tr>
<td>To know how sustainable long-term success of the tools and steps that lead to transformational change? (1IH)</td>
<td>Where can I find this information?</td>
</tr>
<tr>
<td>What does a design process to drive big change in the health care sector?</td>
<td>How are groups using the DMGT process? Who out in the field?</td>
</tr>
<tr>
<td>What are management methods used in the healthcare sector? (1DM)</td>
<td>What is working? What does a DMGT process?</td>
</tr>
<tr>
<td>What are challenges for the institutional healthcare sector? (2IH)</td>
<td>What are skills that could be supported by the DMGT process?</td>
</tr>
<tr>
<td>The research will be guided by the following sub-questions:</td>
<td>Where are the leaders of design management activity in healthcare? (3DM)</td>
</tr>
<tr>
<td></td>
<td>What is the definition of design management in the context of institutional healthcare? (2DM)</td>
</tr>
</tbody>
</table>

### Consent Forms

#### Pre–Interview Discussion

Figures 10 and 11 concern the Research Project Explanation and informed consent forms.

The pre-interview discussion structure is outlined in Table 13.

Table 13. The pre–interview discussion structure

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Interviewer</th>
<th>Subject</th>
<th>Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 min</td>
<td>Retrieve the form and place in Envelope with forms</td>
<td>Listen/Review</td>
<td>Envelope</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Listen/Review</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Design. For additional information please contact Professor Regina Rowland, Ph.D. at rrowland@scad.edu.

This project is being conducted through the Design Management Program at the Savannah College of Art and Design. M.A. Final Project.

Data Management

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field. There may be no unique method across all research projects that might incorporate it into the product to market. The research will be guided by the following sub-questions:

- What are the barriers to enacting transformational change within the institutional healthcare sector?
- Who are the leading designers in health care?
- What does a design process to drive big change in the health care sector?
- What are management methods used in the healthcare sector?
- What are challenges for the institutional healthcare sector?
- The research will be guided by the following sub-questions:

### Research Project Explanation

The research will be guided by the following sub-questions:

- What are the barriers to enacting transformational change within the institutional healthcare sector?
- Who are the leading designers in health care?
- What does a design process to drive big change in the health care sector?
- What are management methods used in the healthcare sector?
- What are challenges for the institutional healthcare sector?
- The research will be guided by the following sub-questions:

### Data Collection

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field.

### Data Management

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field. There may be no unique method across all research projects that might incorporate it into the product to market.

---

The pre–interview discussion structure is outlined in Table 13.

Table 13. The pre–interview discussion structure

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Interviewer</th>
<th>Subject</th>
<th>Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 min</td>
<td>Retrieve the form and place in Envelope with forms</td>
<td>Listen/Review</td>
<td>Envelope</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Listen/Review</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Design. For additional information please contact Professor Regina Rowland, Ph.D. at rrowland@scad.edu.

This project is being conducted through the Design Management Program at the Savannah College of Art and Design. M.A. Final Project.

Data Management

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field. There may be no unique method across all research projects that might incorporate it into the product to market. The research will be guided by the following sub-questions:

- What are the barriers to enacting transformational change within the institutional healthcare sector?
- Who are the leading designers in health care?
- What does a design process to drive big change in the health care sector?
- What are management methods used in the healthcare sector?
- What are challenges for the institutional healthcare sector?
- The research will be guided by the following sub-questions:

### Data Collection

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field.

### Data Management

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field. There may be no unique method across all research projects that might incorporate it into the product to market.

---

The pre–interview discussion structure is outlined in Table 13.

Table 13. The pre–interview discussion structure

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Interviewer</th>
<th>Subject</th>
<th>Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3 min</td>
<td>Retrieve the form and place in Envelope with forms</td>
<td>Listen/Review</td>
<td>Envelope</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Listen/Review</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Design. For additional information please contact Professor Regina Rowland, Ph.D. at rrowland@scad.edu.

This project is being conducted through the Design Management Program at the Savannah College of Art and Design. M.A. Final Project.

Data Management

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field. There may be no unique method across all research projects that might incorporate it into the product to market. The research will be guided by the following sub-questions:

- What are the barriers to enacting transformational change within the institutional healthcare sector?
- Who are the leading designers in health care?
- What does a design process to drive big change in the health care sector?
- What are management methods used in the healthcare sector?
- What are challenges for the institutional healthcare sector?
- The research will be guided by the following sub-questions:

### Data Collection

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field.

### Data Management

Data will be collected primarily through interviews and secondary sources. These will include design professionals. Additional secondary research in literature reviews will be conducted to evaluate best practices in the field. There may be no unique method across all research projects that might incorporate it into the product to market. The research will be guided by the following sub-questions:

- What are the barriers to enacting transformational change within the institutional healthcare sector?
- Who are the leading designers in health care?
- What does a design process to drive big change in the health care sector?
- What are management methods used in the healthcare sector?
- What are challenges for the institutional healthcare sector?
- The research will be guided by the following sub-questions:
Research Protocols: Interview Questions Field Notes Form

Table 14. Interview discussion steps.
The interview discussion structure is outlined in Table 14.

```
<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Interviewer</th>
<th>Subject</th>
<th>Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5 min</td>
<td>Watch</td>
<td>Label</td>
<td>words</td>
</tr>
<tr>
<td>2</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>3</td>
<td>2 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>4</td>
<td>3 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>5</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>6</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>7</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>8</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>9</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>10</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>11</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>12</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>13</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>14</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>15</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>16</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
</tbody>
</table>
```

Card Sorting Unique Method

The unique method was adapted from a 2013 study by Miller and Moultrie. They called it a “card sorting” method and their study focused on understanding the skills of fashion industry leaders that had design in their job titles. This card sorting adapted from a unique method that had “design” in their job titles. This card sorting adaptation focused on understanding the skills of UK fashion industry leaders. They called it a “card sorting” method and their study focused on understanding the skills of UK fashion industry leaders. The intent was to capture subjects’ personal associations with activities in the context of their jobs and their ranking in their professional settings.

Figure 14. Card sort words. Ten words are identified in each category. Only ten minutes are allotted for this activity. Two additional “blank” cards are provided in the event a subject would like to add to the collection. 

Figure 15. Card sort exercise. 

The card sorting structure is outlined in Table 15.

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Interviewer</th>
<th>Subject</th>
<th>Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 min</td>
<td>Watch</td>
<td>Label</td>
<td>words</td>
</tr>
<tr>
<td>2</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>3</td>
<td>2 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>4</td>
<td>3 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>5</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>6</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>7</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>8</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>9</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>10</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>11</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>12</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>13</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>14</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>15</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
<tr>
<td>16</td>
<td>5 min</td>
<td>Watch and document</td>
<td>any type</td>
<td>of activity.</td>
</tr>
</tbody>
</table>
Research Activity

Overview
The research was conducted over a two-week period from January 19 to 30, 2015. A total of 6 designers and 6 managers were interviewed at two St. Louis health care companies. Designers and managers ranged in role type and level, but all had a creative or managerial role supporting transformational change, innovation and large scale projects. All subjects were responsible for supporting change initiatives in their organizations at various levels. The interviews were conducted within a one-hour time frame. All interviews were recorded and transcribed. Upon completing the interviews, the research team recorded photographs of the interviewees signing the consent forms and during the card sorting activity.

Data: Card Sort by Subject Type

<table>
<thead>
<tr>
<th>Subject Type</th>
<th>DP Play</th>
<th>DP Draw</th>
<th>DP Discover</th>
<th>DP Define</th>
<th>DP Iterate</th>
<th>DP Explore</th>
<th>DP Develop</th>
<th>DP Implement</th>
<th>DP Visualize</th>
<th>DP Synthesize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject #</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>35</td>
<td>35</td>
<td>37</td>
<td>40</td>
<td>42</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>49</td>
</tr>
<tr>
<td>Average</td>
<td>4.83</td>
<td>5.83</td>
<td>5.83</td>
<td>6.17</td>
<td>6.67</td>
<td>7.00</td>
<td>7.33</td>
<td>7.50</td>
<td>7.67</td>
<td>8.17</td>
</tr>
</tbody>
</table>

| Subject Type | MP Structure | MP Balance | MP Budget | MP Ensure | MP Monitor | MP Negotiate | MP Plan | MP Communicate | MP Clarify | MP In the health care designer subjects’ data, the top 2 words were synthesize and communicate. These words were associated with the “design process.” For the management process, the most common word was clarify. For “transformational change,” the common word was translate. The words that scored highest were synthesize, communicate, clarify, and translate. The words that scored the lowest were play, draw, balance, structure, determine, and foster.

<table>
<thead>
<tr>
<th>Subject Type</th>
<th>TC Determine</th>
<th>TC Foster</th>
<th>TC Mobilize</th>
<th>TC Build</th>
<th>TC Encourage</th>
<th>TC Weave</th>
<th>TC Connect</th>
<th>TC Recognize</th>
<th>TC Evaluate</th>
<th>TC Translate</th>
<th>TC Connect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject #</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Code Word</td>
<td>TC Determine</td>
<td>TC Foster</td>
<td>TC Mobilize</td>
<td>TC Build</td>
<td>TC Encourage</td>
<td>TC Weave</td>
<td>TC Connect</td>
<td>TC Recognize</td>
<td>TC Evaluate</td>
<td>TC Translate</td>
<td>TC Connect</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>26</td>
<td>26</td>
<td>34</td>
<td>36</td>
<td>38</td>
<td>38</td>
<td>42</td>
<td>38</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>3.83</td>
<td>4.33</td>
<td>4.33</td>
<td>5.67</td>
<td>6.00</td>
<td>6.33</td>
<td>6.33</td>
<td>7.00</td>
<td>6.33</td>
<td>7.00</td>
<td></td>
</tr>
</tbody>
</table>

Table 16: Card sorting research data for health care designers.
Table 17: Card sorting research data for health care managers.
Figure 16 visualized words in common between health care designers and managers that ranked low on how well the subjects believed they did that work in support of transformational change. For designers, all working within two large health care systems in St. Louis, Missouri, six activities were identified and correlated to the words listed on each circle. The data is sorted based on the average totals from low to high. The visualization also helped identify the top common strengths for both subject types. The data was then used to place the words in proximity to the word “Me” based on how subjects believed they did those things in support of transformational change.

**Data: Card Sort all Data**

<table>
<thead>
<tr>
<th>Subject #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject Type</td>
<td>HM</td>
<td>HM</td>
<td>HD</td>
<td>HD</td>
<td>HM</td>
<td>HD</td>
<td>HM</td>
<td>HM</td>
<td>HD</td>
<td>HM</td>
<td>HD</td>
<td>HD</td>
</tr>
</tbody>
</table>

**Insights**

A review of the data revealed that the most common activities for both design and management related to change were: facilitate, design, synthesize, clarify, communicate, and implement. This suggests that, on average, these words support change in the subjects’ activities.

Health care professionals scored a total of 21 points higher in support of change for managers compared with designers. This suggests that, on average, these words support change in the managers’ activities.
Overview

Figure 20 represents the top 15 words chosen by health care managers and designers and an average of the two. All data can be found in Table 16. Like taking the data words explore patterns between the two subject types. In addition, words without any connections were circled in red.

Analysis: All Data Synthesis

Insights

The visualization strategy corroborates data in Table 17 that health care managers generally believe they support change well in their jobs as compared to the average. A couple of words would emerge as unique to each subject type that were not revealed in the averaged data. These words are identified in Figure 18 for managers compared to encode and evaluate for designers.

Card Sort Data: Designers

Overview

Figure 18 presents all 14 subjects’ card sort exercises on top of each other. Arturo was applied such that as many of the words as possible, as well as a visual density and proximity to “Me.” In addition, the red circle applied to words in Figure 17 and the red circle applied to subjects were asked to place each word appropriately to “Me” based on how often they did that type of work in their jobs. Additionally, a baseline of common job activities were identified for each of the subject types.
Card Sort Data: Managers

Overview
Figure 21 layers the 6 manager subjects’ card sort exercises onto each other. A filter was applied to each in order to see as many of the words as possible, as well as to identify density and proximity to “Me.” In addition, the top 3 words identified in Figure 16 were layered to each subject’s exercise. Subjects were asked to place each word in proximity to “Me” based on how often they did that type of activity in their jobs. In doing so, a baseline of common job activities were identified for each of the subject types.

Insights
Figure 22 is a composite of all subjects’ card sorting activities. Looking at the placement of the words in Figure 22 and Figure 21 revealed some differences between health care designers and managers in institutional health care environments. Designers appear to do less activity in their jobs compared to what they believe contributes to change in their work. This reflects a disconnect between their ability to support change and the amount of time they spend doing that activity in their jobs. Managers appear to do more activity in their jobs that is equally reflective of supporting change. The similarity in amount of time and ability suggests they may be more invested in change activities for their company.

Card Sort Data: Designers & Managers

Overview
Figure 22 layers the 4 designer subjects’ card sort exercises onto each other. A filter was applied to each in order to see as many of the words as possible, as well as to identify density and proximity to “Me.” In addition, the top 3 words identified in Figure 16 were layered to each subject’s exercise. Subjects were asked to place each word in proximity to “Me” based on how often they did that type of activity in their jobs. (5 min) There are two blank cards if there are additional things you do that you feel are important to include.

Insights
Figure 22 is a composite of all subjects’ card sorting activities looking at the placement of the words in Figure 22 and Figure 21 revealed some differences between health care designers and managers in institutional health care environments. Designers appear to do less activity in their jobs compared to what they believe contributes to change in their work. This reflects a disconnect between their ability to support change and the amount of time they spend doing that activity in their jobs. Managers appear to do more activity in their jobs that is equally reflective of supporting change. The similarity in amount of time and ability suggests they may be more invested in change activities for their company.
Figure 24 illustrates a couple of interesting relationships. Communicate, understand, and translate are activities that both designers and managers do more often in their jobs. These words also get high marks for supporting change. At the opposite end, play and draw are done the least and do not support change well. Iterate was the only word designers and managers both do more often; however, it was not an activity they believed supported change.

More subjects placed the words budget, draw, and play farther from the center. These were also in the bottom 25 words, thus suggesting a correlation between lower activity levels and amount of time spent doing these activities. However, it does present an opportunity to evaluate if these regiment activities that might support change in other ways.
Insights from interviews reflected that subjects believed the people who are in health care are committed to their jobs and want to do well. Patient-centered outcomes topped the minds of many in part because of federal regulations. In addition, there is a focus on preventive care as opposed to reactive medicine. For many, patient-centered outcomes are the foundation for how they approach their work.

The complexity of problems being solved seemed to necessitate a shift towards better communication and coordination. For example, the inclusion of electronic medical record systems and simply asking patients about their experiences has led to a shift from a reactive approach to a more proactive one.

In addition, there is a trend towards more transparency in health care systems. There has been an increased focus on understanding what is happening across all areas. This is leading to a greater willingness on the part of their organizations to adopt new ideas in order to solve some of the challenging issues facing institutional health care systems.

There seemed to be a constant need to better understand what is happening in all the different areas and how to better coordinate their activities. The complexity of problems being solved seemed to necessitate a shift towards better communication and coordination. For example, the inclusion of electronic medical record systems and simply asking patients about their experiences has led to a shift from a reactive approach to a more proactive one.

Insights from interviews reflected that subjects believed the people who are in health care are committed to their jobs and want to do well. Patient-centered outcomes topped the minds of many in part because of federal regulations. In addition, there is a focus on preventive care as opposed to reactive medicine. For many, patient-centered outcomes are the foundation for how they approach their work.

The complexity of problems being solved seemed to necessitate a shift towards better communication and coordination. For example, the inclusion of electronic medical record systems and simply asking patients about their experiences has led to a shift from a reactive approach to a more proactive one.

In addition, there is a trend towards more transparency in health care systems. There has been an increased focus on understanding what is happening across all areas. This is leading to a greater willingness on the part of their organizations to adopt new ideas in order to solve some of the challenging issues facing institutional health care systems.

There seemed to be a constant need to better understand what is happening in all the different areas and how to better coordinate their activities. The complexity of problems being solved seemed to necessitate a shift towards better communication and coordination. For example, the inclusion of electronic medical record systems and simply asking patients about their experiences has led to a shift from a reactive approach to a more proactive one.

Insights from interviews reflected that subjects believed the people who are in health care are committed to their jobs and want to do well. Patient-centered outcomes topped the minds of many in part because of federal regulations. In addition, there is a focus on preventive care as opposed to reactive medicine. For many, patient-centered outcomes are the foundation for how they approach their work.

The complexity of problems being solved seemed to necessitate a shift towards better communication and coordination. For example, the inclusion of electronic medical record systems and simply asking patients about their experiences has led to a shift from a reactive approach to a more proactive one.

In addition, there is a trend towards more transparency in health care systems. There has been an increased focus on understanding what is happening across all areas. This is leading to a greater willingness on the part of their organizations to adopt new ideas in order to solve some of the challenging issues facing institutional health care systems.

There seemed to be a constant need to better understand what is happening in all the different areas and how to better coordinate their activities. The complexity of problems being solved seemed to necessitate a shift towards better communication and coordination. For example, the inclusion of electronic medical record systems and simply asking patients about their experiences has led to a shift from a reactive approach to a more proactive one.
Interview Synthesis: Barriers

Barriers to change for the organization were many. Turnover was a constant challenge and made significant disruptions in one case, suddenly reducing the size of the project. Several subjects identified issues with the project design that affected the overall outcome of the project. Barriers included:

1. **Turnover**: High turnover was a significant barrier, impacting the project's sustainability and success.
2. **Change Resistance**: People were resistant to change, and this resistance sometimes delayed the project's progress.
3. **Project Failure**: Sometimes projects failed due to lack of planning, which led to wasted resources and time.
4. **Team Dynamics**: Poor team dynamics or lack of communication among team members also caused delays and challenges.
5. **Stakeholder Involvement**: Stakeholders were not always involved adequately in the decision-making process, leading to conflicts and delays.
6. **Resource Allocation**: Insufficient resources, including funding, personnel, and materials, impacted project outcomes.
7. **Communication**: Lack of clear communication among team members and stakeholders contributed to misunderstandings and errors.

Insights

Most subjects identified the design process as a problem-solving process. Each has unique ways of describing it as a different application. For us, the way they defined it as a problem-solving process was essential in understanding how they approached and solved issues in their projects. We also asked them some general questions related to problem-solving possibilities and how they make use of their problem-solving capabilities.

Barriers

Interview Synthesis: Design Process

Most subjects identified the design process as a problem-solving process. Each has unique ways of describing it as a different application. For us, the way they defined it as a problem-solving process was essential in understanding how they approached and solved issues in their projects.

Insights

Most subjects identified the design process as a problem-solving process. Each has unique ways of describing it as a different application. For us, the way they defined it as a problem-solving process was essential in understanding how they approached and solved issues in their projects. We also asked them some general questions related to problem-solving possibilities and how they make use of their problem-solving capabilities.

Design Process

Barriers

Interview Synthesis: Barriers

Barriers to change for the organization were many. Turnover was a constant challenge and made significant disruptions in one case, suddenly reducing the size of the project. Several subjects identified issues with the project design that affected the overall outcome of the project. Barriers included:

1. **Turnover**: High turnover was a significant barrier, impacting the project's sustainability and success.
2. **Change Resistance**: People were resistant to change, and this resistance sometimes delayed the project's progress.
3. **Project Failure**: Sometimes projects failed due to lack of planning, which led to wasted resources and time.
4. **Team Dynamics**: Poor team dynamics or lack of communication among team members also caused delays and challenges.
5. **Stakeholder Involvement**: Stakeholders were not always involved adequately in the decision-making process, leading to conflicts and delays.
6. **Resource Allocation**: Insufficient resources, including funding, personnel, and materials, impacted project outcomes.
7. **Communication**: Lack of clear communication among team members and stakeholders contributed to misunderstandings and errors.

Insights

Most subjects identified the design process as a problem-solving process. Each has unique ways of describing it as a different application. For us, the way they defined it as a problem-solving process was essential in understanding how they approached and solved issues in their projects. We also asked them some general questions related to problem-solving possibilities and how they make use of their problem-solving capabilities.

Barriers
Interview Synthesis: Management Process

Key Insights:

- **Process improvement methods** were discussed frequently.
- Various project management methods were used, including Lean Six Sigma, Plan-Do-Study-Act, and Define Measure Analyze Improve Control (DMAIC).
- DMAIC was identified as a key tool for process improvement.
- There was a need for more effective communication and collaboration among teams.
- Rigid protocols were often criticized for limiting innovation.
- Continuous feedback and improvement are crucial for sustaining change.

### Management Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define</td>
<td>Identify the problem and its root causes.</td>
</tr>
<tr>
<td>Measure</td>
<td>Collect data to establish a baseline.</td>
</tr>
<tr>
<td>Analyze</td>
<td>Analyze the data to identify the root causes of the problem.</td>
</tr>
<tr>
<td>Improve</td>
<td>Develop and implement solutions to address the root causes.</td>
</tr>
<tr>
<td>Control</td>
<td>Monitor the process to ensure the improvements are sustainable.</td>
</tr>
</tbody>
</table>

### PERSONA: Sally

**Overview:** Sally is the Director of Activation Management for a 200-million dollar facility for pediatrics. With an MBA and MPH and five years at her prior job, she has just arrived from California where she was in the health care business managing operations at three hospital systems. With an MBA and five years of prior project work, she is a heavy process head but liking the opening of a pediatrics department is a huge change that she is managing to understand how the facilities of the hospital need to work to set up a path to the vision that she has.

**Skills:**

- **Evaluate:** Sally is a go-getter. She is direct and professional in her approach to her role. She is a leader and is able to implement a road map addressing a particular need.
- **Negotiate:** Sally is an implementer at heart. She has to negotiate with top managers, ensure alignment, recognize industry trends, and make evaluations.
- **Balance:** Sally has a positive attitude. She believes this is a necessity in the business of caring for people. When people know that she is invested in them, they know the just the best to keep moving forward.

**Needs and Wants:**

- **Sally needs to make sure all of the information is clear, otherwise there is no buy-in for the technology.**
- **We need to make sure all of the users are on the same page.**
- **We need a plan for when Richard is no longer in that position.**
- **We need a plan for when Richard is no longer in that position.**
- **We need a plan for when Richard is no longer in that position.**

**Frustrations:**

- **Sally needs to make sure all of the users are on the same page.**
- **We need to make sure all of the users are on the same page.**
- **We need to make sure all of the users are on the same page.**
- **We need a plan for when Richard is no longer in that position.**
- **We need a plan for when Richard is no longer in that position.**

**Attitude:**

- Sally has a positive attitude. She believes this is a necessity in the business of caring for people. When people know that she is invested in them, they know the just the best to keep moving forward.
Research Insights

Insight 1
Health care turnover is a significant problem, often leading to stalling a project or shelving it altogether.

Insight 2
Adoption and buy-in is difficult to mitigate in health care because there are so many expert stakeholders involved in one clinical setting.

Insight 3
Communication is a core strength for both health care designers and managers; however, interview insights suggested the complexity of systems breaks down understanding.

Insight 4
Health care is open to adopting new human-centered design strategies in order understand and improve operations and patient outcomes.

Insight 5
Health care managers and designers have different skill sets and methods for solving problems, yet they are often tasked with implementing large projects in collaboration.

Insight 6
There is a culture of teaching and learning in the organization in support of continuous improvement.

Persona: Tomas

Overview
Tomas is a native of St. Louis, Missouri. He received his undergraduate education at Pratt Institute in New York City. Upon graduation, he worked for a small firm with large retail health care clients, mostly consumer products for Walgreens. After fifteen years at New York-area firms, he returned home to work for a local firm, continuing with a health care focus. This move allowed him to return to his roots in health care and continue his work in the health care industry. Tomas was a key contributor to the company’s success in health care, focusing on health care turnover, health care practice, and health care systems. He was hired for his graphic design skills and his ability to visualize and clarify complex systems through information graphics.

Skills
Tomas is a great communicator and uses his design skills to visualize and clarify complex concepts or processes that are part of the firm’s operations.

Frustrations
He is frustrated with his role— he does not get to draw or play as much as in prior roles. This is mostly due to the corporate environment, but he hopes innovation will be fostered by the senior leadership once they see his work. Tomas is feeling a little stuck in a system with people that do not want to change or explore new ideas.

Attitude
Tomas has a casual, low-key attitude, and nothing seems to upset him. When people start getting emotional, he tells a joke to create some levity. He is good at recognizing details about people and then evaluating if it is best to drop a joke.

Typical Tasks
At the moment, Tomas is dealing with what most designers consider superficial activities, i.e. just the visuals. He was brought in to be part of a larger team, meeting around strategy and improving communications and operations of the company, but it has been slow-going in realizing the potential of his work and skills, but adoption from others will be slow.

Need and Wants
Tomas feels he needs to weave his way into a more robust role within the company, to validate his skill for larger roles that lead to innovative ways of supporting patients. He wants to make a difference in the lives of patients that come to the hospital. He knows there are inefficiencies and people do not like being there, so he really wants to support change.
“Make sure that all of the right people are talking to each other I think is one.”

“Try to create the sense of urgency that we need to fix this, so everybody’s on the same page.”

Health care designers:
- MArch, ID, GD

Health care managers:
- MBA, MHA

“Transparency is another good thing.”

“Health care workers do an amazing job at workarounds.”

Health care is open to using these strategies:
- Six Sigma
- Lean
- TQM
- Design thinking
- Human-centered design
- Design management

Preparing for change:
- Adoption and buy-in
- Knowledge transfers
- Communications

Health care is good at these strategies:
- Overlapping skill sets
- Teaching and learning
- Overlapping skill sets

Designers’ ability to use qualitative methods may complement change efforts.

Managers’ ability to use quantitative methods may complement change efforts.

“Adopting new methods Teaching and learning Overlapping skill sets”

Figure 34. Research findings at a glance. An overview of the relationship between the abilities of subjects and how to support change. Author’s Image.
Design Opportunities and Criteria, Reframing}

Figure 35. Design opportunities and criteria, reframing cover image. Exploration of key concepts in the design opportunities and criteria, reframing section. Author's image.
Opportunities for Design Matrix

**Table 19.**

**Opportunity 1**

How might we mitigate continuous turnover by supporting activity over long periods of time? How might we ensure knowledge transfer in order to sustain transformational change considering the periods of turnover?

**Table 20.**

**Insight 1 SWOT.**

**Strengths**

- Staff in health care are dedicated to helping each patient
- Staff members are dedicated to seeing patients well

**Weaknesses**

- Leadership is very busy, with tight deadlines
- Ongoing teaching and training is a big cost of doing business

**Opportunity 2**

How might we create project plans that gather input by demonstrating value to participants in order to support adoption at each step in the process? How might we create project plans that garner buy-in by consistently communicating and advocating across many stakeholders?

**Table 21.**

**Opportunity 3**

How might we improve health care health care's ability to consistently demonstrate value to participants in order to support adoption at each step in the process? How might we improve a health care team's ability to consistently communicate and understand across many stakeholders?

**Table 22.**

**Opportunity 4**

How might we create a journey process map that supports each practice area's expertise while visualizing the overall process in order to access a transformational change initiative? How might we use existing process improvement methodologies in combination with design-centric methods to formulate a new process to support transformational change initiatives?

**Table 23.**

**Opportunity 5**

How might we create a journey process map that supports each practice area's expertise while visualizing the overall process in order to access a transformational change initiative? How might we use existing process improvement methodologies in combination with design-centric methods to formulate a new process to support transformational change initiatives?

**Table 24.**

**Opportunity 6**

How might the teaching and learning process be embedded in a constant sharing of information across silos in order to provide transparency and understanding? How might the teaching and learning process be embedded in a constant sharing of information across silos in order to provide transparency and understanding?
This project would be considered successful if:

Institutional health care managers and designers are able to collaborate and communicate effectively when leading change.

It reinforces the tool sets that are currently being used by the system, such as Six Sigma process improvement strategies.

It facilitates problem solving in a way that documents the steps and allows stakeholders to see the process unfold, aiding in adoption each step of the way.

It allows for turnover, while still retaining the long-term change initiatives needed to be successful year over year.

Expert voices are supported while still continuing to move initiatives forward.

It merges existing methodologies of process improvement with external and emerging design-led approaches.

Opportunities for Design Map

- Support communication challenges
- Strengthen buy-in processes
- Mitigate constant turnover
- Reinforce strengths through collaboration
- Breakdown silos of knowledge transfer
- Combine new with old processes

**Figure 36.** Opportunity for design map. An overview of the possible opportunity for design to support transformational change in the institutional health care sector. Author’s Image.
To reframe this project, I:

Reinforced the existing abilities of institutional health care managers and designers. Research revealed key attributes that included being good communicators and implementers when it comes to supporting change. Other attributes, such as connectors or translators, also emerged that were considered in the prototype.
Prototype Development and Testing

Figure 37. Prototype development and testing cover image. Exploration of key concepts in the prototype development and testing section. Author’s image.
Concept 1: Project Facilitator Toolkit

Concept 1 was a project facilitator toolkit to help managers lead change activities and bring diverse stakeholders together at various points in a process. It would support an increased ability to implement change, considering challenges and potential solutions. The teaching strategy would map existing HCD methods with new tools for change in the organization. The facilitation toolkit could be adapted to other industries.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Project Facilitator Toolkit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interesting</td>
<td>High potential to be a long-term mechanism for supporting continuous change (+3)</td>
</tr>
<tr>
<td>Minus</td>
<td>Does not address the turnover challenges observed on projects (-3)</td>
</tr>
<tr>
<td>Plus</td>
<td>Reflects the emerging role of the designer to support change (+3)</td>
</tr>
<tr>
<td>PMI Totals</td>
<td>+12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feature</th>
<th>Teaching Meta–Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interesting</td>
<td>If adopted, this could be an interesting tool for measuring the design process (+5)</td>
</tr>
<tr>
<td>Minus</td>
<td>May be costly to implement (-5)</td>
</tr>
<tr>
<td>Plus</td>
<td>Tool is design-centric in that it captures qualitative data (+3)</td>
</tr>
<tr>
<td>PMI Totals</td>
<td>+4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feature</th>
<th>Communication Feedback Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interesting</td>
<td>If adopted, this could be an interesting tool for measuring the design process (+5)</td>
</tr>
<tr>
<td>Minus</td>
<td>Requires many stakeholders to implement (-3)</td>
</tr>
<tr>
<td>Plus</td>
<td>Supports a culture of constant feedback in the organization (+5)</td>
</tr>
<tr>
<td>PMI Totals</td>
<td>+11</td>
</tr>
</tbody>
</table>

Key areas to support when dealing with change initiatives:
- People
- Process
- Places
- Products

Collective strengths that support change:
- Health Care Designers (MBA, MHA)
- Health Care Managers (BA, MBA)
- Lean Six Sigma (March, ID, GD)
- Six Sigma (March, ID, GD)

Selected Concept: Teaching Meta–Method

The teaching strategy could be a vehicle for supporting continuous change. It would provide such a vehicle because a culture of process improvement already exists and it supports continuous change initiatives. Furthermore, change within a profession can be sustained through perpetual educational systems that are embedded in day-to-day processes.
Subjects identified Human–Centered Design (HCD) as being one of the main methods that frequently appear in scholarly publications as well as in the business world. HCD has been embraced by organizations as a means of developing more human-centric solutions. Dubberly (2009) described HCD as an approach that identifies how they might work together as one meta–method. The intent was to identify a tool that is effective at clarifying the process, showing current state and improvements resulting from process improvement. Several methods and tools are available to facilitate teamwork and in order to reach a project full closure effort.

Overview: Methods and Tools

A selection of tool cards were created from the two main methods: the Human-Centered Design method cards were adopted from various published sources; however, the Six Sigma cards were derived from IDEO’s toolkit (MoreSteam, 2015). The Six Sigma cards were developed from published tools and the HCD toolkit (d.School, 2001).

The most widely used and accepted by the industry is Six Sigma which focuses on the human side of situations, while Six Sigma focuses on emotional factors (or the human side of situations), and Six Sigma tool cards were developed from various sources. However, there are nearly 100 more published cards, most notably Sigma cards were developed from IDEO (IDEO, 2003). The Six Sigma cards were adopted from various sources, while Six Sigma tool cards were developed from various sources.

The intent was to identify a tool that is effective at clarifying the process, showing current state and improvements resulting from process improvement. Several methods and tools are available to facilitate teamwork and in order to reach a project full closure effort.
Step 1: Clarifying the Challenge Together

During step 1, groups of subjects were asked to identify a challenge in their work environment. The goal was to focus on a specific patient or caregiver and what that person might be feeling and thinking. In addition, participants were asked to describe the place, product, and process in which the person was situated and the associated challenges accompanying those three scenarios.

Subjects were provided with a collection of images, but were also encouraged to use Post-it Notes and/or to draw on the visuals to clarify relationships.

Goal

The goal of step 1 was for the group of subjects to paint a collective understanding of a situation that they were trying to describe. Subjects placed a picture of a patient or caregiver at the center of the board and then worked their way around the board. For each segment of the board, subjects used the visual stimuli to build a visual map of the person. In doing so, subjects could develop greater insights about potential challenges that might be faced by the person and, in turn, develop strategies to solve those challenges in step 2.

Empathy Challenge Map:

- **Thinking**
  - What is the person thinking?
- **Feeling**
  - What is the person feeling?
- **Process**
  - What process is the person going through?
- **Place**
  - What environment is the person in?
- **Products**
  - What products might be involved?

Step 2: Agreeing on Steps and Tools

In part “A” of step 2, subjects were asked to use the combined Six Sigma and HCD steps identified in Table 29 to map out what they believed to be the best “steps” to solve the challenge from step 1. The goal was to see how they might align the steps from these two methods.

In part “B” of step 2, subjects were asked to identify which tools they would use with each step. Two lists of Six Sigma and HCD tools were presented. Subjects were allowed to use as many tools as they felt were necessary for each step. If others were needed, they could write them in with Post-it Notes.

Goal

The goal of step 2 was to test how subjects might mix the Six Sigma and HCD tools and group the tools for those steps. Along with producing the cards in the same way, different backgrounds, an equal selection of both Six Sigma and HCD tools were provided to further enhance a lack of distinction between the two methods. It was not necessary for each step to be addressed; otherwise, a subject who was familiar with a particular method would work more quickly to complete the sequence of steps.

Steps & Tools Map

- **Steps**
  - Are there a set of overarching steps you think are needed?
- **Tools**
  - Are there tools you would use for each step/phase of the process?
Concept Testing With Target Audience

Group 1: Overview
The first test was conducted with two process improvement managers at one of the health care facilities in the target group.

Time: Friday, Feb. 13, 1:00 - 2:00pm
Location: Meeting room at work location of target audience
Testing Subjects: Two health care managers, one of which was part of the initial research phase of the project.

This group of subjects selected a nurse as the target person to explore the prototype with.

Steps
Step 1: Preparations
- Graphic boards with “Empathize With the Challenge” and “Steps & Tools” were prepared in advance
- Images were cut out for inspiration
- Pens and Post-it Notes were purchased
- Informed Consent Forms were prepared

Step 2: Introduction
- All subjects signed Informed Consent Forms prior to commencing
- A brief introduction was provided about the project to date and the goals of the prototype test
- Key insights were shared from the first round of research activity

Step 3: Challenge
- Subjects were asked to identify a real-life care provider or patient challenge they wanted to solve
- Subjects were asked to visualize what the care provider/patient would be thinking and feeling
- Subjects were asked to identify the types of places, products, and services impacting the challenge
- Subjects were asked to use their imaginations to explore key challenges at various stages in the process of building the map

Step 4: Steps & Tools
- Subjects were first asked to map out how they might solve the challenge using the steps alone
- Subjects were then asked to imagine how they might use the tools provided to solve the challenge and at which step they would use them

Step 5: Take-Aways/Feedback
- Subjects were asked to share key insights from the prototype test and how they might use the method in their own work

Figure 42. Meeting room. The space in which the prototype test was conducted. Author’s image.
Figure 43. Subjects working. Subjects are selecting images to explore their challenge. Author’s image.
Figure 44. Subjects discussing challenge. Subjects discussing the challenge as they build the visual map. Author’s image.
Figure 45. Subject explaining situations. One subject explaining specific issues to the other. Author’s image.
Figure 46. Subjects considering steps and tools. Subjects begin to explore step 2 of prototype. Author’s image.
Figure 47. Subjects building step 2. Subjects begin to identify the steps and tools that would help solve the challenge in step 1. Author’s image.
Figure 48. Subjects building step 2 detail. Subjects debate various steps and tools as they discuss and build step 2. Author’s image.
Figure 49. Subjects building step 2 detail. Subjects debate various tools to accomplish the steps. Author’s image.
Figure 50. Subjects building step 2 detail. Subjects debate various tools to accomplish the steps. Author’s image.
Figure 51. Final map of steps and tools. Subjects complete the steps and match tools they associate with each step. Author’s image.

Figure 42. Meeting room. The space in which the prototype test was conducted. Author’s image.
Figure 43. Subjects working. Subjects are selecting images to explore their challenge. Author’s image.
Figure 44. Subjects discussing challenge. Subjects discussing the challenge as they build the visual map. Author’s image.
Figure 45. Subject explaining situations. One subject explaining specific issues to the other. Author’s image.
Figure 46. Subjects considering steps and tools. Subjects begin to explore step 2 of prototype. Author’s image.
Figure 47. Subjects building step 2. Subjects begin to identify the steps and tools that would help solve the challenge in step 1. Author’s image.
Figure 48. Subjects building step 2 detail. Subjects debate various steps and tools as they discuss and build step 2. Author’s image.
Figure 49. Subjects building step 2 detail. Subjects debate various tools to accomplish the steps. Author’s image.
Figure 50. Subjects building step 2 detail. Subjects debate various tools to accomplish the steps. Author’s image.
Figure 51. Final map of steps and tools. Subjects complete the steps and match tools they associate with each step. Author’s image.
Group 2: Overview

A second test was conducted with four health care professionals, two of whom were focused on innovation, while the other two were focused on transformation support. All subjects had been trained in Human-Centered Design and Six Sigma methods.

Time: Monday, Feb. 16, 3:00 - 4:00pm
Location: Meeting room in office of target audience
Testing Subjects: Four health care professionals

This group of subjects selected what was called a “complicated patient.” They defined this as someone who was suffering from a number of medical conditions, was often homebound, and a challenge to move to the hospital due to being overweight.

Steps

Step 1: Preparations
  > Graphic boards with “Empathize With the Challenge” and “Steps & Tools” were prepared in advance
  > Images were cut out for inspiration
  > Pens and Post-it Notes were purchased
  > Informed Consent Forms were prepared

Step 2: Introduction
  > All subjects signed Informed Consent Forms prior to commencing
  > A brief introduction was provided about the project to date and the goals of the prototype test
  > Key insights were shared from the first round of research activity

Step 3: Challenge
  > Subjects were asked to identify a real-life care provider or patient challenge they wanted to solve
  > Subjects were asked to visualize what the care provider/patient would be thinking and feeling
  > Subjects were asked to identify the types of places, products, and processes that might be involved
  > Subjects were asked to use Post-it Notes to explain key challenges and various steps in the process of building the map

Step 4: Steps & Tools
  > Subjects were first asked to map out how they might solve the challenge using the steps alone
  > Subjects were then asked to imagine how they might use the tools provided to solve the challenge and at which step they would use them

Step 5: Takeaways/Feedback
  > Subjects were asked to share key insights from the prototype test and how they might use the method in their own work

Figure 52. Meeting room. The space in which the prototype test was conducted. Author’s image.
Figure 53. Subjects working. Subjects selecting images to begin exploring the challenge. Author’s image.
Figure 54. Subjects discussing challenge. Subjects discussing the challenge as they build the visual map. Author’s image.
Figure 55. Subjects exploring situation. One subject exploring the relationship of images prior to posting on the board. Author’s image.
Figure 56. Subjects considering steps and tools. Subjects begin to explore step 2 of the prototype. Author’s image.
Figure 57. Subject explaining step 1. Subject is explaining to colleagues various factors that he believes are an issue for the patient. Author’s image.
Figure 58. Subjects considering steps and tools. Subjects begin to explore step 2 of the prototype. Author’s image.
Figure 59. Subjects building step 2. Subjects continue to identify the steps and tools that would help solve the challenge identified in step 1. Author’s image.
Figure 60. Subjects building step 2 detail. Subject debates various tools for accomplishing the steps as she moves items around the board. Author’s image.
Figure 61. Final map of steps and tools. Subjects complete the steps and match tools they associate with each step. Author’s image.
Concept Testing Findings

Table 30. Prototype test group 1 and 2 results.

<table>
<thead>
<tr>
<th>Prototype Group</th>
<th>Test Group 1</th>
<th>Test Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathize</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Define</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathize</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 31. HCD steps ordered.

Table 32. Results

<table>
<thead>
<tr>
<th>Prototype Group</th>
<th>Test Group 1</th>
<th>Test Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathize</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Define</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathize</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 33. One unique word overall the steps did seem to represent.

Table 34. Two unique words for both groups. The unique word emerged, ‘context’ which was placed at the very end of the process.

Table 35. Two groups ordered from bottom to top, most often had successful HCD coaching. The sequence of steps for the top group seemed to separate the six stages and the HCD steps into two larger sets. Subjects also noted that they would click back from the prototype to the HCD phase and vice versa in order to refine the solution.

Table 36. Figure 62. Smarter Design steps.”
Group 1: Overview

**Observed Insights**
- Subjects were engaged when placing images on the boards.
- Subjects needed clarification for some of the terms at each step.
- Subjects were engaged when placing images on the boards.
- All subjects were lively and equally engaged at all times.
- Subjects joked with each other while building the visual map.
- Subjects were engaged when placing images on the boards.

**Stated Insights**
- One subject noted that it is hard to map cognitive decisions with flowcharts.
- One subject suggested switching some of the words in order to make the steps clearer.
- One subject felt that this combination of methods was needed.
- One subject had created an HCD/Six Sigma slide deck based on the process.
- Subjects already had training in HCD and were attempting to rapidly implement the process into their work.
- One subject suggested making the prototype less rigorous, but not to admit it down.

Group 2: Overview

**Observed Insights**
- Subjects were engaged when placing images on the boards.
- Subjects took more time during step 2.
- Subjects built the challenge map very quickly.
- Subjects spent more time debating the use of tools than building the sequence of steps.
- All subjects were lively and equally engaged at all times.

**Stated Insights**
- One subject noted that it is hard to map cognitive decisions with flowcharts.
- One subject suggested that the tools of HCD are a "complement and not divisive".
- Subjects felt the prototype would be beneficial to their activities.
- Subjects were engaged when placing images on the boards.
- Subjects joked with each other while building the visual map.
The prototype concept was validated by returning to the initial research findings and using key word insights to establish design criteria. While not all research findings were applicable to the prototype, those listed in Figure 64 represent a combination of key attributes from the target personas.

It provides a shared method to support knowledge creation and collaboration among institutional health care professionals.

It facilitates problem solving in a way that will document steps and allow stakeholders to see the process unfold.

It reinforces tool sets that are currently being used in the system, such as Six Sigma process improvement strategies.

It aids in sustaining change by creating the conditions for adoption of new initiatives by diverse stakeholders.

It merges existing methodologies of process improvement with external and emerging designed approaches.

**Validation**

The prototype concept was validated by returning to the initial research findings and using key word insights to establish design criteria. While not all research findings were applicable to the prototype, those listed in Figure 64 represent a combination of key attributes from the target personas.

**Findings**

- Subjects were consistently engaged at each step in the process and openly discussed their activity.
- Subjects were able to quickly visualize the challenge, demonstrating that they can collectively imagine a situation during a planning stage.
- Subjects were able to connect the challenges of their persona to the map and outline in order to agree upon a shared plan of action.
- It aids in sustaining change by creating the conditions for adoption of new initiatives by diverse stakeholders.
- It merges existing methodologies of process improvement with external and emerging designed approaches.

**Revised Design Criteria**

- The prototype concept was validated by returning to the initial research findings and using key word insights to establish design criteria. While not all research findings were applicable to the prototype, those listed in Figure 64 represent a combination of key attributes from the target personas.

**MergeCare** is a strategic approach for facilitating problem solving in order to create conditions for adoption and sustained change initiatives in the institutional health care sector.
Final Design to Market

Figure 65. Final design to market cover image. Exploration of concept for the final design to market section. Author's image.
Overview

The final direction is based on primary and secondary research, user testing, and validation of design criteria. MergeCare is a strategic approach for use by institutional health care managers and designers when supporting change activity. The product combines Human-Centered Design and Six Sigma methods. MergeCare combines the two methods into a set of workshops that builds conditions for adopting new solutions and, in turn, successful initiatives. The goal is to affect how projects are evaluated, understood, and executed. Ultimately MergeCare helps institutional health care professionals integrate these new strategies into their existing cultures and processes.

Fulfilling the Design Criteria

The final strategic method was evaluated against previously-determined design criteria.

MergeCare Phases

Figure 66 illustrates the phases of the strategic approach.

Phase 1: Evaluate

Phase 1 includes clarifying the organization’s context, culture, and opportunities. Research has shown that institutional health care systems operate at different scales with many different change support structures. Evaluating the appropriate scale and opportune places for implementing new methods is critical to planning openings where change can occur.

Phase 2: Understand

Phase 2 encourages team members to envision solutions to the chosen problem in the context of a workshop that is comprised of empathize, steps/tools, and journey. These steps build the key learning portion of the Human-Centered Design and Six Sigma processes and support participants in imagining a future resolution.

Phase 3: Implement

Phase 3 is comprised of managing the overall adoption of new tools to support change through the test, encourage, and reflect steps. This phase involves the implementation and monitoring of the project change. This is where understanding is demonstrated through actions in the field.

Knowledge Center (website)

The phases are supported by a knowledge center website designed specifically for each health care organization. Websites are built as part of consulting engagements and include resources and tools for the organization to continuously build their culture of change and innovation as projects develop.

Final Prototype

Table 32. Fulfilling the design criteria.

<table>
<thead>
<tr>
<th>CIO</th>
<th>DM</th>
<th>CFO</th>
<th>MHA</th>
<th>CEO</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

Figure 66. MergeCare strategic approach phases. Graphic representation of the three phases and associated steps. Author’s image.
MergeCare has two levels at which clients can utilize the strategic approach. Level one is purchased as a workbook and knowledge center website to implement by internal managers and designers. Product level two engages MergeCare consultants who facilitate the workshops and overall strategic approach.

Product to Market

MergeCare has two levels at which clients can utilize the strategic approach. Level one is purchased as a workbook and knowledge center website to implement by internal managers and designers. Product level two engages MergeCare consultants who facilitate the workshops and overall strategic approach.

Product to Market

MergeCare has two levels at which clients can utilize the strategic approach. Level one is purchased as a workbook and knowledge center website to implement by internal managers and designers. Product level two engages MergeCare consultants who facilitate the workshops and overall strategic approach.

Resources to expand Human-Centered Design tool such as IDEO cards.

Case studies about other health care systems that are implementing change initiatives and use mixed methods.

Project tracking tools for specific change initiatives.

Area to internally share best practices and encourage use of new methods.

MergeCare

A strategic approach to support change in health care systems.
MergeCare is a strategic approach created specifically for institutional health care managers and designers who need to support change in complex functional and operational environments. Our strategic approach integrates an intuitive and logical process to evaluate, understand, implement, and then sustain change initiatives. MergeCare uses a set of visual exercises that clarify opportunities and codify processes in order for team participants to collaborate and implement projects. Unlike other existing approaches, ours combines Human-Centered Design and Six Sigma process improvement methods. As a result, health care professionals are better equipped to facilitate and support innovative programs that improve overall operations.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>About</td>
<td>6</td>
</tr>
<tr>
<td>Research</td>
<td>7</td>
</tr>
<tr>
<td>Methods Used</td>
<td>8</td>
</tr>
<tr>
<td>Team Formation</td>
<td>9</td>
</tr>
<tr>
<td>Overview of Phases</td>
<td>10–11</td>
</tr>
<tr>
<td>Phase 1 Evaluate</td>
<td>12–13</td>
</tr>
<tr>
<td>Phase 2 Understand</td>
<td>14–23</td>
</tr>
<tr>
<td>Phase 3 Implement</td>
<td>24–25</td>
</tr>
</tbody>
</table>
Research

Results of the research uncovered that a number of strong attributes were present among designers and managers when successful change activity was taking place in the institutional health care sector.

The words should not impair an exhaustive list, but they provide the strategy used by the MergeCare approach. In addition, research demonstrated a strong culture of Six Sigma process improvement along with an emerging adoption of Human-Centered Design methods to support change activity. The two methods are combined into MergeCare. The phases described on the following pages are a high-level approach to using the two methods and are a starting point for managers and designers as they become familiar with the process.

The ability to communicate and clarify well are characteristics that support change activity for health care management professionals.

The ability to synthesize, visualize and implement well are characteristics that support change activity for health care design professionals.

The ability to connect, evaluate, and translate well are characteristics that support change activity across both health care management and design professionals.

MergeCare is the result of a study investigation by Enrique Von Rohr that was supported by design management methods. The outcome is a strategic approach for managers and designers within institutional health care systems that are leading teams of people through a process of change. Often the change is in the context of solving a specific challenge and may require stakeholders to alter how they plan and implement the initiative. The methods used here are applicable to many health care challenges in which an organization seeks to implement a new strategic approach. The research is intended to be a starting point for managers and designers as they become familiar with the process.

About

MergeCare is the result of a study investigation by Enrique Von Rohr that was supported by design management methods. The outcome is a strategic approach for managers and designers within institutional health care systems that are leading teams of people through a process of change. Often the change is in the context of solving a specific challenge and may require stakeholders to alter how they plan and implement the initiative. The methods used here are applicable to many health care challenges in which an organization seeks to implement a new strategic approach. The research is intended to be a starting point for managers and designers as they become familiar with the process.

The ability to communicate and clarify well are characteristics that support change activity for health care management professionals.

The ability to synthesize, visualize and implement well are characteristics that support change activity for health care design professionals.

The ability to connect, evaluate, and translate well are characteristics that support change activity across both health care management and design professionals.
Methods Used

Human-Centered Design is a methodology that is used to solve problems and prepare for the launch phase of the process. It is a design process in which empathy is gained by focusing on the human experience, which leads to innovative solutions that meet the needs of the people one is designing for. The methods used in the process embrace inspiration, ideation, and implementation in some form. A commonly used version developed by design firm IDEO uses a five-step process: empathize, define, ideate, prototype, and test.

Six Sigma is a statistics-driven methodology for reducing business variations problems or improving processes by implementing performance metrics to minimize waste and increase customer satisfaction. Leading businesses across the globe use this methodology to improve such areas as manufacturing and services. The steps involved are known as the DMAIC process, which stands for Define, Measure, Analyze, Improve, and Control.

Team Formation

Assembling team members from the very beginning is a part of the solution is establishing the process. The methodology supports group learning, open discussions, and brainstorming. When managers and designers in the team members in scoring and setting the goals and tasks, they are more likely to support adoption of the method.
Phases Overview

Phase 1: Evaluate
Phase 1 includes clarifying the organization’s context, culture, and opportunities. Research has shown that institutional health care systems operate at different scales and opportunities for implementing new methods can vary. To plan effectively, understanding context is critical to planning openings where change can occur.

Phase 2: Understand
Phase 2 encourages team members to envision solutions to the chosen problem in the context of a workshop that comprises empathy, steps/tools, and journey. These steps build on understanding the human-centered design and view. Participants will go through steps to imagine a future resolution.

Phase 3: Implement
Phase 3 is comprised of managing the overall adoption of new tools and support through testing, encouragement, and reflection. This phase involves the implementation and monitoring of project change. Understanding is demonstrated through actions in the field.

Knowledge Center (Website)
The phases are supported by a Knowledge Center website designed specifically for each health care organization. Websites are built as part of consulting engagements and include resources and tools for the organization to continue building their culture of change and innovation as projects develop.

Figure 77. Phases overview. Description of each phase of the process. Author’s image.

Figure 78. Illustration of phases. Illustration of approach phases for the organization’s continued building their culture of change and innovation as projects develop.
Phase 1: Evaluate

What needs to happen?
Phase 1 is comprised of clarifying the organization context, culture, and opportunities in order to target a change initiative. Context looks at how the organization supports change and if there are existing formal or informal structures – or even individuals – that champion change methods and initiatives. Culture looks at how receptive team members are to change, how they currently implement changes, and how often they adapt new tools or even work-arounds to solve challenges. Understanding the culture is critical in identifying an opportunity for implementing change. Opportunity looks at where the organization has the flexibility and ability to initiate and sustain a change effort, which is critical in determining the overall culture of the organization, especially when there are roadblocks to change.

How it can happen?
Designers and managers start with an evaluation map. Senior leadership and middle management build this diagram through a collaborative process. In order to retain continuity, team members from this phase will need to carry over to Phase 2.

What are the measures of success?
The goal is to identify a high or low presence of support for change activity in the context and culture. The opportunity goal is to identify the best areas for implementing change activity. By ranking projects from high to low, leaders, managers, and designers can visually see connections in order to prioritize where to invest in change activity.

Participants use post-it notes to place ideas on the map. Figure 79.

Figure 79. Phase 1 evaluate. Overview of phase 1 of the strategic approach. Author’s image.

Figure 80. Evaluation map. Illustration of the evaluation map and meeting steps. Author’s image.

Figure 80. Evaluation map. Illustration of the evaluation map and meeting steps. Author’s image.
It is important to plan a space where all team participants are welcomed and can engage in critical thinking about the project. Secure a sufficiently large room so all participants can move freely around the space. Place all material on a table in the center of the room. Participants will physically place images and text on boards, so they must move back and forth to the map. This activity is critical to building rapport and understanding about the challenge being discussed and leads to solving it collaboratively.

**Phase 2: Understand**

**What needs to happen?**
Phase 2 takes a staged approach to build a set of visuals that support teams understanding and planning. Each step is explained, to define the steps and tools needed to synthesize all the insights into a journey map that visualizes what the team needs to do.

**How it can happen?**
Designers and managers facilitate this process in partnership with key leaders and the teams. The following activities are performed:

1. **Participation in the space**
   Participants involved in Phase 1 are included in addition to individuals actually doing the work. Each must be part of the process.

2. **Journey Map**
   Participants explore the overarching steps and tools that are to be used to solve the challenge. At this point, participants codify a high-level project plan.

3. **Steps/Tools Map**
   Participants use the steps/tools as well as the empathy content to build out parts of the Journey Map that can inform details of an implementation project plan.

4. **Empathy Map**
   Participants identify the key people affected by the challenge and develop an understanding of the different experiences.

5. **Space Preparation**
   Designers and managers facilitate this process in partnership with key leaders and the front-line staff. In addition to those people actually doing the work, participants involved in Phase 1 are included.

**What are the measures of success?**
Success will be achieved when there is clarity of alignment for each of the steps. In aggregate, a visual that is shared and debated is part of the process that augments consensus among participants. By making the process physical, participants can see the vision unfolding – and a path to success forming.

**Phase 2: Understand**

**Steps/Tools Map**
Participants explore the overarching steps and tools that are to be used to solve the challenge. At this point, participants codify a high-level project plan.

**Empathy Map**
Participants identify the key people affected by the challenge and develop an understanding of the different experiences.

**Journey Map**
Participants use the steps/tools as well as the empathy content to build out parts of the Journey Map that can inform details of an implementation project plan.

**Space Preparation**
Designers and managers facilitate this process in partnership with key leaders and the front-line staff. In addition to those people actually doing the work, participants involved in Phase 1 are included.

**What are the measures of success?**
Success will be achieved when there is clarity of alignment for each of the steps. In aggregate, a visual that is shared and debated is part of the process that augments consensus among participants. By making the process physical, participants can see the vision unfolding – and a path to success forming.
Empathy Map:

What is the challenge you need to solve for?

Thinking

What is the person thinking?

Feeling

What is the person feeling?

Process

What process is the person going through?

Place

What environment is the person in?

Products

What products might be involved?

Always come prepared with tape for posting images on the board, Post-it Notes, markers, and scissors for building the map.

First, place an image of the target audience or person here.

Map size: 48” x 24”

As part of the planning process the manager or designer should select a large number of photographs and icons and cut them out in advance. These visual stimuli can be strong, but might also contain images relevant to the area of challenge. The use of visual stimuli can help stimulate the team members to think more broadly about the challenges they are facing and the potential solutions they are tasked with addressing.

The Empathy Map allows participants to fully visualize a challenge. It starts with the challenge. The challenge is the focus or the area the team is solving the challenge in the middle. When health care systems the challenge involves a person and their role within the place they work, the products they use, and the processes they are involved with. For example, the target individual may be a nurse who is dealing with a particular situation in their workplace. It is important for team members to describe what the person is thinking and feeling in order to gain greater understanding of potential challenges that are always immediately evident. These two areas are critical to the Human-Centered Design approach.

Visualizing the person in proximity to the place, product, and process will help clarify the problem and allow teams to empathize with the person through the relationship of ideas.

B. Empathy Map

Phase 2: Understand

Figure 83. Phase 2 understand. Illustration of the parts included in the empathy map of phase 2. Author’s image.

Figure 85. Phase 2 empathy map. Illustration of the empathy map and its components. Author’s image.

Figure 84. Photographic images. Royalty-free stock photography purchased at https://us.fotolia.com.
Phase 2: Understand

C. Steps/Tools Map

The steps/tools portion of the understanding phase is designed to familiarize the team with the Human Centered Design method and how it integrates into the Six Sigma method. The “steps” at right are taken from both methods. The “tools” are also taken from each method and can be matched with different steps. There are dozens of tools to accomplish each of the steps on the Steps and Tools Map that will be explored in the journey map stage. Each tool has actions associated with it that will be discussed and debated during the journey map stage.

The Steps/Tools Map is designed to allow participants to fully understand each of the steps and tools that might be needed throughout a change initiative. As participants build the map, they may include discussion and debate about which steps or tools are appropriate. The goal is to further understand and see the potential benefits of each step in a way that helps in understanding the potential benefits of the Six Sigma and Human Centered Design methods.

Participants can select what they believe are the best steps for solving the challenge, and place them on the Steps and Tools Map. Participants place the tool cards to match each step of the process.
The Journey Map outlines a vision for how the chosen change might unfold over time. It combines the thinking, feeling, place, process, and products from the Empathy Map with the Steps and Tools Map. The Journey Map is a manifestation of the qualitative approach found in Human-Centered Design with the quantitative aspects of Six Sigma. While the goal of the Journey Map is to imagine an ideal future state, many of the parts will be refined in Phase 3, when a schedule of work is determined.

### Elements from the Empathy Map and the steps/tools populate the Journey Map.

**Empathy Map:**
- **What is the challenge you need to solve for?**
- **Thinking:** What is the person thinking?
- **Feeling:** What is the person feeling?
- **Process:** What process is the person going through?
- **Place:** What environment is the person in?
- **Products:** What products might be involved?

### Steps/Tools Map
- **Steps**
  - Are there a set of overarching steps you think are needed?
- **Tools**
  - Are there tools you would use for each step/phase of the process?

---

**Phase 2: Understand**

**D. Journey Map**

The Journey Map is an illustration of the parts included in the journey map of phase 2. Author's image.

**Figure 88.** Phase 2: Understand. Illustration of the parts included in the journey map of phase 2. Author's image.

**Figure 89.** Phase 2 journey map. Illustration of the journey map and its components. Author's image.
### Sample Schedule

The following is a sample schedule to follow for a Phase 2 workshop: understanding.

<table>
<thead>
<tr>
<th>Step</th>
<th>Time</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Reserve Space</td>
<td>1 week prior</td>
<td>Manager/Designer makes sure the space is appropriate</td>
</tr>
<tr>
<td>2: Collect Materials</td>
<td>1 week prior</td>
<td>Print out Empathy Challenge, Steps/Tools and Journey Maps</td>
</tr>
<tr>
<td>3: Invite Team</td>
<td>1 week prior</td>
<td>Manager/Designer invites team members to join the meeting</td>
</tr>
<tr>
<td>4: Steps/Tools Map</td>
<td>1 hour</td>
<td>Manager/Designer facilitates and participates in posting images</td>
</tr>
<tr>
<td>5: Lunch</td>
<td>1 hour</td>
<td>Select a place to go in advance or order in</td>
</tr>
<tr>
<td>6: Journey Map</td>
<td>1 hour</td>
<td>Manager/Designer facilitates and participates in merging the used in the workshop of phase 2. Author's image.</td>
</tr>
<tr>
<td>7: Closing</td>
<td>30 min</td>
<td>Manager/Designer facilitates closing the meeting by getting used in the workshop of phase 2. Author's image.</td>
</tr>
</tbody>
</table>

*Sample Schedule*
Final Design to Market

M.A. Final Project

Knowledge Center

The Knowledge Center is a website dashboard that supports collaboration and knowledge sharing. The website is part of the MergeCare consulting services and is built to support the implementation phase of the project. Change initiatives are tracked through the site in order to support all team members when testing the project. In addition, case studies and resources are provided to support team members and encourage them to keep up the good work. Lastly the site contains tools for members of the team to reflect on the project as it progresses.

Resources to expand Human-Centered Design tool such as IDEO cards.

Case studies about other health care systems that are implementing change initiatives and use mixed methods.

Project tracking tools for specific change initiatives.

Area to share best practices internally and encourage use of new methods.

MergeCare

Phase 3: Implement

What needs to happen?
Team members agreed on a path in Phase 2 and now work to enact change by implementing the stages outlined in the Journey Map.

How it can happen?
Managers and designers review the phase 1 output to identify the stages of the Journey Map. Managers keep the Journey Map as a visible artifact and use it to re-evaluate the process as it unfolds.

What are the measures of success?
The measure of success will be the overall adoption of the methods used. Managers and designers will need to ensure that the tools used during this phase are used in all future projects. The surrogate of success should become more adopt at using the MergeCare and the design-led tools included in this strategic approach.

Knowledge Center

The Knowledge Center is a website dashboard that supports collaboration and knowledge sharing. The website is part of the MergeCare consulting services and is built to support the implementation phase of the project. Change initiatives are tracked through the site in order to support all team members when testing the project. In addition, case studies and resources are provided to support team members and encourage them to keep up the good work. Lastly the site contains tools for members of the team to reflect on the project as it progresses.

Resources to expand Human-Centered Design tool such as IDEO cards.

Case studies about other health care systems that are implementing change initiatives and use mixed methods.

Project tracking tools for specific change initiatives.

Area to share best practices internally and encourage use of new methods.

MergeCare
MergeCare
A strategic approach to support change in health care systems.

For materials and/or consulting contact:
Enrique Von Rohr
enrique@merge-care.com
314.799.0041

Figure 94. Back cover. Illustration of strategic approach back cover and contact information. Author’s image.

Figure 95. Logotype identity. Illustration of application of the logotype identity on various backgrounds and color combinations. Author’s image.

The Wordmark, Symbol, and Color

The MergeCare name is intended to reflect the value of bringing diverse methods together in support of health care. Because our focus is health care, we accent the word “care” in the wordmark. Combining “merge” and “care” reflects the aspirations of our vision and mission to positively affect the institutional health care sector with a new approach to problem solving. The wordmark identity is a total look, which combines and uses a palette that further expresses the blending of methods we use in our strategic approach.

The wordmark that follows the wordmark is a graphic representation of combining two ideas into one. The symbol is reinforced through a color system intended to reflect a warm and inviting approach. The pastel color palette is balanced by a saturated, single blue color that imparts a strong yet friendly quality to the overall identity.
## Business Model Canvas

**Table 33. Business model canvas.**

<table>
<thead>
<tr>
<th><strong>Cost Structure</strong></th>
<th><strong>Key Partners</strong></th>
<th><strong>Value Proposition</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed Cost Salaries</strong></td>
<td><strong>Change Managers</strong></td>
<td><strong>Customer Segments</strong></td>
</tr>
<tr>
<td><strong>Rent</strong></td>
<td><strong>Change Agents</strong></td>
<td><strong>Health Care Providers</strong></td>
</tr>
<tr>
<td><strong>Employee salaries</strong></td>
<td><strong>Innovation Teams</strong></td>
<td><strong>Health Care Professionals</strong></td>
</tr>
<tr>
<td><strong>Cost of promoting the strategic approach materials and consulting</strong></td>
<td><strong>Think Tanks</strong></td>
<td><strong>Educational Institutions</strong></td>
</tr>
<tr>
<td><strong>Media</strong></td>
<td><strong>Professionals</strong></td>
<td><strong>Health Care Managers</strong></td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td><strong>Other Change Strategies</strong></td>
<td><strong>Health Care Designers</strong></td>
</tr>
<tr>
<td><strong>Revenue Streams</strong></td>
<td><strong>Key Activities</strong></td>
<td><strong>Health Care Managers</strong></td>
</tr>
<tr>
<td>Consulting</td>
<td><strong>Key Resources</strong></td>
<td><strong>Health Care Professionals</strong></td>
</tr>
<tr>
<td>Sales of stand-alone product</td>
<td><strong>Customer Relationships</strong></td>
<td><strong>Professionals</strong></td>
</tr>
<tr>
<td>Grants/Foundations</td>
<td><strong>Customer Relationships</strong></td>
<td><strong>Professionals</strong></td>
</tr>
</tbody>
</table>

### SWOT Analysis

#### Key Partners

**Strengths**
- We have an inclusive approach, which allows for entry into the market.
- Professionals in health care are interested in improving their system.

**Weaknesses**
- Still a young strategy, so market conditions have yet to be fully developed.
- Founders are new to the space and may not have the ability to make long-term commitments.

#### Key Activities

**Strengths**
- Education approach offers for entry into the market.
- Consulting agreements with organizations interested in offering a combined approach.

**Weaknesses**
- It is difficult to gain the buy-in needed to implement the strategy presented in this approach.
- There are many health care leaders who are overworked and have little time to think critically about the strategy presented in this approach.

#### Key Resources

**Strengths**
- Consulting agreements with organizations that have a long-term success rate are a challenge to find.
- Founder is passionate about the work and the strategy presented in this approach.

**Weaknesses**
- Founders are new to the space and may not have the ability to make long-term commitments.
- Health care sector is familiar with both existing approaches to change and new methods.

### Summary

MergeCare supports Institutional Health Care Professionals by offering a strategic approach that integrates an intuitive and logical process for participants to implement. Unlike other change strategies that are primarily data-driven, our approach is based on research that revealed an opportunity to combine human-centered design and process improvement methods to deliver greater outcomes and sustainable change. Because we put people at the center of our strategy, health care professionals who adopt the approach will experience successful change programs. We do this by facilitating change initiatives and are looking for new opportunities to energize their colleagues. Change Managers and adopt.
A new combination of existing tools may be non-threatening because people are familiar with them. Low cost to test may create large opportunity for adoption.

**Opportunities**
- Low cost to test may create large opportunity for adoption.
- High cost to implement long-term.
- There are many health care conferences dealing with innovation in the sector where we could promote the strategy.
- There is a large target audience.
- Adoption by one large system may sustain the startup growth of the consulting service.
- Consulting can have long lead times without consistent revenue.

**Strengths**
- A new combination of existing tools may be non-threatening because people are familiar with them.
- Customer segments may not be open to innovation due to fear of perceived cost.
- Consultant network may be able to identify potential entry points beyond a local market.
- Multiple touch points offer opportunities for dissemination.
- Economy of scale may be difficult to realize.
- There are many health care conferences dealing with innovation in the sector where we could promote the strategy.
- There is a large target audience.
- Low overhead will be needed to start the service.
- Organizations are receptive to funding improvements to health care systems.

**Threats**
- Pressure may surface due to high venue cost during educational engagements.
- Simple to make the product and deliver service.
- Real-world testing will need to be done to validate the cost structure.
- Consulting cost to support teams may be too high for smaller systems that need the service.
- Consulting can have low start up cost to prepare materials and put in place technology needed to disseminate the product to market.
- Consulting cost to support teams may be too high for smaller systems that need the service.

**Weaknesses**
- Customer segments may not be open to innovation due to fear of perceived cost.
- Consultant network may be able to identify potential entry points beyond a local market.
- Multiple touch points offer opportunities for dissemination.
- Economy of scale may be difficult to realize.
- Low overhead will be needed to start the service.
- Organizations are receptive to funding improvements to health care systems.

**Opportunities**
- Low overhead will be needed to start the service.
- Customers often have pre-existing service frameworks for large organizations to support the product.
- Customers often have pre-existing service frameworks for large organizations to support the product.

**Strengths**
- A new combination of existing tools may be non-threating because people are familiar with them.
- Low cost to test may create large opportunity for adoption.
- Consultant network may be able to identify potential entry points beyond a local market.
- Multiple touch points offer opportunities for dissemination.
- Economy of scale may be difficult to realize.
- There are many health care conferences dealing with innovation in the sector where we could promote the strategy.
- There is a large target audience.
- Low overhead will be needed to start the service.
- Organizations are receptive to funding improvements to health care systems.

**Threats**
- Pressure may surface due to high venue cost during educational engagements.
- Simple to make the product and deliver service.
- Real-world testing will need to be done to validate the cost structure.
- Consulting cost to support teams may be too high for smaller systems that need the service.

**Weaknesses**
- Customer segments may not be open to innovation due to fear of perceived cost.
- Consultant network may be able to identify potential entry points beyond a local market.
- Multiple touch points offer opportunities for dissemination.
- Economy of scale may be difficult to realize.
- There are many health care conferences dealing with innovation in the sector where we could promote the strategy.
- Organizations are receptive to funding improvements to health care systems.

**Opportunities**
- Low overhead will be needed to start the service.
- Customers often have pre-existing service frameworks for large organizations to support the product.
- Customers often have pre-existing service frameworks for large organizations to support the product.

**Strengths**
- A new combination of existing tools may be non-threatening because people are familiar with them.
- Low cost to test may create large opportunity for adoption.
- Consultant network may be able to identify potential entry points beyond a local market.
- Multiple touch points offer opportunities for dissemination.
- Economy of scale may be difficult to realize.
- There are many health care conferences dealing with innovation in the sector where we could promote the strategy.
- There is a large target audience.
- Low overhead will be needed to start the service.
- Organizations are receptive to funding improvements to health care systems.

**Threats**
- Pressure may surface due to high venue cost during educational engagements.
- Simple to make the product and deliver service.
- Real-world testing will need to be done to validate the cost structure.
- Consulting cost to support teams may be too high for smaller systems that need the service.

**Weaknesses**
- Customer segments may not be open to innovation due to fear of perceived cost.
- Consultant network may be able to identify potential entry points beyond a local market.
- Multiple touch points offer opportunities for dissemination.
- Economy of scale may be difficult to realize.
- There are many health care conferences dealing with innovation in the sector where we could promote the strategy.
- Organizations are receptive to funding improvements to health care systems.

**Opportunities**
- Low overhead will be needed to start the service.
- Customers often have pre-existing service frameworks for large organizations to support the product.
- Customers often have pre-existing service frameworks for large organizations to support the product.

**Strengths**
- A new combination of existing tools may be non-threatening because people are familiar with them.
- Low cost to test may create large opportunity for adoption.
- Consultant network may be able to identify potential entry points beyond a local market.
- Multiple touch points offer opportunities for dissemination.
- Economy of scale may be difficult to realize.
- There are many health care conferences dealing with innovation in the sector where we could promote the strategy.
- There is a large target audience.
- Low overhead will be needed to start the service.
- Organizations are receptive to funding improvements to health care systems.

**Threats**
- Pressure may surface due to high venue cost during educational engagements.
- Simple to make the product and deliver service.
- Real-world testing will need to be done to validate the cost structure.
- Consulting cost to support teams may be too high for smaller systems that need the service.

**Weaknesses**
- Customer segments may not be open to innovation due to fear of perceived cost.
- Consultant network may be able to identify potential entry points beyond a local market.
- Multiple touch points offer opportunities for dissemination.
- Economy of scale may be difficult to realize.
- There are many health care conferences dealing with innovation in the sector where we could promote the strategy.
- Organizations are receptive to funding improvements to health care systems.
Business/Implementation Plan

Executive Summary

MergeCare is a strategic approach for institutional health care managers and designers who need to support change in complex functional and operational environments. We deliver our strategic approach by partnering with experts across the country who provide innovative programs that improve overall operations. Our team has over 30 years of combined experience partnering with clients that appreciate collaboration and design-led approaches. The techniques we use are trans-disciplinary: we utilize human-centered design with process improvement methods to deliver programs that bridges not only methods and tools, but customer segments and stakeholders. Our focus on two customer segments in order to optimize consulting engagements.

The Team

Managers/Profile

Chief Design Officer
The chief design officer at MergeCare has over twenty years of experience in the design industry. He was a founding member of a New York-based start-up design practice with clients in financial services, law, and health care. In addition, he has taught design 101 to design professionals to build upon.

Facilitation Activators
The Facilitation Activator has been in the health care sector for ten years - on anger out of facilitating education experiences and facilitates professional development through a design management process. The outcome is our strategic approach.

The MergeCare model has a distributed workforce strategy, positioned to lead large teams of health care professionals. The Lead Design Activator has been in the health care sector for twenty years – an ongoing act of facilitating educational experiences. The Chief Design Officer of MergeCare has over twenty years of experience in the design industry. He was a founding member of a New York-based start-up design practice with clients in financial services, law, and health care. In addition, he has taught design 101 to design professionals to build upon.

Why We Are a Winning Team

We have a passion for improving the quality of people’s lives. The health care sector comprises some of the largest organizations in the world. We implement the change. MergeCare’s strategy is intended as a starting point for an expanded set of methods for health care managers and designers who need to support change in complex functional and operational environments. Our strategic approach integrates human-centered design with process improvement methods to deliver programs that bridges not only methods and tools, but customer segments and stakeholders. Our focus on two customer segments in order to optimize consulting engagements.

The Business Model

Value Proposition

MergeCare is a new approach for institutional health care managers and designers who need to support change in complex functional and operational environments. We offer our consulting service as a strategic approach in partnership with management strategies that bridges not only methods and tools, but customer segments and stakeholders. We do this by facilitating a set of visualization sessions that clarify opportunities, imagine futures, and implement the change. We offer our consulting service as a strategic approach that enables design and management leaders to affect change activity in their health care organizations.

Our mission is to facilitate collaboration between managers, designers, and multi-faceted teams to help them evaluate, understand, imagine futures, and codify a desired process in order for team participants to implement projects. Unlike other approaches, ours combines Human-Centered Design with process improvement methods. The outcome is our strategic approach that integrates human-centered design with process improvement methods to deliver programs that bridges not only methods and tools, but customer segments and stakeholders. Our focus on two customer segments in order to optimize consulting engagements.

We have a passion for improving the quality of people’s lives. The health care sector comprises some of the largest organizations in the world. We implement the change. MergeCare’s strategy is intended as a starting point for an expanded set of methods for health care managers and designers who need to support change in complex functional and operational environments. Our strategic approach integrates human-centered design with process improvement methods to deliver programs that bridges not only methods and tools, but customer segments and stakeholders. Our focus on two customer segments in order to optimize consulting engagements.
and design thinking. Health care is now looking to design for innovation, these strategies often data driven and lack a human-centered approach. Health care professionals can develop holistic approaches that meet outcome goals. By integrating a mix of human-centered approaches. The Affordable Care Act of 2010 is putting increased pressure on the institutional health care sector to focus more on patient outcomes. By integrating approaches that focus on behavior change from the start, health care professionals can develop holistic approaches that meet outcome goals.

Project Implementation Roadmap

Projects

- Financial Analysis
- Product Refinement

Financial Analysis

- Review of existing financial statements and projections
- Analysis of capital spending, operating costs, and funding requirements.

Product Refinement

- Refinement of the product and consulting scope will be needed prior to implementing change management strategy.
- Additional testing will involve providers to refine changes.

Competitor Analysis

- By positioning MergeCare as a business intended to support managers and designers ability to affect change through a human-centered and process improvement approach, we position ourselves in an opportunity space that few are targeting.

Competitive Advantages

- Competitor analysis revealed that there is a growing interest in approaches to change in the health care sector.
- The methods we are adopting may be available to the target audience.
- Needs senior level buy-in to pay for change activity may be a challenge.
- Professionals in health care are overworked and may not take time to test new methods.

External Environment

- The economy is put under pressure by the new economy.
- External Environment: Risk Analysis
- Business SWOT Analysis

- Opportunities
- Threats

Weaknesses

- Limited factors for MergeCare include the possibility that existing organizations in the healthcare design space are already penetrating the health care space and can pivot to include our services.
- Consulting agreements with services that have a long lead time for success are a challenge to fund.
- Consulting agreements with services that have a long lead time to success may create opportunity for adoption.
- Consulting cost to support teams may be too high for smaller systems that do not need the service.
- Health care professionals often find their own workarounds to problems, thus adopting a combined approach may be a challenge.

- Customers often have limited time to engage.
- Economy of scale may be difficult to realize.

- Institutions health care can often limit outsourcing of change initiatives, especially when the organization is large.
- Consultants may diversify potential entry points beyond the approach.
- Consulting agreements with services that have a long lead time for success are a challenge to fund.
- Consulting fee for national non-profits that advocate for new services.
- Consulting fee for national health care conferences that showcase new approaches to innovation can be obtained.
- Consultants often seek out innovative approaches like ours and may promote our work.
- There is a large target audience.
- Potential for large, existing partner organizations to support the product.
- Consultant network may diversify potential entry points beyond the approach.
- We have an inclusive view of methods to support our approach.

- Challenges/changing culture of Six Sigma and integrates a new, human-centered approach.
- Change activity has a long lead-time to demonstrate results, thus challenging adoption from target audiences in order to sustain strategy by managers and designers.
- Limiting factors for MergeCare include the possibility that others will co-opt parts of the approach. Audiences may seek out the methods on their own.
- Another limiting factor could be that, once the organization adopts the approach, there may be limited growth of consulting services.
- The methods we are adopting may be available to the target audience.
- There is a real chance that others will co-opt parts of the approach. Audiences may seek out the methods on their own.
- There could be slow growth of consulting services.
- Professionals in health care are overworked and may not take time to test new methods.
- There is a large target audience.
- Potential for large, existing partner organizations to support the product.
- Consultant network may diversify potential entry points beyond the approach.
- We have an inclusive view of methods to support our approach.

- One of the key problems is that there is a lot of pressure on the health care sector to focus more on patient outcomes. By integrating approaches that focus on behavior change from the start, health care professionals can develop holistic approaches that meet outcome goals.

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.

2.4 Revenue model

- Business SWOT Analysis

1.0 Introduction

2.0 Business Model

2.1 Proposition

- We have an inclusive view of methods to support our approach.

2.2 Value Proposition

- Customer success
- Core offers
- Customer outcomes

2.3 Strategy

- Strategy is driven by the need to change the healthcare sector.
Conclusions and Recommendations
Conclusions

MergeCare is a proposal for health care managers and designers in the St. Louis region, however, it is intended to be applicable across US-based systems. Institutional health care systems seeking to affect greater change by integrating design-led approaches within their existing process improvement methods will find value in what MergeCare has to offer.

The Process

This concept grew out of a research question: "How might the application of design management methodologies support transformational change within the institutional health care sector?" The process began with defining the problem, target audience, purpose, scope, and significance of the study. These initial steps clarified the boundaries of what could be accomplished within the timeframe and the question’s relevance to the practice of design management.

Secondary research about institutional health care defined a strategic intent through market analysis. The insights generated provided a broader understanding of the problem statement in order to identify opportunities for design to be integrated into the institutional health care sector.

MergeCare is marketed as a program that managers and designers can implement on their own, or in the context of a consulting service in which facilitators walk teams through the process.

Conclusions

Conclusions and Recommendations

Institutional health care managers and designers have challenging jobs that intersect with operational logistics and human factors. Subject interviews revealed that affecting change in order to better serve clients was a slow and difficult proposition, partly due to the intensity and complexity of practice across institutional health care. The heterogeneous environments, data points, and health conditions that must be attended to make it challenging to develop a strategy that works across all areas. Hence, MergeCare’s strategic approach is inclusive, giving it the potential to integrate additional methods over time.

If changes to occur in institutional health care, it is recommended that managers and designers embrace approaches that incorporate design- and process improvement strategies in a holistic way. It is also recommended that the initial problem-solving team be limited to a few key stakeholders until the organization is well versed in the approach. This will help secure long-term change agents within the organization.
References section cover image. Pattern from card sorting method showing the three areas of inquiry. Author's image.
Summary: This article, published prior to Berry’s book of a similar title, is a valuable resource for those interested in the leadership lessons learned in the collaborative organization. The author, L. L. Berry, provides a case study of Mayo Clinic, highlighting the success of a large organization in dealing with patient-centered issues and providing a collaboration model unique to Mayo. The administrators function as coaches and vice versa, working together at each level, with every physician paired with an administrator. The organization is physician-led, supported by investment in infrastructures that facilitate electronic medical record (EMR) systems and electronic health records, capturing all patient data and supporting collaboration. The Mayo Clinic’s success is attributed to the “team” approach used by all Mayo employees, which enables them to hire for life and work collaboratively. The article discusses how Mayo Clinic invests in leadership development and continuous learning, which is crucial for the organization’s success. The Mayo Clinic’s approach to leadership is based on understanding the organization’s attributes, delivering by actually functioning collaboratively, and working in all activities in order to hire for life. Collaboration is further supported by Mayo Clinic’s approach to investment, which informs what might be best practices.

Relevance: This article provides insights into the successful implementation of a collaborative organization, which is relevant to healthcare organizations looking to improve their patient-centered care and collaboration models. The Mayo Clinic’s approach to leadership, investment, and continuous learning can be applied to other organizations to enhance their effectiveness and success.

Summary: The paper discusses the role of managers in organizational learning and transformation, highlighting the importance of understanding and managing the creation of meaning. The paper proposes ways to link discourse as a way of reasoning/making sense of things, and as the “creation of artifacts, reflexive practice, as a problem-solving activity, as a change management process.” They include: being a communicator, helping one to understand characteristics of the process, understanding where they fit within the model and what methods they could incorporate into the teaching process and to consider if that is relevant in the context of transformational change.

Relevance: This paper discusses the role of managers in organizational learning and transformation, which is relevant to healthcare organizations looking to improve their patient-centered care and collaboration models. The paper provides insights into how managers can understand and manage the creation of meaning in their organizations, which can be applied to healthcare organizations to enhance their effectiveness and success.


The intent of this paper was to "identify factors and design leading indicators for success when applying a Six Sigma methodology to the health care sector." The authors argued that Six Sigma is a structured method, and performance metrics with the aim of supporting transformational change.

Research Relevance: In order to have transformational change, a systems thinking perspective is often needed to understand the multiple areas within health care.

The authors noted that Six Sigma is a structured focus group format and three-dimensional video mock-up to inform design decision making.

Research Relevance: This article assists with understanding how the top management team membership in order to be successful.


The intent of this paper was to "identify factors and design leading indicators for success when applying a Six Sigma methodology to the health care sector." The authors argued that Six Sigma is a structured method, and performance metrics with the aim of supporting transformational change.

Research Relevance: In order to have transformational change, a systems thinking perspective is often needed to understand the multiple areas within health care.

The authors noted that Six Sigma is a structured focus group format and three-dimensional video mock-up to inform design decision making.

Research Relevance: This article assists with understanding how the top management team membership in order to be successful.

The intent of this paper was to "identify factors and design leading indicators for success when applying a Six Sigma methodology to the health care sector." The authors argued that Six Sigma is a structured method, and performance metrics with the aim of supporting transformational change.

Research Relevance: In order to have transformational change, a systems thinking perspective is often needed to understand the multiple areas within health care.

The authors noted that Six Sigma is a structured focus group format and three-dimensional video mock-up to inform design decision making.

Research Relevance: This article assists with understanding how the top management team membership in order to be successful.
Figure 1. Cover image.  
Figure 2. Project framing section cover image.  
Figure 3. Project positioning section cover image.  
Figure 4. 2x2 axis of organizations supporting transformation.  
Figure 5. 2x2 axis of approaches to transformation.  
Figure 6. Research space..  
Figure 7. Venn diagram of new process intersection.  
Figure 8. Research activities and synthesis section cover.  
Figure 9. Research space.  
Figure 10. Research space.  
Figure 11. Informed consent form.  
Figure 12–13. Interview questions field guide.  
Figure 14. Quotations from subject interviews.  
Figure 15. Project positioning section cover image.  
Figure 16. Project framing section cover image.  
Figure 17. Methods cards.  
Figure 18. Top 15 words for all data.  
Figure 19. Quotations from subject interviews.  
Figure 20. Composite of 6 designers’ card sort results.  
Figure 21. Composite of 6 managers’ card sort results.  
Figure 22. Prototype development and testing cover image.  
Figure 23. Synthesis of card sort map.  
Figure 24. Quotations from subject interviews.  
Figure 25. Quotations from subject interviews.  
Figure 26. Quotations from subject interviews.  
Figure 27. Quotations from subject interviews.  
Figure 28. Quotations from subject interviews.  
Figure 29. Questions from subject interviews.  
Figure 30. Sally persona.  
Figure 31. Sally persona activities.  
Figure 32. Tomas persona.  
Figure 33. Tomas persona activities.  
Figure 34. Sally persona.  
Figure 35. Tomas persona.  
Figure 36. Tomas persona.  
Figure 37. Prototype development and testing cover image.  
Figure 38. Methods cards.  
Figure 39. Methods cards.  
Figure 40. Empathy challenge map.  
Figure 41. Mapping steps and tools.  
Figure 42. Subjects building step 2 detail.  
Figure 43. Subjects discussing challenge.  
Figure 44. Subjects discussing challenge.  
Figure 45. Subjects building step 2 detail.  
Figure 46. Subjects building step 2.  
Figure 47. Subjects building step 2.  
Figure 48. Subjects building step 2 detail.  
Figure 49. Subjects building step 2 detail.  
Figure 50. Subjects building step 2 detail.  
Figure 51. Final map of steps and tools.  
Figure 52. Quotations from subject interviews.  
Figure 53. Quotations from subject interviews.  
Figure 54. Subjects discussing challenge.  
Figure 55. Subjects discussing challenge.  
Figure 56. Subjects considering steps and tools.  
Figure 57. Subjects discussing challenge.  
Figure 58. Subjects considering steps and tools.  
Figure 59. Subjects discussing challenge.  
Figure 60. Subjects discussing challenge.  
Figure 61. Subjects discussing challenge.  
Figure 62. Subjects discussing challenge.  
Figure 63. Subjects discussing challenge.  
Figure 64. Findings and revised design criteria.  
Figure 65. Final design to market cover image.  
Figure 66. MergeCare strategic approach phases.  
Figure 67. Subjects discussing challenge.  
Figure 68. Subjects discussing challenge.  
Figure 69. Prototype cover.  
Figure 70. Approach relationship concept.  
Figure 71. MegerCare description.  
Figure 72. Contents.  
Figure 73. Relationships map.  
Figure 74. Research insights.  
Figure 75. Research insights.  
Figure 76. Illustration of phases.  
Figure 77. Phases overview.  
Figure 78. Illustration of phases.  
Figure 79. Phase 1 evaluate.  
Figure 80. Evaluation map.  
Figure 81. Phases overview.  
Figure 82. Illustration of phases.  
Figure 83. Phase 1 evaluate.  
Figure 84. Findings and revised design criteria.  
Figure 85. Subjects building step 2.  
Figure 86. Findings and revised design criteria.  
Figure 87. Findings and revised design criteria.  
Figure 88. Findings and revised design criteria.  
Figure 89. Findings and revised design criteria.  
Figure 90. Findings and revised design criteria.  
Figure 91. Findings and revised design criteria.  
Figure 92. Findings and revised design criteria.  
Figure 93. Findings and revised design criteria.  
Figure 94. Findings and revised design criteria.  
Figure 95. Findings and revised design criteria.  
Figure 96. Findings and revised design criteria.  
Figure 97. Findings and revised design criteria.  
Figure 98. Findings and revised design criteria.  
Figure 99. Findings and revised design criteria.  
Figure 100. Findings and revised design criteria.  
Figure 101. Findings and revised design criteria.  
Figure 102. Findings and revised design criteria.  
Figure 103. Findings and revised design criteria.  
Figure 104. Findings and revised design criteria.  
Figure 105. Findings and revised design criteria.  
Figure 106. Findings and revised design criteria.  
Figure 107. Findings and revised design criteria.  
Figure 108. Findings and revised design criteria.  
Figure 109. Findings and revised design criteria.  
Figure 110. Findings and revised design criteria.  
Figure 111. Findings and revised design criteria.  
Figure 112. Findings and revised design criteria.  
Figure 113. Findings and revised design criteria.  
Figure 114. Findings and revised design criteria.  
Figure 115. Findings and revised design criteria.  
Figure 116. Findings and revised design criteria.  
Figure 117. Findings and revised design criteria.  
Figure 118. Findings and revised design criteria.  
Figure 119. Findings and revised design criteria.  
Figure 120. Findings and revised design criteria.  
Figure 121. Findings and revised design criteria.  
Figure 122. Findings and revised design criteria.  
Figure 123. Findings and revised design criteria.  
Figure 124. Findings and revised design criteria.  
Figure 125. Findings and revised design criteria.  
Figure 126. Findings and revised design criteria.  
Figure 127. Findings and revised design criteria.
Appendices
## Appendix A: Timeline

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Appendix B: Signed Consent Forms (Interviews)

Subjects signed informed consent form. Subjects 1-12 signed informed consent form and image of them signing. Author's images.
Appendix B: Signed Consent Forms (Prototype Testing)

Subjects signed informed consent form. Subject 13-19 signed informed consent form and image of them signing. Author’s images.

Appendix C: Interview Questions

Subject interview notes. Documentation notes from the interviews 1-12. Author’s images.
Appendix D: Working Wall (Ecosystem Map Development)

Figures 130–136. Working wall of ecosystem. Exploration of ecosystem and project concept prior to start of project. Author's images.

Appendix D: Working Wall (Week 2)

Figures 137–138. Working wall week 2. Progress from week 2 reflecting research insights. Author's image.
Appendix D: Working Wall (Week 3)

Figures 139–141. Working wall week 3. Progress from week 2, reflecting research. Author’s image.

Appendix D: Working Wall (Week 4)

Figures 142–145. Working wall week 4. Progress from week 3, reflecting research synthesis. Author’s image.
Appendix D: Working Wall (Week 6)

Figures 146–151. Working wall week 6. Progress from week 6 reflecting research insights. Author’s image.

Appendix D: Working Wall (Week 7–8)

Figures 152–154. Working wall week 7–8. Progress from week 7–8 reflecting research insights, prototype refinements and business model. Author’s image.
ER department. They are still looking at opportunities to streamline supplies and resources, so the supply

Yes. There are a lot of challenges that are difficult to solve. There is constantly a battle between doing the

needs assessment that are existing within hospitals and health departments and looking at patient centered

Are there particular types of institutional healthcare challenges that are difficult to solve? (2IH1)

living and engaging community partnerships was a big part of policy change and philanthropic side. And so

so that is something that can improve.

What processes do you see people using to solve complex operational functions in healthcare? (2IH2)

The strategic planning was looking at BJC’s overall budget and forecasting the next 10 or 15 years and

consultant. I think some other pieces around data governance is a big one and that is just learning and

that audience, making sure the information meets the needs of the users, so is it someone who really needs

challenge, learning more about it through background research, to validate what you are talking about and

I think it really depends on the audience and project itself, but what we are trying to do is balance that it is

voice, so those are two major barrios and making this a three-ring circus of administration, staff and

Absolutely, so, trying to think of this, good thing this is confidential, there is a formula, the effectiveness of

How might you describe the design process? (2DM1)

we actually have somewhere we have promised and experience map or a human centered design cycle then

that you are not making assumptions, gathering user feedback, observations, interviews, and then

the biggest projects for BJC, and then there are some of the project that are coming out of that that will be

inclusion, so that even if it comes down to a score on the decision, where the decision if higher, there still

just not process improvement, that people are a part of that process and the people and their voice need to

Institutional Healthcare Sector (IH)

EVR: You call it innovation science team.

Institutional Healthcare Sector (IH)

so much. She found a company that does exclusively that design, user design, and she left and so

research right appropriately so. It feels like a competition and I feel like if we were all better at

are moving from a reactive medical approach into more of a preventative public health approach,

Institutional Healthcare Sector (IH)

like that? Do you like this?” instead of it being more of a bigger idea.

Address: 8300 Eagar Road

Date/Time: 1/13/15 at 1:10pm

physiology. I think I realized that the reason that I went into healthcare in general, the MPH, is

anatomy and physiology teacher. I realized that I loved just science. I spend an undergraduate

Institutional Healthcare Sector (IH)

Record the following information from each interviewee.

Appendix E: Transcriptions

Appendix E: Transcriptions

Appendix E: Transcriptions

Appendix E: Transcriptions

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4

Appendix F: Unique Method Activity Subjects 1–4
Appendix F: Unique Method Activity Results Subjects

Figures 166–177. Card sort results 1–12. Shows how subjects arranged words in proximity to "Me" and how they rated their support of change with each word. Author’s image.
Figure 178. Process book back cover. Illustration of a simplified set of phases for doing an activity. Author's image.