

The Impact of Varying Leader Culture Types on Organizational Change

Initiatives

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Dedication

For my daughters, Adison and Anna, for giving me the strength to strive for success, showing you that anything is possible. To my husband, Aaron, for always pushing me to finish no matter how long the race.

Abstract

The Impact of Varying Leader Culture Types on Organizational Change Initiatives

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The nature of homeostatic organizations makes change difficult, yet organizations promote change to meet new visions, new goals and to address organizational deficiencies. Commonly used change management tools, known in this research as process change models, focus on the art of change, the steps needed to move people from one state to another and how to deal with the barriers between the former and desired states of change. It is within the change process that organizational and individual cultures are impacted. Process change models indicate the importance of and value of organizational culture, yet do not equip change agents with means to clearly identify organizational culture types prior to, during and after a change initiative.

Documented failure rates of change are high. Because of the high rate of change failure, the frequent use of process change models and the inability for process change models to identify culture types at the organizational or individual level, the aim of this study is to determine how closely aligned organizational culture types are among leader and staff roles. Different culture types in a single organization among functional groups with distinct mission can cause change disruption and reduce the likelihood of new behavior acceptance. When organizational leaders, change agents, and staff share culture types successful change is more likely.

To this end, this research addresses three questions: (1) *How closely aligned are culture types, existing and preferred, of the Change Leader – each groups' change agent with those of the Formal Leader, organizational leadership,*

and staff culture types within their functional group during a technology and process? (2) How aligned are culture types among Change Leaders – each groups' change agent in a single organization? (3) How aligned are Change Leader culture types and change success?

The research questions are answered through a modified online Organizational Culture Assessment Instrument (OCAI) and semi-structured interviews. This research identifies that culture types among different organizational roles vary in each of the organization's functional groups. The unknown differences in culture across the organizations can be a contributing factor to failed change.

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Chapter 1: Introduction

Public organizations are under pressure to reinvent, transform, or reform (Fernandez and Rainey 2006; Rainey 2014; Kuipers et al. 2013). Public organizational leaders play a critical role in bringing about successful organizational change (Fernandez and Rainey 2006; Schein 2010; O’Flynn 2007). To address change issues affecting public organizations, leaders leverage change tools to achieve desired change. Unfortunately, literature shows that change is typically unsuccessful. Due to the likelihood of necessary change and the rate of failed change, this study examines the role of leader culture in a public organizational change initiative.

This study looks at the culture types that exist in nine functional groups within an organization that underwent a change effort. Chapter 1 discusses the purpose of organizations, the people who lead organizations and their role in organizational change. The primary purpose of the research is to examine the cultures of people in organizations, and the tools that organizational leaders leverage during change management efforts. This chapter focuses on the people within organizations, viable change tools, change success, and organizational culture.

Organizational change, especially change that shocks organizational culture is very difficult (Mintzberg 1989). What people believe to be their culture in an organization guides the ability to change. This is true for those leading the change as well as for those people in the organization impacted by the change.

Organizations and Leaders

Organizations are entities comprised of people, structure, and a distinct mission and vision (Aldrich and Ruef 2006; Chell 1987; Godwyn and Hoffer Gittel

2011; Van der Duin 2016). Organizations contain people who execute mission related work. Organizations are guided by leaders (Fullan 2008). Leaders are the drivers within an organization, directing people to believe and engage in deliberate change (Kim and Mauborgne 2011). Leaders are change agents; they identify allies and opponents of change and mold uncommitted people towards change tolerance and acceptance (Heifetz and Linsky 2011). Leaders can be any person at any level of an organization. According to Mechanic (1962), organizational leaders however, are not necessarily high-ranking officials. Mechanic asserts that “lower participants in an organization can often assume and wield considerable power which is not associated to their position” (Mechanic 1962, 351). Mechanic’s position on leaders is important to this research because leaders within the organization studied in this dissertation hold not only high position roles but also lower organizational position roles. Organizational leaders define what the organization’s future should look like, align people with a vision, and inspire people within the organization to make deliberate change happen despite obstacles (Kotter 1996; Kotter 2002). During change efforts, leaders hope that people are flexible to change; however, being flexible depends on the people’s cultures within the organization.

Organizational Change

Organizations, including public organizations, change all the time (Burke 2018), but “organizations by their nature are homeostatic, which makes each of them recognizable from day to day, year to year, decade to decade” (Kaufman 2017, 2). Organizations look to change people to meet the new vision and goals of the organization (Torben 2014b) even when people in the organization bring forth reasons not to change (Laszlo 2000). Organizations can experience change

as revolutionary, where a leader guides people through periods of incremental change, or evolutionary, where multiple people lead change and work to empower others to become leaders themselves. “Long-term success is marked by increasing alignment among strategy, structure, people, and culture through incremental or evolutionary change” (Tushman and O’Reilly 1996, 11). It is the evolutionary change that stays with an organization. “Almost all successful organizations evolve through relatively long periods of incremental change” (Tushman and O’Reilly 1996, 11), but evolutionary change is complex (Ahmed, Balzaro, and Cohen 2015). Evolutionary change promotes long lasting successful organizational change, but it takes time, dedication and planning from leaders keeping in mind that a single change impacts people differently (Prosci 2016). To aid in successful change, leaders may use a variety of tools to achieve successful organizational change.

Tools that Leaders can use to Change Organizations

Organizations need to consider change and its associated management from two perspectives: (1) fundamental change; a change in the culture or identity of the organization, and (2) building a capacity for change which, importantly, highlights both speed of response and implementation excellence (Higgs and Rowland 2000). There are several tools that leaders, Change Leaders, can use during change initiatives. Change Leaders, for this study, are defined as people within an organization who embrace the defined change and lead others towards accepting the change. Leaders maintain the ability to shift people from one way of working to another (Maxwell, 2013). I defined these various tools as process change models, which are used by Change Leaders to address performance gaps, consider new technology, capitalize on opportunities, confront external pressures, and modify behavior in internal culture challenges.

Although process change models help Change Leaders during organizational change, they do have limitations. Process change models focus on change through process and less on identification and classification of culture.

Organizations tend to be unyielding to change and adaptation, (Ahmed, Balzarova, and Cohen 2015). “Constraints on change by definition diminish flexibility” (Kaufman 2017, 2); constraints hinder organizational change. Process change models are intended to help facilitate organizational change, yet there are “ways that management can utilize cultural assessments to increase the likelihood of success in managing change (Mallinger, Goodwin, and O’Hara 2009, 2)). Organizational culture may be an underlying constraint for why organizations fail to change. process change models are not intended to categorize culture and alone process change models may be inadequate in achieving successful change.

Process change models mention culture within the change process steps but do not provide Change Leaders with ways to identify organizational culture. Having different organizational cultures in a single organization can create an inflexible change environment. Different cultures create complex and inflexible environments for change. Functional groups, organizational units within the organization with distinct organizational missions, that have competing cultures, may find difficulty accepting change during a change effort. Although process change models help leaders guide people during organizational change efforts, process change models alone may not produce successful change. Because of the role and potential influence that culture may have on an organization, this research identifies the different cultures present in a single organization and examines their alignment during a change effort.

Organizational Culture

Culture is defined in surprisingly different ways. For some, it is the same as 'organizational climate,' for others 'management style' and for still others culture is a deep phenomenon merely manifested in various behavior (Schein 1986) that implies the interconnection of rituals, climate, values, and behaviors together into a coherent whole (Schein 2004). "Culture has been variously defined as: a set of values, beliefs, and behavior patterns (Deshpande and Webster 1989; Moorman 1995); customs or ways of doing things (Buono et al. 1985; Lefkoe 1987); the core identity of an organization (Dennison 1984); a set of rules, norms and roles (O'Reilly 1989; Ouchi and Wilkins 1985); informal, hidden forces and unwritten, unconscious messages (Deshpande and Webster 1993; Webster 1990); an organization's expressive and affective systems (Reynolds 1986); a social control system (O'Reilly 1989); management style and problem solving behavior (Schwartz and Davis 1981); and shared symbols and meanings in the form of myths, stories, legends, rituals, etc. (Gregory 1983; Smircich 1983)" (Velliquette and Rapert 2001, 70-71). "Organizational culture can be defined as a set of values and beliefs that members of an organization share" (Krisellen, Antelman, Arlitsch, and Butler 2010, 323). Similarly, Burke (1994) identifies culture as norms and values with conforming patterns of behavior (Burke 1994).

Organizational culture is the binding fabric in organizations. It is the frame of reference that helps distinguish one group of people from another known as functional groups (Conner 1992). Functional groups maintain distinct missions and their cultures are unique to the group (Denison and Spreitzer 1991; Fine 1995). Individuals within each functional group provide a personal identity (Kavanagh and Ashkanasy 2006, 81) that contributes to group culture.

People in each functional group may have different cultures and based on their values and beliefs may respond to the change differently. Because change can be perceived differently by people in the same functional group, it is important for Change Leaders to understand their staff cultures and prepare to lessen negative reacts to change. Change Leaders guide staff towards successful change while being mindful of staff's cultures and should understand how their staff values and beliefs are impacted by change.

Statement of the Problem

My research looks at the importance of culture identification during organizational change efforts. Organizational change can occur when the organization's Formal Leaders identify needed adjustments due to internal and external forces that shift the organization's ability to meet its mission and goals. The cultures that Formal Leaders embody guide the Change Leaders during the change effort; The Change Leader leads their functional group by the Formal Leader culture. Unified cultures in an organization help achieve organizational change (Rose 2018). Functional groups in an organization with different cultures can experience change acceptance barriers that hinder successful change (Kotter 2011). Barriers include change resistance due to fear of the change itself, and/or a lack of consensus among functional groups on how to change, what to change or why to change (Kotter 2011). "The most general lesson to be learned from the many studies is that organizational culture is the most common barrier" (Torben 2017, 1). Organizational cultures can hinder successful change.

Knowing the cultures in an organization can help Change Leaders navigate barriers and work towards successful change. Ideally, everyone in the organization shares the same vision of culture for the organization. This is rarely

the case. It is dangerous to assume that the same culture exists across an organization. Because of the likelihood of different cultures in the organization, Change Leaders should: 1) know their own cultures 2) know their leadership's, cultures and reproduce that as their own 3) know staff cultures 4) help staff understand why the organization needs to change and guide staff towards change with the Formal Leaders' cultures as guidance. Appropriately this research looks at identifying cultures through use of a culture model in conjunction with process change models. Culture models and process change models together can lead to successful change.

“Leaders who are change savvy know that they cannot become successful without the collective commitment and ingenuity of the group” (Fullan 2011, 53). Novice Change Leaders may unconsciously follow behaviors and values of their group, but may not have the ability, due to time, inexperience or other factors, to categorize or comprehend their own or their group's cultures. Central leadership is important to change efforts but relies heavily on peer cultures to achieve deep seated change (Fullan 2011). A lack of culture identification can carry frustration and introduce barriers during change efforts.

Change Leaders who use process change models do so with the intent of having successful organizational change; however, the failure rate of most planned organizational change initiatives is striking (Cameron and Quinn 2006). Shin, Taylor and Seo (2012) state that there is a 50% failure rate of change initiatives (Shin, Taylor, Seo 2012). According to a 2013 Strategy & Katzenbach Center survey of global senior executives on culture and change management, the success rate of major change initiatives is only 54 percent (Aguirre and Alpern 2014), and according to another source, “two out of three transformation initiatives fail” (Sirkin, Keenan, and Jackson 2011, 155). While a high failure rate

of change initiatives may be surprising, “even less well known is why the other 30 percent of change initiatives succeed” (Clear Rock 2015, 1). According to Kotter, 70% to 90% of successful organizational change efforts occur because of leaders (Kotter 1996), but what does this really mean? Most change initiatives fail, but what makes that small percentage of organizational change initiatives succeed? Does leader knowledge of culture contribute to successful change?

“Most [change] efforts encounter problems; they often take longer than expected and desired, they sometimes kill morale, and they often cost a great deal in terms of managerial time and emotional upheaval” (Kotter and Schlesinger 1979, 107). This research looks at the different cultures in a single organization by functional group after a process change model was used for a change effort. This research is intended to determine if culture types align in a single organization among functional groups and roles within each of those groups. This research determines the alignment of culture types in an organization during a change effort, and examines the benefits of culture type identification during change efforts.

Study Purpose

Most process change models mention the importance of culture in change; however, process change models do not identify culture. Because culture is important during change efforts and process change models look at culture but do not provide steps on how to identify culture, this research presumes that the use of process change models alone may be a reason that change fails. The documented low success rate of change initiatives, and the unknown reasons that change initiatives do succeed drive the interest for this research.

This study identifies the various cultures that exist in a single organization. Cultures help people identify who they are within an organization. People who identify with groups are less likely to leave, are more involved with their work, perform better, and are more satisfied with their jobs (Bright 2017). Culture type identification for the Formal Leaders, Change Leaders, and staff help the Change Leader determine if different cultures exist in groups and across the overall organization. Different culture in a group or organization can lead to change failure. Because process change models are helpful to leaders during change initiatives, but do not provide steps to identify culture, this study looks at the value of using culture models with process change models to guide successful organizational successful change.

Study Setting

The study identifies the cultures within a small federal health organization of about 1,000 staff members with nine functional mission related groups. Each of the nine functional groups serves a distinct mission for the organization. Each group contains one Formal Leader to guide the group mission and lead staff. One of the nine Formal Leaders is the director of the organization to which each Formal Leader reports. The director guides the entire organization towards organizational goals.

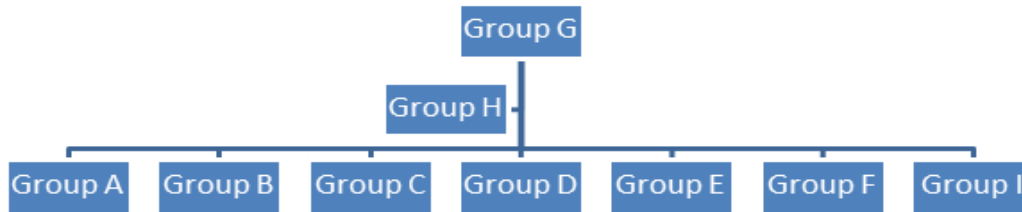
In this organization, a process change model was used during a change effort. To determine if culture types in the organization were similar and this similarity aided in the change initiative's success or whether group cultures were different and potentially hindered the change success, this research identified the Formal Leader, Change Leader, and staff culture type for each functional group. Each of the nine functional groups serves a scientific or administrative

purpose. Six of the 9 groups perform scientific tasks while three of the nine perform administrative tasks. The group identifier, number of electronic routing system users in each group size, and group category is illustrated in table 1. Table 1 shows that two of the administrative groups account for the smallest and largest functional groups in the organization. The third administrative group is the third smallest group in the organization. Figure 1 shows that two of the administrative groups, Groups G and H, are at the top of the organization structure. The third administrative group, Group I, reports to Group G as do the scientific groups.

Table 1: Nine Functional Groups by Size

Group Identifier	Number of Users in Group	Group Category
Group G	11	Administrative
Group A	12	Scientific
Group I	13	Administrative
Group B	17	Scientific
Group F	21	Scientific
Group E	32	Scientific
Group D	64	Scientific
Group C	100	Scientific
Group H	174	Administrative

Figure 1: Organizational Structure



Groups G and H were the impetus for change with Group G containing the director of the organization. Both groups, as illustrated in figure 1, are senior administrative groups. Group G is the executive functioning group while Group H is the executive administrative group in the organization. Leaders in Group G and H expected that changing from a paper-based routing process to an electronic routing process would be difficult. They also predicted that administrative groups within the organization would find the electronic routing system more useful. It was expected that scientific groups within the organization would see the change as burdensome on their scientific functions.

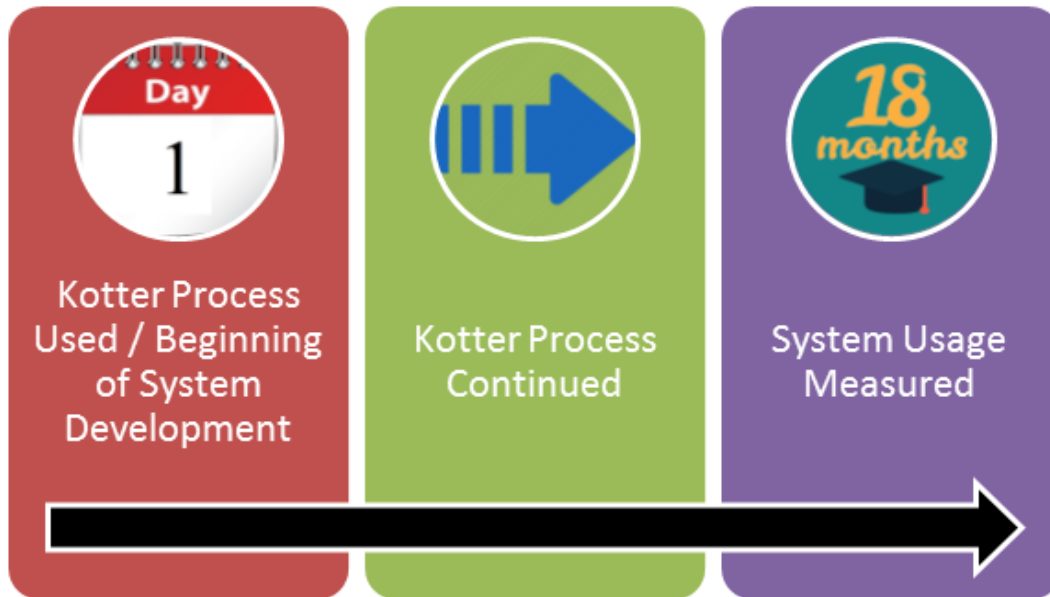
Case Study - process change model

Groups G and H desire the change surrounding a new technology that impacted the entire organization. The new technology, an electronic routing system, was envisioned to assist all staff within the organization with routing procedures. The system provides the study's organization an opportunity to integrate operations and automate functions (Sharma 2016) to help the organization achieve its mission and goals more efficiently and more effectively. Formal Leaders in the organization recognized that a current paper-based routing was inefficient, and that an electronic and more technical advanced

system was desired. Formal Leaders wanted to leverage new technologies to improve the way the organization worked, improving processes, functional group collaboration, and reducing paper usage. A new electronic routing system was created to replace the paper-based routing system.

The electronic routing system was intended to improve routing efficiencies. The system allows people to route budget, human resource, and information Technology actions and requests across the nine groups of the organization. Changing from a paper-based routing system to an electronic routing system brought new ways to perform job duties and interact with various functional groups in the organization. To change the organization from the paper process to the electronic routing system, Change Leaders in each of the 9 functional groups followed a process change model. Change takes a long time. During process change model steps, Change Leaders discussed usage with people throughout the organization. At 18 months following the change initiative, I, as the researcher, documented that not all functional groups were using the electronic routing system. During the 18-month period, the Kotter process change model was used to increase acceptance of the electronic routing system by each group. Figure 2 below illustrates the timeline for the change, Kotter process, and when functional group usage data was collected.

Figure 2: Electronic Routing System Timeline



The Kotter process change model, depicted in figure 3, was selected by administrative groups, Groups G and H, the organization's Formal Leaders (See table 1 above). The Kotter process change model was selected because of its ease of use and success in supporting literature. The Kotter process change model is an 8-step process to solicit change. The first step in the Kotter process change model is to create a sense of urgency. To build the urgency, Formal Leaders in the organization met with group leaders to discuss the purpose of the electronic routing system and its value to each group.

Figure 3: Change Process Model - Kotter Process



The second step of the Kotter process change model is to build a guiding coalition. A guiding coalition was built with select staff from each group in the organization. Each Formal Leader selected one person, a Change Leader, to represent the group during the change initiative. Although these Change Leaders were considered key personnel in their functional group, most were novice to change management principles. Change Leaders from each group participated in a bi-monthly meeting to discuss and provide feedback on the electronic routing system's features and functions.

Step three in the Kotter process change model is to form a strategic vision. The Change Leaders of each functional group discussed the strategic vision of the electronic routing system and addressed how the electronic routing

system would be different from the paper-based process. Each Change Leader had a vision for the electronic routing system that was based on the objectives of their functional group and how their group works to meet objectives. A single strategic vision with the guiding coalition took time; however, after several months of discussion and debate each group's Formal Leader and Change Leader agreed on a vision for the electronic routing system. With the strategic vision set, the Change Leaders represented the interests of their functional group.

Change Leaders enlisted a volunteer army of people, the fourth step in the Kotter Process, to rally around a common opportunity to drive change (Kotter 2017). To build momentum for the electronic routing system change, more people within the organization needed to become involved in the change initiative. Enlisting an army was accomplished in two ways. First, Change Leaders were asked to bring a colleague to the electronic routing system meetings. Second, Change Leaders worked with technical trainers to train their staff on the benefits and purpose of the electronic routing system. Questions on the visions, benefits and purpose of the electronic routing system were answered. The exposure to the electronic routing system allowed staff the opportunity to converse about the new system and its role with colleagues in their functional group. In this step, many functional groups began to buy-into the electronic routing system change initiative.

For those functional groups that had not yet bought into the electronic routing system change initiative, Change Leaders needed to remove barriers. "Removing barriers such as inefficient processes and hierarchies provides the freedom necessary to work across silos and generate real impact" (Kotter 2017, 1). Change Leaders identified barriers within their functional groups and proposed solutions to address the barriers based on their knowledge of the

issues. Change Leaders learned that most electronic routing system barriers related to the change itself. Change leaders revisited the barriers with members who opposed change to alleviate stress and showcase benefits for short term wins.

Short term wins are the building blocks of successful change and is the sixth step in the Kotter Process. Wins must be recognized, collected and communicated – early and often – to energize volunteers to persist in the change effort (Kotter 2017). Short term wins in the organization were created during meetings and Change Leader interaction with staff. For example, when a new electronic routing system feature, such as a bigger button, was created for use, the button was talked about and shown to staff as a small win. Frequent meetings among Change Leaders and staff allowed for the collection and socialization of new features for functional system staff usage.

Change Leaders pressed staff to increase credibility and sustain acceleration, the seventh step in the Kotter Process (Kotter 2017). Change Leaders were relentless with the change until the vision was a reality (Kotter 2017). To sustain change acceleration with staff, staff demonstrations of the electronic routing system's features were provided on a periodic basis. During the demonstrations, staff had the opportunity to give positive and negative feedback on the electronic routing system changes. When positive system feedback was provided, the feedback was shared throughout the staff as a win; however, when negative feedback was provided, it was discussed with all Change Leaders. Negative feedback was viewed as an opportunity to hear opposing view on the electronic routing system. Change Leaders discussed staff concerns and helped staff accept the electronic routing system.

Change Leaders articulated the connections between new behaviors and organizational success (Kotter 2017). They tied together the staff, experiences and vision that the electronic routing system brought to the functional groups. Change Leaders saw where deficiencies in change acceptance existed and worked to address them. Change Leaders continued steps 1 through 7 of the Kotter process change model until the acceptance of the electronic routing system was, from staff conversations, strong enough to replace the paper-based process.

After the electronic routing system was available to staff, Change Leaders continued to meet, and provided electronic routing system demonstrations to staff on new features. Feedback was continually collected by Change Leaders until negative feedback from staff was minimal. After several iterations of the Kotter process change models, Formal Leaders and Change Leaders felt that most staff agreed to use electronic routing system. After 18 months of electronic routing system use and process change model usage, system data showed that most functional groups were not using the electronic routing system; only a few functional groups had staff electronic routing system usage of 50% or more. It was an enormous effort to try to get a few hundred people to use a new electronic routing system in 18 months. But why were more groups not using the electronic routing system?

The definition of successful change for the electronic routing system is that 50% of staff from each functional group would use the electronic routing system. Change Leaders followed the Kotter process change models' steps and did so several times, but because only a few functional groups had staff electronic routing system usage of 50% or more, change in the organization was defined as unsuccessful. Process change models are intended to produce to

change but change in this study's organization failed. Based on the outcomes of this study's organization change effort, this research looks at the functional group usage and cultures in the organization to determine the cultures among people in a single organization and the relationship between Change Leader cultures and change success. The following research questions look at the different cultures in this organization.

Research Questions

Different cultures in an organization could cause failed change. In this study, a culture model was used to identify cultures for Formal Leaders, Change Leaders, and staff in the organization. The organization's cultures were identified after a process change model was used, as described above. This research looks at the electronic routing system usage and cultures of by functional group. The following research questions are addressed in the study:

- 1.) *How closely aligned are culture types, existing and preferred, of the Change Leader – each group's change agent with those of the Formal Leader, organizational leadership, and staff culture types within their functional group during a technology and process?*
- 2.) *How closely aligned are culture types among Change Leader – each group's change agent in a single organization?*
- 3.) *How closely aligned are Change Leader culture types and change success?*

The first research question looks at the alignment among Change Leader, Formal Leader, and staff culture types. In an ideal situation, the Change Leader, who was hand-selected by the Formal Leader, had a conversation with the Formal Leader about their functional group's vision and behaviors that drive

their functional group (i.e., culture types). Together, the Formal Leader and Change Leader understand the desired cultures for the functional group and share culture. The Change Leader, sharing the same cultures as the Formal Leader, works with staff to understand staff culture and guide them towards the new change, clarifying the change and motivating staff to change (Heath and Heath 2010) with the Formal Leader cultures in mind. Change Leaders need to know how staff think and feel about the current functional group environment and what cultures the staff prefers. Because different cultures may exist among Formal Leaders, Change Leaders, and staff, Change Leaders must work to identify cultures among staff while recognizing the level of emotional exhaustion that staff feels because of change (Heath and Heath 2010). The number of different cultures by functional group is dependent on the Formal Leader's previous interactions and discussions with staff about the vision of the functional group. Therefore, the first research question provides the change management field with the different cultures that exist in each functional group of a single organization by organizational role: Formal Leader, Change Leader, and staff.

Successful change requires a leader to provide clear direction, engage staff emotions, and shape a path to success (Heath and Heath 2010). Change Leaders have an important job to complete for change initiatives, change the minds and behaviors of staff. "For individuals' behavior to change, you've got to influence not only their environment but their hearts and minds" (Heath and Heath 2010, 5). But what about the cultures of the people changing other people (*i.e.*, Change Leaders)? Because Change Leaders are change agents, their cultures are important to understand. Culture types will drive how Change Leaders see change and how they feel about change. Therefore, the second research question examines the different cultures among Change Leaders in a

single organization. Change Leaders are familiar with their functional group and with the guidance of the Formal Leader should be ready to guide staff to successful change; however, with change failure common in organizations, I wondered if differing Change Leader cultures could be a contributing factor to unsuccessful change. The second research question looks to uncover the alignment of each Change Leader's culture types.

The third and final research question looks at the Change Leader culture types and each Change Leader's functional group electronic routing system usage. The results of this research question show the alignment or non-alignment of Change Leader culture types and success in a real world organizational change initiative.

Successful change is defined when a functional group had 50% or more staff use the electronic routing system. Fifty percent usage is a reasonable rate of acceptance for the organization. Not all staff in the organization had the need to use the electronic routing system because of their non-administrative job duties that do not align with electronic routing system usage. Additionally, not all staff used the system because with a more efficient system, not everyone in the organization has the need to use the system, meaning fewer people can route requests more efficiently.

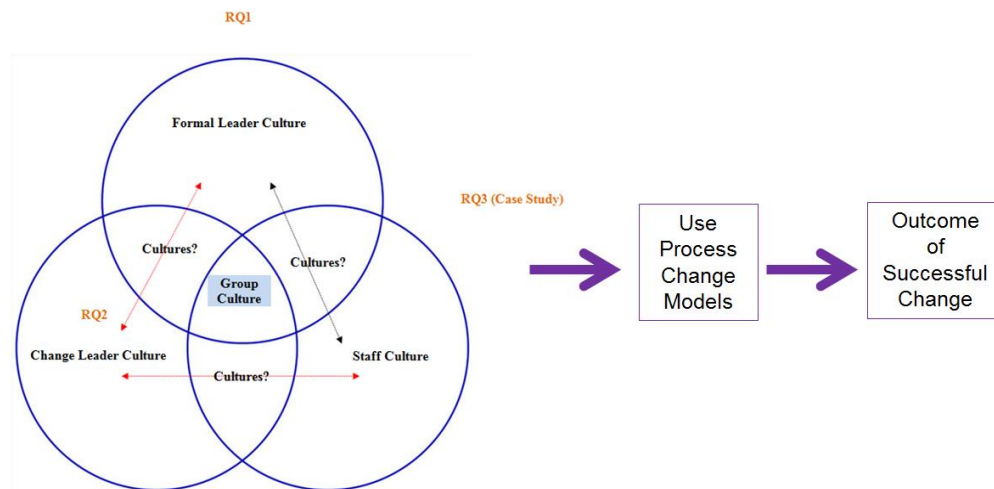
The purpose of the research questions is to (1) determine the alignment of culture types among three different groups of people in nine functional groups (2) determine the alignment of Change Leader culture types in a single organization, and to (3) determine the alignment of each Change Leader's culture types and their functional group's electronic routing system usage. The outcomes for the three research questions highlight the importance of culture type identification in change initiatives. The following section describes the

significance of the research questions and study to the change management field.

Significance of the Study

“In order to understand or change an organization, a researcher or change agent must first examine the linkages between underlying values, organizational structures, and individual meaning” (Denison and Spreitzer 1991, 2). Process change models are used by Change Leaders to help move people towards successful change. Culture models help Change Leaders identify cultures. I believe that change initiatives are more likely to succeed when culture is identified through use of culture models in coordination with process change models. Additionally, I believe that when Change Leaders acknowledge the culture of their staff, change is more likely to succeed. This research contributes to the change management field because it asserts that similar cultures among leaders and staff promote successful change. Figure 4 depicts the conceptual model for this study which drives my research questions. The figure shows the relationship between Change Leaders, who should embody Formal Leader culture, and staff members and when known the culture types can help process change models succeed in producing successful change

Figure 4: Culture and Successful Change



Change Leaders and Formal Leaders benefit from this research. They can see how their own behaviors and culture types align with their staff culture types. A Formal Leader lays out their functional group visions and the Change Leaders take the Formal Leaders' vision and helps staff work towards that vision. Formal Leader and Change Leader culture becomes an important part of the change effort. Change Leaders, as a mirror image of the Formal Leader, work to persuade staff to behavior in a certain manner, to change from what they do in their current work to something different. In perfect situations, Formal Leader, Change Leader, and staff cultures are similar. However, in a more likely scenario where cultures are different, the Change Leader persuades staff to behave in a manner that is consistent with the Formal Leader's culture. A process change model could be used repeatedly in either scenario above until successful change is achieved.

In this case study, a popular process change model, the Kotter process, was used to persuade staff to use an electronic routing system, but cultures for the Formal Leader, Change Leader and staff were not known. The electronic

routing system helps staff work more easily and more efficiently but is a change to the organization. Using the Kotter process as intended, by repeating the process steps 1 through 8 several times, change was seen on some functional groups and not in other groups. Why?

This research provided the organization an opportunity to look closely at the cultures of the electronic routing system users. The electronic routing system data determined which functional groups used the system more than other functional groups. Such an analysis on usage provides Change Leaders and Formal Leaders with information on how often staff used the system. Functional groups that had less than 50% of their staff using the system have an opportunity to improve the way in which their group works. Ultimately, improving each functional group improves the overall efficiency of the organization. Remember, the organization is looking to change, but change happens at smaller group levels and at the individual level.

This research is intended to expose the different cultures in a single federal organization. The varying culture types in the organization, or non-alignment of culture types amongst various functional groups, Change Leaders, Formal Leaders and staff, could hinder the volume of electronic routing system usage. Prior to this research, I presumed that some functional groups were using the system more than other functional groups. Culture types may be a contributing factor of successful change. This research assumes that change is a relevant concern for organizations. It also assumes that different cultures likely exist in a single organization. Chapter 2 discusses the literature that surrounds organizations, organizational leaders, organizational change, organizational change tools and organizational culture and culture tools. Chapter 3 includes the study methods, research design, research questions and premise, culture model

used, sample participants, survey questions and scoring, and semi-structured interview questions. Chapter 4 presents the study's research findings. The research findings encompass the culture model's categories, current and preferred quantitative responses at the organizational level, functional group level, and at the individual level, and qualitative analysis of interview questions. Chapter 5 is the research discussion, which makes sense of the data presented in the study and presents my reasons for the study's importance to the field of public administration. Finally, Chapter 6 provides the conclusion to the research as well as suggestions for future research. The following chapter, Literature Review, describes the conceptual framework covering organizational change, the role of the Change Leader in change efforts, process change models, and culture models.

Chapter 2: Literature Review

Introduction

Change can occur at the individual level, group level, and organizational level (Cameron and Green 2015). Organizational change helps individuals, groups and entire organizations shift from one state to another (Marquis and Huston 2009), yet studies show that 70% of all change efforts are unsuccessful (Burke 2011) and that initiatives involving culture change have only a 19% success rate (Smith 2002). This research asserts that there are two elements to consider during change efforts: (1) organizational cultures and (2) the process change model needed. Change Leaders must not only understand the change, but they must understand the cultures of the organization. This chapter looks at the literature surrounding why organizations change, the role of change leaders, the

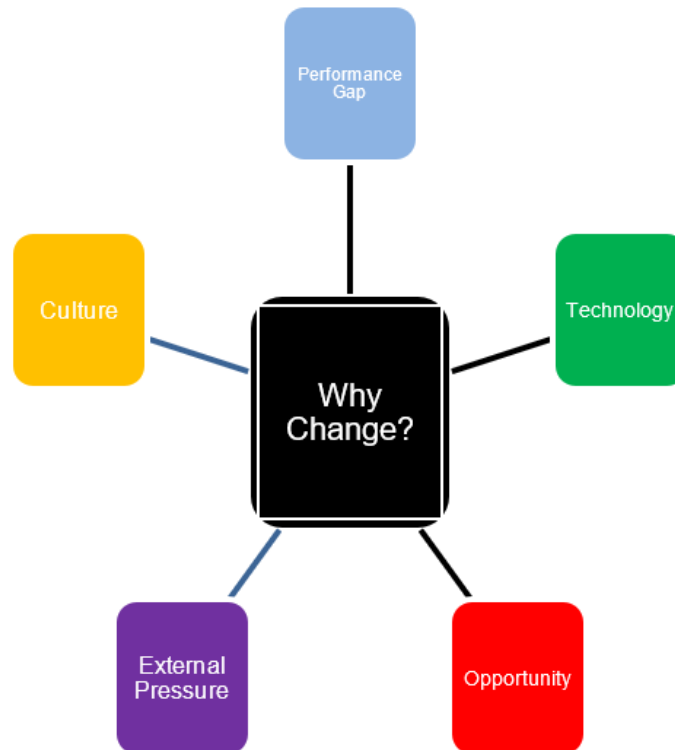
tools that help leaders change organizations, and the tools that help leaders identify organizational cultures. Leaders to balance their understandings of the reasons for change, the outcomes related to change, their interests and their emotions related to the change (Cameron and Green 2015) as well as how to make the change happen with varying cultures across the organization. Leaders begin the change effort with an analysis of why the organization is changing.

Why Organizations Change

Swaim (2011) believes that there are nine reasons organizations change (Swaim 2011) while Hamel (2013) believes that organizations change for two reasons: the trivial and the traumatic (Hamel 2013). Davis (2013) asserts that regulatory forces and economic uncertainty drive change (Davis 2013); however, Richards (2018) believes that reasons for change are far more complex with innovative technologies and growth opportunities. At times, organizations are simply changing to challenge the status quo (Richards 2018; Rousseau and Tijoriwalas 1999).

Based on the change management literature, I have identified five core reasons for why organizations change. Organizational change generally occurs when leaders identify performance gaps, a need for new technology, an organizational opportunity, a need to address external pressures, or internal cultural challenges. Figure 5 below illustrates my understanding, based on the literature review, of the fundamental reasons why organizations change.

Figure 5: Why Organizations Change

***Performance Gap***

The first reason for organizational change is due to performance gaps. Performance gaps are the result of desired performance compared to actual performance. Humans could be a cause of organizational performance issues. Performance gaps in functional groups could be caused by an individual, multiple people or in mechanical system inefficiencies. In human performance, gaps are not solely relevant to poor performance, but to also pertinent to good performers. “In the case of a currently good performer, the gap could be failing to realize the potential and top-notch contribution he or she could make if all

performance factors were in place” (Beane 2013, 10). Any gap small or large could be a need for change. Training may help people resolve a performance issue; however, most often, performance gaps are more complex than they appear. Training alone may not be enough to address human performance issues. The organization with a performance issue may need to dig deeper to understand the root of the human performance problem. An organizational root cause analysis of the problem can take time. Positive performance helps organizations achieve their goals while performance gaps prohibit organizations from accomplishing goals.

Technology

Continuous technological advances are the second driver of change. “Organizations mostly implement new technology to integrate operations or automate functions” (Sharma 2016, 1). Anew technology can help an organization achieve its mission and goals more efficiently and more effectively. With the advancements of information technology and computer science, new technology can help organizations meet their goals. Organizations use technology to be more efficient, to be faster, to be better than they were previously (McLaughlin 2002) changing outdated and inefficient technology. Inadequate technology prevents from achieving goals effectively; however, new technology can achieve goals faster.

Opportunity

At times, organizations have new leadership, new staff, new funding, or another opportunity that provides a window for change. Opportunity is the third reason for organizational change. Whether an organization would change based on opportunity, depends on the Formal Leader's' vision for the organization. New leadership in the organization may bring with it a new way of performing

business and new funding brings financial resources to an organization providing an opening for change (Swaim 2011; Sirkin, Keenan, and Jackson 2011); opportunities to change are endless.

External Pressures

The forth reason organizations change is because of external pressures. Change because of external pressures stem from various entities including government agencies, regulatory committees, competitors, and stockholders (Davis 2013). In some cases, reaction to external pressures is required for organizations to continue to do business and meet the organizational mission and vision. A change in law requires the organization to change or face legal consequences and these external factors do not stop (Moran 2001). For example, an organization that is required by law to modify the way in which it operates is forced to comply with the new legislation. In other cases, organizations may change to keep up with or outperform competitors (Utterback 1994). For example, if organization A produces a light bulb that uses 10% less energy and organization B produces a light bulb that uses 20% less energy, organization A may want to change some of its processes to produce a more efficient bulb.

Internal Cultural Challenges

Finally, an internal cultural challenge is the fifth reason why organizations change. Culture differences in organizations could be embedded in individuals, small business units, and or multiple units in a larger organization (O'Reilly, Chatman, and Caldwell 1991). Cultural differences among staff may breed dysfunctional behaviors and negatively impact the organizational performance and daily business activities. Often, cultural issues are not easy to identify (O'Reilly, Chatman, and Caldwell 1991), and cause challenges within

organizations (Engle et al. 2017). Perhaps, an organization is unable to meet organizational goals. Cultural challenges may be the reason for change; however, identifying culture as the change is not always clear. Culture issues are sometimes masked by performance issues, new technology, new opportunities, and or external pressures because culture issues are more difficult to identify (Schein 1990). Although performance issues, new technology, new opportunities, and external pressures may be a reason why an organization needs to change, organizational culture may also be a contributing factor.

Four of the five reasons why organizations change focus on non-culture factors (i.e. performance gaps, technologies, opportunities, and external factors). As my research proposes, culture has a contributing role in organizational change, no matter why the organizations are looking to change. If an organization is looking to improve a performance gap, leaders of the organization should also look at the organizational cultures. A closer look at culture type alignment may bring forth a connection to successful change; meaning, culture plays a role in organizational change.

Formal Leaders

Formal Leaders, the leadership of the organization, are responsible for identifying why organizations need to change. Formal Leaders encourage other people in the organization to learn and adapt to change (Mayner 2017) with the notion that those people are already doing their best (Deming 2000). Formal Leaders work to gain trust, commitment and accountability from people in their organization (Lencioni 2002). Formal Leader culture is important to change efforts. Formal Leader cultures influence change initiative outcomes (Herold 2008) transforming an organization from one state to another.

In this study, Formal Leaders who are responsible for identifying why change is needed. Formal Leaders carry the burden of providing the organization with the vision of the change and the planned outcomes for change. It is not only the vision that Formal Leaders share for the future of the organization, but also the way in which Formal Leaders feel about the change. “Positive leaders drive positive cultures” (Gordon 2017, 15), but because Formal Leaders guide with their cultural identity and that identity may create temporary change (Gavan 2017). Successful Formal Leaders guide with what is important for the organization and the values that determine what the organization stands for (Deal and Kennedy 2000). Formal Leader change feelings transcend throughout the organization creating a sort of change journey for all people in the organization to experience (Gordon 2017).

“Leaders work within their organizational cultures following existing roles, procedures, and norms” (Bass and Avolio 1993, 112). To follow such organizational culture, Formal Leaders must know the cultures that exist in their organization and lead others toward those cultures (Conger, Spreitzer, Lawler 1999). Without culture knowledge how can Formal Leaders balance or assign other people within their organization to balance change outcomes, interests, and emotions?

Formal Leaders because of their responsibilities to the organization may not have the time to balance outcomes, interests and emotions of the change effort (Cameron and Green 2015). It is because of Formal Leader schedules, “leadership does not and cannot occur only at the top of an organization” (Herman 2005, 154). Formal Leaders can assign change management to trusted people in the organization to Change Leaders. Change Leaders are responsible

for change efforts; they guide change and identify the behaviors in the organization that will support and reject the change.

“Organizational culture both guides and constrains the behavior of members of a group” (Maloney, Antelman, Arlitsch, and Butler 2010, 323). Change Leaders can leverage organizational culture to guide the people in their organization, staff, in a different direction, a direction of change; however, “[Change] Leaders hoping to initiate organizational change and generate follower acceptance face a daunting task” (Kavanagh and Neal M. Ashkanasy 2006, S81). “The [Change] Leader must mobilize organizational members to understand the nature of the adaptive challenge and engage them in a process by which the organization does its adaptive work” (Conger, Spreitzer, Lawler 1999, 127). This process requires a change in values, beliefs, or behavior (Heifetz 1994). Change Leaders who positively affect organizational members’ attitude to work related change and motivation can succeed in change efforts (Kavanagh and Neal M. Ashkanasy 2006).

With Formal Leader change vision in mind, Change Leaders should be conscious of their staff’s attitude, behaviors, and cultures. Change Leaders need to know the existing roles, procedures and norms of the organization that impact change acceptance to guide change (Miles, Saxl, and Lieberman 2014). If differences among Formal Leader, Change Leader, and staff cultures, Change Leaders work to align themselves and the staff to Formal Leaders cultures, which align with the organization’s new values and norms.

Successful Change Leaders can step outside their culture, the culture that shapes them and recognize changes in the external environment. They can lead people helping them adapt to the new cultures (Maloney, Antelman, Arlitsch,

and Butler 2010). Change Leaders who have culture realignment skills can effectively use models to engage people in the necessary change.

During change efforts, Change Leaders may use process change models to help staff adapt to change. Process change models provide Change Leaders with step-by-step instructions on how to institute change for various reasons and address organizational culture in the final steps of the model. Addressing culture in the final steps of each process change model may be a reason for failed change. It appears that process change models assume that Change Leaders have the skills to execute change effort steps and understand their own cultures and those cultures of staff in their organization.

Organizational Change

When organizations need to change, they use Organizational Change Management (OCM) to address the people side of change management (Hiatt and Creasey 2012). Another way to address people related change is through Organizational Development (OD) processes. "OD can be described as a process aimed at modifying and improving an organization or unit and moving it in the direction it needs to go" (Moravec 1979, 18). Organizational development is "(1) planned, (2) organization wide, and (3) managed from the top, to (4) increase organization effectiveness and health through (5) planned interventions in the organization's 'processes,' using behavioral-science knowledge" (Anderson 2017, 2). OD, like OCM is a concept associated with guiding organizations toward successful change but goes beyond change management processes to discover the personalities, learning and motivation of people (Moravec 1979; Cummings and Worley 2009; Burke and Noumair 2015; Warrick 2017). It is important to mention the concept of OD in the Literature Review because of its close

association to OCM. However, since this study is looking at organizational change management tools and culture tools and not the concepts of motivation and learning covered in OD, OD is not considered further in this study.

Organizational Change Management Tools

Change Leaders receive direction from Formal Leaders on why change is needed, and what to change. However, Change Leaders are not given direction on how to change. Change Leaders can use change management tools to guide change. “Change management provides a repeatable and rigorous approach to helping individuals move forward and adopt a change to their day-to-day work, which is what enables projects to ultimately deliver results” (Hiatt 2012, 33). Change management tools are not the only tools that help Change Leaders during change efforts. Culture Models can also help Change Leaders during change efforts. The process change models are models in which help Change Leaders to guide people towards new processes, new technologies, or remedy performance gaps, yet culture models identify the cultures within an organization. Different culture types in a single organization may hinder the ability for process change models to work as intended, leading to failure of the intended change.

Process change models

Process change models help Change Leaders address organizational performance gaps, technologies, opportunities and external pressures. Process change models contain steps that help leaders gather information on individual change concerns related to the change initiative (Coach 2016). When process change models are executed, they help staff within an organization adopt the change. Process change models help Change Leaders develop people in a way

that creates change and deep enough that the change impacts the organizational culture (Hiatt 2012; Nadler 1982; Bridges 1986; Kotter 2002). Process change models help Change Leaders understand the culture types that they and their staff maintain because process change models do not provide distinct steps on how Change Leaders may measure culture types.

Table 2 identifies the process change models that are used for performance gaps, technology, opportunity or external pressure change. This table illustrates each process change model name and author, the number of steps in each process change model, where culture is mentioned within each process change model, and the culture reference in the change process model. It should be noted that each of the process change models looks at culture in the final step as is identified in the *Cultural Reference* column, but as mentioned previously; process change models do not provide Change Leaders with steps to measure culture.

Table 2: Process change models

Process change model Name (Author)	Type of Change	No. of Steps in Model	Culture occurrence in Steps	Cultural Reference
ADKAR (Jeffrey Hiatt)	Individual	5	Step 5	Culture is impacted because of reinforcement activities relate to the change.
Beckhard-Harris Change Model (Beckhard and Harris)	Organizational	3	Step 3	Culture is impacted because of taking first steps towards new vision.
Bridges' Transition Model (William Bridges)	Individual	3	Step 3	Culture is impacted during the new beginning when

				the transition is anchored into the culture.
Kotter Process (John P. Kotter)	Organizational	8	Step 8	Culture is impacted because of institutionalizing new approaches.
Kubler-Ross: Stages of Change (Kubler-Ross)	Individual	5	Step 5	Culture is impacted during the change.
Lippett's Change Theory Model	Individual	7	Steps 6 & 7	Culture is impacted when change is maintained and change agent steps back from their role.
Lewin Model (Kurt Lewin)	Organizational	3	Step 3	Culture is impacted during refreezing when the change is anchored into the culture.
McKinsey 7S Model (McKinsey Company)	Organizational - Processes	7	Step 6	Culture is impacted with staff are part of the discussion.
Plan-Do-Check-Act (W. Edwards Deming)	Organizational - Processes	4	Step 4	Culture is impacted in the act step.
Virginia Satir Therapy Model	Individual	4	Step 4	Culture is impacted in the New Status Quo.

Process change models share two common elements: they help change individuals' behaviors; and they impact the behaviors of people (culture) during the process change model process. Organizational culture is impacted because during use of a process change model the intention is to alter behaviors.

Although the process change models (ADKAR, Beckhard-Harris Change Model, Bridges Transition Model, Kotter Process, Kubler-Ross: Stages of Change, Lippett's Change Theory Model, Lewin Model, McKinsey 7S Model, and Plan-Do-Check-Act, Virginia Satir Therapy Model) share common elements, they each offer unique perspectives on the ways to achieve change.

Process change models for the Individual

Process change models that focus on the individual are most common in the change management literature. Each of the five models, which focuses on individual change, start when a change is identified (Hiatt 2006; Kritsonis 2004-2005; Banmen 2002) and look at the individual behavior, individual roles and responsibilities, individual goodness and the ability to change. Process change models for the individual contain sequential steps that produce change (Prosci 2018).

The following paragraphs discuss the process change models that focus on individual change. The ADKAR model is a learning, planning and assessment tool to improve individual performance (Boca 2013; Hiatt 2006), to impact overall organizational change management and business results through elements of awareness, desire, knowledge, ability, reinforcement (Prosci 2018). ADKAR acts as a framework to realize the benefits and desired outcomes of change (Hiatt 2006) and to guide thinking and learning styles in a way that allows for adopting and practicing critical thinking and lifelong learning (Abdallah and Mohammand 2016).

Like ADKAR, Lippitt, Watson, and Westley's seven-step theory model focuses on the role and responsibility of the individual, but more specifically, the change agent, rather than the evolution of the change itself (Kritsonis 2004-2005). The seven steps look at change agents' ability to diagnose problems, assess motivations and capacities for change, assess change agents' motivations and resources, select progressive change objects, choose appropriate roles of the change agent, maintain changes, and terminate the helping relationships (Mitchell 2013). Taking the role of the individual one step further is the Virginia Satir Model where transformational change resolves differences in interpersonal relationships (Banmen and Maki-Banmen 2014; Banmen 2002). This therapeutic model provides the means to transform people at the basic human individual level where inherent goodness and personal growth thrives for improved self-esteem and individual awareness (Satir and Baldwin 1983; Satir 1988; Andreas 1991; Banmen and Maki-Banmen 1994; Banmen 2002; Beaudry 2002); the psyche of the individual is transformed.

Furthermore, the Kubler-Ross Model, a grief construct consisting of isolation, anger, bargaining, depression, and acceptance in a cyclical not linear phase (Larry 2017; Kramer 2004-2005), focuses on sudden changes or grief situations (Schiffman 2013) impacting the psyche of an individual. It is typically associated with death, dying and acceptance of the death process (Sotelo 2017; Burnier 2017; Larry 2017). Like the Kubler-Ross Model, the Bridges Transition Model captures both the psychological and social dimensions experienced by individuals during a transition (Dima and Skehill 2011; Larry 2017) in three stages: the past, the neutral zone, and the future (William Bridge Associates 2018). "Transition is a three-part psychological process; it cannot be planned or managed by the same rational formulae" (Bridges 1986, 26). This process models

allows people to discuss the transition that they are experiencing, “mourn for what has been lost, the confusion over identify, and focus on the new beginning (Bridges 1986).

The five process change models presented in this section, ADKAR, Lippett’s Change Theory model, Virginia Satir Therapy Model, Kubler-Ross Model, and the Bridges’ Transition Model, focus on the individual during a change. These process change models provide Change Leaders with tools to achieve individual change. Unfortunately, these five process change models do not measure change at the organizational level and they do not categorize culture. Because culture deals with human behavior, it may influence whether change is successful. The process change models presented in the following paragraphs are tools which Change Leaders can use to address organizational change.

Process change models for the Organization

Each of the five models described in this section look to improve organizational behaviors, processes or business outcomes. The five organizationally focused process change models are: Beckhard-Harris Change Model, Lewin Change Model, McKinsey 7S Model, Kotter Process Model, and Plan-Do-Check-Act Model.

The Beckhard-Harris change model is a simple yet effective model for thinking about organizational change (Nadler 1982; Okpara 1988) where dissatisfaction is identified in the organization where the conditions necessary for change to occur are prevalent (NAACP PA 2017). This model is used to examine and analyze an organization's mission, environmental demands, midpoint goals, and its response systems (Okpara 1988). The model also

provides a vision to guide the development of a successful change strategy for an organization (Alban 1987). Beckhard-Harris Change Model moves an organization from one state to another as the Lewin Model. The Lewin model provides sequential anchors for Unfreezing, Movement, and Refreezing (Lewin 1964). It discusses inevitable contextual changes in a linear fashion where unfreezing is necessary for change progression prior to, during, and post change implementation (Manchester et. Al 2014). Dynamic forces drive change because they push people in a desired direction (Kritsonis 2004-2005). “The power of Lewin's theorizing lay not in a formal propositional kind of theory but in his ability to build ‘models’ of processes that draw attention to the right kinds of variables that needed to be conceptualized and observed” (Schein 2018). Lewin’s model helps Change Leaders recognize and plan for the right things to change.

The Kotter Process Model goes beyond that of the Lewin Model. “Kotter’s eight-step change model is highly regarded and considered by many to be the definitive change model” (Friesen 2016, 42) that recognizes organizations inability to see the need for change, know what to do when change is needed, and successfully make change happen (Newcomb 2008). This flexible change model “allows the [change] facilitator to know how to initiate the change process, who to involve, and how to sustain the change after implementation” (Mbamalu and Whiteman 2014, 284) by establishing the platform from which something new can be created” (Finnie and Norris 1997, 19). The Kotter process change model is an 8 step process to solicit change by: (1) creating a sense of urgency, (2) developing the guiding coalition, (3) developing a change vision, (4) communicating the vision, (5) empowering action, (6) generating short-term wins, (7) sustaining acceleration, and (8) instituting the change (Kotter 1996; Wheeler and Holmes 2017; Mbamalu and Whiteman 2014).

Although the Kotter Process model is intended to address how organizations are to cope with change, Kotter's model of change management lacks rigorous fundamentals (Appelbaum, Habashy, Malo, and Shafiq 2012) making it not ideal for all change efforts. Because of the flexibility in the Kotter Process model, disagreement in the change management field exist (Pillay et al. 2012) with some scholars describing the Kotter process as planned change and others describing the model as an emergent and not a planned approach to change management (Pollack and Pollack 2014). Regardless of the scholarly approach taken, the Kotter Process Model is a tool that aids in organizational change efforts.

The final two process change models focus on changing organizational processes. The Mckinsey 7S model "is a model for analyzing organizations and their effectiveness" (Singh 2013, 39) from seven points of view: organizational strategy, structures, systems, staff, skills, style (culture), and shared values (Kaplan 2005; Peters 2011; Singh 2013; Hanafizadeh and Ravasan 2011). The Mckinsey 7S Model is an "effective tool for aligning all the organizational variables and processes that lead to successful strategy execution" (Kaplan 2005, 41). "7-S framework offers a sound approach to combining all of the essential factors that sustain strong organizations" (Peters 2011, 7). On the other hand, Plan-Do-Check-Act model was created by Dr. Edwards Deming, an expert of quality management in the 1950s (Wu et. al, 2015) to drive organizational improvement (Lundkvist, Meiling, and Sandberg 2014) in a variety of industries such as healthcare and construction. The Plan-Do-Check-Act model is described as "(1) Plan: study the current situation and knowledge, plan for a change or test; (2) Do: carry out the change or test, preferably on a small scale; (3) Check: observe the effect and report the results to those who make decisions; and (4)

Act: study the results and identify the changes that are needed to improve and standardize the process” (Lundkvist, Meiling, and Sandberg 2014, 1055).

The five process change models presented in this section focus on the organizational change and organizational process change. process change models at the organizational level guide Change Leaders during organizational change efforts. Although these five process change models provide Change Leaders with the ability to achieve organizational change, each model provides a distinct perspective for guiding change.

Benefits of process change models

process change models are tools useful to Change Leaders who want to achieve change. process change models assume that Change Leaders know their organization’s cultures providing Change Leaders the opportunity to achieve change while addressing barriers to change to “reduce costs, improve the quality of products and services, locate new opportunities for growth, and increase productivity” (Kotter 1996, 3). Change Leaders use process change models to help staff understand why the organization needs to change, where they fit into the change and how the change will impact those staff members (Kim and Mauborgne 2011). Process change models help Change Leaders “confront the basic or hidden assumptions, interests, practices, or values” (Meyerson 2011, 59) during change.

Limitations of process change models

process change models allow Change Leaders to address performance gaps, new technology, opportunity or external pressures, but do not provide a way to identify organizational cultures as other models can offer. “You have to have the right strategy of course, but it is your culture that will determine

whether your strategy is successful” (Gordon 2017, 18). Culture is a driving factor in change efforts. Process change models assume that Change Leaders understand their organizational cultures. During the implementation of a process change model, one of the challenges that Change Leaders face is the need to help people in their organization give up values and behaviors (Heifetz and Linsky 2011). “Most people are reluctant to alter their habits” (Garvin and Roberto 2011, 17), but Change Leaders can find people within their organization that want to grow as Change Leaders themselves and support the change (Maxwell, 2013, 97)

According to process change models, culture change comes last, not first because culture is very hard to change (Sweden 2007), yet failure to change an organization’s culture dooms any other kind of initiated organizational changes (Cameron and Quinn 2006). “Whenever a discrepancy exists between the current culture and the objectives of your change, culture always wins” (Conner 1992, 176). When cultures are not known, it can overshadow other aspects of the change effort. Because of the power that cultures have in change efforts, Change Leaders must know the cultures that are driving their organization to help guide towards the change (Maxwell 2013). How can Change Leaders guide change when they do not know their own cultures or their organizational cultures, which drive their behaviors?

As you recall, Change Leaders are designated by Formal Leaders within an organization to lead change; however, Change Leaders have other responsibilities outside of the change effort that they must accomplish. For Change Leaders to successfully change an organization, they need to lead, understand the change and know their organizational cultures. A Change Leader without an understanding of the change or the goals of the change cannot lead

people towards change no matter how well-intentioned the person is (Maxwell 2013, 110). The same principle holds true for organizational culture. Change Leaders must live their culture, know their organization's cultures, and know that their culture is an extension of who they are as a leader (Gordon 2017).

Recall that Formal Leaders select Change Leaders based on their talent and ability to lead change efforts (Maxwell 2013) and their ability to view the world through the eyes of other people (Wilson 2011). Change Leaders define what the culture stands for, they build it, reinforce it, live it, protect it, and fight for it (Gordon 2017). Unfortunately, some Change Leaders use their position to devalue people, get caught up in politics and lose sight of the change effort, expect people to serve them, and find themselves alone with the change (Maxwell 2013); these Change Leaders are uncertain of their own cultural identity as well as that of the organization.

"Organizational identity refers broadly to what members perceive, feel and think about their organizations" (Hatch and Schultz 1997, 2). Change Leaders, like other people in their organization, maintain their own cultural identity, which affects organizational change adaption (Raquz and Zekan 2016). Remember, Change Leaders guide the change with their values. Change Leader values can impact other people's feelings within the organization. To ensure that Change Leader culture does not interfere with the change effort, Change Leader as well as Formal Leader and staff cultures can be categorized before or during a change effort. Change Leaders may use culture models to classify organizational cultures.

Culture Models

“Cultural forces are powerful [and] they operate outside of our awareness” (Schein 2010, 7) but cultures can create barriers in change efforts (Torben 2017). Change Leaders unconscious values and beliefs guide change (Schein 2010), making the culture of one person extremely essential in the change effort (Gordon 2017). But what if a Change Leaders’ beliefs are far different from their Formal Leader or staff? It is possible that Change Leaders hold different cultures than other people, including their Formal Leader, within their organization. A Change Leader, just one person, can impact an entire organizational change outcome (Dennison 1990); their feelings and perception of the change, the values and behaviors that they hold can reinforce cultural values (Cameron and Quinn 2006), and impact the organizational culture (Cameron and Quinn 200). It is true that dealing with conflict and leading challenging people is one of the most difficult areas for most Change Leaders (Maxwell 2016) yet Change Leaders can use culture models to identify people who support and reject the change. Change Leaders measure culture through culture models.

Culture Models are tools to help Change Leaders consciously identify, categorize and alter underlying culture-based assumptions (Gross, Pascale, and Athos 1993; Van de Vijver, Van Hemert, and Poortinga 2008). Categorizing cultures by type helps Change Leaders identify the types of culture that exist within their organization, within their functional group and themselves which many be numerous (Martin and Siehl 1983). Different cultures in a single organization and among functional groups challenge Change Leaders during change initiatives (Fullan 2014). Hence, it is important that Formal Leader, Change Leader and staff cultures are known. Staff who embrace the change

become champions for change (Kotter 2016) helping Change Leaders cultivate the necessary cultures among staff for change success (Maxwell 2013).

Like other aspects of an organization, culture is not as responsive to shifts as Formal Leaders or Change Leaders would like to think (Martin and Siehl 1983). Unidentified, misunderstood or misrepresented cultures can create barriers, which could be the difference between successful and unsuccessful change outcomes (Schein 2010; Martin and Siehl 1983). Change Leaders should approach the change as if the change is disruptive for majority, from a cultural perspective, so that they are prepared for the greatest change challenges (Conner 1992). Culture categorization in a functional group shows a Change Leader where different values and behaviors within a functional group may conflict and therefore, present challenges during the change initiative. Change Leaders who examine organizational culture through culture models can plan for culture differences that may impede performance gap, technology, opportunity, or external pressure changes.

When varying cultures exist in an organization, Change Leaders can use culture models to realign staff to similar cultures. From the literature, the key Culture Models are identified in table 3 below with the culture model name and author, the culture model purpose, the number of culture types in the culture model, the culture types by name, and the leader role in the culture model. The table shows that culture models are similar in their purpose and leader role. Although culture types are named differently for each culture model name, each culture model maintains the same purpose: to identify and categorize culture based on type. Additionally, the table illustrates that culture models are intended to be used by leaders to categorize an organization's culture into one of 3 or 4 culture types.

Table 3: Culture Models

Culture Model Name (Author)	Culture Model Purpose	No. of Culture Types	Culture Types by Name	Change Leader Role
Deal and Kennedy Cultural Framework (Terrance Deal & Allan Kennedy)	Provides four typology categories. Leaders determine which category the organization leans toward.	4	Tough Guy / Macho, Bet Your Company, Process, and Work Hard / Play Hard	Change Leaders think of the culture, look at the four culture types and determine which of the four best fits the organization, and identify risks to the type.
Harrison's Model of Culture (Roger Harrison)	Provides four typology categories. Leaders determine which category the organization leans toward.	4	Role, Task, Power, and Person	Change Leaders observe people in the organization to determine which of the culture types an organization centers toward.
Organizational Change Assessment Instrument (OCAI), (Kim Cameron and Robert Quinn)	Assess current and preferred organizational culture	4	Adhocracy, Clan, Hierarchy, and Market	Change Leaders implement the OCAI survey to determine which of the culture types an organization centers toward.
Organizational Culture Model (Edgar Schein)	Used to determine differences between the desired and the present culture, making culture more visible within the organization.	3	Visible Artifacts, beliefs and values, and unconscious basic underlying assumptions	Change Leaders become conscious of the backgrounds and values of people in the organization through qualitative interviews.
Schneider Culture Model (Schneider)	Provides four typology categories. Leaders determine which category the organization leans toward.	4	Collaboration, Control, Competence, Cultivation	Change Leaders evaluate the current culture and look at which culture type best fits the organization.

Culture Models Themes

Some organizations have clear and defined organizational culture beliefs, but other organizations focus on performance outcomes rather than culture (Gordon 1984). Culture models are helpful to Change Leaders during change efforts; they allow Change Leaders to understand the cultures of the organization experiencing change when cultures are not known. There are various Culture Models available to Change Leaders, which help answer specific cultural questions. For example, although most of the Culture Models listed in Table 3 share a common numeric element of four culture types, the four culture types in each culture model looks at different aspects of an organization's culture. Deal and Kennedy's culture model helps Change Leaders qualitatively define four generic cultures (Deal and Kennedy 2000). Harrison's Model of Culture helps Change Leaders call out any cultural gaps related to the organizations centralization and formalization (Harrison 1987). The Organizational Change Assessment Instrument (OCAI) measures current and preferred organizational cultures. Schneider's model provides Change Leaders the ability to assess culture by collaboration, control, competence and cultivation (Lal Patary 2015). Schein's Organizational Culture Model is different from the four culture types previously listed because it allows Change Leaders to identify various cultural markers within an organizational culture (Yilmaz 2014; Rickwood 2013). Each of the five culture models listed in this research gives Change Leaders organizational cultural information; however, each from a different lens illuminating an organization's culture (Brown 1995).

Culture Models with 4 Culture Type Categorizations

Several scholars in the literature developed models to categorize organizational cultures many of which categorize cultures into 4 categories. For

example, Deal and Kennedy developed a culture model for effectively studying organizations based on their assessment of 80 corporations (Deal and Kennedy 2000). Based on Harrison's experience with organizations, Harrison's culture model calls out cultural gaps related to an organization's centralization and formalization. Schnieder's culture model focuses on the interrelations of the collaboration and cultivation of people in organizations while Cameron and Quinn's Organizational Change Assessment Instrument (OCAI) identifies the behavior of people relative to dominant characteristics, organization leadership, employee management, organization glue, strategic emphasis, and criteria for success (OCAI Online 2016).

As mentioned earlier in this chapter, organizational cultures can differ based on the beliefs and behaviors of people within an organization. Each of the culture models identified in this chapter maintain two commonalities: (1) 4 cultural categories, and (2) a goal to help Change Leaders define the cultures within their organizations. The first culture model, Deal and Kennedy's Culture Model, helps Change Leaders identify cultures among four generic culture categories based on 2 dimensions: Feedback and Risk (Barnat 2014). Risk is based on whether decisions or strategies are successful, and feedback is based on company activities (OpenLearn 2018). The culture types in Deal and Kennedy's culture model are: Work Hard / Play Hard, Tough Guy, Process, and Bet Your Company (Barnat 2014). The second culture model, Harrison's Model of Culture, categorizes organizational cultures into the following four categories: role, task, power, and person cultures (Harrison 1987; Harrison 1993; Dudovskiy 2014; Manetje 2009; Maximini 2015). Maximini (2015) states that most organizations we know, and work in are a combination of the power-oriented and role-oriented culture categories, with larger organizations tending toward

the bureaucratic culture categorization (Maximini 2015) The Schneider models assess culture by collaboration, control, competence, and cultivation (Lal Patary 2015), which takes a close look at the human interactions in an organization, while Cameron and Quinn's OCAI culture model categorizes the current and preferred behaviors into one through four categories for the six defined dimensions.

As indicated above, Deal and Kennedy's culture model uses feedback and risk to get response from people in the organization where feedback and risk is communicated. The speed of feedback and risk intensity creates different reactions from the people within the organization exposing potential organizational issues (Deal and Kennedy 1983). With rapid feedback and low risk, people experience high speed action and reaction also known as the "Work Hard Play Hard" culture; With rapid feedback and high risk, people focus on the present rather than the future known as the "Tough Guy" culture; With low feedback and low risk, people focus on a consistency in their current and future known as the "Process" culture; and With slow feedback and high risk, people focus on a planned focus and work to execute it also known as "Bet Your Company" culture (Deal and Kennedy 2000; Changing Minds 2018).

On the other hand, the Harrison's model of culture provides Change Leaders an opportunity to measure the power, role, task and individual cultures in preparation for a change effort through a 60-question questionnaire (Harrison 1987). The Organizational Culture Questionnaire (OCQ) diagnoses culture in an organization, identifies the different cultural orientations and initiates culture change strategies (Naik 2011). Dudovskiy (2017) describes the role, task, power, and persons cultures as : (1) The "Role" culture of the Harrison model focuses on

formal rules, regulations and the position of people rather than personal traits; (2) the “Task” culture focuses on the skills and competencies necessary to address tasks; (3) the “Power” culture has organizational leaders directing processes and actions; and (4) the “Persons” culture one individual influences the group (Dudovskiy 2017). The Harrison model does not allow Change Leaders to categorize culture by intervening with the behavior of people in the organization, but it categorizes the cultures that exist in the organization around the role, task, power, and persons as discussed above.

Contrary to the Deal and Kennedy culture model and the Harrison culture model, the Schneider model assess current culture from 4 aspects: collaboration, control, cultivate, and competency (Lal Patary 2015). This culture model assesses how the people of the organization work together, how to keep stability in the organization, how to build a long-standing culture, and how to learn and grow with a sense of purpose (Schneider 1994). In the collaborative category, people in an organization are people and reality oriented; in the cultivate category, people in an organization are people and possibility oriented; in the control category, people in the organization are reality and organizationally oriented; and in the competency category, people are possibility and organizationally oriented (Schneider 1994). The Schneider model helps Change Leaders think about how the organization currently behaves and then categorize the behavior.

The Cameron and Quinn OCAI measures organizational behaviors but not just from a current perspective but also from a preferred perspective (Cameron and Quinn 2006). The OCAI identifies the current and preferred culture types from six dimensions allowing a Change Leader or researcher to uncover multi-level cultural definitions within an organization. OCAI helps to tell a story about

the people in the organization, what they currently perceive as culture and what they prefer the culture to be from six dimensions: (1) dominant characteristics, (2) organization leadership, (3) employee management, (4) organization glue, (5) strategic emphasis, and (6) criteria for success (Cameron and Quinn 2006; OCAI Online 2016).

The culture models presented above categorize cultures into 1, 2, 3, or 4 defined culture types, but each model defines the 4 culture categories differently. Each culture model is used to answer distinct questions about an organization's culture. The Deal and Kennedy model looks to create culture by influencing the people in the organization (Deal and Kennedy 2000). The Harrison Model categories power, role, task and individual cultures in an organization (Harrison 1987). The Schneider Model allows for brainstorming of the people in the organization with regards to collaboration, control, cultivation, and competency (Schneider 1994). The Cameron and Quinn's OCAI model is used to identify the current and preferred culture types in an organization (Cameron and Quinn 2006). Although most of the culture models in this research identify 4 culture categories, the final culture model, the Schein's model, identifies organizational cultures into 3 level (Schein 2004).

Schein's Organizational Culture Model: 3 Culture Levels

Schein's organizational culture model identifies three culture levels within organizations to include: artifacts and behaviors, espoused values, and assumptions (Schein 2004). The model helps people identify various cultural markers of an organizational culture (Yilmaz 2014; Rickwood 2013) and provides rigor and clarity to culture so that researchers and practitioners understand how culture impacts institutional performance (Tierney 1986; Spector 2000).

Compared to the other culture models identified in this chapter, Schein's culture model is unique.

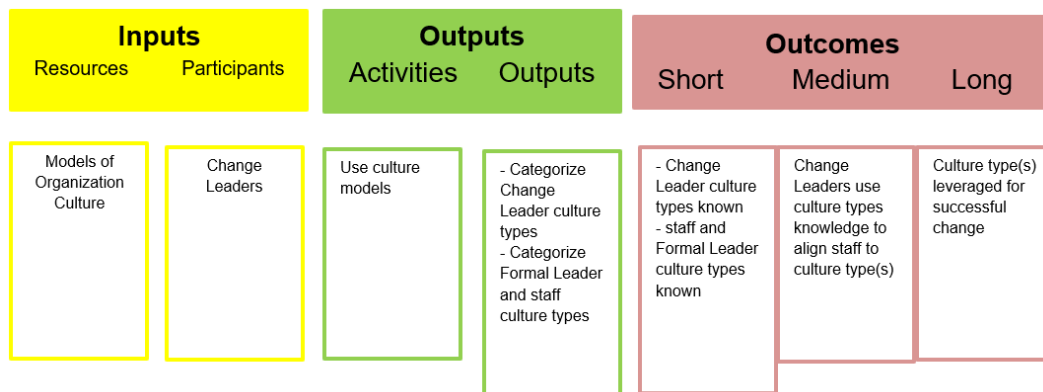
The Schein culture model was especially influential to the culture field because it more than the other models articulated a conceptual framework for analyzing and intervening in the culture of organizations (Hatch 1993). The model stresses the importance of leadership, strategy, and culture alignment (Darling 2017). Schein's organizational culture model helps identify different cultural phenomena in organizations (Schein 2010). Schein's organizational culture model is an effective culture identification model that when used by Change Leaders, allows them to be conscious of the backgrounds and values of people in the organization through qualitative interviews (Schein 2010). Interviews, like change, can be a daunting task from a logistical perspective depending on the number of people participating in organizational interviews. Although the model may help people understand the cultural phenomenon in organizations, it is not an easy tool for novice Change Leaders (Fullan 2011).

The Deal and Kennedy, Harrison, Schneider, Cameron and Quinn, and Schein's culture models are useful tools for culture categorization. Each of the culture models help Change Leaders identify organizational culture, yet each model provides Change Leaders with a unique way to identify culture. The culture model that a Change Leader leverages depends on the types of culture questions being answered. Culture models are effective when Change Leaders need to categorize culture.

Process change model and Culture Model Alliance

Culture models are a valuable tool to Change Leaders. When culture models are used in conjunction with process change models, they can help Change Leaders achieve successful change. Based on the literature previously discussed, Figure 6 depicts the culture model and change initiative relationship; when culture models are used before process change models, they can help identify culture types in preparation for successful change. Figure 6 displays inputs, activities, outputs and outcomes of culture models. With culture types identified, process change models may be more effective.

Figure 6: Culture Models and Change Initiatives



Change Leader culture is inseparable from organization culture (Kuhlmann 2010). Culture models are tools that help Change Leaders during change initiatives. Culture models provide Change Leaders with a means to identify and categorize the culture that their staff exhibits and that they embody. Process change models do not provide leaders with the steps to categorize culture by type but are helpful tools when culture types are already identified or known by Change Leaders (Kotter 2006; Kotter 1996). Process change models assume that Change Leaders understand and represent the group's culture and

therefore, process change models address culture last, not first (Kotter 2006; Sweden 2007).

Because Change Leaders in change efforts can be in various organizational positions, both low and high throughout the organization, Change Leaders in change initiatives may not understand or represent the culture that their Formal Leader nor staff expect. Change Leaders may also not have experience in culture change analysis or change management, which challenges change efforts (Fullan 2008). It is because of the vast probability that Change Leaders are novice change managers with limited culture knowledge and that process change models do not address culture until late in the change process that this research looks at the of the alignment of culture types and where alignment did occur was change successful.

Research Questions and Premise

This study intended to answer 3 research questions surrounding organizational culture types from a case study. The research questions focus on the existing and preferred culture types within a single federal organization with 1,000 employees who serve an administrative and scientific mission in the public health field. The case study organization contains 9 functional groups that serve either an administrative or scientific mission. There are 3 administrative functional groups and 6 scientific functional groups. Recall, each functional group has one Formal Leader and one Change Leader with many staff members.

The organization in this case study experienced a technological change. Change Leaders in the organization used the Kotter process change model, as it was designed, to achieve successful change; the Kotter process change model steps were implemented cyclically until change was documented in some of the

functional groups; system data showed that some functional groups were using the electronic routing system frequently while other functional groups were not. Culture was not identified for the individuals, functional groups or organization in this case study prior to Kotter process change model usage. Since culture was not identified, this research looks to determine if the Kotter process change model was effective in changing a public organization. This research presumes that organization change fails when cultures are unknown.

Culture models like OCAI can help Change Leaders identify cultural barriers. Culture models help identify the similar and different cultures that exist at the among Formal Leaders, Change Leaders, and staff, in an organization while process change models exclude culture identification. Formal Leaders provide cultural guidance to Change Leaders and Change Leaders in turn guide staff towards the change with the Formal Leader cultures in mind. Based on the high rate of failed change and the availability of process change models, but the inability for process change models to categorize cultures, this research intends to answer the following research questions:

- 1.) *How closely aligned are culture types, existing and preferred, of the Change Leader – each groups' change agent with those of the Formal Leader, organizational leadership, and staff culture types within their functional group?*
- 2.) *How closely aligned are culture types among Change Leader – each groups' change agent in a single organization?*
- 3.) *How closely aligned are Change Leader culture types and change success?*

The research questions aim to shed light on the degree of culture type alignment that exists among people within functional groups of public organizations. Culture alignment may not be present in among Formal Leaders, Change Leaders, and staff as expected. For this reason, research question 1 looks at the different culture types within each functional group by Formal Leader, Change Leader, and staff role. For example, Group A's Formal Leader may have one or more cultures; the Change Leader may have the same or different cultures compared to the Formal Leader; and staff members may have similar or different organizational cultures compared to the Formal Leader and Change Leader. The culture type alignment provides insight into the different culture types that exist in each of the functional groups. This information is helpful when unifying people during change; culture types that are similar can move towards the change together.

The second research question intends to examine the current and preferred culture types among Change Leaders across the organization while the final research question investigates the alignment of Change Leader culture types and electronic routing system usage by functional group. Successful electronic routing system change is achieved when 50% or more people within a functional group use the electronic routing system. The research questions intend to uncover the cultures types that exist in a single public organization among Change and Formal Leaders and their staff. The following chapter presents the research methodology and procedures for which the research questions are answered.

Chapter 3: Methodology

Introduction

The Methodology chapter addresses the reasoning behind, and procedures of, the study. After reading this chapter, the steps necessary to replicate the study from start to finish should be clear. This chapter opens with the overall research design followed by the quantitative results and then qualitative results. The quantitative results are organized by design, sample and participants, and data collection methods. Data collection information includes the study model and relative dimensions, the instrument, the survey used, procedures to collect the data, and the analysis plan. The qualitative results are organized by case study design, sample and participants, and data collection methods. Qualitative data collection methods include semi-structured interview questions, interview procedures and questions, and the coding strategy. A summary of the quantitative results and introduction to the research findings follow.

Overall Research Design

A mixed methods approach is used in this study. The quantitative method measures the culture types of Change Leaders, Formal Leaders, and staff within each of the functional groups in the study's organization. With the quantitative data, culture profiles can be identified at the individual level and provide a functional group culture profile. The qualitative component was used for the Change Leaders only. The qualitative method determines the accuracy of the quantitative data from the Change Leaders. It also provides Change Leaders to

express their feelings about the change initiative and discuss how they would like their functional group to behave differently in a dialogue format.

Quantitative Research

Design

A cross sectional survey is used in this study to analyze data from a subset of the organization's population. The population that received the survey was the organization's electronic routing system users as of July 15, 2017. The electronic routing system had been in use starting January of 2016. The organization had experienced change during this 18-month period. At the 18-month mark, I wanted to know if electronic routing system change was successful.

Sample and Participants

The study's organization is comprised of nine functional groups that execute public administrative and scientific organizational mission functions. Each functional group executes a different administrative and scientific mission. The organization contains 444 electronic routing system users; electronic routing system users account for 44% of the organization's population.

Electronic routing system users hold various roles within the organization. Each functional group contains one Formal Leader, one Change Leader, and many people categorized into a third role, staff members. Four hundred forty-four electronic routing system users were identified from the electronic routing system, the catalyst for this study, as of 7/15/2017. Data analysis was conducted to remove duplicate users. Of the 444 electronic routing

system users, staff members account for 426 (96%) of users; their participation in the study is important to the study results.

Based on electronic routing system usage, 9 Formal Leaders, 9 Change Leaders and 426 staff were asked to participate in the email-based survey through purposive sampling. Purposive sampling, specifically homogenous sampling, is based on the characteristics of a population (Saunders, Lewis and Thornhill 2012), This sampling selective and purposeful representation of the electronic routing system users for which culture type data can be collected. Purposive sampling is an appropriate technique for this research because Formal Leader, Change Leader, and staff of all nine functional groups together depict the group culture types, which in turn, contribute to the organization's dominant culture types.

Data Collection

OCAI Model and Dimensions

The Organizational Culture Assessment Instrument (OCAI) is the culture model used in this study. It is a valid and reliable organizational culture assessment tool created by Kim Cameron and Robert Quinn that effectively profiles organizational cultures, and diagnoses aspects of an organization's underlying culture (Cameron and Quinn 2006). OCAI measures culture on an ipsative scale, a 100-point distribution among four culture types. Documented OCAI studies, in the early 1990s, show patterns of reliability where ratings of organizational culture were consistent (Cameron and Quinn 2006). Studies that have used the OCAI have also produced evidence for the validity of the OCAI (Cameron and Quinn 2006).

OCAI assesses culture from the perceived practice of members of an organization (Iriana and Buttle 2006). “OCAI helps to match key management theories about organizational success, approaches to organizational quality, leadership roles, and management skills” (Maximini 2015, 16) six organizational culture dimensions (Cameron and Quinn 2006). The six OCAI dimensions are: dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases, and criteria of success. OCAI derived from Cameron and Quinn’s the Competing Values Framework (CVF), in which four organizational culture types result from scores in each of the six dimensions (Cameron and Quinn 2006). The four organizational culture types are: Clan culture, Adhocracy culture, Market culture and Hierarchy culture (Cameron and Quinn 2006). According to Cameron and Quinn (2006), Clan culture type is focused on teamwork, communication and mentorship; Adhocracy culture type is focused on innovation, entrepreneurship and transformation; Market is focused on competition, production, and results; and Hierarchy is focused on structure, efficiency, and timeliness.

OCAI contains four quadrants. Each quadrant corresponds to the four organizational cultures. Figure 7 displays the four OCAI quadrants, which categorize internal focus, integration, flexibility, discretion, external focus, differentiation, stability, and control (OCAI Online 2012).

Figure 7: OCAI Culture Type Categories Defined



The Competing Values Framework (Cameron and Quinn, 1999).

Source: [The-Competing-Values-Framework](#)

The Clan culture type describes a very pleasant place to work, where people share a lot of personal information, much like an extended family with teamwork and participation (Cameron and Quinn 2006). The leaders or heads of the group are mentors and perhaps even parent figures (Cameron and Quinn 2006). The group is held together by loyalty or tradition and commitment is high (Cameron and Quinn 2006). The group emphasizes the long-term benefit of human resources development and attaches great importance to cohesion and morale while success is defined in terms of sensitivity to customers and concern for people (Cameron and Quinn 2006).

The Adhocracy culture type describes a dynamic, entrepreneurial, and creative place to work (Cameron and Quinn 2006). People in the group stick out

their necks and take risks and leaders in the group are considered innovators and risk takers (Cameron and Quinn 2006). The organization is held together by commitment to experimentation and innovation (Cameron and Quinn 2006) with an emphasis on leading the way and acquiring new resources (Cameron and Quinn 2006). Success in the Adhocracy culture type means gaining unique and new products or services; individual initiatives and freedoms are encouraged (Cameron and Quinn 2006).

The Market culture type describes a result-oriented group whose major concern is getting the job done (Cameron and Quinn 2006). People are competitive and goal-oriented while leaders are tough demanding hard drivers, producers, and competitors (Cameron and Quinn 2006). Winning, reputation and success are common concerns (Cameron and Quinn 2006). Success is defined in terms of creating opportunities, and exposing organizational capabilities are important (Cameron and Quinn 2006).

The Hierarchy culture type describes a very formalized and structured place to work where procedures govern what people do (Cameron and Quinn 2006). Formal Leaders pride themselves on being good coordinators who are efficiency minded (Cameron and Quinn 2006); maintaining a refined group is most critical. Stability and performance with efficient, smooth operations are desired where rules and policies hold the group together (Cameron and Quinn 2006). Success is defined in terms of dependable delivery, smooth scheduling and low cost of services (Cameron and Quinn 2006).

OCAI Instrument Survey

The study's quantitative survey is based on the OCAI questions by Cameron and Quinn. In the traditional execution of the OCAI, participants divide

100 points into the table for the Clan, Adhocracy, Market, and Hierarchy cultures types. Participants enter 100 points for their current cultures and 100 points for their preferred cultures. Traditional OCAI survey questions are found in Appendix B. Although an effective method for capturing the culture types of the various individuals or groups of people such as Formal Leaders, Change Leaders, and staff (Cameron and Quinn 2006), the traditional OCAI scoring is time-consuming for and can be confusing for participants. For this research, a modified and easier to understand format was provided to electronic routing system users; the Likert scale format.

The modified OCAI survey in this study was comprised of 24 survey questions for the current culture categorization and 24 survey questions for the preferred culture categorization, totaling 48 OCAI culture types' questions. The 48 survey questions were based on OCAI's six dimensions: dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases, and criteria of success; and were also based on OCAI's four culture types: Clan, Adhocracy, Market, and Hierarchy. Each of the 48 survey questions could be rated on a scale of 1 through 5 with 1 being the most negative score and 5 being the most positive score. A score of 1 represented strongly disagree; a score of 2 represented disagree; a score of 3 represented neutral; a score of 4 represented agree; and a score of 5 represented strongly agree.

Likert scores were averaged and documented for each of the six OCAI dimensions for current and preferred culture types. The first 24 questions focused on how electronic routing system users currently saw their functional group culture types while the second 24 questions focused on how electronic routing system users preferred the group culture types. In each OCAI dimension,

a Clan, Adhocracy, Market, and Hierarchy culture type question existed. For example, question 1 asked if electronic routing system users strongly disagreed, disagreed, were neutral, agreed, or strongly agreed to the following: *The group is a very personal place. It is like an extended family. People seem to share a lot of themselves* (Cameron and Quinn 2006). In the example, the question asks the participant to rate their Clan culture type. All modified OCAI survey current and preferred questions used for this study are found in Appendix C.

Procedures for Distributing OCAI Survey and Collecting Responses

Because of the size of the electronic routing system users and differing geographic locations, emails were used to collect culture type data. The modified OCAI survey was emailed to 444 electronic routing system users in the summer of 2017. Emails were distributed to each of the Formal Leaders and Change Leaders with unique electronic surveys link so that each role and functional group was appropriately captured. Staff from each functional group received a survey link unique to their staff role and their functional group. Electronic routing system users were provided 3 weeks to complete the survey. Follow up emails were sent to participants 1 week and 2 weeks following the initial survey distribution. It was assumed that electronic routing system users were available and able to complete the survey within this 3-week period. Extensions were offered to users who did not respond after the 3-week period. Survey responses were automatically collected in the Survey Monkey tool. I, as the researcher, as notified via email of survey responses as surveys were completed.

Analysis of Quantitative Data Plan

Quantitative results were analyzed 4 weeks after survey distribution. The additional week between the communicated survey due date and quantitative

analysis allowed 2 additional surveys to be received. Survey data was transferred from Survey Monkey to SPSS by functional group and survey participant role. Once in SPSS the survey data was reviewed against the Survey Monkey data to ensure proper data transfer.

Each functional group was coded with an alpha character of A, B, C, D, E, F, G, H, or I to uniquely identify each of the nine functional groups while also keeping the identity of each group and the organization anonymous. Each role within each functional group was given a unique numeric code: 1 through 27. Survey responses for the 48 questions were noted in SPSS as column headers (i.e., Q1, Q2, Q3, etc.). Each column header could be mapped back to the modified OCAI questions provided to electronic routing system users in Survey Monkey. Responses to Each question had 1 response for each electronic routing system users who completed the survey. Responses were indicated in SPSS as 1, 2, 3, 4, 5 or 99. As you recall, a score of 1 through 5 represented the strong disagree through strongly agree. A value of 99 represented no answer for the question.

The Cronbach's Alpha was determined from the survey response. Cronbach's Alpha identified how similar electronic routing system cultures were in the organization. In this study, results of the internal consistency are examined from two perspectives: (1) the overall current and preferred organizational level culture types, and (2) each of the OCAI dimensions. Recall that the OCI six dimensions are: (1) dominant characteristics, (2) organizational leadership, (3) management of employees, (4) organization glue, (5) strategic emphasis, and (6) criteria of success. After the internal consistency was measured, an analysis of each functional group was performed. A super-variable was created for each of

the 3 functional group roles: The Change Leader, Formal Leader, and staff. The super-variable was created using the SPSS Transform > Compute Variable function to obtain the median value for each participant's current and preferred culture types. Additionally, a cross tabulation in SPSS of current and preferred culture type was conducted to determine the functional group culture types by role.

Qualitative Research

Design

Following the OCAI survey distribution, a case study was executed to determine the phenomenon surrounding varying Change Leader culture types. Face-to-face qualitative semi-structured interviews were held with each of the nine Change Leaders. The case study provided an opportunity to document additional electronic routing system user data in verbal responses from Change Leaders. The interviews were conducted after the modified OCAI survey was data was collected.

Sample and Participants

The Change Leaders were selected through purposive sampling similarly to the quantitative research design; each of the nine functional group Change Leaders were interviewed. Formal Leaders nor staff were part of the qualitative research design. Recall that each Change Leader represented their Formal Leader and therefore, their functional group's scientific or administrative mission.

Data Collection

Semi-structured interviews were held with Change Leaders in their office within the organization. Each Change Leader was asked to participate in the

interview for 30 minutes during a 3-week time on the day and time of their choice. All Change Leaders complied with the interview invitation. Email invitations were sent to each Change Leader for individual interview sessions.

At each interview session, I introduced myself to the Change Leader and explained the purpose of the research; the purpose was to determine their current and preferred culture types. The interviewee was asked if he or she had any questions and then question 1 of the interview was asked; six additional questions followed. During each interview session, notes were taken in lieu of audio recording to document interview feedback. Interview notes were later transcribed and analyzed. In this organization, audio recording was not a permitted method.

The 7 semi-structured interview questions were based on the six dimensions of the OCAI. Every Change Leader was asked the same 7 questions, which were meant to affirm the strength of understanding that Change Leaders had of their own culture types and the culture types of their functional groups. As the literature stated earlier, a weak understanding of culture puts the group at risk of having misunderstood or misrepresented group cultures. Additionally, I assert that change may be met with resistance. Knowing the culture types within each functional group could empower Change Leaders during the change effort. Full semi-structured interview questions with question probes are included in Appendix D; however, core interview questions for each of the Change Leaders are identified below.

- 1.) How would you describe your group's current work environment?
- 2.) If you could select the type of work environment to work in, what would it be like?
- 3.) How do you feel your group Formal Leader guides your group today?

- 4.) How do you think your group organizes employees?
- 5.) How do you think your group is held together?
- 6.) What aspects of your group are emphasized?
- 7.) How do you feel your group defines success?

Once all Change Leaders had participated in the interview process and provided answers, interview responses for each of the seven core interview questions (as listed above) by Change Leaders were compiled into a PDF document for qualitative coding. Interview response were coded from the OCAI culture type keywords. Keywords from the interviews were specific to one of the four culture types. The keywords were categorized into the four culture types: Clan, Adhocracy, Market, and Hierarchy. For example, keywords for Clan culture included but was not limited to: family, mentor, collaborate, and team. If from the Clan keywords, the word *family* was mentioned 2 times during an interview, that word and its relationship to Clan culture type was captured in the qualitative analysis software. Change Leaders responded with one, several or all four culture type phrases associated with the OCAI culture types. Each phrase counted for one culture type. The counts for each culture type were documented in Atlas.ti, which was used to uncover qualitative data phenomenon. The qualitative data was manually entered in Altas.ti so that the numerous keywords were visible in a map-like structure for Clan, Adhocracy, Market and Hierarchy culture types.

Conclusion

The study's methods include a cross sectional survey of the organization's population, the electronic routing system users, after the organization had experienced change for 18-months. Survey participants were selected based on

their usage of the electronic routing system. The Change Leader case study provided further information on the Change Leader culture types. The interviews exposed culture type patterns among the Change Leaders in the organization. The following chapter, Chapter 4, examines the research findings and linkages among organizational culture types, and the role of culture models during change initiatives.

Chapter 4: Research Findings

Introduction

Recall that organizational change initiatives are time consuming and dynamically challenging efforts (Richards 2018; Rousseau and Tijoriwalas 1999). Change creates a loss of identity but if you link the change to something that people currently are accustomed to and that identifies with the organization, change is more likely to happen (Bright 2017). Process change models support Change Leaders with the people side of change (Kotter 2006; Hiatt 2006). Change adoption is realizable through process change models however; process change models are not the ideal tools for organizational culture identification. Norms, behaviors or cultures, are best measured through culture models (Burke 1994; O'Reilly 1989; Bass and Avolio 1993). When culture models are used with process change models, Change Leaders bind the Formal Leader cultures and staff cultures together during change efforts (Conner 1992).

Chapter 4 begins with the study's descriptive statistics at the organizational level, which describe the organization's participant response rates from the quantitative survey. The Cronbach's Alpha is then presented at

organization level and at the OCAI six dimensions level so that the reader is introduced to the internal consistency among the OCAI dimensions for the study. The reader is then familiarized with the organization's culture types that help address research question 1: *How closely aligned are change leaders' culture and culture of the Formal Leader and staff within each group*, by functional group current culture types, preferred culture types, and role (Formal Leader, Change Leader, and staff) culture types. Research question 2: *how closely aligned are Change Leaders' culture types in a single organization* is answered from the cultures types identified in the first research question as well as the qualitative interviews. Finally, research question 3: *how closely aligned are Change Leaders' culture types and change success* is answered from the cultures types identified in the first research question as well as the electronic routing system data. Remember, the electronic routing system was the change which the organization's leadership desired.

Organizational Descriptive Statistics

Of the 444 electronic routing system users, 97 or 22% participated in the 48-question electronic survey. Table 4 illustrates the number and percentage of participants by group and role for each of the 9 functional groups. For example, 5 of 12 electronic routing system users from Group A responded to the survey. Group A's survey response rate is 42%. The Formal Leader and Change Leader participated in the survey while 3 of 10 staff (30%), completed the survey.

The organizational descriptive statistics in the table show that many staff members from Groups C and H completed the survey compared to the other functional groups. The response rates for Groups C and H are comparable to other functional group response rates such as Groups A, B, and C. Groups D, E

and F had much smaller response rates. The smaller response rates could be attributed to failure to deliver the questionnaires to the target population and the reluctance of people to respond to the survey (Baruch and Holtom 2008). (Baruch, 1999).

Table 4: Survey Responses by Group

Group Name	Formal Leader	Change Leader	staff	staff Responses by Percentage	Total Responses	Total Respondent Percentage
Group A	1	1	3	33.3%	5	42%
Group B	1	1	5	33.3%	7	42%
Group C	1	1	25	25.5%	27	27%
Group D	1	1	5	8.0%	7	11%
Group E	0	1	1	3.3%	2	9%
Group F	0	1	1	5.3%	2	14%
Group G	1	1	3	33.3%	5	45%
Group H	1	1	36	21.0%	38	22%
Group I	1	1	2	18.0%	4	31%
Total Responses	7	9	81	18.2%	97	22%

To determine if the results of the OCAI survey response are reliable, Cronbach's Alpha is executed at organization level and at the OCAI six dimensions level. This measure of internal reliability "is the average of all possible split-half correlations" (Remler and Ryzin 2011, 122). Although a Likert scale is used in the survey rather than ipsative scale, the 100-point distribution among the four culture types, the Cronbach's Alpha still identifies how closely

related the cultures of respondents are in the organization. The results of the internal consistency are detailed in Cronbach's Alpha section below.

Cronbach's Alpha

The 48 question Survey Monkey survey uses Likert scale responses with values 1 through 5. One means is the most negative response, strongly disagree while 5 means the most positive, strongly agree. Cronbach's alpha for current organizational culture, 24 of 48 questions, of all survey responses is .880. Cronbach's alpha for preferred organizational culture, the remaining 24 of 48 questions, of all survey responses is .878 (See table 5). Both Cronbach Alpha scores for current and preferred are good and nearly excellent scores (Remler and Ryzin 2011; Nunnally 1978).

Table 5: Cronbach's Alpha

	Current Culture	Preferred Culture
Valid Cases	93	85
Excluded Cases	7	15
Cronbach's Alpha	.880	.878

The Cronbach's Alpha demonstrates that results for current and preferred cultures are consistent across repeated measures at the organizational level; the Cronbach's Alpha scores have a shared covariance and likely they measure the same concept (University of Virginia Library 2017). Although only

slightly smaller, the preferred cultures Cronbach's Alpha is, like the current cultures Cronbach's Alpha score, sufficient; it surpasses the .70 minimally acceptable level of reliability (Remler and Ryzin 2011; Nunnally 1978). The Cronbach's Alpha for all 48 questions together results in a score of .843. According the organizational level Cronbach's Alpha scores, the test measures as intended, the current and preferred culture types.

Cronbach's Alpha by OCAI Dimensions

The Cronbach's Alpha was also calculated for the OCAI six dimensions for current and preferred culture types to test the reliability at the OCAI dimensional level. Table 6 shows the Cronbach's Alpha for current and preferred culture types by OCAI dimension. All Cronbach's Alpha variables are positive but below the .70 minimally acceptable level of reliability (Remler and Ryzin 2011; Nunnally 1978).

Table 6: Cronbach's Alpha by OCAI Dimension

Dimension	Current Culture	Preferred Culture
Dominant Characteristics	.438	.369
Organization Leadership	.690	.655
Management of Employees	.402	.451
Organizational Glue	.431	.561
Strategic Emphasis	.540	.516
Criteria for Success	.574	.556

Culture Types at the Organization Level

As an organization, accounting for responses from each of the functional groups, the median value for current and preferred responses for current Clan, Adhocracy, Market, and Hierarchy culture types are displayed in table 7. Valid responses in the table refer to the number of cases used to compute median value statistics. Yellow in the table highlights current culture types with a Likert scale score of 3.5 or above while blue highlights preferred culture types with a Likert scale score of 3.5 or above.

Based on the median Likert super-variable responses received, the current culture type of the study's organization is Hierarchy culture type. Hierarchy culture types received a median Likert scale response of 3.5. Current Clan, Adhocracy, and Market culture types in the organization received a neutral

or 3.0 Likert scale score. On the other hand, the Clan, Adhocracy, Market, and Hierarchy preferred culture types received a median Likert score of 3.5 or higher. The median super-variables show that the organization's current culture type among all roles in the organization is Hierarchy and that the preferred culture types be Clan, Adhocracy, Market, and Hierarchy.

Table 7: Organization Level Culture Types

	Current Clan	Current Adhocracy	Current Market	Current Hierarchy	Preferred Clan	Preferred Adhocracy	Preferred Market	Preferred Hierarchy
Valid	98	98	98	98	91	90	90	90
Median	3.0	3.0	3.0	3.5	4.0	4.0	3.5	4.0

In addition to the median super-variable value calculations, the percentage for each of the current and preferred culture types by OCAI dimensions was computed. The full outputs from Frequency Tables for organization's culture types by dimension are found in Appendix E; however, table 8 summarizes the organization's dimensional current and preferred culture types. Table 8: The Organization's Culture Type by OCAI's Six Dimensions presents each of the 6 OCAI dimensions, current and preferred four culture types by majority as a percentage providing more information into the current and preferred culture types within the organization. Percentages in each of the dimensions illustrates the organization's trending culture types with all group respondents represented. Yellow highlights current culture types while blue highlights preferred culture types. Current organizational culture types with a Likert score of 3.5 or above is highlighted in yellow while the preferred organizational culture type with a score of 3.5 or above is highlighted in blue.

Table 8: The Organization's Culture Type by OCAI's Six Dimensions

	Dominant Characteristics Dimension Likert Ranking / Valid %	Group Leadership Dimension Likert Ranking / Valid %	Employee Mgmt. Dimension Likert Ranking / Valid %	Group Glue Dimension Likert Ranking / Valid %	Strategic Emphasis Dimension Likert Ranking / Valid %	Criteria for Success Dimension Likert Ranking / Valid %
Current Clan	4 / 35.7%	3 / 33.7%	4 / 50.5%	4 / 38.9%	3 / 29.8%	4 / 35.5%
Preferred Clan	4 / 33.7%	4 / 51.5%	4 / 59.1%	4 / 59.1%	4 / 61.4%	4 / 54.1%
Current Adhocracy	2 / 33.7%	4 / 30.5%	2 / 38.9%	4 / 33.7%	4 / 37.2%	2 / 36.6%
Preferred Adhocracy	3 / 56.7%	4 / 50.6%	4 / 53.4%	4 / 60.2%	4 / 53.4%	4 / 42.4%
Current Market	4 / 49%	4 / 38.9%	3 / 37.9%	4 / 55.8%	3 / 43.6%	3 / 34.4%
Preferred Market	4 / 61.1%	4 / 40.4%	3 / 47.7%	4 / 70.5%	3 / 45.5%	3 / 43.5%
Current Hierarchy	4 / 40%	4 / 36.8%	4 / 50.5%	4 / 38.9%	4 / 48.9%	4 / 37.6%
Preferred Hierarchy	4 / 36.7%	4 / 61.8%	4 / 38.6%	4 / 47.7%	4 / 59.1%	4 / 54.1%

For example, the second column of Table 8 displays the dominant characteristics dimension. Respondents of the survey feel that the Market culture type is a current culture with a Likert score of 4 or agree. Forty-nine percent of the respondents rated the current culture as Market at 3.5 or higher on the Likert scale. Because the dominant characteristics dimension current culture type was identified as Market, the Market culture type is yellow within table 8. Respondents also feel that the Market culture type is a preferred culture. The preferred culture type of Market received a Likert score of 4 or

agree. Sixty-one-point-one percent of the respondents rated the current culture as Market at 3.5 or higher on the Likert scale. Because the dominant characteristics dimension identified Market culture type as a preferred culture type, the Market culture type is blue within table 8. With the organization's current and preferred cultures types among the OCAI six dimensions identified, the following paragraphs describe the results of the first research question.

Results for Addressing Research Question 1

To answer the first research question, *how closely aligned are culture types, existing and preferred, of the Change Leader and those of the Formal Leader and staff culture within each functional group*, a quantitative analysis by group is applied. Remember that Groups G and H leaders were the driving forces for change; these two groups contained the director of the organization and the administrative leader of the organization. Groups G and H leadership pushed for the creation of and use of the change, the electronic routing system, yet persuasion alone from these two groups, as discussed in the literature review chapter, may not be enough to cultivate change. The cultures that exist in each group within the organization contribute to electronic routing system usage. The following sections of this chapter are segmented by functional group and role (Formal Leaders, Change Leaders, staff) and predominant current and preferred culture types by OCAI dimension identifying the similar and different culture types which can help or hinder use of the electronic routing system.

Current Culture Types at the Group Level

Current culture types at the group level show that there are varying (different) predominant cultures across the organization. Scientific groups, which represent 6 of the 9 groups, do not share the same cultures types. The same

concept is true with the administrative groups. Administrative groups, which represent 3 of the 9 groups, have different culture types. Table 9 illustrates the variations in overall current culture types of all responses by functional group. Yellow highlights current culture types with a Likert score or 3.5 or above. For example, Group A survey respondents feel that Market is a current culture type. Group B respondents are neutral and therefore do not believe that their functional group has a current culture identify. Group D respondents believe that Market and Hierarchy culture types are currently part of their functional group cultures.

Table 9: Current Culture Type Likert Scale Rating by Group

	Group A (Scientific)	Group B (Scientific)	Group C (Scientific)	Group D (Scientific)	Group E (Scientific)	Group F (Scientific)	Group G (Admin)	Group H (Admin)	Group I (Admin)
Clan	3.0	3.0	3.0	3.0	3.75	2.0	4.0	3.0	2.25
Adhocracy	3.0	3.0	2.25	3.0	3.75	3.0	3.0	3.5	2.25
Market	4.0	3.0	3.0	3.5	3.25	3.0	3.0	3.75	3.25
Hierarchy	3.0	3.0	3.75	4.0	3.5	3.0	3.5	3.5	3.25

Preferred Culture Types at the Group Level

Preferred culture types are the cultures that people in the organization desire (Cameron and Quinn 2006). Preferred culture types at the group level, show that there are many shared preferred culture types by group. All groups, both scientific and administrative, prefer Clan culture type while 8 of 9 groups prefer Hierarchy culture types, 7 of 9 groups prefer Adhocracy culture types, and 5 of 9 groups preferred Market culture type. Table 10: Preferred Culture Type

Likert Scale Rating by Group illustrates the variations in overall preferred culture types for each functional group. Blue highlights preferred culture types. For example, Group A survey respondents strongly prefer (5.0 Likert score) the Clan culture type. Group A respondents also prefer (4.0 Likert score) Adhocracy, Market, and Hierarchy culture types. As displayed in Table 10, preferred culture types across the organization are similar. The table shows that the 3 administrative groups align exactly with preferred Clan and Hierarchy culture types while 2 administrative groups (Groups H and I) preferred Adhocracy, and 2 groups (Groups G and H) preferred Market culture types. The table also shows that the 6 scientific groups align exactly with preferred Clan culture type, while 5 scientific groups (Groups A, B, C, D and E) preferred Adhocracy, 3 scientific groups (Groups A, D and E) preferred Market, and 5 groups (Groups A, C, D, E, and F) preferred Hierarchy culture types.

Table 10: Preferred Culture Type Likert Scale Rating by Group

	Group A (Scientific)	Group B (Scientific)	Group C (Scientific)	Group D (Scientific)	Group E (Scientific)	Group F (Scientific)	Group G (Admin)	Group H (Admin)	Group I (Admin)
Clan	5.0	4.0	4.0	4.0	3.5	3.5	5.0	4.0	4.0
Adhocracy	4.0	4.0	4.0	4.0	3.5	3.25	3.0	4.0	4.0
Market	4.0	3.0	3.0	4.0	3.5	3.0	3.5	4.0	3.0
Hierarchy	4.0	3.0	3.5	4.0	3.5	3.75	4.0	4.0	3.5

Culture Types by Group and Role

Analyzing the survey responses by not only functional group but role (Formal Leader, Change Leader, and staff) helps answer the first research

question: *How closely aligned are Change Leaders', Formal Leaders' and staff cultures within each group.* Recall that the Formal Leaders, the appointed functional group leader, each designated a Change Leader to represent the Formal Leader desires and beliefs; their cultures. In an ideal situation, the Formal Leader and Change Leader should have aligned culture types because the Change Leader was designated by the Formal Leader as a representative of his/her interests. The results show that current and preferred culture types by group and role vary in this case. To summarize the Formal Leader, Change Leader, and staff members' current and preferred culture types, super-variables are derived from the Likert scores of each survey question.

Recall, a Likert scale was used for the 48-question survey. Different Likert score responses could be applied across the 48 questions. For each respondent, the super-variable produces a median Likert score for the current and preferred Clan, Adhocracy, Market, and Hierarchy culture types. The median Likert score for each participant summarizes current and preferred culture types from the 48-question survey making current and preferred culture types among Formal Leaders, Change Leaders, and staff identifiable.

In the following sections, current and preferred culture types for each functional group by role (Formal Leader, Change Leader, and staff) are distinguished. Likert scores of strongly agree (Likert score of 5) and agree (Likert score of 4) are noted in this research as positive while strongly disagree (Likert score of 1) and disagree (Likert score of 2) are noted in this research as negative. Neutral responses (Likert score of 3) are neither positive nor negative but noted in the research.

Group A

Five Group A electronic routing system users completed the survey, which represents 42% of Group A's total electronic routing system users. As a group, the Group A median value of all roles (Formal Leader, Change Leader and staff) showed that Market was the current culture type. The median values of Clan, Adhocracy, and Hierarchy culture types were neutral (Likert score of 3). By percentage, 40% of Group A survey respondents agreed (Likert score of 4) to the current culture type as Market. Forty percent of Group A respondents were neutral (Likert score or 3) to the Hierarchy culture type and 40% of all respondents disagreed (Likert score of 2) with Clan and Adhocracy culture types.

Group A preferred culture type median values showed that Clan culture type was the strongly preferred (Likert score of 5) culture type. Adhocracy, Market, and Hierarchy culture types were preferred (Likert score of 4). By respondent percentage, 60% of respondents strongly preferred (Likert score of 5) the Clan culture type. Sixty percent of all respondents preferred (Likert score of 4) the Adhocracy culture type, while 40% preferred (Likert score of 4) Market and Hierarchy culture types. Culture types within Group A varied.

Group A Culture Type by Role

To determine the current and preferred culture types in Group A by role, a cross tabulation analysis in SPSS was performed (See table 11: Group A Current and Preferred Culture Type Likert Scale Rating by Group and Role). The Group A Formal Leader strongly agreed (Likert score of 5) to a current Clan culture type and agreed (Likert score of 4) to Adhocracy, Market and Hierarchy culture types. The Change Leader's current culture types differ slightly from the Formal Leader culture types. The Change Leader strongly agreed (Likert score of 5) that the current culture types are Market and Hierarchy, yet Clan and Adhocracy

culture types received neutral (Likert scores of 3) responses. The median value for all staff responses showed that staff agreed (Likert score of 4) to the current Market culture type. Staff were neutral (Likert score of 3) to the Hierarchy culture type, and negative (Likert score of 1 or 2) to Clan and Adhocracy current culture types. Market was the common current culture of the Formal Leader, Change Leader and staff in Group A.

The Group A Formal Leader, Change Leader and staff preferred culture types are similar. The Formal Leader strongly preferred (Likert score of 5) the Clan and Hierarchy culture types and agreed (Likert score of 4) to Adhocracy and Market culture types. The Change Leader strongly preferred (Likert score of 5) Clan, Adhocracy, and Hierarchy culture types, and preferred (Likert score of 4) Market culture type. The staff median value show that they preferred (Likert score of 4) Clan, Adhocracy, and Hierarchy culture types. Staff were neutral (Likert score of 3) to the Market culture type. Preferred culture types in Group A were similar for Formal Leader, Change Leader, and staff roles. The Group A Formal Leader and Change Leader preferred all four culture types, whereas the staff preferred all but one culture type, Market. In the table below, yellow emphasizes the current culture types while blue stresses the preferred culture types.

Table 11: Group A Current and Preferred Culture Type Likert Scale Rating by
Group and Role

	Group A Formal Leader	Group A Change Leader	Group A staff
Current Clan	5	3	2
Current Adhocracy	4	3	2
Current Market	4	5	4
Current Hierarchy	4	5	3
Preferred Clan	5	5	4.5
Preferred Adhocracy	4	5	4
Preferred Market	4	4	3
Preferred Hierarchy	5	5	4

Group A Conclusion

According to the research data and the OCAI survey category definitions (See figure 7: OCAI Culture Type Categories Defined), Group A's Formal Leader saw the group's current culture as a very personal place where people seem to share a lot of themselves and teamwork, consensus, and participation were valued (Cameron and Quinn 2006). The Formal Leader and Change Leader agreed that Group A is a very controlled and structured place with formal procedures that generally govern what people do and leaders pride themselves on being coordinators and efficient organizers (Cameron and Quinn 2006). The Formal Leader, Change Leader and staff all agreed that Group A was a results-oriented organization and getting the job done was a focus (Cameron and Quinn 2006). All roles agreed that Clan, Adhocracy, and Hierarchy were the preferred culture type. The Formal Leader and Change Leader preferred that Group A maintain aspects of all four culture types, which included a concern for people, being cutting edge, being dependable in delivery, and being competitive (Cameron and Quinn 2006). Staff preferred all culture types except the Market culture type where there is the desire to be group results oriented and competitive leaders (Cameron and Quinn 2006).

This Group A functional group level data and the data that precedes in the following group sections shows that variations exist between the Formal Leader, Change Leader and staff for current and preferred culture types. Cultural data collected at the role level can assist the Change Leader during a change effort. In this functional group, the Group A Change Leader can use culture models, like the OCAI, to identify current culture types of herself, the Formal Leader, and staff. While understanding the change that a group must undertake, the Change Leader considers the predominant culture types and prepares to

address change with preferred culture types in mind (Cameron and Quinn 2006). The Change Leader can leverage preferred culture types and help move the functional group toward the preferred environment while driving successful change. For Group A, the Change Leader could guide staff with preferred culture types of Clan, Adhocracy and Hierarchy during the change effort.

Group B

Seven Group B electronic routing system users completed the survey, which represents 42% of Group B's total electronic routing system users. As a group, the Group B median value of all roles (Formal Leader, Change Leader and staff) showed that there no predominant current culture types; all current culture types had a median neutral Likert score. By percentage, 14.3% of Group B respondents agreed that the current culture types were balanced among all four culture types. Forty-two-point nine percent of Group B respondents were neutral to the current culture of Clan while 42.9% disagreed with Clan as the current culture type. Forty-two-point nine percent were neutral to Market as the current culture type. Seventy-one-point four percent of Group B respondents were neutral to Hierarchy as the current culture type. Based on the responses of all seven respondents, there was no agreed upon current culture type.

Eighty-Five-point eight percent of Group B respondents preferred the Clan culture type. One hundred percent of respondents preferred the Adhocracy culture type. Forty-two-point nine percent preferred the Market culture type and 42.9% preferred the Hierarchy culture type. Culture types in Group B varied.

Group B Culture Type by Role

An SPSS cross tabulation was performed on the current and preferred culture types by role. Group B Formal Leader, Change Leader and staff current

and preferred culture types varied (See table 12: Group B Current and Preferred Culture Type Likert Scale Rating by Group and Role). In the table, yellow highlights current culture types while blue emphasizes preferred culture types.

Table 12: Group B Current and Preferred Culture Type Likert Scale Rating by Group and Role

	Group B Formal Leader	Group B Change Leader	Group B staff
Current Clan	4	2	3
Current Adhocracy	4	2	3
Current Market	3	2	3
Current Hierarchy	3	3	3
Preferred Clan	5	4	4
Preferred Adhocracy	4	4	4
Preferred Market	3	3	3
Preferred Hierarchy	3	4	3

Group B Conclusion

According to the study data and the OCAI survey category definitions (figure 7: OCAI Culture Type Categories Defined) Group B's Formal Leader saw the group in its current state as a very personal place where people seem to share a lot of themselves and teamwork, consensus, and participation are valued (Cameron and Quinn 2006). The Formal Leader also saw the group as dynamic and entrepreneurial where people were willing to stick their necks out and individual initiatives and freedoms were cultivated (Cameron and Quinn 2006). The Change Leader, however, did not view Group B as a personal place where people were valued nor risk taking encouraged. The Change Leader had no current culture type. Staff in Group B were neutral to all four current culture types. Although the Formal Leader and Change Leader had different current culture types, they as well as the staff had similar preferred culture types.

The Group B Change Leader can use culture models, like the OCAI, to identify current culture types of the Formal Leader, staff, and herself. While understanding the change that a group must undertake, the Group D Change Leader could consider the current culture types and identify preferred cultures. During a change effort, the Change Leader could use Group B's preferred culture types to drive successful change.

Group C

Twenty-Eight Group C electronic routing system users completed the survey, which represents 27% of Group C's total electronic routing system users. As a group, the Group C median value of all roles (Formal Leader, Change Leader and staff) showed that Hierarchy was the predominant overall current culture type. Clan and Market culture types showed a neutral median value and

Adhocracy was a negative Likert score. As a group, 71.4% of Group C respondents agreed that the current culture type was Hierarchy. Forty-two-point nine percent of Group C respondents agreed to the Clan culture type. Forty-two-point nine percent agreed to the current Market culture type; however, 42.8% disagreed to the Market current culture type. Sixty-point seven percent of respondents did not believe that the Adhocracy culture type was the current culture while only 17.9% agreed to the current Adhocracy culture type.

Ninety-two percent of Group C respondents preferred the Clan culture type. Seventy-two percent preferred Adhocracy culture type and 64% preferred the Hierarchy culture type. Forty-eight percent preferred the Market culture type. Only 16% of respondents did not prefer the Market culture type while 12% did not prefer the Hierarchy culture type. Culture types in Group C varied.

Group C Culture Type by Role

An SPSS cross tabulation analysis was performed on the current and preferred culture types by role. Group C Formal Leader, Change Leader and staff current culture types varied (See table 13: Group C Current and Preferred Culture Type Likert Scale Rating by Group and Role). In the table, yellow stresses current culture types while blue highlights preferred culture types. Current and preferred culture types are different among Group C roles.

Table 13: Group C Current and Preferred Culture Type Likert Scale Rating by
Group and Role

	Group C Formal Leader	Group C Change Leader	Group C staff
Current Clan	3	3	3
Current Adhocracy	2	4	2.25
Current Market	3	4	3
Current Hierarchy	3	3	4
Preferred Clan	4	5	4
Preferred Adhocracy	4	5	4
Preferred Market	3	4	3
Preferred Hierarchy	4	4	3.5

Group C Conclusion

According to the study data and the OCAI survey category definitions (See figure 7: OCAI Culture Type Categories Defined) Group C's Formal Leader did not

identify with a current culture type, but preferred personal cultures where people seem to share a lot of themselves and teamwork, consensus, and participation were valued; the group encouraged risk taking for unique products and services; and preferred a controlled and structured place with formal procedures that govern what people do and leaders who pride themselves on being coordinators and efficient organizers (Cameron and Quinn 2006). The Change Leader believed that the current culture encompassed a very personal place where risk taking was encouraged; however, the Change Leader preferred a results-oriented functional group with a focus on getting the job done and preferred similar cultures as the Formal Leader. Staff viewed the current culture type as results oriented group with a focus on getting the job done, having an efficient and structured group and risk taking was encouraged (Cameron and Quinn 2006). Culture types in Group C varied.

The information collected for Group C in the study can be used to achieve shape the functional group's culture. During a change effort the current and preferred culture type data could help the Change Leader identify current culture types of the Formal Leader, staff, and herself. While understanding the change that a group must undertake, the Group C Change Leader could consider the lack of predominant current culture types and prepare to guide Group C toward the desired and identified culture type behaviors to drive successful change.

Group D

Seven Group D electronic routing system users completed the survey, which represents 11% of Group D's total electronic routing system users. As a group, the Group D median value of all roles (Formal Leader, Change Leader and

staff) showed that Market and Hierarchy were the predominant overall current culture types. As a group, 57.2% of Group D respondents agreed to the current culture type as Market and 57.2% agreed to the current culture type as Hierarchy. Forty-two-point nine percent of Group D respondents agreed that Clan was a current culture type while 42.9% disagreed that Adhocracy was a current culture type. Eighty-Five-point seven percent of Group D respondents strongly preferred the Clan culture type. Seventy-one-point five percent of all respondents preferred the Hierarchy culture type, while 57.1% preferred Adhocracy and Market culture types respectively.

Group D Culture Type by Role

A cross tabulation analysis was performed on the current culture type (See table 14: Group D current and preferred culture type Likert Scale Rating by Group and Role). In the table, yellow highlights current culture types while blue emphasizes preferred culture types. Current culture types in Group D varied by Formal Leader, Change Leader, and staff roles. A cross tabulation analysis was also performed on the preferred culture type and role. Preferred culture types are similar for the Group D Change Leader and staff, but the Formal Leader preferred culture types were different. Culture types in Group D varied.

Table 14: Group D Current and Preferred Culture Type Likert Scale Rating by Group and Role

	Group D Formal Leader	Group D Change Leader	Group D staff
Current Clan	4.0	3.0	3.0
Current Adhocracy	2.0	3.0	3.0
Current Market	3.0	4.0	4.0
Current Hierarchy	2.0	3.0	4.0
Preferred Clan	4.0	4.0	4.0
Preferred Adhocracy	2.0	4.0	4.0
Preferred Market	2.0	4.0	4.0
Preferred Hierarchy	3.0	4.0	4.0

Group D Conclusion

According to the study data and the OCAI survey category definitions (See figure 8: OCAI Culture Type Categories Defined), Group D's Formal Leader saw

the group as a very personal place where people seem to share a lot of themselves and teamwork, consensus, and participation were valued (Cameron and Quinn 2006) and preferred that these current cultures persisted in the future. The Change Leader and staff agreed that Group D was a results-oriented organization where competition was fostered, and leaders are hard drivers (Cameron and Quinn 2006). The Change Leader and staff preferred that Group D have all aspects of the four culture types.

As discussed in Groups A, B, and C, current and preferred culture type data can assist the Change Leader during change efforts. The Group D Change Leader can use culture models, like the OCAI, to identify current culture types of the Formal Leader, staff, and herself. While understanding the change that a group must undertake, the Group D Change Leader could consider the current culture types, identify preferred cultures, and prepare for successful change.

Group E

Two Group E electronic routing system users completed the survey, which represents 9% of Group E's total electronic routing system users. As a group, the Group E median value of all roles (Formal Leader, Change Leader and staff) showed that Clan, Adhocracy and Hierarchy were the current culture types. As a group, 100% of Group E respondents, the Change Leader and one staff member, agreed that all four culture types were part of the current Group E culture. The Formal Leader did not take the survey and was therefore not represented in the responses. Fifty percent of respondents in Group E preferred all four culture types. The other respondent was neutral to all four culture types.

Group E Culture Type by Role

A cross tabulation analysis was performed on the current and preferred culture types (See table 15: Group E Current and Preferred Culture Type Likert Scale Rating by Group and Role). In the table, yellow highlights current culture types while blue highlights preferred culture types. Group D Formal Leader was unable to participant in the survey and therefore, no data from the Formal Leader is available. Group E culture types were varied. Table 15 below summarizes the varying current and preferred culture types by role.

Table 15: Group E Current and Preferred Culture Type Likert Scale Rating by
Group and Role

	Group E Formal Leader	Group E Change Leader	Group E staff
Current Clan	N/A	4.0	4.0
Current Adhocracy	N/A	4.0	4.0
Current Market	N/A	3.5	3.0
Current Hierarchy	N/A	4.0	3.0
Preferred Clan	N/A	4.0	3.0
Preferred Adhocracy	N/A	4.0	3.0
Preferred Market	N/A	4.0	3.0
Preferred Hierarchy	N/A	4.0	3.0

Group E Conclusion

According to the study data and the OCAI survey category definitions (See figure 7: OCAI Culture Type Categories Defined), Group E's Change Leader

believed that all four culture types were present in the group. Staff saw the current culture type as a personal place where new ideas are fostered (Cameron and Quinn 2006). The Formal Leader was not able to participate in the survey due to competing responsibilities.

Group F

Two Group F electronic routing system users completed the survey, which represents 14% of Group F's total electronic routing system users. As a group, the Group F median value of all roles (Formal Leader, Change Leader and staff) showed that Group F had no dominant current culture types. As a group, 66.7% of Group F respondents disagreed that the current culture type was Clan. Sixty-six-point seven percent of Group F respondents were neutral to Adhocracy, Market and Hierarchy culture types. The Formal Leader did not participate in the survey and therefore, is not represented in the responses.

One hundred percent of respondents preferred the Hierarchy culture type, while 100% were neutral to the Market culture type. Fifty percent of Group F respondents preferred the Clan and Adhocracy culture types. Although the current culture types among the respondents in Group F were the same, the preferred culture types were different.

Group F Culture Types by Role

A cross tabulation analysis was performed on the current culture type (See table 15: Group F Current and Preferred Culture Type Likert Scale Rating by Group and Role). In the table, yellow highlights current culture types while blue highlights preferred culture types. The Group F Formal Leader was unable to respond to the 48-question quantitative survey due to time constraints and thus, no data exists for Group F Formal Leader. There were no clear current culture

types of Group F and preferred culture types in Group F vary slightly from Change Leader and staff roles. Table 16 below summarizes the varying current and preferred culture types by role.

Table 16: Group F Current and Preferred Culture Type Likert Scale Rating by Group and Role

	Group F Formal Leader	Group F Change Leader	Group F staff
Current Clan	N/A	2.0	2.0
Current Adhocracy	N/A	3.0	3.0
Current Market	N/A	3.0	3.0
Current Hierarchy	N/A	3.0	3.0
Preferred Clan	N/A	3.0	4.0
Preferred Adhocracy	N/A	3.0	3.5
Preferred Market	N/A	3.0	3.0
Preferred Hierarchy	N/A	3.5	4.0

Group F Conclusion

Group F's Formal Leader did not participate in the survey and therefore no data is available for the Group F Formal Leader. The Change Leader did not have a pulse on the current Group F culture types. The Change Leader provided a neutral response to Clan, Adhocracy, Market, and Hierarchy culture types. According to the study data and the OCAI survey category definitions (See figure 7: OCAI Culture Type Categories Defined), the Change Leader preferred a formalized and structured environment with efficiency minded leaders and formal rules and policies were preferred (Cameron and Quinn 2006). Staff did not have a current dominant culture type but preferred a concern for people, encouraged teamwork and desired risk-taking qualities in a formalized structured environment (Cameron and Quinn 2006). Although Group F had minimal respondents, the data showed that the culture types varied among those who participated.

Group G

Five Group G electronic routing system users completed the survey, which represents 45% of Group G's total electronic routing system users. As a group, the Group G median value of all roles (Formal Leader, Change Leader and staff) showed that Group G dominant current culture types are Clan and Hierarchy. As a group, 80% of Group G respondents agreed to the current culture type as Clan. Eighty percent of respondents agreed with Hierarchy as a current culture type. Only 40% of Group G respondents agreed to Adhocracy and Market culture types.

One hundred percent of Group G respondents preferred the Clan culture type. Sixty percent of respondents preferred the Market culture type while 80%

preferred the Hierarchy culture type. Only 40% of respondents preferred the Adhocracy culture type. Culture types in Group G varied.

Group G Current Culture Types by Role

A cross tabulation analysis was performed on the current culture types (See table 17: Group G Current and Preferred Culture Type Likert Scale Rating by Group and Role). In the table, yellow highlights current culture types while blue highlights preferred culture types. The Group G Formal Leader, Change Leader and staff agreed that Clan and Hierarchy were the current culture types. Preferred culture types in Group G were Clan and Hierarchy. The Formal Leader and staff were aligned in preferred cultures. Table 17 below summarizes the varying current and preferred culture types by role.

Table 17: Group G Current and Preferred Culture Type Likert Scale Rating by
Group and Role

	Group G Formal Leader	Group G Change Leader	Group G staff
Current Clan	4.0	4.0	4.0
Current Adhocracy	2.0	2.0	3.0
Current Market	3.0	3.0	4.0
Current Hierarchy	4.0	4.0	4.0
Preferred Clan	5.0	5.0	5.0
Preferred Adhocracy	3.0	5.0	4.0
Preferred Market	2.5	3.5	3.0
Preferred Hierarchy	4.0	5.0	3.0

Group G Conclusion

Culture types were different for the Group G Formal Leader, Change Leader, and staff. The Group G Formal Leader maintained consistent similar current and preferred culture types. According to the study data and the OCAI survey category definitions (See figure 7: OCAI Culture Type Categories Defined), the Formal Leader believed the group to have a focus on people, and structure (Cameron and Quinn 2006) and preferred these cultures to proceed in the future. The Change Leader believed that the current culture was also people concerned and structured; however, unlike the Formal Leader, the Change Leader preferred all four culture types be part of their functional group. Staff in Group G believed that all four culture types existed in the group; however, preferred a concern for people, a focus on results, and structure (Cameron and Quinn 2006). There is an opportunity for the Change Leader in Group G to unite the group to one or more preferred culture types.

Group H

Thirty-Eight Group H electronic routing system users completed the survey, which represents 22% of Group H's total electronic routing system users. As a group, the Group H median value of all roles (Formal Leader, Change Leader and staff) showed that Group H dominant current culture types were Market, Adhocracy, and Hierarchy. Forty-seven-point four percent of Group H respondents agreed to Clan as the current culture type. Fifty-seven-point nine percent of respondents believed that Adhocracy was the current culture type. Fifty-two-point six percent of respondents agreed that Market was the current culture type. Finally, 65.7% of respondents believed that Hierarchy was the current culture type.

Thirty-four respondents completed the preferred survey questions. The median values illustrate that Group H respondents strongly prefer all four culture types. Eighty-Eight-point six percent of Group H respondents preferred the Clan culture type. Eighty four percent preferred the Adhocracy culture type. Sixty-point five percent of respondents preferred Market culture type while 70.6% preferred the Hierarchy culture type. Culture types in Group H varied.

Group H Culture Types by Role

A cross tabulation analysis was performed on the current culture type (See table 18: Group H Current and Preferred Culture Type Likert Scale Rating by Group and Role). In the table, yellow highlights current culture types while blue highlights preferred culture types. The median values show that Market is the dominant culture among Group H participants. The preferred culture types of Group H were the same for all roles.

Table 18: Group H Current and Preferred Culture Type Likert Scale Rating by
Group and Role

	Group H Formal Leader	Group H Change Leader	Group H staff
Current Clan	3.5	2.0	3.0
Current Adhocracy	4.0	4.0	3.5
Current Market	2.5	3.0	4.0
Current Hierarchy	3.0	4.0	3.5
Preferred Clan	5.0	4.0	4.0
Preferred Adhocracy	5.0	4.0	4.0
Preferred Market	4.0	3.5	4.0
Preferred Hierarchy	3.5	4.0	4.0

Group H Conclusion

Group H current culture types varied by role; however, preferred culture types for Group H were consistent across Group H roles. According to the study data and the OCAI survey category definitions (See figure 7: OCAI Culture Type Categories Defined), the Formal Leader believed the group was focused on people and new ideas (Cameron and Quinn 2006). The Change Leader believed that new ideas and structures were important while Staff believed that new ideas, results, and structures were the current group focus (Cameron and Quinn 2006). Group H prefers that all four culture types were part of their culture.

Group I

Four Group I electronic routing system users completed the survey, which represents 31% of Group I's total electronic routing system users. As a group, the Group I median value of all roles (Formal Leader, Change Leader and staff) showed that Group I did not have a dominant current culture. As a Group, 25% of Group I respondents agreed to Clan as the current culture type while 50% disagreed. Fifty percent agreed that Market was the current culture type while 25% disagreed and 25% were neutral. Only 25% of respondents believed that Adhocracy was the current culture type while 75% disagreed. Finally, 50% of respondents believed that Hierarchy was the current culture type, while 25% disagreed and 25% were neutral. Current culture types in Group I were different.

Thirty-three-point three percent of Group I respondents strongly prefer the Clan, Adhocracy, and Hierarchy culture types. Thirty-three-point three percent of Group I respondents prefer the Clan, Adhocracy, and Hierarchy culture types. 100% of respondents are neutral to Market culture type. Culture types in Group I varied.

Group I Culture Types by Role

Group I Formal Leader and Change Leader have different beliefs for their functional group’s current and preferred culture types. Table 19 below summarizes the varying current and preferred culture types by role of Group I. Yellow highlights current culture types while blue highlights preferred culture types.

Table 19: Group I Current and Preferred Culture Type Likert Scale Rating by
Group and Role

	Group I Formal Leader	Group I Change Leader	Group I staff
Current Clan	1.0	5.0	2.0
Current Adhocracy	2.5	4.0	3.0
Current Market	4.0	2.5	3.0
Current Hierarchy	4.0	2.5	2.25
Preferred Clan	3.0	5.0	4.0
Preferred Adhocracy	3.0	4.5	4.0
Preferred Market	2.5	3.0	3.0
Preferred Hierarchy	3.0	3.5	4.5

Group I Conclusion

In this research, Group I current culture types varied by role. According to the study data and the OCAI survey category definitions (See figure 7: OCAI

Culture Type Categories Defined), the Formal Leader believed the current culture types were results focused and structured but has no preferred culture types (Cameron and Quinn 20s06). Neither the Change Leader nor staff agreed with the Formal Leader current culture types.

Results for Addressing Research Question 1 Summary

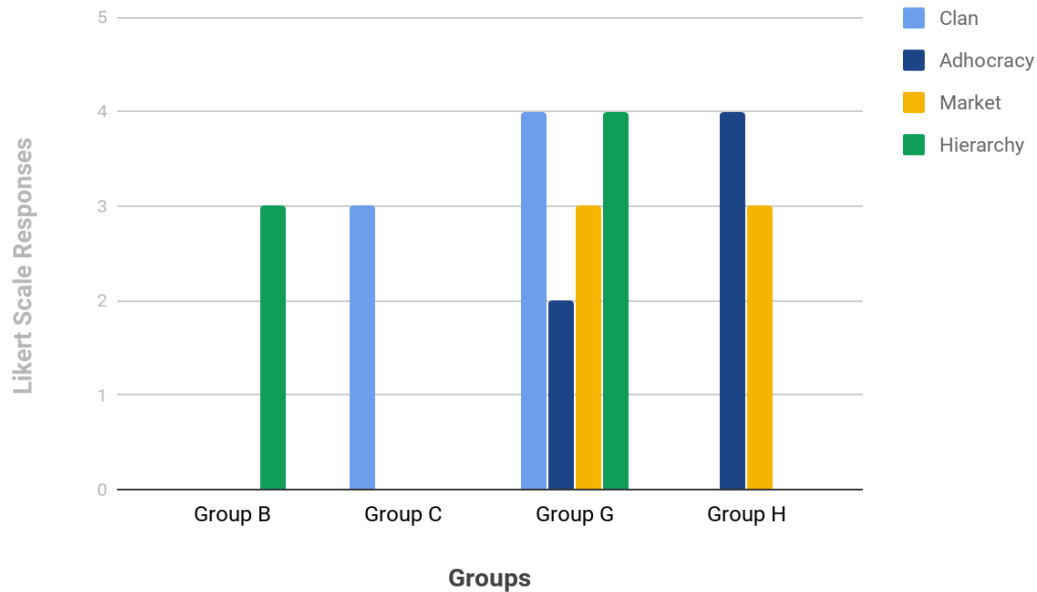
The preceding section discussed the data to support the first research question. Recall the first research question as follows: *How closely aligned are culture types, existing and preferred, of the Change Leader – each group’s change agent with those of the Formal Leader, organizational leadership, and staff culture types within their functional group during a technology and process?* Based on the functional group data, the results show that cultures in most functional groups varied. Meaning, culture identification through use of culture models exposed the complexity of functional group cultures and their organizational culture differences. How could Change Leaders scientifically categorize cultures without using culture models? The answer: It is difficult or next to impossible. Although the Change Leader maintains a role within the functional group to guide people towards successful change, each role within each group had its own current and preferred culture types making change difficult.

Change Leaders use process change models with the intention of providing a positive change outcome. Change Leaders use culture models to identify current and preferred culture types of Formal Leader, Change Leaders, and staff. Culture type assessment within a Change Leader’s functional group provides measurable Formal Leader, Change Leader and staff culture types, which could hinder successful change during a change effort. Change Leaders

who know the current culture types of Formal Leaders and staff know the current behaviors and can guide desired change, addressing barriers to successful change. Change Leaders are the connection to the current work environment and future work environment.

Culture types can vary between the Formal Leader, Change Leader, and staff member as discussed in the previous sections. Different culture types among the Formal Leader, Change Leader, and staff can make change more difficult. The first relationship to consider during a change effort is the Formal Leader - Change Leader relationship. The Change Leader should embody the Formal Leader's culture during a change effort; however, looking at this research data, only 22% of the Formal Leaders and Change Leaders share current culture types. The similar current culture types for the Change Leaders and Formal Leaders is depicted in figure 8: Formal Leader and Change Leader Current Culture Types below. According to figure 8, across the organization, there are 8 of 36 instances (22%) in 4 functional groups where the Formal Leader and Change Leader share similar current culture types, within a .5 Likert scale ranking.

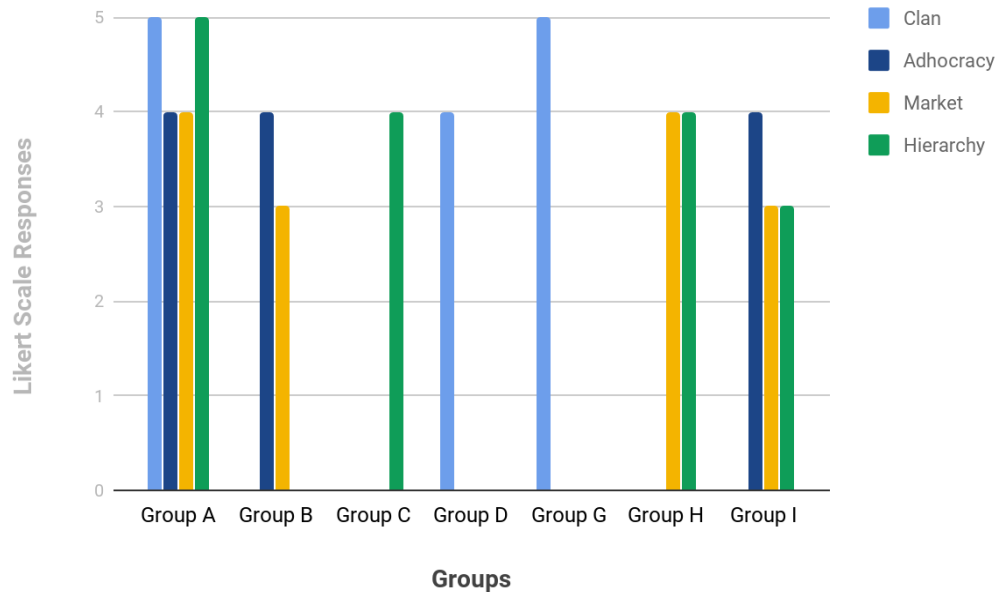
Figure 8: Formal Leader and Change Leader Current Culture Types



Across the organization there are 14 of 36 instances (39%) from 7 groups where the Formal Leader and Change Leader share similar preferred culture types, within a .5 Likert scale ranking. Preferred culture type similarities occurred in 7 of the 9 groups, which is a positive finding. Preferred culture type similarities between each Formal Leader and Change Leader are important during a change effort. Remember, the Change Leader and Formal Leader should share similar culture types to stand a chance at successful change.

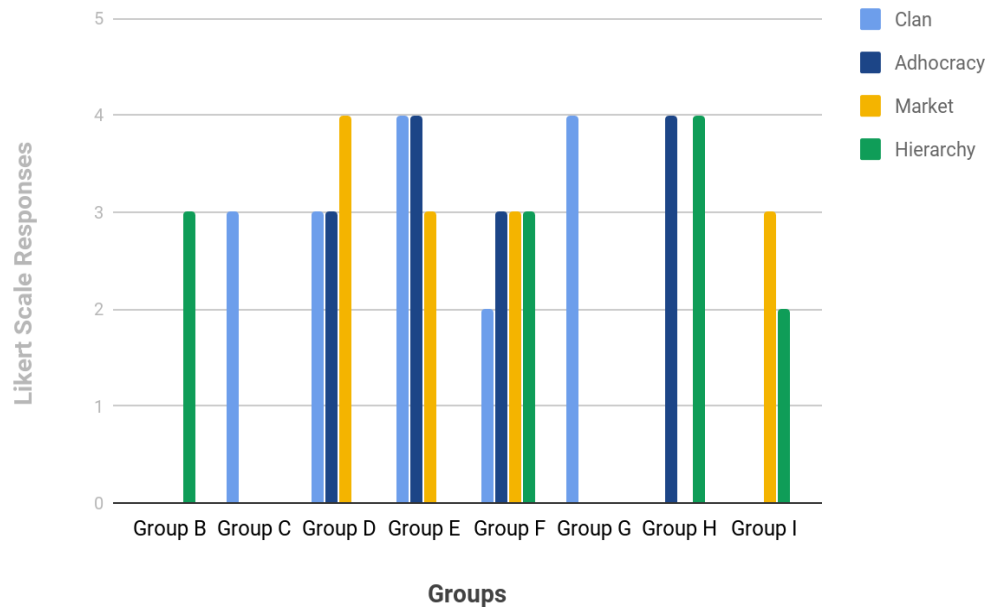
Figure 9 displays the results of similar Likert scale responses, where applicable, by group for preferred Formal Leader and Change Leader culture types. The two groups that had no shared preferred culture types were Groups E and F. Based on differences in preferred culture types for these 2 Formal Leaders and the 2 Change Leaders, I would expect change to be difficult.

Figure 9: Formal Leader and Change Leader Preferred Culture Types



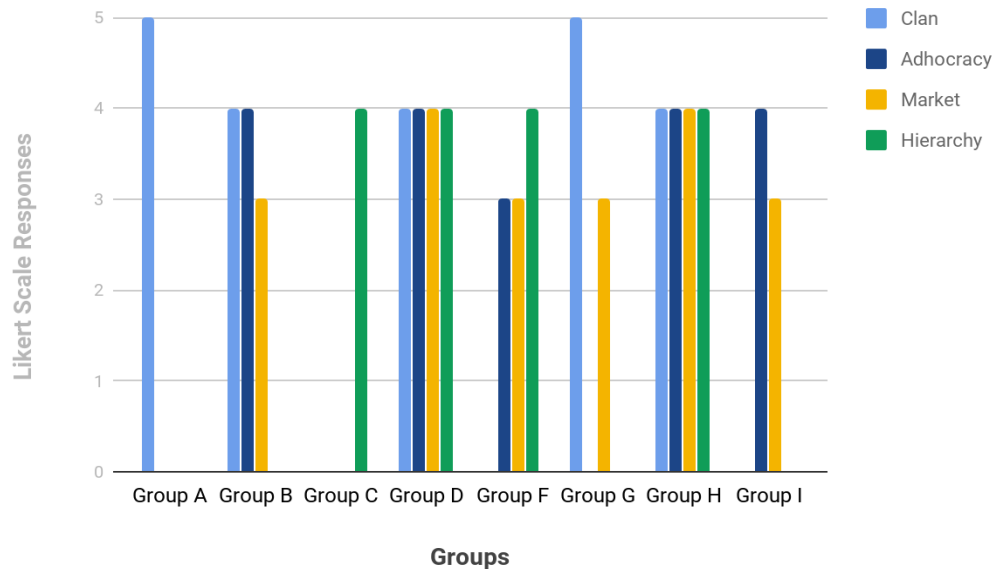
A closer look at the Change Leader and staff median Likert scores determines the similarities, within a positive Likert response (4 or 5 rating), in current and preferred culture types. Across the organization, there are 17 of 36 instances (47%) from 8 groups where the Change Leader and staff share similar current culture types. Eight of the 9 groups show similar culture types between Change Leaders and staff members. Group A Change Leaders and staff were the only group that shared no current culture types. There are more similarities in current culture types between the Change Leader and staff than the data presented in previous figures on the Change Leaders and Formal Leaders. Figure 10 shows the results of similar current culture types among Change Leader and staff.

Figure 10: Change Leader and staff Current Culture Types



Across the organization there are 20 of 36 instances (55%) from 8 groups where the Change Leader and staff share similarities, with positive Likert responses (4 or 5 Likert rating), in preferred culture types (See figure 11). Eight of the 9 groups share similar preferred culture types between each group's Change Leader and collective staff members. It should be noted that Group E does not share any similar culture types among the Change Leader and staff members. There are more similarities in preferred culture types between the Change Leader and staff than in the previous Change Leader and Formal Leader figure. Figure 11 shows the results of similar Change Leader and staff culture types.

Figure 11: Change Leader and staff Preferred Culture Types



Clan culture type is the dominant preferred culture type among Change Leaders and staff. The Clan culture type accounts for family like interactions, mentoring and concern for people. The data in figure 11 shows that Change Leaders and staff prefer a culture that embraces friendliness, loyalty, and teamwork (Cameron and Quinn 2006). Success in Clan culture type groups is focused on accomplishing the needs of its people (Cameron and Quinn 2006).

Figures 8 through 11 in the previous text show the Likert rankings between each group's Change Leader and Formal Leader and Change Leader and staff. In the organization, the Change Leader and Formal Leader share 8 instances (22%) of similar current culture types and 13 instances (47%) of preferred culture types. The Change Leader and staff share 17 instances (36%) of similar current culture types and 20 instances (55%) of preferred culture types. Although there are instances of the similar Likert scale rankings for preferred culture types, not all instances score a 4 or 5 on the Likert scale. While the

Change Leader and Formal Leader and Change Leader and staff may share neutral (3.0 on the Likert scale) or negative (2.0 or 1.0 on the Likert scale) Likert responses as captured in Figures 8, 9, 10 and 11, only positive (Likert score of 4 or 5) responses for current and preferred culture types in this study are captured in table 20 below. Positive responses represent the current and desired culture types for each group. Table 20 below illustrates the number of electronic routing system users and similar current and preferred (4.0 or 5.0 on the Likert scale) culture types between the Change Leader and Formal Leader.

Table 20: Number of Users and Similar Culture Types (Change Leader and Formal Leader)

Group	No. of Users in Group	Culture Types							
		Similar Change Leader and Formal Leader Current Culture Types				Similar Change Leader and Formal Leader Preferred Culture Types			
		Clan	Adhocracy	Market	Hierarchy	Clan	Adhocracy	Market	Hierarchy
G	11	●			●	●			●
A	12			●	●	×	×	●	●
I	13								
B	17					×	×		
F	21								
E	32								
D	64					×			
C	100					×	×		×
H	174		●			×	●	×	×

Legend

X is different culture types

Circle is shared culture types

As described in previous sections of this chapter, the Change Leaders and Formal Leaders have different current and preferred culture types. In 3 groups, the Change Leader and Formal Leader agree to the current culture types. In 6 groups, the Change Leader and Formal Leader agree to the preferred culture types. Shared culture types are indicated by a *circle* or an *X*. Shared culture types for Change Leaders and Formal Leaders in the current and preferred states are indicated by a circle. Instances where Change Leaders and Formal Leaders had

shared preferred culture types, but not current culture types are indicated with an X.

According to table 20, the number of electronic users does not show a pattern of similarities in current and preferred culture types between the Change Leader and Formal Leader. Two additional observations are noted. The smallest group, Group G, shares the current and preferred culture types of Clan and Hierarchy. Group A, another small group, shares the current and preferred culture types of Market and Hierarchy. Finally, the largest group, Group H, shares the current and preferred culture type of Adhocracy.

Upon examination of Change Leader and staff data, they have different current and preferred culture types (see table 21). In 4 groups, the Change Leader and staff agree to the current culture types. In 8 groups, the Change Leader and staff agree to the preferred culture types. Although there are differences between each group's current and preferred culture type, the preferred culture types for most groups are Clan, Adhocracy and Market.

The number of electronic users does not show a pattern of similarities in current and preferred culture types between the Change Leader and Formal Leader. Two additional observations are noted. The smallest group, Group G, shares the current and preferred culture type of Clan. Group D, a larger group, shares the current and preferred culture type of Market. Finally, the largest group, Group H, shares the current and preferred culture types of Adhocracy and Market. Table 21 below illustrates the number of electronic routing system users and similar current and preferred (4.0 or 5.0 on the Likert scale) culture types between the Change Leader and staff.

Table 21: Number of Users and Similar Culture Types (Change Leader and staff)

Group	No. of Users in Group	Culture Types							
		Similar Change Leader and Staff Current Culture Types				Similar Change Leader and Staff Preferred Culture Types			
		Clan	Adhocracy	Market	Hierarchy	Clan	Adhocracy	Market	Hierarchy
G	11	●			x	●	x		
A	12					x	x		x
I	13					x	x		x
B	17					x	x		
F	21								x
E	32	x	x						
D	64			●		x	x	●	x
C	100					x	x		x
H	174		●	●		x	●	●	x

Legend

X is different culture types

Circle is shared culture types

Change Leaders help the people in an organization change (Kim and Mauborgne 2011). They guide people from one state to another, changing the behaviors of the people and how the people work. This research shows that Change Leaders have their own current and preferred culture types just as Formal Leaders and staff. This research also shows that there is no coherent current or preferred culture among most Change Leaders, Formal Leaders and staff in each functional group.

In each group, current and preferred culture types are not aligned for most Change Leaders, Formal Leaders, and staff. Groups G and H as the impetus for the change initiative have the Change Leader, Formal Leader and staff members agreeing on the current culture types. The preferred culture types among the Group G Change Leader, Formal Leader, and staff are similar. The preferred culture types among the Group H Change Leader, Formal Leader, and

staff are identical; everyone in Group H wants all four cultures types, Clan, Adhocracy, Market, and Hierarchy, as part of their functional group.

Groups A, B, C, G, and H appear to be in a good position for a change initiative because of the preferred culture type alignment among Change Leaders, Formal Leaders, and staff. Different culture types among Formal Leaders, Change Leaders and staff within a group with a distinct organizational purpose, compound the success of change efforts (Naylor 1996). Change Leaders however, work with the Formal Leader and staff to define agreed upon preferred culture types.

The following section examines each Change Leader's current and preferred culture types within the organization. Change Leader culture data illustrates the varying Change Leader culture types in a single organization. Change Leaders who share culture types in a single organization can collectively change their staff towards the desired change which moves the organization to change (Fernandez and Rainey 2006; Schein 2010; O'Flynn 2007).

Results for Addressing Research Question 2: Change Leader Culture Types

Change Leaders are influencers during change efforts guiding and collaborating with people (Kavanagh and Neal M. Ashkanasy 2006). Change Leaders embrace the vision and culture of their functional group's Formal Leader and guide staff towards change. Change Leaders leverage current and preferred culture types during change efforts to drive staff towards acceptable change. In this study, 9 functional groups were each represented by 1 Change Leader. Each Change Leader was selected and tasked by their Formal Leader to guide staff towards electronic routing system usage. The selection of each Change Leader

was not voluntary but based on the person who would best lead the Staff to the Formal Leader's vision. A miss-selection of the Change Leader by the Formal Leader could take the staff members in a different direction that was not desired by each Formal Leader.

The Formal Leaders envisioned each of their functional groups using an electronic routing system. Usage of the electronic routing system equates to successful change acceptance of the electronic routing system in this study. Prior to this study, the Change Leaders in organization did not have measurable data on group culture types. Because each of the nine functional groups embrace a different role in the organization, variations in culture types were thought to be possible, yet without documentation on the culture types, is unknown. Having documented culture types for the Formal Leader, Change Leaders, and staff can help Change Leaders guide people towards electronic routing system usage.

Following a quantitative survey, Change Leaders were asked to participate in a one-on-one qualitative semi-structured interview for 30 minutes to help address the second research question: *How closely aligned are culture types among Change Leaders in a single organization?* All 9 Change Leaders participated in the interview individually. Their responses, identified in the paragraphs below, provide additional data on their group's current and preferred cultures.

Change Leader Culture Types via the Survey

Based on the quantitative data provided in the previous sections, in 3 groups the Change Leaders aligned with their Formal Leader current culture types. In 6 groups, the Change Leaders aligned with their Formal Leader preferred culture types showing that most of the Change Leaders and Formal

Leaders share the same preferred culture types. In 4 groups, the Change Leaders aligned with their staff current culture types. In 8 groups, the Change Leaders aligned with their staff preferred culture types showing that the Change Leaders and staff shared the same preferred culture types; they had a unified cultural vision. Many of the group Change Leaders and Formal Leaders shared similar preferred culture types; almost all the group Change Leaders and staff shared similar preferred culture types.

Since the overall preferred culture types of Formal Leaders, Change Leaders, and staff were identified, a closer look of the Change Leaders is needed to determine cultural unity among change agents. Table 22 illustrates the varying Change Leader culture types across the organization. The table shows the Change Leaders' current and preferred culture types based on the survey data. *Circles* in the table show the shared culture types among current and preferred states while *X's* show differences in current and preferred culture types. A larger X or circle shows strong culture type relationship. For example, in Group A scientific group, there is a preferred culture of Clan with a large X. This X shows that Clan is highly preferred, but not part of Group A's current culture. Group A's Market culture type was highly prevalent in the current culture (represented by a large circle), but not as highly preferred (represented by a small circle).

Table 22: Change Leaders Culture Types in the Organization

Group	Function	No. of Users	Change Leader Current & Preferred Culture Types				
			Culture State	Clan	Adhocracy	Market	Hierarchy
G	Admin	11	Current	•			•
			Preferred	●	X	x	X
A	Scientific	12	Current			●	●
			Preferred	X	X	•	●
I	Admin	13	Current	●	•		
			Preferred	●	•		x
B	Scientific	17	Current				
			Preferred	x	x		x
F	Scientific	21	Current				
			Preferred				x
E	Scientific	32	Current	•	•	•	•

			Preferred	•	•	•	•
D	Scientific	64	Current			•	
			Preferred	x	x	•	x
C	Scientific	100	Current		•	•	
			Preferred	X	•	•	x
H	Admin	174	Current		•		•
			Preferred	x	•	x	•

Legend

X shows differences in current and preferred culture type states

O shows shared culture types among current and preferred states

Based on table 22, the number of electronic routing system users and current and preferred culture types vary from group to group. Five Change Leaders have current Clan culture type, 3 are current Adhocracy culture type, 2 are current Market culture type, and five are current Hierarchy culture type. Two groups, Groups B and F, do not have any current culture types. Eight of the Change Leaders prefer the Clan and Adhocracy culture types. Four Change Leaders prefer the Market culture type, and six Change Leaders prefer the Hierarchy culture type. Group E has no preferred culture types.

Change Leader Culture Types via the Interviews

The semi-structured interviews held with the 9 Change Leaders in the organization sheds light on the reasons for the Change Leader current and preferred culture types identified in the survey. The interview questions provide more detail on the Change Leaders current and preferred culture types.

Variation in group Change Leader current culture types is influenced by the nature of the work each group is tasked to accomplish and the Change Leader's understanding of culture or the behaviors experienced from staff (Dennison 1990; Kezar 2011; Campbell 2014; Oreg, Michel, By Todnem 2013). One Change Leader from each of the nine groups participated in a brief, 30-minute interview. Responses from each interview was documented on paper during the 30-minute session and transcribed into a single Word document after all interviews were conducted. Recall that the full interview question list with probes can be found in Appendix D. Below are the seven qualitative interview questions.

- 1.) How would you describe your group's current work environment?
- 2.) If you could select the type of work environment to work in, what would it be like?
- 3.) How do you feel your group Formal Leader guides your group today?
- 4.) How do you think your group organizes employees?
- 5.) How do you think your group is held together?
- 6.) What aspects of your group are emphasized?
- 7.) How do you feel your group defines success?

Culture type keywords are abstracted from the seven interview questions based on Cameron and Quinn's Organizational Culture Assessment Instrument. According to the nine Change Leader interviews, the Clan, Adhocracy, Market, and Hierarchy keyword count is produced. Table 23 presents the culture types

and number of culture type keywords from all Change Leader interviews. The highest keyword count is the Hierarchy culture type with 34 Hierarchy culture type references; Hierarchy is indicated in green within table 23. Based on the interviews, there are 31 Clan culture type keywords mentioned among all Change Leaders during the interview, Adhocracy: 23, and Market: 28. Meaning, the Change Leaders most frequently mention Hierarchy keywords, followed by Clan, Market and then Adhocracy with regards to their functional group's culture types. Upon analysis, the interview data is consistent with survey data; most functional groups are Hierarchy culture types as expressed by the Change Leaders during the interviews.

Table 23: Total Number of Clan, Adhocracy, Market, and Hierarchy Culture Types Referenced in the Change Leader Interviews

Clan	Adhocracy	Market	Hierarchy
31	23	28	34

Table 24 illustrates the culture type keyword count breakdown by interview question. As a reminder, the interview questions are structured with the six dimensions of the OCAI so that consistent and relevant responses across methods are received. The six OCAI dimensions are: dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases, and criteria of success. In the survey, the predominant current culture type for all Change Leaders is Hierarchy while the preferred culture type is Clan (refer to table 22). In table 24, Hierarchy culture type is the most referenced culture type in the Change Leader interviews. Clan culture type

is the second most mentioned culture type with Market and then Adhocracy culture types. This data supports the answer to the second research question: *How closely aligned are culture types among Change Leaders in a single organization?*

Table 24: Number of Clan, Adhocracy, Market, and Hierarchy Culture Types Referenced in the Interviews by Question

	# of Clan References	# of Adhocracy References	# of Market References	# of Hierarchy References
Current Culture	6	6	7	8
Preferred Culture	8	1	0	1
Leader Guidance	3	1	4	3
Employee Organization	0	0	1	6
Glue	5	6	5	5
Strategic Emphasis	4	5	2	6
Success Criteria	5	4	9	5
Total	31	23	28	34

Next, the interview data is broken down by functional group and OCAI culture type. Table 25 indicates each functional group's current culture types

according to the Change Leader interviews. The highest OCAI culture type keyword count for each functional group is indicated in green. The table lays out each Change Leader's group user size from smallest, Group G, to largest, Group H.

Table 25: Number of Clan, Adhocracy, Market, and Hierarchy Culture Types Referenced in the Interviews by Change Leader

Change Leader	Number of Users in Group	# of Clan References	# of Adhocracy References	# of Market References	# of Hierarchy References
Group G	11	5	1	2	5
Group A	12	5	0	2	3
Group I	13	4	3	2	3
Group B	17	0	0	4	3
Group F	21	1	2	3	5
Group E	32	3	3	2	5
Group D	64	0	2	7	5
Group C	100	3	3	3	2
Group H	174	4	6	2	1

The interviews provided an additional mechanism to obtain each Change Leader's dominant culture type. It appears that most Change Leaders show culture type consistency between the survey and interview. For example, the interviews (see Table 25) showed that the Group I Change Leader maintains a predominant Clan culture type; however, the survey results (see table 22) showed that Clan, and Adhocracy culture types are the dominant culture types. The interviews allowed the Change Leaders to focus on their predominant culture types. The interviews also provided Change Leader culture type identification when culture type identification was not obtained from the survey. For example, the survey data (see table 2) showed that Change Leaders in Groups B and F did not have any dominant current culture types. The interviews, however, showed that the Group B Change Leader had a dominant Market culture type while Group F Change Leader had a dominant Hierarchy culture type.

Based on the information obtained from the second interview question: *If you could select the type of work environment to work in, what would it be like*, Change Leaders verbal responses led to preferred culture types of Clan, Adhocracy, and Hierarchy culture types. The preferred culture type descriptions are defined in the following sentences. Change Leaders preferred professional, well experienced and very committed to their work staff; an environment that is team oriented, full of team players who encouraged dialogue; a group with new ideas; Formal Leader mentorship with encouraging staff to try new things (Cameron and Quinn 2006). Finally, Change Leaders preferred that groups remain in an organized structure with defined roles and responsibilities (Cameron and Quinn 2006).

A Change Leader represents her Formal Leader and staff during a time of change and is tasked with achieving successful change based on Formal Leader expectations and cultures (Herold 2008). Change Leaders who know their groups culture types can direct staff towards change. Change Leaders in this study were required to successfully change their staff behavior. Staff were required to use a new technology, an electronic routing system. Change Leaders entered the change effort without documented functional group culture types. Use of the electronic routing system by group, function, and size and the relationship among group characteristics is discussed in the following sections.

Results for Addressing Research Question 3

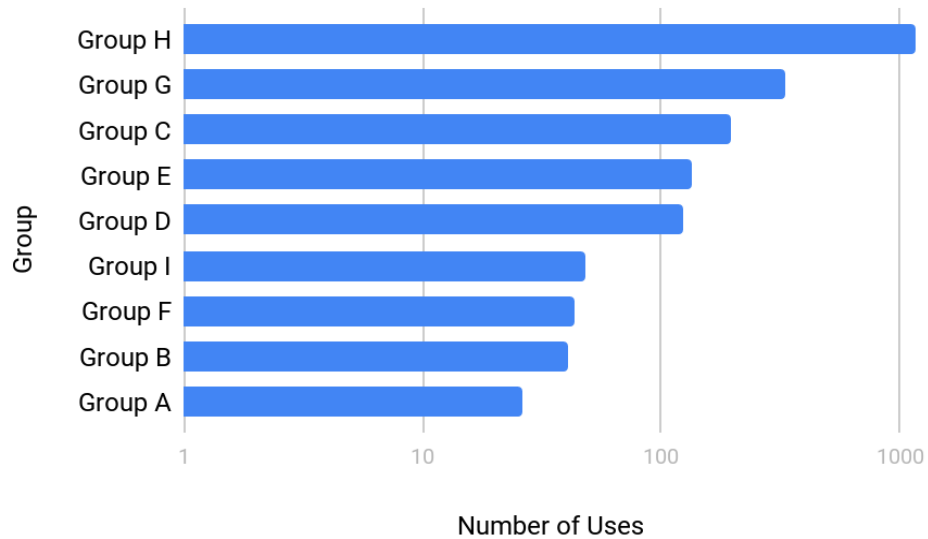
In this study, a public organization underwent a technological change. The organization shifted from a paper-based routing mechanism to an electronic routing system. The electronic routing system changed the way in which people in the organization worked. Although the intent of the electronic routing system was to bring efficiencies and collaboration to the organization, change was not 100% achieved. The third and final research question of this research looks at alignment of Change Leader culture types and electronic routing system usage.

Change Leaders in each of the organization's functional groups were an important part of change adoption. Change Leaders discussed with Formal Leaders on how the new electronic routing system would benefit their functional group. The Change Leaders worked with staff to learn how the electronic routing system would improve and devastate their daily tasks. The Change Leaders worked with staff for 18 months to obtain successful electronic routing system usage.

Change Leaders used the Kotter process, a process change model, to achieve electronic routing system usage. Remember, process change models are tools for Change Leaders to use when organizational change is needed due to performance gaps, technologies, opportunities or external pressures; these tools provide Change Leaders with steps to change staff behavior. At the time electronic routing system data for this study was collected, the electronic routing system was in use for 18 months. Recall that a culture model was not used and culture types for the Formal Leader, staff, and Change Leaders were unknown. After 18 months, the electronic routing system data showed that some functional groups achieved successful change while other groups had not. So, what is the relationship between Change Leader culture types, and electronic routing system usage? I want to know if there is a connection.

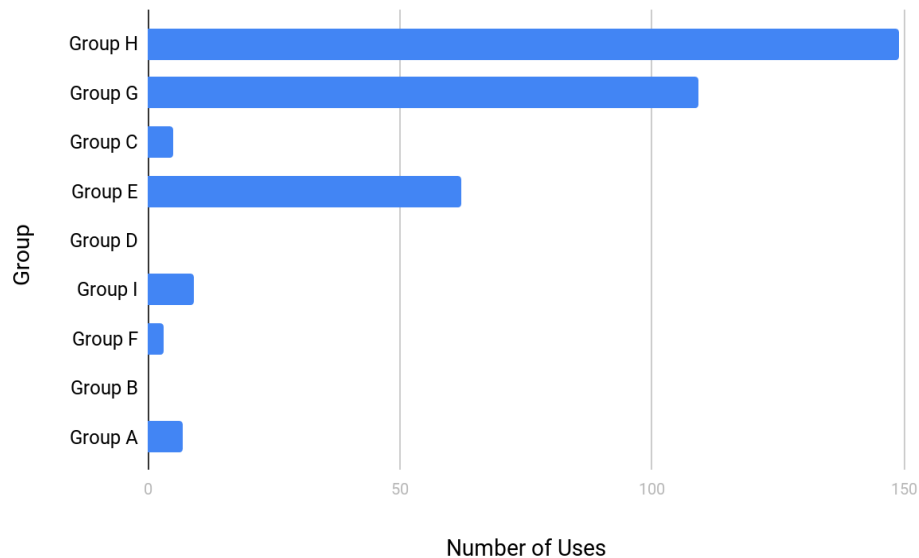
Figure 12 shows each functional group's number of electronic routing system submissions. Electronic routing system submissions data is used to capture usage. The number submissions (Uses in Figure 12) are displayed on the x-axis of the figure while functional group name appears on the y-axis. Figure 12 displays the group with the highest overall number of personnel submissions, Group H with over 1,000 uses, to the lowest overall number of personnel submissions, Group A with about 40 uses. The highest number of uses are from two of the three administrative functioning groups, Groups H and G. One scientific functional group, Group C had the third highest number of uses, which could be contributed to the high number of users within Group C.

Figure 12: Organization's Electronic Routing System Usage by Group



Change Leaders from most of the functional groups have used the electronic routing system except for Groups D and B. Figure 13 displays the number of uses by the Change Leader from each group. For consistency and ease of reading the data, the Change Leader uses are shown by functional group like Figure 12, Group H through A. The Change Leaders from two the three administrative functional groups, Groups G and H, used the electronic routing system the most out of the nine groups. One scientific functional group Change Leader, Group E, used the system much more than the other scientific functional group Change Leaders.

Figure 13: Change Leader Electronic Routing System Usage



As a champion for the change, most Change Leaders led by example and used the electronic routing system. Seven of the nine Change Leaders used the system 290 times in the 18-month period. Of the seven Change Leaders who used the electronic routing system, 2 Change Leaders accounted for about 250 of the uses. The Group H administrative group Change Leader electronic routing system uses accounted for 12.7% of total Group H electronic routing system uses. The Group G administrative group Change Leader uses accounted for 32.7% of total Group G uses. Group I administrative group Change Leader accounted for 18.7% of total Group I uses. The Group E, a scientific group, Change Leader accounted for 47% of total Group E uses. Group C, a scientific group, Change Leader accounted for 2.6% of the group's uses while the Group F, a scientific group, Change Leader accounted for 7% of the group's uses. Finally, the Group A Change Leader accounted for 27% of the group's uses. Group D and Group B Change Leaders did not use the system.

Table 26 shows the percent of actual system users by group because of the change effort. The organization goal was to have over 50% of people within each functional group use the system. Only three groups in the organization met the change goal. The three groups to achieve change were the three administrative function groups, which are indicted in table 26 in green.

Table 26: Percent of Users by Group

Group Name	Potential electronic routing system Users	Actual electronic routing system Users	% of Actual Users
Group A	12	5	42%
Group B	17	8	47%
Group C	100	45	45%
Group D	64	16	25%
Group E	32	12	37.5%
Group F	21	4	19%
Group G	11	11	100%
Group H	174	87	50%
Group I	13	7	54%

Three groups had over 50% usage; they achieved successful change. Two additional group, Groups B and C were within 5% or less of the 50% electronic routing system usage goal. Groups H, I, and G are administrative functional groups for the organization and share the Clan and Adhocracy culture types. The three Administrative groups with 50% or more electronic routing system usage shared Clan and Adhocracy culture types as discussed in previous sections. The two scientific groups that were close to the 50% electronic routing system usage

goal also shared Clan and Adhocracy culture types. Table 27 displays Change Leader current and preferred culture types.

Table 27: Change Leader Culture Types Current and Preferred

Group	Function	No. of Users	% of System Users	Change Leader Current & Preferred Culture Types				
				Culture State	Clan	Adhocracy	Market	Hierarchy
G	Admin	11	100%	Current	•			•
				Preferred	●	X	X	X
A	Scientific	12	42%	Current			•	•
				Preferred	X	X	•	•
I	Admin	13	54%	Current	•	•		
				Preferred	•	•		X
B	Scientific	17	47%	Current				
				Preferred	X	X		X
F	Scientific	21	19%	Current				
				Preferred				X

E	Scientific	32	37.5%	Current	•	•	•	•
				Preferred	•	•	•	•
D	Scientific	64	25%	Current			•	
				Preferred	X	X	•	X
C	Scientific	100	45%	Current		•	•	
				Preferred	X	•	•	X
H	Admin	174	50%	Current		•		•
				Preferred	X	•	X	•

Legend

X shows differences in current and preferred culture type states

O shows shared culture types among current and preferred states

Of the groups that achieved successful change, Group H maintained 2 current culture types of Adhocracy and Hierarchy and preferred all 4 culture types; Group G maintained 2 current culture types of Clan and Hierarchy and preferred all 4 culture types; and Group I maintained 2 current culture types of Clan and Adhocracy and preferred Clan, Adhocracy and Hierarchy culture types.

Of the Scientific groups, there is no clear indications that percentage of usage, number of users and Change Leader culture types have a relationship. For example, Group B, one of the smallest for potential users in the scientific groups has 47% usage, no current culture types, and preferred culture types of Clan,

Adhocracy and Hierarchy. To scientifically support that there is no relationship between usage, number of cultures types, the correlation coefficient by percentage of usage and the number of preferred culture types is executed. The results showed that there is a weak but positive association between the two variables. The correlation is .31. This means that as percent of usage increases, there is a lower likelihood of a relationship with the number of culture types.

According to the data presented for the third research question: *how closely aligned is the Change Leader culture types and system usage (change success)*; the administrative groups used the electronic routing system to a point of success; administrative groups achieved successful change. Upon review of the scientific groups usage and Change Leader culture types, there does not appear to be a relationship between change success and Change Leader culture types. Perhaps the way in which process change models and culture models were used resulted in these research outcomes.

Recall that a process change model was used on the organization during a change effort without a culture model. A culture models was only used during this research after the process change model had been executed for 18 months. Had cultures been identified prior to or during the change effort, when the process change model was actively applied, Change Leaders may have achieved change success. Various cultures in each functional group could have created barriers to change. Change Leaders could have used culture identification tools to gain insights into their functional groups dominant cultures and then leveraged culture knowledge to achieve successful change.

Chapter 5: Discussion

This research provided 3 major conclusions: (1) it showed that Change Leaders, Formal Leaders, and staff within each functional group do not share culture types, but have different culture types among the people in the group; (2) it showed that even though most of the Change Leaders in the organization were moving toward the same defined change, Change Leaders in the organization did not share all of the same culture types; and (3) Change Leader culture types did not show a pattern of successful or unsuccessful change. It is important to revisit where the research started and how I, as the researcher came to the above 3 major conclusions.

Organizations are comprised of people with specific job duties to fulfill a mission (Aldrich and Ruef 2006; Chell 1987; Godwyn and Hoffer Gittell 2011; Van der Duin 2016). Organizations change frequently to meet new visions and goals (Burke 2018; Torben 2014b), yet organizational change as a simple concept is overcome with complexity due to the nature of organizational culture, which are the rituals, climates, values, and behaviors tied together into a coherent whole (Schein 2014). Just as presented in this research, change is difficult when the change directly impacts the behaviors of many people from different areas of an organization. The change imposed upon people in this study's organization redirected the ways in which they worked. The change caused the people of the organization to behave in a different manner. Organizational change which attempts to change the culture of an organization is very difficult to achieve (Mintzberg 1989). Cultures are part of people, part of their identity.

The outcomes of organizational change are heavily dependent on human factors (Kezar 2011; Campbell 2014; Oreg, Michel, By Todnem 2013). The way in which people react to the change sets the tone for how the change will or will not be part of the organization's culture. The way in which people feel about change, the behaviors of people, the ingrained feelings or cultures that people hold, impacts the change (Naylor 1996; Bremer 2012). Reaction to change in a positive or negative light may be based by the roles that people hold in the organization. People in this study's organization held different job duties to fulfill the mission of the organization. Some of the people completed administrative functions for the organization while other people completed tasks related to the scientific mission of the organization. People in the administrative and scientific functional areas also held distinct roles during the change effort.

Remember that the organization in this study wanted to shift from a paper-based routing process to an electronic routing system. In each of the nine functional groups people were identified as either a Formal Leader, a Change Leader or part of the functional group staff. Change Leaders held an important job within each of the functional groups. Change Leaders were tasked with shaping or maintaining the organizational cultures as directed by the Formal Leader. Change Leaders are distinctly and purposively different from Formal Leaders. Change Leaders focused on people and relationships (Fullan 2014). They embrace the desires of the Formal Leader and put in the change management work with Staff to make the change happen.

Change Leaders do not need to be high ranking public officials but can be anyone with the ability to understand the Formal Leader's vision and ability to guide and lead others in their functional group. As stated by Mechanic, "lower

participants in an organization can often assume and wield considerable power which is not associated to their position” (Mechanic 1962, 351) making them change agents during change efforts. Change Leaders are the drivers within an organization, directing people to believe and engage in deliberate change (Kim and Mauborgne 2011). Change Leaders help identify allies and opponents of change, join forces with allies, and mold uncommitted people toward change and acceptance (Heifetz and Linsky 2012). An improperly selected Change Leader, however, can take a functional group or organization in the wrong direction, even against the change. Therefore, when Formal Leaders select the right Change Leaders, change can succeed. Selection of the Change Leaders is only one part of successful change. Change Leaders, because of their varying personalities and leadership skills can use tools to make change happen. In this study, Formal Leaders, appointed bureaucrats within each functional group, purposively selected a Change Leader to embrace their vision of change. It was assumed that each Change Leader shared the same fundamental behaviors and beliefs of their Formal Leader. However, through this research, it was determined that behaviors and beliefs, the cultures, between each Formal Leader and Change Leader were different, which can complicate successful change.

Process change models are a mechanism which Change Leaders, who were purposively selected by Formal Leaders, use during change efforts. Process change models are easy to use because of their step-by-step processes. Even the novice Change Leaders, as were selected by Formal Leaders in this study, can follow process change model steps with the intent of making change stick. Process change models typically include 3 to 8 steps. When executed, process change models intend to achieve successful change. Table 28 revisits the key

process change models, the number of steps in each model and scholars who founded each model.

Table 28: process change model Scholars

process change model Name	No. of Process Steps	Author
ADKAR	5	Jeffrey Hiatt
Beckhard-Harris Change Model	3	Richard Beckhard and Reuben Harris
Bridges' Transition Model	3	William Bridges
Kotter Process Model	8	John P. Kotter
Kubler-Ross: Stages of Change	5	Elisabeth Kubler-Ross
Lewin Model	3	Kurt Lewin
McKinsey 7S Model	7	McKinsey Company
Plan-Do-Check-Act	4	W. Edwards Deming

Process change models, although helpful tools during change efforts do not help Change Leaders identify culture and they are not intended to identify culture. Recall that Formal Leaders purposively select Change Leaders to see the change through. The Change Leaders guide their functional group staff towards the change. Process change models do have their value. They help Change

Leaders move a group of people toward change, but process change models alone may not enough to achieve successful change. Because process change models do not provide Change Leaders the means to identify cultures within their organization, culture could be an underlying factor that hinders successful change. In this study, the lack of unified cultures among functional groups Formal Leaders, Change Leaders, and staff could contribute to failed change.

There are tools outside of process change models that Change Leader can use during the change effort. Culture models can be used prior to or with process change models. Remember, culture can impact outcomes of change (Dennison 1990; Kezar 2011; Campbell 2014; Oreg, Michel, By Todnem 2013), and the use of culture models during change efforts is valuable to Change Leaders. Culture models, if you recall, identify culture at the individual, group and organizational level (Deal and Kennedy 2000; Harrison 1987; Cameron and Quinn 2006; Lal Patay 2015; Schein 2004). Culture Models can be used supplementary with process change models. Table 29 illustrates the key Culture Models in the literature of this dissertation.

Table 29: Culture Model Scholars

Culture Model Name	No. of Culture Types	Author
Deal and Kennedy Cultural Framework	4	Terrance Deal and Allan Kennedy
Harrison's Model of Culture	4	Roger Harrison
Organizational Change Assessment Instrument (OCAI)	4	Kim Cameron and Robert Quinn
Organizational Culture Model	3	Edgar Schein
Schneider Culture Model	4	William Schneider

Literature in the change management field shows that process change models, as identified as process change models in this research, are helpful to people introducing change to an organization. These process change models are not only available to commercial organizations, but they are also available and beneficial to public organizations; change is change regardless of the organization experiencing the change. The research finds that although process change models are helpful, culture may be unknown or not the same within a functional group or across administrative and scientific functional areas. Unknown cultures can create barriers to change (Torben 2017; Kotter 2017; Engle et al. 2017). Varying culture types in a single organization, a group or

individual can contribute to unsuccessful change (Dennison 1990; Kezar 2011). Based on the limitations of process change models and the possibility that Change Leaders are novice to process change models, culture models are an important tool during change efforts.

As illustrated in this research, the culture types vary or are different among functional groups and roles within each functional group. Meaning, the organization does not have a distinctly clear cultural identity and Change Leaders in this study relied heavily on process change models alone. Change Leaders did not know the cultures in their functional area and did not use a culture model, or any model, to identify their Formal Leader or staff culture types. During the qualitative interviews, it was clear that the Change Leaders did not think about the impact of their culture nor did they know their own culture types. In this study, the result of the change effort was unsuccessful change at an organizational level. Remember, only 3 of the 9 (33%) functional groups achieved successful change. Different culture types can impede successful change initiatives (Campbell 2014).

In this study, the population had undergone a change through use of a process change model and cultures were not known. It was assumed by Formal Leaders that change was successful for some functional groups but unsuccessful for other functional groups. This study brought forth the data on which functional groups achieved successful change and which did not, and it showed how closely aligned Formal Leader, Change Leader and staff culture types were within each functional group and each roles' alignment to successful change. The research set out to answer 3 research questions:

- 1.) *How closely aligned are culture types, existing and preferred, of the Change Leader – each group's change agent with those of the Formal Leader, organizational leadership, and staff culture types within their functional group during a technology and process?*
- 2.) *How closely aligned are Change Leader - each group's change agent culture types in a single organization?*
- 3.) *How closely aligned are Change Leader culture types and change success?*

In short, culture type alignment can help with change success. Taking a step back, this research looked at cultures in several functional groups of an organization, their similarities and their differences, and whether those functional groups achieved successful change. When all functional groups succeed in change, the organization succeeds. When most functional groups change, the change is mostly successful. When only a few functional groups change, change has failed. But why does failure happen? Can nonaligned culture types contribute to failed change? This study, through its description of literature and results, states that yes, nonaligned culture types at the functional group level and/or roles level can contribute to change failure.

At the most basic level of understanding, change failure occurred because the functional groups within the organization did not use the new electronic system as often as the Formal Leaders envisioned. However, this study provides a unique insight to the way in which administrative and scientific functional groups behave regarding the change. A closer look at the functional groups showed that the scientific functional groups used the electronic routing system far less than their administrative functional group counter parts. Much of the use and non-use appears to stem from the function of the groups.

Administrative groups have reasons to route administrative requests throughout the organization and remember, two of the administrative groups were drivers of this new electronic routing system. Scientific groups perform different non-administrative functions and therefore focus on their scientific duties and not the electronic routing system.

To determine if culture (behavior) was a contributing factor to successful and unsuccessful change, the Formal Leader, Change Leader, and staff culture types within the organization were measured. For this study a culture model was selected, and survey distributed to the research population for culture data retrieval. The culture types were identified following process change model implementation. Culture data for each functional group's Formal Leader, Change Leader, and staff was identified through the culture model. Recall that the Formal Leader appoints a Change Leader to guide the staff towards change. The Change Leader should embody the Formal Leader cultures.

This research data provided 3 major conclusions: (1) it showed that Change Leaders, Formal Leaders, and staff within each functional group with a clearly defined organizational purpose, do not share culture types; (2) it showed that even though as an organization the Change Leaders of each functional group were moving toward the same change, Change Leaders in the organization did not share all the same culture types; and (3) using the electronic system data it was realized that the types of Change Leader culture types did not result in successful change (See Table 27), yet the function, not size, of the functional group did was tied to successful change (electronic system usage over 50%). As discussed earlier, the 3 administrative functional groups achieved change while the 6 scientific groups did not achieve change.

The mechanism to measure successful change was the usage of a new electronic routing system. People in the organization were required to use the electronic routing system rather than a paper-based process. Usage of the electronic routing system showed that in the real world, process change models alone are not enough to achieve successful change as only 3 of the 9 functional groups met the threshold for successful change. Table 30 reiterates the relationship between successful change (electronic system usage over 50%) and administrative or scientific mission of the functional groups within the organization.

Table 30: Successful Change and Group Function

Group Name	Electronic routing system Users	% of Actual Users
Group A	5	42%
Group B	8	47%
Group C	45	45%
Group D	16	25%
Group E	12	37.5%
Group F	4	19%
Group G	11	100%
Group H	87	50%
Group I	7	54%

Culture is powerful and can challenge change (Schein 2010; Schein 2004), yet the comparison of visible aspects of culture across and within organizations can provide useful information for guiding the directions of organizations (Marcoulides and Heck 1993). Culture models' ability to help leaders categorize cultures in organizations is invaluable (Gross, Pascale, and Athos 1993; Yilmaz 2014; Rickwood 2013). Culture models provide Change Leaders the opportunity to know the cultures in their functional group and prepare to address or

embrace them. By aligning Change Leader culture to the culture of the Formal Leader, Change Leaders can guide staff towards the desired change.

Why the Results Matter

Scholars in the culture identification field have presented the importance of culture in change efforts (Mintzberg 1989; Naylor 1996; Bremer 2012). In the 1980s, researchers began to introduce concepts of culture as a viable explanation in different outcomes when few differences in the organizations' structure existed (Deshpande and Webster 1989). During the 1980s and 1990s, culture began as an important business concept but today can be applied into the public administration organization field. For example, Dennison (1990) created a generic framework for assessing the work environment to improve corporate productivity and performance (Dennison 1990). Dennison's framework can be used in government entities to measure and improve productivity and performance.

Culture is an important element of change. To increase the likelihood of successful change, two key points should be understood: (1) Change Leaders must know the cultures among their group so that they can adequately prepare for change barriers and know who can help the change succeed; and (2) process change models alone are not enough to achieve successful change. Process change models assume that Change Leaders know the shared cultures and different cultures in their functional group. The assumption that Change Leaders know their functional group cultures could lead to failed change. Change Leaders who know the culture types in their group can first confirm their Formal Leader cultures, making sure that their plan for change is on the correct path. Second, process change models help Change Leaders analyze their own cultures to

determine if they are aligning with their Formal Leader's cultures. Third, process change models help the Change Leaders align to the cultures of the Formal Leader, if alignment does not already exist. Meaning, functional group change success is unlikely if the Formal Leader and Change Leaders have different options on culture (Dennison 1990; Kezar 2011). Finally, process change models allow Change Leaders to guide their staff toward change with their Formal Leader's cultures.

Measuring the current and preferred culture types of Formal Leader, Change Leader, and staff allows Change Leaders to understand the competing and shared cultures in their functional group. When all cultures across the groups are known, the organizational culture is defined even if cultures vary. Culture analysis allows the Change Leaders to see where behaviors and values in their functional group may foster change resistance, plan to address the resistance, and shift their people closer toward change acceptance. Change Leaders should familiarize themselves to culture models and choose a model that makes sense for categorizing cultures within their functional group.

Sixty-six-point sixty-six percent of the functional groups in this research experienced change failure. That means that only 33.3% achieved successful change. Based on this research, culture could have contributed to failed change in 66.6% of the functional groups. Different culture types for the Formal Leader, Change Leader, and staff across the organization were a common theme among the failed change functional groups. The same pattern of different culture types was seen among all Change Leaders with the organization; the Change Leaders in the organization did not share cultures. Because a culture model was not used at the time a process change model was used for the participants of this study,

Change Leaders in this study did not know the current and preferred cultures of their Formal Leader, themselves nor staff. Remember, unknown cultures and unaligned cultures can create barriers (Kotter 2006). Had a culture model been used prior to the process change model or even during the process change model, change success among the scientific functional groups may have increased.

Expected and Unexpected Findings

After reviewing the data, results for the first and second research questions were expected while results of the third research question contained a component that was unexpected. The first research question results illustrated that culture types among Formal Leaders, Change Leaders, and staff in each functional group were different and that the function of the group, scientific and administrative, held various, not similar, culture types. As expected, the second research question demonstrated that Change Leaders in each of the nine groups had different current culture types; however, most of the functional group Change Leaders shared Clan, Adhocracy, Market, and Hierarchy (all four) preferred culture types.

In the third research question, it was revealed that Change Leaders' culture types and change success (measured through electronic routing system usage) did not align. The non-alignment was expected based on the data retrieved from the electronic routing system. What was not known at the time of data collection was the breakdown of administrative and scientific group usage. The results of question 3 showed that the 3 administrative functional groups achieved successful change (each group met the usage threshold of 50% or more), see Table 26. Two of the three administrative groups were the impetus

for change. Based on this information alone, groups G and H Change Leaders were to be successful in the electronic system usage. The third administrative group executes administrative functions and therefore found value in the new electronic routing system. The 6 scientific groups do not perform administrative functions for the organization and were not groups that drove the electronic routing system. The 6 scientific groups did not achieve successful change as they did not meet or exceed the 50% usage threshold.

Results in Practical Application

In the real world, process change models are suitable tools for Change Leaders to use during change efforts when cultures in public organizations are known. When cultures are not known, culture models are an invaluable tool. They allow Change Leaders to identify cultures. Change Leaders can be at any level in the organization; they are not always high-ranking officials (Mechanic 1962) and these leaders can be novice to change management concepts (Mechanic 1962) and can struggle to achieve successful change. Change management literature shows that organizational change fails at distressing rate (Kotter and Schlesinger 1979; Kotter 1996; Cameron and Quinn 2006; Aguirre and Alpern 2014; Sirkin, Keenan, and Jackson 2011; Shin, Taylor, and Seo 2012; Clear Rock 2015), yet process change models are readily available in bookstores and online data searches.

At first glance, it appears that process change models are used with misunderstandings. Process change model scholars contribute failed change to inadequate execution of the process change model (Kotter 1996). Kotter (1996) stated that failed change occurs because: (1) there is too much complacency during the early stages of change; (2) there is a failure to create a sufficient

powerful guiding coalition; (3) underestimate the power of vision; (4) under communicate the vision by a factor of 10; (5) permit obstacle to block the new vision; (6) fail to create short term wins; (7) declare victory too soon; and (8) neglect to anchor changes firmly into the organization's culture (Kotter 1996). Although the failure to execute process change models is an adequate reason for failed change, are the process change models too difficult to follow or is there something that could help Change Leaders when using process change models? This research provides a 9th reason for failed change: (9) change fails because cultures are not known.

This research supports the theory that failed change is likely in organizational change efforts and that the functional groups within an organization may have reason to drive change or retain the status quo. Functional groups that want the change (i.e., like groups G and H) in this study, drive the change, whereas groups who do not find the change directly applicable to their work (i.e., the 6 scientific groups), would rather retain the status quo. By introducing a culture model with a process change model, change could succeed among all functional groups within an organization. When culture identification is not known it can be a contributing factor to failed change. Because of the high rate of organizational failures and the potential novice experience of Change Leaders, this research supports the theory that culture models used in conjunction with process change models are likely to produce successful change where change is likely to fail.

Chapter 6: Conclusion and Suggestions for Future Research

Organizational change is needed for many reasons in organizations both in commercial and the public sectors. Most often, the need for change can be cataloged into one of five change categories: performance gaps, new technology, organizational opportunities, external pressures, or internal cultural challenges. “Strategic change interventions seek to improve both the organization’s relationship to its environment and the fit among its technical, structural, informational, human resource, and cultural components” (Cummings and Worley 2015, 13). Change impacts people, behaviors and culture (Naylor 1996; Bremer 2012). Culture represents the environment in an organization, how people act and react to one another, to job related tasks, and to new processes and ideas.

Change Leaders in an organization, for the sake of mission and efficiencies, should know the dynamic or cultures of the organization. Change Leaders from the driving functional areas and functional areas that would rather not embark in the change need to be part of the change process. Change Leaders who know their functional group environment can understand the impact that change has on their people, how the people will react and how they will embrace or not embrace the change. Engaging both the groups who drive change and those that are opposed to change is an important part of the change success process. How Change Leaders behave drives the kind of culture they end up with (Whitehurst 2016). Change occurs when a shift is necessary to meet the goals and objectives of the organization. That shift also affects the people

receiving the change. Companies engaging in strategic organizational change initiatives are more likely to fail than succeed (Deeker, Durand, Mayfield, McCormick, Skinner and Purdue 2012; Torben 2014a). “The failure rate of most planned organizational change initiatives is dramatic” (Cameron and Quinn 2006, 1). Based on the high rate of change failure, this research looked at the role of culture in a change effort.

Change Leaders use process change models as described in this research to address performance gaps both human and mechanical, address and implement new technology, capitalize on opportunities, and confront external pressures. There are many process models developed by change experts readily available to change agents for use in change efforts, however, literature shows that change is often unsuccessful. My premise in this research is that process change models alone are not enough to achieve successful change. If process change models were adequate, change success would be more abundant and documented in the literature.

It was assumed prior to this research that current culture types were unknown in the study’s organization. Through data analysis, this assumption was affirmed; culture types varied by functional group, Formal Leader, Change Leader and staff members throughout the organization. During the organization’s change effort to obtain electronic routing system usage, it was evident that some functional groups used the electronic routing system more than other functional groups. Process change models are useful but when culture types are unknown, it is possible for Change Leaders to struggle to achieve the desired level of successful change.

The OCAI culture model was used in this research to determine the current and preferred culture types within the study's organization. Survey results showed that 97 people in the organization completed the survey. Most survey participants completed the survey without any comments on the intent of the research nor the questions asked. One participant, however, explained via email why he/she was not willing to participate in the survey. This non-participant stated that the way in which the OCAI questions were worded caused confusion. For example, one of the OCAI survey questions asked participants if being results oriented and being competitive is something they could strongly disagree, disagree, be neutral, agree or strongly agree with. In this example question, the non-participant disagreed with being results oriented but agreed with being competitive. This non-participant was therefore not comfortable completing the survey. This was interesting feedback on the OCAI. Although this issue was reported by only one person, it is possible that other non-participants felt the same way but did not communicate their perspectives.

From the 97 survey participants, the current culture type of the organization was predominately but not solely Hierarchy and the preferred culture types were Clan, Adhocracy, Market and Hierarchy. Participants of the study felt that the organization in its current state was one of structure, processes, and efficiency. Participants saw positive elements in the Clan, Adhocracy, Market, and Hierarchy culture types and preferred them in the organization. The culture types at the functional group level showed the culture type variations within the organization. Many culture types in a functional group can complicate change efforts.

Five of the 9 functional groups felt that they fostered the Hierarchy culture type. Three of the 9 functional groups nurtured the Market culture type, while two groups felt that Adhocracy was part of their current culture type, and two groups felt that Clan was currently part of their culture type. All nine groups preferred that the Clan culture type be a part of their functional group culture. Eight groups preferred that the Hierarchy culture type be a part of their group's culture, seven groups preferred that Adhocracy culture type be part of their group's culture, and five groups preferred that Market be a part of their group culture.

The organization in this study set a change goal. The organization wanted 50% electronic routing system usage in each functional group. The organization recognized that with the use of a new electronic routing system, organizational processes would change, and the number of actual users may be less than predicted. Therefore, 50% not 100% was an acceptable rate of electronic routing system usage 18 months after system availability.

According to table 26 in the previous chapter, 3 of the 9 groups met the goal of 50% or higher; these 3 groups were successful in the change effort. The three groups hold administrative functions for the organization. The Change Leader and staff of each administrative group preferred the Clan and Adhocracy culture types. The 6 scientific functional groups used the electronic routing system between 19% and 47% per functional group. Two scientific groups were within 5% of the 50% goal. What was different about the remaining 4 scientific groups that lead to unsuccessful change? Could a culture assessment and understanding of various culture types in the scientific groups by the Change Leaders helped to improve the electronic routing system usage? I believe that

based on this research, yes, use of a culture model prior to use of a process change model would help improve the usage of the scientific functional groups. Culture models, like the OCAI, help Change Leaders know the preferred culture types, including their own. Change Leaders can leverage culture knowledge to drive staff to successful change.

Knowing the environment in which change will occur is important. The definition of successful organizational change is defined by Formal Leaders and Change Leaders. Change Leaders work with Formal Leaders to define successful change and work to make the change happen through use of process change models. Process change models are easily accessible to Change Leaders but they take time to use. Literature shows that although process change models are easily available, change success is low. Culture models could help Change Leaders achieve the desired successful change.

This research's purpose was to identify the various culture types of a public organization, its functional groups, its Formal Leaders, its Change Leaders, and staff. The culture types identified in this research show the complex nature of cultures in organizations and the role of culture in organizational change. Change Leaders who know the culture types of their organization can prepare for behavioral barriers and use culture type knowledge to move people toward the intended change. In the study's organizational change effort, a culture model prior to or during the change may have helped Change Leaders understand the underlying cultures in the organization.

Suggestions for Future Research

This research showed that the use of process change models alone does not achieve successful change. Had a culture model been used prior to the process change model in this study or even during the process change model method, change success for all functional groups may have been accomplished because culture models could help categorize the behaviors of the functional groups within the organization. The culture model could have emphasized the functional groups who desire to change and those who would rather remain with the paper-based process. To test the theory that culture model use prior to or during process change model usage is impactful, a future research study could implement a culture model first to identify the culture types of an organization. Then, once the culture types are known, a process change model could be deployed. In this first suggestion for future research, the OCAI could be used for the culture model and the Kotter process model for the process change model for a public organization of similar size, mission and functional group structure as the one in this study. Meaning, the same research questions could be used for future similar functional and sized organizations. A researcher could also apply the dissertation study research questions to a smaller organization population (less than 444 people), and a larger population (more than 444). The results may provide different culture type outcomes than those described in this research. Remember that in this research some of the functional groups had very little participation in the quantitative survey. Although I acknowledge this limitation, the data obtained from groups D, E and F still provided valuable insight to culture types. Even the limited number of staff responses gave some data to Group D staff (8%), Group E staff (3.3%), and Group F staff (5.3%) culture types. It would be interesting to see if other organizations under the same construct as

this research and with the same research questions returned similar results as this study.

A third suggested future study could use a different culture model with the process change model by Kotter. It would be interesting to compare the outcomes of this third future study with the results of this original dissertation research. A forth future research study option could execute a change analysis with a different culture model (other than the OCAI) and a different process change model (other than the Kotter process). As stated previously, it would be interesting to compare the outcomes of this forth future study with the results of this and other similar studies. There may be common phenomenon among the studies.

In another suggested research study, it could be interesting to determine the role of culture models from the perspective of Formal Leaders, Change Leaders and staff. Do Formal Leaders, Change Leaders and staff know what culture models can do? Perhaps, semi-structured interviews with Formal Leaders, Change Leaders and staff would uncover such culture model knowledge. Finally, as an extension of this research, researchers could look at the role of the Formal Leader in the change efforts more closely. In my research, the Change Leaders is examined but maybe Formal Leader knowledge and frequency of interaction between the Change Leaders during change efforts should be measured. Perhaps Formal Leaders have a stronger influence in change efforts than accepted.

As outlined in the previous paragraphs, the deviations of this research are numerous. An increased number of participants may provide more data, a different process change model or culture model could unearth different results about a change effort, and different research questions related to culture types

by more defined roles may provide new information about the organization in question. Of all the future research possibilities, one thing can be certain. The research provided in this dissertation is invaluable to the field of organizational change. It provides the field of public administration insight into the importance of culture models during change efforts and just how different culture types can be within a single organization, its functional groups and individuals within groups. It also shows the public administration community that process change models, which are generally associated with private or commercial organizational entities have value in the public space; process change models and culture models together can offer opportunities for organizational change success.

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Appendix A: Key Definitions

Term	Definition
Change Initiative / Change Effort	An effort to modify the way in which an organization works or behaves.
Change Leaders	People empowered to accomplish change from various backgrounds and roles.
Change Success	Achieving positive modification of performance gaps, technology, opportunity or external pressures and instilling the modification into the organization's culture.
Culture	A set of values, beliefs, and behavior patterns of organizations that helps distinguish one group of people from another.
Formal Leader	Appointed organizational leaders in an organization.
Functional Group	An entity within an organization made of people who fulfill a distinct mission.
Leaders	A person who guides and directs other people towards the vision and

	within the mission of an organization.
Organization	People structured in a variety of ways to accommodate work specializations, formalized chain of commands and how decisions are made to meet a visions or mission. Regardless of the way organizations are structured, the most basic and compelling elements of the organizations is the individual. Individuals feel, behave and act based on emotion and understanding and so individuals are the foundation of an organization's culture.
Organizational Culture Assessment Instrument (OCAI)	A tool used by leaders to assess six key dimensions of organizational culture into one of four culture profiles (types).
Role	An organizational function carried out by people (i.e. Formal Leader, Change Leader, staff).
Staff	People within the organization who carry out mission related tasks.

Appendix B: Traditional OCAI Participant Survey

Dominant Characteristics	Now	Preferred
A) The organization is a very personal place. It is like an extended family. People seem to share a lot of themselves.		
B) The organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.		
C) The organization is very results-oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.		
D) The organization is a very controlled and structured place. Formal procedures generally govern what people do.		

Organizational Leadership	Now	Preferred
A) The leadership in the organization is generally considered to exemplify mentoring, facilitating, or nurturing.		
B) The leadership in the organization is generally considered to exemplify entrepreneurship, innovation, or risk taking.		
C) The leadership in the organization is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.		
D) The leadership in the organization is generally considered to exemplify coordinating, organizing, or smooth-running efficiency.		
Total		

Management of Employees	Now	Preferred
A) The management style in the organization is characterized by teamwork, consensus, and participation.		
B) The management style in the organization is characterized by individual risk taking, innovation, freedom, and uniqueness.		
C) The management style in the organization is characterized by hard-driving competitiveness, high demands, and achievement.		
D) The management style in the organization is characterized by security of employment, conformity, predictability, and stability in relationships.		
Total		

Organization Glue	Now	Preferred
A) The glue that holds the organization together is loyalty and mutual trust. Commitment to this organization runs high.		
B) The glue that holds the organization together is commitment to innovation and development. There is an emphasis on being cutting edge.		
C) The glue that holds the organization together is the emphasis on achievement and goal accomplishment.		
D) The glue that holds the organization together is formal rules and policies. Maintaining a smooth-running organization is important.		
Total		

Strategic Emphases	Now	Preferred
A) The organization emphasizes human development. High trust, openness, and participation persist.		
B) The organization emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.		
C) The organization emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.		
D) The organization emphasizes permanence and stability. Efficiency, control, and smooth operations are important.		
Total		

Criteria of Success	Now	Preferred
A) The organization defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.		
B) The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator.		
C) The organization defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key.		
D) The organization defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.		
Total		

Appendix C: OCAI Participant Survey

Likert Scale Participant Survey Email

Good Morning / Afternoon X,

You have been selected to participate in a brief online survey regarding change management. Your participation in this survey will assist in the fulfillment of my Doctoral degree at the University of Baltimore. This survey is for educational research purposes only. All answers will remain confidential. The survey should take 10 to 15 minutes to complete.

Please follow this link to take the survey: <Survey link here>.

Thank you for your participation.

Regards,

Meghan Norris

Survey Questions

Please answer questions 1 through 4 for your functional group as you see it today.

1.) The group is a very personal place. It is like an extended family. People seem to share a lot of themselves.

2.) The group is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.

3.) The group is very results-oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.

4.) The group is a very controlled and structured place. Formal procedures generally govern what people do.

Please answer questions 5 through 8 about your functional group's leadership style today.

5.) The leadership in the group is generally considered to exemplify mentoring, facilitating, or nurturing.

6.) The leadership in the group is generally considered to exemplify entrepreneurship, innovation, or risk taking.

7.) The leadership in the group is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.

8.) The leadership in the group is generally considered to exemplify coordinating, organizing, or smooth-running efficiency.

Please answer questions 9 through 12 about your functional group's management style today.

9.) The management style in the group is characterized by teamwork, consensus, and participation.

10.) The management style in the group is characterized by individual risk taking, innovation, freedom, and uniqueness.

11.) The management style in the group is characterized by hard-driving competitiveness, high demands, and achievement.

12.) The management style in the group is characterized by security of employment, conformity, predictability, and stability in relationships.

Please answer questions 13 through 16 on what binds your group today.

13.) The glue that holds the group together is loyalty and mutual trust. Commitment to this organization runs high.

14.) The glue that holds the group together is commitment to innovation and development. There is an emphasis on being cutting edge.

15.) The glue that holds the group together is the emphasis on achievement and goal accomplishment.

16.) The glue that holds the group together is formal rules and policies. Maintaining a smooth-running organization is important.

Please answer questions 17 through 20 on what your group emphasis today.

17.) The group emphasizes human development. High trust, openness, and participation persist.

18.) The group emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.

19.) The group emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.

20.) The group emphasizes permanence and stability. Efficiency, control, and smooth operations are important.

Please answer questions 21 through 24 on how your group defines success today.

21.) The group defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.

22.) The group defines success on the basis of having the most unique or newest products. It is a product leader and innovator.

23.) The group defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key.

24.) The group defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.

Please answer questions 25 through 28 for how you prefer your functional group to be.

25.) The group should be a very personal place. It should be like an extended family. People seem to share a lot of themselves.

26.) The group should be a very dynamic and entrepreneurial place. People should be willing to stick their necks out and take risks.

27.) The group should be very results-oriented. A major concern should be getting the job done. People are very competitive and achievement oriented.

28.) The group should be a very controlled and structured place. Formal procedures should generally govern what people do.

Please answer questions 29 through 32 about how you prefer your functional group's leadership style.

29.) The leadership in the group should be generally considered to exemplify mentoring, facilitating, or nurturing.

30.) The leadership in the group should generally considered to exemplify entrepreneurship, innovation, or risk taking.

31.) The leadership in the group should generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.

32.) The leadership in the group should generally considered to exemplify coordinating, organizing, or smooth-running efficiency.

Please answer questions 33 through 36 about how you prefer your functional group's management style.

33.) The management style in the group should be characterized by teamwork, consensus, and participation.

34.) The management style in the group should be characterized by individual risk taking, innovation, freedom, and uniqueness.

35.) The management style in the group should be characterized by hard-driving competitiveness, high demands, and achievement.

36.) The management style in the group should be characterized by security of employment, conformity, predictability, and stability in relationships.

Please answer questions 37 through 40 on what you prefer to bind your group.

37.) The glue that holds the group together should be loyalty and mutual trust. Commitment to this organization should run high.

38.) The glue that holds the group together should be commitment to innovation and development. There should be an emphasis on being cutting edge.

39.) The glue that holds the group together should be the emphasis on achievement and goal accomplishment.

40.) The glue that holds the group together should be formal rules and policies. Maintaining a smooth-running organization should be important.

Please answer questions 41 through 44 on what you prefer your group to emphasize.

41.) The group should emphasize human development. High trust, openness, and participation persist.

42.) The group should emphasize acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities should be valued.

43.) The group should emphasize competitive actions and achievement. Hitting stretch targets and winning in the marketplace should be dominant.

44.) The group should emphasize permanence and stability. Efficiency, control, and smooth operations should be important.

Please answer questions 45 through 48 on how prefer your group define success.

45.) The group should define success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.

46.) The group should define success on the basis of having the most unique or newest products. It should be a product leader and innovator.

47.) The group should define success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership should be key.

48.) The group should define success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production should be critical.

Appendix D: Qualitative Semi-Structured Interview Questions

Semi-structured interview questions:

1.) How would you describe [group name]'s current work environment?

Probe 1: Is it...

- Family like, a personal place
- Dynamic and entrepreneurial, risk takers
- results-oriented, gets the job done
- Structure place with formal procedures for executing work

Probe 2: Tell me more about that (from the response).

2.) If you could select the type of work environment to work in, what would it be like?

Probe 1: Can you give me an example?

Probe 2: Why does that stand out in your memory?

3.) How do you feel your leaders (Director, Deputy Director i.e., formal leaders) guide [group name] today?

Probe 1: Do they guide as you expect? Why or why not?

Probe 2: Have you always felt this way? What caused a change (if applicable)?

4.) How do you think [group name] organizes employees?

Probe 1: Ability? Job Type?

Probe 2: Does the organization of employees matter?

Probe 3: Do you think other staff in [group name] feel the same way as you about organization of employees?

5.) How do you think [group name] is held together?

Probe 1: Is it...

- focused on mentoring and “doing things together.”
- focused on innovation, and “doing things first.”
- focused on competition and “getting the job done.”
- focused on efficiency and “doing things right.”

Probe 2: Say what you mean by [term or phrase].

6.) What aspects of [group name] are emphasized?

Probe 1: Are the aspects...

- Human development, open, trust
- Creating new challenges, trying new things
- Emphasizing achievement
- Stability, efficiency, control

Probe 2: Are there any aspects that are not emphasized but you feel should be emphasized?

7.) How do you feel [group name] defines success?

Probe 1: Is success defined on the basis of...

- Teamwork, human resources, concern for people
- Having unique products, projects
- Overcoming the competition
- Consistent delivery of what the organization does

Appendix E: Example Frequency Tables Used to Collect Study Data on Organizational Culture Type

Frequency Table Results

Current Dominant Characteristics Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	7.0	7.1	7.1
	disagree	19	19.0	19.4	26.5
	neutral	34	34.0	34.7	61.2
	agree	35	35.0	35.7	96.9
	strongly agree	3	3.0	3.1	100.0
	Total	98	98.0	100.0	
Missing	99.00	2	2.0		
Total		100	100.0		

Current Dominant Characteristics Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	7.0	7.1	7.1
	disagree	33	33.0	33.7	40.8
	neutral	29	29.0	29.6	70.4
	agree	25	25.0	25.5	95.9
	strongly agree	4	4.0	4.1	100.0
	Total	98	98.0	100.0	
Missing	99.00	2	2.0		
Total		100	100.0		

Current Dominant Characteristics Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	9	9.0	9.2	9.2
	neutral	28	28.0	28.6	37.8
	agree	48	48.0	49.0	86.7
	strongly agree	13	13.0	13.3	100.0
	Total	98	98.0	100.0	
Missing	99.00	2	2.0		
Total		100	100.0		

Current Dominant Characteristics Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	2.0	2.0	2.0
	disagree	13	13.0	13.3	15.3
	neutral	21	21.0	21.4	36.7
	agree	38	38.0	38.8	75.5
	strongly agree	24	24.0	24.5	100.0
	Total	98	98.0	100.0	
Missing	99.00	2	2.0		
Total		100	100.0		

Current Group Leadership Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	3.0	3.2	3.2
	disagree	26	26.0	27.4	30.5
	neutral	32	32.0	33.7	64.2
	agree	30	30.0	31.6	95.8
	strongly agree	4	4.0	4.2	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Group Leadership Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	4.0	4.2	4.2
	disagree	28	28.0	29.5	33.7
	neutral	23	23.0	24.2	57.9
	agree	29	29.0	30.5	88.4
	strongly agree	11	11.0	11.6	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Group Leadership Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	4.0	4.2	4.2
	disagree	28	28.0	29.5	33.7
	neutral	24	24.0	25.3	58.9
	agree	37	37.0	38.9	97.9
	strongly agree	2	2.0	2.1	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Group Leadership Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	7.0	7.4	7.4
	disagree	24	24.0	25.3	32.6
	neutral	22	22.0	23.2	55.8
	agree	35	35.0	36.8	92.6
	strongly agree	7	7.0	7.4	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Mgmt of Employees Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	3.0	3.2	3.2
	disagree	15	15.0	15.8	18.9
	neutral	19	19.0	20.0	38.9
	agree	48	48.0	50.5	89.5
	strongly agree	10	10.0	10.5	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Mgmt of Employees Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	9	9.0	9.5	9.5
	disagree	37	37.0	38.9	48.4
	neutral	23	23.0	24.2	72.6
	agree	22	22.0	23.2	95.8
	strongly agree	4	4.0	4.2	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Mgmt of Employees Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	5	5.0	5.3	5.3
	disagree	21	21.0	22.1	27.4
	neutral	36	36.0	37.9	65.3
	agree	28	28.0	29.5	94.7
	strongly agree	5	5.0	5.3	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Mgmt of Employees Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	5	5.0	5.3	5.3
	disagree	13	13.0	13.7	18.9
	neutral	26	26.0	27.4	46.3
	agree	48	48.0	50.5	96.8
	strongly agree	3	3.0	3.2	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Group Glue Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	2.0	2.1	2.1
	disagree	26	26.0	27.4	29.5
	neutral	27	27.0	28.4	57.9
	agree	37	37.0	38.9	96.8
	strongly agree	3	3.0	3.2	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Group Glue Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	3.0	3.2	3.2
	disagree	20	20.0	21.1	24.2
	neutral	31	31.0	32.6	56.8
	agree	32	32.0	33.7	90.5
	strongly agree	9	9.0	9.5	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Group Glue Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	3.0	3.2	3.2
	disagree	10	10.0	10.5	13.7
	neutral	22	22.0	23.2	36.8
	agree	53	53.0	55.8	92.6
	strongly agree	7	7.0	7.4	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Group Glue Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	3.0	3.2	3.2
	disagree	20	20.0	21.1	24.2
	neutral	26	26.0	27.4	51.6
	agree	37	37.0	38.9	90.5
	strongly agree	9	9.0	9.5	100.0
	Total	95	95.0	100.0	
Missing	99.00	5	5.0		
Total		100	100.0		

Current Strategic Emphasis Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	7.0	7.4	7.4
	disagree	25	25.0	26.6	34.0
	neutral	28	28.0	29.8	63.8
	agree	27	27.0	28.7	92.6
	strongly agree	7	7.0	7.4	100.0
	Total	94	94.0	100.0	
Missing	99.00	6	6.0		
Total		100	100.0		

Current Strategic Emphasis Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	2.0	2.1	2.1
	disagree	23	23.0	24.5	26.6
	neutral	24	24.0	25.5	52.1
	agree	35	35.0	37.2	89.4
	strongly agree	10	10.0	10.6	100.0
	Total	94	94.0	100.0	
Missing	99.00	6	6.0		
Total		100	100.0		

Current Strategic Emphasis Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	5	5.0	5.3	5.3
	disagree	20	20.0	21.3	26.6
	neutral	41	41.0	43.6	70.2
	agree	24	24.0	25.5	95.7
	strongly agree	4	4.0	4.3	100.0
	Total	94	94.0	100.0	
Missing	99.00	6	6.0		
Total		100	100.0		

Current Strategic Emphasis Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	1.0	1.1	1.1
	disagree	13	13.0	13.8	14.9
	neutral	28	28.0	29.8	44.7
	agree	46	46.0	48.9	93.6
	strongly agree	6	6.0	6.4	100.0
	Total	94	94.0	100.0	
Missing	99.00	6	6.0		
Total		100	100.0		

Current Criteria for Success Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	7.0	7.5	7.5
	disagree	25	25.0	26.9	34.4
	neutral	23	23.0	24.7	59.1
	agree	33	33.0	35.5	94.6
	strongly agree	5	5.0	5.4	100.0
	Total	93	93.0	100.0	
Missing	99.00	7	7.0		
Total		100	100.0		

Current Criteria for Success Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	6.0	6.5	6.5
	disagree	34	34.0	36.6	43.0
	neutral	21	21.0	22.6	65.6
	agree	26	26.0	28.0	93.5
	strongly agree	6	6.0	6.5	100.0
	Total	93	93.0	100.0	
Missing	99.00	7	7.0		
Total		100	100.0		

Current Criteria for Success Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	12	12.0	12.9	12.9
	disagree	28	28.0	30.1	43.0
	neutral	32	32.0	34.4	77.4
	agree	19	19.0	20.4	97.8
	strongly agree	2	2.0	2.2	100.0
	Total	93	93.0	100.0	
Missing	99.00	7	7.0		
Total		100	100.0		

Current Criteria for Success Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	9	9.0	9.7	9.7
	disagree	13	13.0	14.0	23.7
	neutral	32	32.0	34.4	58.1
	agree	35	35.0	37.6	95.7
	strongly agree	4	4.0	4.3	100.0
	Total	93	93.0	100.0	
Missing	99.00	7	7.0		
Total		100	100.0		

Preferred Dominant Characteristics Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	4.0	4.4	4.4
	disagree	14	14.0	15.6	20.0
	neutral	36	36.0	40.0	60.0
	agree	31	31.0	34.4	94.4
	strongly agree	5	5.0	5.6	100.0
	Total	90	90.0	100.0	
Missing	99.00	10	10.0		
Total		100	100.0		

Preferred Dominant Characteristics Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	7	7.0	7.8	7.8
	neutral	13	13.0	14.4	22.2
	agree	51	51.0	56.7	78.9
	strongly agree	19	19.0	21.1	100.0
	Total	90	90.0	100.0	
Missing	99.00	10	10.0		
Total		100	100.0		

Preferred Dominant Characteristics Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	2.0	2.2	2.2
	disagree	6	6.0	6.7	8.9
	neutral	19	19.0	21.1	30.0
	agree	55	55.0	61.1	91.1
	strongly agree	8	8.0	8.9	100.0
	Total	90	90.0	100.0	
Missing	99.00	10	10.0		
Total		100	100.0		

Preferred Dominant Characteristics Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	3.0	3.3	3.3
	disagree	20	20.0	22.2	25.6
	neutral	27	27.0	30.0	55.6
	agree	33	33.0	36.7	92.2
	strongly agree	7	7.0	7.8	100.0
	Total	90	90.0	100.0	
Missing	99.00	10	10.0		
Total		100	100.0		

Preferred Group Leadership Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	2	2.0	2.2	2.2
	neutral	5	5.0	5.6	7.8
	agree	46	46.0	51.1	58.9
	strongly agree	37	37.0	41.1	100.0
	Total	90	90.0	100.0	
Missing	99.00	10	10.0		
Total		100	100.0		

Preferred Group Leadership Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	3	3.0	3.4	3.4
	neutral	15	15.0	16.9	20.2
	agree	45	45.0	50.6	70.8
	strongly agree	25	25.0	28.1	98.9
	24.00	1	1.0	1.1	100.0
	Total	89	89.0	100.0	
Missing	99.00	11	11.0		
Total		100	100.0		

Preferred Group Leadership Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	2	2.0	2.2	2.2
	neutral	6	6.0	6.7	9.0
	agree	55	55.0	61.8	70.8
	strongly agree	25	25.0	28.1	98.9
	44.00	1	1.0	1.1	100.0
	Total	89	89.0	100.0	
Missing	99.00	11	11.0		
Total		100	100.0		

Preferred Mgmt of Employees Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	neutral	12	12.0	13.6	13.6
	agree	52	52.0	59.1	72.7
	strongly agree	24	24.0	27.3	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Mgmt of Employees Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	1.0	1.1	1.1
	disagree	3	3.0	3.4	4.5
	neutral	19	19.0	21.6	26.1
	agree	47	47.0	53.4	79.5
	strongly agree	18	18.0	20.5	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Mgmt of Employees Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	4.0	4.5	4.5
	disagree	12	12.0	13.6	18.2
	neutral	42	42.0	47.7	65.9
	agree	29	29.0	33.0	98.9
	strongly agree	1	1.0	1.1	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Mgmt of Employees Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	4.0	4.5	4.5
	disagree	6	6.0	6.8	11.4
	neutral	33	33.0	37.5	48.9
	agree	34	34.0	38.6	87.5
	strongly agree	11	11.0	12.5	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Group Glue Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	1.0	1.1	1.1
	disagree	3	3.0	3.4	4.5
	neutral	10	10.0	11.4	15.9
	agree	52	52.0	59.1	75.0
	strongly agree	22	22.0	25.0	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Group Glue Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	4	4.0	4.5	4.5
	neutral	17	17.0	19.3	23.9
	agree	53	53.0	60.2	84.1
	strongly agree	14	14.0	15.9	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Group Glue Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	3	3.0	3.4	3.4
	neutral	11	11.0	12.5	15.9
	agree	62	62.0	70.5	86.4
	strongly agree	12	12.0	13.6	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Group Glue Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	2.0	2.3	2.3
	disagree	8	8.0	9.1	11.4
	neutral	24	24.0	27.3	38.6
	agree	42	42.0	47.7	86.4
	strongly agree	12	12.0	13.6	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Strategic Emphasis Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	1	1.0	1.1	1.1
	neutral	8	8.0	9.1	10.2
	agree	54	54.0	61.4	71.6
	strongly agree	25	25.0	28.4	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Strategic Emphasis Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	neutral	19	19.0	21.6	21.6
	agree	47	47.0	53.4	75.0
	strongly agree	22	22.0	25.0	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Strategic Emphasis Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	3.0	3.4	3.4
	disagree	10	10.0	11.4	14.8
	neutral	40	40.0	45.5	60.2
	agree	33	33.0	37.5	97.7
	strongly agree	2	2.0	2.3	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Strategic Emphasis Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	2	2.0	2.3	2.3
	neutral	24	24.0	27.3	29.5
	agree	52	52.0	59.1	88.6
	strongly agree	10	10.0	11.4	100.0
	Total	88	88.0	100.0	
Missing	99.00	12	12.0		
Total		100	100.0		

Preferred Criteria for Success Clan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	disagree	5	5.0	5.9	5.9
	neutral	16	16.0	18.8	24.7
	agree	46	46.0	54.1	78.8
	strongly agree	18	18.0	21.2	100.0
	Total	85	85.0	100.0	
Missing	99.00	15	15.0		
Total		100	100.0		

Preferred Criteria for Success Adhocracy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	3	3.0	3.5	3.5
	disagree	12	12.0	14.1	17.6
	neutral	22	22.0	25.9	43.5
	agree	36	36.0	42.4	85.9
	strongly disagree	12	12.0	14.1	100.0
	Total	85	85.0	100.0	
Missing	99.00	15	15.0		
Total		100	100.0		

Preferred Criteria for Success Market

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	4	4.0	4.7	4.7
	disagree	16	16.0	18.8	23.5
	neutral	37	37.0	43.5	67.1
	agree	27	27.0	31.8	98.8
	strongly agree	1	1.0	1.2	100.0
	Total	85	85.0	100.0	
Missing	99.00	15	15.0		
Total		100	100.0		

Preferred Criteria for Success Hierarchy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	1.0	1.2	1.2
	disagree	7	7.0	8.2	9.4
	neutral	23	23.0	27.1	36.5
	agree	46	46.0	54.1	90.6
	strongly agree	8	8.0	9.4	100.0
	Total	85	85.0	100.0	
Missing	99.00	15	15.0		
Total		100	100.0		