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Re-Envisioning Talent Management for the 4th Industrial Revolution: A Systems and Design Thinking Intervention

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RE-ENVISIONING TALENT MANAGEMENT FOR THE 4TH INDUSTRIAL REVOLUTION: A SYSTEMS AND DESIGN THINKING INTERVENTION

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ABSTRACT

This dissertation examines the application of interactive planning as an intervention for the purpose of exploring its effectiveness with diverse, cross-organizational stakeholders when considering an issue that transcends individual organizations. The case study offers a practitioner method and approach using systems and design thinking to re-envision talent management in the *4th Industrial Revolution*. The first two phases of a three-phase model, entitled Consider, Research, Explore, Associate, Theorize, and Empathize, (C.R.E.A.T.E.) contains aspects of systems and design thinking, and are addressed in this study. Data were gathered from direct observation and facilitation of two stakeholder sessions. The first, in Blue Bell, Pennsylvania, included participants employed in a variety of roles from across industries and companies in the Greater Philadelphia area. The second, in Austin, Texas, included external human capital consultants across the United States and Canada who were all partner-members of Career Partners International (CPI). Results indicated that stakeholders representing different organizations, roles and boundaries can enter into generative space regarding a common issue. Results also show designs with emergent themes that have the potential to influence the creation of an effective talent management system, and the C.R.E.A.T.E. model can be applied to accelerate the pace of innovation and creative solution seeking with regard to issues of complexity. Reflections on the facilitation process and a timeline practitioners can use with internal and external clients are provided along with suggestions for future research into this highly collaborative and interactive process.

DEDICATION

This thesis is dedicated to those who care deeply about the value of the workforce and who work tirelessly to improve the employee experience. I could not have done this without the kind support of my husband, Eric Johnston, and the never-ending encouragement of my daughter, millennial mentor and compass, Shira Johnston. I am also grateful to my parents, Jules and Elaine Ellison, who never called me crazy for going back to school again and again, and again. To my brother, Aaron Ellison and his beloved, Flossie Chua, who are forever in my corner, and finally, to Emily Dickinson whose poem "*I dwell in Possibility"* has been a beacon for my own development.

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CHAPTER 1: INTRODUCTION

Introduction and Statement of the Problem

Solutions to business problems are commonly championed by organizational leaders, and those leaders rely on the workforce to achieve the strategic goals and objectives necessary for businesses to remain profitable and viable. Thousands of books and articles are written about the role employees, teams and leaders play in the success of businesses. A company's most valuable asset is often referred to as human capital or talent. Yet, professional or personal development of people is often underappreciated when investment is available; indeed, a more common approach is to manage people as a function of cost savings.

Although people are often intangible assets and goodwill in the valuation of a company, talent assets are considered a critical but difficult to measure element in business transactions such as mergers and acquisitions. This is evidenced by an organization's depth of skill correlated with organizational success and the downstream impact realized when retaining and developing employees (Fulmer & Ployhart, 2014; G. L. Bohs, personal communication, November 30, 2017; D. Bookbinder, personal communication, August 2, 2017). For example, ADP, a human capital management firm with more than 650,000 business clients around the world, highlights how hard it is to measure the return on investment on talent when there are limited human capital valuation metrics quantifying innovation, contributions to intellectual property, and even justification for investing in employee development (Leddy, 2016). The lack of clear and consistent quantifiable financial measurement of talent coupled with the limited ability to forecast the ROI of talent acquisition, development and retention strategies, magnifies the

importance for addressing how talent is managed in light of new technologies, shifts in the available workforce, and the fast-pace of organizational change. Factors influencing talent management have become the strategic gap a leader must embrace to harness a differentiated workforce and gain competitive advantage (Silzer & Dowell, 2010). In fact, even the concept of *talent* is changing in that the word now includes forms of highly interactive artificial intelligent agents as they begin to work alongside people (World Economic Forum's Meta-Council on Emerging Technologies, 2016).

Talent management is a strategic commitment to attract, retain, engage, develop and deploy employees to maximize organizational effectiveness and to achieve competitive advantage (Collings & Mellahi, 2009). A still developing field, the practice of managing talent is often unique to the organization or industry, and is co-dependent on the size of resources devoted to human resources, and sometimes reactive or informed by intuition and experience. Programs and initiatives that take a seat-of-the-pants approach to what is happening inside the organization are ill-equipped to plan, problem-solve, and make strategic decisions to address workforce issues critical to the needs of the multi-national, culturally diverse, and technologically advanced organizations of the future (Ashton & Morton, 2005; Khilji, Tarique, & Schuler, 2015; Deresky, 2017). An opportunity exists to contribute to the field in the form of a talent management framework that takes a comprehensive view of managing talent within the context of the larger system environment rather than what appears to be a component, and often reactive view, that fails to address an organization's complexity.

Conceptual Framework for Addressing Talent Management

The 2017-2018 business environments exist in a dynamic state of complexity and amidst a systems landscape where distinct macro trends contribute to workforce challenges. Complexity, a term used in this dissertation and described in greater detail in Chapter 2, is a systemic property of a complex organizational system characterized by the structural complexity of the number of parts and their interrelationships, as well as the dynamic complexity of the people who change and develop through interactions and feedback from those interactions.

The systems landscape, also discussed in greater detail in Chapter 2, implies that this level of organizational complexity exists in a non-linear set of subsystems, containing systems and the larger contextual environment, or suprasystem. Macro trends refer to a pervasive change rather than a temporal fad or brief micro trend and place pressure on the behavior of the system. Many talent management practices narrowly address micro trends by applying transactional tools such as engagement surveys, high-potential programs, and succession planning without adequately integrating them with the larger talent management systems and processes. For example, various assessment tools, such as 360s, are increasingly used to benchmark high-potential employees using in-house definitions of what makes up a high-potential employee and yet a recent study conducted by Church, Rotolo, Ginther and Levine (2015) show only 23% of high-potential programs reach the level of being fully integrated with the business and offer a transparent process with involvement across the system. These tools are supported in current talent management models that address organizational components within the

internal system rather than take into account the larger system that includes the expanded environment where macro trends emerge and underpin the complexity organizations face.

The proposed framework (see Figure 1.1) offers a backdrop for how talent management is referenced in this dissertation. It highlights four layers and also represents the complexity of the interactions of the parts of the system layers, represented by the arrows, and includes: (1) organizational talent management is a system, and a subsystem of (2) the containing organization system, affected by (3) the containing system of its stakeholders, and (4) the suprasystem consisting of the influencing environmental factors.

Figure 1.1: Talent Management Framework

The framework can be described as a set of concentric circles with (1) the talent management system at the core and the interrelated components of the employee lifecycle of recruitment, orienting/on-boarding, performing the role, developing new skills, being promoted to, or otherwise moved through the organization and finally, transitioned out through termination, resignation or retirement. The six large arrows of assessing talent, aligning efforts, engaging and motivating, managing succession, transferring knowledge and defining gaps point towards the talent management core system and represent the processes applied in support of the employee lifecycle and the six forces of compensation, Human Resources (HR) strategy, Human Resource Information Systems (HRIS) capabilities, learning and feedback, career ladders and mentoring, representing transactional tools and components applied.

The framework suggests that the performance of talent is an emergent property of the management of talent derived from the interaction of the multiple systemic components displayed within the inner circle (1) subsystem. However, the overall effectiveness and longer-term sustainability of performance is both informed and influenced by the larger system and suprasystem as represented by the organizational system (2), the containing system (3) and the suprasystem (4).

Significance of the Study

The macro trends explored in this study are informed in part from the World Economic Forum (WEF) review of the changing nature of jobs and of work, sometimes referred to as the 4th Industrial Revolution (World Economic Forum, 2016). Their five-year projection conducted in 2010 noted that complex problem-solving would be the most important talent skill; and their 2015 projection for 2020 repeated this as the most

required skill. The degree of complexity is increasing as we presently recognize the challenges of innovative and integrated technologies, and the need to address the interrelationships of machine to man to society through the use of cyber-physical systems (http://www.engineersjournal.ie/2016/06/14/future-trends-in-engineering-global-urbanisation-the-fourth-industrial-revolution/). Just here in the United States, the WEF (2016) report identifies the major barriers organizations face with regards to change management and the future of workforce planning as insufficient understanding of disruptive changes, resource constraints, pressures posed to attain short-term profitability, the misalignment of workforce strategy and innovation strategy, and the insufficient priority by line management (p. 129). Complexity includes dynamic shifts in workforce demographics, the incessant pace of technological advancements, and global trends resulting in new markets and economic shifts of power. These issues are causing pressure on human capital, both internal and external to the organization, such as in the case of older workers exiting companies at a rapid pace and taking their practical and tacit knowledge with them while there exists a skills gap preventing quality talent from entering into the organization from the outside (Malik & Venkatraman, 2017; Calo, 2008). An example offered in 2013, according to the Boston Consulting Group (BCG) suggested a timeline:

> Although there is limited evidence of a skills crisis today, we believe that long-term concerns at the national level could be more serious—if companies do not do more to develop future talent… New skilled workers will be needed not only to keep pace with expected growth in U.S. manufacturing production but also to replace professionals who are expected to retire from the U.S. labor force. The

> U.S. had 370,000 machinists as of 2010, for example, and demand is projected to reach 522,000 in 2020, primarily because of market growth and manufacturing work that has been repatriated from countries such as China and from high-cost economies. However, it can be assumed that around 113,000 machinists will retire before 2020. If these forecasts are correct, an additional 264,000 machinists must join the U.S. workforce to meet demand in 2020. The talent gaps for welders, engineers, and machinery mechanics could be just as severe (bcg.perspectives, 2013, p. 5).

The issue expressed by BCG is further complicated by the current domestic and international political pressures and economic incentives that are perceived to have a negative influence on business, access to human resources and international mobility such as restrictive immigration policies (Chang, 2016). As recent as January 2018, a McKinsey report based on 2017 research points to the fact that, "spending on labor-force training and support has fallen steadily for years in most member countries [yet]…executives increasingly see investing in retraining and "upskilling" existing workers as an urgent business priority—and they also believe that this is an issue where corporations, not governments, must take the lead" (Illanes et al., 2018, p. 3).

Artificial intelligence and machine learning, emerging technological macro trends, are still seen by many as issues of the future while other trends, like the skills gap and shifting demographics of eligible workers, are coming together more quickly and impacting the organizational system and the larger culture. This 'confluence' or, "the flowing together of two or more streams" and 'emergence' defined as "the act or instance of emerging" (Merriam-Webster Dictionary, n.d.) of these macro trends is at the core of

the strategy gap where organizational leaders are implementing talent-related solutions keeping them stuck in a revolving cycle of today's workforce problems without adequately addressing opportunities and solutions that will harness their competitive advantage as these trends converge with the business of tomorrow. The field of talent management can support closing this strategic gap by leveraging new knowledge, perspectives, and skills of organizational leaders to think beyond the best practice solutions applied in the past and confront the current state of complexity head-on to manage the talent of today and the future.

As a practitioner, the intersection of this confluence and emergence, or '*conflergence'* of these trends, is contributing to complex and evolving conditions resulting in workforce management challenges that extend beyond any one company. In light of these trends there is an opportunity to explore their influence on how businesses operate or transform through large scale re-engineering or organizational re-design. To address these workforce challenges a more strategic approach may be needed to harness the capacity of the workforce to be more elastic or cross-trained, flexible in how knowledge is acquired across generations and perspectives, and focus on competencies that foster adaptability in light of the dynamic and complex environment.

This dissertation draws on design thinking methodologies, discussed in Chapter 2. This problem-solving approach enables engaged groups of participants to serve as designers to apply system and design thinking as a problem-solving strategy, and generate a series of ideas leading to a prototype for an ideal talent management system. Applying design thinking across stakeholders with different organizational cultures and

experiences will test the ability of this method to address the issue of talent management that transcends a unique organization.

Design thinking offers an opportunity for practitioners who work in the areas of organizational development/effectiveness and human capital concerns to generate ideas to best manage the complex challenges of tomorrow's talent as the issues of today evolve. This dissertation offers a unique design thinking model and approach, informed by established methods, to provoke the ideal talent management system based on the input of two distinct stakeholder groups. The purpose is to share the process and lessons learned, and to inform practitioners who work either inside an organization's human resources arena or in service to the organization's talent management concerns. The first two phases of the Consider, Research, Explore, Associate, Theorize, and Empathize, (C.R.E.A.T.E.) model is applied and data are gathered from two populations; stakeholders internal to organizations and a cross-section of external human capital consultants who provide solutions to organizations. By bringing together a cross-section of stakeholders from across industries to consider a talent management system for the 4th Industrial Revolution, the hope is to challenge current practices and make room for potential new ideas that can be applied across companies and industries.

Design thinking methods already draw on established interdisciplinary and multidisciplinary approaches, and there is an opportunity to explore a transdisciplinary approach to provoke considerations for an ideal talent management system thus moving design thinking methods forward in its approach by applying methods across disciplines and expertise while retaining rigor (Adams et al., 2011; Blevis & Stolterman, 2008). Bringing together the practice of thinking as a designer with systems thinking gives

stakeholders an expanded perspective and, through the ideation process, allows them to make assumptions about the future of talent management to generate prototypes to apply in today's organization. The skills used in creative design, otherwise known as *designerly thinking* where the designer creates holistically and within the context of the environment, along with the systemic perspective seen to be more descriptive, as Sevaldson (2017) suggests, will offer a "design and generate creative new states of the system and even entirely new systems… [and a] complex picture of the systems" (p. 3). Although this dissertation limits its scope to talent management, the lessons learned from the process and reflections of the participants can supplement the growing body of organizational interventions highlighting different ways design thinking can be used to solve organizational problems.

This dissertation is structured into five chapters. Chapter 1 provides an overview of the challenge, proposes a talent management framework and operational definition to anchor talent management within a systems framework, and presents the research questions. Chapter 2 presents a literature review building a case for the current state of complexity surrounding talent management. Social systems and systems and complexity theory are also briefly discussed as they relate to organizations. Finally, the background of design thinking and its established methods are addressed to illustrate how they informed the process used in this work. The Consider, Research, Explore, Associate, Theorize, Empathize (C.R.E.A.T.E.) model is offered to represent the unique approach of this study and its components are further discussed in Chapter 3, reviewing the methods applied in this work during two stakeholder sessions. Chapter 4 discusses aspects of the participant experience, the application of the design thinking method, and shows the ideas

that emerged from both sessions. Chapter 5 offers results, practitioner reflections and lessons learned through the process of delivering the design thinking method through the sessions.

Research Questions

This project was precipitated by the following research questions:

1. Can stakeholders representing different organizations, roles and boundaries enter into generative space regarding a common situation or problem?
2. Can diverse organizational stakeholders effectively apply design thinking and will this method generate solutions to complex talent management challenges that are generalizable across industries?
3. Are there emergent themes common to divergent stakeholders that can inform a talent management system which is itself informed by the conflergence of macro trends and other characteristics of organizational and contextual complexity?

In order to understand how stakeholders across organizations respond to the design thinking process and approach, the qualitative design for this study entailed an exploratory case study with two distinct populations. The project approach is informed by a constructivist philosophy that assumes there are many subjective realities and is consistent with the emphasis on the emergence approach of design thinking methods. Constructivism is helpful for practitioners to address organizational complexity because it is context-driven and recognizes the role researchers play in the research process. Charreire-Petit and Huaul (2008) suggested, “Constructivists considered that science

cannot pursue the aim of knowledge of reality and that, in fact, this reality neither exists independently from, nor predates, the actual observer-researcher" (p. 77). This constructivist paradigm assumes the search for multiple perspectives and is a core component necessary to solve emergent problems. This paradigm also supports positioning the researcher as the facilitator and, therefore within the context of the work. The constructivist approach also supports the researcher collecting the data and output of the design thinking sessions to interpret and generate meaning, while also evaluating the interaction of the participants. This method is different from taking a qualitative or mixed-method approach but is supported by the goals of this project and research questions. However, it is important to clarify that the focus on this case study centers on the practitioner approach to the application of the design thinking method and does not dip into meaning-making or interpretation of the output of the sessions. Therefore, constructivism is used as a guiding paradigm for this work in that the researcher is also the facilitator and the interpreter of information; Constructivist Grounded Theory method (Glaser, 2002; Mills, Bonner, & Francis, 2006; Strauss & Corbin, 1994, Chapter 7), often used in qualitative research, is not applied to evaluate or interpret the data since this aspect is recommended as future research and as such, will not be reviewed in Chapter 3.

Researcher Positionality

The position of a researcher guides their perspective and understanding (Milner, 2007). The selection of topic, choices regarding subjects of inquiry, method and understanding of the participants, and positionality of the researcher cannot be ignored and is discussed in this section using the first person, and reflected upon in the final chapter of this dissertation.

Despite identifying as a professional Caucasian woman who grew up in an upper-class family who resides on the cusp of Generation X and the Baby Boomer generation, I consider myself acutely aware of issues of social stratification, labor and organizational dynamics, and aspects of adult learning and development that contribute to the passion and interest in the subject of talent management. My background and the values with which I approach this dissertation research have evolved through the course of my life and profession, my academic background in sociology and aging, my academic and operational roles, and are driven by four central themes comprised of:

- My sociological perspective that offers an appreciation for the uniqueness of culture, social systems and norms that has contributed to how I see the world and has evolved through decades of study, travel, community engagement and direct involvement with learners, teams and leaders at all levels;
- A professional career centered on adult transformational learning that allowed me to extend my own skills into teaching, leadership development and executive coaching, and contribute to my growing awareness that the tradition and often stagnant, top-down bureaucracies in organizations fail to engage people in a way that promotes innovation, independence and leadership effectiveness;
- A deep desire to harness the power of collaboration and creative problem-solving that establishes human-centric improvements and builds the capacity of employees to be generative and satisfied in their vocational endeavors; and

- My personal need to connect the dots between disparate organizational systems and operate across boundaries for the purpose of making sense of how individuals often feel displaced from their careers.

My post-academic career began as an executive recruiter with senior-level roles including physicians. The educational background I brought to my work included a keen understanding of social systems, organizations, and the displacement of workers through transition and retirement. I moved into the career-college sector of higher education where I applied my skills and knowledge to elevate the focus of the career services office to place graduates into education-related roles, write career-focused curriculum to meet the needs of employers, interface with businesses across industries to tap into opportunities to close the skills gap, and lead the school-house operations to work collaboratively and place the needs of students at the core of organizational decisions. Today, I have taken my experience into the consulting world where I apply the same perspective to "learners" inside companies as the practice leader for a talent development consultancy.

In each organization I have worked for, or consulted to, I observe the often dynamic tension of a leader vacillating between a cemented transactional mindset that centers on what has worked in the past and a mindset of innovation and continuous improvement. Leaders have been observed preaching innovation and continuous improvement and yet relying on benchmarking and best-practice approaches creating stiff boundaries appearing to frustrate and disengage teams; problems compounded by rewarding what has always been done rather than what could be done differently. As an example of this I recall my almost twenty years in the career-college sector of higher

education that devoted its time and mission to helping adults tool-up and train-up after having been displaced from organizations or needing to launch a new career. Faculty and staff focused on creating innovative methods and approaches to help the adult learner overcome school-life obstacles, engage in learning and ready themselves for the expectations of the job market only to be told by "corporate" to benchmark retention and profits, and by the way…figure out how to get graduates jobs even if they are not prepared. The dissonance between the desire to collaborate and generate bottom-up solutions with the top-down mandate of shifting expectations to satisfy short-term needs (and earnings calls) caused me to exit my role internal to organizations and into an external consultancy offering clarity of issues never seen before. I engaged in deeper study of businesses and organizations, exposed myself to challenges of operational and HR leaders, and clarified my own organizational development practice integrating my expertise in business operations, adult learning and development. This was the impetus for my research into talent management and opportunities to further the field of practice focusing on what needs to take place in order for talent to be managed in light of organizational change and complexity. My aim in applying design thinking has been to understand how a method steeped in human collaboration and ideation could be applied to advance the scholarship of talent management, still in its infancy, while also being able to discern ways a practitioner can embrace the process to generate actionable ideas organizations can use to face an uncertain future in light of intense technological, demographic and global change. I recognize that my research has been driven by my personal and professional experiences which are both limited and biased.

CHAPTER 2: REVIEW OF THE LITERATURE

Talent Management

Background of talent management. Even though the formal history of established talent management processes goes back to the evolution of the personnel industry of the 1980s (Marants, 2012), much of the talent management literature draws on the 1997 McKinsey report entitled, "The War for Talent" describing the difficulties companies faced recruiting and retaining talented employees, and is also considered to be the origination of the term "*talent management*" (Chambers, Foulon, Hanfield-Jones, Hankin, & Michaels III, 1998). More importantly, the subsequent book of the same name contributed to the change in direction of the long established human resources (HR) field towards the recognition that talented employees were at the core of organizational success, and the failure to focus on talent would result in a company losing its edge - (Michaels et al., 2001). This "war" became a call to action for headhunting firms seeking to recruit the best and brightest or pluck out previously successful people and place them into new start-ups or competing companies rather than developing the talent internally (Klemp, 2014). Highlighted by Groysberg and Abrahams (2006), this recruiting challenge morphed into a process whereby companies competing for talent, either globally or locally, began to "lift out" entire teams to acquire the competitive brain trust rather than acquiring the entire company. The initial McKinsey report published in 1998, identified as a seminal work sparking a change in the human capital industry, is seen as a juncture in the evolution of the field that is now connecting to current policy issues related to international talent mobility as nations compete for an ever-scarce human resource in the form of both knowledge workers and direct labor where human

interaction is critical to meet business demands (Lund, Manyika, & Ramaswamy, 2012; Harvey, 2014). There is a wide variation of focus among talent management professionals and limited research in comparison to research in the larger HR field. There is little agreement as to whether talent management is a standalone field, a subset of HR or Organizational Development (OD), or the degree to which it is associated with learning and development. Agreement does exist that little has changed over twenty years of research in HR Management (HRM) even while the business environment has experienced dramatic changes as noted in *Global Trends in Human Resources*, a longitudinal study published by the University of Southern California's Center for Effective Organizations:

> The period since our last survey in 2010 alone saw enormous change in the business environment: a global economic recovery; the continuing economic growth of India and China; and fundamental changes in technology-driven social platforms, personalization, and device-centric applications. There is widespread agreement and much writing about the need for HR to change and how it needs to change to be more strategic and more of a business partner; offer higher-quality HR information systems (HRIS) and human capital management systems; and be more of a leader on issues such as globalization, sustainability, workplace personalization, and organizational agility (Lawler III & Boudreau, 2015, p. 154).

Minbaeva and Collings highlight the change in competition for talent from a domestic concern in the U.S. to one that now faces developing economies; placing terms like 'global' and 'strategic' in tandem with talent management (Minbaeva & Collings, 2013) leading to the call for a more rigorous research agenda focusing on "…the strategic

management of the flow of talent through an organization" (Iles, Preece, & Chuai, 2010, p. 127). In the background of the academic literature are industry practitioners and consultants calling for redesigning HR and a talent management system and approach to address issues in the current state that help to prepare organizations for the future. The unclear description of talent management and its role in the HR field, along with the difficulty in measuring value to the bottom line, has made it difficult to find consensus on how talent management fits into the larger business structure - - let alone strategy.

Personnel management emerged in the United States in the 1920s as a staff function in companies focusing on hiring, training and compensation, although it turns out the history of personnel management traces its roots back to the Australian colonial public service administration of the late 1850s (Thornthwaite, 2012). Some point to Robert Owen, a social reformer in England, who sought to improve the rights of the working-class and championed such things as an 8-hour day and who was an advocate for better working conditions ("Robert Owen Museum," n.d.). Others point to significant milestones influencing the field of personnel as it morphed into Human Resource Management (HRM) in the 1920s with the focus on human relations arising out of perceived changes due to such issues as the Hawthorne Studies at Western Electric (1964), the passing of the Wagner Act in the 1930s, and as the Taft Hartley Act in the 1940s that saw labor become more of a concern that involved growing issues such as worker benefits, collective bargaining, labor relations and compensation (Klare, 1977). Some of the most critical changes arose out of the Civil Rights legislation of the 1960s and, specifically, "Title VII of the Civil Rights Act (CRA), which prohibits discrimination on the basis of race, color, sex, religion, and national origin"

(whatishumanresource.com, n.d.). In the years following the CRA, equal employment opportunity and affirmative action became key HRM responsibilities as did the environmental impacts of deregulation sparking OSHA in 1971 from the OSH Act of 1970 addressing how technological advancements, such as the use of computer technology, influenced workers.

The trajectory of HRM and its distinct activities such as payroll and benefits, compensation, recruitment and training, policies and performance management programs, collided with what was becoming a more recognizable asset, otherwise referred to as *talent*, in the 1990s. "…this fragile birth identified a heavy importance on the live resources and their valuable talent in establishing organizations' goals and objectives" (Marants, 2012, p. 2). Today, the HR field has clear roles and accountabilities ranging from an HR manager, providing support of the business with regards to process and performance systems, to HR Business Partners (HRBPs) who may or may not have a seat at the strategic table (Lawler III & Boudreau, 2015).

With the current understanding that basic HR processes converge with the strategic leveraging of talent to achieve a competitive advantage, the term *Talent Management* coined in the 1997 McKinsey report was too broadly defined. Today, practitioners observe a wide variation on how the field carries out its work that is largely dependent on the type and structure of the organization (Lewis & Heckman, 2006). Talent Management references a catch-all bucket of applications and business solutions; tools and processes from distinct disciplines such as HR, Organizational Development (OD), Organizational Behavior (OB), Industrial and Organizational Psychology (I/O), Training or Learning & Development (L&D) and even disparate HR Information (HRIS)

or Learning Management (LMS) systems (Ashton & Morton, 2005). Tarique and Schuler address how aspects of these disciplines have resulted in an increased emphasis on analyzing the effectiveness of talent management applied internally to an organization but they also suggest there is an opportunity to widen the practitioner perspective to address the larger system (Tarique & Schuler, 2010). Business magazines have published pieces that highlight the ways to approach the recruitment, retention, engagement, development and transition of talent, still referring to the "war", yet little empirical evidence exists on the success of unique company initiatives intended to address the problems. For example, *Fast Company* published a piece in March of 2017 that criticized the premise of the McKinsey researchers and argued how, among other things, levels of employee satisfaction that exist in today's workforce have consistently been dropping over the years while there has been an increase on annual spending for developing employees and an upward trend of hiring chief engagement and chief people officers to manage to the employee experience (Chamorro-Premuzic & Yearsley, 2017).

Ployhart and Moliterno bridge the micro- or individual-level aspects of the talent management field related to knowledge, skills and abilities, with the macro- or organizational-level aspects related to strategy, education, organizational knowledge and experiences that are leveraged to advance the company (Ployhart & Moliterno, 2011). They draw on the work of Kozlowski & Klein (2000) and conclude that, "…despite the prominence of the human capital construct in both microlevel and macrolevel scholarship, and despite great theoretical and methodological sophistication within both disciplines and levels, there is little understanding about how human capital manifests across organizational levels" (Ployhart & Moliterno, 2011, p. 127). Kozlowski et al.

(2013) highlights the need to move beyond studying the processes applied to managing talent toward the study of complexity and interconnectedness, and additionally measure the multilevel emergence within the organization.

An interesting talent management model was proposed by Kalaiselvan and Naacimuthu who scanned the existing body of academic work to propose a High Performance Organization (HPO) model that appears to widen the scope of talent management into the larger areas of organizational governance and sustainability (Kalaiselvan & Naacimuthu, 2016). Their model is most intriguing because it shows the interconnectedness among all aspects within the business but did not address the systemic influence from external pressures on the business.

The apparent lack of empirical evidence, theory and research supporting the practice of talent management on organizational performance leaves the field without a clear model to advance human capital within organizations. Collings and Mellahi cite, "the fact that talent management lacks a consistent definition and clear conceptual boundaries" (2009, p. 304). For the practitioner, this prevents the field from addressing the larger systems issues and remain focused just on transactional and component-centered approaches to recruit, onboard, engage and develop people. This limited perspective may underlie what practitioners observe in the benchmarking many organizations report - - that turnover is increasing, engagement decreasing and budgets for training and development are some of the first to be reduced when times are tough.

Anecdotally, among practitioners, there appears to be strong agreement that talent is seen as the key to competitive advantage yet there is little agreement on how to achieve it. Taking a strategic view of managing talent (as clients call it, "Talent Strategy") is

presented to practitioners as critical but the knowledge and understanding clients exhibit about talent remains vague. Practitioners are beginning to see more regular executive sponsorship and requests for services that question what is impacting their internal issues; indicating that business leaders are beginning to seek a wider perspective when looking at human capital (Turner & Kalman, 2104).

Current state of practice in talent management. There remains confusion about how talent management is defined and whether or not it falls under the larger HR umbrella which may be part of the current issues facing the field. Adamsen (2014) noted,

> Even though talent management today seems to be a recognized research (sub-) field, the term is rooted partly in both a consultant and scientific discourse and while some common, general (but also vague) definitions of talent management are broadly accepted, an increase in criticism seems to have emerged in recent years (p. 5).

The lack of consensus on the term, scope, and objectives of talent management contribute to the on-going difficulty of how the field operates within the context of the organization and measuring the effectiveness of its human capital initiatives (Meyers & Van Woerkom, 2013; Lewis & Heckman, 2006; Ashton & Morton, 2005). Practitioners continue to struggle moving beyond organizational level applications and transferring knowledge through the system and into the wider industry.

Among the talent management literature, the term *Global Talent Management* (GTM), appears to most frequently apply a systems thinking focus as it points to global challenges and complexity influencing competition and sustainability. A 2010 paper by Tarique and Schuler (2010) advocate an integrative talent management framework that

displays exogenous drivers of globalization, demographics and demand-supply gap, along with the endogenous drivers of regiocentrism, international strategic alliances and required competencies that challenge the GTM system and effectiveness (figure 1). They emphasize the need to engage deeper research, develop a stronger understanding of the issues of the global economy and the complex and dynamic environment impacting the ability of organizations to keep up. They draw a distinction between the differences between GTM and International HRM (IHRM) that can be summarized by IHRM including a more holistic system of a greater number of stakeholders, broader concerns and criteria, and policies thus, "GTM can be examined in the context of IHRM [that] enables future researchers to build on work already undertaken in IHRM and apply some of those theories and models to GTM" (Tarique & Schuler, 2010, p. 124). Broadening the system of talent management, Karen King (2015) introduced a compelling visual framework of the internal and containing system that integrates organizational strategy, human resources management, and the talent climate and systems within the organization as presented in her GTM Multiple-actors Model (p. 279, figure 1) that emphasizes a robust feedback loop. For practitioners, this framework offers strong potential for overlaying the current components, initiatives, or solutions used within the talent management arena while ascribing to the prior thought that talent management research might be well-suited to be done in the context of IHRM.

A review of the limited academic literature points to the need to contribute to the talent management field with a model that is both measurable and offers a comprehensive internal and expanded systems view. Several have written on the dearth of good research supporting the varied initiatives that fall in the talent management bucket (Lewis &

Heckman, 2006; Cappelli, 2008; Dries, 2013). Dries' meta review of papers discusses that, "…we can conclude that talent management – at least as an area of academic inquiry – has yet to reach the status of a 'mature' field...[although] there has been an upsurge of research around the topic of talent management between 2010 and 2013" (Dries, 2013, p. 2). Several academic papers point to the absence of consistent empirical evidence supporting the work in the field, and there appears to be consensus that the industry lacks a strong theoretical framework and, as discussed earlier, lacks an empirical model. This academic perspective is supported by the fact that popular literature and industry publications on talent management topics rarely cite rigorous research.

A scan of the popular literature and trade publications shows that most source research is done by consultancies and research arms of large firms that build a body of proprietary data to support their own products and services such as Lawson, ADP, Workday, Korn Ferry and Deloitte, to name just a few. Even the Harvard Business Review, a go-to source for business leaders, proclaim they require submissions to contain rigorous citations but fail to qualify the level of research (Harvard Business Review, n.d.) resulting in many published submissions citing information from organizations such as Corporate Executive Board (CEB, now Gartner), Society for Human Resource Management (SHRM) or Association of Talent Development (ATD), and consulting firms that survey their own clients or members, or fail to provide sampling information to help justify the results. For practitioners, a rigorous body of research can help drive a consistent methodology to inform interventions.

The current talent management models presented by these same firms and organizations offer a wide variety of frameworks that show discrete components and

programmatic solutions such as *Employee Engagement* or *Succession Management* but offer little consistency across frameworks; motivating the researcher of this study to craft a talent management framework presented in Chapter 1. The proprietary frameworks presented by established firms do not appear to draw on academic work such as King's multi-actors model showing employees at the heart of the organizational system (King, 2015). The consultancies or trade associations producing these frameworks laud their approach and also use their frameworks as sales tools for organizations to adopt prescribed initiatives that currently lack measurements or evidence of generalizability across industries. The application of such frameworks and models by practitioners take a short-sited view solving the problems of today's micro-trends and fads while simultaneously supporting the firm's proprietary approaches rather than focusing on the macro-trends and issues influencing talent in the workplace. This is not to say that unique initiatives show some promise within their own organizational context, but as larger talent management solutions there is limited evidence that their results are sustainable or resolve the issues or problems through time and as the organizations continue to change. One example can be seen in the case of companies implementing a series of activities designed to improve employee engagement. A *Google* search (January 28, 2018) on *Employee Satisfaction* and *Engagement Surveys* generated more than 2 million results and thousands of articles referencing the cost to organizations for having disengaged employees. There is little information found on the financial investment companies spend on employee engagement tools but information published by Deloitte and HBR estimate close to $1B per year in general employee engagement programs (Deloitte University Press, 2017; Morgan, 2017). Interestingly, with employee

engagement now becoming reframed and referred to as *Employee Experience*, the Gallup organization reported that employee engagement has been flat since 2000, stagnant since 2015, and the percentage of engagement in the US stands at 32% while only 13% worldwide (Gallup, January 7, 2017); evidence that established initiatives are not working and the results remain flat.

Large consulting groups such as McKinsey, the Boston Consulting Group (BCG), and Bersin (Deloitte) publish whitepapers, annual reports and e-zine articles describing that CEOs are now evaluating the HR and talent management functions, showing the state of transactional activities applied post 2008 recession and that CEOs need to now apply strategies to become sustainable organizations. Central to the current state of talent management surrounds the need to carve out distinct space outside of Human Resources (HR) or Organizational Development (OD). "The issue of talent management is thus of interest to a wide range of stakeholders beyond human resource (HR) academics and professionals" (Mellahi & Collins, 2009, p. 4) leading to an opportunity to consider a wide population of stakeholders to address this evolving concern surrounding talent.

Outside of the few research-based models previously mentioned, talent management models are not easily found that address business complexity and take a systems perspective. Most models only show the talent management subsystem or at most, the subsystem and parts of the organizational system. They do not routinely represent the containing system that includes the stakeholder environment and rarely include the suprasystem or expanded contextual environment where changes in the macro-trends begin to apply pressures. Some framework examples that demonstrate this, and are reputable to practitioners are presented in Appendix A.

Macro Trends Influencing the Complex State of Talent Management

Our world is changing rapidly. The speed with which technology is advancing no longer has just the *potential* to disrupt the way we live and work, but it is *currently* in the process of disrupting it. The annual World Economic Forum placed the 4th Industrial Revolution (4IR) as a central theme (World Economic Forum, 2016) and those such as Erik Brynjolfsson from MIT are joining the chorus of how technological advances will pose dramatic changes to our workforce and, therefore, society as a whole. In his book, *The Second Machine Age*, Brynjolfsson suggests how machines are accelerating in their development of skills at a greater rate than people. With the convergence of artificial intelligence and technology, big data and analytics, and disparate functions such as simulation software and additive manufacturing working together there is increasing awareness how dramatic these technologies will impact business (Brynjolfsson & McAfee, 2014). Efforts by companies such as SAP and Shell Oil are digitally connecting people and processes, based on the Internet of Things (IoT) or machine-2-maching technology, in ways that open up the possibility of machines not only augmenting the work we do but also being included as a part of the everyday interactions of employees and consumers alike. According to Sistu (2017), from Cognizant, one of the world's leading professional service companies,

> This is the Industrial IoT [IIoT], which connects people and the physical world of places and machines with the digital world of software, cloud platforms, automation, augmented reality, artificial intelligence and data. IIoT offers the opportunity to maintain a single view of analytical data, and thus operate with real-time agility and respond to adverse events within the plant or across the

> supply chain. This requires integrating and consolidating enterprise and operational applications, infrastructure and systems (p. 4).

The artificial intelligence (AI) application of machine learning, with a focus on how supervised computers can access data and learn from it, and deep learning, a subset of machine learning that uses networks and learn unsupervised, may still be seen by many as science fiction concepts or just in the infancy of their applications, but evidence shows this type of technology is growing at a rapid pace. Issues surrounding AI and intelligent agents, bots, and genetic algorithmic capabilities are influencing decision-making and sparking innovation for companies already reeling with how to adjust their structure and strategy in a global business environment (Pan, 2016; Muller & Bostrom, 2016; Anderson, 2017; World Economic Forum, 2016). Organizations are challenged to address this new age and must confront the difficulty of how human capital intersects with both this new industrial revolution and the computer evolution.

The rapid pace of change in the technology sphere is coupled with demographic shifts across the generational landscape of workers, the educational preparedness and skills gap of workers to address industry needs, and how economic and social instability interact in non-linear ways. This complexity places pressures on public policy and business leaders to formulate the problems and generate potential solutions. Gone are the days when it is enough for organizations to apply reductions in force or restructure departments to make room in the talent pipeline for workers. Now, for companies to successfully adapt to change they must adopt a new mindset and apply new strategies rather than to repeat failed approaches that keep them in a cyclical pattern of attempting

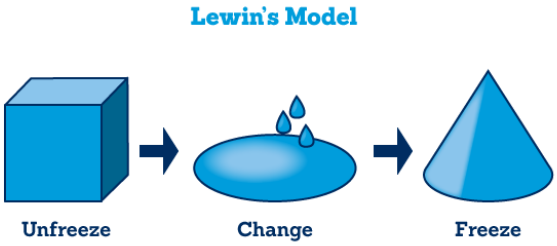
to solve the wrong problem; what Mitroff and Silvers (2010) called a Type III error, within talent management.

A recent McKinsey report notes, "Last year, we showed that currently demonstrated technologies could automate 45 percent of the activities people are paid to perform and that about 60 percent of all occupations could see 30 percent or more of their constituent activities automated, again with technologies available today" and the same report highlights AI will have difficulty replacing management, application of expertise, stakeholder interaction and unpredictable work (Chui, Manyika, & Miremadi, 2016). An opportunity exists for the workforce to come together and harness their total capacity to think through a way for the organization to function effectively as people and technology work together rather than only focus on those roles or people being replaced by technology. The roles and functions will change but this seismic shift in how we work and who we work with requires organizations to address not only the speed with which people adapt to change and technology but also with how they integrate with it.

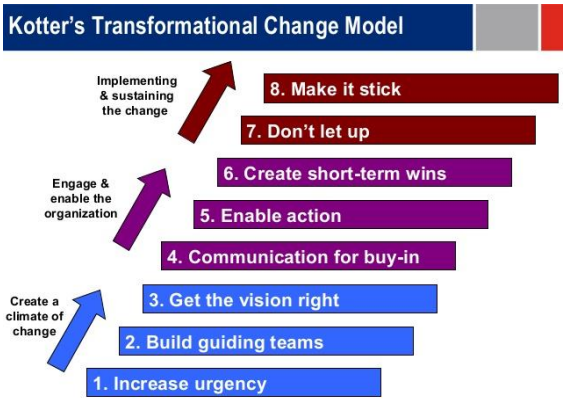
The Deloitte Global Human Capital Trends Report (2017) touches on the current reality of how organizations must shift their attention to issues of the digital age. They draw on the work of Thomas Friedman's (2016) *Thank You for Being Late*, which references a graph drawn by the CEO of Alphabet's Google X division, Eric "Astro" Teller, suggesting "that technology is increasing at an ever faster rate while human adaptability rises only at a slower, linear rate (Deloitte, 2017, p. 3). Freidman points to the rate with which technology, individuals, businesses and public policy embrace change, and Deloitte calls on Human Resources (HR) to take steps to close the gaps and specifically apply interventions to help accelerate the rate people move through change.

The Deloitte trends report focuses on several important items but appropriately highlights their number one human capital trend as "the [attention to the] organization of the future…[where] nearly 60 percent of respondents rated this problem as very important, and 90 percent rated it as important or very important" (Deloitte, 2017, p. 5). Their identified trends also addresses the need to build an employee experience that facilitates adaptation but the solutions noted in the same report suggest approaches that appear to recreate distinct "old" processes within established functions such as performance management, talent acquisition and employee engagement; applying a reductionist approach rather than addressing the organization's entire system and the interrelationships between the aspects they describe. However, one interesting area they touch upon is the opportunity to, "Embrace design thinking: study, listen to, and learn what employees are doing every day and discover new ways to simplify work and improve productivity, performance, and engagement. Develop employee personas and use them to develop journey maps" (Deloitte, 2017, p. 59). This stepped further from their previous recommendations that advocated taking actions to enhance the employee experience and address critical talent programs. In concert with the current state of the talent management field, it can be argued that issues are not unique to HR but are a strategic priority, and leaders at the top of the organization can apply design thinking across the entire organization to allow a new talent management system to emerge; one that can contribute to addressing the employee experience, focus on the complex nature of the evolving organization, and one that will aid in accelerating the adaptability of an organization's talent in a state of complexity.

To accelerate the pace organizations adapt while either achieving or maintaining a competitive advantage requires an understanding that the linear and sequential planned approach to change, popularized originally by Kurt Lewin (1947) and later by John Kotter (1996), are best applied to small and incremental changes where the conditions remain relatively constant but are not as effective with the kinds of change resulting from complexity (Burnes, 2004). A linear change model such as Lewin's or Kotter's (Figure 2.1) have been critiqued by complexity theory followers who ascribe to the 'emergent approach to change' embraced by current change theory followers, which are most applicable to rapid and transformative change (Todnem, 2005). While both approaches may be helpful, there may also be a need to further adapt methods when adding the global and disruptive business environment into the state of complexity.



Source: https://www.nationalleasing.com/en/blog/entry/4-change-management-models-for-your-small-business



Source: https://www.slideshare.net/ChrisBoyer/driving-transformational-change-through-digital-strategy-at-inova-health-system

Figure 2.1 – Kurt Lewin and John Kotter Change Models

The concept of an ambidextrous organization, as defined by Tushman & O'Reilly, III (1996) as organizations that can quickly respond to the changing environment, may be a useful added consideration here in support of the idea that organizations must exercise

capabilities that allow managers and executives to constantly adapt to potential change. Once seen as a concept related to the changing nature and approach to project management, the ambidextrous state of an organization seems to be more closely aligned with how today's organizations are adapting their culture and strategy to discontinuous change. Tushman and O'Reilly (1996) examined the history of organizational change up to that point and highlighted the need for organizations to become ambidextrous as distinguished by the ability of managers and organizations to implement both incremental and revolutionary change that they determined to be the distinguishing factor for long-term organizational success. The magnitude and speed with which they catalogued such changes in organizations paled in comparison to today's (2018) environment, but their assessment of how leaders responded remains quite relevant. They noted, "The real test of leadership, then, is to be able to compete successfully by both increasing the alignment or fit among strategy, structure, culture, and processes, while simultaneously preparing for the inevitable revolutions required by discontinuous environmental change" (Tushman & O'Reilly III, 1996, p. 11).

In recent works on ambidextrous organizations more attention is being placed on building ambidexterity across the organization by proactively harnessing intellectual capital, social capital, organizational capital or infrastructure, and specifically, "extending the process of adjustment between exploration and exploitation activities, focusing on organizational knowledge stocks" (Fernandez-Perez de la Lastra et al., 2017, p. 669; Subramanian & Youndt, 2005). Design thinking offers a methodology for accelerating this process as "the designer invents new patterns and concepts to address facts and possibilities" (Owen, 2008, p. 27).

The MEL – Index, introduced by Phil Dover and Udo Dierk, measures the capabilities of how, "managers, entrepreneurs and leaders – must exist within the ambidextrous organization where a balance must be found between managing the present while preparing for the future" (Dover & Dierk, 2010, p. 1). At this early stage of their research their findings are not generalizable to the larger population even though their more recent work (2013) shows more promise as their study continues; adding more to their sample size. However, their focus and attention on the balance needed between issues of the present and readiness of capabilities for an envisioned future is central to the concept of this dissertation as it addresses the importance of taking a more intentional and deliberate approach to designing a talent management system. Being able to make assumptions about the future and apply them to address current issues regarding the integration of the present workforce that, for example, harnesses the capacity of all "intelligent agents" to include humans and machines in concert rather that in tandem. Ensuring attention is placed on applying systems thinking to consider the suprasystem, where the macro trends begin to exert pressure, will shift the organizational mindset to consider their ideal talent management system.

In addition to technology and the resulting need to project into the future, another macro trend influencing companies are demographic shifts placing pressures on human capital and talent management. Underlying these pressures lay assumptions and stereotypes influencing human capital decisions. In the most general terms, biases exist that younger workers are more innovative and productive; resulting in companies making resource decisions based on generational biases (Posthuma & Campion, 2009; McNamara et al., 2016). As discussed above, the elastic workforce must address human

capital as well as technology "workers" while also harnessing all capabilities, regardless of workforce generation, to understand how best to position the workforce of the future. Taking a narrow and reductionist view repeats the traditional approach of simply making room in the talent pipeline, where reductions in force disproportionately impact older workers, will leave companies at a disadvantage due to some unique characteristics of the younger workforce.

The most current data from the Bureau of Labor Statistics points to one side of the coin showing a shift in the labor force, anticipating that one in four workers will be over age 55 in 2030 as compared to one in five as recently as 2010 (Bureau of Labor Statistics, 2016). According to the Report on Economic Well-Being of U.S. Households published by the Federal Reserve Bank (2016) and as reported by Steverman in Bloomberg News, 27% of Americans said they will continue working as long as possible while an additional 12% indicate they don't plan to retire at all (Steverman, 2016). The Bureau of Labor Statistics notes (Figure 2.2) that the U.S. unemployment rate is at its lowest since the 2008 recession. One outcome, according to a report by SHRM (2017) is that is becoming increasingly difficult to recruit international employees due to global restrictions.

Source: Tradingeconomics.com | U.S. Bureau of Labor Statistics

Figure 2.2 – U.S. Unemployment Rate

Steverman (2016) also points to research from the Boston College Center for Retirement Research showing that older workers are earning less in relation to the total workforce than they used to, while the cost of recruiting younger talent is increasing, which may result in employers now less inclined to lose their experience and stability. The Cornell University School of Industrial and Labor Relations (ILR) 2012 report from the Employment and Disability Institute highlighted that 85% of the 76 million Baby Boomers plan to continue working after retirement and 70% seek to remain working at a fulltime capacity (Bruyere & Young, 2012).

The aging of the workforce is also changing. According to American Association of Retired Persons (AARP), "the percentage of [age] 70-plus women who are still working is expected to rise from 30 percent to 39 percent by 2024 (Newcott, 2016, p.1). The increase in longevity of the aging workforce, coupled with their desire to remain working during a time where there is no push for mandatory retirement, places the pressure on employers to make room in the talent pipeline differently from the current norm of voluntary retirement programs or sometimes using restructure or reductions in force to accomplish this goal.

While there are a large number of Millennials in the workforce, there is also less stability in this younger pool of workers that range in age from 18 through around 35 years. Research by the Gallop Organization suggests that organizations may be making spurious assumptions resulting in their placing too many eggs in the millennial basket. Assumptions about the return on investment in millennial workers range from their being highly innovative and fast moving to being a generation of workers who will solve issues of cost to maintain and re-train older workers when, in fact, millennial workers bring a

new set of concerns and costs previously not faced by companies. Costs in retaining and maintaining younger workers range from issues with engagement and turnover, medical costs, organizational structure issues addressing remote roles, and even programs attending to the needs of younger worker (Gallup, Inc., 2016). Some highlights include potential cost for health insurance, traditionally seen as less expensive for the younger worker. Writing in *Fortune*, Lewis (2016) noted,

> "Since 2009, the Center for Collegiate Mental Health has been warning about higher levels of mental illness among college students. By age 18, a National Institute of Mental Health study of Millennials found, 35% will be diagnosed with an anxiety disorder, 25% will be diagnosed with a substance addiction, and 20% will have a behavioral disorder. Accounting for overlap, one of these disorders will affect 1 in 2 young people" (p. 1).

Jonathan Gruber (2009), an MIT economist, warned that the Affordable Care Act (ACA) would increase the cost of insurance for young workers as health insurance mandates took effect while it was too soon to determine how other provisions would alter the costs for employers (Klein, 2009). In 2018, people have access to some of the lowest uninsured rates in decades but there was also a decrease in eligible employees under 26 years who obtain coverage under their employer due to the extended amount of time the ACA allows for people to be covered under their parents' plan. Regardless, the health premiums rose across all age groups and, according to the ADP 2016 Annual Health Benefits Report analyzing three-year trends among large employers, employees participating in employer-sponsored programs remains relatively constant among those ages 26 through 64 years with the highest rate between 55 and 64. The rates of those

employees under 26 years were lowest but they had the highest rates of eligibility pointing to a quickly changing cost landscape as they come off of their parents' plans. Additionally, the employer contribution, as a percentage of total premium, rose most with the under 26 populations and also rose for all groups except those older than 55 where employers experienced a drop of .1% (ADP Research Institute, 2016). The ADP report noted stability since the ACA took hold and, since 2011, "another trend confirmed…that changes in workforce demographics are keeping the overall growth rate in cost per employee lower than in the past" (ADP Research Institute, 2016, p. 27). The ability to use data to evaluate costs and also adjust based on demographic shifts allows the cost of the employee to be constrained across age groups; a change from prior assumptions. The current uncertainty of the ACA and the rapidly shifting policies under the new Trump administration may result in the need for companies to revisit the cost of workers along demographic lines that will be further complicated by the vast number of millennial workers entering child bearing years.

In addition to health care costs, Millennials are identified as cohorts of workers more inclined to leverage free-agency and switch jobs. A Gallop report, published in 2017, brings together employee engagement data across the world that shows high turnover rates, with 60% open to new job opportunities, and the millennial generation being the least engaged as compared to workers of older generations. Gallup estimates millennial turnover costing the U.S. economy close to $30.5 billion a year (Gallop, Inc., 2016). Deloitte's 2017 Millennial Report surveyed almost 8,000 millennials across 30 countries. They found that their loyalty to employers is increasing slightly and businesses are being viewed more positively since their 2016 survey, but this generation

of employees are also seeking alignment with employers who value their social concerns resulting in the launch of company efforts to focus on attracting young workers to their brand (Deloitte, 2017). Millennials, who include both Generation Y (born between 1982 and 1996) and Generation Z (born after 1996), and like generations before them, are a generation with a wide range of attributes. Generally, while Generation Y is depicted in most of the current Millennial surveys, Generation Z members are newer to the workforce and are seen to have unrealized potential but are in need of more support, and whose need for high-level collaboration and team involvement may experience some dissonance as they enter the workforce in larger numbers (Deloitte, 2017). Dan Schawabel, partner and research director at the consultancy Future Workplace, has reviewed the gaps across generations in the workplace and notes the need for companies to address the experience of younger workers and their propensity to work in the gig economy where they can participate in flexible teams and experience greater mobility (Dan Schawabel, n.d.). This high mobility workplace increases the need for organizations to make concerted efforts to retain institutional knowledge not only as the older workers' tacit knowledge is lost as they exit the workforce through retirement but also as younger workers exercise free agency. The accelerated speed employees transition out of the organization from either end of the age spectrum creates a dynamic that was previously more manageable. This fact is further aggravated by the volumes of information and analytics companies must use to remain competitive.

There are other assumptions and trends facing talent management. For example, compulsory retirement, outside of specific occupations such as the military and law enforcement, is generally unlawful in the United States. Although there are established

laws preventing age discrimination there remains the perception that workers face rapid decline after 65 years. This contributes and supports the mindset many have enforcing attitudes towards older workers and their relevance (Munnell et al., 2006). Cost factors influence when workers decide to retire. The 2008 recession placed hardship and stress on people's retirement funds, and there have been losses to pensions and stable retirement packages in recent years. Working longer directly contributes to the ability to delay accessing Social Security thus avoiding the premature actuarial reduction of personal benefits. Working longer also allows retirement assets to continue to grow as opposed to withdrawals from fixed income. However, cost factors are also a concern to employers. In 2006, 40% of employers surveyed by Boston College felt that older workers were generally more productive than younger workers but the older workers, across levels, cost more in term of salary and benefits (Munnell et al., 2006). With the recent leveling off of salary costs of the older worker, coupled with the hiring costs for replacing high-turnover younger workers who, as discussed previously, also use more medical services than was seen in the past, the cost pressures may actually equal out leaving the retention of older workers as a more viable option than previously assumed.

Talent management concerns also stem from interventions primarily attending to small subsets of the workforce, such as high-potentials or those identified as top talent, and dismissing the value of other workers resulting in a loss of collaborative energy, disengagement and reduced productivity. As noted by scholar, Jane Sturgis,

> In addition to ensuring that the A-players get into A-positions linked to core capabilities, one should not forget a third dimension, namely critical knowledge or competencies. One of the limits of focusing on current key people and

> positions in talent and succession management is that business and industry trends can be neglected – trends that in fast-paced industries might imply a need for new kinds of people and positions in the future (Sturgis, 2016, p. 237).

Companies typically evaluate talent through the lens of past performance and future potential. Models such as the Bossidy 9-box (Silzer & Dowell, 2010, p. 563) developed by Larry Bossidy when he was at General Electric or applications ascribing to the Pareto principal (McRray, 2015) of separating talent as the vital few from the trivial many are used with little evidence of success (Markus, 2017). A global study commissioned by Korn Ferry and conducted by Hanover Research in 2014 found that while succession programs and talent mapping were said to be based on current performance and future potential, an analysis of future potential was rarely done leaving many talented employees without a path forward (Newhall, 2015). Companies struggle when development programs either fail or don't supply the bench strength sought by organizational leaders as outlined by several articles and commentary in leadership magazines such as Harvard Business Review (HBR) and Forbes; resulting in the failure to articulate factors that measure future success but instead, simply assign a high potential status (Fernandez-Araoz et al., 2017; Chamorro-Premuzic et al., 2017). Few practitioners will argue the importance of focusing resources on the highest levels of leadership although they will also agree it should be done when the outcomes address the strategic needs of the organization.

If practitioners continue to apply reductionist solutions with diminished returns to problems that are actually symptoms of complex issues, their choices will result in a repeating cycle that reinforces the perception that talent is easily expendable. Applying

systems thinking to address the issues of talent may result in stronger solutions contributing to the building of an elastic workforce more adaptable to change and one that can embrace and interface regardless of age and role, and engage new technologies into the system, not simply use them. Instead of the performance-potential conversations, attention may be better placed on leading in complexity that, "focuses on the strategies and behaviors that foster organizational and subunit creativity, learning, and adaptability that emerge when the right [complex adaptive systems] CAS dynamics are activated" (Uhl-Bein, Marion, & McKelvey, 2008, p. 3). Systems thinking and a stronger appreciation of organizational complexity produce emergent solutions that can be applied to the future needs of talent management.

Addressing Complexity in the Organization

The talent management frameworks and models reviewed in this dissertation support the importance of linear analytic organizational strategy; but there is a lack of consensus on where talent management falls within the larger HR domain. The way talent is currently managed seems based on the assumption that what is internal to the organizational is the primary concern. This is clearly presented by Farrow & Hirsch, (2008) who note that talent management concerns,

> "…extended the core ideas of attracting and developing talent into every -ing imaginable - retaining, motivating, rewarding, and so on. So at one extreme, talent management can be taken to encompass the whole of human resources management for the whole of the workforce, which is not very helpful when trying to narrow down what one means when one talks about talent management" (p. 390).

When talent is managed without taking the transactional and contextual systems into account it takes a longer time to adapt when issues, macro trends, micro trends and larger environmental pressures appear than it would if the entire system is routinely considered.

The system matters. The complexity of an organizational system requires a different lens with which to approach the most critical component of an organization; its talent. A system is, "a set of objects together with relationships between the objects and between their attributes" (Hall & Fagan, 1956, p. 18). An organizational system, therefore, is the set of independent employees, each with their specific function and where they interact with other employees through interrelated responsibilities, and adapt as they interact and provide feedback into the relationships. As an open system, an organization interacts and is influenced by its internal and external environment, and can be seen as interconnected and interdependent such that if one part is affected, all parts are affected. While many systems refer to mechanical products and biological entities, a major contribution made by Russell Ackoff concerned social and organizational systems as noted by Andrea Gabor:

> (Ackoff) drew the clear distinction between the machine age, in which companies could assume relative stability and seek optimum solutions to discreet problems, and the systems age, beginning after World War II, a time of growing global and technological complexity. Organizations would henceforth have to deal with 'sets of interacting problems' and give up the quixotic search for simple solutions that could be applied consistently. The key challenge, Ackoff said, would be designing systems that would learn and adapt (Gabor, 2010, p. 103).

Organizations are complex systems capable of continuous learning that "can transform themselves into new entities and retain the ability to learn and transform all the time" (Pourdehnad & Bharathy, 2004, p. 2). This requires leaders and members of organizations to recognize that the way they responded in the past no longer works as today's environmental factors are accelerating organizational disruption, and requiring a systems view (Pourdehnad & Bharathy, 2004). As many systems thinkers posit, the problems organizations experience today arise from well-intentioned efforts to resolve yesterday's problems.

The contribution of complexity science, cognitive science and systems theory applied to the organizational development, management and general HR literature has produced new ways to understand and describe organizations and organizational behavior. Systems theory asserts that *complexity* is a systemic property of a complex organizational system. To address the issues of the workforce requires a similar approach organizational researchers have been advocating for several decades which is to apply design theory and systems theory to organizational redesign. According to De Sitter, Hertog, and Dankbaar (1997), "Organizations which are confronted with increasing uncertainty and complexity have to invest in organizational redesign [applying Integral Organizational Renewal (IOR)] in order to survive" (p. 498).

In addition to complexity being an emergent property of a complex system, complexity in an organization can also be described as a way of observing a situation where there are non-linear, interactive elements that are dynamic (Snowden & Boone, 2007), and exists in an organizational system made up of subsystems such as departments, containing systems such as divisions, and larger systems as might be seen as

an enterprise-wide organization (Agar, 1999; Ackoff & Emery, 1972). In other words, they are in a constant state of change. Sargut and McGrath also apply complexity and change concepts to organizations and leadership, and define a complex system as one where the same starting conditions can produce different outcomes based on the interaction of the unique elements or parts due to the number of potential interactions, the degree to which they are interdependent and their level of heterogeneity or diversity (Sargut & McGrath, 2011). Related to complexity is the concept of organizational change, specifically unknown or ambiguous change, which is often what a company faces as they seek to prepare the workforce for things to come. This unknown change is a characteristic of a complex system that, in a simple system, is the more limited "known change" and therefore, more manageable.

Burke, Lake, and Paine (2009) describe how in the 1970s Emery and Trist highlighted the difficulty of studying organizational change due to the increased complexity that arises as the organization's environment and containing system simultaneously undergoes change. They reference the causal texture of the environment which requires a complex look at how to help organizations address uncertainty and still achieve their primary goals. Practitioners applying systems theory have increased their understanding of the factors influencing change (Burke, Lake, & Paine, 2009, Chapter 1). This reinforces Ackoff's belief that a system undergoing continuous change would better respond to interactive planning and the idealized design method to achieve solutions when the systems is in an ambiguous and imprecise state. Conceiving and designing this ideal system represented the organizational system unimpeded by constraints and would require disruption or discontinuity achieved by starting with a mindset that the "system

was destroyed last night" (Ackoff, Magidson & Addition, 2006). Struggling with solutions to the challenges and ambiguous changes facing talent management may derive from the fact that organizations apply talent solutions as if the management of talent is a simple problem that requires a basic change management approach rather than acknowledging the need to embrace the systemic complexity, anticipate factors influencing the system, and navigate how the system, in turn, influences the environment.

David Lane and Mike Jackson wrote a comprehensive annotated bibliography addressing the breadth and depth of systems thinking, and they highlighted select areas that make up General Systems Theory (GST), the systems movement which, according to Lane & Jackson (1995), "can be recognized by a commitment to holism rather than reductionism and to organizing knowledge in cognitive systems…" (p. 219). The areas within GST that most inform this study are organizational systems and systems dynamics. Drawing on early social science theory, the concept of organizational systems was deeply influenced by the work of early sociologists who took a functionalist approach to social theory. These reflect the contributions of Max Weber on bureaucracies and the impersonal division of labor, the structural functionalist approach popularized by Herbert Spencer and Talcott Parsons whose focus was on social structures and complex social systems seeking equilibrium; and the earlier functionalist school of thought promoted by Aguste Comte and the inter-workings of the body where the biological system worked interdependent of any specific organ (Witt, 2014). With the maturity of the field several sociologists took aim at this perspective because of concerns that stability could not be maintained through time in a complex environment. As noted by Scott Page (2015):

> Sociology engages both change and progress as opposed to presuming equilibrium. From a sociological perspective, our social, economic, and political lives are dynamic—admitting new ideas, categories, and technologies. Those innovations can produce complex (nonstationary) dynamics. Finally, parts of sociology accept the possibility that a group can have emergent properties that exist independent of its members (p. 22).

Just as social systems struggle to maintain equilibrium, so do companies that are social systems made up of talented individuals. The transdisciplinary nature of complexity and systems theory pulls together contributions from varied disciplines. From sociological concepts of social systems and networks to engineering disciplines such as system dynamics, which is an approach to modeling the linear and non-linear relationships between all parts of a system, and concepts of feedback loops, all are seen as ultimately instrumental in how the organizational system and its members learn and adapt (Lane & Jackson, 1995; Senge, 1990; Byrne & Gallaghan, 2015). Furthering the concepts of adaptation and learning, and applying them to think through solutions to real-world systems problems, Peter Checkland sought to relate experience to ideas. The process of reflection is encouraged by people who engage in Soft System Methodology (SSM) to model "purposeful 'human activity systems' as sets of like activities which together could exhibit the emergent property of purposefulness" in Checkland's inquiring/learning cycle that addresses how the organizational actor observes their situation in the context of a complex system (Checkland, 2000, p. S14, figure A2).

The concept of purposefulness, derived from the philosophy that events should be explained by the purpose they serve rather than their cause, was described by Russell

Ackoff who earned his PhD in the Philosophy of Science and whose work in Operations Research explored purposeful systems and the relationship with social, cultural and psychological systems (Ackoff & Emery, 1972). Ackoff and Emery saw people and organizations as purposeful "ideal-seeking systems" that required an expansionist rather than reductionist perspective since everything the system experiences is intertwined in the larger system and whole (Ackoff & Emery, 1972, p. 241). Organizations are complex and purposeful, and are directed by mission, vision, and values. In recognition of this state, they require systems thinking to aid in being more adaptive and continuously learning; the organization, structure and individuals must flex to the changing environment (Smither et al., 1996).

Practitioners addressing organizational effectiveness and development take several approaches to address organizational change and transformation but do not always apply systems thinking which is required when addressing complexity. Practitioners may apply decision making tools or forecasting models, brainstorming techniques or even apply visioning techniques to clarify short, mid-range and long-term strategies to address how to move an organization into the future. Most practitioners engage approaches appropriate to address a known change and they focus on how individuals, teams, and the larger organization responds and takes action to face the known change. Organizational Development (OD) practitioners apply change initiatives that tend to address a variety of areas within the internal organizational system. David Peter Stroh correctly asserts that systems thinking addresses the challenges of change that can be applied to help members of an organization become motivated, collaborative, focused and in a state of continuous learning (Stroh, 2015). He is not alone in this

assertion and joins many thought leaders by advocating aspects of systems thinking and design thinking methods to solve issues of change. The Organizational Development Network (ODN) recently addressed the concept of *design*, central to interventions used by the OD practitioner, and design thinking as a place, "where OD and the design communities clearly overlap" (Vogelsang, 2015, p. 1). The Complexity Continuum for Interventions offers a theoretical foundation for how OD practitioners can offer interventions that allow for self-directed change to occur and where the consultant is more facilitative than direct (John, 2015). For example, applying the Cynefin Framework during an OD intervention, the practitioner can expose leaders to think through factors to help them become externally sensitive without being locked in their internal perspective to help make decisions on how to move forward.

I hold that design thinking methods are best suited to address problems facing how talent is managed. A recent blog post on the website of the Interaction Design Foundation, a Danish-based online community with representation from 84 countries, attempted to drill down into the history of design thinking. Researchers, Dam and Siang (2017) stated that, "Design Thinking emerged from an exploration of theory and practice, in a range of disciplines and sciences, as a means of addressing the human, the technological and strategic innovation needs of our time" (p. 1). Alongside this emergence, complexity leadership or systems leadership is thought to be required in order to address the state of complexity and the complex system influencing the organization and its competitive advantage (Senge, Hamilton, & Kania, 2015; Uhl-Bein, Marion, & McKelvey, 2008). With regards to the management of talent, and the need to create a desirable future to inform and be informed by the environmental context, the talent

management system must be understood as a subsystem of the larger contextual environment to allow solutions to the problems facing talent management to emerge (King, 2015). I argue that aspects of design thinking and interactive planning, an approach developed by Ackoff (1981) that focuses on creating the future by designing a desirable present, will invent possible solutions and facilitate options not yet considered that, if applied today, may result in minimizing potential issues down the road.

Background and Importance of Design Thinking

The *historical father of design* is architecture. Modern design conjures up notions of fashion, aesthetics and consumer products used on a daily basis. In the context of design thinking the definition of design refers to a process or way of thinking about how the human experience comes in contact with the world around us (Brown, 2009). This designerly way of thinking, as it has come to be known, has been influential in the ways design practitioners address ill-defined problems and develop solutions, but has historically lived in the narrow fields of the arts or architecture (Cross, 2006). Unlike scientific approach or the rational method of design, architecture and planning, Cross highlighted *designerly thinking* as a third way to think about the world and devoted much of his writing to establishing a systematic approach to the process (Cross, 2006).

Generations of design thinking. The first identified generation of design thinking is described by Bousbaci (2008).

> Proponents of the first generation; based on a strong reaction against the intuitive, artistic, and "beaux-arts" vision of the design process, which was largely diffused since the nineteenth century in design professional education; have supported,

between the late 1950s and 1967, a very logical, systematic, and rationalist view of design activities" (p. 38).

This reaction moved the designer from the intuitive artist to the logical designer; allowing for the establishment of a more formal and rational design method. Different from the approaches applied by practitioners in the traditional sciences or the humanities, the growth and development of *Design* as a discipline with an accompanying method and approach evolved from the marriage of the humanities, arts and engineering, and the study of man-made systems and things (Bayazit, 2004). The blend of the designerly way of thinking as a method of inquiry with the up-and-coming fields of the day such as operations research, cybernetics and aspects of engineering, architecture and other design fields, sparked the Design Methods Movement (DMM) begun by Horst Rittel, Christopher Alexander, and Bruce Archer, among others who, "advocated a systems view of design projects and introduced a range of methods emphasizing a rigorous, rational or scientific approach to designing" and to whom the design process of defining the problem, creating a prototype and evaluating the solution was attributed (Rith & Dubberly, 2007, p. 72).

Rith and Dubberly point to the work of Rittel and the Design Methods Movement as shifting from the historical transactional process of the design practitioner *i.e., design by an expert for a user,* where the designer thinks through the potential solutions in isolation towards the recognition that a designer alone is ill-equipped to address a problem. As noted by Rith & Dubberly (2007), "the problem is subjective, it comes from a point of view" (p. 73) placing Rittel's conception at the juncture of the second generation of design thinking wherein the user's experiences more significantly informs

the designer and the nature of the design, *i.e., design with the user*. Even though different schools of thought established in response to some who felt there was the tendency to oversimplify the design process, this second generation of design thinking methods moved the process from one where the design practitioner is at the center of the process to one that included the participation of users and stakeholders, and the recognition of the user's perceptions about the complexity of real-world problems (Bousbaci, 2008). Rittel proposed, "User involvement in design decisions and the identification of their objectives" and was seen as, "a new democratic approach parallel to the prevailing movements of the era…The concept of user participation is as wide and variable as that of democracy" (Bayazit, 2004, p. 22). However, in this case, even though the users provide information, the designer makes the final choice about the design.

Influenced by his education in philosophy and his training in architecture, Russell Ackoff also promoted a third generation of design by placing users in the central decision-making mode, *i.e., design by the user*, sometimes referred to as the "wish" mode, to spark new ideas that he applied to help organizations through the process of interactive planning instead of continuous improvement (Ackoff, Magidson, & Addison, 2006). Vince Barabba (2004), former general manager of corporate strategy for General Motors Corporation and a major contributor to the evolution of systems thinking, and Nigel Cross (2006) noted that Ackoff's approach was different because it placed the design decision in the hands of the stakeholder which was a significant change from the prior generations of design thinking.

Application of design thinking is most commonly associated with the d. School of Stanford University and IDEO, a global design and innovation company advocating the

practice of, “human-centered design, a creative approach to problem solving that starts with people, and arrives at new solutions tailored to meet their lives” (www.ideo.com). Their notoriety stems from highly publicized product design engagements for major organizations and certification programs using their method that are popular with consultancies worldwide. The IDEO method and approach represents the second generation as described by Rittel that distinguishes the need for the designer to engage directly and collaboratively with stakeholders to solve, or in “taming wicked problems” and where the designer and the stakeholder both hold expertise that keeps track of all the variables and co-creates a solution (Rith & Dubberly, 2007, p. 73). Cross (1999) emphasized that *Design* involved first people, then the process and finally the product. Cross states, “We should not underplay our [the general public] abilities as designers, many of the most valued achievements of humankind are works of design, including anonymous, vernacular design as well as the “high design” of professionals” (Cross, 1999). The distinction between the “people” from the “high designers” is similar to the contributions of IDEO and the Stanford d. School that encourages intense interaction with the customers and stakeholders but leaves the ultimate solution to the professional, “high” designers.

David Kelly, a Stanford University professor and co-founder of IDEO, applied the term *Design Thinking* to describe the work his company did for client organizations. The term was already in use by thought leaders in other disciplines, but it was used more generally by Kelly to describe the IDEO process then popularized by the current IDEO CEO, Tim Brown, in his book *Change By Design* (Brown, 2009). Brown outlines the IDEO method of using design teams who interface with users, customers, and

stakeholders to solve ill-defined, complex issues of product design and work within the constraints of desirability, viability and feasibility (Brown, 2009, p. 19). The IDEO method is sometimes referred to as a *Deep Dive*, a term coined from an ABC Nightline News segment highlighting how the method could be applied to redesigning the grocery shopping cart (Koppel & Smith, 1999). This Deep Dive is more commonly used to address a consumer product and improve on it, or solve a distinct problem that requires consumer input to come up with a solution related to the design of the product. Brown's (2008) three-step method: Inspiration, Ideation and Implementation, "is best described metaphorically as a system of spaces rather than a predefined series of orderly steps" applied by an "interdisciplinary team" who, using customer input, was "responsible for every aspect of what was envisioned as a holistic experience, came up with the concept…" (p. 88).

Also applying the concepts of Rittel's second generation design thinking, the Rotman School's Dean Roger Martin (2009) expanded on the idea of solving wicked problems with a mental model he termed a "knowledge funnel" that could be applied as a path to value creation and within an organization. According to Martin (2009), applying this design thinking method within an organization will "enable leaders to innovate along the path of the knowledge funnel, and the firms that master it can gain long-term business advantage" (p. 38). The process begins with uncovering the mystery of what the collective conscience knows to be true. Then, from that initial understanding, rules or heuristics are established, leading to a solution, "by way of organized exploration of the possibilities" (Martin, 2009, p. 39). David Dunne and Roger Martin have applied the design thinking paradigm to businesses and to management education programs as they

introduce the cognitive aspects of the process requiring the use of inductive, deductive and abductive reasoning (Dunne & Martin, 2006, p. 518).

The mental model of a designer is important to the output of the second generation design process. For Tim Brown, the success factors are applied more generally to the makeup of the design teams and the idea generation, including such factors as heterogeneous but complimentary teams, the application of divergent and convergent thinking, optimism, and the movement towards the creation of prototypes (Efeoglu et al., 2014; Brown, 2009). The cognitive and attitudinal aspects of the designer are also addressed in Martin's work as he applies it to the mindset of management thinking that, in concert with systems thinking and quoted from Peter Senge, can promote, "visualizing a design or managerial problem as a system of structures, patterns and events, rather than just the event alone – and understanding the impact of changes in one component on the others, and on the system as a whole" (Dunne & Martin, 2006, p. 518). IDEO/d. School and the Rotman School perspectives advocate for user understanding, teamwork, and collaboration as vehicles to ensure an expansive view is taken when solving problems. Within this process, and as part of its evolution, included the need for the designer to develop their skills in reflection and empathy, a concept previously introduced by Schön (1984). Schön's concept is not only important in the evolution of design thinking; it is also used widely in action research, organizational learning, and process consultation as evidenced by the works of Argyris (2002), Senge (1990), Shein (1969), and Checkland (2000). Schön's promotion of learning systems coupled with Martin's knowledge funnel nudged design thinking onto a parallel path of applications for organizations and product design. Taken together, "Design thinking is a

means and a strategy. As a means it helps developing new products and services with multi-disciplinary teams. As a strategy it opens up the fixed mindset that the day-to-day operation of jobs creates in people's functioning" (Efeoglu et al., 2014, p. 254).

The complexity and scope of challenges businesses face coupled with the maturity of organizational psychology and assessments, and the deeper understanding of social systems and organizational culture offer even more opportunities to apply design thinking methods to solve complex problems. According to Shannon Finn-Connell and Ramkrishnan Tenkasi (2015), "design thinking has emerged as a problem-solving protocol to organizations seeking creative solutions to complex issues" (p. 196). Their study focused on common practices across design thinking interventions within organizations and specifically organizational design/re-design related to the structure of an organization. They placed attention on contingency theory and organizational change, adaptive organizations and open systems theory and posited that thinking as a designer is conducive to the thinking strategies necessary in complexity as represented in the description of operational practices using various design thinking methods (Finn Connell & Tenkasi, 2015, Table 1).

Applying an intense understanding of organizations and systems, Russell Ackoff addressed the need to move beyond designing solutions for the users by trying to understand what others experienced, and instead created a process whereby the design was done directly by the users. His concept of interactive planning (IAP) and idealized design, while generating more that 3.2 million hits on *Google Scholar,* are less familiar within the popular design thinking literature. Anchored in systems thinking, Ackoff described the difference between thinking approaches. Analysis applied a reductionist

approach derived from scientific research methodology and addressed problems by breaking them into individual parts seeking root causes for better understanding based on the Euclidian premise that the whole is equal to the sum of its parts. Synthesis, an alternative approach, focuses on connections and interactions between the individual parts based on the premise that a whole system's understanding is derived from the interaction of its parts (Ackoff, 1993). Using mechanistic, biological and social/organizational examples, Ackoff defined a system as, "a whole, which cannot be divided into independent parts…the essential properties of any system, the properties that define a system, are properties of the whole which none of its parts have" (Ackoff, 1993, p. 10). Unlike the focus of the Deep Dive method that starts with a clearly defined problem that must be solved, the focus of IAP is that the problem may be understood or defined in advance. Through the collaboration of stakeholders, it seeks to follow a two-step method. One step is to describe the "mess" formulation or the current reality constructed from specific system processes and problems observed through their interconnected interactions, and the second step is to create a prototype for an ideal design of what would exist if the stakeholders could have whatever they wanted in place of the current reality. The goal is to dissolve the problems identified in the mess and, "[the creation of] its future by continuously closing the gap between where it is at any moment of time and where it would most like to be" (Ackoff, 2001, p. 3).

Both design methods test a solution against the current situation, but IAP is informed by the mess formulation which motivates stakeholders to redesign rather than to improve what already exists as a way to solve a problem. Ackoff's approach supports his believe that the stakeholders are the designer and they idealize the solution, while

Deep Dive allows the design team to synthesize stakeholder input to create the solution for the stakeholders.

The IAP method offers two distinct stages with several structured sub-stages that provide a more detailed process than those offered in Brown's Inspiration, Ideation and Implementation *spaces* identified in the Deep Dive method (see Table 2.1).

Interactive Planning Method	
Stage	Sub-stage
Idealization	Formulating the Mess Ends Planning
Realization	Means Planning Resource Planning Design of Implementation Design of Controls

Deep Dive Method
Stage
Inspiration
Ideation
Implementation

Table 2.1 – Comparison between Interactive Planning and Deep Dive Methods

Design Thinking Methods

Design thinking is applied broadly across product and process challenges, and uses multiple methods to promote thinking as a designer. Popular blogs and whitepapers published by consulting firms often use the term as a description of anything creative or innovative. Design thinking is making its way into the field of executive and life coaching as evidenced by Evans and Burnett (2016) have written *Designing Your Life*, that applies the core components of the design thinking method to help people "get unstuck" (National Public Radio, 2017).

Regardless of method, design thinking has four elements: (1) establishing a common understanding of the current state, (2) applying a process where divergent thinking occurs to generate new ideas, (3) applying a process to allow convergence of ideas into possible solutions or prototypes, and (4) establishing a vehicle to apply or test

the effectiveness of those possible solutions or prototypes to the challenges of the current state. The shift between divergent and convergent thinking is at the core of creative thinking as people are engaged in the process of designing (Goldschmidt, 2016). This shift between divergent and convergent thinking has also been applied to learning and problem solving through creative thinking techniques such as brainstorming, appreciative inquiry, visioning, journey mapping, and rapid prototyping (Liedtka, 2014; Kalargiros & Manning, 2015; Finn Connell & Tenkasi, 2015; Kumar, 2013; Cooperrider, Whitney, & Stavros, 2008). Liedtka (2014) reviewed how design thinking is used to spark innovation in companies and, "uncovered a set of unexpected strategic contributions it was making" related to business growth and problem solving (p. 42). I argue that design thinking also offers a strong opportunity to a new approach to talent management.

The practice of promoting systems thinking, innovation and anticipating how the environment will impact organizations is not unique to design thinking. The method and approach used in this dissertation drew from a variety of approaches and disciplines including the contribution of Peter Senge whose work with Hal Hamilton and John Kania (2015) highlighted the growing importance of systems leadership to address the rapid acceleration of change and ambiguity faced in society today. The aspect of their work most intriguing to this study was to find a way to apply their well-articulated gateways to becoming a system leader. Specifically, calling upon their strategies to re-direct the attention of the participants to see, "that problems 'out there' are 'in here' also – and how the two are connected" as well as to create their "re-orienting strategy: creating the space for change and enabling collective intelligence and wisdom to emerge" (Senge et al., 2015, p. 29). Senge, Hamilton and Kania addressed the need to foster reflection and

establish a generative space for ideas to flow and, although mostly applied to individuals, it is inextricably linked to shifting the mindset of the organization as it relates to generating new ideas to apply to a talent management system.

Aspects of Organizational Development (OD) also influenced this study including advocating systems thinking and the use of divergent and convergent problem solving because today's OD practitioners recognize internal organizational constraints limit the effectiveness of a solution. Kalargiro and Manning (2015) report using divergent thinking and brainstorming as a way to create a generative space for ideas during OD interventions. However, their research points to challenges that the organizational cultural, "may prevent divergent thinking and brainstorming from becoming an established normative organizational process" (p. 294). Their research supports this project's assumption that applying the design thinking process to a diverse stakeholder population that crosses organizations will generate broader, and therefore more generalizable output, across industries since the internal cultural constraints would be minimized.

The application talent management components may be unique to an organization but the complexity of the talent management system transcends organizations. Stakeholders from multiple organizations, roles, and perspectives might generate a greater diversity of ideas to solve real-world problems where prototypes could inform separate organizations as they test those potential solutions against the issues of today.

While many employees have fundamental concerns about known trends and how they will impact talent, we cannot predict accurately how human capital will impact or be impacted by them in the future. This study applies several design thinking methods,

including aspects of IAP and Deep Dive, for the purpose of engaging stakeholders across organizations, hierarchical roles and levels to gather input for the ideal talent management system. The assumptions for this project, different elements of the C.R.E.A.T.E. model, and the process roadmap are described in Chapter 3.

CHAPTER 3: ROADMAP, METHOD AND PROCESS

Assumptions, Implications, and Research Questions

Two assumptions and two implications guided this project. The first assumption is that problems facing those responsible for the management of organizational talent are complex. The second assumption is that the experience, characteristics and context of complexity transcend individual organizations due to the migration and flow of talent across organizations, industries and the newly forming gig economy. The implications are that first, analytic problem-solving approaches are necessary but insufficient to solve complex problems; rather complex problems require thinking in systems which enable one to apply a framework and to acknowledge the mess, or current reality, of the complex systems within the containing system and suprasystem. The second implication is that design thinking is an appropriate method to use to address complex problems.

This dissertation poses the following research questions:

1. Can stakeholders representing different organizations, roles and boundaries enter into a generative space regarding a common situation or problem?
2. Can diverse organizational stakeholders effectively apply design thinking and will this method generate solutions to complex talent management challenges that are generalizable across industries?
3. Are there emergent themes common to divergent stakeholders that can inform a talent management system which is itself informed by the conflergence of macro trends and other characteristics of organizational and contextual complexity?

Overview

A qualitative case study was conducted that engaged stakeholder participants in two distinct design thinking sessions. A model and roadmap, method, and process were created in support of the view that to establish a talent management system it is dependent on a generative process involving a collaborative environment independent of organizational constraints. The data collected were aligned into themes. The questions that emerged from the process and the content of what was learned, as expressed by the participants, and the constructivist interpretation of the experience by the researcher of the study were summarized.

Design Thinking and the C.R.E.A.T.E. Model

The model presented in Figure 3.1 offers both a practitioner model and roadmap to enable a new talent management system to be generated by engaging stakeholders who cross organizations, roles and levels. The model consists of three phases: Phase 1 has six input elements: Consider, Research, Explore, Associate, Theorize, and Empathize; referenced using the acronym, C.R.E.A.T.E. Together, the inputs from these elements establish a point of view (POV) about the state of talent management, and contribute to an understanding of the underlying issues, and current state of complexity outlined in Chapter 2. Informed by design thinking methods, and used to establish a common understanding of the current state of organizational complexity, the C.R.E.A.T.E. input elements were applied in advance of the sessions to gain an understanding of the system and underlying mess, and to set a foundational framework (Figure 1.1) for the systems perspective of talent management.

Phase 2 involved engaging stakeholders in an *idealized design* session to create prototype designs for an 'ideal' talent management system; ones that transcend individual organizational entities of which they were or had been a member.

Phase 3 uses the information, knowledge and understanding about an ideal talent management system to formalize a prototype which is then tested, analyzed, iterated, and refined. Phase 3 was not part of this dissertation study.

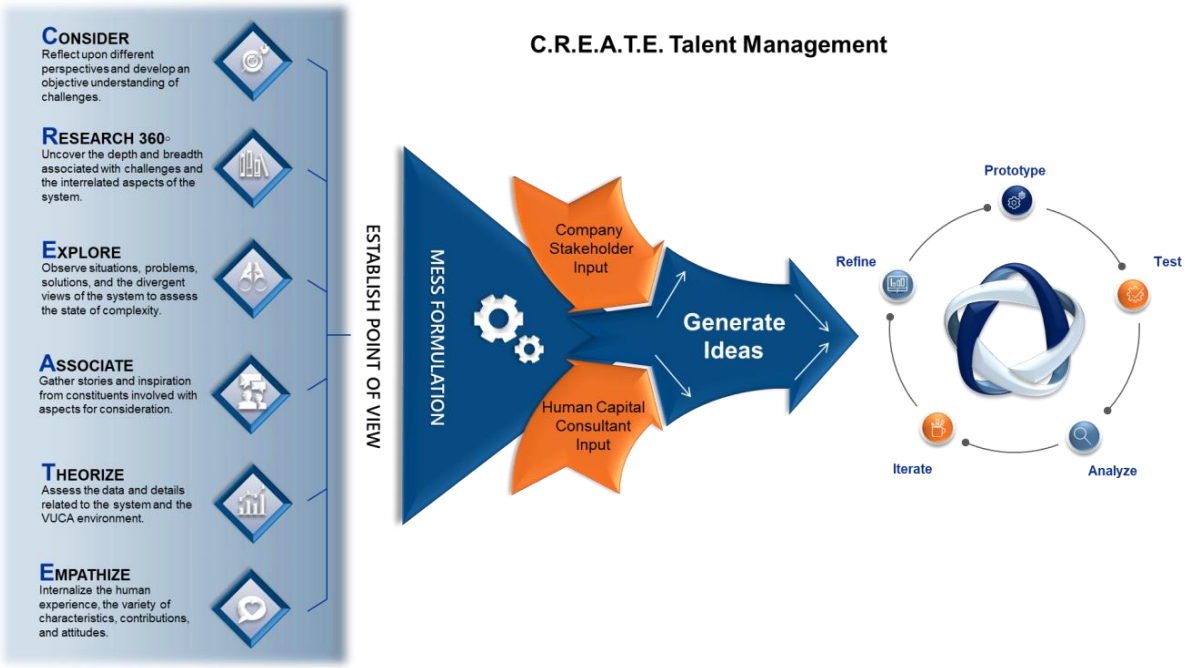


Figure 3.1 – C.R.E.A.T.E Model

Method and Process Steps

The research questions explore how applying design thinking to solicit input from a cross-section of organizations, hierarchical levels and roles will generate generalizable output that transcends an individual organization. In other words, output in the form of an ideal talent management system that could be applied to an array of organizations. The core of the project illustrates how this cross-section of stakeholders engaged in the design

thinking process, and if they offer enough input to address the complexity of talent management.

With an understanding that the mess offers a systems perspective of talent management as a subsystem of an organization and within several containing systems, no specific problem was identified for participants. Instead, the talent management challenges and themes from Phase 1 in the C.R.E.A.T.E. model were presented to the stakeholders in the form of a brief presentation and a visual display (see Figure 3.8) that included information and provocative images to shift their mindset from one that was fixed within the context of their own organization or experience to one that took on an expanded view. The presentation showed systemic relationships, interactions between organizational elements within the system with other elements (individuals) who held multidimensional experience, and how those elements influenced and were influenced by the talent management system. The session environment and set up attempted to minimize organizational constraints such as common culture and power dynamics among the stakeholders; it was unrealistic to remove all constraints. Careful consideration was placed on applying the idealized design approach of removing constraints on creativity during the activity of designing the ideal solution, but also applying what Ackoff promoted as the useful constraints on the design itself; technological feasibility, operational viability, and desirable (Ackoff, 1981). These constraints were incorporated into the ground rules for each session.

Procedural Overview

C.R.E.A.T.E. Phase 1 was completed in advance of the design thinking sessions for the purpose of establishing the mess and creating a point of view on the complexity

surrounding talent management. Phase 1 was done by the author of this dissertation applying aspects of academic research, knowledge of the 'users' and building empathy for their position, and gathering stories and narratives about their experiences. The acronym C.R.E.A.T.E. came from the process used to understand the variety of perspectives and organizational approaches surrounding the challenges facing talent. The C.R.E.A.T.E. input elements are not intended to be done in any particular order and allow for the practitioner to remain fluid with the process for the purpose of building a foundation of information as a backdrop for addressing the complexity of the situation. The resulting point of view and challenge can be summarized to show that leaders of organizations face a strategic gap that will reduce the organization's competitive advantage if the talent management system is not addressed.

The point of view and the mess. The C.R.E.A.T.E. model supports engaging in a broad and deep analysis of an issue that transcends organizations than if the issue is only applied to a unique organization as is typically done when applying Ackoff's Idealized Design method. The C.R.E.A.T.E. input elements were used to formulate the context as well as establish empathy for the situation. During the Phase 1 process, Ackoff's four-step mess formulation process was also applied: (1) systems analysis, (2) obstruction analysis, (3) reference projection, and (4) presenting the mess. In consideration that Phase 1 and the mess formulation was completed in advance of the sessions for the purpose of offering procedural context, the results of the four steps applied to the talent management mess formulation are outlined below instead of in the results chapter of this dissertation.

Systems Analysis. This was conducted as an independent study in the spring, 2017 semester. The outcome of a systems analysis was intended to generate, "a detailed description of how the organization or institution currently operates" (Ackoff et al., 2006, p. 6). Attention was placed on the research pointing to the dramatic confluence and the incessancy of newly emerging demographic, technologic and global macro trends that put pressure on talent management systems across all industries and sectors. In addition to the research and the process of evaluating the system, an evaluation of practitioner-related concerns and employee observations were included as a way to empathize with the current situation faced by members of the workforce. The totality of learnings was translated into an influence diagram (Figure 3.2) representing the interactions within the system and it was shared with industry stakeholders in the areas of human resources, talent acquisition, operations and finance, learning and development, sales and consulting, and employees both internal and those recently transitioned out of companies.

The stakeholders contacted to provide feedback on the systems analysis were identified through their interaction with CCI Consulting (www.cciconsulting.com), the researcher's employer, and included representatives of client companies, external consultants, individuals who received career transition services and CCI employees who support the human capital initiatives for a cross-section of Philadelphia area companies. Individuals were randomly approached by the researcher to provide feedback on the influence diagram and their participation was dependent on how and when they engaged with the greater CCI Consulting community and whether or not this researcher was on-site and able to ask for their input.

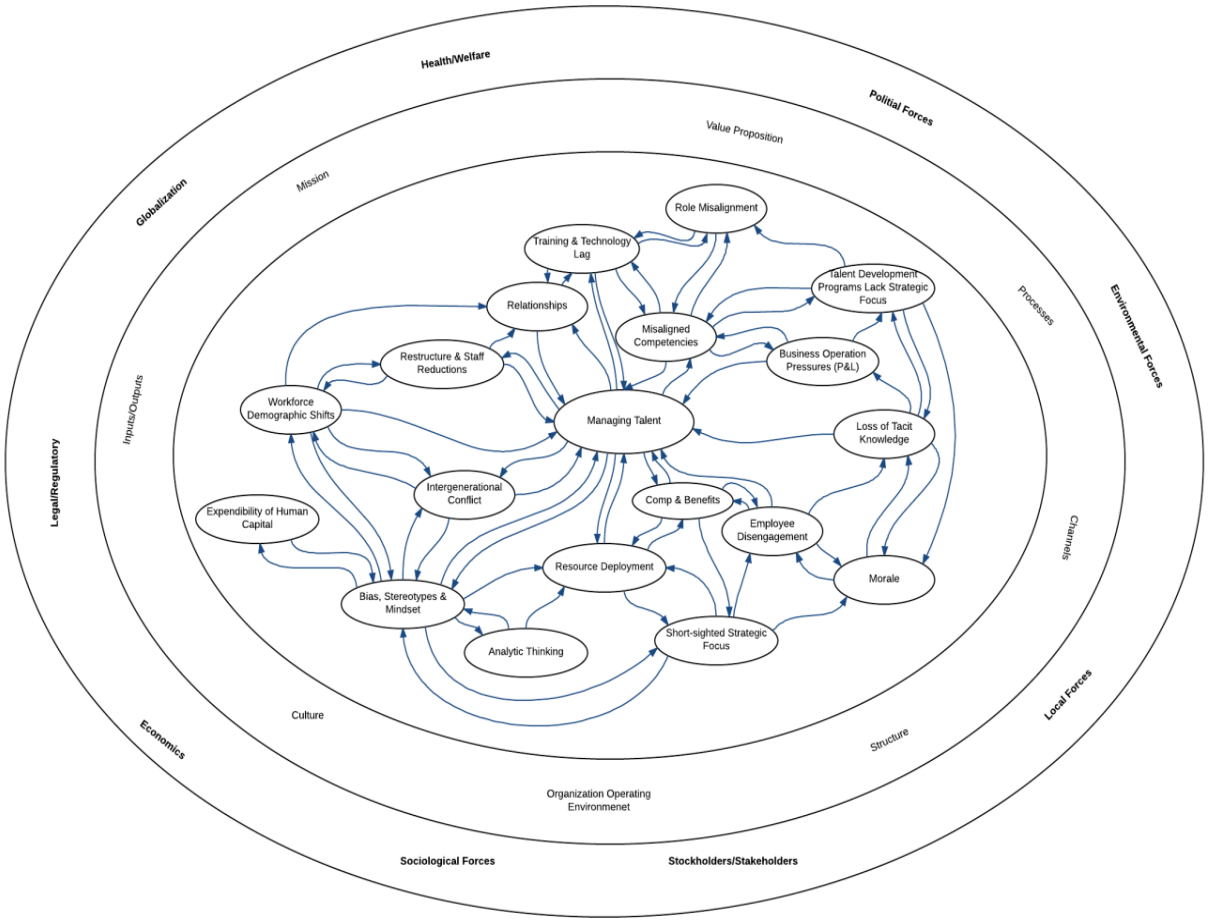


Figure 3.2 – Influence Diagram

Obstruction Analysis. The purpose of this step was to understand the constraints in the system. The outcome of the obstruction analysis is designed to, "Identify those characteristics and properties of the organization or institution that obstruct its progress or resist change" (Ackoff et al., 2006, p. 6). The obstruction analysis was done in tandem with the systems analysis by creating a Current Reality Tree (CRT) and Evaporative Cloud (EC), Theory of Constraints (TOC) concepts originated by Eli Goldratt (Goldratt, 1990). The CRT and EC (Appendix B) were used to establish an obstruction analysis and pointed to the root cause of issues of talent management being an organizational mindset.

Reference Projection. The reference projection was established through the process of applying TOC and the outcome of the system analysis, and integrating the results with the strong body of existing research and context established in C.R.E.A.T.E. Phase 1. The reference projection describes what the organization would be assuming no changes in its current plans, policies, programs, or practices, or changes of what it expects in its environment (Ackoff, 2006). In this case, the work in Phase 1 revealed a projection of an increasingly disengaged workforce adversely affected by technology that disrupts talent rather than working in concert with it. This coupled with demographic shifts and issues of globalization could result in societal disruption and its cascading effects on employee displacement and well-being. The complexity of the problem, outlined in Chapter 1, served as the backdrop for the ends planning process and Phase 2 of the C.R.E.A.T.E model that was at the heart of this dissertation project.

Presenting the Mess. The Ackoff method (2006), "combined the state of the organization and its reference projections into a scenario of the possible future of the organization, a future it would face if it were to make no changes in its current practices, policies, tactics, and strategies, and the environment changed only in expected ways" (p. 50). In the case of this dissertation no one organization was evaluated. Rather, the current state of talent management was explored so the reference projection and presentation of the mess were not applied in the same way.

The mess clearly showed the complexity surrounding organizations with regards to the confluence, emergence, and the dynamic transformation of macro trends that influence talent and how talent is, and has been, traditionally managed. Based on the foundational research on complexity theory done by Snowden and Boone (2007) this

state of complexity cannot be addressed using a traditional problem-solving approach but, instead, it is necessary to allow solutions to emerge (Snowden & Boone, 2007; Kurtz & Snowden, 2003). Drawing on idealized design and interactive planning (IAP), "The vision prepared in ends planning may not be attainable, but it must be continuously approachable…it is not a description of an ideal system, but of an ideal-seeking system, the best one can conceive at the time" (Pourdehnad & Hebb, 2002, p. 338). Ackoff (2006) notes,

> This [ends planning] stage of planning is at the heart of idealized design. It involves determining what planners would like the organization or institution to be now if it could be whatever they wanted. It then identifies the gaps between this idealized design and the organization as it is, thus revealing the gaps to be filled by the rest of the planning process. It is crucial to note here that the design must demonstrably prevent the self-destruction revealed in the formulation of the mess (p.51).

The ideation process was conducted during two design thinking sessions with two different stakeholder groups to solicit data and input, and to generate potential prototypes of an ideal talent management system.

Subjects. A stakeholder approach to subject selection offered the chance to gain the perspective beyond Human Resource (HR) professionals who are the ones often involved in talent management decisions. An attempt was made to include a variety of business leaders to also engage in this process and communicate their sometimes-competing demands. Edward Freeman's early work on the benefits of applying a stakeholder approach to include members that could affect or be affected by a strategic

change was consistent with design thinking (Freeman, 2004). Robert Phillips, Edward Freeman and Andrew Wicks clarify however, that stakeholder theory is within the management and ethics domain and has potential risks. Among them are risks associated with the method due to position and power concerns across stakeholders and its limitations for providing a sufficiently objective output across organizational functions (Phillips, Freeman, & Wicks, 2003). Their concerns about risks for stakeholders were acknowledged and the researcher recognizes the relevance of their concern, especially when design thinking is used as an intervention within a unique organization. This project focused on stakeholders across a variety of organizations and their roles were not central to how participants interacted, mitigating this as an overriding concern.

Felsen and Nastanski offer a case study concluding that applying a stakeholder approach facilitates innovation and adaptation to new realities (Felsen & Nastanski, 2017) and was an outcome sought in this study's design thinking session. The potential innovation and cross-company collaboration was central to the idea-generating process and the stakeholder sample sought alignment between the talent management systems model and this design thinking method. For the purpose of this study the choice of a stakeholder approach made the most sense in the context of gaining a wide perspective when bringing people together across organizations to offer, as Nonaka (1994) suggested, a forum where tacit and explicit knowledge is shared and a shift happens as new knowledge is created.

Two distinct groups of stakeholders, also referred to as participants, were identified and invited to take part in two distinct design thinking sessions. The first group (P1) included 25 individuals representing stakeholder groups who work within traditional

companies. They took part in the first session (S1) held on Friday, September 15, 2017. The second group (P2) included individuals representing human capital consulting firms who consult to traditional companies and took place on September 28, 2017 (S2). The S2 participants were a convenience sample of scheduled attendees at the Career Partners International (CPI) North American Regional Conference. As such, the sample was generated from those 56 people who voluntarily registered for the event and subsequently volunteered to take part in the session. The P2 representation was not based on any other criteria.

Stakeholder groups. The process applied to identify which stakeholder groups to invite to S1 grew out of the influence diagram (Figure 3.3) established during the C.R.E.A.T.E. process. The groups identified were generated from a list of roles involved with setting the strategy or implementing initiatives related to talent management. Groups included business/operational positions as well as the traditional HR and related roles. No size estimation was used in the sample selection of the targeted stakeholder population although a vetting process was applied in an attempt to include a balanced representation across roles and industries.

The conflergence of macro trends influencing talent management crosses all types of companies so the S1 stakeholder groups were industry agnostic, crossed roles and levels, and varied in size and structure. Representation was sought from private or publicly held companies with greater than 100 employees. S1 participants excluded start-ups or companies smaller than 100 employees because of their small size and growth orientation where roles and responsibilities were possibly more fluid and where aspects

of the talent lifecycle were less mature. Stakeholder roles and personas considered in the participant pool included those presented in Figure 3.3:

HR Business Partners – those who play a strategic role aligning business objectives with HR-related solutions.

OD Managers – Develops and integrates HR programs in support of business objectives such as change management.

Training & Development Directors – Creates, monitors, evaluates and delivers training/learning in companies.

Internal Recruiters - Responsible for timeliness of hiring, quality of candidates and costs of hiring process.

Members of the C-Suite – CEO, COO, CFO, CLO, CMO, CHRO CTO/CIO In Small-market, Mid-market, publicly held, matrix, multi-site or multi-national.

Experience Leaders – responsible for ensuring positive employee experience with internal and external customers.

Employees across race, gender, Millennials, Gen Y&Z, GenX & Baby Boomers, who have experienced being laid-off, and entrepreneurs.

IT Professionals – those who interface with data analytics, information systems, learning & employee management systems.

All images require no attribution (Pixabay.com)

Figure 3.3 – Stakeholder Personas

Six people affiliated in business development and leadership roles at CCI Consulting were asked to list organizations they were familiar with and their network contacts to identify names of individuals who fell into the established stakeholder categories. The initial contacts were encouraged to recommend others with the goal of obtaining a snowball or referral sample of potential participants. There were two primary reasons for selecting participants using this snowball sampling method (Biernacki & Waldorf, 1981). The first reason was to limit participants who knew the researcher who also acted as facilitator and also to try to limit the facilitator's self-serving bias of selecting individuals who would offer unconditional support because of their relationship with the facilitator. The second reason was to target a population of potential subjects whose characteristics might generally fit that of a successful Design Thinker. Efeoglu, Boer, Serie and Moller (2014) reported that they explored patterns from a variety of

design thinking methods applied to changing an organizational mindset and each method addressed the characteristics of a successful participant. They identified two characteristics invaluable for those who participated in stakeholder groups: (1) business leaders who were thoughtful and considerate of possibilities, and (2) people who bring a positive approach to idea generation. These two characteristics were requested from the CCI community who identified potential participants from their suggested organizations although there was no test for them outside of mentioning the characteristics when asking for referrals. In the end a total of 123 individuals were identified for potential participation.

Session 1- Stakeholders Embedded in Traditional Companies

Constraints existed with the structure of Session 1 (S1) due to space and resource availability. Two large meeting rooms with a dividing wall were available but the number of participants was limited to no more than 40, including facilitation team, because of seat availability and fire code. The joint meeting rooms contained two large projection screens and ample wall space to post information and output. The only other constraint for S1 was that the session was scheduled for 3 hours not including a networking breakfast and opening remarks.

A total of 123 invitations were sent to solicit participation for S1. The invitation (Appendix C) was approved by the Thomas Jefferson University Institutional Review Board (IRB) and emailed to each member of the identified stakeholder groups six week in advance of the scheduled session. Stakeholders were invited across industries, roles, levels and titles (see Figure 3.4).

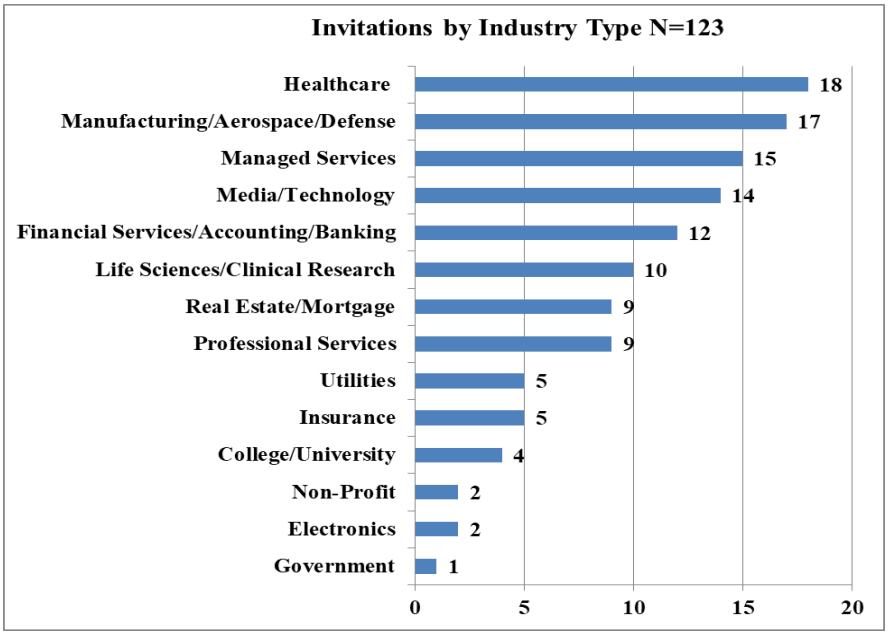


Figure 3.4: S1 Invitations by Industry

Of the 123 invitations issued 27 agreed to participate in S1 and 25 ultimately attended the session producing an effective response rate of 20.3%. Participation was voluntary and was limited by their interest and availability. The P1 industry types, representation and roles are presented in Figures 3.5, 3.6 and 3.7.

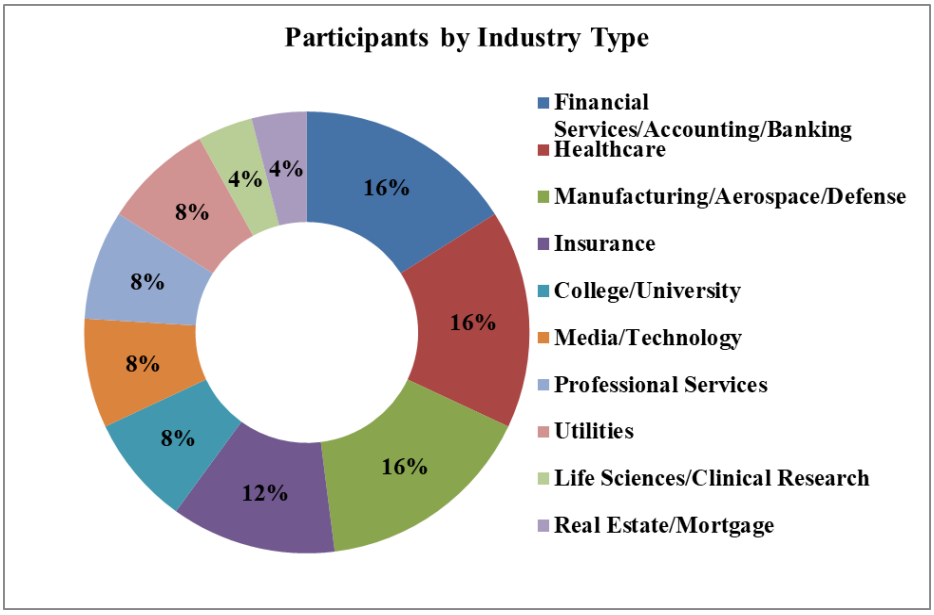


Figure 3.5 – P1 Participants by Industry Type

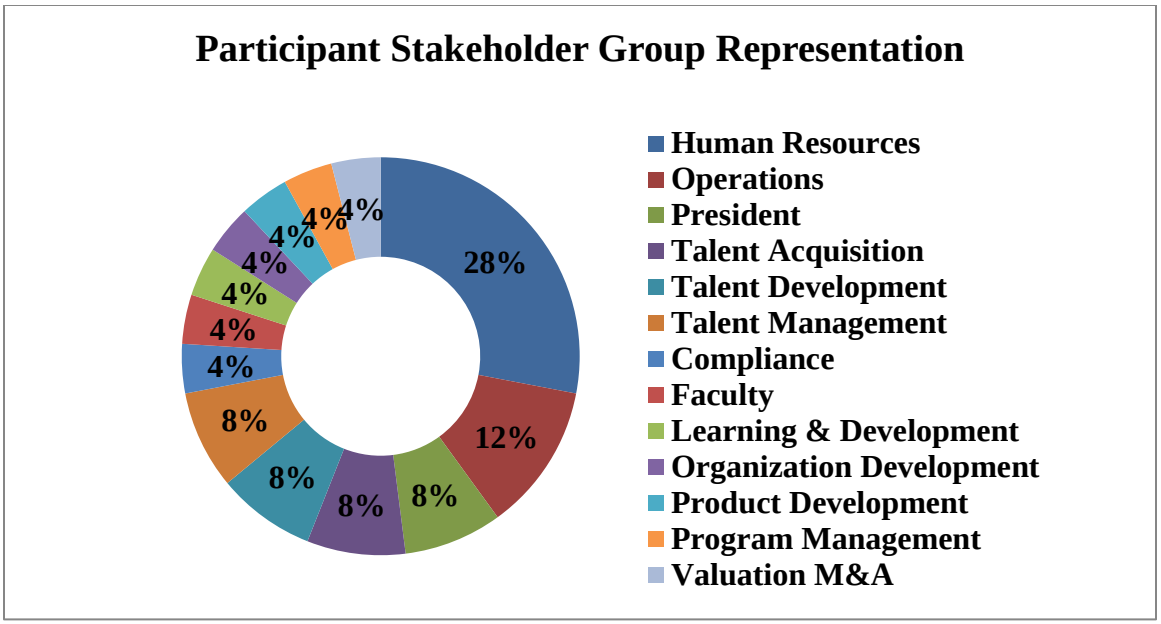


Figure 3.6 – P1 Participant Stakeholder Group Representation

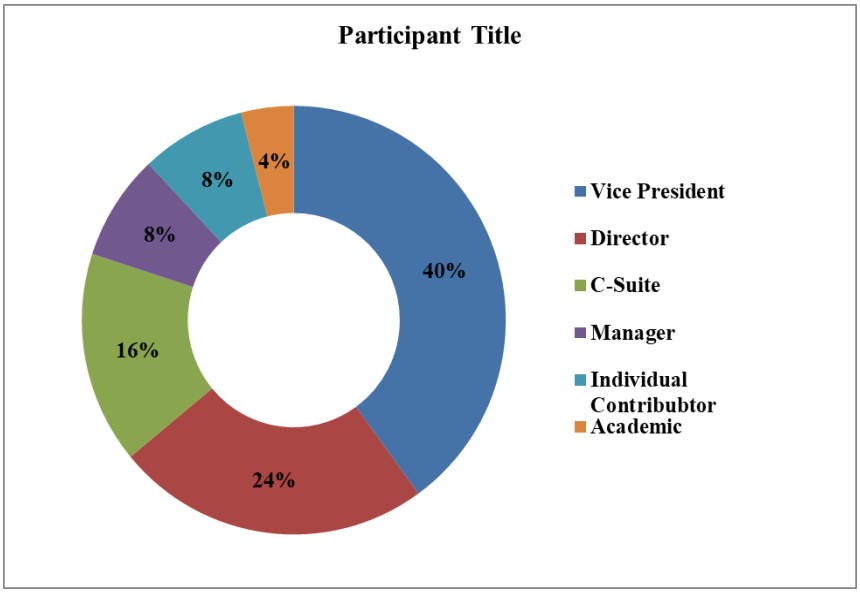


Figure 3.7 – P1 Participant Title

Facilitators. The author also served as the session facilitator. Assistance was provided by two doctoral student colleagues who helped register participants and monitored the activity but they did not provide facilitation during the session. The

dissertation's advisor and one committee member attended and, along with the assistants, served as observers.

Workshop Setup and Activities. Each P1 member was assigned to one of four table groups. Name tent cards and numbers were generated for P1 with the goal of ensuring that no member of the same organization sat at the same table. When P1 arrived, each person was given a sign-in sheet (Appendix D) acknowledging their voluntary participation, their role in the session, and offering permission to use their name and title. P1 took a seat at their assigned tables and were asked to place their tent cards outward-facing so people at their table could identify them.

A PowerPoint presentation was used to guide the conversation and the facilitator paid close attention to the flow of the agenda to allow enough time for the design thinking activity. The agenda contained three sections briefly described below and presented later with more detail:

1. ***Section 1***: Brief welcome and context for the session (15 minutes). P1 was encouraged to introduce themselves by providing their name and title, the name of their organization, and informing the room if they had any prior design thinking experience. The facilitator allowed the facilitation team to introduce themselves and closed this section with introducing the members of the doctoral committee who were not present.
2. ***Section 2***: Brief presentation (25 minutes). The presentation included the purpose, process, and value of design thinking. It oriented the audience to the system perspective uncovered during the Mess Formulation with the goal of establishing a systems mindset with the

participants. This section also engaged P1 in a brief activity to highlight the creativity needed to engage in design thinking.

3. ***Section 3***: Design thinking activity (120 minutes). The purpose of the activity was for each group to generate prototypes for the ideal talent management system. This section included one hour for prototype generation, time for each table to present their prototypes, and additional time to refine their prototypes based on what they learned from others. Finally, each table briefly presented what they learned during the process and the session concluded with a networking lunch for those who could remain.

Section 1. The facilitator introduced herself, thanked P1 for their support and participation in her dissertation research. Careful consideration was given to the possibility that the participants did not know the facilitator and also did not know one another. It was important to build trust and engagement quickly, so time was allotted for the participants to briefly introduce themselves without getting distracted by people's companies, roles and potential conversation that could derail the event.

Section 2. The second section of the agenda was designed to inform P1 about design thinking, a concept most were unfamiliar with. The facilitator built a common awareness of the purpose of applying design thinking by explaining the definition of design thinking, anchoring the audience in the current state of complexity and the conflergence of trends surrounding talent management, and justifying the application of design thinking as one method to address complexity. The facilitator then addressed the process of the study and charged each table with serving as a design team with their goal

to generate prototypes of the ideal talent management system. The facilitator went on to disclose that the activity would be replicated in S2 and that the ideas generated from both groups would be evaluated to see what emerged. Finally, two streams of value for the process were offered to P1. The first offered the chance to problem solve using a systems perspective that they could also apply in their own organization. The second was specific to the importance of talent across organizations and that the output of both groups would be shared back with them in the hopes that they might learn something from what they created.

The systems perspective was presented visually as a backdrop to the discussion (Figure 3.8). On one wall of the room the system was depicted through images, data and quotes related to the trends uncovered in the Mess Formulation.

Figure 3.8 – Presentation Wall

During the presentation the facilitator discussed the difference between systems thinking and the thinking process used in traditional forms of analysis. In the case of

taking a human-centered approach by applying design thinking to a social system, the example of an organization chart was used to illustrate the social system elements (people) and the tendency to address functional goals and performance measures in isolation or organizational silos. Using animations during the slide show, the participants were shown the distinction between observing the elements in traditional silos and the system view of the interactions between these same elements (people) along with the resulting expanded view from the internal operating environment through the transactional and larger contextual environments. Highlighting the complexity of the system influencing talent management was intended to establish a frame of reference for how P1 would apply assumptions about the future during the design thinking activity. An example of the slide used (without animation) is presented in Figure 3.9:

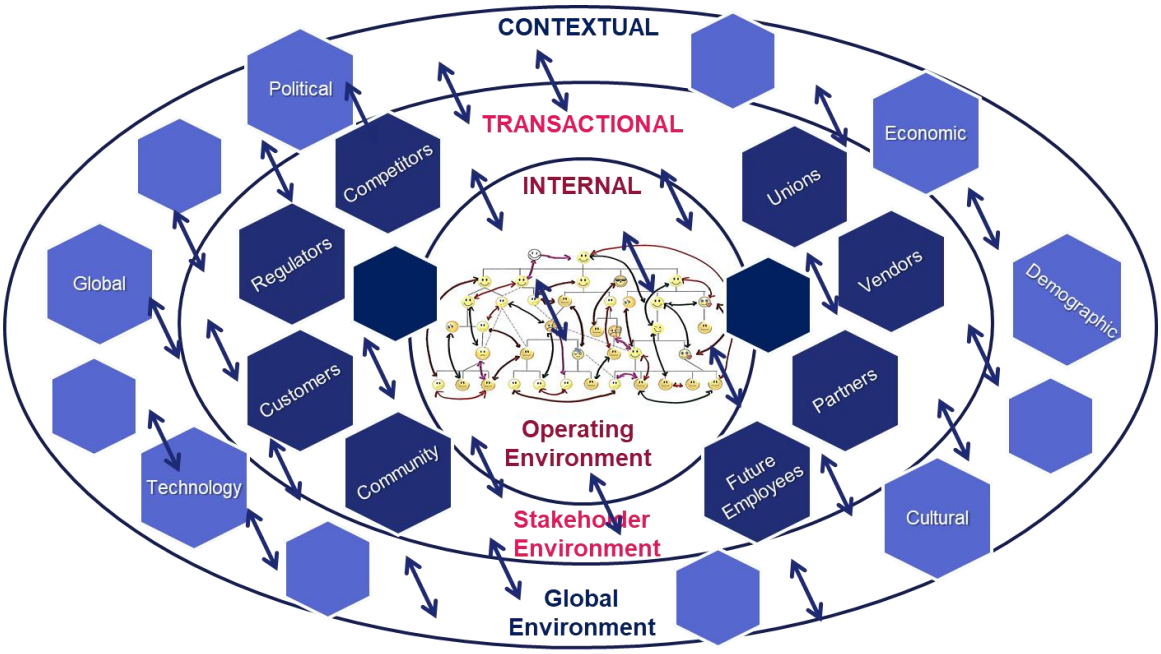


Figure 3.9 – Slide Showing the System

Through the presentation it was important to help the participants (a) connect to seeing talent management through a systems lens and (b) understand how applying the

design thinking approach could generate an innovative prototype. It was also important to present the information as objectively as possible and limit debate so as not to influence the process. The goal of this section and the brief presentation was to create a foundation and establish a shared perspective to the broad audience without having them engage in the actual C.R.E.A.T.E. discovery process. To move quickly from this shared perspective and shift their thinking in a way that allowed them to focus their attention on the process of ideation, a brief creative activity was initiated that also served to engage a room of strangers. The activity selected was adapted from one used by Ferrell (2013) to help shift the mindset of participants for members of the *Irish Times* newspaper.

The activity began by polling the audience to see who self-identified as being creative. Of the 25 participants about half raised their hands. Then, each person was asked to turn to the person next to them and, in 45 seconds, draw their portrait. Once the time elapsed they were instructed to share their portraits with one another. At the close of this activity the facilitator connected the drawing activity to innovation by quoting Ferrell (2013):

> The reason I wanted to have you do that is because research shows that when you ask that question [who identifies as being creative] in a room of adults that only about half will raise their hands. And, the reason that is, is that many people were told when they were young that they couldn't draw, or you opted out of other artistic things as a kid. Most adults equate creative ability with artistic ability but that is not what we are referring to as creative with regards to designing. When we talk about designing we are referring to the ability to show unfinished work. The ability to show unfinished work is the evidence of creative courage. This

courage drives us to participate in something we may not be an expert in but we have internal confidence with tackling problems or coming up with ideas that are new or unusual, haven't been tried, shared or even articulated. This is the backbone of innovation. Innovative ideas, by nature are things that are not yet defined.

After the activity each person was asked to take a paper from a folder placed at the center of each table (APPENDIX E) that described the *Design Thinking Challenge* (Table 3.1) and the *Ground Rules for Collaboration*. The document served three purposes: a reference sheet for each person that also codified the method they were to follow as they designed their ideal talent management system; a reminder of what was discussed in the presentation, i.e., their ideal system which must be desirable, technologically feasible and operationally viable; and ground rules for collaboration to help minimize the power dynamics that naturally exist in groups.

Design Thinking Challenge

- You are the design team for a new organization.
- The organization's vision supports gaining a competitive advantage within the complex landscape.
- The CEO committed unlimited resources to talent management.
- Focus on what you WANT for the talent management system to be (your ideal).
- Do not focus on what is NOT wanted.
- If you disagree with a statement, offer an alternative.
- Do not worry about implementation or resource requirements.

Table 3.1 – Design Thinking Challenge

Section 3. Participants spent 45 minutes collaborating at their table while the facilitator, assistants and observers walked around listening, observing them in action, and answering questions about the process. At the 45-minute mark each table group was instructed to pull their prototypes together, select a spokesperson for their table, and prepare to present their ideal talent management system to the other groups.

Each group presented their ideal talent management system at which point they were given 10 minutes to discuss with others, walk around the room, and look at the images and information displayed on the wall as well as other groups' prototypes. The participants were asked to regroup at their tables for 15 minutes to revise their ideal talent management system and, in the process, they were given permission to "borrow or steal" from other prototypes presented.

The session concluded with each group presenting changes to their prototype and sharing what they felt were challenges of applying the design thinking method. The facilitator closed the session by sharing some of the general design thinking challenges found through her research and reviewed the timeline for next steps. Finally, session participants were invited to remain for lunch and talk more about the experience.

Session 2- Stakeholders Representing Human Capital Consultants

The second session took place on September 28, 2017 and the session was scheduled as a portion of the first day's agenda for the North American Conference for Partner firms of Career Partners International (www.cpiworld.com/) held in Austin, TX. There were different constraints with Session 2 (S2) although the session components remained the same.

The meeting room was large and accommodated the attendees that included the 54 people who participated in the design thinking session. In addition to those that participated were 2 members of the home office team who assisted the facilitator but did not participate in the design thinking activity. Conference attendees were not required to participate and each was provided a similar sign-in sheet acknowledging their voluntary participation. The sign-in sheet for this group was slightly different in that this second set of participants (P2) represented human capital consulting firms that offered a variety of consulting services. Their role in the firm was less important than the services they provided to their client companies. The sign-in sheet allowed them to select the practice areas their firm supported. P2 represented firm locations across the US and Canada. Two participants attended from Bermuda and one attended from Asia as a representative of the Asia Pacific region. The geographical representation and practice areas of P2 are in Figures 3.10 and 3.11:

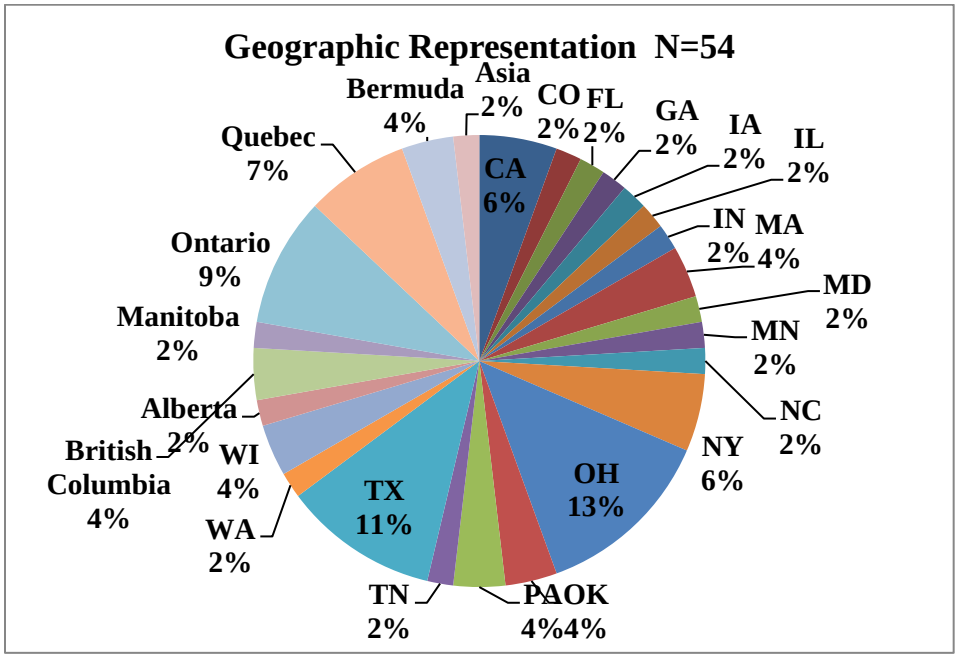


Figure 3.10 – P2 Geographic Representation

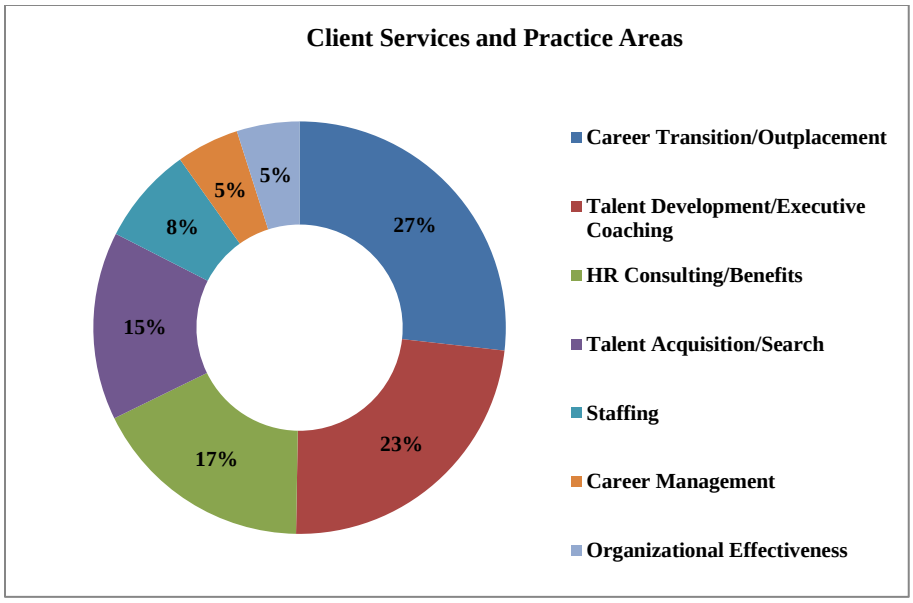


Figure 3.11 – P2 Client Services and Practice Areas

The second session agenda was the same and the same drawing activity was done, but the order of the presentation was different. In the case of S2 the participants were presented with the timeline at the beginning so they understood their role in the context of the prior session activities. The slide deck and images were the same but the facilitator used language to reflect their frame of reference and role as consultants rather than embedded employees as were the case with P1. The same wall images were affixed to one wall of the meeting room. The relationships, roles and frame of reference with regard to organizational life made these groups different.

Participant Survey

A follow-up survey (see Table 3.2) using Survey Monkey® was sent to all participants within two weeks of participating, and reminders were sent for a total of four weeks before the survey was closed. The purpose of sending the survey was to obtain their reaction only and to learn how the process helped to widen their perspective of the issues. All items, including background questions, were:

Q1-Please indicate which session you participated in

Q2-Prior to attending the session how familiar were you with design thinking?

Q3-Two concepts were introduced during the session: Systems Thinking and Idealized Design. Which do you believe played a stronger role in widening your perspective?

Q4-How did the process of engaging in the session widen your perspective?

Q5-Thinking about your experience working with others during the session, what are the top three things you uncovered about the complexity involved with managing talent?

Q6-When envisioning an ideal talent management system what surprised you about interacting with people who worked in a different company?

Q7-This question is to identify stakeholder characteristics and is for statistical purposes only (respondents were asked to check applicable characteristics).

Q8-Please provide any additional comments that you would like to share.

Table 3.2 – Participant Survey Questions

Methods of Analysis

Data collection. A data collection and observational protocol based on Creswell (2014) was established. This engaged the researcher in an ethnography documentation and reflection, a tool used to both work with the data derived from the experience and to explore the facilitator's observations of the participants' experiences during the design thinking process. For data collection, the practice of recording notes, observations and memo writing over the course of this study began at the earliest stages of the study design and continued throughout the process and during both sessions. Two observational

protocols were used (Appendix F). The first included dividing memo pad pages to represent each design team that served as a place to document descriptive notes, comments and interactions while the sessions were in progress. The researcher also asked process observers to take notes and offer feedback at the close of the sessions. The second was a "who to whom" matrix, a tool to document interactions between groups of people, and an efficient way to identify the communication and collaboration levels in outlining intergroup conversation (Napier, Sidle, & Sanaghan, 1998). A set of matrices was created in advance and was available for use when the researcher observed a design team for a period of time or if their level of collaboration was dynamic.

In addition to the observational protocol, a data recording protocol was important to establish in advance to determine what aspects to record for analyzing the output (Creswell, 2014). With respect for participant confidentiality, recording devices were not part of the original design but the researcher asked for permission to use materials and artifacts created, and received written permission from participants in S1 and S2 during the session registration process. A camera was used to take pictures of each team's idealized design, and P2 gave permission for portions of the session to be videotaped by the CPI Headquarters team.

Data analysis and interpretation. The qualitative case study focused on the use of the design thinking method and describes its use and application with participants across levels and organizations. The research design was important, although it is recognized that there is no precise way of setting criteria for interpreting the findings that include interaction of participants, matching patterns, and contrasting output across groups (Yin, 2013). In addition, the researcher was mindful to not change the objectives

or process mid-stream or to accommodate for the attributes of each session due to the recognized difficulty at looking for consistent patterns using an embedded design across sessions of two populations (Yin, 2013; Creswell, 2014). Triangulation is relevant to the standards of rigor in case studies and especially in qualitative inquiry as a method to add depth to the data being gathered and interpreted, and to determine if the findings are consistent (Eisenhardt, 1989; Yin, 2013; Creswell, 2014).

For this study, the researcher's academic study and direct observation of design thinking sessions facilitated by Thomas Jefferson University faculty or recorded online were used along with her background in sociological research, professional knowledge, judgement and experience facilitating the interactions of organizational groups using similar applications such as appreciative inquiry, brainstorming, strategic planning, and group problem solving methods, all of which helped guide the interpretation and contextualization of the case. Creswell (2014) noted the importance of incorporating validity strategies including, "If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding to the validity of the study" (Creswell, 2014, p. 201). As such, the forms of triangulation used for the case study included professional experience, the emerging data, direct observations and memos, and the iterative process of participant engagement. Additionally, the post-session survey results, reflections against the researcher's own bias and the use of technology to interpret themes were all relevant and contributed to the rigor applied to the data analysis process.

Three approaches were used to analyze the output generated by P1 and P2 design teams and evaluate the ideas for the purpose of discerning generalizable themes. First,

with regard to the "how" of interpretation, the time-honored constructivist paradigm for social science methods was applied (Schwandt, 1998). Specifically, the Shiva model of Constructivist Inquiry was used and supports a researcher moving in an out of observation and interpretation while being mindful of judgement, and also supports the design stage being followed by the discovery and "data" collection stage, all leading to interpretation/analysis informed by theory to interpret the experience (Crabtree & Miller, 1999, figure 1.2). Second, the method used to illustrate the output was informed by one of Yin's (2013) approach to case study analytics as the option for creating data displays or temporal themes, and also by placing evidence in certain categories or into different arrays (Yin, 2013, Chapter 5). This level of analysis was used to display stakeholder perspectives in an attempt of gaining contextual understanding at the macro-level of group interactions and meso-level of connections among the output these groups considered important to the talent management system that could be applied at the organizational level. This level of analysis was only used to reveal, not analyze, themes. Recognizing that data visualization is not a pure representation, the use of "word cloud" technology was applied to generate visual themes as a way to consolidate thoughts, emotions and sentiment, and the degree of emphasis of words used from the sessions (Cui et al., 2010; Harris, 2014).

Finally, practitioner reflections were an important aspect of evaluating the effectiveness of the session) facilitations. A four-quadrant map (Figure 3.12), similar to an empathy map, was created consisting of *thinking, seeing, feeling* and *doing* labels (Interactive Design Foundation website, n.d.).

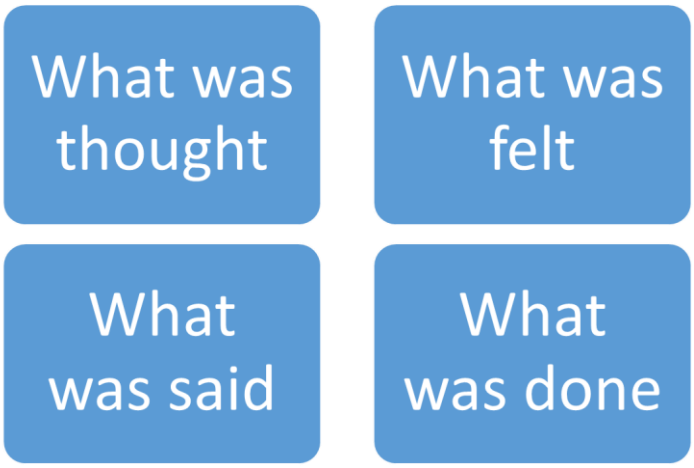


Figure 3.12 – Facilitator Empathy Map

Each quadrant represented a different angle to reflect on the facilitator's role in the activity and challenge assumptions and thoughts that took place throughout the process of engaging the stakeholders.

CHAPTER 4: RESULTS, IMPLICATIONS & OBSERVATIONS

Three (3) key themes emerged from the design thinking sessions. While the themes are combined here, the specific findings from each session are also presented in the order of the questions guiding the research. While the process used in each session was designed to address the same talent management issue, the two different groups of participants offer unique insights based on their orientation to organizational life. Observations from the researcher and process observers are integrated throughout this chapter and presented in relation to the session design and delivery, the degree and extent of stakeholder participation, and the types of solutions that emerged from both sessions. The feedback from the participant survey is presented as a final section in this chapter.

Key Themes Emerging from Design Thinking Process

Key main themes. The facilitator identified three key themes that emerged from both sessions. The first was that the collaborative process across organizational stakeholders increases participant perspectives about the organization and work, and builds awareness of experiences across industries that cannot be acquired through ordinary methods of accessing knowledge (ex: newspapers, popular business journals, and networking functions). This theme was highlighted by participants in their expressed appreciation for the need to establish new definitions for the organization and work; their recognition that the conflergence of macro trends will continue to require a shift in how talent is managed; their expressed awareness that interacting with colleagues in isolation of the wider environment offers a limited perspective; and articulated understanding that time and effort are required to continue building awareness and making meaning through collaboration.

The second key theme emerged as participants were able to understand and address a potential future state as a result of receiving current state information from the facilitator and sharing direct experiences with other another. The ideas included: an acceptance that the ideal organization will rely more on employees who are driven by free choice and opportunities to learn that will result in the need to establish a contingent, ready, and on-demand workforce; that workforce decisions would better address complexity when driven by input from a wide array of stakeholders, employees and teams rather than mostly by external shareholders; the intentional use of technology and automation can increase the capacity of the workforce, although in different ways than are valued today; and data analytics and algorithms can be combined with social technologies to assist in acquiring, engaging, deploying and developing employees.

The third key theme emerged as the facilitator observed that multiple aspects of a complex environment are difficult for stakeholders to address simultaneously, resulting of the need for "chunking" the information during the idealization experience to maximize the output desired, as evidenced by: the limited ability of table group/design teams to undertake a holistic view during the design thinking process; their tendency to focus on the aspect where most participants had familiarity, understanding, and experience; their reticence, as evidenced by questions implying uncertainty, to confront issues of technology, machine learning and artificial intelligence; and the observed difficulty of applying systems thinking and drawing connections between the personal organizational experience and the sometimes impersonal external environment.

Key sub-themes. Three sub-themes emerged from S1 and S2: the perceived importance of intentional relationship-building including the building common ground,

rules of engagement, and an environment conducive to collaboration; the value placed on involving stakeholder perspectives resulting in an openness to ideas, input and feedback; and the emphasis on a work-in-progress mindset and the iterative nature of innovation, and creative solution seeking. The key themes and sub-themes are integrated and displayed as a reference point for how they pertained to both groups through the sessions (Figure 4.1).

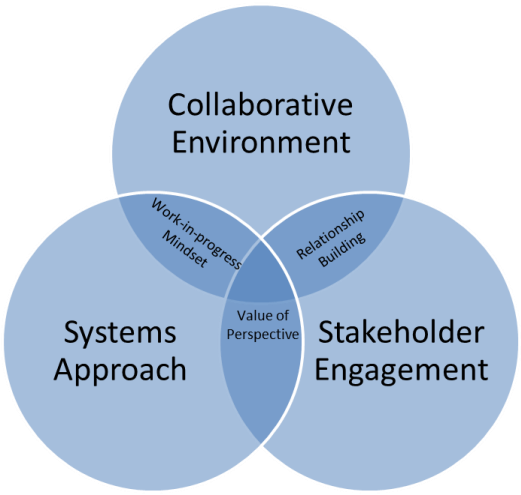


Figure 4.1 - Relationship of Key Themes

As represented in Figure 4.1, the participants were observed to act intentionally and demonstrated behaviors that supported a collaborative environment such as talking about their process and going around the table to solicit opinions or assigning roles. They also demonstrated interactions that quickly built a team relationship as evidenced by active involvement, laughter, offering ideas that exposed their lack of knowledge or vulnerabilities, applying communication techniques facilitating the solicitation of input, and openly giving and receiving feedback. The table groups were overheard discussing the system approach presented by the facilitator, and periodically asked questions of the facilitator, as they idealized potential solutions for talent management. The relationship

between the key themes was observed in S1 and S2 as they actively engaged in relationship building, appeared to value one another's perspectives and understood the iterative process. Each group held a wide array of perspectives contributing to their ability to express divergent ideas and allowing those ideas to converge in a fashion that participants seemed to react in a way that they felt was inclusive of their ideas as evidenced by the lack of individuals pushing their own opinions against the group. Ultimately, participants were observed engaging in a dynamic collaborative process that included listening, discussing, exchanging and sharing ideas, supporting others in the group and ultimately advocating and placing value on their ideas.

The Design Thinking Process

Phase 2 of the C.R.E.A.T.E. model (Figure 4.2) represents the design thinking sessions where the facilitator first established understanding with P1 and P2 followed by engaging them in a design thinking activity where individual design teams were divided into table groups to generate divergent ideas and converge their ideas into an ideal talent management system.

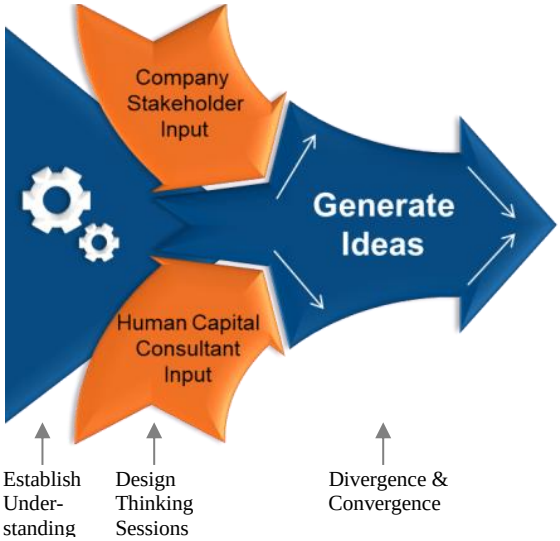


Figure 4.2 – C.R.E.A.T.E Model, Phase 2

Responses to Research Questions

First research question. The first question guiding the research was whether stakeholders representing different organizations, roles and boundaries can enter into a generative space regarding a common situation or problem. To create the space where rooms of people could share ideas and collaborate within a finite period of time, it was important to respect the natural team dynamics of group formation and still focus on quickly moving to the idealized design activity. To accomplish this the introductions were kept brief and the warm up activity, promoting creativity by drawing the portrait of one's neighbor, was used to bring the guards down for each participant and promote engagement with one another. Several participants remarked that this process helped a room full of strangers feel more comfortable and engaged as suggested by laughter and the talking after the activity, their using their drawings when they presented back their ideas to the larger group, and some even asked to keep the drawings. One of the observers commented, "…most people seemed to lighten up a bit and let down their corporate persona (T. Wiltsee, personal communication, September 15, 2017)."

Drawing on the assumption that the shared talent management mess is more representative of the complex system effects than the talent management mess of any individual organization, the decision was made to present the mess through two forms of presentation: a micro lesson presented to the participants and a visual presentation available for them to access as any time during the activity. The micro lesson, as described in Chapter 3, attempted to present the point of view and mess established by the researcher through the initial elements of the C.R.E.A.T.E. model without going into such detail that it would disclose a specific problem to solve. The presentation also

included the concept of talent management, systems thinking and the difference between creativity and design in the context of design thinking and specifically with the application of idealized design. In S1 and S2 the purpose, process and value of design thinking was presented using the same script, and in each case the typical approach to problem solving was used to distinguish the modified idealized design approach taken during the sessions.

An image of an organizational chart representing functions (Figure 4.3) followed by an image of an organizational chart representing interactions (Figure 4.4) was an animated element in the PowerPoint presentation that received the strongest reaction and, in both sessions, comments expressing obvious understanding were audible. Figure 4.3 was ultimately placed at the center of the slide showing the system (Figure 3.6).

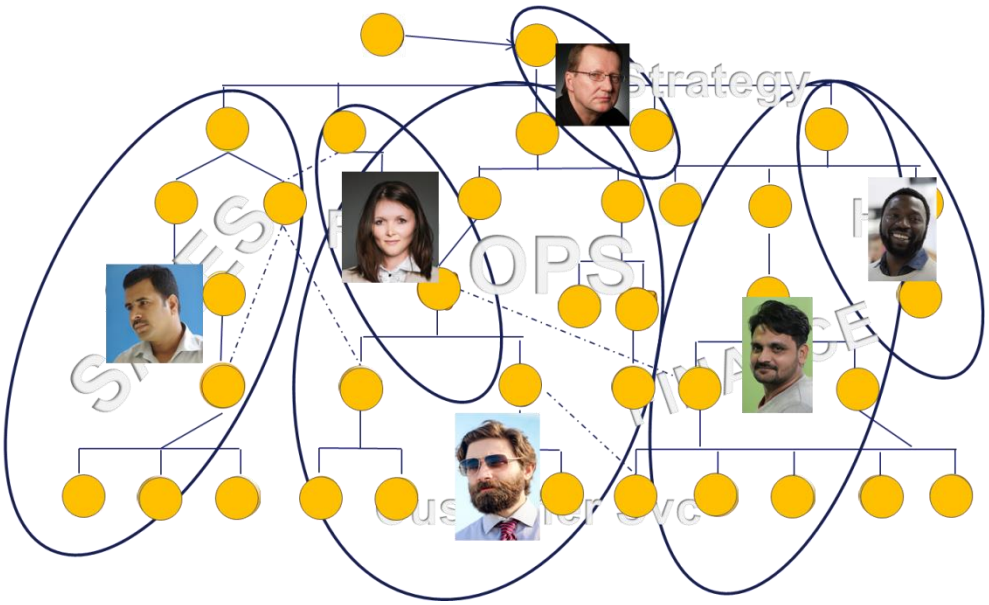


Figure 4.3 – Organizational Chart Representing Functions

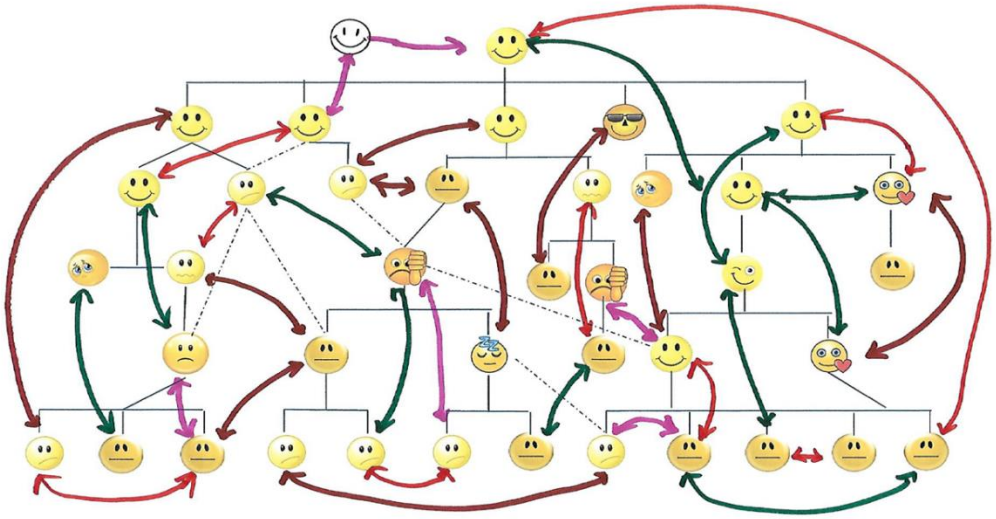


Figure 4.4 – Organizational Chart Representing Interactions

Presenting the system perspective to the participants using a familiar construct of an organization chart was effective at illustrating how the elements of the system (the people) act and interact and showing them the placement of the talent management subsystem in the context of its containing system and, ultimately, the larger environment that included the macro trends seemed useful to set a common understanding. Several participants commented that the visual was helpful in establishing a frame of reference for how employees fit in the larger system framework. Although the visual presentation was colorful and took up a 20ft. by 10ft. portion of the wall in each session, only 10% of S1 and S2 participants approached the visual presentation proactively, prior to being invited to do so by the facilitator as a deliberate attempt designed to "pump" their thinking. Research on employee proactivity and information exchange with regard to creativity and the generation of ideas shows that employees who engage in proactive information exchange develop a more trusted and safe space for creative idea generation (Gong, Cheung, Wang, & Huang, 2012; Shin, 2014; Fredrickson & Losada, 2005). There

was a notable shift in information exchange as more people approached and discussed the material provided on the visual wall pointing to an opportunity for practitioners to exploit this behavior.

There appeared to be a high level of engagement by both groups as evidenced by the conversations taking place and the fact that each group generated strong ideas in a short period of time, and with few exceptions the participants were able to get to work using established directions and guidelines provided at their tables and referenced to by the facilitator. Each design team, represented by a set of session participants, generated a unique solution.

The first session participants, P1, representing stakeholders embedded in traditional companies, were observed to be quieter at the start and a little less willing to open up at first than was observed in S2 where most participants were familiar with one another. The S1 design teams appeared engaged although there were questions posed privately to the facilitator or the process observers asking if they were being videotaped or otherwise asking if their contributions were being recorded even though this was openly mentioned at the start of the session indicating that the participants may have been more cautious. There was also a stronger sense that members of P1 were managing personal impressions in that they represented area businesses and may have also attended the session as a networking opportunity. For example, a few participants in S1 stepped away from their design teams to speak with process observer members of the facilitation team and needed to be reminded by their design teams to return to the activity at hand. This was not observed to the same degree during S2 although impression management is a normal aspect during human interaction (Goffman, 1959) and was noted among some

of the newer members to the consultant group and in relation to how they interacted with members of the CPI Board.

In both sessions, a few people were more dominant than others although in every case all members were ultimately engaged in the task of designing their ideal talent management system. In S1, one participant sought to play more of an advising role and his design team placed more emphasis on their own idea generation and collaboration rather than taking in his advice. They appeared to marginalize that member who then played a quieter role throughout the session but remained somewhat engaged; he was observed checking his email from time to time and stepped out to take a phone call but apologized to his team members for his absence. Another member of S1 seemed to place more emphasis on critiquing ideas generated by the group rather than offering up her own. She appeared to become more frustrated towards the end of the session as evidenced by her body language and lack of support when her team member presented their design.

In S2, one of four tables initially struggled with both the concepts presented, especially the concept of a system, and they remained in a state of reductionist problem-solving longer than the other teams. They asked numerous questions and commented on their struggles with understanding the aspects of the expanded environment. However, they ultimately generated an improvement on the current state that they determined would be an ideal design and appeared to struggle moving from an analytic to a systemic perspective.

During both sessions the teams became highly energized around 20 minutes into the activity as observed by heightened laughter and members of the design teams

beginning to take markers to either draw ideas on their flip charts or catalog thoughts from the members. At around 35 minutes 2/3 of the tables in each session were observed to have one participant with a dominant voice. This was observed by those more dominant members either standing up and orchestrating conversation or taking steps to move conversation in a more focused direction. At 45 minutes the facilitator notified all groups in both sessions to move their ideas from a place of divergence to convergence and notified each design team to identify a spokesperson. The facilitator noted compliance by all groups and the majority of those dominant voices took control of bringing their ideas into a system model. Teams were observed rushing but all followed directions to come up with their ideal approach to talent management. In S1 there was one design team where over half of its members came from very large corporations. While they did not previously know one another, they had a common process and were observed to work independently at first, had members approach the facilitator to ask if they were "on track" or if there was a "right" answer, and they also took longer than other groups before total team collaboration was observed.

After designing a prototype for an ideal talent management system and a presentation by each design team to the larger audience, participants were offered a 15-minute period of unstructured time to walk around, look at the designs of other teams posted around the room, and borrow or steal ideas they found useful for their team's design. It was during this time that the facilitator "pumped" their thinking by prompting them to talk amongst each other and observe the display containing additional information they might consider before refining their own team's design. This action sparked heightened discussion after the majority of participants in each group moved

directly to the wall and engaged in focused conversation about the images, facts and figures presented. They were overheard discussing the information in the context of their designs rather than talking about unrelated topics or generally networking with one another.

The closing portion of the session allowed each group to make changes to their designs and each team was observed becoming even more active in generating a finished product. Some were overheard making competitive comments about their designs with members of other teams. The facilitator did not anticipate this degree of ongoing participation after two hours and noted this level of engagement may have continued had more time been allotted to the activity.

The facilitator's experience with team facilitation was valuable and observations about the team behavior were noted. For example, the facilitator observed that no individual in S1 and S2 became outwardly opinionated, displayed unbalanced passion about an idea, or attempted to strong-arm the team discussion. The groups were observed to approach the activity in a less emotional and less conflicted state than the researcher observes when facilitating group sessions inside of unique organizations. This stands in contrast to the behavior the facilitator notes when applying the dialectic method with her clients to offset, "the danger of one-sidedness that often occurs naturally in organizations through the process of selective filtration of members and homogeneity of viewpoints is lessened in this process… by bring together opposing views to surface assumptions and generate debate between stakeholders" (Mitroff, Emshoff, & Kilmann, 1979, p. 585; Ackoff, 1999; Cuppen, 2012). As such, stakeholders brought together to solve problems or generate ideas inside of an organization tend to approach solving problems with

sometimes competing goals. In this case, it may be that reducing the cultural constraints of individual organizations allowed all involved to consider the issues more objectively than they might have had the activity been done within their own company or division. However, there may be other reasons for this including the fact that participants gave of their time and offered support for this research thus not having a personal stake in the outcome. In summary, the participants in both sessions were able to enter into a generative space and responded positively to the opportunity to idealize a new talent management system which was an issue in common with all participants.

Second research question. The second research question was to learn if diverse stakeholders can effectively apply design thinking and will this method generate solutions to complex talent management challenges that are generalizable across organizations. The strength and generalizability of potential solutions is based on the responses from the participants and the themes that emerged although the testing of their talent management prototypes is not part of this case study. The output generated from the two groups is based on a wider perspective than stakeholders within a unique organization and, therefore, is stronger output. There are also differences noted between each session that informs the answer to this question.

Session 1 output. The four design teams in S1 generated output that appeared to be generally confined to the transactional environment inside the context of a traditional business, mostly addressing potential solutions to more current issues and concerns. Teams in S1 were observed to take more time getting into the "wish" mode than those in S2, and conversation within the S1 teams suggested some members experienced difficulty setting aside what they were familiar with to make assumptions about the future

as evidenced by comments such as, “remember, we can’t just apply programs we have today” and some were overheard mentioning the Russell Ackoff prompt used in the presentation, that everything they knew “was destroyed last night.” Teams did stretch their thinking to create ideal designs, but the prototypes centered more on their internal perspectives and idealized disruptions to components of already familiar talent management systems.

First design team. The first design team generated a great deal of conversation about the importance of diversity to maintain a competitive advantage. Discussing diversity of culture, ideas, and experiences, the team was animated and engaged from the onset of the activity. They appeared collaborative and all members were observed to be active in the discussion. Passionate voices were heard discussing the social conscience of companies and the need to recognize the value members of the community offered even if they were not employed. Finding talent was an overarching concern and this team recognized that companies had to live the language of inclusion to be able to welcome a future workforce more representative of the shifting culture here in the US and to compete on the global stage.

They developed a vision for the ideal talent management system involving elements of compensation and shared ownership, employee choice and flexibility of schedule, and aspects of mentoring and feedback designed to attract potential employees and enhance the employee experience. This team also asserted the need to address the potential lack of skilled workers and suggested the talent pool extend beyond geographic borders that tapped into both talent deemed “ready” as well as marginal members of the workforce such as those who were released from incarceration or who displayed other

issues previously seen as limiting factors to employment. Building the employee base to address the talent gap was this design team's primary focus. They recognized that resources spent on recruiting and cultivating talent by developing them once they joined would result in loyal employees who would commit to growth and make their company attractive worldwide. This team's mission-driven model design served both the needs of the organization and the needs of society in a way that emphasized diversity and inclusion values along with shareholder return.

Second design team. The second design team engaged well although one member was observed discussing his opinions and promoting his experience before a few members redirected the group. They focused on the need to assess and measure talent to ensure their confidence in the selection process. Spending time discussing how teams worked together and provided benefits even if they had a different area of expertise, this team spent time discussing how the rewards system could also serve as a motivator to attract and retain talent in the face of a more mobile workforce.

They offered a talent management system revolving around the familiar model of attracting/hiring, matching, rewards, and employer of choice brand. The core of their effort involved a company living its brand to attract and engage talent. Specifically, this team's fluid hiring model and talent system was designed for and open to those employees who were attracted to and responded positively to the organization's environment. The desire to work for the company superseded the work which could evolve through time as long as the desire remained intact. The core value of the business is talent that "wants" to be in the company. For those people who "chose" to join the company, they would be expected to take an active role to seek out a job that met the

needs of the business and continue to apply their own motivation to grow and develop. This team's ideal system placed its focus on only attracting and engaging potential employees whose skill is an "aptitude to learn." Once on board their system placed development of individual employees in the hands of the employees themselves, and matched the skills of the project with the desires and needs of the unique employee. The goal for this system was to maximize efficiency and engagement by matching task with interest. Compensation and rewards were also placed in the hands of the employees such that they were charged with creating what they individually and collectively desired, and the company would present compensation and rewards back to employees based on individual and team contributions. Within this team's talent management system existed accountability at all levels and their model promoted direct feedback in all directions, and specifically promoted "calling out" one another on the organization's core values. They drew on examples from existing organizations such as SAP, Amazon and Google that promote the frontline employees to offer feedback directly to the CEO. Their ideal workforce would be deployed throughout the organization as needed and in relation to the individual development plans of unique employees. This talent management system was internal to one organization and did not specifically articulate how technology would be leveraged nor how employees would remain engaged when not deployed.

Third design team. The third design team offered a talent management system that was determined to be most creative by S1 participants. This group was extremely animated and members were observed standing up and walking around to different sides of the table, drawing and using many methods to spark their ideas. This team focused on the employee experience and their assertion that a talent management system must

support continuous development to ensure an adaptable and nimble workforce. Aspects of their talent management system prototype were internal to the specific company they created and focused on the employee once they were hired.

They created a company called "Utopia, ULC" where ULC stands for "Unlimited Learning Corporation" and created a strategic vision designed to attract talent to join its purposeful and values-based learning organization. Within this ULC the ideal talent management system offered "never-ending on-boarding" and promoted continuous re-orientation to ensure employees would grow as the company evolves and grows. The most important moment for an employee in this system was the onboarding stage where the company would learn as much about the employee and gain motivational data for future use for how the employee was rewarded and recognized.

During the onboarding stage the new employee would create their own "employee GPS" to guide their employment and evolving growth over time. The talent management system also applied a shared-ownership model like the one presented by the first design team and their underlying philosophy supported people being seen as an investment and not an expense by the larger organizational entity. The team's justification for this degree of investment in new employees was their ULC's intention to only hire "attitude, chemistry and commitment" or what they termed ACC. Similar to the second design team output, this focused approach to talent acquisition was felt to ensure maximum engagement and, therefore, personalized investment would yield the strongest efforts leading to talent achieving competitive advantage. The entire organization would be focused on employee development with coaching, mentoring, and training designed to support learning agility and redeployment as the needs of the business changed. The

team centered their attention on the people (assets) who help knowledge and capabilities of all aspects (HR, finance, sales, etc.) of the organization equally to allow for easier redeployment, and the company supported the assets through transparency of process, concern for the wellbeing of the employee, and fostering a philanthropic environment where assets continuously support the larger community.

Fourth design team. The fourth design team members represented a larger percentage of major corporations than did the other teams with three members of the team representing different Fortune 500 companies. This team took longer than other teams to engage in open collaboration and members were observed working independently at first. Members of this team engaged more frequently with the facilitation team and asked clarifying questions that also included questions to validate they were progressing appropriately. At 15 minutes into the activity three dominant voices representing the major corporations were observed to take charge of the activity and the other three members became disengaged and sat down to almost work in parallel to the first three members. Shortly thereafter, a more dominant member stepped away to speak at length to members of the facilitation team at which point the rest of the group joined together and was observed placing colored sticky notes on the wall and begin to collaborate and idealize. The majority team and one process observer spoke to the person who stepped away and asked that he rejoin the group. The primary focus of this team was on the goals and objectives of the company and how talent could best support the company.

The talent management prototype resembled the current structure of corporations but did include two distinct workforce sets as a way to address the shortage of skilled

workers. Their ideal system contained a core company that followed the traditional strategic alignment between business objectives and goals with the workforce planning process. Employees in this core workforce enjoyed development resources tied into their personal needs and motivators, and supported by current state HR performance and development strategies with nothing new or different mentioned. However, this team's model also included a separate but measurable contingent workforce that extended beyond traditional geographic borders. Their model was similar to large organizations that already manage a contingent or temporary/seasonal workforce, the difference being that they offered operational definitions of talent as human and automated, traditional and non-traditional to include students and retirees as well as consultants and offshore employees. Their model, while stretching the categories of who could be included in the workforce, relied mostly on the application of standard programs and current state workforce planning and metrics. The elements used to support their system included employee background and experience, learning culture, company culture, and standard aspects of an employer-of-choice brand to attract and retain talent already familiar to today's talent management systems.

S1 participant summary. All four groups displayed effort trying to apply systems thinking and stretch their ideas to address the macro trends and the issues facing talent management. In each case they worked hard to define terms and engage in conversation around the information provided by the facilitator. However, they also struggled in freeing their mindset to enter the "wish" mode and disregard elements existing in current state talent management systems; each group was overheard acknowledging the latter. In 90 minutes they generated prototypes, displayed an eagerness to move beyond their

ordinary approach to problem solving, and articulated a recognition that they were trying to get beyond their role-based habitual solutions and acknowledged they were constantly pulled back to familiar strategies.

All four design teams presented their final ideal talent management systems and the word cloud image (Figure 4.5) represents the aspects addressed within each team's system where the size of the words reflects the emphasis of aspects across teams.

Figure 4.5 – S1 Thematic Summary

Session 2 output. The second session, consisting of 54 participants from across the United States and Canada, included 7 design teams with members representing firms varying in size and scope of service but all serving as external consultants to organizations. Their perspectives were informed by the variety of the organizations they consulted to and from their specialty areas of talent acquisition, talent development, HR consulting and career transition/outplacement services. The session took place during a previously scheduled conference, immediately following lunch and after a morning agenda designed to have the participants envision the future of Career Partners International (CPI) as an organization. The facilitator assumed this activity would accelerate and prime the participants to already be in a future-focused mindset but no

difference was observed in how the participants entered into the design thinking session; they focused on the task, followed directions and engaged similarly with the macro presentation and display wall. The timing required for the presentations due to the number of design teams was shortened by 7 minutes to accommodate for the larger number of group presentations in the time allotted on the conference agenda.

Each design team worked hard. Participants in S2 appeared to organize and collaborate quicker as was evidenced by the discussions taking place as the facilitator walked around the room. One marked difference was that the design teams in S2 were already engaged with one another because they were in the midst of a conference agenda that began the night before. Although the facilitator asked each team to select a spokesperson, all members of the design teams were involved with the presentation back to the larger audience where only one member of each design team presented to the larger audience in S1. This may have been due to the S2 participants all being members of the larger CPI partner organization.

S2 design teams appeared to more easily apply systems thinking in their design approach than did S1 participants. One group struggled with the concepts, yet all groups presented a prototype that either showed a systems diagram or discussed the expanded system during the presentation. S2 produced ideal systems that extended beyond the internal business environment although they were still observed to struggle with the concept of complexity and with their lack of awareness of details surrounding specific macro trends.

First design team. The first design team was highly engaged although they spent more time discussing their idealized design than they did representing it on paper. They

openly expressed that their ideas remained "mostly in their heads" because they felt ill-equipped to create a diagram or system image of talent management. Their idea for a system centered on the fact that companies must "court" potential employees and "go out there" to build relationships. Members of this team were aligned around opportunities for technology to assist in identifying and engaging talent.

The team did not present a visual diagram; instead showed a blank piece of paper because they said, "it is more important for organizations to not tell people about talent but hear back about it from talent." The group spoke about applying artificial intelligence (AI) and virtual reality (VR) as a Meta talent management system designed to generate data each time talent engaged with the system. AI and VR would be applied across all aspects of the employee lifecycle and engage people as the company attracted, engaged and deployed talent. This team related their AI and VR system as "Tinder for Talent" (Tinder.com) where companies used it to court talent and build relationships before, during and post-employment. The Meta system also generated data during interactions in development and training activities as well from team projects, performance management, and recruiting functions. As talent engages throughout every aspect of the organization, systems feedback is captured from each interaction and used to identify and test, refine, and deploy talent into new roles and relationships. For example, potential employees enter a VR space of the company and data is captured through every interaction to determine how the potential employee will engage with the organization. VR is also used to develop internal talent by engaging employees in virtual training and experiences designed to help develop into new and expanded roles. At each interaction the AI system becomes "more intelligent" about talent and learns and adjusts

the VR application to better engage talent and refine data for use by the company to make talent-driven decisions. The talent management system also remains connected to employees who exit the organization so it continues to capture feedback on their next role and employment experience. The design team did not discuss if the system was physically embedded in the employee as a tracking mechanism or if there was another method of maintaining connectivity once the employee left the company.

Second design team. The second group struggled with the activity and found it "ambiguous" and "hard." They were overheard discussing their difficulty with determining if they were supposed to create a process or a system. As such, they focused only on talent acquisition, what it is and isn't, and presented the business rules about what they felt were the "classic problem of inefficiency" and, specifically, "where recruiters must step in because talent cannot find work and work cannot find talent." Although they did not move past talent acquisition, it was notable that they addressed the creation of a system platform that promotes cooperation across industry verticals where there might be multiple types of work, such as project teams or product launch initiatives, which can allow talent to be spread across industries and build efficiencies equally among multiple competitors. This design team addressed labor elasticity and the need to promote flexible locations allowing access to talent "as needed" with a shared agreement, if applied with purposeful intention, that "all boats would float."

Third design team. The third design team had members from the US and Canada and engaged quickly in discussing ideas and thoughts about the importance of cultivating talent to be ready when the companies needed them. They offered a similar talent pool concept as the second design team by offering the concept of a "community talent

garden" representing how a company could address the inefficiencies created when talent could not be utilized when needed. The talent garden valued adaptation and redeployment, and represented a place where people would go to learn new skills and develop new knowledge. The talent garden was a shared resource by members either of an industry or like-minded organizations in concert with the larger community where all members leveraged development resources as needed. Talent would be used by companies for specific roles and tasks and when talent was not utilized they remained engaged through the talent garden, extending their skillsets to be more adaptive and deployable. This team's idea resulted from assumptions they made surrounding the gig economy (McKinsey Global Institute, 2016) to serve as an exchange program of sorts backed by the larger community of stakeholders including universities and social institutions. This team's primary focus was on learning and re-learning to maximize and extend talent resources but with an understanding that the application and integration into the workforce is in the hands of the employee.

Fourth design team. The focus of the fourth design team was placed on the demographic shifts of the available workforce. They were active in the process and had a few members who appeared highly informed about issues related to a quickly retiring workforce and factors influencing a temporary workforce. One member held a wide range of information about contingency workers and the growing market for companies who seek interim assistance for special projects. Their prototype centered on creating a workforce planning model informed by external factors and macro trends restricting ready talent. This group presented a talent supply chain made up of fulltime, part-time, and exited employees called 'alumni' and retirees. At the center of their model was an

assessment process measuring the skills and capabilities of talent assets against market forces so they could be moved in and out, or through an organization in a way that best suits the needs of the company. This model was unique to a specific company and the team asserted that the assessment and reassessment process, and philosophy of redeployment, would result in an employer-of-choice brand reputation making the company attractive thus contributing to acquiring, retaining and engaging better employees.

Fifth design team. The fifth design team disclosed that they were most intrigued by information presented on the display wall showing statistics about those members of the US workforce already freelancing (Bureau of Labor Statistics, 2016). They were highly engaged and spoke at great length about how trends are moving to more personalized services, such as seen in medicine, and that companies might benefit from taking a similar approach to talent.

Their design took an individual approach to talent management by placing the company on "offense" and only hiring those who displayed skills in innovation and creativity, and those committed to their career. Their system, called "mIcareer" leaned on a hiring process that used robust assessment technology to determine fit for the company needs and culture. The company would focus the onboarding process on empowerment whereby development and onboarding never ended. This was similar to the second and third design teams from S1 in that employee engagement consists of an ala carte approach centered on the individual. Unlike these teams, however, the fifth design team in S2 directly addressed engaging departed employees by forming an

"alumni community" that felt respected when they left the company thus contributing to their loyalty and openness to being called on as a contingency, as-needed workforce.

Sixth design team. The sixth design team included the president of CPI. While the facilitator assumed the members might defer to his authority or opinion. This was not observed to be the case and all members of the team were sharing ideas and offering thoughtful comments as their ideas converged into consensus for a solution. They zeroed in on making assumption about the ongoing and accelerating war for talent leading their ideal talent management system to establish deep roots in the educational system as a primary link to the training environment. Their focus on cultivating talent as early as possible was further leveraged by ensuring their employment brand was associated in the education system with a return on their investment being to both attract and retain talent at a higher rate. This team's system also promoted continuous development once someone was hired by creating a position called a "career strategist" who engaged employees personally and served as an independent manager of an employee's career as opposed to the traditional manager role who, in this model, only served to assign work. Working with employees on their unique development path, the career strategist role would "ensure employee choice is paramount" and would facilitate rotational experiences and stretch assignments designed to help the employee grow as they and the organization evolved. The career strategist would also be responsible for deploying talent in the organization with the goal of offering an independent lens and a holistic view of the organization. This kind of career mobility within the organization had the compounding effect of breaking through established silos and power centers that presently inhibit talent from easily shifting as opportunities become available.

Seventh design team. The seventh team included an international member of CPI who brought an interesting dynamic to the group. Members were observed considering his international view more directly than was observed in all other teams where questions of globalization were not apparent. They named their talent management prototype the "JET" system standing for "Just Engage Talent" where the company represented the jet and the employees represented the fuel needed to make it run. They did not address technological aspects of talent acquisition or development but instead, focused on the characteristics of the ideal talent management system such as being flexible, universal, engaged, free of constraints, transparent, and consisting of an open architecture. Their system centered on the culture of the company and its desire to achieve its goals. The cycle allowed talent who fueled the culture to be retained and those that did not measure up to the desired characteristics to be discarded as waste. The team aspired to achieve "renewable energy" with an employee base that could be "interrupted" rather than "disrupted" so the system empowered and supported employees to take time to grow and renew their energy.

S2 participant summary. S2 was observed making a concerted effort and appeared to have fun in the process. They were active and engaged, were seen standing and talking, drawing, and speaking with one another in a fashion that implied they were listening as well as offering new ideas. Each presented prototype systems that attempted to address a wide set of issues impacting talent such as technology and the availability of talent as represented in the word cloud image (Figure 4.6) showing the aspects addressed within each system where the size of the words reflects the emphasis across the teams.

Figure 4.6 – S2 Thematic Summary

The output of both groups taken together offers a more generalizable set of solutions across industries considering the range of approaches offered by both sessions pointing to the need to include the widest stakeholder group possible to generate an idealized design that transcends a unique organization.

Third research question. The third research question asked if emergent themes common to divergent stakeholders can inform a talent management system which is itself informed by the conflergence of macro trends and other characteristics of organizational and contextual complexity. To explore the answer to this question required evaluating comments and discussion throughout the sessions as well as the prototypes the participants created. Themes that emerged across both groups are represented in Figure 4.7.

Figure 4.7 – S1 and S2 Emergent Themes

The focus on individuals and their individual experience in the workplace rose to the surface when evaluating the emergent themes from both groups and combining topics of conversation and sidebar reactions from teams. For example, a shift in emphasis from maximizing profit to maximizing the capabilities of people was apparent as an underlying concern for how organizations will continue to manage talent assets regardless of the influence of macro trends. Profit and shareholder return was not prominent in any prototype design nor was it measured as a metric for a successful talent management system.

Another theme was the minimal awareness across all participants about specific advances in technology or their application to either augment or replace talent. In some cases, the conversation drifted from restructuring and reducing talent as technology played a larger and more advanced role in the organization to providing time, space and ongoing investment for talent to be nurtured and developed even as technology replaced

distinct roles and responsibilities. Session participants openly articulated their lack of awareness surrounding specific technological advancements. Although technology was a common theme it was not central to many designs and there appeared to be little consensus among design teams around how it is currently being used to advance or replace talent; only in relation to its use in data warehouses or tracking systems.

The employee experience was discussed by each design team and often placed at the center of most ideal talent management systems presented, and specifically the individual/personal experience. The design teams did not directly mention tools such as engagement surveys or programs of success planning, learning management systems or HR information systems; their focus was on developing and retaining employees as a method of engagement and as a way to influence loyalty to the company and a readiness for new and different roles. The execution of development programs was tied to personalized career pathing from the beginning of an employee's career so they could continue to stretch and evolve as the needs of the company changed in response to the competitive landscape. This type of internal, career-focused initiative offered a multi-modal approach by engaging with internal stakeholders and also the external community and cross-industry partnerships to provide learning and training experiences specifically designed to attract, retain, and engage workers. This individualized focus extended into how rewards and recognition systems were applied although to a lesser extent than the design teams' emphasis on utilizing technology as assessment and feedback systems to simultaneously promote the needs of the employee and evaluate how their skills could be redeployed for the betterment of the organization.

All design teams seemed to have a great deal of confidence in the individual employee's desire and subsequent ability to establish, execute and maintain their own development and career growth plans through time. It was interesting to note that no one seemed to challenge this assumption. This degree of employee commitment extended to the suggestion that the organizational structure could survive as a meritocracy. Interestingly, no group addressed any constraints or leadership structure, CEO constraints or even the influence of shareholders and boards. In fact, the emphasis was more on the ability of the "crowd" of engaged employees to drive an organization forward than the "leader" of the company to set the agenda that everyone followed.

The concept of accountability to profits were presented as a link to employee investment, commitment and even shared-ownership, and in no case did shareholder value or market forces come into focus in the designs presented. Globalization was addressed to a lesser extent and mostly in relation to accessing available workers. As a rule, international competition and shifts in economic power went unmentioned although the sentiment was expressed that the kinds of talent management systems presented would be an international draw for top talent to come to North American companies.

Additional themes mentioned throughout discussions but did not appear in the final prototypes included concepts of synergy, chemistry and attitude. Specifically, discussion took place around the need to assess and measure intangible aspects of employees and there was general agreement that the lack of assessment and measurement of these intangibles were also current barriers to successful talent management. In some cases, minority voices spoke about machine learning and big-data analytics as being helpful but many participants expressed unfamiliarity with these capabilities and

advancements so ideas did not take form. However, the issues did evolve through the sessions as design teams stepped further into this unfamiliar territory as evidenced by the majority of teams adding some aspect of technology mentioned by other teams when they revised their final designs at the conclusion of the sessions.

A recurring theme that sparked most conversation for both S1 and S2 participants was the need to personalize work. Concepts such as personalized compensation and rewards, project involvement and upskilling, and even career trajectories that evolve as the employee grows with the company appeared to resonate with the participants. For example, those who were involved with benefits selection thought a potential ala carte approach for rewards and benefits could reduce the cost to the employer while increasing the satisfaction of the employee who "gets what they want" out of the relationship. Examples of release time to care for family as a benefit for some versus additional vacation time over pay as a benefit for others were seen as providing value if applied as a rule and on a personalized basis. Work-life balance and using personalized technology to monitor wellness and activity resonated with S1 participants but was not mentioned in S2 where personalization revolved around employee selection and development.

Ultimately, both sessions recognized the nature and definition of work is changing and team members were heard challenging one another around the need to define it. For example, aspects of the gig economy and the contingent workforce were addressed and, in some cases, the concept of completely mobile teams surfaced as something that would happen more routinely through time and as analytics could provide the data on who might hold unique sets of skills. Generational issues were mentioned and participants grappled with maximizing the utilization all resources regardless of age rather than discarding

them through retirement. However, all of these issues were tempered by the energy that rose in the room in relation to whether their ideal systems centered on the environment of work or the production of work.

Several participants voiced how the process of ideation allowed them to stretch their ideas into spaces that were ambiguous or far afield of what they ordinarily considered. In fact, in the first session a participant was overheard saying, "I have a crazy idea" and their team responded, "We love crazy ideas." This individual later disclosed they would have never shared the idea in their workplace. The collaboration across people from different industries in S1 and different geographies in S2 sparked numerous questions as participants were overheard calibrating their opinions and perspectives with one another and sharing possibilities.

Survey Results

The responses include those from the 29 out of 79 (36.70%) who responded to the survey. The Survey Monkey® word cloud text analysis function was used to create Figures 4.8 - 4.11 showing the emphasis of words used in the responses. Direct quotes are provided by survey question; no grammatical edits were made.

Q1-Please indicate which session you participated in

Of the 29 out of 79 (36.70%) the session participant breakdown is in Table 4.1.

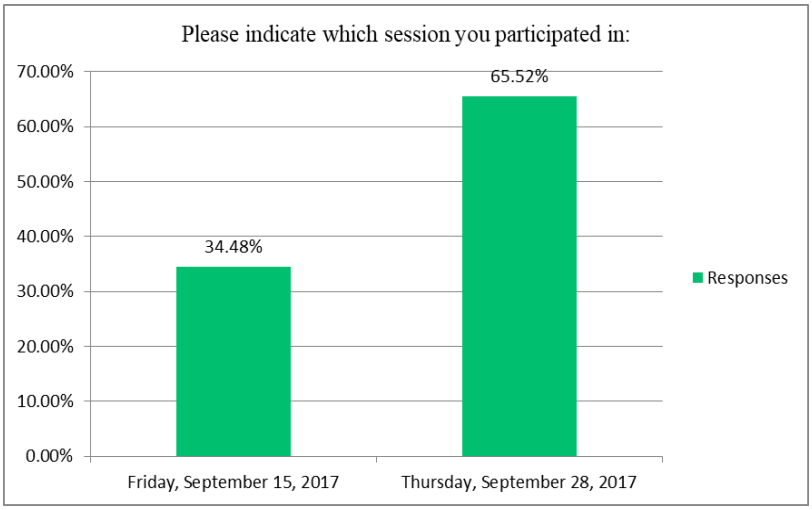


Table 4.1 – Survey Results, Question 1

Q2-Prior to attending the session how familiar were you with design thinking?

29 people (36.70%) responded. As presented in Table 4.2, the split in familiarity with design thinking was approximately equal with 51% reporting no familiariy or only hearing of design thinking, and 49% reporting being somewhat familiar or very familiar.

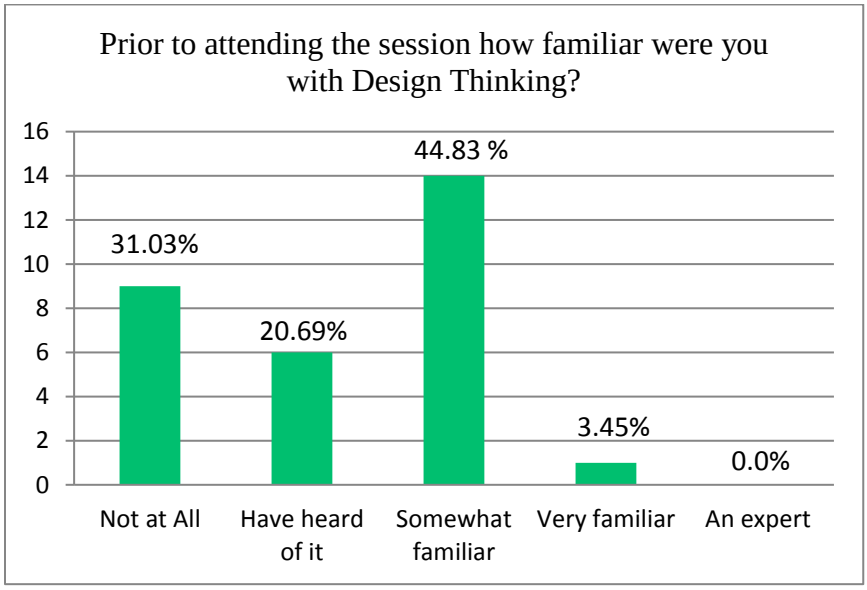


Table 4.2 – Survey Results, Question 2

Q3-Two concepts were introduced during the session: Systems Thinking and Idealized Design. Which do you believe played a stronger role in widening your perspective?

29 people (36.70%) responded. As presented in Table 4.3, 17 (58.62%) of the respondednts felt the concept of idealized design played a stronger role in widening their perspective. 9 (31.03%) believed the concepts presented about systems thinking played a stronger role and 3 (10.34%) did not feel either concept played a role in widening their perspective.

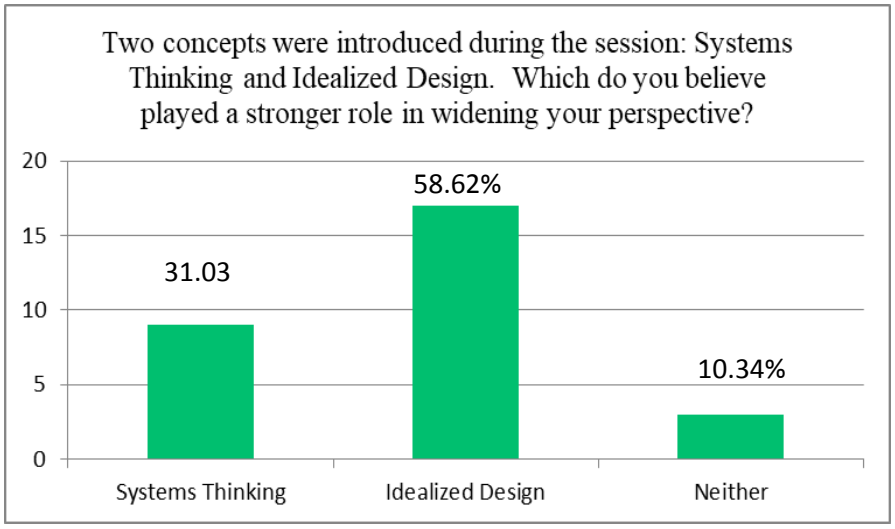


Table 4.3 – Survey Results, Question 3

Q4-How did the process of engaging in the session widen your perspective?

25 (31.64%) responded. The word cloud in Figure 4.8 represents their emphasis followed by unique quotes.

Figure 4.8 – Survey Word Cloud, Question 4

- "Got to see the viewpoints from very different approaches."

- “Our group thought about the hiring process from a completely opposite lens than how things are being done today. It felt wonderful and free to be able to think creatively.”
- “It made me curious to learn more.”
- “Given the opportunity to think and create with no obstacles was very freeing.”
- “I appreciated working with my team to come up with our system! Thinking together to design our employee system really helped.”
- “Interesting ideas and concepts. Difficult to implement in the real-world work environment.”
- “Clarified the vision for building a roadmap. Also showed me that others are not thinking the same way about design.”
- “It was a good reminder that the easiest way to see the solution to a problem is to stop worrying about the limitations and obstacles.”
- “Listening to others at my table reflect and process enabled me to get out of my own head and narrowed POV.”
- “Seeking the goal, without $$ constraints, even in a hypothetical exercise, opened up the possibilities.”
- “Opened up perspective of the # of factors that influence the system were attempting to model.”
- “I find myself limited my brainstorming based on constraints of implementation or cost. This taught me to remove all constraints until later.”
- “It raised my attention to the fact that it was difficult to think differently and we need to do more of it.”

- “The process of not setting constraints is an exercise I will try more often.”
- “By engaging in the process we were weighing the complexity of incorporating and understanding the relationship of technology to the human factors of reasoning and feeling.”
- “Hearing from participants from other companies.”
- “Removed traditional barriers of how to rather than what to…”
- “It gave me pause to expand my thinking.”
- “It was very compelling to stop and think about end to end solutions in an overall ecosystem.”
- “I became more aware of how difficult it is for those participating in this type of session to "let go" of their old ways of seeing the topic(s) in question.”
- “I think it was more about being in an environment and being reminded of the guidelines we were to use in our discussion. The guidelines were a fabulous structure that ensured I listened intently to all ideas and processed accordingly. The challenge itself also made me really consider the changing face of our workforce. Having no constraints on resources allowed us to truly innovate.”

Q5-Thinking about your experience working with others during the session, what are the top three things you uncovered about the complexity involved with managing talent?

25 (31.64%) responded. The word cloud in Figure 4.9 represents their emphasis followed by unique quotes.

Figure 4.9 – Survey Word Cloud, Question 5

- "1. People have very different definitions of Talent Management. 2. Some generational stereotypes can be true. 3. Many of the goals would be impossible to measure."
- "First, everyone has an opinion and they are all different: some started talking about the generational gaps, others talked about process, technology, and tactical items such as resumes. Second, with so many factors around managing talent, everyone had to have their say before they would listen. Third, when the report outs were happening, no two groups had the same thoughts so it would seem there are many answers to managing talent. A company will need to have tolerance to implement a new way because there is not one right answer. It was a very creative experience."
- "The uncertainty about the future workforce Organizations need to really think differently Employees will also need to think differently."
- "Some people get stuck in their model; trying to include everyone's input is hard; creativity in thinking out of the box challenges many."
- "1. Retention 2. Personalization of employee engagement 3. Benefits."
- "Culture, adaptability, systems."

- “We have a greater perspective than others about what’s involved in talent management process and cycle. Managing talent goes beyond the talent- it involves a strategy for workforce planning educating others takes time.”
- “It is as difficult to remove personal judgements about people delivering ideas as it is to design a system that enables everyone to contribute to a solution. People tend to dismiss ideas delivered by people who are not viewed as "popular" or viewed as experts in the subject under consideration.”
- “1. It is incredibly broad 2. Everyone has a different "definition" of managing talent 3. In today's VUCA environment, everything is even more complex.”
- “To broaden the definition of talent beyond humans and more than an FTE; to anticipate the ebb & flow of work; to provide learning & growth of talent (which hopefully contributes back to getting work needs met).”
- “The external factors at play; the need for flexible and agile solutions; the importance for leaders to all be aware of the moving parts of the system.”
- “There is no one solution that fits all - talent has different motivations and wants, so flexibility is key. Have to plan globally in today's world which adds more variables and considerations.”
- “1) We had not one idea what the desired outcome would be; 2) everyone at our table was mentally wandering around and needed something for focus; 3) unsure.”
- “1. Each person perceives job satisfaction differently; 2.There is a process to innovate through ideation as opposed to brainstorming solutions to problems; 3. Employee engagement is a sliding scale.”

- “1. We tend to limit others based on our own limitations 2. Our past experiences can't help but carry over into the future 3. Most people enjoy working on a project together/with others.”
- “Everyone has an opinion. We need to listen to others. No one has all the answers.”
- “There’s no ONE right answer. Learning agility is a key differentiator of managing/developing talent there are many valid approaches to managing/developing talent.”
- “1. Each participant has a different approach to the issue at hand 2. It is hard to collaborate 3. though it takes a little more time building synergy through collaboration gives better solutions.”
- “Retention, enrichment, incorporating feedback and opinion.”
- “1. That there was some confusion as to what we were expected to design 2. That everyone has unique understanding of what a design might look like 3. We came together as a team and completed almost on time which was impressive.”
- “Everyone has a different perspective of how it "should" work; organizational structure has significant impact on managing talent; industry sector norms need to be considered.”
- “The difficulty of balancing the needs of talent and those of the business. The challenge of determining what preconceived ideas managers may have about their points of view and how unaware some are that they even are attached to those points of view. How "natural leaders/extroverts" sometimes take over the conversation and try to solve a "problem" before it's even defined.”

- “There are lots of parts and we still need to think longer term.”
- “How little feedback is received and given "real time", the tendency to only think internally vs externally and globally when thinking strategically and how one-sided talent management systems are today.”

Q6-When envisioning an ideal talent management system what surprised you about interacting with people who worked in a different company?

25 (31.64%) responded. The word cloud in Figure 4.10 represents their emphasis followed by unique quotes.

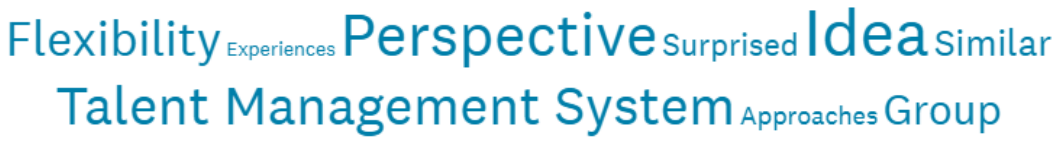


Figure 4.10 – Survey Word Cloud, Question 6

- “How idealistic and unrealistic some of the ideas and suggestions were.”
- “Some people were solutions providers and some were problem identifiers. After everyone had their say, one person emerged as the leader with a very unique perspective that the rest of the people in the group all agreed upon. The unique idea hooked everyone enough to cause further discussion, exploration and viability. So when an idea is good or perhaps very different, people can get excited and engaged.”
- “Many of us have similar views and experiences on talent management which made some of the discussion tend toward what we know rather than what we can imagine.”
- “Huge differences in how each would define a talent management system.”

- “I appreciated a different perspective and the complexity of their business model.”
- “Flexibility other companies are able to provide.”
- “Structural constraints placed by others.”
- “I knew more than I thought I did.”
- “We all understood talent management system as something slightly different.”
- “In a group of 5, representing different companies, ages & genders, we had 5 distinct approaches to contributing to a solution.”
- “The different perspectives they brought to the table and the ability to merge different ideas to envision the ideal TMS.”
- “The creative programs they are already implementing.”
- “I wasn’t surprised; we were all over the board.”
- I feel like as a CEO that I get to create employee engagement systems, catalysts and incentives.”
- “Different approaches based on different past experiences.”
- “What some other people considered priorities.”
- “They are invested in doing things their way and were protective of their ideas.”
- “We had the same concept of what is needed in the future as demographics and needs evolve.”
- “Their lack of flexibility when thinking about another industry.”
- “How similar we were in our thoughts on what is most critical in talent --- and that is that we all want to have a purpose and contribute and be valued. It was great to hear that we all held that core belief.”

Q7-This question is to identify stakeholder characteristics and is for statistical purposed only. Please check all that apply to you.

29 people (36.70%) responded. Each respondent was allowed to identify all characteristics that applied to them as represented in Table 4.4.

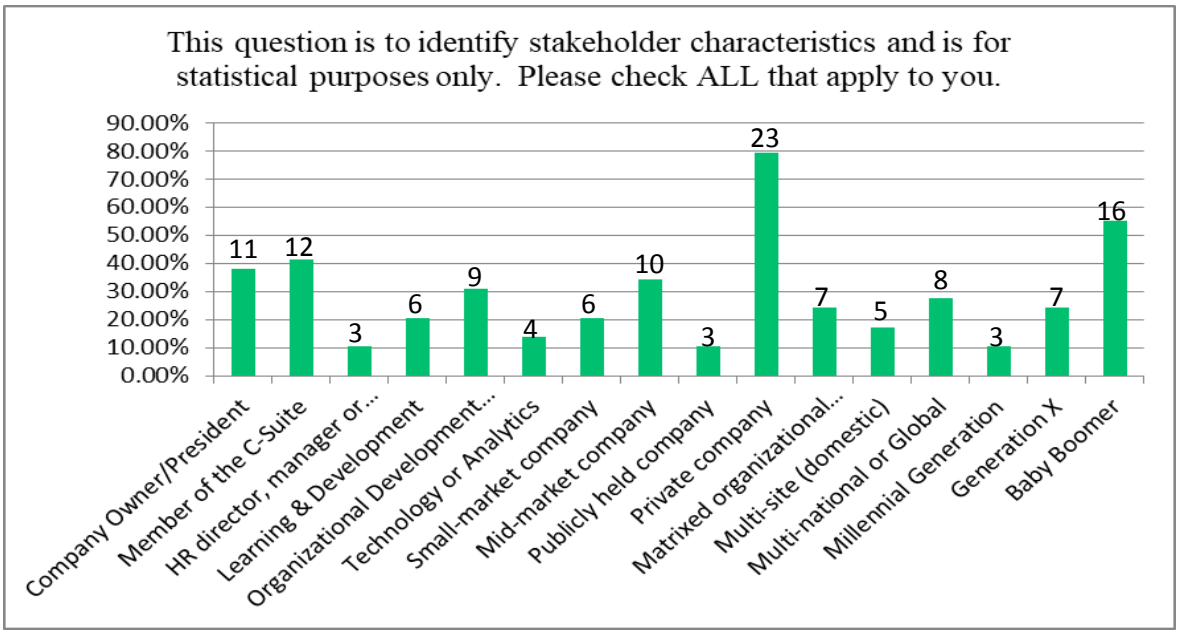


Table 4.4 – Survey Results, Question 7

Q8-Please provide any additional comments that you would like to share.

21 (26.58%) responded. The word cloud in Figure 4.11 represents their emphasis followed by unique quotes.

Figure 4.11 – Survey Word Cloud, Question 8

- "The process was great. I loved the energy and the perspectives in the room, as well as meeting like-minded people. The facilitation and visuals of the session

were excellent. Great pictures, data and quotes. I'm generally not a pessimist, but I was surprised by how many people seemed to support and encourage completely unrealistic ideas. Many of the "fluffy" utopian suggestions generated energy and buy-in, despite being unmeasurable, and impossible to fund/manage. I understand this was a hypothetical scenario, but I was surprised by my own doubt and pessimism. Some of the ideas people seemed to like actually had very little to do with managing talent. But, it was sure fun!"

- "I liked the process and would like to set aside time to do idealized design thinking for other topics. Very transformative. Thank you."
- "The process was exhilarating and some excellent ideas surfaced. Seems like a very useful way to get people to think more broadly and creatively."
- "It was a great session. I did not know anything about design thinking and walked away with a better understanding. Thank you."
- "Glad I attended. Very interesting concepts and have applied some ideas in work environment."
- "Interesting session-can be applied to other consulting opportunities."
- "I enjoyed the presentation but I am not sure that I really understood the purpose of all the paper and quotes on the wall - a bit more explanation regarding this would be a good idea."
- "Thanks for the opportunity to participate in both the exercise and this feedback. I look forward to intriguing outcomes from your research and the opportunity to review the Executive Summary."

- “It would have been helpful to experience the concept on something easier than advancing talent management.”
- “I enjoyed the opportunity to experience design thinking.”
- “Great collection of people, ideas and concepts.”
- “The focus on systems thinking and idealized design seemed disconnected from the standard methodology generally considered as design thinking. I felt this was more a seminar on those topics more so than design thinking.”
- “Good exercise! Thank you Adena.”
- “Adena did a wonderful job engaging the audience and taking us into the future.”
- “Great job! You really gave us an interesting perspective of design.”
- “Very interesting presentation and exercises and am anxious to learn the results of your work.”

CHAPTER 5: CONCLUSIONS, REFLECTIONS, AND OPPORTUNITIES

In this chapter, I summarize and offer conclusions about the effectiveness of the design sessions reported in Chapter 4, reflect on the use of the methodologies applied including the nature of acting as a researcher/facilitator in design-based research, suggest opportunities for future research and applications, and conclude with limitations of this study.

Consultants and practitioners require new techniques and strategies to help organizations deal with complexity and the rate with which people in organizations must adapt to change. While companies have already established methods to address internal structures and processes, and even managing planned change using decades-old change models, the standard approaches fail to accomplish intended results when issues are the result of the ever-changing volatile, uncertain, complex, and ambiguous (VUCA) environment; seen as a growing threat to how organizations, social, and educational institutions prepare the next generations to be competitive and contribute to the workforce as we have come to know it (Kail, 2010; Shaffer & Zalewski, 2011; Bennett & Lemoine, 2014). It is these VUCA issues, issues that cross unique or traditional organizational structures and cultures and consist of dynamic macro trends, which can benefit from a different approach; one that fosters the use of creativity and skills that spark innovation without the organizational constraints that often inhibit the problem-solving process.

Design thinking has been applied within individual organizations such as GE, Google, Whole Foods, Samsung, Nike, Proctor & Gamble and many others for the purpose of prototype generation and considering solutions to problems. Several authors

contributing to the September 2015 issue of HBR were spotlighted on their design thinking perspectives and the benefits of this approach, including Kolko (2015) who suggests design thinking and the principles of design should be applied to how people work. Organizational applications using the interactive planning method advocated by Ackoff yielded outstanding results as evidenced by the innovations at Bell Labs (Ackoff, R. L., Magidson, J., & Addison, H. J., 2006). Design thinking's human-centered model has become commoditized with facilitator guides and workshop templates that market innovation and are offered in a do-it-yourself and self-paced online format if a company does not want to pay for the expert consultant. The concepts and designerly ways of thinking are also seen as viable practices to apply to larger issues that extend beyond a product or service and still engage a human-centric approach and leverage well-researched tools to generate empathy, understanding, optimism and creativity (Bjögvinsson, Ehn, & Hillgren, 2012).

Talent management is an example of such a larger issue and one that exemplifies the complexity inherent in both organizational life and the larger society. Addressing or navigating this kind of problem using the ways companies are currently using design thinking may result in mere restructuring as companies narrowly focus on HR systems and processes. And, with the speed that innovation must keep up in light of the rapid conflergence of macro trends, accelerating the design thinking process may offer new opportunities to creative problem solving for issues that extend beyond their unique organization.

Practitioners have the opportunity to embed aspects and methods of design thinking into their work to evolve the way organizations re-position how they go about

solving problems and to apply design principles to how people work together. One purpose for applying the C.R.E.A.T.E. model to diverse stakeholders across organizations is that today's companies are often made up of different sectors including those serving different verticals, supporting diverse and remote teams, and often supporting locations across the country or around the world. The habits applied to solve organizational issues have not changed in response to changes in how organizations are structured let along moved their strategy forward to address the workforce challenges (Guthridge, Komm, & Lawson, 2008). Another purpose is that companies must accelerate the pace of innovation and compressing aspects of the process can offer new choices for organizations that may not have the resources of time and money available but still seek to engage in an interactive design process.

Reflection on C.R.E.A.T.E. model and methods. The first phase of the C.R.E.A.T.E. model places the onus of information gathering, understanding, and empathizing on the practitioner. The steps are not completed in a linear fashion but are all components used in the data gathering process and require the practitioner to continuously calibrate information in advance of establishing a point of view. In the Consider step the practitioner must reflect upon different perspective and develop an objective understanding of the challenges. During the Research step the practitioner must dive into the current state and system to uncover the depth and breadth associated with the interrelated aspects of the system. The Explore, Associate and Empathize steps are used to observe and understand the views through stakeholder stories and experiences that help the practitioner empathize with the human experience of the "user" or employee in the case of talent management. Finally, the Theorize step references the on-going

assessment process applied to the data and details related to the system and the VUCA environment.

The components in Phase 1 of the C.R.E.A.T.E. model have the power to deepen the practitioner's subject matter expertise so the contextual information can be provided along with a systems perspective to participants engaged in Phase 2. If used within an organization, the point of view can be socialized to increase understanding about the experiences of other companies and, if used across organizations, can generate a broader range of perspectives and context with which to apply the ideation process. With either stakeholder population the C.R.E.A.T.E. model allows the point of view to be established in advance of the ideation phase in order to move quicker into generating ideas and prototypes for the purpose of engaging dialog and sharing the wisdom of stakeholders and before testing and iterating potential solutions.

In the case of talent management, Phase 1 provided an approach to information gathering and the exploration needed to gain strong contextual information, including perspectives of constituents in relation to their experience as an identified "member" of talent as well as those who have direct responsibility for "managing" talent. The prevailing analytic process used when engaging with a client, whether as an internal or external consultant, relies on analysis to gain contextual understanding to inform the work or intervention (Schein, 1969). The C.R.E.A.T.E. process offers a different approach. Here the practitioner engages in deep research and exploration into the issues, considers different perspectives, and gives voice to the issues without just relying on the opinions of a client. The process of engaging in dialog with multiple parties and reflecting on the concerns of those parties with relation to, in this case talent

management, helped the practitioner empathize with the different stakeholders resulting in a point of view of the dynamic current state, or mess.

In the context of this study and recognizing that priming the participants or leading their thought process in a particular direction would compromise the data, the process was truncated as the groups were presented with the mess versus being offered additional time to establish common ground on the actual mess formulation. The model can be adjusted to provide for a period of interaction but due to the specifics of the case study it was important to offer just enough information to not prejudice the process.

The subsequent interactive planning process used to generate ideas for the ideal talent management system was successful. While the teams offered a range of results that are not evaluated or tested in this study, each design team followed the process provided to create a unique prototype, stakeholders offered a variety of stories and perspectives that informed the work of the group, the collaborative dynamics were supported through liberating structures and the facilitated environment, and they experienced a positive environment leading them to disclose openness to encouraging the process in their own organizations.

It was important to determine the effectiveness of the process at facilitating quick movement into the process of ideation. However, when applying the C.R.E.A.T.E. model as a practitioner in a more formal context, the results suggest it makes sense to allow time for the participants to better understand the facilitator's established point of view and apply systems thinking where they can react and even influence the final version to ground the mess formulation. Doing this may offer richer conversation with the understanding that the facilitator may also have to work harder to keep the participants

focused on the idealization process and mitigate those who potentially hold a greater desire to validate their own opinions and ideas.

In reflecting on how the C.R.E.A.T.E. model could be applied outside the research context, the suggested timeframe for facilitation is in Figure 5.1:

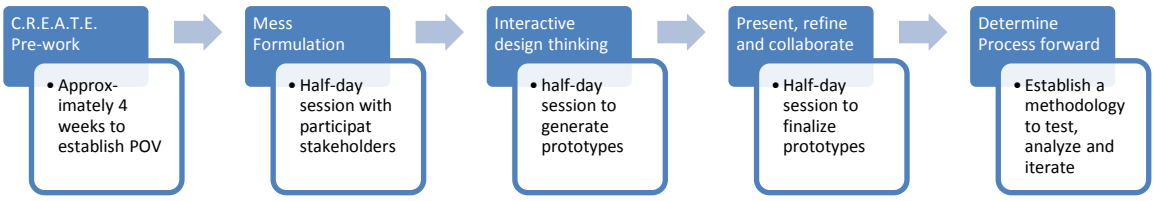


Figure 5.1 – Recommended Session Timeframe

Limitations of the study. This study's key limitations also revolved around its strengths, which included a session to capture the input and perspectives of participants across levels and across organizations, including consultants. The goal of determining how design thinking methods can be applied to an unrelated workforce population for the purposed of creating solutions that are generalizable did not allow the study to delve deeply into using C.R.E.A.T.E. with one organization or with an expansive stakeholder population. The qualitative design was important to unveil how the design thinking process can be modified to address a cross-section of constituents, but it was also limited with regards to sample size and selection, space limitations and room availability, all offering challenges to the research. Some challenges involved the difficulty generating committed participants for S1 and the random makeup of the final group offered limited opportunity to ensure they represented the target distribution of industries and stakeholder roles established. Samples that are not necessarily representative may not offer conclusions applicable to the larger business population (Creswell, 2014). In this

case, however, the goal was not to evaluate and test the prototypes but to discern the applicability of using the method to engage a diverse group in a generative space around a common issue. Although researcher bias was discussed, participant bias was inherent in the design and influenced the ideas participants generated that could not be controlled for. In addition, participants who volunteered of their time during regular business hours and offered their help to a doctoral student were probably motivated to engage and collaborate more readily than had their attendance been required.

Sampling limitations with regard to industry diversity and categories of stakeholders precluded insights from a more expansive sample population. Some examples of this include the fact that there were invited stakeholders that chose not to respond. This resulted in a sample with limited representation in the ranks of CEO, CIO, and CFO, and those engaged with data and analytics whose perspectives on technology would have been valuable. Other stakeholder groups that would have offered a more expansive view of talent management include educators who prepare workers through training-focused or traditional academic programs, vendors to organizations that manage talent or otherwise understand aspects contributing to the utilization of talent, and union members who represent industries inclusive of for-profit, non-profit, and government entities. Other groups such as policy makers from state and local governments or other organizations that influence workforce development, including funding for programs, could have offered a unique perspective as well as international stakeholder representation highlighting cultural components unique to their workplace environment.

Opportunities for the session design. Reflecting on the outcomes of the sessions, it was reassuring to see that groups of diverse stakeholders and those without

direct company allegiance could easily engage in the process of ideation and collaborate in such a way that they could experiment with new ideas. There were several opportunities reflected upon to better design the sessions. First, participants needed more time before entering into the act of designing prototypes to process and discuss their understanding of complexity and the issues at hand so they could coalesce around a common understanding of the mess presented by the facilitator. Second, provocative questions designed to pump the thinking of the group could have been used more intentionally and at specific times throughout the session for to engage participants and with the purpose of allowing "popcorn" ideas float out periodically to help facilitate a shift in mindset. Finally, recording the session activity would have allowed for a deeper analysis of how each group engaged in design thinking and would also create the opportunity to code the data.

Opportunities for future research. This case study applying design thinking to a cross-section of employees and organizations sets the stage for future research into how this method can propel innovative problem solving around issues of importance to the business and management community. One option is to employ a mixed methods research approach to obtain qualitative and quantitative data. For example, pre- and post-session interviews could uncover preferred methods of collaboration or idea generating, sentiment around collaborative interaction or even open-ended questions tapping into the level of awareness about trends or complexity could be used to add to rigor in sampling. In addition, assigning one process observer to each design team could generate richer data that could be used to code and evaluate each team's output to determine factors that facilitate or inhibit the design thinking process.

Another option would be to establish a method that reproduces the method by industry sector. This could be accomplished with an expanded case study that engages a wider and more intentional stakeholder group for the purpose of comparing prototypes by industry. Facilitating inquiry of this nature could be replicated in different countries to establish common themes more relevant to macro trends of globalization, workforce migration and demographics.

Additional qualitative studies could also be launched to further explore the participant experience. One example could be to test the time required to engage participants in the facilitator's point of view as a way to solidify the mess. Another example would be to engage in phenomenological research to understand the lived experiences of people who more easily display creative and innovative ideas, or respond positively to the design thinking activity.

Finally, macro and meso levels were only used to reveal, not analyze, themes but can be used in future research to study the change in how innovation can advance change in a socio-technical system (Geels, 2004). It would be interesting to look at the effectiveness of the design thinking process through the lens of gender, race, religion or other socioeconomic factors. Much research has already been done on diversity and inclusion in relation to problem solving, collaboration and decision making and learning about social aspects that can contribute to innovation could help management and leadership foster stronger teams.

Facilitator reflections. The energy required to remain on point and engaged during the session was greater than anticipated. Facilitation requires deep listening and monitoring progress to not allow participants to disengage or fall into dialog that

undermines effective collaboration or the ideation process. It was also important to reflect on my own distractions and be focused on the timing of each stage of the activity to keep participants moving and productive. Time-boxing activities are critical to ensure the facilitation of a difficult set of objectives is maintained (pmi.org).

Upon reflection, the teams would have benefitted from more time at the end of the session to refine their prototypes even further, react to others, and process the experience. The first session had a networking lunch at the close of the session. Most participants remained and processed the event through dialog with one another and also with the facilitator. The second session returned to their scheduled agenda although discussion ensued in the evening and several people asked follow-up questions throughout the conference.

The facilitation was successful although upon reflection other techniques could be used including methods unique to speed dating rounds where some members of the design teams could remain with their prototype while other members walked around commenting and asking questions of other design teams. Another facilitation technique to help with feedback across design teams could include allowing people to walk around and comment using sticky notes where they could edit, refine, or even question clarity of ideas.

At the end of the first session it was important to reflect on the facilitator process to become more aware of what was said and done that may have influenced the session. A four-quadrant map, similar to an empathy map, was created consisting of *thinking, seeing, feeling* and *doing* labels (Interactive Design Foundation website, n.d.). Each quadrant represented a different angle to reflect on the facilitator's role in the activity and

challenge assumptions and thoughts that took place throughout the process of engaging the stakeholders. The *thinking* quadrant reflected the facilitator's over-zealousness to keep track of and know the facts, to disclose to the audience her expertise and gain their trust that she had everything under control as they appeared unsure and lost at first. It also reflected the loss confidence from time to time wondering if the participants felt the session was worthwhile or a waste of time. The need to shake off periodic states of worry was also noted and concern for not following the process or if something was stated unintentionally to a team that could distract or derail their progress was highlighted. The *seeing* quadrant held reflections about the intensity with which the facilitator paid attention to the audience in order to moderate or accelerate movements and actions to keep people attentive and focused, or provide them more information as they needed. This skill was applied well in the first session although it was more difficult in the second session where participants were spread out across a much larger space requiring the facilitator to walk and pace more deliberately and even check for understanding using verbal prompts or visual contact. The *feeling* quadrant had the least amount of reflective information. It was difficult to both facilitate the sessions and be close enough to each table to get a strong sense of their reaction and response to the activity. The opportunity for CPI to videotape parts of the second session offered comfort that there would be a chance to go back and self-observe the facilitation and execution of the session but while the sessions were underway the facilitator had to rely on the tone and tenor participants used when presenting their output as well as monitor their laughter and words to capture snippets of their collaborative interactions. This would have been much more effective if a process observer was stationed at each table.

However, posing this as a potential option to some participants after the second session resulted in their expressing that a person not involved, but "watching" would have made them uncomfortable and probably less open to sharing because they would have felt judged. Finally, the greatest amount of input was found reflecting on the *doing* quadrant. Offering a safe space where confidentiality was expressed and the idea that they were being asked to innovate which was described as creating unfinished work seemed to give courage to the process.

The facilitative power of the expert may be passed on to the participants when liberating structures are established in the form of trust, boundaries and space, and the invitation to create and focus on a common goal (Liberating Structures website, n.d.). Design thinking is also a liberating structure for systems thinking as it is a method that is unrestrictive in its goal to engage the whole system to allow ideas to emerge. In fact, the methods used during the design thinking sessions that included participants telling stories, listening, asking big questions and inviting participants to innovate and harvest output in the form of rapid learning and prototype cycles are similar to the ten principles of liberating structures advocated by Keith McCandless and Henri Lipmanowicz who helped bring complexity science into organizational activities and whose work is integrated into activities of the Plexus Institute (Kimball, 2012; plexusinstitute.org, n.d.). It was important that the sessions consist of well-tested facilitation methods successfully used to engage and motivate participants. Observing the collaborative behaviors during the sessions was evidenced by formal and informal communication patterns that appeared fluid, inclusive, and interactive.

Some of the most prominent questions and comments presented by participants highlighted their comfort with the rational-analytical approaches normally applied in their business environment. The activity was recognized by many as brainstorming which seemed to be a more familiar activity although most expressed experience brainstorming a solution to a specific problem and never coming up with a specific prototype. The teams were observed engaging well in this activity but were noticed avoiding concepts where the members lacked information or knowledge about some of the identified trends. Mostly with regard to technology, opportunities exist to more thoroughly present information around unfamiliar concepts to redirect their thinking and require time that was outlined in the recommended timeframe provided above. This could be done using a variety of tools. For example, videos may have been an effective way to show the participants advances in the use of data analytics or to represent stories of pockets of the workforce changes as a result of technological advances. If resources were available it would be interesting to engage participants in an interactive opening that included multiple audio-visual and storytelling opportunities to personally engage participants with the complexity and help further facilitate thinking in systems. However, there were as many that seemed to struggle with abstract concepts as others who seemed unfazed by information they were unfamiliar with.

The C.R.E.A.T.E. model and design thinking process succeeded in drawing out new ideas from all distinct design teams centered on aspects that could highlight opportunities for a new talent management system that offer new options to consider in light of the conflergence of macro trends and mostly pointing to the center of the system being represented by the personalized needs of the employee. The facilitation easily

moved the participants in a creative space that quickly engaged them successfully in design thinking even though most in the room would benefit from taking more time to practice systems thinking. Opportunities exist to improve the design and add an activity to help them not just see complex entities as interacting, influencing and being influenced as was done through the presentation, but also provide additional time to process and engage in dialog about the system to further help shift their mindset. Most members in S1 appeared to struggle to remove themselves from the organizational structure they were part of while those in S2 were observed to have an easier time focusing more on the whole and less on the organizational parts. It was anticipated that the prototypes would resemble a more traditional top-down system but in the end, this was not the case. Most prototypes represented decentralized management or team-based production systems that service the needs of the employee rather than the needs of the master. With more time it would have been interesting to open up the dialog on this new way organizations are beginning to be governed and how the creation of a holacracy could be aided by AI and its potential influence on decision-making (Bernstein, Bunch, Canner, & Lee, 2016).

Conclusion. The key themes that emerged from both sessions and discussed in Chapter 4, supported the research questions. The collaborative process used in design thinking helped to increase participant perspectives leading to a heightened awareness about issues that cross industries and companies. They were capable of generating ideas that had similar themes across design teams implying the solutions are generalizable across industries. And, aspects of the talent management systems map on nicely to the deep work done by futurists and thought leaders who focus their attention on the future of work in light of (mostly) AI and machine learning (http://thefuturesagency.com). While

opportunities to access the time to engage in knowledge sharing or networking across industries are not always available, design thinking can serve to spark a wider perspective of the conflergence of macro trends and their impact on the workplace of the future.

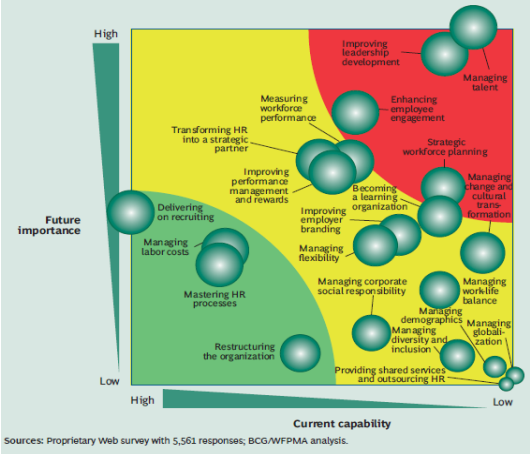
The process of design thinking supports understanding that the reductionist approach to problem solving is not the only way to consider solutions and, while still important in everyday simple and complicated challenges of the organization, it is limited when solving issues of complexity where the practice of design thinking may be offer up emergent ideas that are more effective because they apply systems thinking in the solutions. The opportunity to engage in systems thinking is critical to understand how to address talent management and cultivating these ideas take time but the time can be compressed if applying the C.R.E.A.T.E. model that allows the practitioner to facilitate the dissemination of the point of view.

It is critically important that the process of intentional relationship-building strategies be included into the method, including building common ground, rules of engagement, and that the creation of an environment conducive to collaboration is not be short changed. Using liberating structures that emphasize the value of stakeholder perspectives over the perspectives of the facilitator or expert creates an experience that emphasizes a work-in-progress mindset and the iterative nature of innovation, and creative solution seeking.

APPENDIX

Appendix A: Talent Management Frameworks

Boston Consulting Group (BCG.com)



Human Capital Institute (http://HCI.org)

Bersin by Deloitte (http://home.bersin.com)

MIT/Sloan School of Business (http://sloanreview.mit.edu)

Society for Human Resource Management (https://blog.shrm.org/blog/certify-this-the-role-of-competency-based-certification-in-hr)

Appendix B: Current Reality Tree & Evaporative Cloud

Adena Johnston

Undesireable Effects (UDE)

1. A bias exists that younger workers are more productive and more innovative
2. Tacit knowledge is lost
3. Insufficient resources are invested in older workers
4. Intergenerational collaboration is difficult to achieve
5. Older workers are disengaged
6. Reduction in Force (RIFs) disproportionately impact older workers

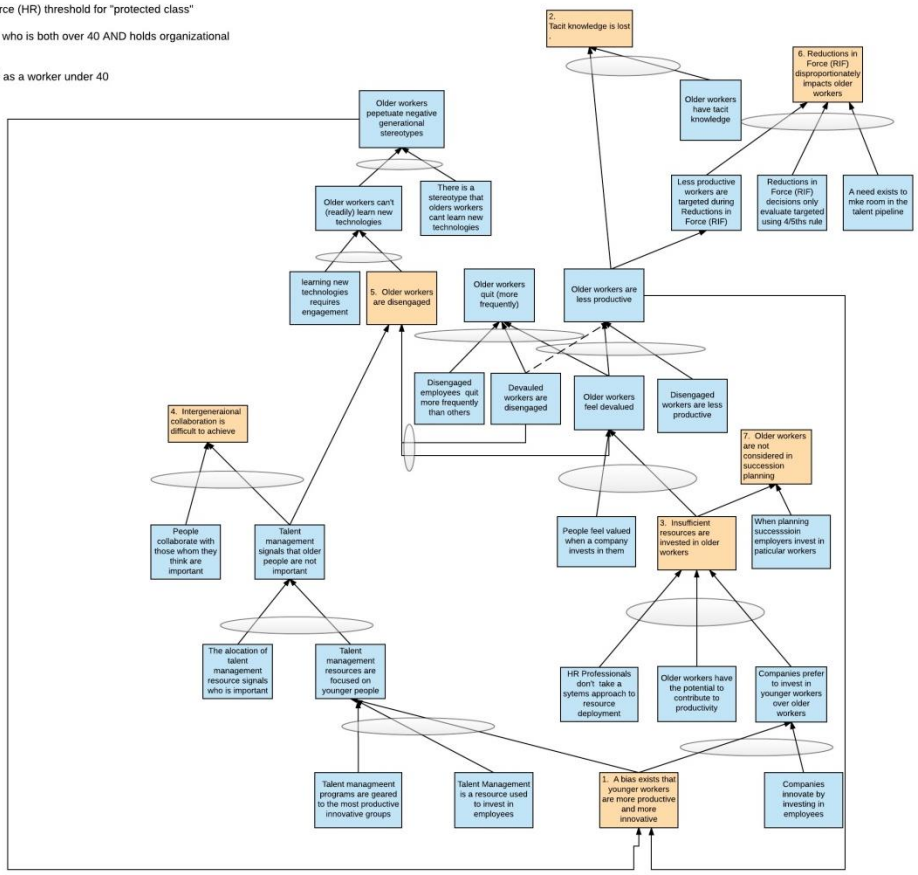
Definitions

Age 40 is the Human Resource (HR) threshold for "protected class"

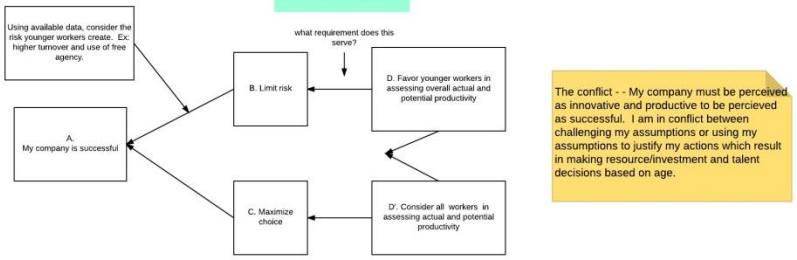
An Older Worker is a worker who is both over 40 AND holds organizational knowledge

A Younger Worker is defined as a worker under 40

Current Reality Tree



Evaporative Cloud



Appendix C: Invitation to Participate

Dear Organizational Leader:

My name is Adena Johnston and I am inviting you to participate a workshop to address the complexity facing how we manage talent. This workshop is intended to fulfill the requirements to complete my Doctorate in Strategic Leadership at Jefferson University. The focus of my research is on the application of design thinking with stakeholders across organizations and I am asking for you to participate in this project.

In addition to being a doctoral student I am a Talent Development consultant with over twenty-five years of leadership experience. I am confronted daily with challenges organizations face trying to gain the competitive advantage necessary to compete in today's world of shifting demographics, globalization, and technology while simultaneously implementing strategies to address such issues as the employee experience, succession and knowledge transfer.

Should you agree to take part in my research, you will participate in a workshop conducted by myself and assisted by Dr. John Pourdehnad along with members of my program. The workshop will create a generative space to clarify issues and opportunities in talent management, and germinate ideas and possibilities that may shift the current model and approach currently used by organizations.

There will be two workshops of which you are being asked to take part in only one. The first workshop will be with a cross-section of stakeholders and thought leaders who work for companies. The second workshop will be with a cross-section of consultants throughout the US and Canada. In each session the output will be collected and synthesized. No audio or visual recording devices will be used and the identity of the participants and their organizations will remain confidential. You may withdraw from participation at any time and for any reason, without being asked for any explanation.

As part of the study you will receive an executive summary report of the output of both sessions in exchange for you taking the time to respond to a brief evaluation of your experience.

Collaborating with other thought leaders will add value to the how organizations address managing talent in an increasingly complex environment. There is no compensation or cost for participating, and you have the opportunity to attend an interactive design experience valued at $650 per participant. Food and refreshments will be served along with a chance to network.

You are invited to the first of two workshops. Space is limited, so if you would like to attend and contribute to this research, please email me at adenajoh@gmail.com or call me at 215-896-0034.

Regards,

Adena Johnston, MA, MSOD, ACC

Appendix D: Participant Sign-In Sheet

University: *Thomas Jefferson University, School of Continuing & Professional Studies*
Title of Project: *Applying Interactive Design Method to Address the "Conflergence" of Macro Trends*
Thesis Advisor: *John Pourdehnad, Ph.D.*

This document acknowledges that I am serving as a voluntary participant in a design thinking workshop on September 15, 2017 and in support of Adena Johnston's Doctorate of Management in Strategic Leadership at Jefferson University.

I further understand that:

- I will be observed in action and the output generated from my participation will be used in Adena Johnston's dissertation.
- I will not be subject of psychological, social, physical or legal risk.
- My participation will not involve tests or instruments.
- No personal or business intelligence will be requested.

Name (printed) _____

Signature: _____

I agree to allow my name and title to be referenced in Adena Johnston's doctoral thesis _____ (initials).

Appendix E: Design Thinking Challenge and Ground Rules for Collaboration

Design Thinking

Design thinking is an iterative process that is, at its foundation, a way to explore areas previously not considered. In fact, in business, we tend to center on our own culture of ideas and engage in a recursive process of trying things we have done before, differently.

Today is about creating a lab for swarming or crowdsourcing. It is about building on each other's ideas without the confines of our own companies and constraints.

✸ ✸ ✸

Your Challenge

Apply *Design Thinking* and a systems perspective to establish the ideal talent management system.

- Being **OPEN** and reflective.
- Moving into the **WISH** mode.
- Expressing how the system **OUGHT** to be.
- Refraining from pushing **OLD** ideas.
- Generating a **NEW** bar.
- Releasing **NEGATIVE** assumptions.

Your System must be:

- ✓ **Desirable**
- ✓ **Technologically Feasible**
- ✓ **Operationally Viable**

✸ ✸ ✸

Ground Rules for Collaboration

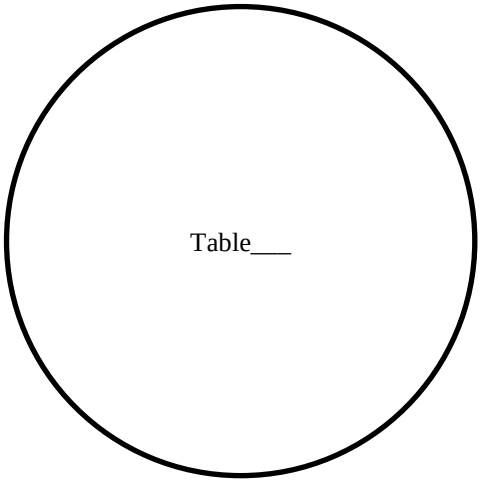
Social Skills: taking turns, equal participation, calm voice, politeness, appreciation statements, waiting your turn, encouraging others.

Communication Skills: attentive listening, paraphrasing, seeking clarification, accepting and extending the ideas of others, probing.

Critical Thinking Skills: Suspending judgment, examining both sides of an issue, considering all factors, disagreeing in an agreeable manner.

Appendix F: Observational Protocol

		TO WHOM					
		Person 1	Person 2	Person 3	Person 4	Person 5	Person 6
WHO	Person 1						
	Person 2						
	Person 3						
	Person 4						
	Person 5						
	Person 6						



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