



Applied Change Project

Cohort 6

Final Paper

Schneidemann, Oliver

Teachers College, Columbia University, New York, NY

XMA Cohort 6, April 17, 2017

Correspondence address:

os2303@tc.columbia.edu



This paper satisfies one requirement for an M.A. Organizational Psychology degree with Teachers College at New York's Columbia University. It is based on an applied change project (ACP) taking place within the student's employer organization.

Section 1: Research Question

The question examined for this ACP is *Determine if there are barriers that slow down the organization's innovation engine, and validate whether steps can be taken to shift the organization into higher gear.* Topics for consideration in the ACP surfaced during two meetings with the client and included trust in leadership, team seniority, the group's skill set, talent development, and succession planning. However, the need for the client's team to remain adaptable when managing demand for its services appeared as a central theme.¹ When I pointed this out, the client decided to focus the ACP on *innovation*. The decision was also informed by two recent executive memos, which highlighted the need to be efficient and innovative for the firm to remain competitive.

The ACP is grounded in the assumption that the company's United States (U.S.) and Canada Information Technology (IT) management team is not using an innovative mindset as often as it could. IT is a key enabler in the firm, and the IT team is expected to contribute original if not ground-breaking solutions to support the business' objectives. Yet, the team emphasizes keeping up with maintenance work, defaults to proven methods to solve problems, and mainly leverages the existing solutions repertoire to address business needs. There is seemingly no time for innovation. As will be shown later, team members reasoned in various ways why it is challenging to innovate.

¹ In this paper, I am not using the terms *agile* or *agility* when describing an organization's responsiveness to client needs (whether such clients are internal or external). Agile principles often have a specific meaning for technologists and describe development processes used to build technology solutions (e.g. *agile software development*). Holbeche (2015) defines "organizational agility" as "an organization's ability to develop and quick apply flexible, nimble, and dynamic capabilities" (p. 11). See also later discussion of adaptability (Heifetz, Grashow, & Linsky, 2009).



Such reasoning might represent “covert” (Marshak, 2006, p. 22) actions used to cope with business expectations, resource constraints (staff/funding), and the intensity of the daily workload.

As is the case with firms in most industries, competitive forces (Porter, 2008) affecting the enterprise may require support organizations such as IT to find novel ways to meet business needs and solve problems. As Heifetz, Grashow, & Linsky (2009, Chapter 2, Section 3, para. 1), Johansson (2006, p. 41), and Mootee (2013, p. 54) observed, relying on historical experiences will not always lead to the right approach to meet business expectations. An orientation toward innovation is essential to generate ideas since new challenges typically have no past.

Mesaglio & McMullen (2011) highlighted the different views enterprise stakeholders may have on innovation. IT’s role, for example, is “critical to maintaining the status quo.” Business stakeholders “demand innovation” but habitually take a near-term view and fail to provide funding or “enough data to work on innovative answers to opportunities or persistent problems.” Mesaglio & McMullen propose several innovation success factors: emphasize “value proposition” and “purpose” when communicating an idea, build a team with technical and non-technical skills, establish close relationships with stakeholders whose engagement is vital, tailor communications for each set of stakeholders, and build credibility and “trust” by initially delivering “small innovations.”

Task focus can create barriers to innovation since proficiency with repetitive tasks does not mean a team has a knack for developing original ideas. This proposition led Galbraith (1982) to make an argument for dedicated innovation teams, with “role structure,” “key processes,” “reward systems,” and “people practices” (pp. 5-6). The basic configuration of innovation teams is thus not materially different from those conducting regular business operations. The difference, Galbraith (1982) proposes, is functional autonomy of the innovation team (to ensure focus and allow testing



of “crazy ideas”, p. 11), liberation from the controls environment (to prevent the throttling of inputs), and a phased method for transitioning innovations into regular business operations (which is mainly a factor if their introduction creates a variance within the existing business operations model;² pp. 11-14). Galbraith (1982) sees the innovator’s profile as that of a goal-driven and risk-tolerant individual, who is discontent with “the status quo,” at times an “outcast,” and possesses “industry knowledge” (pp. 21-22). Organizations that approach innovation with intentionality, commit resources, provide freedom for experimentation, and attract relevant talent, Galbraith (1982) emphasizes, increase their facility for “generating and developing new business ideas” (p. 25).

Kuczmarski (1996a), who took a product development perspective, notes that dedicated teams are “critical for success.” He proposes nine additional “innovation insights” for senior leaders’ consideration: tolerate false starts, be strategic about ideas, use a defined product development process, link results to rewards, ensure senior leader involvement, track value creation over time, ensure variety of the product selection, start with understanding customer needs/wants, and establish incentives, values, and norms that influence the innovation team’s performance (pp. 10-11).

But what is *innovation*? Man (2001) observed that “the terms innovation and creativity are often used interchangeably.” He asserts that “true innovation” is different from attending reactively to today’s most pressing issues, in that innovation is “groundbreaking,” has “high impact,” and “[creates] value” (pp. 229-230). Rosenfeld & Kolstoe (2006) linked innovation and human predicaments and observe that “Problems precede questions, which precede the thoughts that generate ideas” (p. 40). Innovation is people-dependent and usually begins when someone identifies an issue or is in a difficult situation. Innovators “[wonder] about things” (p. 38) and research, test,

² In comparison, Galbraith (1982) provides an example where a staged transition into regular business operations was not required since the innovation remained self-contained, as an independent business.



and evaluate “until something different or better was produced” (p. 38). Some innovations satisfy “a perceived need” while others are discovered by accident when their “conception is incidental to another problem being solved” (p. 38). Hirst, Van Knippenberg, & Zhou (2009) also took a problem-centric view and define creativity as “a process in which employees develop novel and useful solutions [sic] to challenges and problems encountered in goal pursuit” (p. 281). Amabile (1988); Hammond, Farr, Neff, Schwall, & Zhao (2011); and McAdam & McLelland (2002), similar to Galbraith (1982), separated the *formation of an idea* (creativity) from its *application in context* (innovation/implementation). Hammond et al (2011) also distinguish perfect from qualified originality since innovation can mean applying a new idea *or* deploying a practice “already in use elsewhere” (p. 91). The major points are that addressing a problem or opportunity rarely ends with the creation of a new idea, and that a solution needs not be original if we can reuse something that serves the purpose.

Individual’s creative skills can be understood based on Guilford’s (1966) characterization of “intellectual abilities potentially most relevant for the assessment of creative disposition” (p. 188).³ Creative skills are relevant to innovation since idea formation and application in context (see Hammond et al, 2011) are unlikely without consideration of variety (to identify suitable ideas), association (to ensure fitness/compatibility), complexity (to ensure completeness), class-change (to grow available options), reinterpretation (to adjust to context), or elaboration (to ensure applicability). Table 1 summarizes Guilford’s (1966) viewpoint.

³ Guilford’s (1966) article discusses intellectual abilities in service of creativity and proposes how to measure them.



Table 1: Guilford's intellectual abilities for creative disposition

Fluency	Flexibility	Elaboration
producing a variety of unitary thoughts or ideas	facility for going from one class [of ideas] to another ... to list unusual uses	ability to ... suggest a number of ... different aspects of [a] plan
[associating] relations ... [using a] list of things similar to a given idea	flexibility [for] shifts of meaning or reinterpretations in the service of problem-solving	
[producing] a number of complex, organized ideas		

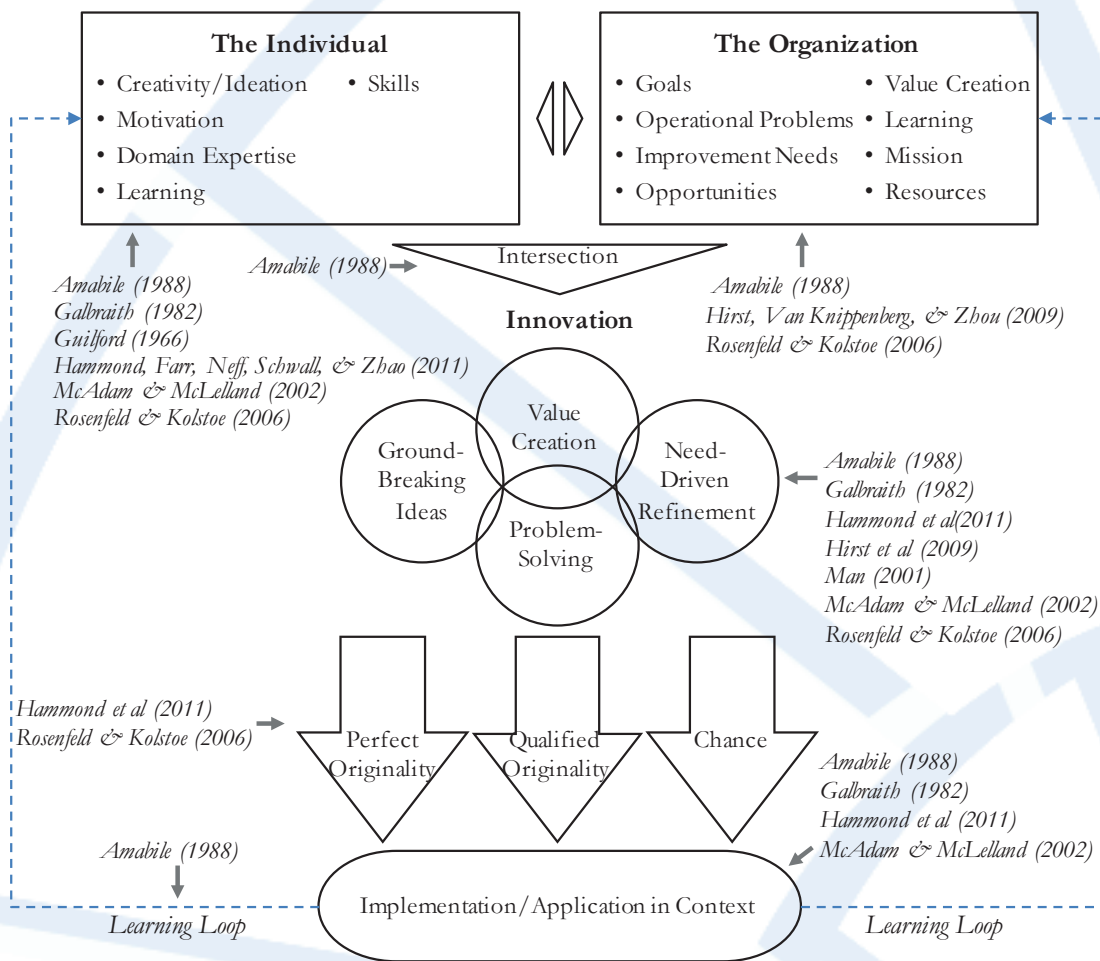
Amabile (1988) argued that an *individual's* innovation capacity is crucial to organization innovation, but not in itself sufficient since the organization's environment can inhibit or promote innovation (pp. 146-148). She highlights the "Creativity Intersection" (p. 155) at which organization facilities (mission, resources, ideation and go-to market processes, tendency to welcome innovation, etc.) and individual abilities (cognitive skills, domain knowledge, motivation, etc.) meet. In individuals, high motivation can make up for task knowledge deficiencies, but low motivation cannot be offset by high ability (p. 133). This means that motivation drives application of domain expertise and creativity skills and is influenced by the work environment. And while intrinsic motivation⁴ is suitable for "heuristic" problem solving (where new methods are explored, p. 134) and preferred to extrinsic motivation,⁵ extrinsic motivation has its place to resolve issues algorithmically (where familiar methods are used, p. 143). Such problem solving may involve trials

⁴ Hirst et al (2009) defined intrinsic motivation as "interest in the task itself ... [leading] to a deeper and more intensive engagement" (p. 281).

⁵ Citing VandeWalle (1997), Hirst et al (2009) defined extrinsic motivators as "factors such as competing..., receiving rewards, acknowledgement, or avoiding criticism" (p. 281).

and refinements that, depending on successful or unsuccessful outcomes, have positive or negative implications for an individual’s motivation. These trials can result in learning “loops” (p. 141) and enhance individual and organizational innovation capacity – if the innovator is incentivized to try, fail, and try again. The relationship between selected concepts discussed above is depicted in Fig. 1.

Fig. 1: Concepts relating to creativity, learning, organization facilities, innovation application





Nature of the question

The research question is *descriptive* and the research strategy uses a *survey study* (Perry, 2016). When the client decided to focus the ACP on innovation, he shared that he believes that the IT management team is not using an innovative mindset as often as it could. The ACP therefore seeks to understand the team's orientation toward innovation and inform an intervention to enhance its innovation mindset.

Because no examination has ever been undertaken with this team to determine if there are barriers to innovation, the client and I agreed on two principles. First, the question is presented to the IT management team in a kickoff meeting as an *assumption*. We thought that making a proposition instead of arriving with a foregone conclusion achieves two things. One, it invites the team to confirm, refute, or revise the assumption about a lack of innovation focus. Two, by including the team in the decision-making about the ACP's focus, we secure their support since "involvement leads to commitment" (Burke & Noumair, 2015, p. 25). It is worth noting that presenting the research question by describing a problem is not consistent with Schein's (1999) "appreciative inquiry" (p. 56). The words *barrier* and *slow*, for example appear in the question and convey a possible deficit. To bring positive aspects of a situation to light, we require diagnostic questions "that emphasize what is working, what makes the client feel good, what her goals and ideals are, and where she wants to go." (p. 58). Schein (1999) cautioned, "If we start with a problem orientation, we are more likely to follow up with questions that highlight what is wrong" (p. 58).

For the second principle, the client and I agreed that the next step should be to seek to understand "how things are" (Perry, 2016). "Structured interviews" (Sekaran & Bougie, 2013, p. 119) and a survey (p. 124) should be used to gather data.



The client chose ten U.S. and Canada based members of the IT management team for participation in the ACP. The sample is therefore “purposive” (Sekaran & Bougie, 2013, p. 252). The group has additional responsibilities extending its footprint into other locations and, initially, team members in other regions were considered, too. Though ultimately the ACP has been limited to the U.S. and Canada regions. Focusing the work locally as a trial allows sharing learned lessons with other regions at a later point. Regional priorities and role specialization also made participation of team members in Latin America and the United Kingdom (U.K.) impractical. Whether (and which) cultural differences require examination will have to be determined separately, should lessons from this ACP be re-used elsewhere.

Lab or field experiments (Sekaran & Bougie, 2013, p. 101) were not considered in the study’s design. Creating an “environment in which all the extraneous factors are controlled” (p. 101) is not practical since IT management team members are expected to continue performing in their jobs while the ACP work takes place. The project also does not seek to establish causality using dependent and independent variables (Sekaran & Bougie, 2013, p. 70), such as individual performance in relation to business performance. The project is predominantly a leadership development program: participants are encouraged to integrate learning from the initiative with daily job responsibilities to improve their own and the organization’s capacity to innovate.

Relevance, meaning, and importance to the organization

Merely developing a better understanding of the IT management teams’ innovation mindset is not the sole focus of the ACP. Already during our second meeting, the client expressed the desire to improve the team’s ability to provide *innovation leadership*. We agreed that a training intervention is crucial to augment the team’s grasp of innovation as a concept and mindset.



Employees' basic tendencies to choose one way to contribute to the organization over another –the mindset– can obstruct or benefit innovation. Hirst et al (2009), for example, describe a person's "Performance Orientation," where the organization context causes the individual to modulate "behavior" to avoid "punishment" (p. 283). Since innovation requires creativity (Amabile, 1988; Galbraith, 1982; Hammond et al, 2011; Hirst et al, 2009; McAdam & McLelland, 2002) and at times originality (Hammond et al, 2011; Rosenfeld & Kolstoe, 2006), it is unlikely that a mindset defaulting to risk-minimization produces outcomes that were never tried before. Innovation is more likely to happen when employees are willing to challenge circumstances (Galbraith, 1982, p. 21) and are "[open] to experience" (Hammond et al, 2011, p. 92). These are two qualities that make up the right mindset for innovation. I will return to selected aspects of the innovation mindset later.

A few members of the client's team also believed that innovation has a single prerequisite: funding.⁶ Nothing could be further from the truth. Consider, for example, Fenn's (2015) proposed six "styles" for innovation teams: exploring possibilities to guide potential users ("Navigator"); researching and evaluating, at times in conjunction with external parties ("Scholar"); providing capacity for reactive problem solving ("Responder"); spearheading ideas and possibilities ("Counselor"); facilitating cross-unit information sharing ("Conductor"); and driving adoption of innovation used elsewhere in the organization ("Pollinator"). Depending on a team's style, a unique blend of leadership, skills, and management practices may be required. In its most optimal form, innovation capability is supported by roles, processes, and incentives – along with functional autonomy, a flexible controls environment, and a suitable transition process (Galbraith, 1982, pp. 11-14). Thinking about funding as the only prerequisite for innovation is short-sighted.

⁶ I expected that selected team members might believe that funding is the sole prerequisite. I heard similar statements in other contexts before the work in the ACP began. Comments overheard during interviews conducted for the ACP confirmed the expectation.

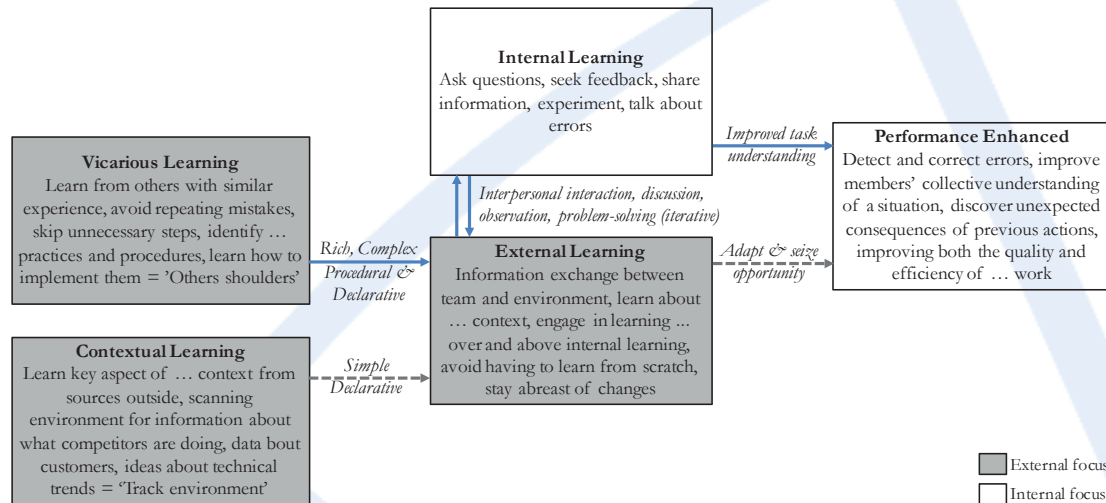


To promote the right mindset in the IT management team, the client thought that an intervention should take its members out of their familiar environment. He envisioned a day-long workshop at a cloud, web search, and advertising company that is regarded as highly innovative. During the workshop, the team should learn about innovation by experiencing *innovation mindset in-action* so that it could expand its *innovation leadership* capacity.

A few definitions are useful at this point. I will begin with *learning*: Lachman (1997) explained that individual learning happens when we interact with our environment through our “senses” and when external stimuli cause a “modification” in *how* we interact (p. 479). He notes that learning is a “process” that is separate from “biological growth and development” (p. 479). Mitchinson & Morris (2012) wrote that successful leaders make learning a constant part of their life. Effective learners, they argue, remain adaptable to circumstances, “make meaning from ... experiences,” “let go of entrenched patterns of behavior,” and “recognize the nuances in different situations” (p. 2).

External learning was discussed by Bresman (2010), Chan, Pearson, & Entrekim (2003) and Edmondson (1996). Edmondson’s definition (“extent to which the team engages in behaviors such as seeking new information or asking ... for feedback; ... is viewed as working to improve its team processes or performance,” p. 166) takes an evaluative perspective and is thus outcome-focused. Bresman (2010) and Chan et al (2003) examined the relation between learning activities and team performance. They suggest that team learning is most impactful when external observation precedes internal learning *and* application of what was learned. Bresman (2010) cautions that learning from others without sufficient internal learning can affect team performance negatively (p. 15). Fig. 2 summarizes how he sees learning improving task understanding.

Fig. 2: Bresman's perspective on team learning⁷



Bunderson & Sutcliffe (2003) examined “group learning” in combination with “performance orientation” (p. 553). They propose the following implications of a team’s primary orientation:

A group learning or performance orientation reflects a shared understanding of the extent to which a team emphasizes learning or performance goals, and, consequently, helps to facilitate group decision making, collaborative problem solving, and intragroup coordination that maintain the group’s emphasis on learning or performance goals (p. 553)

Edmondson (1999) wrote along those lines about group members’ “psychological safety” (p. 350). She describes team learning as “an ongoing process of reflection and action, characterized by asking questions, seeking feed-back, experimenting, reflecting on results, and discussing errors or unexpected outcomes” (p. 353). The study highlights that one’s belief about psychological safety in the team impacts learning. There is, for example, a link between perceived safety and an individual’s

⁷ Adapted from Bresman (2010).



“tolerance of imperfection and error” (p. 376). Safety makes it acceptable to confront faults, cultivates learning, and improves performance. Low safety causes “reluctance to ask for help” (p. 375), hinders learning, and hampers performance. Raes, Kyndt, Decuyper, Van den Bossche, & Dochy (2015) came to similar conclusions. Their work examines the relationship between a group’s performance maturity over time (p. 8) and “team learning behavior” (defined as “team members ... refining, building on, or modifying each original offer” and “elaborated discussions ... triggered by expressed diversity,” p. 10). This study reveals that effective team learning takes place in groups that moved past the initial stages during which there is concern about “acceptance” and “power” (pp. 10-11). Mature groups “trust” and “disagreements are no longer taken as personal rejections” (p. 11). At their peak, they are “capable of, [sic] dealing with conflicts and engaging in team learning” (p. 12) and experience psychological safety (p. 21). In summary: individuals who wish to contribute an idea (creativity) or ask a question (learning) but fear consequences may not speak up. Those who do not fear mistreatment create and learn, and the team is more likely to perform well. Teams that learn internally and externally improve their performance. Notable is that *successful* groups can get attached to ideas that are known to work (Bunderson & Sutcliffe, 2003, p. 554). Mature successful groups that perform well over time may need to guard against progressively diminishing creative and learning performance.

The next definition considers leadership in relation to innovation. Fleishman (1953) reduced leadership to “Consideration” (for group member emotions) and “Initiating Structure” (activities designed to ensure “goal attainment,” including organizing and communicating, p. 2). He does not specify “the degree of each kind of behavior that is desirable or undesirable” (p. 6), though it might be pointless anyway to consider leadership styles in a mutually exclusive way. As suggested by



Somech (2006), the literature indicates that leaders can develop high-performing teams by alternating “directive” and “participative ... styles” (p. 135). Effective leaders know how to modulate their behavior by adjusting to the context. This is consistent with Open Systems Theory (Burke & Noumair, 2015), which says that a system and actors in it are “influenced by [the] environment ... and also [affect the] environment” (p. 119). Zaleznik (2004) recognized the abilities to “[actively influence] ideas,” “influence [people by] evoking images,” and “[relate to people] in more intuitive and empathetic ways” as essential leader traits (pp. 76-78). A seeming contradiction is that effective leaders also “feel separate from their environment” and do not rely on “social indicators of identity.” Managers, in contrast, work with people to accomplish results, are “passive ... toward goals,” are busy aligning “opposing views” (which entails making concessions), and seek to enhance their “sense of self-worth” by maintaining the organization’s “existing order of affairs with which they personally identify and from which they gain rewards” (p. 79). Hogan, Curphy, & Hogan (1994) contended that “leadership matters” (p. 494) and that it “involves persuading other people ... to pursue a common goal,” which is achieved by “building cohesive and goal-oriented teams” (p. 493).⁸ To keep the IT management team thinking about its *innovation leadership* role throughout the ACP, I recommended periodic meetings for reflection (Schön, 1987, p. 31) to discuss related ideas.⁹

The last definition pertains to the *innovation mindset*. What does it mean whether an organization or individual has an innovation mindset? Kuczarski (1996b) described the innovative *organization* as having “developed a mindset that permeates every aspect of its business ... a pervasive attitude, a feeling, an emotional state, an ongoing commitment to newness” (p. 9). Man (2001) proposed three factors that “trigger” the organization’s innovation mindset. One, evaluating people

⁸ They also found that leaders fail more than 50% of the time. A deteriorating economic environment can be one reason. Others include a poor match between person and role due to “Invalid selection procedures” (Hogan et al, 1994, p. 496) or a “personality defect or character flaw” (p. 499).

⁹ As will be shown later, reflection meetings were used to examine a variety of innovation and ACP-related subjects.



or equipment's performance and identifying variations to agreed performance levels. Two, "right brain" thinking, portrayed by Pink (2005) as "synthesis, emotional expression, context, and the big picture" (p. 25). And, lastly, "action learning," where solutions are tried in real-world scenarios (Man, 2001, p. 232).

A characterization of an *individual's* innovation mindset can be derived from Hammond et al (2011). Their meta-analysis shows how certain attributes ("individual differences, motivation, job characteristics, and contextual influences," p. 90) can be used to make prognoses about innovation performance. "Individual differences" include descriptors such as "confident, individualistic, insightful, inventive, original, and unconventional" (p. 91).¹⁰ Hammond et al (2011) write that an individual's "tenure and education" do not predict performance (p. 97) and that "Creative personality" (p. 91) and "openness to experience" (p. 92) are moderately useful. Intrinsic and extrinsic motivation, in contrast, are good predictors of "innovative behavior" (p. 98). "Creative self-efficacy"¹¹ is particularly relevant to making prognoses (p. 100). Similarly, Hirst et al (2009) studied "team learning" and "individual differences" (p. 280-281). They propose that the environment provides "cues" (p. 283) that influence an individual's orientation towards learning/performance, that "team learning behavior" affects the relationship between a person's "goal orientation" and "creativity" (p. 288), and that creativity can be encouraged to "a certain point" (p. 289). In other words, when the context promotes development of competence over demonstration of results, the individual is more likely to learn, pursue goals, and be creative. However, creativity diminishes at "higher levels" of learning (p. 290).¹² We can look again to Bunderson & Sutcliffe (2003), who may have found an explanation for this phenomenon. They note that *less successful* teams that exhibit a

¹⁰ "Job characteristics" and "contextual influences" are not discussed since this section of the ACP paper is concerned with the individual.

¹¹ The knowledge or confidence one has about one's ability to perform and create a preferred outcome, see p. 92 in the article.

¹² Article does not propose how managers could avoid reaching that "certain point" to avoid higher levels of learning impacting creativity.



learning orientation produce a wide variety of ideas. *Successful* teams with a learning orientation also develop original and diverse ideas. Eventually, however, they get attached to successes, default to solutions that they know work, and discard unfamiliar options to protect their reputation (p. 554).¹³ This could mean that leaders need to consider assignment variety and job rotation in addition to encouraging learning and using motivation to limit the diminishing effects of learning. For example, employees with a high goal and learning orientation working in creative, high performing teams could be reassigned to less successful teams with learning potential.¹⁴ While the reassignment might feel like punishment (and it should be explained why it is not), it could provide a fertile ground for the *innovation mindset*, assuming a good person-role-domain match.¹⁵

The ACP is relevant to the client since, per his own assessment, the IT team has the potential to use innovation effectively when responding to demand for its services. Professional services firms, such as the client's company, react to market demand for advisory, transactional, or business intelligence services (First Research, 2016). Being able to win a client contract may depend on the firm's ability to deploy talent, expertise, and technology. When services are sold that require technology enablement, the internal IT organization may be requested to provide the capability. *That is when the IT team may need to be able to innovate.* Because of the ACP, the IT management team is being inspired to engage in discussions, learning, and reflection about innovation. We (the client and I) observed after the first team meeting that team members had become energized about innovation due to our work together. Plausibly, the IT management team will be able to approach future problems or opportunities in novel ways. Hopefully the post-intervention survey validates this.

¹³ Bunderson & Sutcliffe (2003) also note that teams that minimize learning are inefficient and more tolerant of suboptimal solutions.

¹⁴ Implicitly, this means that low performing teams with no interest in learning most likely need to be disbanded.

¹⁵ No indication provided by the authors how leaders could manage a team's learning orientation; they also note that they are not suggesting that successful teams should stop learning.



Section 2: Literature Review and Theoretical Model

This section covers the primary theoretical framework used in the ACP, discusses why it was selected, and describes how the framework informed the research question.

The “Burke-Litwin Model of Organizational Performance and Change” (Burke & Noumair, 2015, p. 148) guides the work throughout this ACP. During our second meeting, I introduced the client to the model and selected Organization Development (OD) concepts. This was necessary since I am an employee of the client’s company and part of my role is to implement project management and change delivery standards and methods. I frequently interact with the client’s team to ensure that project plans incorporate change delivery plans. For the ACP, we pursue a different kind of work. I had to ensure that the client understands that an OD initiative considers culture, norms, behaviors, motivation, mission, etc.

Theoretical model/framework

Grounded in Open Systems Theory (Burke & Noumair, 2015, p. 147), the Burke-Litwin model is useful to diagnose causality (p. 167). Organizations are open systems analogous to “organisms” (p. 107). Their parts (people, structure, inputs, processes, outputs, etc.) can be affected by the environment, can affect the environment, and may affect each other.¹⁶ External conditions influence leaders and individual contributors, and leaders influence the performance of the organization and individuals belonging to it (p. 145-146). Understanding organization components, context, *and* the nature/implications of relationships is vital for diagnosis (pp. 106-107).

The Burke-Litwin model distinguishes between “transformational” and “transactional factors” (p. 147). “Transformational factors” include “External environment,” “Mission & strategy,”

¹⁶ An analogy, derived from cell biology theory, is that systems take from the environment, convert what was taken, and produce an output (Burke, 2016e).



“Leadership,” and “Organization culture” and are more difficult to change due to their interaction “within and without,” and since they “require entirely new behavior sets on the part of organizational members” for change to be sustained (p. 149). “Transactional factors” include “Structure,” “Management practices,” “Systems (policies and procedures),” “Work unit climate,” “Task requirements,” “Motivation,” “Individual needs and values,” and “Individual and organizational performance” (p. 166).¹⁷ Their nature is one of “reciprocity among people and groups” (p. 150). Like musicians of an orchestra, organization factors need to play well together for good performance.

How the theoretical model/framework informed the question

I chose the Burke-Litwin model (Burke & Noumair, 2015, p. 148) for three reasons. One, its design (factors, relationships, and the transformational/transactional distinction) makes it clear in what ways the ACP is different from change delivery plans. This kept my thinking focused and helped in explaining the difference to the client. Two, the model clarifies the relationship between organization factors in a straightforward way. As if we were using a map, the client and I spotted points of interest during our initial discussion of the project. Three, the model promotes investigating cause. It encourages one to wonder if an organization issue observed in one part of the system could have its root cause elsewhere in that system. Once the cause is found, the organization can determine next steps.

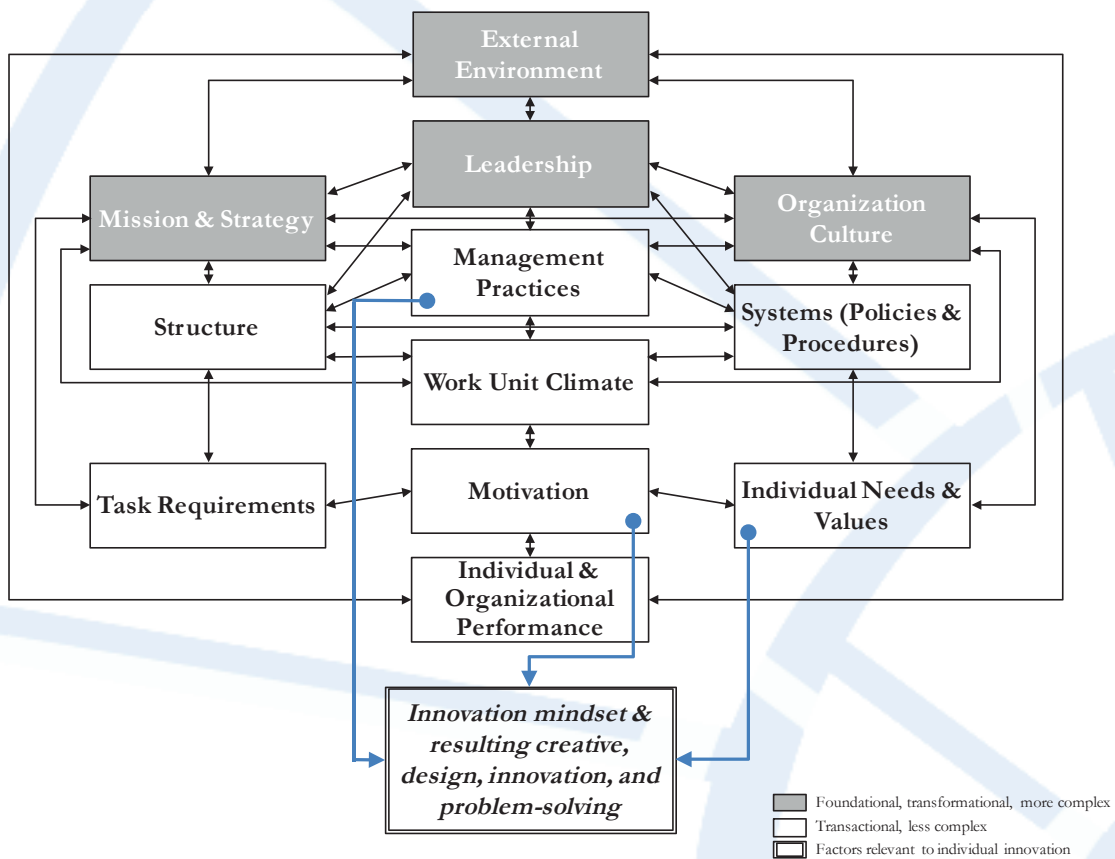
After the client decided not to pursue trust in leadership, team seniority, general skill set, talent development, and succession planning, we began hypothesizing about innovation issues. What is known about culture? Are management practices emphasizing proven methods? Are policies and

¹⁷ Capitalization as in source.

procedures getting in the way? Is the group’s innovation skill set right? Are people motivated to innovate? What is known about needs and values relevant to innovation? We expected that the diagnosis would reveal relevant and related insights.

Fig. 3 depicts tiered, two-way relationships between “transformational” and “transactional” factors in the Burke-Litwin model (Burke & Noumair, 2015, p. 148). It also illustrates how the ACP’s focus aligns with selected factors in the model. *Management Practices, Motivation, and Individual Needs & Values* directly influence how the IT management team innovates and solves problems. *Structure, Systems (Policies & Procedures)* and *Task Requirements* have indirect influence.

Fig. 3: Burke-Litwin Model of Organizational Performance and Change¹⁸



¹⁸ Adapted from Burke & Noumair (2015, p. 148).



We did not forget about “Mission & strategy” (Burke & Noumair, 2015, p. 148). Rather, an unexpected issue surfaced prior to the second client meeting. Many of the company’s support organizations (e.g. Compliance, Finance, Operations) maintain intranet pages to describe who they are and what they do. While searching for an IT organization diagram and services catalog, I noticed the absence of IT’s intranet presence. This led me to ask if a mission statement exists. There was none, and publicizing one seemed to be a lower priority for the client at that time.¹⁹ I thought that this gap needed attention, given the gravitational nature of the Burke-Litwin model: vagueness at a higher level can impact lower level factors (p. 149). A mission defines the “central purpose of the organization and how [it] intends to achieve that purpose,” drives “behavior” (p. 150), and impacts employee’s “daily responsibilities” (p. 152). Hoping that the client would consider the importance of a mission when looking at words on paper, I offered to prepare a draft and recommended that we review it with the IT management team during the kickoff meeting.²⁰

At the end of our third meeting, the client and I had settled on the research question and a preliminary mission statement. We were ready for the kickoff with the IT management team.²¹

Section 3: Background and Context of the Organization

The organization

The company is a multi-national, public for-profit professional services firm in the financial sector with a sizable presence in the U.S. and Canada. IT capabilities are a key enabler to bring services to the market. Given the services-based business model (as compared to, for example, manufacturing), expertise and ingenuity of its talent base are central to the firm’s competitive

¹⁹ The client and I created an organization diagram specific to the initiative once participants had been selected. I was comfortable with proceeding with the ACP without a services catalog due to my reasonably well established understanding of the department (since I am a former member).

²⁰ Recommendation was made after consulting with ACP advisor.

²¹ An assumption that I made (implicitly) at that time was that we would gain understanding of the group’s culture through the gathering of data.



differentiation. The ACP involves IT management team members selected by the client and is limited to the U.S. and Canada. The project's lessons may be shared with peer groups in the future.

The IT team develops and maintains technology platforms and business applications that support the company's operations. When a business launches a client-facing product and requires a technology solution to (for example) facilitate transactional processing or client interactions, IT is engaged to understand requirements, determine whether to procure or build a solution, and oversee its implementation. Software development and maintenance services are largely outsourced to external companies. The ACP is relevant for the IT management team since an innovation mindset is needed to ensure the suitability of technology solutions requested by the business. Being innovative at times means making the right choice between buying or building.²²

External environment

Three aspects of the external environment are worth noting. First, recent geopolitical events could impact multi-national firms. For example, Great Britain's decision to leave the European Union and the outcome of the recent U.S. Presidential election might bring about policy changes that affect trade, currencies, or international diplomacy. Under yet-to-be-determined circumstances, these concerns could intensify national and global conflict, degrade economic conditions, and lower production and income in many industries.

The second aspect is less obscure and already affects firms in a variety of industries. The increasing use of data to drive business decisions creates threats and opportunities. Theft, misuse, or accidental disclosure of information are risks that can have reputational, legal, and financial consequences for private and public sector entities. Their clients' risks create opportunities for

²² Software packages developed by the team are not sold for profit following business models similar to traditional software makers like Microsoft, Oracle, IBM, etc.



professional services firms when they can offer advisory services or other products that help clients manage risk. Professional services firms' internal IT organizations are then requested to enable client-facing services with suitable technology solutions. At times, such solutions require unique, innovative ideas and approaches.

Third, professional services firms are not immune to disruptions to their business models. One threat comes from “automation” (Knowledge@Wharton, 2015). Rotman (2013) wrote that technology has been taking over work from accountants, administrators, and machinists for 30+ years and references a study that notes that “technological change has been destroying jobs faster than it is creating them.” Brant, Gupta, & Sommer (2015) went as far as predicting that 90% of all jobs could be at risk by 2030 (p. 3). Yet, estimates about job losses “vary widely” (Lohr, 2017). Manyika, Chui, Miremadi, Bughin, George, Willmott, & Dewhurst (2017) took a differentiated view:

we estimate that 49 percent of the activities that people are paid to do in the global economy have the potential to be automated by adapting currently demonstrated technology ... less than 5 percent of occupations can be fully automated, about 60 percent have at least 30 percent of activities that can technically be automated (p. 5)

Chui, Manyika, & Miremadi (2016) estimated that 60% of financial sector jobs could be automated when computers recognize speech as well as humans (p. 10). For some IT specialists, this anticipated next technology disruption might have appeal. It almost certainly necessitates individual innovation skills and could result in job security. This will be true if machines “augment” (Kirby & Davenport, 2016) and not eliminate jobs. Candidates for these roles will likely be selected based on their learning and creative skills since new challenges typically have no past (Heifetz et al, 2009,



Chapter 2, Section 3, para. 1; Johansson, 2006, p. 41; Mootee, 2013, p. 54). Technological advancements thus create incentives to embrace innovation and enhance personal skills. This makes the ACP relevant for individual participants.

Internal environment

There are no issues in the internal environment that interfere with the ACP. Some of the work takes place during the annual budget season, which is at times a higher priority for participants. Despite this potential conflict, only one interview had to be rescheduled. Another plausible development is that an organization restructuring may be announced during the ACP due to recent leadership changes.²³ Depending on the new structure, the IT team (or even I) may be affected.

It is worth noting, but ultimately no obstacle for the ACP, that I underestimated how processes in the internal environment can frustrate ideas. This came up in several ACP interviews. Financial planning, information security, and corporate governance (for example) are necessary to prioritize resources, protect sensitive data, and drive accountability. However, enforcing plan targets and demanding process compliance can be innovation's enemy (Moss Kanter, 2013). It makes part of the case for compartmentalizing an innovation function into a "reservation" (Galbraith, 1982, p. 11) with limited process overhead. Ironically, my regular role in the company is part of a mechanism that curbs innovation. My team ensures that funding requests are vetted and approvals are obtained before project work begins. At times, we slow innovation down.

²³ Public information.



Applied Change Project challenges

Aside from the sponsorship changes described below, there are no complications affecting the ACP. Once the strategy for diagnosis, data gathering/analysis, and intervention was conceived, the work began and progressed with few changes to the plan.

Sponsorship level

Two changes in sponsorship took place. The original sponsor left the company before the work started. A short while later, a senior leader in Asia briefly considered working with me. He had two change projects in mind; both could have created a setting for an ACP. Their timeline, however, made a timely completion of this paper unlikely. The sponsor is now my former supervisor, the Head of IT for U.S. and Canada, who is based in the New York metropolitan area. When both options in Asia fell through, I asked if he would work with me on an ACP that is meaningful to his team and, as a byproduct, would enable me to write this paper. During our first meeting, we contracted that the ACP may be a favor to me, but must be consequential for the organization.

The second sponsor change reduced the project's complexity since completing an initiative in Asia would have introduced at least three constraints. One, time zone differences limit the overlapping hours available for stakeholder meetings. Two, relying almost exclusively on technology-facilitated meetings to bridge the "space-time" gap lowers the richness of stakeholder interactions (Priest, Stagl, Klein, & Salas, 2006, p. 192). Third, onsite diagnosis or intervention work requires travel, which is costly in terms of capital and time. Conducting the ACP in the New York metropolitan area provides adequate opportunities for in-person meetings during regular business hours, for the price of a commuter train ticket if required.²⁴

²⁴ A few participants are located outside of the New York area; video conferencing is used with them where possible.



Practitioner expertise and judgment

Role in the organization during the project

I am the Head of the firm's Global Program Management Office (PMO). The PMO's primary responsibilities are to support executive governance forums and implement project management standards. We guide the development of funding requests, screen the requests, and facilitate governance decisions. Once a project receives authority to proceed, we work with the appointed project manager to ensure that project and change management methods are adopted.

Relevant expertise

I spent >20 years in the private sector, mainly in IT, and have a reasonably well established understanding of technology innovation. For five years, I was a Management Consultant, which taught me client service competencies. My academic credentials include a B.S. in Information Systems Management from New York University and an M.B.A. from Pace University. I also hold a certification from the Project Management Institute. Research skills evolved during my B.S. and M.B.A. studies. I gained teaching experience as an Adjunct Instructor in New York University's School of Professional Studies. Other work experiences include having co-authored a change implementation toolkit and being a former member of the company's U.S. IT team.

My experience is relevant and applicable in the ACP for three reasons. First, having an IT background enables me to use and understand technology terms as I interact with ACP participants. Second, consulting experience allows me to be inquisitive and helpful while maintaining some objectivity. Third, having project management skills makes it easy to plan and deliver the ACP.



Hunches about the project

My first hunch surfaced during initial research. I considered Sidhu, Goubet, & Xia's (2016) scoring algorithm and questionnaire to measure innovation. Initially, their approach seemed appropriate for the ACP. But I was hesitating, seemingly due to the algorithm's complexity. Later, as I prepared the survey, I realized what had caused the hesitation: their method estimates an *individual's* innovation score. I decided to use the questionnaire without the algorithm, for two reasons. One, publicizing individual scores, I feared, would distract. ACP participants might argue over them or compare scores to rank order. Two, I thought that using the algorithm and taking the mean for each question would be of little consequence due to the small sample (ten).

Briefly, I also had a hunch about the relationship between quality and innovation. Innovating often means doing things *well* that were never tried before. I speculated that ineffective corporate processes resulting in poor quality cause innovations to be rejected. Papers from Bresman (2010), Bunderson & Sutcliffe (2003), Chan et al (2003), Edmondson (1999), Hirst et al (2009), and Raes et al (2015) about learning, goals, performance, creativity, and innovation make it obvious that the issue is more complicated. A high-performing team working in a risk-tolerant environment whose members exhibit a learning orientation is needed to consistently deliver high quality innovation.

Perspective of those affected by the ACP

ACP participants' perspectives are relevant in at least three ways. First, information they share during meetings and in surveys influences project activities. Second, every dialog with participants is an "intervention" (Schein, 1999, p. 17). For example, asking the sponsor to help me with the ACP caused him to examine more deeply the IT management team's innovation skill set. Third, having a sense of how others' "prism" shapes their world view and causes "covert" (Marshak,



2006, p. 22) behaviors can be revealing. Two situations during the second meeting with the IT management team are good examples. The first report (pre-intervention) with interview and survey data had been shared. The client led a lively discussion to finalize an action plan. The team, however, focused on *fixing issues noted in the report*. It made sense to default to real-time problem solving since this way of thinking is part of the team's daily routine. Yet most likely this was a simple deflection technique. Having an incomplete understanding of a subject (such as innovation) can contribute to anxiety. Being vocal about what is familiar then becomes a coping mechanism. Showing confidence and competence helps saving face. I used "self-as-instrument" (Burke & Noumair, 2015, p. 276) and stated the following: *I am noticing that you use a thought process that you use most everywhere else and are familiar with. But you are using it in our discussion of innovation capabilities, where what works for you elsewhere may not be suitable. I would like to suggest that you consider spending a little more time on unpacking your assumptions.* We discussed how to decompose assumptions (Cowan, 2016) and the group agreed with the observation and recommendation. Four work streams²⁵ were identified and assigned team members promised to report initial ideas within a few weeks. Just before the meeting closed, I acted on my instinct and said: *Develop your ideas in a format as you see fit, there is no set format or template provided or required.* The positive reaction to lifting this constraint, which was unplanned, means that the team indeed assumed that format compliance is expected. The assumption was reasonable since the group often uses templates. Not specifying a format is of course consistent with the ACP's theme.

Other stakeholders of interest are the IT team's internal customers. Since the client opted not to involve business stakeholders in the ACP, their perspective is unknown.²⁶

²⁵ Action items in each work stream were determined by the IT management team during the same meeting in which the team reviewed the first report; these actions are discussed later in this paper.

²⁶ See section on limitations of the project.



Section 4: Proposed Method

The research strategy emerged shortly after the second meeting with the client. During the first meeting, we reviewed selected OD concepts. This set the stage for the second meeting, in which the client decided to focus the ACP on innovation. It soon became clear that we would want to incorporate “quantitative” (interviews), “qualitative” (surveys), and “archival” (team documentation; Burke, 2014, p. 16) data from primary sources. Secondary research would come from academic journals (e.g. Journal of Applied Psychology) and industry sources (e.g. Gartner).

Through “evidence-based practice” (Perry, 2016) I planned to combine own expertise and research to help the client define the issue, locate its cause, and separate fact from belief. I was aware that new information or the client’s desire to change direction could cause the research strategy to evolve. The time boundary for submitting the paper concerned me briefly. I therefore developed a plan to conduct primary and secondary research within eight weeks, leaving sufficient time for analysis, intervention, and writing. Conducting an empirical investigation is not a requirement for this paper and likely of low value due to the small sample (ten), although the innovation subject (generally) *is* suitable for cause and effect examination (see Bresman, 2010).

Research Design

The research question is *descriptive* and the research strategy uses a *survey study* (Perry, 2016). Data from primary research (interviews, surveys, and team documentation), I hoped, would reveal the IT management teams’ current attitude toward innovation. Secondary research I expected would yield an understanding of innovation as a concept and provide ideas for an intervention. As noted before, lab or field experiments were not considered in the study’s design.



Sample

Throughout our first two meetings, the client considered involving thirteen senior IT leaders in the ACP. We did not consider targeting the entire IT department as this would have caused considerable complexity. The sample is “purposive” and based on “judgement sampling” (Sekaran & Bougie, 2013, p. 252). Due to its non-probabilistic nature (selection is made so that not all members of the population have an equal chance of being selected), study results are not generalizable (p. 245). The ACP’s most valuable aspect is the intervention, not measuring or describing results.

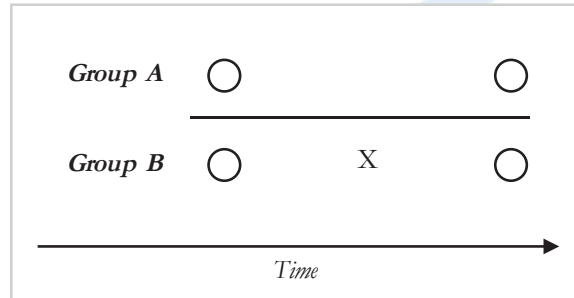
Data Collection

Data would come from multiple sources. The client and I agreed that interviews with the IT management team would be vital. I recommended that we use a survey to collect data for pre- and post-intervention measures. The client also provided the department-wide 2015 employee engagement report and status summaries from current projects. I also thought to use reflection sessions (or *debrief meetings*) with ACP participants to encourage discussions and collect more data.

Measures

It became clear at this time that using a control group (Sekaran & Bougie, 2013, p. 172) would not be suitable. I shared with the client what that entails. Circles in Fig. 4 and 5 illustrate measurement activities. For example, a survey can be used to establish an understanding of the status quo (first measure). The X represents an intervention designed to drive change and lead to a desired result. To assess whether the status quo has changed due to the intervention, a second measure is taken. Both groups should be measured at the same time. Measuring one group at a different time can introduce “history” (unexpected event affects the sample) or “maturation effects” (basic facts of life change over time and affect the sample; Sekaran & Bougie, 2013, pp. 176-177).

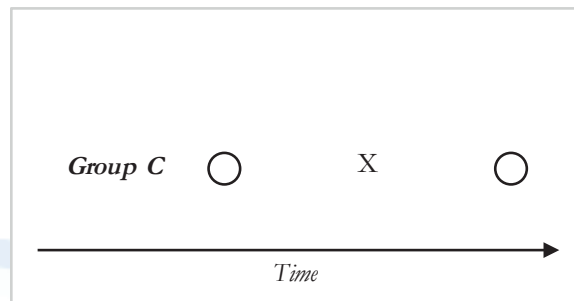
Fig. 4: Use of a control group²⁷



Once the second measure is taken, we can compare its results to the first. A’s status quo should not have changed unless the group was inadvertently exposed to the intervention. Though, other unforeseen events could explain an unexpected change to A’s status quo, too. B is assessed to determine whether the intervention led to the desired result. Should B’s status quo have changed, we need to be reasonably certain that it did as a consequence of the intervention and not due to different reasons (Sekaran & Bougie, 2013, pp. 171+).

Without a control group, pre- and post-intervention measures can be taken, but the before-and-after comparison will only be possible within the group and not across groups.

Fig. 5: No use of a control group



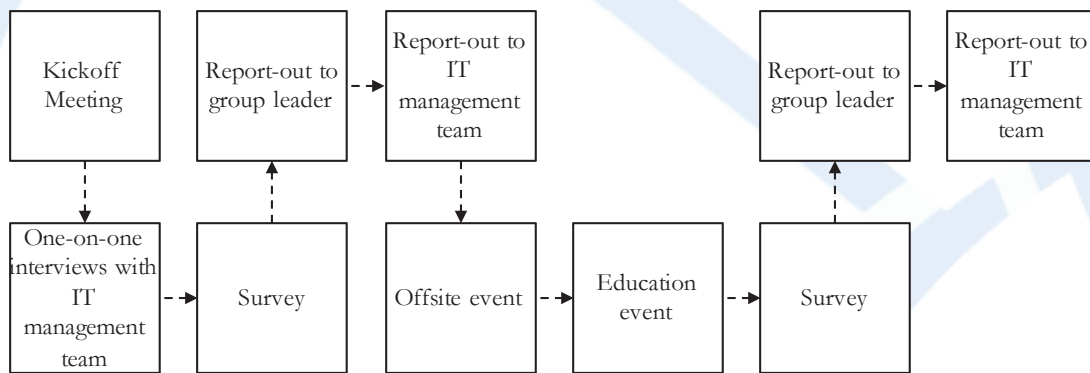
Splitting the small ACP sample to create a control group has at least two drawbacks. One, it increases the effort: the control group will have to receive the same intervention at a later time,

²⁷ Fig. 4 and 5 adapted from lecture by E. Perry, Tarrytown, NY, June 2016.

should the work eventually reach the full team. Two, the split requires determining who is selected for the group being influenced and who is in the control group. The project being conducted in a “non-contrived setting” (Sekaran & Bougie, 2013, p. 100) means that participants can find out who is in which group. And those in the control group may feel undervalued for being only in the control group. I thought that we should avoid both scenarios.

The client agreed to work without a control group. We also settled on the work plan and next steps: draft a presentation for the kickoff meeting with the IT management team, build an interview form, and develop a survey. One-on-one interviews were to take place soon after the kickoff. I timed the pre-intervention survey after the interviews to be able to answer participant’s questions about the project during interviews. Already at this stage, the client and I shared ideas for a two-part intervention. Fig. 6 shows the work plan.

Fig. 6: ACP work plan



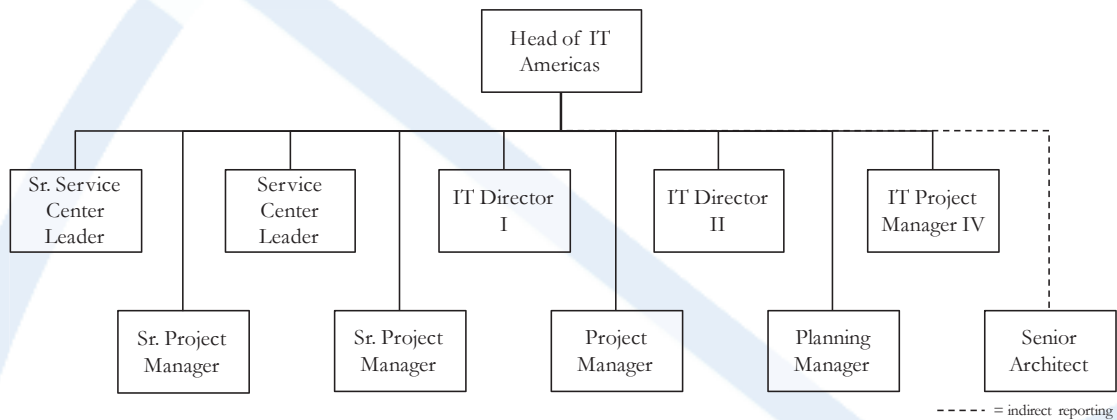
Section 5: Actual Method and Outcomes

It was not necessary to substantially change the ACP’s plan. The client reduced the sample and additional literature was incorporated as the project progressed. I proceeded with collecting and analyzing data, planning offsite and educational events, and defining the client report’s structure.

Sample

At its beginning, IT management team members in four regions were considered for participation in the ACP. The client limited the project to the U.S. and Canada team to focus the work locally as a trial and since regional priorities and role specialization made participation of team members based outside of the U.S. impractical. The final sample includes ten U.S. and Canada based IT management team members. All but one report directly to the group leader (see Fig. 7).²⁸ All ten attended the kickoff meeting and agreed to actively participate in the work.

Fig. 7: Overview of the IT management team



Data Collection Methods

Interviews and surveys were scheduled to assess the teams’ understanding of and sentiment toward innovation. The client approved the interview questionnaire and survey questions. A separate documentation review was expected to provide additional insights.

Interviews

Shortly after the kickoff meeting, I conducted six interviews in person and four via video conference. Beckhard (in Burke & Noumair, 2015), Dillard (2016), and Fenn (2015) inspired the

²⁸ Senior Architect shown with dotted line since the role reports into the Chief Technology Officer; the Senior Architect was invited to participate in the initiative due to the close working relationship with the group, and given the subject matter expertise this role can contribute.



interview forms' structure.²⁹ Five questions inquire in general terms about work satisfaction and concerns. The next eight focus on interviewees' understanding of innovation, the group's innovation performance, and innovation issues and goals. Questions are "open-ended" (Sekaran & Bougie, 2013, p. 150) to gather data *and* stimulate interviewees' thinking. Aside from the kickoff meeting, the interview setting was (likely) only the second time in recent history participants examined innovation as a concept. I imagined that getting participants to think during the interviews and asking them to complete the survey with a few days' distance increases the survey response's quality. The fourteenth interview question was included to surface "undiscussables" (Marshak, 2006, p. 25). During each interview, I demonstrably stopped taking notes when we arrived at question fourteen and asked whether there are other issues worth discussing. A few participants used the opportunity.

Survey

The electronic survey assesses innovation *attitude* and *behavior*. The pre-intervention survey was distributed a few days after interviews concluded. Part one of the survey uses Sidhu et al (2016) innovation questions and focuses on attitude. I added part two on faculty advice. Its four subsections assess behavior: six questions each for individual creativity (Farmer, Tierney, & Kung-McIntyre, 2003), learning orientation (VandeWalle, 1997), and team learning (Edmondson, 1999). Responses to the eighth interview question (*How do you know when you individually or the team has been innovating?*) inspired additional six questions to make up the fourth (innovation) subsection in the electronic survey.³⁰ Most responses were recorded using a five-point Likert scale, asking respondents to specify the degree to which they agree or disagree with a question or proposition (Sekaran & Bougie, 2013, p. 211). In total, the survey uses 38 questions. As I reviewed the enhanced survey, I

²⁹ See interview questions in appendices.

³⁰ See survey questions in appendices. In the client reports, responses to innovation questions –fourteen from Sidhu et al (2016) and six created from interviews– are shown combined. See also Alderfer & Brown (1972) for a discussion of questionnaire design that leverages collected data.



felt comfortable that it would yield useful data and enable measuring innovation attitude and behavior pre- and post-intervention. I distributed the post-intervention survey shortly after the first team meeting following the completion of the two-part intervention. Due to the holiday break, it was important to use that meeting for a reflection to refresh participant's memory before they completed the survey. Sending the survey after this reflection, I hoped, would ensure its relevance. Due to the ACP's work plan schedule, there was no time to pre-test survey questions.

Documentation Review

In parallel to conducting the interviews, I reviewed documentation provided by the client.

Engagement Survey

The firm's engagement survey is distributed annually to all employees and gathers feedback in multiple dimensions. The 2015 engagement survey data used for the ACP covers the clients' global IT organization. I extracted results from five relevant categories (Enablement, Collaboration, Efficiency, Innovation, and Inclusivity) hoping that they would reveal useful information. The engagement survey data included in the report to the client contrasts each category's favorability index for the U.S. and Canada IT management team (along with the category 'All Other Managers'),³¹ all employees in the IT department, and all employees of the company.³²

Project Status Reports

In lieu of team performance metrics, the client provided status reports for more than 40 ongoing U.S. and Canada projects for two consecutive months.³³ The reports include color indicators for each project's scope, spending, and schedule performance as compared to the baseline

³¹ Engagement survey report is designed to show details for managers with five or more direct reports. Those with less than five are grouped in 'All Other Managers'. The engagement survey report provides clear names of the managers, which were not included in the reports for the client.

³² Limitations: engagement data was collected approximately one year earlier; it is not known if the category 'All Other Manager's included managers not based in the U.S. or Canada; data exhibits the team structure at the time the survey was distributed.

³³ Other regions were omitted from the analysis completed for the ACP.



plan. A red indicator means that delivery issues warrant management intervention. Yellow suggests that the project team manages delivery issues. Green signals that the project performs to plan or with negligible variances to the baseline. These report's main use is to brief various stakeholders about work progress and to drive decision-making. Due to time constraints, I reviewed three weekly reports for each month and organized the data to highlight trends. As I worked through the analysis, it occurred to me that the information might be of little value to the client in the ACP's context.

Measures

The electronic survey is the sole instrument used to measure the IT management team's innovation attitude and behavior. The first measure, taken after the interviews and prior to the intervention, establishes a baseline. The post-intervention measure uses the same survey questions³⁴ and occurs approximately three months after the intervention.³⁵ The sample included in the pre-intervention survey is included in the post-intervention survey and all participants receive the survey at the same time. Results from both surveys are compared on a per-question basis and hopefully reveal whether the ACP led to a change in the IT management teams' innovation mindset. No change in the data, of course, is a valid outcome as well and may inform next steps.

How results were analyzed

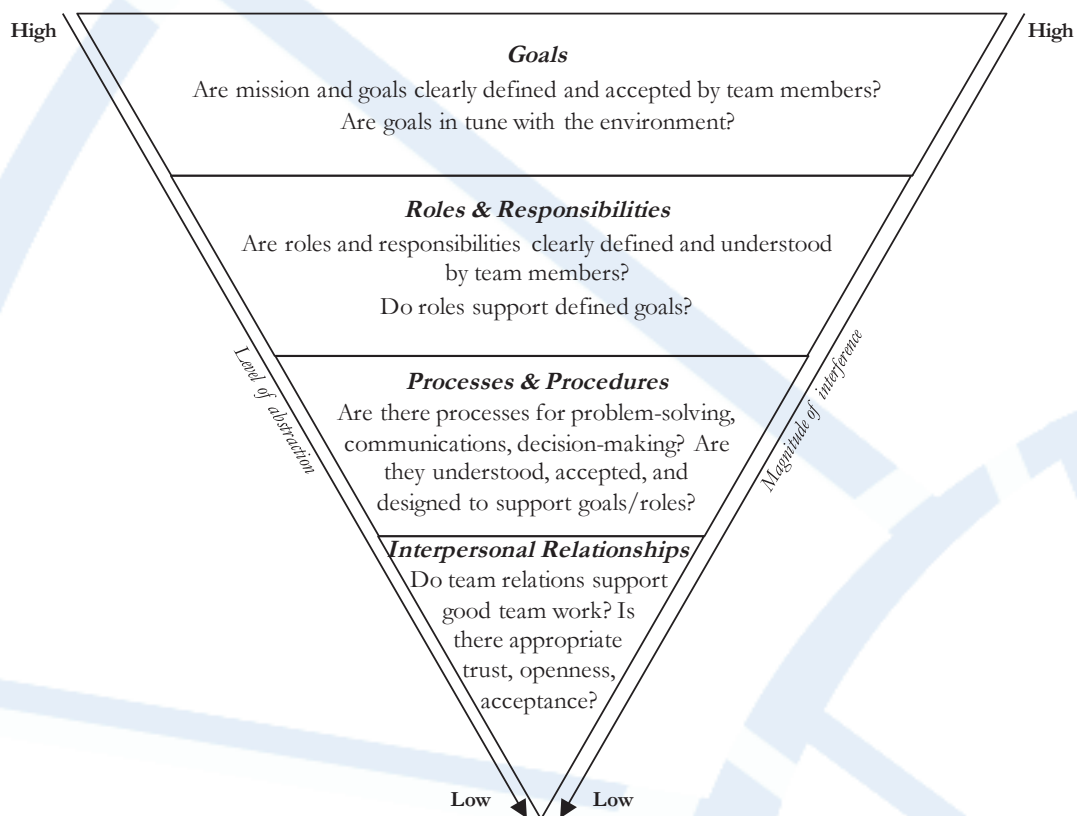
Interviews and the pre-intervention survey generated a good amount of data. The next step was to integrate this data with the engagement survey and project status data. The first report for the client emphasizes the interview and survey data and makes no recommendations. As noted before, the Burke-Litwin model (Burke & Noumair, 2015, p. 148) guides the work in this initiative. The model keeps the ACP work focused as it clarifies the relationship between organization factors.

³⁴ Minor modifications made to the post-intervention survey are described later.

³⁵ Scheduling accounts for public holidays in the U.S. and Canada.

Beckhard’s four dimensions (Goals, Roles & Responsibilities, Processes/Procedures, and Interpersonal Relationships; Burke & Noumair, 2015, p. 165) provide the scaffolding for summarizing the interview data. Operating at a more condensed level than the Burke-Litwin model, Beckhard’s framework can also be used to diagnose organization challenges. It, too, is hierarchical: ambiguity at one level flows down to the next. Unclear goals, for example, cause 80% of organization issues. Interpersonal conflict is only responsible for 1% (Pasmore, 2016). Beckhard’s model was only used to summarize results from the ACP interview phase (see Fig. 8).

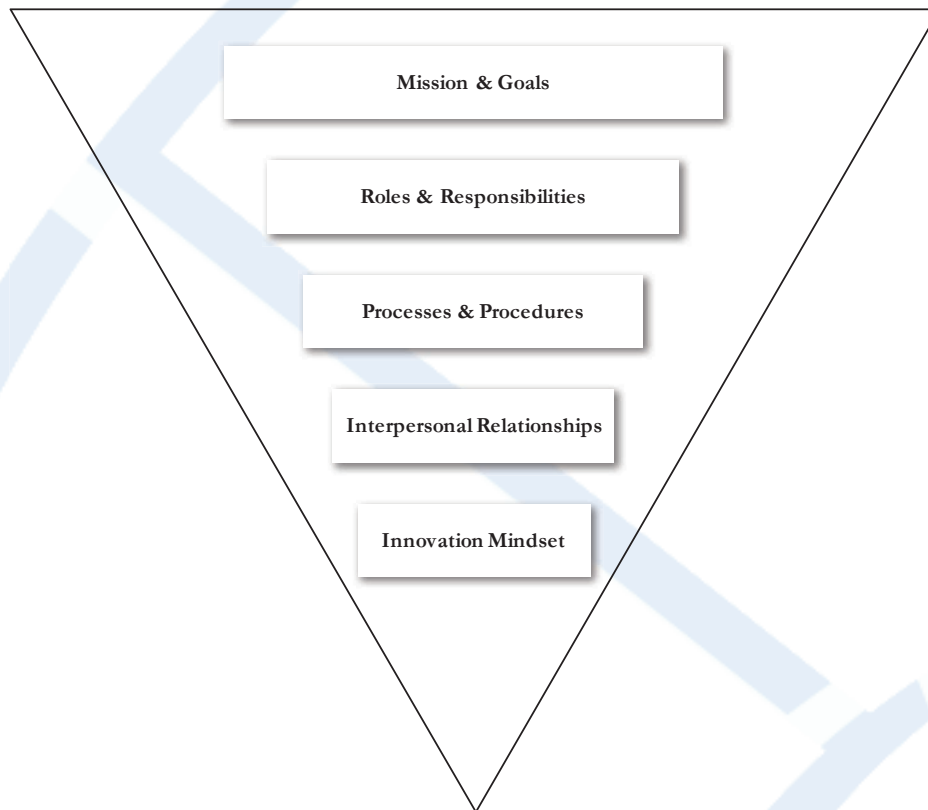
Fig. 8: Beckhard’s GRPI model³⁶



³⁶ Adapted from Burke & Noumair (2015).

To account for the innovation-related interview questions, I added one dimension. Intuitively, I added this fifth dimension (Innovation Mindset) at the lowest point of the model. This keeps the hierarchical order intact since the mindset is inherent to the individual and subordinate to the interpersonal relationships one maintains (see Fig. 9).

Fig. 9: Beckhard's model with added dimension



The following example illustrates how relationships are superior to the mindset in these circumstances: to innovate, teams may engage thought leaders/experts to develop concepts and ideas. Two steps need to be taken to benefit from expert advice. One, the individual has to first consider it possible that others may be able contribute knowledge (mindset). Two, he or she then needs to engage others to obtain knowledge or information (interpersonal relationships).



In each dimension, the report distinguishes between *Comments and Opportunities* and *Issues and Challenges*. An example of a comment is *roles are defined to some extent but at times bifurcated*. An example of a challenge is *people are measured on delivery, not on business engagement*. The survey data is presented in the report using the previously discussed breakdown (creativity, learning orientation, team learning, innovation).³⁷ I highlighted major themes, recurring issues, and apparent contradictions between survey results and interview commentary. For example, we know from the interviews that many in the IT management team believe that they have the ability to contribute new ideas. Through survey responses, however, we learned that the team largely agrees that the group emphasizes safe and proven methods. I wondered if participants believe that everyone *but* the IT management team relies on safe and proven methods. Additionally, I cross-referenced survey data with interview commentary to identify common themes and locate overlaps that suggest consistency in the data. An example of an overlap is repeated mention of a *need to invite more external information to the team* in interviews and survey responses indicating that *more collaboration is seen as an opportunity*.

The post-intervention survey analysis is completed in a similar way. However, interview and survey data are not shown in an overlay. Instead, pre- and post-intervention survey responses are compared on a per-question basis, to understand whether respondent's attitude or behavior has changed. The comparison of October and February surveys uses the same two-point Likert-scale (*Agree/Strongly Agree* and *Disagree/Strongly Disagree/Neutral*) for both data sets. A summary section highlights observations and makes no recommendations.

Prior to distributing the post-intervention survey, I made two changes to its design. First, I removed two open-ended questions (*How comfortable are you with making decisions under uncertainty in*

³⁷ Sidhu et al (2016) fourteen survey questions are subdivided into *Creativity, Trust, Resiliency, Diversity, Mental Strength, Uncertainty, Resource Awareness*, and *Miscellaneous Questions*. Their subdivision was not maintained when the report for the client was developed; instead, Sidhu et al questions were combined with the six questions inspired from interview results.



professional life? and *When you say you will do something, how often do you actually do it?*), thinking that participant's attitudes in relation to these questions unlikely shifted and that we would not learn anything new by asking again. Additionally, removing the open-ended questions avoids "editing" bias (Sekaran & Bougie, 2013, p. 279), which can arise when comparing typed or written answers during an analysis of survey results. I could have contacted respondents to clarify responses and minimize bias but chose to remove the questions instead to simplify the analysis. Comparing ratings-based responses (e.g. using a Likert scale, p. 211), on the other hand, helps ensuring objectivity since conclusions come directly from the data (p. 22) and are not subject to "interviewer bias" (p. 160). They can be subject to other problems, including a "low response rate" and the inability to determine if results are "unbiased since the nonrespondents [sic] maybe different from those who did respond" (p. 161). Second, I added an open-ended question at the end of the survey, to create space for respondents to share additional suggestions for future consideration (*What other ideas would you like to share or recommend at this time as you continue on this innovation leadership journey?*). Results summarized in two reports for the client are discussed later in this paper.

Ten IT management team members included in the initiative participated in interviews and responded to the first survey. Nine responded to the second survey. Clear names appearing in interview notes and survey results were not included in any report for the client.

Findings

Interviews and surveys revealed the teams' understanding of and sentiment toward innovation. The documentation review (engagement survey/project status) incorporated into the first report for the client provided limited insights.



The First Report

The first report to the client synthesizes data from interviews, survey responses, employee engagement report, and project status summaries. While preparing it, I was aware that my knowledge of the team and expanding understanding of creativity, learning, and innovation could affect my impartiality. For example, I might inadvertently deemphasize interview comments based on a well-intended assumption that an issue is not important. Or I disproportionately highlight an observation in the data, not knowing whether the client sees it with a lower weight. Alternatively, how I cross-reference interviews and survey responses could be wrong.

I concluded that a modest “bias” (Sekaran & Bougie, 2013, p. 21, 160, 279) is unavoidable since I cannot unlearn what I know about the organization, having worked in the group before. I therefore took great care as I analyzed the data, frequently questioning my assumptions and checking for errors.³⁸

As per our original contract, I met with the client (the group’s leader) alone prior to sharing the report with the IT management team (Burke & Noumair, 2015, p. 93). The client reviewed the report briefly, asked a few questions, did not dispute content in the report, and requested that we meet again to extract key messages for discussion with the team. He was already clear about his expectations for the next team meeting: he wanted an action plan. Table 2 summarizes the report.

³⁸ I did not consider using a third party (colleague, friend, peer student) to conduct or validate the analysis; an assumption that I made throughout was that I work on this project on my own.



Table 2: Summary of first report provided to client

General Area	Selected report content
Mission & Goals	<ul style="list-style-type: none"> – Draft is under review, innovation goals not defined in the past
Roles & Responsibilities	<ul style="list-style-type: none"> – At times understood, at other times bifurcated or misinterpreted – IT staff occasionally stretch roles to bridge resource gaps
Processes & Procedures	<ul style="list-style-type: none"> – Required process compliance occasionally creating roadblocks – Emphasis on proven methods, reactive/mechanical delivery, tested approaches, and existing solutions repertoire – Staff measured on delivery but not on business engagement – Focus on accountability spotlights decisions with higher stakes – Collaboration benefits understood and seen as improvement area
Interpersonal relationships	<ul style="list-style-type: none"> – Positive intra-team relations – Opportunity exists to expand collaborative relations (e.g. knowledge sharing, reflection on work process to drive learning) – Relationship with internal clients could be strengthened with joint efforts, team building, and alliances
Innovation	<ul style="list-style-type: none"> – Little to no space for experimentation or creating novel ideas due to a variety of reasons – Projects drive technology solutions (not the other way around) – Team is keen to learn and grow, highly confident, and understands that innovation is not only the next big idea – Most in IT management team believe they take risks to learn

It was at this time that the client asked that I *manage* him. This does not mean that we traded roles. The client remains the *change leader* and I perform as the *change facilitator*. Rather, it means that the client trusts me and needs me to keep him and the team focused. It also means that I gained a degree of control over the project that increases its success probability.³⁹

³⁹ Success references both, the ability of the client to positively influence an organizational issue, and my ability to meet graduation requirements.



A few days after the client settled on the key messages, we met the IT management team. All participants were present; some joined by video conference. The team had received a copy of the report in advance and many were eager to contribute ideas. Evidently, the kickoff meeting had inspired them. In the meeting, the client facilitated a review of report highlights to identify focus areas for the action plan. The energy in the room was remarkable: on numerous occasions participants talked over each other, though not due to disagreement or conflict. Instead, creative tension filled the room. Within an hour, the team agreed to four work streams: *Business Engagement*; *Culture Change*; *Efficiency Improvements*; and *Lessons, Learning, Collaboration*. Team members assigned to the work streams agreed to provide an update in a few weeks.

The team met again four weeks later to review progress of the work streams (again, all participants were present, some by video conference). I chaired the meeting since the client had a scheduling conflict. My first question probably surprised the team: *How is the unpacking going?*⁴⁰ Members of two work streams shared that not defaulting to instant problem solving and instead decomposing assumptions prior to developing alternatives is challenging. Learning was happening.

The progress updates revealed intersections between work streams and the team agreed to schedule separate meetings to align their work. We also agreed to review specific recommendations within six to eight weeks. A review of the updated mission statement (showing changes based on the feedback received during the kickoff meeting) was deferred due to time constraints.

The Second Report

The second report to the client contrasts October and February survey responses on a per-question basis. It groups results in the same subsections (creativity, learning orientation, team

⁴⁰ See earlier reference to the discussion about unpacking assumptions that took place during second meeting with the IT management team.



learning, innovation)⁴¹ to allow a comparison. I tested crosstabs with selected questions but they did not provide meaningful insights due to the small sample (ten). On three occasions, the presentation highlights a link between two questions or draws attention to an observation. For example, believing that innovation opportunities exist is linked to the perception of whether it is safe to try ideas. An observation is that there is rising awareness in the team about resource sharing. As noted before, I did not overlay the pre-intervention interview data with the post-intervention survey data. And again, I took great care preparing the report, frequently checking for my own bias and errors.

The report makes it clear where results suggest a change in beliefs or behavior and where they do not. For example: more participants now wonder how effectively internal stakeholder relationships are managed (change), and all respondents continue to exhibit confidence in their problem-solving abilities (no change).

Aside from being based on the same small sample, the February report has one additional limitation. Since one (of ten) participants did not complete the February survey, it is unlikely that a change of approximately ten percent on selected questions reflects a change of beliefs or behavior in the IT management team. To disclose the limitation, I marked all affected questions. Table 3 summarizes the second report.

⁴¹ As in the first report for the client, responses to innovation questions –fourteen from Sidhu et al (2016) and six created from interviews– are shown combined.



Table 3: Summary of second report provided to client

General Area	Selected Report Content
Creativity	<ul style="list-style-type: none"> – Continued high individual confidence in problem-solving abilities – Most team members continue to believe that they can contribute ideas – Focus may be shifting to ideation (novelty) from developing solutions for old problems (improvements)
Trust	<ul style="list-style-type: none"> – Trust remains relatively unchanged and high – Some develop trust in others they just met sooner
Resiliency	<ul style="list-style-type: none"> – No material change, team exhibits high resiliency
Diversity	<ul style="list-style-type: none"> – Inconclusive, selected member's view of diversity exposure may be shifting
Mental Strength	<ul style="list-style-type: none"> – Continued high individual confidence in abilities
Uncertainty	<ul style="list-style-type: none"> – Most still rank the importance of work effectiveness higher than quality – Possibly a modest shift happening, away from effectiveness-emphasis
Resources	<ul style="list-style-type: none"> – Rising awareness about resource sharing – Most in team willing to share
Team Behavior ⁴²	<ul style="list-style-type: none"> – Most believe that external collaboration happens, and more believe so now – More believe that unconstrained idea opportunities exist (not the majority) – Majority believes that trying an idea, failing, and trying again is not OK – Fewer believe that business relations are managed effectively (ratio ~50/50) – Continued concerns about engaging experts (ratio remains ~50/50) – Majority of team continues to not believe that solutions are holistic
Goal Orientation	<ul style="list-style-type: none"> – Full team now sees itself as continuously looking for development – Taking risks to develop self no longer important for all team members – Some team members may have changed their perspective on working in a challenging environment (and prefer not to)
Team Learning	<ul style="list-style-type: none"> – Increasingly, team sees itself as improving how it works, leveraging external information sources/seeking information that inspires change – Many believe that team-introspection is not consistently happening – Fewer believe now that dissent is a regular occurrence

⁴² Questions inspired by comments noted during interview in October.



While preparing the summary pages for the client presentation, I developed a new hunch. What if the survey results generally only mean that respondent's capacity for introspection increased? Could it be that they now simply have a more realistic view about the team's ability, performance, and relationships? And would that mean that we did not accomplish a lot? Several observations in the results caused me to wonder. *Fewer* respondents now believe that they contribute fresh ideas to solve old problems; that trying an idea, failing, and trying again is OK; and that team members often speak up to test assumptions. Also, *more* participants now disagree with the statement *Business stakeholder relationships are maintained, proactively and ongoing, to discover and understand needs*. And collectively, the team now sees more favorably how it improves its work and seeks personal development. The last observation in particular could be a simple mirror expression of individuals' work in the ACP.

I reasoned that participants' understanding of the team's ability, performance, and relationships is evolving and explains most differences between the pre- and post-intervention surveys. Golembiewski, Billingsley, & Yeager (1976) examined such variability in measurements. They distinguish three types of change resulting from OD interventions. "Alpha change [alters] some existential state" (p. 134) "along relatively stable dimensions of reality" (p. 135). In this scenario, measuring method and contextual variables remain steady during pre- and post-measure. "Beta change" (p. 135) occurs when the method uses different "intervals" (p. 136) in a later measure. This is similar to using a metric ruler first and an imperial ruler second to measure distance. "Gamma change ... [is a] shift in ways of conceptualizing salient dimensions of reality" (p. 138). Here the intervention changes how the world is seen. As a result, "the pre-intervention instrument is no longer appropriate" (p. 139).



Some “alpha change” (p. 134) can be observed in the IT management team. For example, team members discuss innovation more frequently and openly, which is “a variation in the level of some existential state” (p. 134). There is also evidence of beta change in the February survey results. The “intervals” (p. 136), however, were not altered in the measuring method. Rather, since change initiatives can “modify or enlarge an individual's knowledge or experiences” (p. 136), respondents “recalibrate” (p. 137) their perception of the measurement scale. A participant might respond to a question with *Strongly Disagree* in the first survey and switch to *Neutral* or *Agree* in a subsequent survey because she thinks differently about the change. Golembiewski et al (1976) summarize:

In effect, the OD experience may have encouraged respondents to recalibrate Likert's intervals after the intervention in at least two ways:

- 1) respondents made different estimates of reality, given a clearer perception of what exists; 2) respondents changed their intervals for measuring value-loaded terms in the instrument (p. 137)

Measurements that rely on “self-reports” (p. 136) thus can be elastic. In the ACP, a third survey might confirm in which areas “alpha change” (p. 134) was *sustained*. Gamma change should not be expected since the project does not seek to redefine reality and facilitate “a change from one state to another” (p. 138).⁴³ Reminding myself that the February survey also highlights positive aspects (e.g. confidence in own problem-solving, trust towards others, diversity awareness, external learning) and that the initiative is a marathon and not a sprint, I decided to share the hunch with the client and recommend a repeat of the survey at a later time.⁴⁴

⁴³ Golembiewski et al (1976) use social justice examples to describe gamma change, establishing a very high benchmark for successful gamma change.

⁴⁴ Results of a third survey, if distributed, will not be incorporated into this paper due to time constraints imposed by its submission deadline.



When I met the client to discuss the second report, we began with a review of the executive summary (reference Table 3). I prepared the summary since I know that he likes receiving a brief rundown of key points before examining details. I shared my hunch, noting that selected results might be obscured by a shift in participant's perception. We agreed that this point warranted a separate discussion, to take place later in the same meeting. Following the summary, the presentation displayed results by subsection (creativity, learning orientation, team learning, innovation), comparing October and February surveys. With the client's permission, I revealed information on each page *without* highlighting findings. Once he had examined a page, I made an overlay appear that draws attention to selected observations (for example, that more team members wonder how effectively business relationships are managed). Our subsequent discussion covered the following:

- 1) A third survey should be distributed within twelve months.
- 2) I should contact the team member who did not respond to the February survey and inquire why no response was provided. The client respected that I did not share the individual's name and asked that I find out if the survey can be made whole. I did not share my hesitation but thought that the lack of a response itself is instructive (more on this later). Also, incorporating the last response might not yield a benefit since survey results suggest that the group's perception has shifted, and since a third survey is planned.
- 3) Results are promising; for example, there is a positive shift with regard to trust (past project issues eroded trust, which is now slowly rebuilding but will require more time).
- 4) Several areas cause concern: trying new ideas, business stakeholder relations, solutions' holistic approach, taking risks to learn, and constructive handling of dissent.



- 5) A separate meeting with the IT management should be scheduled to review the report, and the team should receive the report ahead of the meeting.

We then returned to the hunch. To my surprise, the client was not concerned about the perception shift. I thought that he might doubt the reports' reliability by assuming that the perception shift points to a problem in the analysis. Instead, he reiterated that a third survey should be administered. Before we concluded our meeting, the client shared his summary assessment of the second report: *Most in the team have crossed the line and see themselves as leaders – they are ready to change.*

When I contacted the team member who did not respond to the February survey, the individual let me know that the reply was *simply missed*. This participant also believed that *The team has not done anything tangible yet* and said *I am optimistic but would like to see our work go live*. I took it to mean that gathering survey data is inconsequential in this employee's mind.⁴⁵ The individual went on to share concerns about suppliers' lacking innovation capabilities. When asked to use new technologies, their fees typically go up. I encouraged that this issue could be raised in a team meeting.

The IT management team received the second report a few days before the review meeting in early April. All participants were present in the meeting, most via video and audio conference. The planned agenda also included the mission and work stream status updates. The client requested that I start the meeting and we began with a discussion of the report summary.

Several participants observed that some areas had improved and some had not changed. Asked about a part of the report that suggests an unfavorable trend (*team behavior*), I commented that it might reflect individuals' changing perspective about the team's abilities and relationships. One team member agreed and shared that she now *looks at things differently*. Another commented that a

⁴⁵ I decided at this point not to make the survey data whole by asking the participant to provide responses, since survey results suggest that the group's perception has shifted and since a third survey is planned.



mentality change is needed to avoid *falling back on old behavior*. The client then stated *As a team we are starting to think differently. We are not afraid to have conversations about how to do work in new ways. We are evaluating ourselves differently, too. Business stakeholders are also engaging, they recognized that they need to change. There is a 'pull' from the business, which we never saw before.* Additional remarks from the group included: *We are more educated than we were when the initiative began; Our teams are now encouraged to speak up and we need to follow up on their ideas; and We trust others sooner, which is helpful when collaborating with business stakeholders.*

I asked the client about his ideas for the initiative for the next six to twelve months. Focusing on familiar work issues only is too easy, he cautioned. The team should make time for a continued innovation dialog. Project teams should be given space to demonstrate innovation leadership. And the next layer of leaders in the department should assume ownership of innovation. It will also be essential to hire talent that helps innovating and changing the culture. Addressing the group, I asked *How do you sustain this change, given that people pay attention to what they are measured against?* A few participants shared that they had assigned the previously agreed goals to individual contributors in their teams.

Oddly, the conversation went flat for a moment at this point. When I highlighted this, the client noted that *everyone has a lot going on*. Reframing the earlier question, I asked *What is an incentive for people to perform?* Several ideas were raised: *Money, but cannot provide set amount; Evaluate people on progress and recognize it; Provide leadership opportunities and recognize it; Provide interesting work assignments; Identify high-potential employees and develop them; Identify priority innovation ideas and run them as mini-projects; Enable people to use flexible work methodologies (e.g. agile development).* Since the time boundary was approaching, I asked the group how it wishes to use the remainder of the meeting. The client requested that another check-in meeting should be scheduled in a few weeks.



The discussion in this meeting was good and, from my perspective, remained aspirational. Much of the team's work in the initiative is pursued opportunistically and focuses inwardly. I shared my concern (Schein, 1999, p. 55) indirectly by asking *How do you implement the mission? How do you commit to innovation publicly?* The client noted that a presentation on innovation should be given to the department. A participant commented that *letting it all happen naturally may not suffice*. What happened next may have been a critical moment in the project. The client asked *Who is our change champion?*

Some energy returned into the room. To sustain the momentum, I felt it was important to challenge the group to consider central issues. Creating accountability for work stream deliverables and emphasizing tactical over systemic change, for example, requires deliberateness. The client and one other team member noted that tactical accomplishments lead to addressing greater challenges. Others commented that the group did not always follow up on findings from past engagement surveys, that the Business Engagement work stream has great potential,⁴⁶ and that *things will happen organically*. The client reiterated that a change champion is required and that a plan should be developed to track, with *discipline*, two to three priority items (I reminded that a work plan is in place). Before closing the meeting, the client asked that the Planning Manager (see Fig. 7) should lead a future discussion about the change champion role and work stream's status.

I wondered if the team had missed an opportunity to create momentum. Portions of the discussion were contradictory: *things will happen organically* but *focus and discipline is desired*; although one exists already, *a plan should be created*; everyone in the team *has a lot going on* but *it is important to make space for innovation leadership*. We did not review the mission. Work stream updates were not discussed. Perhaps the meeting's timing was unfortunate and the agenda too rich. Other issues may have been

⁴⁶ This remark was made by a member of the work stream.



on the group's mind since it appeared distracted and seemed reluctant to consider specifics. During the project close meeting with the client I plan to revisit several issues from this meeting (see section on *Implications for the future of the organization*). The key question is how the change will be sustained.

This meeting to review the second report with the IT management team marked the formal end of the work covered in this paper. My next step was to prepare for the project close meeting.⁴⁷

Intervention

One purpose of the kickoff meeting was to confirm whether the IT management team agrees with the question. But this first meeting already was an intervention. According to Schein (1999), there is no “pure diagnosis” since “any contact with the client system” is consequential (p. 17). Employees do not attend work meetings without being affected. They may agree with what is said and imagine how meeting outcomes impact them, or they reject what was discussed. This is noteworthy since rejection is “energy” that can be redirected (compared to indifference, which is not trivial to manage; Burke, 1990; Burke & Noumair, 2015). Alternatively, they might discuss meeting content with peers. The point is that few remain completely unconcerned.

During the kickoff meeting, the client also shared the proposed mission statement and asked for feedback. We noted a few suggestions and agreed to return to this matter at a later time. It soon became evident that the initiative had gained momentum. The client mentioned shortly after the kickoff meeting that IT management team members were challenging *their* teams to more often consider alternative ways to do work and to contribute new ideas. Change was in the air.

During our second planning meeting (prior to the kick off meeting with the team), the client and I agreed that we needed to be intentional to make a difference. We both believed that

⁴⁷ Since the client asked already that I continue supporting the work, the close meeting will be mainly a reflection and exchange of feedback. However, since it marks the completion of the paper, a formal dialog and re-contracting with the client is appropriate in the close meeting.



encouraging *and* training the team is vital. During this meeting, in which the project's innovation focus emerged, the client expressed interest in an offsite learning event. A day-long workshop at a company considered to be highly innovative should showcase innovation in-action and pioneering technology solutions. This offsite event became part one of the intervention. The client sent an email to a contact at this company and we continued deliberating what the agenda for such a day might entail. The client also began referring to the ACP as a leadership opportunity, which highlights that the project is primarily a learning initiative.

Reviewing the literature, as hoped, inspired the second part of the intervention: a design thinking training. 'Design thinking' was not a search term I initially considered, but Mootee's (2013) text provided the right source material. The training presentation largely follows the book and incorporates two ted.com talks,⁴⁸ Argyris & Schön's "Double loop learning" (discussed by Noumair, 2016a), storytelling (referencing two Harvard Business Review articles),⁴⁹ Guilford's (1966) description of creative skills, and a case study discussion.⁵⁰ Each participant, the client decided, should receive a copy of Mootee's (2013) book at the end of the session.

Part one of the intervention, the offsite event, happened in December. We kept the name of the company hosting the team a secret, fueling participants' curiosity. The client made in-person attendance mandatory and approved travel funding for team members located in offices outside of the New York metropolitan area. I did not attend the offsite since I feared that an outsider's presence might impact the team's learning. I also thought that it would dilute my facilitator role.

Two weeks later the debriefing took place, due to scheduling issues on the same day as the second intervention. Two team members were excused. During the debrief, the client praised the

⁴⁸ Johnson (2010) and Whitesides (2010).

⁴⁹ McKee & Fryer (2003) and Monarth (2014).

⁵⁰ Case study developed by the student presents a scenario of mismatched expectations of a technologist and an internal business stakeholder.



team and thanked them for their engagement. Team members' impressions from the event included: *Creative thinking ought to be pervasive throughout an organization; 80% failure needs to happen to gain a 20% benefit; There is low tolerance for failure at the company; and Process can be detrimental to innovation when it creates constraints.* The client listened attentively, and then responded: *It is a matter of mentality when the team does things always in the same way, but all of this is on the table. One issue to think about is how constraints could be turned into positives. Perhaps the outsourcing partners could be leveraged for the group to become more innovative.*

The conversation had taken on a rather pessimistic tone and I decided to intervene with a statement designed to encourage the team: *You are already changing mentality given the work you are doing right now. The four work streams you agreed to can result in systemic changes.* Shortly before the meeting ended, the client cautioned the team not to *boil the ocean* (the meaning in this context: one should not waste time on activities that may not provide a value-add or delay completion of work). Instead, he said, consider making incremental improvements to work processes. We did not review work stream action items or the updated mission statement in this meeting.

A few hours after the debriefing, part two of the intervention began. Two participants were excused and a third arrived late due to a meeting conflict. The training presentation reviewed mankind's evolution from hunters/gatherers to today's technologically advanced and interconnected society. It also mentioned technology breakthroughs such as digital content distribution and suggested that there could be more disruptions of this kind in the future. On two occasions the discussion became more dynamic. This happened first when I spoke about the difference between strategic planning (establishes control and predictability) and strategic innovation (breaks patterns to reveal new worlds). It happened again when I explained that critical thinking decomposes ideas, whereas design thinking builds up ideas (Mootee, 2013, pp. 16, 29, 55).



Undoubtedly, the IT management team is comfortable with control and predictability. But different skills and attitudes are necessary to think creatively: intuition and playfulness, for example (Mootee, 2013, p. 32). Observing the team during the training revealed the major idea to revisit during the already scheduled reflection meeting in January. Prior to introducing the training's final section (the case study), I summarized this idea: *New challenges typically have no past and leaning on historical experiences may not always suffice to solve problems. Defaulting to what is familiar and seems the right thing to do because it is safe will at times be good enough to solve a problem or produce a solution that meets requirements. At other times, it may be necessary to engage in thought patterns and solution approaches that appear inconsistent with what has worked in the past. These new ways in which problems can be solved and solutions emerge thus could feel unfamiliar, unsafe, perhaps even illogical at first. But they may provide what is needed for progress. Consider that innovation thinking may require you becoming comfortable with using counter-intuitive thought patterns.*

ACP interview comments had inspired the final section of the training. The case study describes a conflict between a technologist and a business stakeholder due to misaligned expectations. The technologist needs information and is required to comply with data security and process requirements. The business stakeholder wants an innovative solution fast, without having to consider much detail or planning. Participants received the case description as a pre-reading assignment along with a Harvard Business Review article about storytelling.⁵¹ To stimulate a discussion, I proposed three questions in relation to how the technologist and business stakeholder could align expectations using storytelling techniques. The discussion, again, was lively.

The client and I met again a few weeks later to plan the next meeting with the IT management team. When I encouraged a review of the mission, the client hesitated. This caused me

⁵¹ Guber (2007).



concern, due to the “transformational” nature of “Mission & strategy” (Burke & Noumair, 2015, p. 149) and since the team had reviewed the mission only once during the kickoff meeting. Feedback had been incorporated and the draft had not since been discussed. My next step was blunter than expected. I explained the gravitational significance of a mission (Burke & Noumair, 2015, p. 149) and convincingly argued for making it a priority in the meeting. The client agreed. I later regretted how vigorously I had argued this point and sent a follow up email to the client providing additional background about the mission’s significance.

It was around the time when the interventions happened that I encouraged the client to consider defining innovation performance goals and reviewing the existing rewards structure. To sustain the change and anchor the IT management team’s innovation mindset, I reasoned, rewards should be linked to goals (Burke & Noumair, 2015, p. 52; Galbraith, 1982, p. 19). Here too, the client first hesitated. In his mind, changes from the innovation initiative were already sticking. He did, however, agree to continued discussions of the subject. A few meetings later, we arrived at the following conclusion: work streams should report their recommendations, which inform goals, which the organization may be able to link to rewards.

The next meeting with the IT management team took place in January. Two members were excused. The client had agreed to four agenda items: in addition to a reflection on the training and obtaining work stream updates, we planned a review of performance goals and the mission. I selected two themes with contrasting dimensions to facilitate the reflection: strategic planning (drives control) versus strategic innovation (breaks patterns to reveal new worlds), and critical thinking (decomposes ideas) versus design thinking (builds-up ideas; Mootee, 2013, pp. 16, 29, 55).



Team member's passion in the meeting, again, was remarkable. They discussed digital disruptions, design thinking in IT, and alignment with business stakeholders. Some shared how they apply learning (e.g. unpacking assumptions, letting work stream ideas influence own thinking, leveraging provided articles).⁵² When one team member questioned the success probability of evaluating cloud-based technology, the client responded by stating *This is old thinking*. This made it clear that he desired more openness in the team about new uses of technology.

To create a bridge to the next agenda item (work stream updates), I asked *What steps can you take to drive your alignment with business stakeholders and shape their thinking about innovation?* The same team member who earlier wondered about the cloud evaluation now argued that alignment is owned by business stakeholders. This deflection was not helpful in my mind since one of the ACP's objectives is to find ways in which the IT management team can improve. Using Schein's (1999) tenth principle ("share the problem", p. 55) to return us to a more constructive dialog, I said to the team member *You now have redirected the discussion on two occasions*. It was a risky step, but this "confronting intervention" (p. 49) refocused the room. Alerting the group to the rebuttals and illustrating when *patterns are not broken* was vital in that moment. After a brief pause I asked again: *What steps can you take to drive your alignment with business stakeholders and shape their thinking about innovation?* No one answered and I sensed the team's curiosity about what I might say next. It was this: *Learn the language of the business. Alignment comes from being able to understand business problems and articulate technology solutions that address business problems*. The subsequent conversation examined the relevance of individual learning, innovation goals, and prototyping when aligning with business stakeholders.

⁵² To encourage the team's continued focus on innovation, I shared links to relevant online articles between meetings, e.g. Morgan (2016).



Next, I asked the group about control/predictability through planning as opposed to deconstructing legacy patterns to drive innovation. The consensus was that, one, breaking patterns is both *scary* and *exciting*, and two, that there are times when a balanced element of control is necessary to ensure predictability. However, the conversation now emphasized tactical issues such as supplier support and funding. Thinking that the team was falling back to what is familiar, I used “self-as-instrument” (Burke & Noumair, 2015, p. 276) again and said: *I see that you make this constantly about technology. You could instead turn inward and focus your thinking on people, your own attitude and assumptions. This also is as much about your leadership, since your own thinking and attitude will inspire team members’ thinking and attitude.* The client agreed with me. Yet perplexingly, the group immediately returned to the subject of funding. Wondering if I intervened too often, I let the conversation go on.

We then revisited critical versus design thinking. The team thought that both are relevant depending on the context. One participant noted that staff members need to be encouraged to use design thinking principles: *We need to ask them for crazy ideas.* Another participant shared a related story: two analysts had been tasked with developing options to solve an issue. Their proposal stated as many disclaimers as it listed ideas. After encouraging them to *pretend that there are no constraints*, the revised proposal came packed with unique concepts. Creative ideas, the participant remarked, emerge when employees are empowered. Many in the room nodded in agreement.

To conclude the reflection, I asked *How counter-intuitive has your thinking become?* Participants’ remarks included: *Adjusting is a step-by-step process; It is harder for a structured person to become unstructured; Team diversity is valuable to innovation; Some of us balance being structured at home and operating in more unstructured ways at work; To become innovative it may not be enough to think outside of the box – we should*



embrace that there is no box; Innovative ideas should be rewarded, but rewards should be used strategically to keep the winning of a reward from becoming more important than contributing an idea.

Presenting work stream updates and recommended next steps to the client was next. Table 4 provides an overview of work streams' status.

Table 4: Work stream updates, January

Work stream	Progress/Status	Next Steps
Business Engagement	Need for IT organization identified to clarify role with business stakeholders	Prepare 'toolkit' to guide IT management team
	Recommendation for re-introduction of IT drafted	Team to leverage a 'toolkit' for business engagement
Culture Change	Culture statement prepared; recognition formed that changing culture is difficult	IT management team to provide input and feedback to work stream
Efficiency Improvements	Work activities where team spends most time identified; areas where team has direct control identified	IT management team to provide work stream with feedback about where focus should be
Lessons, Learning, Collaboration	List of proposed learning events developed	Develop schedule and articulate value proposition

I suggested that a value proposition for learning and collaboration events is articulated since clarifying why attendees are invited improves their participation. I also challenged the quarterly schedule, reasoning that lessons capturing and learning needs a higher contact frequency to be impactful. The team seemed receptive to both ideas. When a participant emphasized email as a useful tool to engage business stakeholders, I thought that this was another indication of the



tendency to fall back on what is familiar and comfortable. I argued that employees receive too much email as it is and that we often do not know if a message was read or understood. With some distance to this meeting, I now believe that encouraging the team to experience the events and additional face-to-face interactions would have been a better than sharing above suggestions. While discussing efficiency improvements, a participant highlighted a characteristic of one of the five identified activity categories. In this category, the team does not fully *control* the activities that are required to realize efficiencies. The activities, however, drive stakeholder engagement. The group agreed that efficiency improvements resulting in direct business benefits should be prioritized.

Since we were pressed for time, I moved on to the review of goals. An outcome-focused team leader example for a business engagement goal is *Six or more annual engagement discussions held with senior internal clients*. Separate objectives were defined for individual contributors. Writing goals with outcome-focused measures can be hard. Often, the language turns out non-specific or aspirational at best. This happened in the Culture Change work stream. Leading up to the meeting, I prepared draft goals with the client's consent but left the culture section blank. The work stream had previously let me know about their interest to discuss culture but a meeting never happened. Thinking that there is no harm if the section remains blank for now, I shared the draft ahead of the January meeting (on request by the client). The work stream promptly requested to see me and provided goals. They were not written in an outcome-focused manner and mainly listed activities. We agreed to a revision, which allowed me to include goals for all work streams in the meeting agenda.

Presenting *prepared* goals was a gamble since writing them did not always involve team members to ensure "commitment" (Burke & Noumair, 2015, p. 25). I chose this approach for four reasons. One, the client had initially hesitated when I suggested drafting goals. I nudged the topic



into the agenda given its significance (see Burke & Noumair, 2015; Pasmore, 2016). Two, the client previously authorized me to manage him. Creating goals meant making progress. Three, reviewing a draft makes a subject tangible. This results in specific feedback and saves time since the departure point for a discussion is not a white canvas. Four, the timing was right. The annual company-wide goal planning deadline was nearing.

Before closing the meeting, the client asked that we schedule additional time to deepen the review of goals and the mission. As we left the room, several participants and the client expressed satisfaction about the productive dialog. My only concern was the client's inattentiveness during the meeting. Attempts to bring him back into the discussion were partially successful. Although he had asked that I manage him, asking for his attention more directly would have been disrespectful.⁵³ Regardless, I was where I wanted to be in the progression of the ACP's work. It was time to distribute the post-intervention survey. Results were discussed in an earlier section of this paper.

In early March, ahead of the review of the second report with the client, the IT management team met to check-in on work stream's efforts and continue the discussion of goals and mission. Two team members were excused; several attended in person and others by video conference. The client thanked team members for their work and noted that *the team now thinks differently*, and that *there is a lot of interest in the organization in engaging in a dialog about innovation*. The status updates provided by work streams are summarized in Table 5.

⁵³ In a debrief after the meeting, I asked the client for feedback about my performance since I was deliberating whether I intervened too often; the client thought that I used the right balance between facilitation and guidance. He also thought that some team members were *turning the corner* and that, to make progress, more time is needed. We also briefly discussed the rebuttals observed in the meeting and the client seemed largely unconcerned.



Table 5: Work stream updates, March

Work stream	Progress/Status	Next Steps
Business Engagement	Developing template to gather information about IT teams and their work	Use information to create catalog that describes ‘who’ IT is and publish on intranet
Culture Change	None	Review culture aspects in next meeting
Efficiency Improvements	Additional team members’ feedback needs to be received (more data required)	Develop concrete plans and prioritize quick-win’s ⁵⁴
Lessons, Learning, Collaboration	Developing schedule for recurring learning events	Distribute draft to team to gather feedback

The Culture Change work stream did not articulate a particular status or make a request (for information, for example) to the group. There was even a brief silence in the room, making it obvious that engagement is lower on this subject than it is on the others. I thought that culture as a concept might still be too obscure for the team to settle on specific activities. Upon my offer, the client asked that I spearhead a discussion on culture change in the near future.⁵⁵

Next on the agenda were goals. I briefly covered their design principles (articulated as activity measures, two sets provided for managers/contributors) and explained that I would not be involved in determining team member’s goal plans. There should be no confusion about my role since performance discussions take place between manager and contributor, typically without a third-party. I later realized my bias in this moment: previous experiences with the team (unrelated to the ACP) caused me to believe that it was important to make this clear.

⁵⁴ Quick-win’s is a term used by the team to describe work that can be completed in a relatively short time and delivers an immediate, positive impact.

⁵⁵ A one-hour discussion on culture based on Schein’s (2010) “Levels of culture” took place a few weeks later to introduce to the team basic ideas about culture, norms, and behavior.



The client noted that he will not mandate specific goals, that the prepared goals should be treated like general principles, that each leadership team member should establish goals suitable for his or her team, and that IT goals should align with business objectives. Two episodes during this portion of the meeting sparked my curiosity. First, I checked my watch since I was concerned about our time boundary, which the client promptly and humorously pointed out. Second, he said that I would speak about innovation at the next department-wide town hall. *He told me – he was not asking.* I thought to reflect on both episodes during our project close meeting.

The conversation moved away from goals when a participant suggested using the company's internal social media platform (an intranet application that allows posting of short messages with hyperlinks and images) to raise IT's profile. The client asked a team member to lead a discussion of the subject in a future meeting. Next, we reviewed the mission. Based on the group's instant feedback, I made changes in a rather hurried manner due to our time boundary. We ended the meeting without agreeing to a final version or next steps. The client had remained silent and shared later with me that this was intentional. He thought that the team should finalize the mission without his oversight or direction.

One task remained in the ACP: reviewing the second report with the client and separately with the IT management team (Burke & Noumair, 2015, p. 93). Delivering diagnosis, plan, analysis, intervention, and reports (Noumair, 2016b) has satisfied this paper's requirements. I will now examine the ACP's link to previous research, discuss its limitations, illustrate my learning, and propose implications for the organization and similar future projects.



Section 6: Overall Discussion, Insights, Implications, and Limitations

The change discussed in this paper is “evolutionary,” not “revolutionary” (Burke, 1990, p. 5). There was no disruption from the external environment (Burke & Noumair, 2015, p. 23) that warrants reorienting the team’s work. The client did not modify the group’s mission (we only documented it so that it can be published) or transform its management structure or leadership. Instead, steps were taken to help the IT management team embrace innovation more than it did before. The intervention was managed in a deliberate and “incremental” way (p. 23).

Since the February survey suggests a shifting perception of some members of the IT management team, a third survey is recommended to assess innovation attitude and behavior. Evaluating the reward system, incorporating business stakeholders’ perspectives, extending the work to include all department members, and sharing lessons with peer groups may be possible after this paper has been submitted.

Previous research

Applicability of previous research with respect to the ACP is assessed with two questions: has the Burke-Litwin model (Burke & Noumair, 2015, p. 148) helped in the diagnosis? Do the project’s findings confirm previous research?

The Burke-Litwin model turned out to be the right choice. It guided the diagnosis and focused the work. Without it, we might never have realized how crucial the mission statement and culture aspects are. Table 6 addresses question one, showing selected ACP outcomes matched to Burke-Litwin factors (Burke & Noumair, 2015, pp. 148-150) and identifying the work streams associated with the outcome.



Table 6: Outcomes matched to Burke-Litwin factors; associated work streams in *(parentheses)*

Outcome	Factor	Definition
<ul style="list-style-type: none"> – IT mission documented/reviewed <i>(All work streams)</i> – Need for business objectives alignment is more clearly seen⁵⁶ <i>(Business Engagement)</i> 	Mission & Strategy	Central purpose of organization and how purpose is to be realized
<ul style="list-style-type: none"> – Space (physical, time) created to explore creativity, culture, learning, collaboration etc.⁵⁷ <i>(All work streams)</i> 	Management Practices	Manager activities to deploy resources to deliver mission
<ul style="list-style-type: none"> – Continuous improvement and team learning inspired <i>(Operational Efficiencies; Lessons, Learning, Collaboration)</i> – Performance goals prepared <i>(All work streams)</i> 	Systems	Policies/procedures designed to facilitate work
<ul style="list-style-type: none"> – Leader vision for innovation capability inspired <i>(Culture Change)</i> – Team's motivation and engagement increased⁵⁸ <i>(All work streams)</i> – Innovation commitment facilitated <i>(Lessons, Learning, Collaboration)</i> 	Motivation	Expressed tendencies to move towards goals and take needed action
<ul style="list-style-type: none"> – Team members' trust improved <i>(All work streams)</i> – Need to understand culture more clearly is seen <i>(Culture Change)</i> 	Individual Needs & Values	Factors that create commitment and personal worth in the work context

⁵⁶ Source: February survey results.

⁵⁷ As is evident from the time spent in meetings and separate working sessions.

⁵⁸ Contribution levels of some participants were lower than others; this could be a function of their personality – for example, a team member who may be less vocal and more observing yet is as engaged in the project's work as compared to one who is more vocal.



Three examples help to answer the second question (do the projects' findings confirm previous research?). First, interviews and surveys highlight ACP participant's inclination toward repeatable, familiar methods. Using known means to make it through the work day is sometimes easier than trying an unusual idea. This supports Galbraith (1982), who observes that repetitive-task proficiency creates innovation barriers (p. 6). Second, the project emphasizes how important it is to break with legacy patterns to innovate. *Counter-intuitive* thinking may be challenging at first but can reveal new worlds. This is consistent with, for example, Guilford's (1966) characterization of "flexibility [as] the basis of originality" (p. 188), Johansson's (2006) discussion of "associative barriers" (p. 41), and Mitchinson & Morris (2012) ideas on "entrenched patterns" (p. 2). Third, survey results draw attention to team member's trying and retrying of ideas and handling of dissent.⁵⁹ When team members can contribute without having to expect a backlash, they might try an unusual idea or challenge an assumption. This relates to, for example, Edmondson's (1999) take on psychological safety (p. 357) and Raes et al (2015) view of mature, creative groups (p. 11).

Limitations

The ACP's limitations fall into two general categories: structural issues and minor considerations. Principal limitations are the small size of the sample (ten) and the fact that the work takes place with one team/in one company. However, due to its descriptive nature, this project does not warrant a sample that is "representative of the population" (all IT staff) to ensure that study results are "generalizable" (Sekaran & Bougie, 2013, p. 244). The project's purpose is to enhance the IT management teams' grasp of and practical application of innovation. The sample size and single-

⁵⁹ Selected variances in the February results may be explained by respondent's perception of the measurement scale. See earlier discussion and Golembiewski et al (1976, p. 137).



team-scope limitations are therefore offset by the *general intent of the project*. The ACP is limited to my home organization as per faculty guidelines.

An indirect generalization might occur after the ACP's conclusion. Merriam-Webster (2016) defines "generalization" as "the act or process whereby a learned response is made to a stimulus similar to but not identical with the conditioned stimulus." Indirect generalization refers to a process by which the U.S./Canada IT management team might transfer learning from this project to different contexts. For example, other regions' IT management teams in the company (e.g. in Asia) could one day adopt selected lessons from this ACP.

Another limitation is that the project does not use a control group. The ACP targets a single, primary group: ten members of the U.S./Canada IT management team. Using a control group helps with understanding an intervention's impact when two groups can be compared, where one is subject to the intervention and the other is not (Sekaran & Bougie, 2013, p. 171). It may be untypical that descriptive studies use control groups (Perry, 2016), yet it is plausible that such studies benefit from a comparison of a primary and a control group. This kind of understanding can inform interventions or determine the future direction of an initiative. For this ACP, tradeoffs of using a control group include a split sample or including participants from other regions (to offset a split). Splitting the sample to create a control group defers learning for one half of the team since only the primary group is initially subject to the intervention. Since the project is not taking place in a lab, we can safely assume that a control group should eventually reach the same level of learning as the primary group. A separate effort would be necessary for the control group to establish parity, likely after the project concluded. Members of the control group also might view being in the control group as undesirable, which could impact their motivation (participants will likely find out who is in



which group since the project is not conducted in a lab where all variables can be controlled). Not splitting the sample avoids these issues. Using a larger sample with participants from other regions to offset a split creates coordination overhead. Video conferencing is used in the ACP to bridge the “space-time” (Priest et al, 2006, p. 192) gap and enable remote participants to attend meetings with a rich experience (compared to “primitive” telephone conferences, p. 188). Adding participants from, for example, Latin America and U.K. increases the sample from ten participants in two time zones to thirteen in four time zones. The resulting seven-hour time difference between selected team members limits the overlapping hours available for meetings and therefore makes it challenging to schedule them. The client had restricted the ACP to the U.S. and Canada early in the project due to regional priorities and role specialization of selected team members. Not adding participants from other regions to increase the sample and offset a split avoids the coordination overhead.

The impact of one other structural limitation is not fully clear. The client initially considered including business stakeholders in the ACP who are recipients (or beneficiaries) of IT innovation. A separate interview questionnaire was developed to ask selected business stakeholders during the project’s data collection phase about their innovation-related concerns or expectations. Since these stakeholders are IT’s internal customers, and since successful innovation maintains an explicit customer focus (Galbraith, 1982; Hammond et al, 2011; Kuczmariski, 1996a; McAdam & McLelland, 2002), their perspective can be instructive. However, no business contacts were named by the client for interviews (despite me inquiring twice). He shared later with me that he thought that their current priorities would have made it too challenging to involve them in a meaningful way. It might still be worthwhile to inquire about their perspective on innovation, even if at a later time.



A minor limitation of the project is that I am not a professional researcher. This fact cannot be changed and has consequences for the study's rigor. The ACP does incorporate "evidence-based practice" (Perry, 2016), but its design and analysis do not match the meticulousness of true academic research. Another minor limitation is that the project does not leverage the Sidhu et al (2015) method to determine an innovation score for each participant. Conducting individual assessments of IT management team members and publicizing scores might have caused an unnecessary distraction, should participants argue over them or compare scores to rank order. The sample (ten) is also too inconsequential to take the mean from each question after using the algorithm. However, this omission is unlikely to reduce the project's value. The client can consider determining aggregate innovation scores (by sub-team, perhaps) for *all* members of the IT department at a later time. An assessment of this kind might be instructive since individual contributor performance is a function of leader effectiveness (Hogan, Curphy, & Hogan, 1994, p. 496). The measurement should be designed to determine the long-term impact of the IT management team's innovation efforts. First, however, the group needs to sustain its learning. Performance goals and rewards are vital to ensure that organization change, including learning about innovation, is sustained (Burke & Noumair, 2015, p. 52). Goals were agreed during the project. I am undecided whether the incomplete consideration of rewards constitutes a limitation. A plausible lesson from how rewards were treated in the ACP is discussed later in this paper (see section *Considerations for the future*).

Additional, minor limitations are mainly imposed by the ACP's time boundary due to the paper's submission deadline. They include: inability to measure impact in terms of financial results (which would require access to proprietary information), no control established for other variables



that can shape participant's view on innovation, and third survey not distributed to compare its results to pre- and post-intervention surveys.

Learning from conducting evidence-based practice

I previously looked at evidence as things one extracts from a database, reads about in a scholarly paper, or analyzes using numbers. Nearly every day, I use information or figures (evidence) to make decisions (practice), mainly at work. My eyes are now more open to evidence being available through *observing behavior*. Examples of behavior include spoken words (e.g. making promises, sharing information) and physical actions (e.g. participation, punctuality). We observe dynamics of behavior when interpersonal or group relations follow an expected protocol for social interaction, which may be informed by the context (Marshak, 2006, p. 37). A work meeting can provide several examples of behavior. Participants may arrive early, right on time, late, or not at all. They may act passively or contribute. They may speak softly or gesture with their hands. They may include others or emphasize issues that are most important to them. These behaviors are often observable and can lead to conclusions about the person, group, or context.

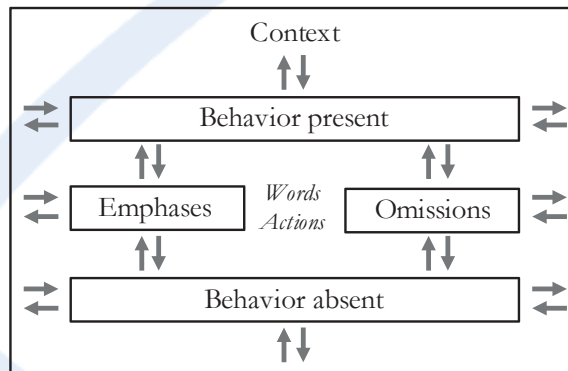
Marshak's discussion of the "prism" (2006, p. 22) and "emphases and omissions" (p. 53) improves my understanding of interpersonal and group interaction aspects. An individual's prism is shaped by experiences, values, adopted thought models, and culture (pp. 22-24) and, in part, explains why people take opposing views while having the same facts. Accentuating or omitting certain aspects of a situation or subject could suggest individual motives (p. 40). Illogical behavior might be caused by "unconscious dynamics in [the group]" (p. 49; see also Burke & Noumair, 2015, p. 163).⁶⁰

⁶⁰ Unconscious dynamics include attribution of the unwanted elsewhere, acting-as-if transfers of issues, denial, counterbalancing activities designed to deny reality, talent that remains hidden, a single member representing a group-wide issue, and symbolism used to convey issues (Marshak, 2006, p. 51).



A five-dimensional model can guide my future reflecting (Schön, 1987, p. 26) on the prism, behavior, emphases, omissions, context, and group dynamics (see Fig. 10).

Fig. 10: Five-dimensional reflection model⁶¹



The model shows presence/absence of behavior (dimensions one and two), emphases and omissions of words or actions (dimensions three and four), and context (fifth dimension). Conduct (behavior) may be visible (present) or not (absent). Emphases and omissions can also be observed as present or absent behavior. An emphasis (present) can be obvious. It may also be evident when it *should* be there but is not. A noticeable omission (present) may convey humor. A concealed omission (absent) could be difficult to detect. Context shapes any scenario. These distinctions are helpful as I calibrate my perception of people and groups. The model is applicable when participating in an interpersonal exchange or experiencing group dynamics. Noticing the covert and decoding the overt helps to make sense of other people's emotions and relationships in and between groups. It will also help me to address a personal style challenge: finding a better balance between task orientation and people consideration.

⁶¹ Inspired by Marshak (2006), Schein (1999), and Schön (1987).



Considerations for the future

Contemplating projects in Asia for the ACP was overly optimistic. Working across cultural boundaries has appeal but adds several layers of complexity: limited overlapping hours for meetings, reliance on technology-facilitated communications for nearly all stakeholder interactions, and time-consuming and costly travel. Proximity to the majority of the IT management team made it easy to schedule meetings during convenient hours and meet most participants in person. Co-location with the client organization will be vital when I lead future change initiatives.

Aside from the limitations discussed earlier, the ACP's methodology is robust and emerged through an ongoing dialog with faculty. Guidance received for pre- and post-intervention measures in particular improved the project. Once the client and I had agreed to the approach, the work began and progressed as expected. If leading or supporting a similar initiative in the future, I would use the same structure: gather data in interviews, measure using a survey, measure pre- and post-intervention, and conduct at least two complementary interventions.

There are four areas I might approach differently if given a similar opportunity. First, we defined the ACP's focus based on a deficit. I could have used "appreciative inquiry (Schein, 1999, p. 56) beginning with the first client meeting to create conditions in which we consistently highlight what is working. Schein's (1999) point is that shining a spotlight on what is wrong makes it less likely that we follow up with questions that emphasize what is right (p. 58). Second, confirming the group's mission came into focus late in the project. We began a dialog in the kickoff meeting but subsequently gave it lower priority. Since the mission provides "direction" (Burke & Noumair, 2015, p. 152) and affects factors at lower levels in the Burke-Litwin model (p. 157), it may have been better to prioritize it higher. Third, due to the group's predominantly tactical work style (concentrating on



maintenance, defaulting to what is proven, preferring existing solutions), goals and rewards could have been considered earlier. They are linked (Burke & Noumair, 2015, p. 52; Galbraith, 1982, p. 19) and instrumental in sustaining change (Burke & Noumair, 2015, p. 52). Managers ensure that goals are understood (Fleishman, 1953, p. 499) and employees perform tasks with the expectation to receive a reward *they value* (Burke & Noumair, 2015, p. 52). Performance can be impacted if employees are unclear about goals or rewards. Fourth, no data was gathered from business stakeholders about their innovation-related concerns or expectations. Since IT is a *service organization*, and since successful innovation maintains an explicit customer focus (Galbraith, 1982; Hammond et al, 2011; Kuczmarski, 1996a; McAdam & McLelland, 2002), the work in the ACP might have benefitted from insights provided by business stakeholders receiving the services.

Two lessons result from the above issues. First, not using “appreciative inquiry” (Schein, 1999, p. 56) and failing to encourage that the mission receives focus earlier is likely due to my lacking OD experience. Due to their systemic relevance, I will treat diagnosis approaches and mission/strategy differently in the future. Second, a rewards assessment and business stakeholder interviews did not take place (performance goals were agreed due to the company-wide annual goal planning deadline and because of my persistence) due to the client’s disinclination. I worried occasionally if this constitutes a significant oversight. In the future, I can be more thoughtful about the possibility that a system simply requires more time until it can confront certain aspects of the OD initiative (Schein, 1999, p. 39).

Learning about organization change

My learning about organization change falls into two categories: ideas that were confirmed and concepts that considerably expand my understanding. Ideas I was reasonably familiar with at the



beginning of the program have to do with *disruption*, *learning*, *sustainability*, and *involvement*. Through experience and in part through intuition, I knew for a while that a *shock* (disruption) can lead to *learning* and that a change that is not properly *sustained* likely fades. Burke's (2016c) review of an organization example is helpful here. If customer demand falls due to changes in the external environment, income may decrease (the *shock*). If the firm previously *learned* how to discover changing market conditions by, for example, being attentive to customer needs, it may be able to adjust strategies and systems to counter emerging threats. If taken by surprise, the firm may have to *learn fast* or face elimination from the market. Burke's (2016c) observation about "Capital market professionals" is especially illuminating in this sense. They are close to market trends and discover early where margins and profits improve or deteriorate. And thus, they direct capital to where opportunity exists. For-profit enterprises should therefore employ strategic planners with capital markets experience to discover market shifts and enable continuous refinement of strategies. Naturally, if the firm's counter to the threat is half-hearted, the response may not be robust (*sustainable*) enough to maintain a competitive position. One of my (familiar) personal growth opportunities relating to organization change has to do with soliciting input and encouraging participation as being superior to directing. *Involving* individual contributors in planning work creates dedication (Burke & Noumair, 2015, p. 25). My task focus (Hogan Assessment Systems, 2016; Quenk & Kummerow, 2015), however, frequently causes me to be too directing. I need to adopt a "participative" leadership style (Burke, 2016c) more often since "*involvement* leads to commitment" (Burke & Noumair, 2015, p. 25; italics added). That way, I can lead organization change effectively.

Three concepts from the program stand out that significantly add to my understanding of organization change. First, the James-Lange theory (Burke & Noumair, 2015, p. 203) may appear



unsound at first, but is not. Traditionalists might reason that we drive change by describing desired behavior and monitoring adoption. We can, however, sustain change by influencing norms that result in behavior. Once the behavior is embraced, commitment becomes more likely (Burke, 2016a). Second, I work well with structures that help to orient work. Due to the non-linear and obscure nature of organization change (Burke, 2016d), the Burke-Litwin model (Burke & Noumair, 2015, p. 148) is useful when diagnosing organization issues and determining root cause. Third, and most important: everything is an intervention (Schein, 1999, p. 17) and all behavior is data (p. 50). I am placing these concepts side by side since project management training conditioned me to plan, execute, and monitor delivery in sequence (Project Management Institute, 2013). Organization change does not follow this pattern. Any interaction is consequential and could require us to return to an earlier phase of the project. Further, we may need to return to an earlier phase because the leadership did not communicate or staff did not attend training. *These issues happen for a reason and have meaning.* The key point is that even failure and unexpected behavior provide data. My desire for perfection (Hogan Assessment Systems, 2016, p. 14) plays a significant role in this context. It is another area in which I want to evolve by setting more reasonable standards for myself and others.

Learning about my own capacity as a change leader

My growth as a change leader spans all facets of the M.A. program's competency model: *frameworks/models, systems thinking, consulting phases, organization design, leadership, applied research, self-reflection, group dynamics, diversity/inclusivity, coaching, collaboration, and conflict negotiation* (Noumair, 2016c).

Learning in the program, for me, is integrative and takes place in two main areas: organization change leadership skills and interpersonal competencies.⁶² Selected concepts are explained next.

⁶² Other subjects in the curriculum are of lesser significance for my development (e.g. Executive Coaching).



Using *frameworks/models* and *systems thinking* to lead change makes sense to me. I like structure; it helps me to grasp theory. The following examples illustrate my meaning: Open Systems Theory helps locating causality in organization issues (Burke & Noumair, 2015, p. 167); “disruption” is necessary for a system and actors in it to “[reorganize] thought” so that new behaviors can become the norm (Burke & Noumair, 2015, p. 312-313); “energy” from “resistance” can be redirected, whereas we cannot manage “apathy” (Burke, 1990, p. 16); Gersick’s “Deep structure” helps understanding adaptability (Burke, 2016e); Lewin’s “unfreeze, change, refreeze” makes change manageable (Burke & Noumair, 2015, p. 214); Argyris & Schön’s “Double loop learning” supports detecting the need for and sustaining change (Noumair, 2016a); and Marshak’s perspective on the covert makes the unforeseen less surprising (2006, pp. 41+). Given the right circumstances, I feel comfortable that I can use these concepts to lead change. Many are as relevant to managing teams.

I am thinking often about my ability to *self-reflect in the moment* and navigate *group dynamics*. The quest to find out who I am, where I come from, and where I might go began just about when I turned 18. I recall a number of breakthrough moments during the past 30 years when a book or therapist helped with a shift of my understanding or attitude. For example, I realized what my father’s influence on me has been. I also learned that I like to be alone because I am an introvert. And I am aware that, amongst other things, I am focused, competitive, loyal, direct, and factual. For about five years I took a break from developing as a person. The M.A. program has re-ignited my interest. It was not obvious to me when I applied but I get it now: we as individuals have to change before we can lead organization change. Clearly, revelations about my past are helpful and I was able to connect additional dots in the past year. But I remain conflicted about my low interpersonal skills and high task orientation (Hogan Assessment Systems, 2016; Quenk & Kummerow, 2015).



Managing change requires designing communications pathways, norms, processes, etc. We shape them as we wish and creating such constructs falls into my comfort zone. However, change *leadership* affects organization member's beliefs, hopes, and fears. That is why I need to develop a greater ability to *self-reflect in the moment* and become more compassionate in interpersonal and *group* settings. There is some irony here, too: to change in my core I need to think counter-intuitively. Breaking with legacy patterns, of course, is a central idea in the ACP. Is this a coincidence? I think not.

My post-program action plan includes hiring an executive coach and demonstrating increased consideration for people. I plan to share assessment findings (MBTI, 360, Hogan, etc.) with the coach to identify additional steps I could take to continue learning. The coach will mainly help me to enhance my ability to diagnose encounters that I observe or take part in to learn from their outcomes (i.e. situation was handled optimally, or recovered from with an effective strategy, or revealed a pattern to avoid). Two examples of behaviors that demonstrate consideration for people have to do with *inclusivity* and empathy/social reciprocity. First, I can be more inclusive of others in work contexts when I empower (by avoiding being too directive) and *coach* (to build up those around me). As a result, team members' motivation improves when they are included in decision-making (Burke, 1990, p. 48) and experience greater autonomy (Amabile, 1981, p. 161). Second, in private and work contexts, I can practice empathy by redirecting task focus to observing emotions and *group dynamics*, and by being more open to social interactions. Social reciprocity in particular is important to all my learning. My tendency in the past was to think that brief encounters with no tangible outcome have little purpose. I am now more comfortable taking a leap of faith and seeing the value of brief contacts to display genuine interest in others. Conscious social reciprocity is foundational



since *self-reflection* aids learning, which improves interpersonal skills, which leads to greater social competence. Exhibiting these behaviors increases my capacity as a *people and change leader*.

Implications for the future of the organization

This ACP's work can result in positive long-term consequences for the client's team and improve its performance. A key question is: will the change be sustained? Understanding the "paradoxical nature of positive organizational change" (Cameron, 2008, p. 8) is helpful when thinking about the sustainability of change. Basically, negative conditions (a threat, problem, or deficiency) instigate change since "living systems" respond quickly to existential threats (p. 13).⁶³ Both, negative and positive aspects are necessary and can co-exist but the "negative [tends] to create stronger defensive reactions" (p. 16). Since we (humans) are inclined to "develop a natural tendency toward positive change" (p. 13), an abundance of positive aspects is key in sustaining change (p. 18).

Not as enigmatic but as relevant are the differences between "technical problems" and "adaptive challenges" (Heifetz et al, 2009, Chapter 2, Section 3, para. 1). Heifetz et al (2009), similar to Johansson (2006, p. 41) and Mootee (2013, p. 54) observe that new challenges have no past:

While technical problems may be very complex and critically important ... they have known solutions [and] can be resolved through the application of authoritative expertise and through the organization's current structures, procedures, and ways of doing things. Adaptive challenges can only be addressed through changes in people's priorities, beliefs, habits, and loyalties. Making progress requires going beyond any authoritative expertise to mobilize

⁶³ Similar to Burke & Noumair (2015) leaning on the theory of evolution as a foundation for systems thinking and organizational development (p. 105-107), Cameron (2008) suggests that a predisposition towards the positive is a "natural human attribute" (p. 11), although the negative ensures a species survival (p. 15).



discovery, shedding certain entrenched ways, tolerating losses, and generating the new capacity to thrive anew (Chapter 2, Section 3, para. 1)

The IT management team, of course, does not face existential threats. Managing the demand for its services confronts the team with issues of versatility. The ability to change depends on positive tendencies (Cameron, 2008, p. 13) and adaptability (Heifetz et al, 2009, Chapter 2, Section 3, para. 1) and such change can be sustained through a reward system (Burke & Noumair, 2015, p. 8). When an organization links rewards to goals (Burke & Noumair, 2015, p. 52; Galbraith, 1982, p. 19) and employees are motivated to perform expecting a reward they value (Burke & Noumair, 2015, p. 52), the organization *and* individual contributors can obtain the results they desire. Deeprose (2006) noted that managers need to consider new aspects of employee “recognition and reward” (p. vii) due to generational changes in the work force. I provided the client with Deeprose’s (2006) list of 150 financial and non-financial incentives (pp. 107-120) and we thought to revisit rewards when the team’s goals were agreed. However, assessing and potentially revising the reward system may only be possible after this paper has been submitted. To engage the client in a discussion about sustaining the *innovation mindset*, I plan to ask the following questions in the project close meeting:⁶⁴

- 1) Who will be appointed as change champion?
- 2) Should a different structure be used for team meeting agendas?⁶⁵
- 3) How will positive aspects of innovation regularly be recognized?
- 4) How can continued learning be ensured?

⁶⁴ The meeting to review the second report with the team marks the formal end of the work completed for this paper. Aside from the formal project close meeting with the client, I plan to meet him separately in an informal setting to exchange feedback about our interaction during the project.

⁶⁵ Future team meetings should cover no more than a single item each. It is in part due to my miscalculation that we tried to cover more ground and periodically ran out of time.



- 5) Will the mission be publicized?
- 6) Could the reward system be assessed and potentially enhanced?
- 7) Should business stakeholders share their views on innovation?
- 8) Should the work be extended to the entire department?
- 9) Is an implementation roadmap needed for the work streams?
- 10) Does the client see me continue in a change facilitator role?⁶⁶

The ACP paper's submission deadline will not allow covering the above work. However, it is likely that I will continue to support the initiative since the client spoke about my continued participation on several occasions. When this work continues, the IT management team will perform as effectively as it does today. It will also continue to learn and improve individuals' and the group's innovation capacity, to keep up with a rapidly changing world.

Considerations for others

Two additional considerations are worthwhile. The first has to do with scenarios in which the absence of "objective performance data" (Pasmore, 2011, p. 263) makes it necessary to articulate a "Subjective Need for Change" (p. 263). Making a case for change based on subjectivity is more challenging because the argument depends on perception and perspective. Innovation is inherently subjective, requiring tolerance of imprecise predictions, false starts, and uncertain outcomes. Pasmore (2011) cautioned that we should expect change efforts based on subjective needs to fail more often than those that were supported by data. An "antidote" (p. 264), he proposes is "dialogue" to secure "alignment" (p. 263) of organization stakeholders.

⁶⁶ Question is included to re-contract with the client, if it is helpful that I continue to support the work.



What else can change leaders do in situations without objective performance data? First, realize that there will not be a “burning platform” (Burke & Noumair, 2015, p. 226) that creates urgency. The initiative’s value proposition will have to be conveyed through a vision for a “desirable future” (p. 188). Second, accept that the change will be gradual, not “revolutionary” (Burke, 1990). It may take many small steps to make progress. Third, provide proof that explains why the change is needed. Pasmore’s (2011) set of diagnosis questions is a good start (p. 265). Answers to these questions will result in additional questions, and answers to those will inspire even more questions. Spend enough time to discover and decompose issues and the need for the change might reveal itself. Fourth, prepare meticulously for the *one* opportunity that might exist to present the need for the change. If the proof is vague or disjointed from the organization’s most pressing issues, it could be impossible to secure support for the initiative and the change leader’s reputation might suffer.

The second consideration is the issue of change facilitators’ hybrid responsibilities requiring them to be mindful of possible interferences. During the ACP, I retained my PMO role while performing as the change facilitator. I wondered occasionally if my day job could collide with ACP work, since ensuring that funding requests are approved before project work begins can delay innovation (no such conflict arose). What should a change facilitator do in this case? Be on guard about role plurality and compartmentalize meetings and communications. If necessary, delegate relevant portions of the day job to ensure continued objectivity as a change facilitator.



Section 7: Abstract

This Applied Change Project examined whether there are barriers that slow down an IT group's innovation engine and whether steps can be taken to shift the organization into higher gear. This is an important question to explore because the ability to innovate is vital when for-profit professional service firms depend on technology to respond to customer demand for advisory, transactional, or business intelligence services. When such services require IT enablement, technologists are expected to innovate and contribute novel ideas and solutions to support business objectives.

The study revealed that individuals and organizations need to overcome tendencies to rely on tested ideas and known solutions since new problems (or opportunities) have no past. Individual and organizational learning and an environment tolerant of imprecise predictions and false starts are crucial to innovate. For individuals, developing innovation capacity has appeal when technology advancements create jobs and candidates are selected for their learning, creative, and innovation skills. The post-intervention survey validated the group's problem-solving confidence, trust towards others, and learning orientation. Study results are consistent with the literature and highlight, for example, that task proficiency or reliance on proven methods will not always solve new problems.

The project's main implications are that concerns remain about the group's stakeholder engagement approach and whether it can try and retry ideas. Study participants developed a more realistic view about the group's ability, performance, and relationships and exhibit a clearer grasp of legacy patterns' impact on creativity. The groundwork was laid for the continued learning so that the group can meet the organization's future innovation needs. A further focus on the link between the



group's mission, customer perspectives, performance goals, and rewards is suggested to benefit the innovation evolution.

The approach used to explore innovation was to assess the innovation abilities of IT leaders in the organization. Research incorporated interviews, surveys, and documentation. Surveys inquired about work satisfaction, understanding of innovation, and innovation performance and goals. Secondary sources inspired a two-part intervention to enhance the group's innovation mindset.

I learned about a variety of diagnostic approaches, how the gravitational nature of transformational organization factors such as mission and culture impacts individuals and groups, and how group dynamics and organization context can drive individual behavior.

Limitations in this study include that reward system modifications were not implemented. Although innovation benefits from customer focus, business stakeholder (a.k.a. IT customer) perspectives were not included. The sample (ten members of the IT group's management team) is small and purposive and does not use a control group.



References

- Alderfer, C. P., & Brown, L. D. (1972). Designing an "empathic questionnaire" for organizational research. *Journal of Applied Psychology*, 56(6), 456.
- Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, 10(1), 123-167.
- Bresman, H. (2010). External learning activities and team performance: A multimethod field study. *Organization Science*, 21(1), 81-96.
- Bunderson, J. S., & Sutcliffe, K. M. (2003). Management team learning orientation and business unit performance. *Journal of Applied Psychology*, 88(3), 552.
- Burke, W. W. (1990). *Managing change questionnaire*. Pelham, NY: W. Warner Burke Associates.
Retrieved June 20, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Burke, W. W. (2014). Changing loosely coupled systems. *The Journal of Applied Behavioral Science*, 50(4).
Retrieved December 21, 2016, from Teacher's College Evernote in odprograms.
- Burke, W. W. (2016a). *Behavior*. [PDF Document]. Retrieved June 9, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Burke, W. W. (2016b). *Organization change*. [PDF Document]. Retrieved June 9, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Burke, W. W. (2016c). *Organization change: current thinking and experience*. [PDF Document]. Retrieved June 9, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Burke, W. W. (2016d). *Successful processes of organization change*. [PDF Document]. Retrieved June 9, 2016, from Teacher's College Evernote Lecture Notes in odprograms.



- Burke, W. W. (2016e). *Systems theory*. [PDF Document]. Retrieved June 7, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Burke, W. W., & Noumair, D. A. (2015). *Organization development: A process of learning and changing* (3rd ed.). Upper Saddle River, NJ: Pearson Education.
- Cameron, K. S. (2008). Paradox in positive organizational change. *The Journal of Applied Behavioral Science*, 44(1), 7-24.
- Chan, C. C., Pearson, C., & Entekin, L. (2003). Examining the effects of internal and external team learning on team performance. *Team Performance Management: An International Journal*, 9(7/8), 174-181.
- Chui, J. M., Manyika, J., & Miremadi, J. (2016, July). Where machines could replace humans—and where they can't (yet). *McKinsey Quarterly*, 7. Retrieved November 27, 2017, from <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/where-machines-could-replace-humans-and-where-they-cant-yet>.
- Cowan, G. (2016). *Negotiations: Getting what you need to succeed*. [PDF Document]. Retrieved October 29, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Deeprise, D. (2006). *How to Recognize and Reward Employees: 150 Ways to Inspire Peak Performance*. Saranac Lake, NY: AMACOM Books. Retrieved December 2, 2016 from ProQuest ebrary.
- Dillard, J. S. (2016). *OD interview questions*. [Word Document]. Retrieved August 3, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Edmondson, A. C. (1996). *Group and organizational influences on team learning*. Unpublished doctoral dissertation, Harvard Business School, Boston. Retrieved November 26, 2016, from ProQuest Database.



- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, Vol. 44, No. 2, 350-383.
- Farmer, S. M., Tierney, P., & Kung-McIntyre, K. (2003). Employee creativity in Taiwan: An application of role identity theory. *Academy of Management Journal*, 46(5), 618-630.
- Fenn, J. (2016, June 6). Create a research engagement plan to advance your innovation culture and processes. (ID: G00272371). *Gartner*. Retrieved September 3, 2016, from Gartner Inc. database.
- Fenn, J. (2015, October 16). Six styles of technology innovation groups. (ID: G00230292). *Gartner*. Retrieved September 3, 2016, from Gartner Inc. database.
- First Research (2016, September 26). Industry profile professional services sector. *Mergent*. Retrieved November 25, 2016, from First Research (Mergent), Hoover's Inc. database.
- Fleishman, E. A. (1953). The description of supervisory behavior. *Journal of Applied Psychology*, 37(1), 1.
- Galbraith, J. R. (1982). Designing the innovating organization. *Organizational Dynamics*, 10(3), 5-25.
- Golembiewski, R. T., Billingsley, K., & Yeager, S. (1976). Measuring change and persistence in human affairs: Types of change generated by OD designs. *The Journal of Applied Behavioral Science*, 12(2), 133-157.
- Guber, P. (2007). The four truths of the storyteller. *Harvard Business Review*, 85(12), 52.
- Guilford, J. P. (1966). Measurement and creativity. *Theory into Practice*, 5(4), 185-189.
- Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of individual-level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1), 90.



- Heifetz, R. A., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world* [Kindle version]. Retrieved from Amazon.com.
- Hirst, G., Van Knippenberg, D., & Zhou, J. (2009). A cross-level perspective on employee creativity: Goal orientation, team learning behavior, and individual creativity. *Academy of Management Journal*, 52(2), 280-293.
- Hogan Assessments Systems. (2016, August 29). *Challenge*. Leadership Forecast Series, Report for: Oliver Schneidemann. Retrieved October 26, 2016, from Teacher's College Evernote in odprograms.
- Hogan, R. (2015). *Personality and the fate of organizations*. New York: Psychology Press.
- Hogan, R., Curphy, G. J., & Hogan, J. (1994). What we know about leadership: Effectiveness and personality. *American Psychologist*, 49(6), 493.
- Holbeche, L. (2015). *The Agile Organization: How to build an innovative, sustainable and resilient business*. USA: Kogan Page Publishers. Retrieved December 3, 2016, from ProQuest ebrary.
- Johansson, F. (2006). *The medici effect: What elephants & epidemics can teach us about innovation*. USA: Harvard Business Press.
- Johnson, S. (2010, July). *Where good ideas come from: The natural history of innovation* [Video file]. Retrieved from http://www.ted.com/talks/steven_johnson_where_good_ideas_come_from.
- Kirby, J., & Davenport, T. H. (2016). The knowledge jobs most likely to be automated. *Harvard Business Review*. Retrieved January 7, 2017, from <https://hbr.org/2016/06/the-knowledge-jobs-most-likely-to-be-automated>.



- Knowledge@Wharton. (2015, November 5). How professional services can disrupt its way out of automation. *Wharton School of the University of Pennsylvania*. Retrieved November 20, 2016, from <http://knowledge.wharton.upenn.edu/article/how-professional-services-can-disrupt-its-way-out-of-automation>.
- Kuczmariski, T. D. (1996a). Fostering an innovation mindset. *Journal of Consumer Marketing*, 13(6), 7-13.
- Kuczmariski, T. D. (1996b). What is innovation? The art of welcoming risk. *Journal of Consumer Marketing*, 13(5), 7-11.
- Lachman, S. J. (1997). Learning is a process: Toward an improved definition of learning. *The Journal of Psychology*, 131(5), 477-480.
- Lohr, S. (2017, January 12). Robots will take jobs, but not as fast as some fear, new report says. *The New York Times*. Retrieved January 12, 2017, from <https://www.nytimes.com/2017/01/12/technology/robots-will-take-jobs-but-not-as-fast-as-some-fear-new-report-says.html>.
- Man, J. (2001). Creating innovation. *Work Study*, 50(6), 229-234.
- Manyika, J., Chui, M., Miremadi, M., Bughin, J., George, K., Willmott, P., & Dewhurst, M. (2017, January). A future that works: automation, employment, and productivity. *McKinsey Global Institute*. Retrieved January 12, 2017, from <http://www.mckinsey.com/global-themes/digital-disruption/harnessing-automation-for-a-future-that-works>.
- Marshak, R. J. (2006). *Covert processes at work: Managing the five hidden dimensions of organizational change*. USA: Berrett-Koehler Publishers.



- McAdam, R., & McClelland, J. (2002). Individual and team-based idea generation within innovation management: organisational and research agendas. *European Journal of Innovation Management*, 5(2), 86-97.
- McKee, R., & Fryer, B. (2003). Storytelling that moves people. *Harvard Business Review*, 81(6), 51-55.
- Merriam-Webster (2016). *Dictionary*. Retrieved from <https://www.merriam-webster.com/dictionary>.
- Mesaglio M., & McMullen, L. (2011, May 16). The innovator's mind-set: Why Innovation and the enterprise are often at odds, and what to do about it. (ID: G00213060). *Gartner*. Retrieved September 3, 2016, from Gartner Inc. database.
- Mitchinson, A., & Morris, R. (2012). Learning about learning agility. *Center for Creative Leadership*. Retrieved November 26, 2016, from <http://www.ccl.org/wp-content/uploads/2015/04/LearningAgility.pdf>.
- Morgan, J. (2016). Crowdsourcing innovation for improved team performance. *BRINK*. Retrieved January 3, 2017, from <http://www.brinknews.com/?p=4152>.
- Monarth, H. (2014, March 11). The irresistible power of storytelling as a strategic business tool. *Harvard Business Review*. Retrieved October 3, 2016, from <https://hbr.org/2014/03/the-irresistible-power-of-storytelling-as-a-strategic-business-tool>.
- Mootee, I. (2013). *Design thinking for strategic innovation: What they can't teach you at business or design school*. Hoboken, NJ: John Wiley & Sons.
- Moss Kanter, R. (2013). Nine Rules for Stifling Innovation. *Harvard Business Review*. Retrieved December 25, 2016, from <https://hbr.org/2013/01/nine-rules-for-stifling-innova>.
- Noumair, D. A. (2016a). *Reflective practice*. [PDF Document]. Retrieved June 6, 2016, from Teacher's College Evernote Lecture Notes in odprograms.



- Noumair, D. A. (2016b). *The consulting process*. [PDF Document]. Retrieved June 8, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Noumair, D. A. (2016c). *What is the XMA program?* [PDF Document]. Retrieved June 6, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Pasmore, W. A. (2011). Tipping the balance: Overcoming persistent problems in organizational change. In Woodman, R., Pasmore, W. A., & Shani, A. (Eds.), *Research in organizational change and development, volume 19* (pp. 259-292). Bingley, United Kingdom: Emerald Group Publishing Limited.
- Pasmore, W. A. (2016). *OD interventions*. [PDF Document]. Retrieved October 24, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Perry, E. L. (2016) *The role of research methods in evidence based practice*. [PDF Document]. Retrieved June 8, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Pink, D. H. (2005). *A whole new mind: Moving from the information age to the conceptual age*. New York, NY: Riverhead Books.
- Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard Business Review*. Retrieved May 6, 2016, from Teacher's College Evernote Lecture Notes in odprograms.
- Priest, H. A., Stagl, K. C., Klein, C., & Salas, E. (2006). Virtual teams: Creating context for distributed team work. In Bowers, C., Sales, E., & Jentsch, F. (Eds.) *Creating high-tech teams: Practical guidance on work performance and technology* (pp. 185-212). Retrieved August 1, 2016, from Teacher's College Evernote Lecture Notes in odprograms.



- Project Management Institute. (2013). *A guide to the project management body of knowledge* (5th ed.). Newtown Square, PA: Project Management Institute, Inc. Retrieved June 2, 2013, from <http://www.pmi.org>.
- Quenk, N. L., & Kummerow, J. M. (2015). *Myers-Briggs Type Indicator Interpretive Report Prepared for Oliver Schneidemann*, dated May 11, 2016 (Interpreted by Noumair, D. A.). CPP, Inc.
- Raes, E., Kyndt, E., Decuyper, S., Van den Bossche, P., & Dochy, F. (2015). An exploratory study of group development and team learning. *Human Resource Development Quarterly*, 26(1), 5-30.
- Rosenfeld, R. B., & Kolstoe, J. (2006). *Making the invisible visible: The human principles for sustaining innovation*. USA: Xlibris.
- Rotman, D. (2013). How technology is destroying jobs. *Technology Review*, 16(4), 28-35. Retrieved November 27, 2016, from <https://www.technologyreview.com/s/515926/how-technology-is-destroying-jobs/>.
- Schein, E. H. (1999). *Process consultation revisited, building the helping relationship*. Reading, MA: Addison-Wesley.
- Schein, E. H. (2010). *Organizational culture and leadership* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Schön, D. (1987). *Educating the reflective practitioner*. San Francisco, CA: Jossey-Bass.
- Sekaran, U., & Bougie, R. (2013). *Research methods for business, a skill building approach* (6th ed.). USA: John Willey & Sons.
- Sidhu, I., Goubet, J. E., & Xia, Y. (2016). *Measurement of innovation mindset*, Retrieved September 9, 2016, from <http://scet.berkeley.edu/wp-content/uploads/BII-ICE-paper-V10.pdf>.
- Somech, A. (2006). The effects of leadership style and team process on performance and innovation in functionally heterogeneous teams. *Journal of Management*, 32(1), 132-157.



VandeWalle, D. (1997). Development and validation of a work domain goal orientation instrument.

Educational and Psychological Measurement, 57(6), 995-1015.

Whitesides, G. (2010, February). *Toward a science of simplicity* [Video file]. Retrieved from

https://www.ted.com/talks/george_whitesides_toward_a_science_of_simplicity.

Zaleznik, A. (2004). Managers and leaders. *Harvard Business Review*, (1), 74-81.



Appendices

Appendix 1. [Interview questions adopted from literature]

- 1) What is going well in the group? What are strengths and positive qualities?
- 2) What is not going well? What are problems, concerns, and issues?
- 3) What in your work provides you with satisfaction and a sense of progress or achievement?
- 4) If you were the boss, what would you do to change things in the group?
- 5) To support the group's mission, are roles and responsibilities clearly defined and understood?
- 6) What is "innovation" to you, in relation to your work in the group?
- 7) How do you know when innovation is needed?
- 8) How do you know when you individually or the team has been innovating?
- 9) What gets in the way of being innovative in the group/the company overall?
- 10) What would it take to be more innovative?
- 11) What kind of innovation goals should the group commit to?
- 12) Can you name one example of an innovation opportunity that could be realized this year?
- 13) If our work together in this initiative is seen as successful, what would we have accomplished?
- 14) Is there anything else that you would like to share but isn't something that can be discussed publicly – and you would like us to find a way to discuss it?

Beckhard's GRPI model (in Burke & Noumair, 2015, p. 165), Dillard (2016), Fenn (2015)



Appendix 2. [Survey questions adopted from literature]

Innovation

- 1) Most people can be trusted ✓
- 2) Those devoted to unselfish causes are often exploited by others ✓
- 3) How long does it typically take you to generate a basic level of trust from a person you just met ✓
- 4) Failures often lead to positive outcomes in the long run ✓
- 5) I overcome setbacks to conquer important challenges ✓
- 6) I frequently come in contact with people that are different from me ✓
- 7) I feel comfortable to talk to people that are different from me ✓
- 8) I am able to successfully overcome many challenges ✓
- 9) When facing difficult tasks, I am certain I will accomplish them ✓
- 10) In general, quality and perfection are more important than effectiveness ✓
- 11) There are times when I would be open to share resources and information with my competitor ✓
- 12) How comfortable are you with making decisions under uncertainty in professional life? ∅
- 13) When you say you will do something, how often do you actually do it. ∅
- 14) What do you do when you disagree with others? ⊕

Sidhu et al (2016), Sekaran & Bougie (2013)

✓ = 5-point Likert scale, “strongly disagree” to “strongly agree”
 ∅ = text response
 ⊕ = Response choices: “Avoid”, “Discuss creatively”, “Argue”

Learning goal orientation √

- 15) I often read materials related to my work to improve my ability
- 16) I am willing to select a challenging work assignment that I can learn a lot from
- 17) I often look for opportunities to develop new skills and knowledge
- 18) I enjoy challenging and difficult tasks at work where I'll learn new skills
- 19) For me, development of my work ability is important enough to take risks
- 20) I prefer to work in situations that require a high level of ability and talent

VandeWalle (1997)

Team learning √

- 21) We regularly take time to figure out ways to improve our team's work
- 22) We tend to handle differences of opinion privately, rather than addressing them directly as a group
- 23) Colleagues go out and get all the information they possibly can from others, such as customers or other teams
- 24) We frequently seek new information that leads us to make important changes
- 25) Someone in the team always makes sure that we stop to reflect on the team's work process
- 26) Colleagues in the team often speak up to test assumptions about issues under discussion

Edmonson (1999)

√ = 5-point Likert scale, "strongly disagree" to "strongly agree"

Creativity ✓

Please indicate how often YOU could be described as a person who:

- 27) Always thinks of other ways to solve problems when he or she runs into obstacles
- 28) Would sooner create something than improve it
- 29) Has fresh perspectives on old problems
- 30) Helps other people develop new ideas
- 31) Has lots of new ideas
- 32) Needs the stimulation of frequent change

Farmer et al (2003)

✓ = 5-point Likert scale, “strongly disagree” to “strongly agree”



Appendix 3. [Survey questions inspired from interview data] √

- 33) Collaboration and information sharing happens periodically with other teams
- 34) Opportunities exists to explore progressive ideas without boundaries
- 35) Thought leaders/experts are engaged to develop concepts and ideas
- 36) New ideas are tried and it is ok to try again after a failure
- 37) Business stakeholder relationships are maintained, proactively and ongoing, to discover and understand needs
- 38) Solutions are conceived that take into account a comprehensive view of the landscape

√ = 5-point Likert scale, “strongly disagree” to “strongly agree”

This paper is provided free of charge and “as is”. You may download, print, and distribute as many copies as you wish.

You must not:

- 1) Store an electronic copy of this paper on any systems accessible through the Internet for personal or commercial benefit, whether such benefit may be monetary or in any other form
- 2) Require a fee or subscription for providing access to this paper
- 3) Remove this page from the paper

Should you have been charged a fee in order to obtain a copy of this paper, please contact Oliver Schneidemann via <http://www.schneidemann.com>