Bridging EMERGE Leadership and Breakthrough Innovation in Public Service: Assessment of Compatibility and Sufficiency, and a New EMERGE Tool

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Abstract

Contemporary public service challenges – including income disparities, chronic fiscal unbalances and climate change – continue to become more complex and dynamic, indeed "wicked", in nature. Robust public leadership is needed to foster innovative breakthroughs in public service which can drive down costs, increase accessibility <u>and</u> improve the quality of services both now and in the future. While the twin phenomenon of leadership and innovation are the subject of intense theoretical and practical exploration in the private sector, there is a dearth of information on the relationship between leadership and innovation in public service settings. The general trend is to conceive of public service leadership and innovation as separate subjects that are only tangentially linked to each other in theory and practice. This paper bridges the topics of public sector leadership and innovation by exploring the relationship between one specific public leadership framework, e.g., EMERGE Public Leadership (EMERGE), and one type of type of public innovation, e.g., Public Service Breakthrough Innovation (PSBI). The paper begins with definitions for the key concepts and follows with a high level literature review. This review provides the basis for development of our bridging Leadership-Innovation Model. The Leadership-Innovation model is then used to address three research questions: (1) Is EMERGE compatible with the requisites of PSBI? (2) Is EMERGE sufficient for facilitating breakthrough innovations in public service settings? and (3) If EMERGE is not currently sufficient, can a new EMERGE leadership tool be developed to better bridge public leadership and breakthrough innovation in the context of wicked challenges? The paper concludes by noting that EMERGE is compatible with PSBI but not sufficient. A new EMERGE tool is proposed to augment the robustness of EMERGE in fostering public service breakthrough innovations. The new tool is then illustrated in the context of the Center of Public Services's "Innovation Laboratory Initiative". The paper concludes with some suggestions for further exploration and research.

Key Words: Public Service, EMERGE Leadership, Breakthrough Innovations, Leadership-Innovation Model, Leading Public Service Breakthrough Innovation Tool

Introduction

Contemporary public service challenges – including income disparities, chronic fiscal unbalances and climate change – continue to become more complex and dynamic, indeed "wicked", in nature (Rittel & Weber, 1973). Robust public leadership is needed to foster innovative breakthroughs in public service which can drive down costs, increase accessibility and improve the quality of services both now and in the future (Sahni, Wessel & Christensen 2013).

While the twin phenomenon of leadership and innovation is the subject of intense theoretical and practical interest in the private sector (Bason, 2010), there is a dearth of information on the nexus of public sector leadership and innovation (Walker, 2010). Indeed "the dearth of studies focusing on collaborative innovation in the public sector is not least regrettable in the light of the increasing demand for public sector innovation" (Sorensen & Torfing, 2012; 844). Wise public leadership practice is critical to inspiring and convening an engaged governance process contributing to high performance in the service of the human and ecological good (Fairholm, 2004; Hames, 2007; Nonaka & Takeuchi, 2011). Continuous public organization innovation is vital for creating and disseminating new knowledge necessary to address increasingly wicked challenges (Napier, 2012). The general trend, nevertheless, is to view and study public leadership and organizational innovation as separate subjects that are only tangentially relate to each other in theory and in everyday practice.

We propose a promising integrated theoretical framework -- drawn from the EMERGE Public Leadership approach (Magis & Duc, 2011, Ingle, Huan and Dinh, 2011) and the contemporary literature on public sector innovation -- for exploring the nexus of public sector leadership and innovation. This Model contributes to high organizational performance under conditions of uncertainty and partial agent control (Bason, 2010; Sahni, Wessel & Christensen 2013). In this context, our unit of analysis is the observed practice of institutionally-embedded agents engaged in the generation and delivery of public goods and services (Heclo, 2008). Leadership and innovation, therefore, imbeds in institutional practice. We will also explore the important role that culture plays in shaping organizational socialization leading to creativity and serendipity (Schein 2004). Our model, therefore, contributes to high organizational performance under conditions of uncertainty and partial agent control.

This paper bridges the topics of public sector leadership and innovation by exploring the relationship between one specific public leadership framework, e.g., EMERGE Public Leadership (EMERGE), and one type of type of public innovation, e.g., Public Service Breakthrough Innovation (PSBI). The paper begins with definitions for the key concepts and follows with a high level literature review. This review provides the basis for the development of our bridging Leadership-Innovation Model. The Leadership-Innovation model is then used to address three research questions: (1) Is EMERGE compatible with the requisites of PSBI? (2) Is EMERGE sufficient for facilitating breakthrough innovations in public service settings? and (3) If EMERGE is not currently sufficient,

can a new EMERGE leadership tool be developed to better bridge public leadership and breakthrough innovation in the context of wicked challenges? The paper concludes by noting that EMERGE is compatible with PSBI but not sufficient. A new EMERGE tool is proposed to augment the robustness of EMERGE in fostering public service breakthrough innovations. The new tool is then illustrated in the context of the Center of Public Services's "Innovation Laboratory Initiative". The paper concludes with some suggestions for further exploration and research.

Definitions of Key Concepts

1. EMERGE Leadership

Simply stated, leadership is about going on a new journey with others. The EMERGE public leadership framework and curriculum was developed for a specific type of journey, one that takes place in a highly complex and dynamic public sector context. Successful leadership in this context needs to be vision-inspiring, values-based, knowledge-intensive, intentional-adaptive, and relational-collaborative vertically and horizontally (Magis & Duc, 2011). Therefore, for purposes of this paper we use the following definition for EMERGE Leadership: An institutionally embedded and situational appropriated practice engaged in by leaders in relationship with self-led followers/constituents for the purposeful advancement of the human and ecological condition, e.g. the public good. (Shove et al, 2010; Nonaka & Takeuchi, 2012; Ingle, Huan and Dinh, 2011). Public officials become leaders anytime they engage in leadership practice. Good public leaders are those whose leadership practice is aligned with the effective and ethical service of the public good (Nye, 2007) in the place-based context where they are situated. The dimensions of EMERGE are elaborated in the literature review below.

2. Innovation

Simply put, innovation is a "change that outperforms previous practice" (Napier, 2012). We define public sector innovation as *systemic behavioral change which results from practices imbedded in institutions that both outperform previous practices and result in the common good*. If changes do not contribute to improved performance (be these of different types and kinds), then the change is merely for change's sake and falls short of the definition of innovation. Innovation in terms of improved performance can occur along a single or multiple dimensions. From the constituent perspective, these dimensions most commonly involve affordability (or cost), accessibility (or lead-time), value (or quality) and durability (Sahni, Wessel & Christensen 2013). Cost is typically, although not exclusively, viewed in economic terms. Monetization, however, is not always possible in the public sector (Morgan 2006; Gordon & Milakovich 1995). This is often the case when facing "wicked" problems that often involve complex and dynamic normative issues. So, for example, the linkages

between environmental issues and morally ambiguous concerns surrounding quality of life are often difficult to value in the traditional economic sense (Morgan, Ingle & Shinn, 2013). Accessibility includes issues of equity and inclusivity. It also includes transaction-time, a temporal attribute which relates to the latency between the start and finish of a process. Lead time represents, for example, the time between the initiation of a request and the complete execution of the process rendering a public good. The value of a service is a qualitative attribute or property (Reese 1996). It is the role of the constituent or citizen to define whether, and to what extent, the value has improved. Value is usually considered in terms of usefulness/effectiveness and ethical correctness (Nye, 2007). Finally, durability (or performance sustainability) is related to how long the performance is continued and maintained, and whether the investment delivers a net return over the long run (Hames, 2007). Our paper will draw on these integrated dimensions of public service in developing our leadership-innovation model later in the paper.

3. Incremental and Breakthrough Innovation

The consideration of these four performance factors — cost, quality, lead-time and durability — often occurs in isolation and involves tradeoffs between the elements. This reflects an "incremental innovation" perspective characteristic of a traditional maximizing methodology as opposed to breakthrough innovation perspective where all four factors are integrated and co-produced. In incremental innovation, one or more of the elements improves while the other(s) remain constant or decreases by a comparatively small amount. The ability to simultaneously achieve a decrease in cost, an increase in quality, a reduction in lead-time and an improvement in durability is at the heart of the definition breakthrough innovation. The proverbial innovation engine is "hitting" on all four of these cylinders in a breakthrough innovation process.

### 4. Public Service Breakthrough Innovation (PSBI)

In a public service institutional context, breakthrough innovation refers to new ways to structure and deliver public services at and across multiple levels that result in synergistic achievement of the four performance factors. Some illustrations include E-governance applications in municipalities, new health care family-centered delivery models, and new accountability systems. See Sahni, Wessel & Christensen 2013 for several recent illustrations.

Literature Review on Leadership

EMERGE: Public Leadership for Sustainable Development is a conceptual framework with tools and case studies co-produced by the Ho Chi Minh National Academy for Politics and Public Administration in Vietnam and the Mark O. Hatfield School of Government (HSOG) at Portland State

University. The object of this endeavor is to prepare public officials to lead for the public good in a world characterized by dynamic complexity (Magis and Duc, 2011). The EMERGE framework represents leadership as a vision-inspired and recursive process of knowledge creation and emergence embracing eleven (11) interrelated curriculum modules (See Figure 1).

Figure 1: The EMERGE Public Leadership Framework for Sustainable Development

M. Ingle, K. Magis, February 2010
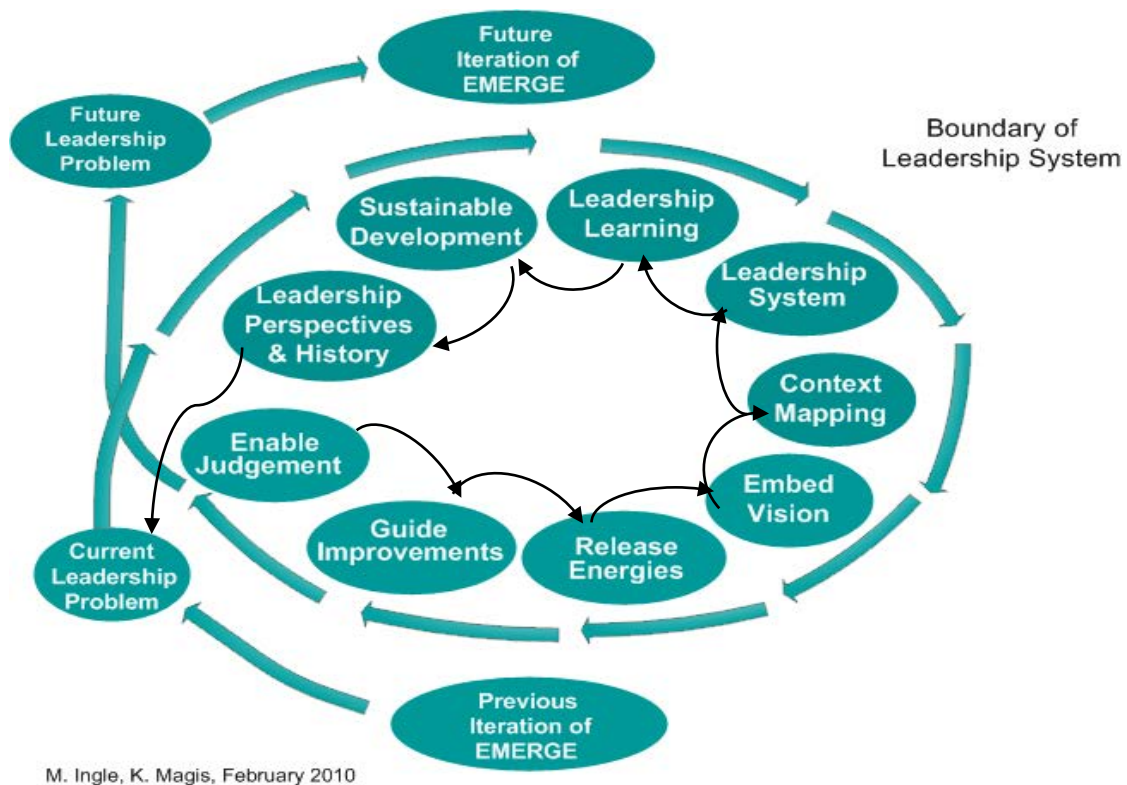
There are eight core foundational premises and theoretical principles of EMERGE as summarized below and described in detail by Magis and Duc, 2011:

- **Dynamic Systems Leadership**

  EMERGE presumes that leadership operates in an integrated, networked, dynamic, polycentric, and hence, highly complex world. Success in this context requires understanding systems and employing systems competencies and tools (Wheatley, 1998). As sustainable development encompasses these dynamics systems characteristics, EMERGE posits that the lessons of Sustainable Development are key factors to successfully working in complexity and with wicked challenges and opportunities (World Commission on Environment and Development, 1987; Cooper & Vargas, 2004).

- **Wicked Challenges & Opportunities**

Because wicked problems are characteristic of systems and endemic to the 21st century leadership context (Weber, 1973), EMERGE focuses on their elucidation in the practical realm of public leadership and on explication of wise practice to work with them. EMERGE, however, posits a different terminology, specifically *wicked challenges and opportunities*. Issues characterized as wicked are more than tame or complex problems; they are dynamic challenges. Moreover, they cannot be solved with strategies established to address simple problems. Rather, they require innovative thinking and wise judgments.

- **Vision-Directed, Values-Based Leadership**

EMERGE is based on the premise that shared vision and values are the wellspring from which leadership emerges, the foundation of endeavors to realize the vision, and the criteria by which those endeavors are evaluated (Magis-Agosta, 1995). In short, vision is the reason and inspiration for leadership practice. EMERGE equates vision with *strange attractors* (Wheatley, 1992). In systems language, a strange attractor is the internal compass to which self-referent systems orient. Through self-reference, strange attractors induce the order inherent in complex systems.

- **Relational Leadership**

EMERGE envisions leadership as a system comprised of leaders and followers in relation to each other and to a shared Vision, i.e., the *leadership system*. EMERGE further stipulates that this leadership relationship is characterized by people who move fluidly between leader and follower roles in response to changing contexts and circumstances. Transformation of the vision into real outcomes cannot occur by the efforts of one leader, no matter how superior the person's acumen. It requires the collaborative efforts of many who share the vision and values, and who contribute their expertise to generating vision-inspired outcomes.

- **Transformative Leadership**

The tenets of transformative leadership are absolutely critical to leading in complexity, hence are integrated throughout EMERGE. Leadership engenders shared vision and values (Bennis & Namus, 1985; Wall, Solum, & Sobol, 1992), harnesses the transformative power of inspiration, enabling, encouraging, challenging and modeling (Kouzes & Posner, 1991), acts in service to others and the vision (Block, 1993), creates organizational conditions conducive to self-actualization, recognition and achievement (Herzberg, 1964, 1968; Maslow, 2001; Peters, 1987, 1992; Peters & Waterman, 1982), sustains the organization through difficult change and

transitions (Kilmann, 1987; Moss Kanter, 1983, 1989), and facilitates learning at both individual and organizational levels (Kline & Saunders; Senge, 1990).

- **Leadership Development**

EMERGE presumes that leadership skills can be learned and leadership behaviors, e.g., trustworthiness, can be practiced (Heifetz, 1994; Kouzes & Posner, 1991; Parks, 2005). In the *Behavioral Era* (Van Seters & Field, 1990), theorists explored the notion that leadership was not, in fact, an in-born trait, but rather a set of behaviors that one could practice and learn (Bass, 1981; Fleishman & Harris, 1962; Hunt & Larson, 1977; McGregor, 1966). Theorists in the *Contingency Era* reinforced the idea, asserting that leaders can change their practices in specific situations to improve their effectiveness (Vroom & Yeten, 1973). EMERGE adopts the approach to learning advocated by Senge (Senge, 1990), namely *generative learning*.

- **Emergent Leadership**

Leadership practice arises in response to challenges and emergent opportunities from all sectors and levels of organizations and society. It is fluid and responsive to changing contexts. In the *Transaction Era* (Van Seters and Field 1990), the relationship between leader and followers was conceieved as based on equitable exchanges. This tenet was premised on the notion that leaders do not dominate followers. Rather, followers select and give their consent to whom they acknowledge as leader. This tenet reinforced the notion that leadership and followership are roles and that those roles can be interchangeable (Bass, 1981). The idea of emergent leadership also arose during this period (Hollander, 1958). Theorists in the *Cultural Era* furthered the idea of leadership emerging from all levels of the organization (Manz & Sims, 1987; Schein, 1985). This is the essence of the concept of "leadership from where you sit" (Morgan, Ingle and Shinn, 2013).

- **Leadership Context**

EMERGE emphasizes that leadership practice is contextual (Crosby & Bryson, 2005; D. F. Morgan, Green, Shinn, & Robinson, 2008). The context includes both the proximate and distant environments. In the public sector, the leadership operates within a given polity and its constitutional characteristics. Pertinent challenges and opportunities emerge from this context, as do those who would share a vision to address them. Leadership relationships and roles, accordingly, emerge from the current milieu and must adapt as those circumstances change (Pfeffer 1981). Hence, EMERGE asserts that, in order to realize its vision, leadership must continuously monitor and navigate its internal and external context.

The practical manifestations of the EMERGE premises and theoretical principles are found in the EMERGE Toolkit of 11 tools that accompany the EMERGE modules. The intent of each EMERGE

tool is to facilitate the application of innovative leadership practices that are intended to lead to valued performance outcomes for the public good. See Ingle, Dinh and Huan, 2011 for a full description of the EMERGE tools and leadership practices. Several key premises related to the conditions for innovation are embedded in the EMERGE framework and tools. Specifically, the Leadership Opportunity Selection tool and the Contextual Intelligence tool postulate the key conditions enable effective and ethical leadership practice.

These conditions, along with the EMERGE Module addressing them, include:

      1. Personal perception of discretion for leadership action (Module I)

      2. Under-standing of culture and opportunities for improvements (Module VI)

      3. Time urgency and crisis as catalyst for the leadership opportunity (Module VI)

      4. Responsive to constituent/ citizen needs and demands (Module VI)

      5. Distribution and dynamics of power resources (Module VI)

      6. Existence of robust information flows (Module VI)

We will refer back to these conditions later in the paper to assess the compatibility of the EMERGE and PSBI frameworks.

Literature Review on Innovation

This section presents the perspectives of a number of leading theorists that have examined the subject of innovation beginning in the 1960's and 70's. Early theories of innovation within organizations depict it as a linear process involving rational decision making (Weber 1964). From this perspective structural variables affect the outcome of organizational activities. Indeed according to this view organic and mechanistic structures have an important impact on leadership and innovation (Burns & Stocker 1961). Innovation is central to the creation of new contexts which break the dominate patterns of practice in favor of new ones. From this perspective it is possible to view innovation as the creative destruction of an existing process (Morgan 2006), the result of which is an improvement in public service outcomes or performance.

In recognizing the close link between innovation and implementation, the research of Zaltman, Duncan and Holbek (1973) is an important early study of innovation. Previous theories tended to focus exclusively on innovation which oversimplified the subject and provided only limited utility. Another important contribution Zaltman et.al. is their formulation of a comprehensive list of attributes of innovation. In characterizing the impact of each attribute on the process of innovation and implementation, they highlight the complex nature of innovation. The themes which Zaltman, et.al.

identified continue to resonate today. Their model, however, faces criticism that it is overly mechanistic and views innovation as occurring in a linear fashion. Subsequent theories on innovation sought to address this shortcoming (Rowe 1973).

Van de Ven's (1989) study of innovation resulted in a more comprehensive and nuanced understanding of innovation spanning both the public and private sector. His attempts at creating a theory-of-theories on innovation provided a comprehensive theoretical perspective. In doing so his research highlighted the complexity and interdependency of various approaches to innovation and implementation. Indeed innovation, according to his model, is an iterative process which frequently results in restructuring not only the process but also the problem. His meta-theory was an ambitious attempt to reconcile often conflicting approaches to organizations, cognition, decision-making and human behavior.

Subsequently Bason (2010) explored the unique nature of public sector innovation in a variety of organizations outside of the United States. His research is prescriptive in nature and relies on qualitative research methodologies. While this appears to meet the needs of practitioners, it also suggests the existence of inherent methodological limitations to developing, operationalizing and empirically testing theories in this complex realm. Bason defines innovation as an iterative process which occurs within an environment characterized as inherently volatile, uncertain and ambiguous. One of the defining characteristics of Bason's approach is a focus on understanding and overcoming barriers to innovation through the creation of a common organizational culture. In this model innovation provides the context for interpersonal interactions. Bason's research concludes that public sector organizations need to facilitate continuous learning in order to foster transformation (Segal 2006).

Theories on innovation universally assume a link exists between innovation and organizational performance (Thompson 1973). The focus of much research, therefore, is on both defining innovation and on understanding the various manifestations in which it appears. In the public sphere this involves describing innovation in terms of both product and process (Goldsmith 2002). Technological innovation typically characterizes the former while the latter concerns an organization's strategy, structure/culture and administrative processes (Rowe 1973). The product of an organization, in this context, is either an inclusive or exclusive good or service. Each of the theories, furthermore, views the creation and diffusion of innovation as involving parties that are both internal and external to the organization, and encompass multiple organizational echelons (Rogers 2003). Regardless of the type of innovation or its source, the near universal assumption is that innovation emerges from a perceived gap between desired and actual/expected organizational performance (Zaltman, Duncan & Holbek 1973; Van de Ven, Angle & Poole 1989).

The pathway from the innovation adoption decision to final implementation is multilayered and complicated. Indeed Walker (2010) builds on the Van de Ven and Poole (1989) model to reflect this

reality. In surveying the field of public sector innovation, Walker (2010) notes the existence of four sets of observations regarding the relationship between innovation and performance. The first is the primacy of organizational characteristics in stimulating innovation which contributes to higher levels of performance. The second is the implicit or explicit existence of a performance gap which the organization wishes to reduce or eliminate. The third relates to the well-studied subject of the diffusion of innovation – in terms of an adaptive and evolutionary process -- as the source of improving organizational performance (Rogers 2003). The final explores the link between performance and innovation from the perspective of typology. In this context Walker (2010) notes the existence of multiple performance goals and accompanying indicators which greatly complicates a public sector organization's ability to define and measure success.

Few empirical studies exist which focus on the measurement of the relationship between innovation and performance. So, the evidence is not clear on whether innovation leads to improving organizational success or whether high organizational performance leads to robust innovation. The former would result in a focus on innovation while the latter would spur concentration on organizational characteristics and culture. Walker (2010) also suggests that high levels of innovation may create organizational instability leading to degraded performance. He finds only four studies on the link between public sector innovation and performance; however, they are limited to US public libraries (N=99) and local governments in the UK (N=412). There is, moreover, a lapse of two decades between these two sets of linked studies. While the limited data set and the operationalization of innovation and performance is a concern, the overall findings suggest that the adoption of innovation results in improving performance.

The literature stresses that individual leaders, as agents, play a significant role in creating an organizational culture conducive to innovation (Jaskyte & Kisieliene 2006). Successful innovation, moreover, requires the creation of a climate in which it is possible to decentralize organizational authority (Zaltman, Duncan & Holbek 1973). Leadership in driving public sector innovation can emerge from the government itself or from the community (Lee, Hwang & Cho 2012).

Culture is important to creating the conditions necessary for innovation (Schein 2004). Sahni, Wessel and Christensen (2013) suggest this is especially true for public service breakthrough innovations. There is also evidence that catalytic events provide the spark necessary for innovation (Van de Ven, Angle & Poole 1989). Sahni, Wessel and Christensen, furthermore, posit that innovation cannot occur without the existence of certain enabling conditions. In accenting the twin attributes of change and performance inherent in innovation, Napier (2009) takes as his staring point that innovation is "change that outperforms previous practice" (30). In this regard he considers innovation as both a management function and as an environmental change. It is, nevertheless, clear that in either context there must exist a personal preference for risk taking. This is the case since innovation is inherently risky. This suggests the necessity of creating a culture in which there is active celebration

of experimentation as opposed to mere passive protection.

Sahni, Wessel and Christensen (2013) build on the work of earlier theorists to posit the existence of five conditions necessary for public service breakthrough innovation (PSBI). In exploring the nature of change their research focuses on innovation at the municipal level. They suggest that PSBI breaks down along two dimensions. In the first dimension the organization must possess the ability to both experiment and to "sunset outdated infrastructure" (28). These two conditions relate to the organic capabilities which individuals and organizations must possess. The second category includes the concurrent existence of feedback loops, incentives for product and service improvement and budget constraints for end users. The latter three conditions point towards the need to consider the unique aspects inherent in PSBI. These revolve primarily around the issue of motivating actions in the public sector.

In summary, two general themes animate the research findings on innovation. The first is that institutions and organizations matter. They provide the setting and context for innovation. In this regard they are a necessary but not sufficient component with the power to either amplify or dampen the potency of innovation by individual agents or leaders. The second is that individual agents are important drivers of innovation, especially in relationships with others. Relationships occur within and across organization boundaries. Likewise innovation can emerge in any organizational space.

Public Service Leadership-Breakthrough Innovation Model

In explaining the phenomenon of innovation, the dominate tendency in the literature is to employ qualitative methodologies such as case studies or surveys, and then to infer particularistic theories which are fragmented and inconclusive. This suggests the need for the development of a structured yet flexible theoretical framework for bridging public service leadership and breakthrough innovation. While work of earlier theorist like Zaltman (1973) and Van de Ven (1989) provides a useful backdrop for understanding the complexity and interrelated nature of innovation, it is the later theorists — and in particular Bason (2010) and Sahni et.al. (2013) — that provides the best point of departure.

We propose an integrated model of public sector innovation and leadership that embeds leadership practice in institutional routines. It involves the participation of empowered individuals with differing roles, identifies and resources (March & Olsen, 1995; Jaskyte & Kisieliene 2006). We posit the primacy of interpersonal relationships as the basis for leadership practice. Leadership practice, therefore, is partially independent of formal organizational roles and can emerge at any level within the traditional vertical organizational structure or from any organizational node within a horizontal structure. Our model posits that leadership defined in this manner is central to breakthrough innovation. In other words, while individuals occupy unique domains in relation to other actors each nevertheless shares the domain of innovation. Our goal is to advance a theory-based model for leaders

as breakthrough innovators in public service organizational settings.

Drawing from our literature reviews on leadership and innovation, several theoretical constructs guided the development of our "Public Service Leadership-Breakthrough Innovation Model." The leadership literature suggests that several different innovation agents working in relationship with each other are critical for breakthrough innovation (Napier, 2012). Specifically, three primary innovation agents can be identified along with their innovation roles as depicted in Figure 2:

- Executive Leader Innovation Enablers in Public Organizations
- Public Servant Leading Innovators and Implementers
- Constituent/Citizen Innovation Co-Producers and Beneficiaries

While clear on the primary innovation agents and their roles, the leadership literature does not provide a theory-based specification of the desirable "leadership practices" for each of the innovation agents operating in relationship with other agents, what we call their primary "breakthrough innovation relationship domains" (See Figure 2).

For a theory-based specification of desirable leadership practices, we turned to the breakthrough innovation literature. This literature identifies six enabling variables as follows:
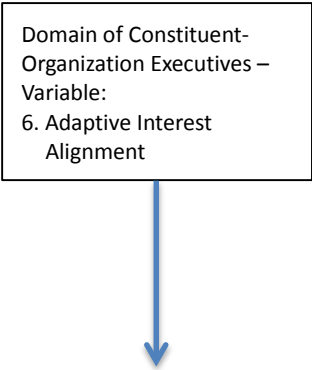
1. Personal preference for risk taking (Napier, 2012; Roger, 1982)

2. Ability to experiment (Sahni et.al, 2013)

3. Existence of incentives for service improvement (Sahni et.al, 2013)

4. Existence of budget constraints for end users (Sahni et.al, 2013)

5. Ability to sunset outdated service infrastructure (Sahni et.al, 2013)

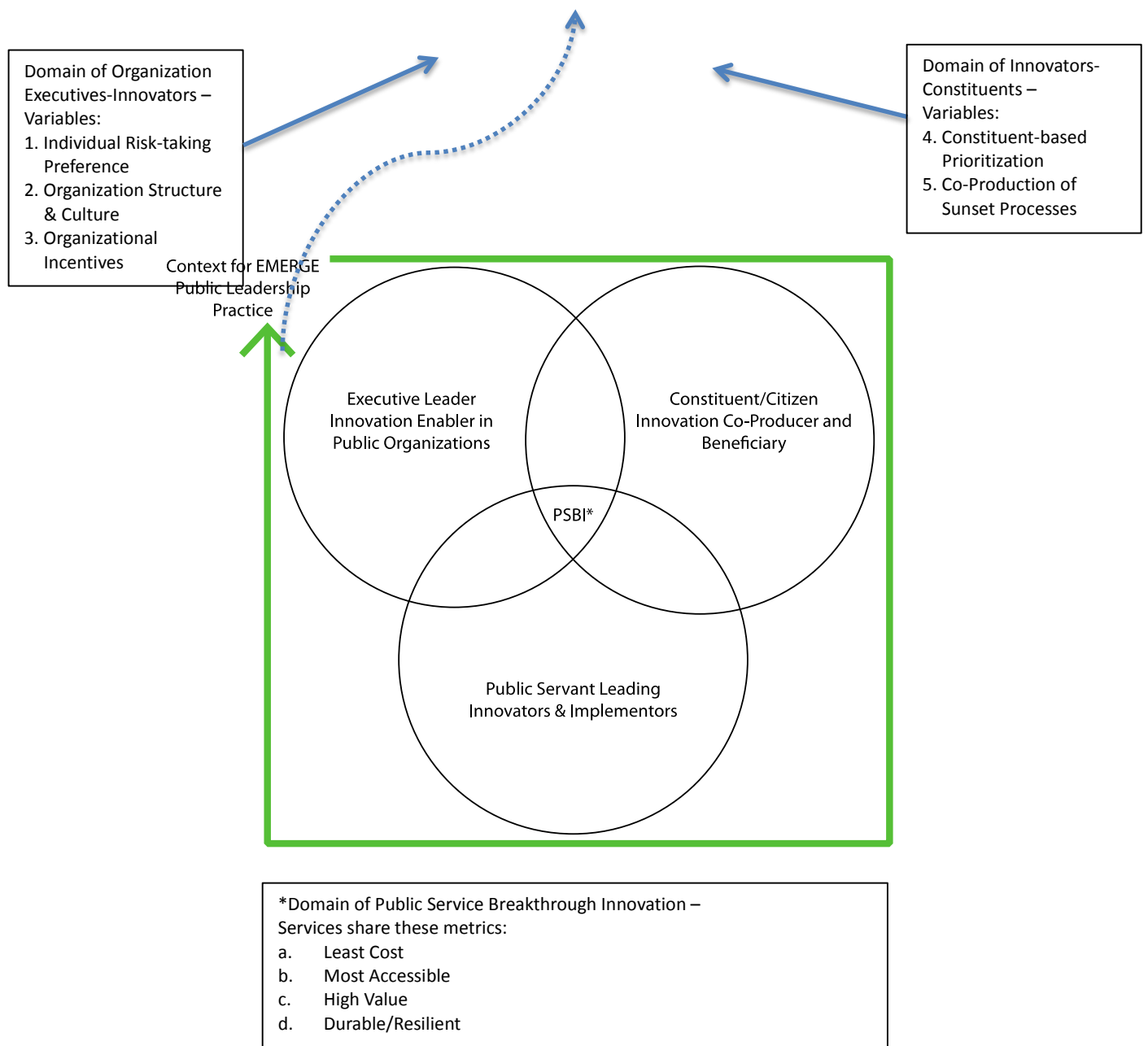6. Existence of feedback loops (Sahni et.al, 2013)

Based on the literature findings, our Model hypothesizes specific leadership practices that enable breakthrough leadership (PSBI) in reference to the three relationship domains. These six enabling leadership practices and their respective leadership domains are depicted by the overlapping sections of the Venn diagram in Figure 2.

Our hypothesis underlying this Model is that the existence of these six leadership practices – by specific agents in their respective relationship domains -- will contribute to PSBI (which is located at the center of the diagram). This paper presents the initial iteration of this Model, and as such only focuses on the primary agent relationships in the breakthrough innovation process. We recognize that there are many additional secondary formal and informal relationships at play in the breakthrough

innovation process, and that these require further elaboration and research.

Figure 2: Public Service Leadership-Innovation Model (Theory-Based)

Domain of Constituent-
Organization Executives –
Variable:
6. Adaptive Interest
   Alignment

Domain of Organization
Executives-Innovators –
Variables:
1. Individual Risk-taking
   Preference
2. Organization Structure
   & Culture
3. Organizational
   Incentives

Domain of Innovators-
Constituents –
Variables:
4. Constituent-based
   Prioritization
5. Co-Production of
   Sunset Processes

Context for EMERGE
Public Leadership
Practice

Executive Leader
Innovation Enabler in
Public Organizations

Constituent/Citizen
Innovation Co-Producer and
Beneficiary

PSBI*

Public Servant Leading
Innovators & Implementors

*Domain of Public Service Breakthrough Innovation –
Services share these metrics:
a.   Least Cost
b.   Most Accessible
c.   High Value
d.   Durable/Resilient

Analysis of the Research Questions: Compatibility, Sufficiency and Action Implications

The Leadership-Innovation Model presents the theory-based "enabling conditions for PSBI". Using these PSBI enabling condition in the Model as a given, we can now address our first research question, i.e, is EMERGE compatible with PSBI? Our methodology for doing this is to compare the existing EMERGE enabling conditions (from our literature review) with the PSBI enabling conditions from the Leadership-Innovation Model. In making this comparison, we first needed to make operational each of the enabling conditions for both EMERGE and PSBI. We did this by specifying assessment questions for each of the enabling conditions. The assessment questions are presented in Table 1. We then compared the questions for each PSBI enabling condition to assesses their compatibility and made observations on each condition as presented in the middle column of Table 1.

Table 1: Compatibility Comparison of EMERGE Leadership and Conditions for Breakthrough Innovation

EMERGE Conditions Assessment Questions	EMERGE Enabling Conditions	Observations on Compatibility	PSBI Enabling Conditions	PSBI Conditions Assessment Questions
- Does a leader perceive that s/he has discretionary authority for pursuing the leadership opportunity?	1. Personal perception of discretion for leadership action (Module I)	Compatible, but somewhat different focus: EMERGE perception of discretion associated with entrepreneurial perspective	1. Personal preference for risk taking (Napier, 2012)	- Do the executive leaders and leading innovators/ implementers embrace an entrepreneurial spirit and risk taking?
- Does the leader identify specific opportunities embedded in the local culture?	2. Understanding of culture and opportunities for improvements. (Module VI)	Compatible, but somewhat different focus: EMERGE emphasizes opportunities for experimentation	2. Ability to experiment (Sahni et.al, 2013)	- Do the executive leaders and leading innovators/implementers operate in a culture that embraces responsible experimentation, pilot efforts and action learning /reflective practice?
- Does the leader use an urgent crisis situation as an incentive for the innovation?	3. Time urgency and crisis as catalyst for the leadership opportunity	Compatible, but somewhat different focus: EMERGE emphasizes urgency as primary incentive of innovation	3. Existence of incentives for service improvement (Sahni et.al, 2013)	- Do executive leaders and leading innovators/ implementers know how to make wise use of extrinsic and intrinsic motivators for service improvements and institutionalization?
- Does the leading innovator identify specific needs of constituents/ citizens that align with the innovation?	4. Responsive to constituent/ citizen needs and demands (Module VI)	Compatible, but somewhat different focus: EMERGE focuses on the "what" while PSBI focuses on both the "what" and "how"	4. Existence of budget constraints for end users (Sahni et.al, 2013)	- Are constituent needs clearly prioritized in budget discussions and allocations (either directly by constituents/citizens or indirectly by leading innovators/implementers)?

EMERGE Conditions Assessment Questions	EMERGE Enabling Conditions	Observations on Compatibility	PSBI Enabling Conditions	PSBI Conditions Assessment Questions
- Does the leader consider and take action to ensure that the leadership opportunity has a positive impact power alignment?	5. Distribution and dynamics of power resources (Module VI)	Compatible, with similar focus: EMERGE encourages active constituent engagement influence approach	5. Ability to sunset outdated service infrastructure (Sahni et.al, 2013)	- Do leading innovators/ implementers have buy-in and influential support from constituents/citizens to sunset legacy systems and processes when better approaches are demonstrated to exist?
- Does the leader identify formal and informal channels of information flows for all actors?	6. Existence of robust information flows (Module VI)	Compatible, but somewhat different focus: EMERGE focuses is general while PSBI is specific to the innovation	6. Existence of feedback loops (Sahni et.al, 2013)	- Do executive leaders have real time feedback loops in operation that directly measure and communicate the value of the innovation for constituents/citizens during the pilot and full roll-out?

Conclusions

Our analysis of EMERGE and PSBI conditions suggests that EMERGE leadership and public service breakthrough innovation are compatible but with differing foci. EMERGE is a more "generic" public leadership framework in that it intends to foster both incremental and breakthrough innovations. PSBI has a laser focus on breakthrough innovation. So, with regard to our research questions, we conclude that EMERGE is compatible with PSBI but operates at a more generic level. As currently designed and applied, EMERGE is not sufficient for fostering breakthrough innovations in public service. The EMERGE tools would need to be further developed if EMERGE is to become a more robust framework for fostering PSBI.

Our third research question is, "If EMERGE is not currently sufficient, can a new EMERGE leadership tool be developed to better bridge public leadership and breakthrough innovation in the context of wicked challenges?" Our conclusion here was "yes". Our Leadership-Innovation Model and the Compatibility Comparison table provided us with enough information to design a new EMERGE tool focusing on breakthrough leadership. So, in the spirit of adding to EMERGE's robustness for PSBI, we designed a new EMERGE tool – the "Leading for Breakthrough Innovation in Public Service" tool. This tool provides public service leaders with guidance on fostering breakthrough innovations in the context of their EMERGE leadership opportunities (See the tool in Appendix A).

To further explore the practical usefulness of this new tool in a public service setting, we completed an initial and high-level application of the tool using the Center of Public Service (CPS) in the Mark O. Hatfield School of Government as a case illustration. Specifically, we applied the two-step tool to CPS's "Public Service Innovation Laboratory" initiative in 2012 (P. Keisling, 2012). The Innovation Laboratory initiative was piloted by core CPS executives and faculty in collaboration with

a Hatfield Fellow. The results for the Step 1 and Step applications of the tool are presented in Appendix B. Although this application of the tool is very initial and high-level, it demonstrates that the tool has practical usefulness in assessing the enabling conditions and offering up some targeted "leadership practice" suggestions for improvement.

<u>Suggestions for Additional Research</u>

It is possible to conclude from the evidence gathered so far that PSBI has important implications for governance in the 21st Century. Our Model provides a theoretical perspective for envisioning the manner in which to pursue breakthrough innovation. It is possible to anecdotally observe the conditions under which our Model is operative. The artifacts of innovation appear, furthermore, to manifest themselves in the characteristics that correlate with each variable. So, for example, we observe leaders emerging throughout organizations to champion innovation. While the initial evidence, therefore, suggests our Model is methodically sound still more research is necessary to empirically validate its utility. A necessary next step is to systematically observe leaders operating within dense social networks that span multiple organizations facilitating the emergence of PSBI space. This would include the co-creation of interpersonal alliances in informal or ad hock organizational settings.

Further research is also necessary to understand the effect of information asymmetry and the strategic environment on PSBI in relations to our Model. Increasing our comprehension of the direction in which asymmetry effects PSBI will provide greater insight into the role of uncertainty and volatility. Discerning significance impacts of the strategic environment on PSBI will allow for the mitigation of risk. Does the broad array of performance indicators, for example, lead to the emergence of multiple performance goals which complicate the organizations ability to successfully define PSBI? More empirical observation regarding the dynamic interaction of core organizational values and social norms will also strengthen the validity of our model. Future research, therefore, must focus on the extent and manner in which these and other crosscutting influences serve to either expand or contract the PSBI space presented in our Model.

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Appendix A:

LEADING PUBLIC SERVICE BREAKTHROUGH INNOVATION TOOL

"BREAKTHROUGH INNOVATION

IN GOVERNMENT IS POSSIBLE."

-- Stanford Social Innovation Review, 2013

Introduction

Contemporary public service challenges – including income disparities, chronic fiscal unbalances and climate change to site a few – continue to become more complex and dynamic, indeed "wicked", in nature (World Economic Forum, 2013).   To address these wicked public service challenges in an effective, ethical and sustainable manner, public service leaders have a moral imperative to seek out "breakthrough innovations" – the kind that Nikhil Sahni and colleagues at Harvard show can drive down costs, increase accessibility and improve services (quality) now and in the future (N. Sahni et.al., 2013).

Public Service Breakthrough Innovation (PSBI) is possible in the public sector as demonstrated by several recent case-based reports (N. Sahni et.al., 2013 & M. Napier, 2012). However, PSBI is neither an easy or a highly certain leadership challenge. Unlike the private sector where innovation is driven by market forces, PSBI operates without natural competitive forces along with a lack of innovation incentives for public officials and the lack of high degrees of autonomy and discretion due to constitutionally derived public laws, regulations and bureaucratic procedures (often viewed as "red tape").

Public leaders interested in PSBI (including executives, public innovators/entrepreneurs and community innovators/constitutents/citizens in the government and civic domains) need new ways of fostering breakthrough innovations from where they sit. Since "wicked challenges" are by definition systemic in nature involving multiple actors within and across organizational and institutional boundaries (Magis, Ingle and Duc, forthcoming in 2013), leaders of PSBI will need to rely on a relational and transformational leadership concepts and tools including those included in the EMERGE Public Leadership curriculum. The PSBI Tool is a recent addition to the EMERGE public leadership toolkit.

Purpose of the PSBI Tool

The purpose of this tool is to assist public leaders in fostering short and long term PSBI in their areas of discretionary authority. Specifically, the PSBI tool guides leaders through a two step process. First, leaders assess – for

the public service EMERGE "leadership opportunity" they are addressing – whether the required enabling conditions for breakthrough innovation are in evidence. Second, leaders are provided with specific suggestions for embedding the required PSBI enabling conditions in those areas where they are not yet in evidence.

The PSBI tool is compatible with the core concepts and other tools in the EMERGE Leadership curriculum. However, the EMERGE curriculum as designed did not distinguish between incremental innovations and breakthrough innovations. The PSBI tool supplements the EMERGE toolkit by providing a specific focus on breakthrough innovations in public service settings. The PSBI tool builds on other EMERGE tools. It is intended to be directly applied in conjunction with the EMERGE Contextual Intelligence and the Convening Coalitions tools (Ingle et. al., 2011).

The application of the PSBI tool will:

- provide a mechanism for augmenting leadership practice associated with the fostering of public service breakthrough innovations;
- enable leaders to experiment with the appropriateness of the PSBI tool within the context of their own location specific leadership opportunities; and
- assist public service leaders in applying a new leadership practice to better serve the public good both now and in the future.

Application Premises for the PSBI Tool

Prior to the use of this tool, public leaders need to ensure that several generic pre-conditions – drawn from the EMERGE Leadership framework -- are in play for their targeted Leadership Opportunity (e.g., the area where a PSBI is desired). If these pre-conditions are not yet fulfilled, the PSBI tool users should employ the relevant EMERGE module or tool to satisfy the pre-condition. The necessary EMERGE Public Leadership pre-conditions include:

1. A wicked, e.g. highly complex and dynamic, public service leadership opportunity should be identified by the leader over which the leader has some meaningful discretion for leadership action. Reference EMERGE Module I.

2. The leader should understand that public service leadership in complex and dynamic settings is a socially constructed practice with several defining characteristics: integrative in nature encompassing the whole and parts; intentional in purpose as characterized by being vision-driven and transforming in service of the public good; relational in process encompassing self-led followers along with internal/external constituents and citizens; political values-mediating within a historical institutional context; parsimonious in orientation with a strong bias toward social action grounded in individual strengths and organizational assets; and evidenced-based with a heavy reliance on reflective practice. Reference EMERGE Module II and V.

3. The leader should see leadership as a constantly evolving practice where generative learning is required for mastery (Senge, 1990). Generative learning is about "creating" new meaning and requires new ways of looking at the world through systemic thinking that sees the systems influencing current events. Generative learning includes and goes beyond "adaptive" learning which is about responding and coping

with the current situation. Breakthrough innovations focus on "creating" new services which better serve the public good and thus require spaces and leaders (in relationships with others) who engage in generative learning. Reference EMERGE Module IV.

The Public Service Breakthrough Innovation Tool requires the leader (preferably in the context of his/her Leadership Team) to take two sequential steps: 1) Decide status of PSBI Enabling Conditions and 2) Embed needed Enabling Conditions.

In **Step I: Decide Status of PSBI Enabling Conditions**.   In this step you assess and determine whether the required enabling conditions for PSBI are in evidence.

In **Step II: Embed Needed Enabling Conditions.**   In this step, you take the suggested actions to embed the necessary enabling PSBI conditions into your Leadership Opportunity in collaboration with members of your Leadership Team.

PSBI Tool Application

Step I: Decide Status of PSBI Enabling Conditions

1. Write down the specific Leadership Opportunity you are considering as the subject for the assessment of the PSBI enabling conditions in the space below:

2. For your Leadership Opportunity, identify key members of your Leadership Team who will join with you in doing the PSBI assessment for the Leadership Opportunity. As EMERGE has distributed leadership roles, please identify members of your team by their PSBI leadership roles:

- Public organization executive leader(s) for enabling innovation –
- Public organization leading innovators/implementers –
- Constituent/citizen innovation leader/co-producers and beneficiaries-

3. For each PSBI enabling condition in the Step I Assessment Matrix below, answer the accompanying question(s) and complete the determination.

Step 1 Assessment Matrix*		
PSBI Enabling Conditions	**Assessment Questions**	**Enabling Conditions in Existence? (Yes or No)**
1. Personal preference for risk taking	- Do the executive leaders and leading innovators/implementers embrace an entrepreneurial spirit and risk taking?	
2. Ability to experiment	- Do the executive leaders and leading innovators/implementers operate in a culture that embraces responsible experimentation, pilot efforts and action learning /reflective practice?	
3. Existence of incentives for service improvement	- Do executive leaders and leading innovators/implementers know how to make wise use of extrinsic and intrinsic motivators for service improvements and institutionalization?	
4. Existence of	- Are constituent needs clearly prioritized in budget	

Step 1 Assessment Matrix*		
PSBI Enabling Conditions	**Assessment Questions**	**Enabling Conditions in Existence? (Yes or No)**
budget constraints for end users	discussions and allocations (either directly by constituents/citizens or indirectly by leading innovators/implementers)?	
5. Ability to sunset outdated service infrastructure	- Do leading innovators/implementers have buy-in and influential support from constituents/citizens to sunset legacy systems and processes when better approaches are demonstrated to exist?	
6. Existence of feedback loops	- Do executive leaders have real time feedback loops in operation that directly measure and communicate the value of the innovation for constituents/citizens during the pilot and full roll-out?	

* PSBI Enabling Conditions adapted by M. Ingle from literature on public service innovation, especially N. Sahni et.al, 2013.

Step II: Embed Needed Enabling Conditions

1. From the matrix in Step I, identify the enabling conditions that need to be further developed.

2. For those enabling conditions needing further development, follow the suggestions in the Step II Improvement Action Table to develop improvement actions with your Leadership Team.

Step II Improvement Action Table			
PSBI Enabling Conditions	**Suggestions for Embedding the Condition**	**Primary Responsibility for Action**	**Leadership Team Improvement Actions**
1. Personal preference for risk taking	- Select leaders for your team with a personal preference for and track record of responsible risk taking. - Invest in "public entrepreneurship learning sessions" for the leadership team.	- Executive leaders and leading innovators/ implementers - Executive leaders and leading innovators/ implementers	
2. Ability to experiment	- Strengthen policies for an open learning culture in vertical and horizontal work structures. - Build experimentation and action learning metrics into the vision and values of the institutional culture.	- Executive leaders - Executive leaders and leading innovators/ implementers	
3. Existence of incentives for service improvement	- Make selective but extensive use of intrinsic (such as public service motivation, recognition, opportunity for mastery and autonomy) motivators for all key actors in the innovation process. - Balance use of financial and non-financial incentives by type of partner in the process (private, public, community, etc.).	- Executive leaders and leading innovators/ implementers - Executive leaders and leading innovators/ implementers	

Step II Improvement Action Table			
PSBI Enabling Conditions	**Suggestions for Embedding the Condition**	**Primary Responsibility for Action**	**Leadership Team Improvement Actions**
4. Existence of budget constraints for end users	- Engage constituents in priority setting exercises regarding public budgets. - Educate constituents/citizens about budget status, and offer choices between service quantity/quality and revenue strategies.	- Leading innovators/ implementers - Leading innovators/ implementers (with support of executive leaders)	
5. Ability to sunset outdated service infra-structure	- Adopt a co-production engagement approach with affected constituents including transparent sharing of investment costs and benefit flows. - Sequence phase-outs of outdated services as innovative services demonstrate value and reliability.	- Leading innovators/ implementers (with support of executive leaders) - Leading innovators/ implementers	
6. Existence of feedback loops	- Invest in targeted external and internal performance tracking systems related to innovation pilots and roll outs. - Assign dedicated staff to continuously report benefits and value-adds from innovations to key constituents.	- Executive leaders - Executive leaders	

3. Implement the improvement actions in the Step II Improvement Action Table in order to embed the enabling condition into the leadership opportunity.

References for this tool are included in Prof. Ingle's paper on "Bridging EMERGE Public Leadership and Breakthrough Innovation", 2013.

Appendix B

CASE ILLUSTRATION OF THE "LEADING FOR BREAKTHROUGH INNOVATION TOOL"
– THE CPS PUBLIC SERVICE INNOVATION LABORATORY (OR INNOVATION LAB)

Step I: Decide Status of PSBI Enabling Conditions

4. Write down the specific Leadership Opportunity you are considering as the subject for the assessment of the PSBI enabling conditions in the space below: The leadership opportunity was pilot testing the CPS Public Service Innovation Laboratory concept in co-production with a local municipality in Oregon. The municipality was selected through a Letter of Interest process.

5. For your Leadership Opportunity, identify key members of your Leadership Team who will join with you in doing the PSBI assessment for the Leadership Opportunity. As EMERGE has distributed leadership roles,

please identify members of your team by their PSBI leadership roles:

- Public organization executive leader(s) for enabling innovation – <u>Phil Keisling (CPS Director), Masami Nishishiba (CPS Deputy Director and Faculty), Marcus Ingle (CPS Faculty)</u>

- Public organization leading innovators/implementers – <u>Mr. Jeff Bailey (Hatfield Fellow assigned to design and manage the pilot effort for 8 months)</u>

- Constituent/citizen innovation leader/co-producers and beneficiaries- <u>Several municipalities responded to a "CPS request for co-production" on a public service leadership challenge of their choosing.</u>

6. For each PSBI enabling condition in the Step I Assessment Matrix below, answer the accompanying question(s) and complete the determination.

Step 1 Assessment Matrix*		
PSBI Enabling Conditions	**Assessment Questions**	**Enabling Conditions in Existence? (Yes or No)**
1. Personal preference for risk taking	- Do the executive leaders and leading innovators/implementers embrace an entrepreneurial spirit and risk taking?	Yes
2. Ability to experiment	- Do the executive leaders and leading innovators/implementers operate in a culture that embraces responsible experimentation, pilot efforts and action learning /reflective practice?	Yes
3. Existence of incentives for service improvement	- Do executive leaders and leading innovators/implementers know how to make wise use of extrinsic and intrinsic motivators for service improvements and institutionalization?	No
4. Existence of budget constraints for end users	- Are constituent needs clearly prioritized in budget discussions and allocations (either directly by constituents/citizens or indirectly by leading innovators/implementers)?	Yes
5. Ability to sunset outdated service infrastructure	- Do leading innovators/implementers have buy-in and influential support from constituents/citizens to sunset legacy systems and processes when better approaches are demonstrated to exist?	Yes
6. Existence of feedback loops	- Do executive leaders have real time feedback loops in operation that directly measure and communicate the value of the innovation for constituents/citizens during the pilot and full roll-out?	No

* PSBI Enabling Conditions adapted by M. Ingle from literature on public service innovation, especially N. Sahni et.al, 2013.

Step II: Embed Needed Enabling Conditions

4. From the matrix in Step I, identify the enabling conditions that need to be further developed – 3. Existence of incentives for service improvement, 4. Existence of budget constraints for end users and 6. Existence of feedback loops

5. For those enabling conditions needing further development, follow the suggestions in the Step II Improvement Action Table to develop improvement actions with your Leadership Team.

Step II Improvement Action Table			
PSBI Enabling Conditions	**Suggestions for Embedding the Condition**	**Primary Responsibility for Action**	**Leadership Team Improvement Actions**
1. Personal preference for risk taking	- Select leaders for your team with a personal preference for and track record of responsible risk taking. - Invest in "public entrepreneurship learning sessions" for the leadership team.	- Executive leaders and leading innovators/ implementers - Executive leaders and leading innovators/ implementers	- No improvements required.
2. Ability to experiment	- Strengthen policies for an open learning culture in vertical and horizontal work structures. - Build experimentation and action learning metrics into the vision and values of the institutional culture.	- Executive leaders - Executive leaders and leading innovators/ implementers	- No improvements required.
3. Existence of incentives for service improvement	- Make selective but extensive use of intrinsic (such as public service motivation, recognition, opportunity for mastery and autonomy) motivators for all key actors in the innovation process. - Balance use of financial and non-financial incentives by type of partner in the process (private, public, community, etc.).	- Executive leaders and leading innovators/ implementers - Executive leaders and leading innovators/ implementers	- In future innovation initiatives, give more explicit attention to the use of intrinsic motivators for different actors and their innovation roles. - In future innovation initiatives, give more explicit attention to balancing financial and non-financial incentives by type of partner.
4. Existence of budget constraints for end users	- Engage constituents in priority setting exercises regarding public budgets. - Educate constituents/citizens about budget status, and offer choices between service quantity/quality and revenue strategies.	- Leading innovators/ implementers - Leading innovators/ implementers (with support of executive leaders)	- No improvements required.
5. Ability to sunset outdated service infra-structure	- Adopt a co-production engagement approach with affected constituents including transparent sharing of investment costs and benefit flows. - Sequence phase-outs of outdated services as innovative services demonstrate value and reliability.	- Leading innovators/ implementers (with support of executive leaders) - Leading innovators/ implementers	- No improvements required.
6. Existence of feedback loops	- Invest in targeted external and internal performance tracking systems related to innovation pilots and roll outs. - Assign dedicated staff to continuously report benefits	- Executive leaders - Executive leaders	- In future innovation initiatives, CPS executives and innovators should build the requirement for targeted feedback loops (e.g., innovation progress and results tracking systems) into the pilots - The innovation lab budget should include resources for

Step II Improvement Action Table			
PSBI Enabling Conditions	**Suggestions for Embedding the Condition**	**Primary Responsibility for Action**	**Leadership Team Improvement Actions**
	and value-adds from innovations to key constituents.		dedicated staff time to report progress and benefits to all actors frequently.