Leadership Framework for an Agile Government

Pallavi Awasthi, Ph.D.
Nova Southeastern University

Kuang Ting Tai, Ph.D.
Nova Southeastern University

IBM Center for The Business of Government

Leadership Framework for an Agile Government

Pallavi Awasthi, PhD
Associate Professor
Huizenga College of Business
Nova Southeastern University

Kuang Ting Tai, PhD
Assistant Professor
Huizenga College of Business
Nova Southeastern University

JUNE 2025

IBM Center for
The Business
of Government

Table of Contents

By investing in leadership, governments can significantly adopt and implement agile work practices as necessary to encourage innovation in service delivery for a sustainable, healthier, and better future.

Foreword

On behalf of the IBM Center for The Business of Government, we are pleased to present this new report, *Leadership Framework for an Agile Government,* by authors Pallavi Awasthi and Kuang Ting Tai of Nova Southeastern University. The report presents leadership imperatives for driving agile government based on extensive research and analysis, drawing on the experiences of digital leaders in city governments such as Boston, Philadelphia, Louisville, and Miami.

Daniel J. Chenok
Executive Director
IBM Center for
The Business of Government
chenokd@us.ibm.com

Chris Shriver
Senior Partner
State, Local, and Education
Industry Leader, IBM
cshriver@us.ibm.com

The report articulates leadership principles important for the effective implementation of agile practices within government agencies. The authors underscore the significance of adopting new forms of leadership that are flexible, participatory, and open to course correction. Specifically, the report outlines six key themes that government leaders can practice to facilitate agile approaches. These themes include "Leadership Models Incorporating Agile Characteristics" to "Barriers to Leadership in Implementing Agile Practices in Government."

The report also introduces three leadership models—Servant, Transformational, and Collaborative leadership—suitable for managing in an agile government environment. The authors then highlight four levels of leadership competencies essential for a successful agile government project, from individual and team levels to organizational and community levels. Recognizing the importance of equipping leaders with the necessary skills, the report also proposes comprehensive leadership training and development competencies tailored for agile government leaders. This includes conducting a leadership needs assessment, establishing measurement metrics, and incorporating workshops focused on enhancing specific skills.

The authors underscore best practices for agile leadership in government, including community engagement, digital commitment, innovation funding, and knowledge sharing. Simultaneously, the report acknowledges the myriad barriers to implementing agile practices in government, such as leadership and cultural resistance, organizational structural rigidity, skill gaps, and regulatory constraints.

This report represents the latest of the Center's multiple studies into how agile government can improve efficiency and effective outcome and strengthen public confidence and trust. Other recent research that the report complements include *Digital Modernization in Government: An Implementation Framework*; *A Guide to Adaptive Government: Preparing for Disruption*; and *The Future of Agile Government*. Further reports on this topic can be found on the website of the Agile Government Center, an initiative led by the National Academy of Public Administration in partnership with the IBM Center for The Business of Government.

The report can serve as a valuable guide for government leaders and stakeholders seeking to develop leaders capable of delivering agile government, leveraging the potential of agile practices to enhance service delivery, foster innovation, and improve responsiveness to citizens' needs. We hope that the framework offered by the authors can inspire and assist government agencies in becoming more agile in their pursuit of adaptable, efficient, and citizen-centric operations.

Executive Summary

A modern government acts with agility to serve the public with speed and high quality. Leaders can set a tone for agencies that enables achieving this goal. Such executives can successfully spearhead agile government projects through actions that are exploratory, solution oriented, flexible, embrace ambiguity, adapt to change, have a vision and pathway for success, can navigate uncertainty, and are empathetic to understand the community and stakeholder needs.

Adoption of agile principles in government is slow and complex. Such adoption calls for new forms of leadership that are people-oriented, flexible, and allow participatory decision-making which is open to course correction—an approach not commonly utilized by government leaders. As governments begin to explore leadership approaches and best practices for faster adoption of agile principles in an age of continuously emerging new technologies and citizen demands, this report provides agencies with an understanding of the wider implications of leading and implementing agile government operations and service delivery provisions, especially in people-centric policymaking, project implementation, acquisitions (i.e., contracting and procurement), and human resource management.

This report highlights an illustrative multilevel framework of leadership competencies for implementing agile practices in government. Particularly, the cases of city governments (including Boston, Philadelphia, Louisville, Miami), insights from digital leaders that have successfully implemented agile principles, as well as relevant published literature, were utilized to highlight leadership competencies for an agile government, assess best practices, and create a roadmap for agile leadership training and development in government agencies. In this report, the following six themes emerge that government leaders can practice to successfully implement agile approaches.

1. **Leadership Principles for an Agile Government:** The following principles of leadership in an agile government context have emerged during the interactions with chief information officers in city governments. They emphasized that government leaders who successfully spearhead digital initiatives are **constituent centered, team centered, adapt quickly** to the changing demands, allow **experimentation through iteration** and trial and error, **use cadence** to develop rhythm at various stages in the project cycle, and are **mission-driven** for consistent progress towards achieving the desired product or a public service delivery outcome in government.

2. **Leadership Models Incorporating Agile Characteristics:** Three models of leadership characteristics have proven necessary to successfully manage in an agile government environment:

   - **Servant leadership** has been traditionally popular in the role of a scrum master as a servant leader, and has been frequently applied in an agile project setting. Servant leaders embody empathy to understand team and constituent needs, which helps in design and development of products and services.
   - **Transformational leadership** is appropriate for agile projects, as it enables government leaders to influence and empower the team by creating a shared vision and a mission-driven approach to reach the desired outcome successfully.
   - **Collaborative leadership** enables a synergy across agencies to understand gaps and align the vision and mission of the project. This also allows acquisition of capabilities and resources wherever needed in the project life cycle, facilitating cross-sector collaboration in situations when the government agency cannot fulfill those requirements.

3. **Competencies for Leadership in an Agile Government:** Four levels of leadership competencies are critical for a successful agile government project:

   - **Individual-level competencies** that highlight personal leadership characteristics leaders possess to implement agile projects.
   - **Team-level competencies** are essential characteristics that team members need to display, such as a common purpose and shared understanding of the vision for an agile government project setting.
   - **Organization-level competencies** are the characteristics displayed by the organization as a whole, including the departments or frontline employees for an agile project to succeed in government.
   - **Community-level competencies** are the interventions that leaders and the organization can implement for a deeper understanding of the dynamic community needs and capabilities essential for successful design and implementation of agile government projects.

4. **Leadership Training and Development Program for Agile Government:** The analysis frames elements of a leadership development and training program for agile government agencies, which emphasizes tools and methods for developing leaders to navigate agile projects effectively. Key elements include:

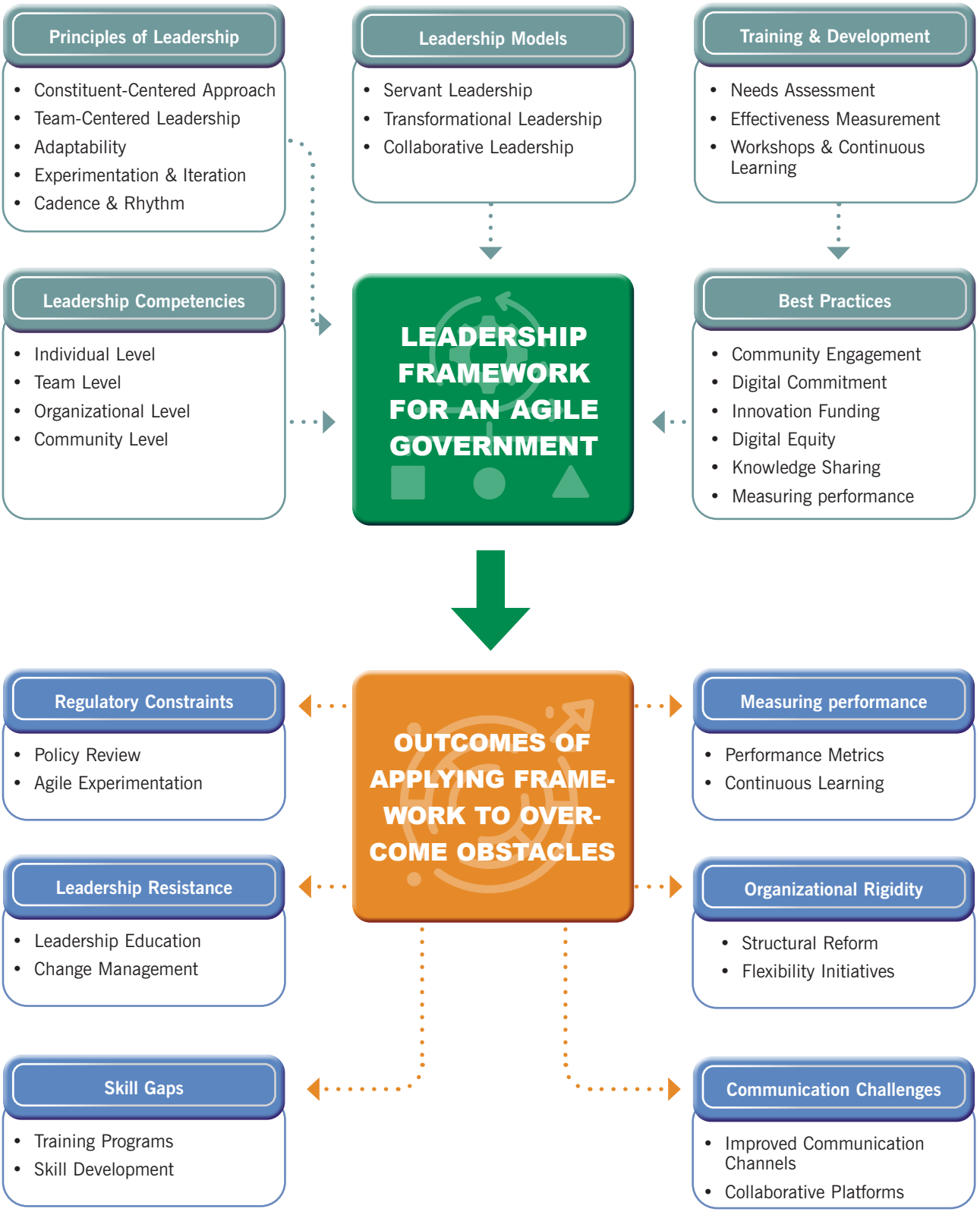
   - Conducting a **leadership needs assessment**—focused on cognitive, digital, interpersonal, and self-leadership skills—can identify gaps and ensure that leaders can respond to change, foster collaboration, and engage residents.
   - **Measurement metrics,** essential to assess leadership effectiveness, can track adaptability and collaboration in meeting organizational goals.

This report recommends that **a leadership development program** should incorporate leadership styles such as **servant, transformational, and collaborative leadership**, and workshops tailored to enhancing specific skills like **stakeholder engagement, empathy, and project execution**. Overall, a leadership development program could create an inhouse continuous learning culture to apply agile work practices in public problem-solving.

5. **Leadership Best Practices for an Agile Government:** The report underlines best practices for leadership for agile government such as community engagement, digital commitment, innovation funding, digital engagement for all, and knowledge-sharing. A **community-centric approach** ensures active community participation in decision-making, fostering transparency and trust. **Digital ownership and commitment** from both officials and residents engaging in technology is enhanced through digital skills training programs. Dedicated **innovation funds** support consistent resources for experimental projects, enabling governments to address emerging challenges. **Digital citizen initiatives** provide access to technology and literacy programs, empowering the community to engage in civic life. Additionally, **national centers for innovation** and **intergovernmental knowledge transfer** facilitate learning and sharing of best practices; such centers can drive agile governance through frameworks that support adaptability, public engagement, and technology integration, enabling government agencies to respond effectively to community needs.

6. **Barriers to Leadership in Implementing Agile Practices in Government:** Implementing agile methodologies in government faces multiple barriers, including leadership and cultural resistance, organizational structural rigidity, skill gaps, communication challenges, regulatory constraints, and difficulties in measuring performance. **Leadership resistance is a significant hurdle**, especially if leaders are ill-informed and lack the required knowledge of agile practices. Leaders can also resist disrupting stream-lined and entrenched processes and are less open to experimentation. **Organizational structural issues,** including hierarchical layers and lack of dedicated funding for innovation, further inhibit agile adoption by stifling cross-functional collaboration and creating budget constraints. Overcoming these barriers requires leaders' familiarity and knowledge of agile principles, and commitment and resilience to adopt agile work practices in government.

Leadership Framework for an Agile Government



Introduction

> *When the rate of change inside an institution becomes slower than the rate of change outside, the end is in sight.*
>
> —Jack Welch

This report examines the application of agile methods in government to enhance efficiency, outcomes, and public trust. It supplements earlier research, including "Digital Modernization in Government: An Implementation Framework; A Guide to Adaptive Government: Preparing for Disruption; and The Future of Agile Government. Additional agile publications are on the website of the Agile Government Center, an initiative of the National Academy of Public Administration in partnership with the IBM Center for The Business of Government.

Serving as a key resource, this report guides government leaders in developing agile governance capabilities. By illustrating the benefits of agile practices for service improvement, innovation, and citizen responsiveness, this report aims to inspire and equip agencies to adopt adaptive, efficient, and citizen-centric approaches.

In today's technologically unpredictable times, organizational agility has become critically important for the government organizations to succeed. The question of "how an agile government is different from a traditional government, and what type of leadership is needed to successfully lead agile governments?" has become highly pertinent. For long, government functioned as a traditionally structured system, with a predictable and a stable future that is efficient in achieving predetermined outcomes. Structured procedures and systems that rely extensively on linear planning and controlled mechanisms leave little room for innovation. These limitations of traditional government are more pronounced in times of rapid technological advancements, as is happening presently at an unprecedented scale. Contemporary digital innovations such as artificial intelligence, virtual reality, the internet of things, smart cities, and others are disrupting how human beings live and function in society.

Governments cannot remain separated from this reality. Government leaders must constantly adapt to new ways of governing to overcome barriers and respond faster to the needs of the residents. Agile methodology has emerged as one such new way of governing that allows the application of emerging technologies to create flexible, effective, and timely governance mechanisms.[1] Agile is frequently contrasted with the older "waterfall" model, where development fol-

1. Ganapati, Sukumar. *Adopting agile in state and local governments*. IBM Center for The Business of Government, 2021.

lows a linear, sequential process with pre-defined milestones. In contrast, agile enables scanning of innovation needs and trends that are highly desired for people-centered policy design and delivery in various functional areas in government, such as human resource management, public safety, transportation and mobility, public procurement, project management, and public engagement. According to National League of Cities (NLC), the projected investment in such technologies in government is expected to be approximately $150 billion to support research and development.[2]

The fundamental principles of agile emphasize prioritizing individuals and interactions over processes and tools, fostering customer collaboration rather than focusing on contractual negotiations, adapting to change rather than adhering strictly to a predetermined plan, and valuing application of innovative technologies over extensive documentation. Despite the critical importance of agile methodologies, their adoption within government entities has been notably slow, fraught with challenges, and complicated by the inherent bureaucratic structures.

This sluggish adoption has been further exacerbated due to limited understanding of the requisite leadership strategies and best practices essential for the successful implementation of agile approaches in government.[3] A study by McKinsey and Oxford University found that public sector digital projects experience cost overruns and delays more regularly than private sector.[4] Most of these initiatives fail due to inadequate leadership, budgetary overruns, and extended timelines, leading to detrimental effects on public service delivery.

Agile implementation needs a new kind of leadership, which is fundamentally different from traditional leadership approach that follows rigid rules and hierarchical structures. Research has emphasized that leadership profoundly impacts team empowerment, team performance,[5] and organizational performance.[6] In fact, some studies suggest that for organizations to become agile, leadership is the most valuable prerequisite. This report presents an analysis of the leadership approaches, referred to here as the Leadership Framework for an Agile Government, that are necessary to the practice of agile principles in government. Utilizing the case studies of city governments (i.e., Miami, Boston, Philadelphia, Louisville) that have successfully applied agile strategies in civic innovation projects, this report advances the understanding of leadership best practices for agile implementation in government, for the following reasons:

1. Leadership for agile enables a high degree of efficiency, stakeholder satisfaction, and performance effectiveness while also saving service delivery time, which contrasts with the traditional bureaucratic approach that results in time delays, cost overruns, and stakeholder dissatisfaction.
2. Leadership for agile creates an enabling environment to apply new methods and creative strategies.
3. Leadership for agile warrants the development of a new organizational culture that embodies empathy, listening, and service orientation as a prerequisite.
4. Leadership for agile enables a shift in the traditional bureaucratic closed culture to a flexible, open, and team-oriented serving culture that emphasizes community well-being, prosperity, and satisfaction.

2. Groll, Steve. Future Proofing Government through Technology Modernization. https://www.nlc.org/article/2024/05/14/future-proofing-government-through-technology-modernization/.
3. Bohne, Raphael. "Government and public sector's new technology adoption barriers 2020," Statista.com, July 6, 2022.
4. Bloch, Michael, Sven Blumberg, and Jürgen Laartz. "Delivering large-scale IT projects on time, on budget, and on value," McKinsey.com, October 2012.
5. Awasthi, P., and F.O. Walumbwa (2023). Servant leadership theory and practice in government organizations. *The Palgrave Handbook of Servant Leadership* (pp. 767-796). Cham: Springer International Publishing.
6. Hsieh, J. Y., and K. T. Liou (2018). Collaborative leadership and organizational performance: Assessing the structural relation in a public service agency. *Review of Public Personnel Administration*, *38*(1), 83-109.

Principles of Leadership for an Agile Government

In a world of complex emerging technologies such as artificial intelligence, the landscape for public problem-solving requires an agile approach.

Government institutions are at the crossroads to understand and devise innovative solutions for workforce development, community readiness, and timely response to adopt these technologies for public problem-solving.[7] In contrast, governments traditionally are burdened with rigid hierarchies and a command-and-control type of setting that embodies a directive approach to design and deliver services. This limits the public engagement needed to comprehend problems from the constituents' viewpoint and diminishes the efficacy and promptness of government actions.

To address these significant challenges effectively, a new form of leadership is required that allows rapid, flexible, and inclusive responses from government leaders to leverage stakeholder partnerships and social networks, rather than taking a top-down approach to public problem-solving. The new leadership approach engenders a shift in the mindset that allows innovative, iterative, and speedy delivery of public services to create value for the constituents. There are six core principles of leadership that enable building an agile government.

1. **Constituent-centered:** Leadership principles for an agile government involve a constituent-centered methodology that incorporates continuous feedback throughout the project implementation process, to ensure that the end services effectively can meet constituents needs. The foremost undertaking for leaders in an agile government setting is to possess a level of empathy and service orientation to understand the needs of constituents and various stakeholders (elected officials, employees, and relevant external partners).

A Government Leader

"Deeper connections between residents and government and tools are pivotal to build trust and sort of unlock the capacity. This facilitates greater alignment. It was a fundamental."

7. DeSeve, G. Edward. *The Future of Agile Government.* IBM Center for The Business of Government, 2022.

2. **Team-centered:** Leaders that are enablers of agile methodologies create teams that understand the importance of user needs. Such teams are self-led and gather user feedback and adjust and iterate on their project approach accordingly to build a minimum viable product (MVP) for any service or product. Leadership in an agile environment is mission driven and utilizes vision building with cross-functional team members while taking a step-by-step strategic approach to achieve the project mission.[8]

A City Government Chief Information Officer

"If I am to lead the team, I have to be interested in them, and how they're doing, and make an effort to show that. It fosters a strong, connected team environment where each member feels valued and understood."

3. **Adaptive:** Agile environment is unpredictable and exploratory. The path to agile discovery and implementation is not a straight line. In fact, it is focused on learning by doing to get to the result. Agile application needs leaders and teams that are adaptive and can navigate uncertainty with patience and never give-up attitude.

A Digital Innovation Leader

"We discovered lots of criteria missing from the statement of work . . . so we made it agile . . . and built new muscles to adapt to new challenges. Each project became easier because you're learning how to use these muscles."

4. **Iterative:** Agile approach emphasizes the need for leaders that allow flexibility and adaptation for trial and error and iteration in projects. The step-by-step iterative process is based on trial-and-error approach and is organized into short cycles, also referred as sprints, each with specific objectives, and focuses on delivering functional solutions and incorporating ongoing feedback to refine and improve user outcomes.

A City Government Chief Information Officer

"Setting the right tone and expectations from the top down is important. If deadlines are imposed too rigidly, staff won't feel free to experiment. You want leadership to support iterative learning, rather than expecting a finished product to look exactly as envisioned from the start. When leadership understands that the project will evolve, it sets a more realistic tone for success."

5. **Cadence:** Agile leaders create a rhythm in executing projects in shorter sprints for achievable strategic objectives and key results. Cadence allows the team to create a synergy and common understanding to follow a schedule to demonstrate progress regularly. For cadence, leaders fix a weekly demonstration schedule for team members to learn, share, commit, and celebrate small successes for a larger goal.

8. DeSeve, G. Edward. *The Road to Agile Government. Driving Change to Achieve Success*, IBM Center for The Business of Government, 2020.

A Digital Leader

"As a leader, I often excel at the onset of projects but may not be as effective at maintaining long-term cadence. It's about knowing where the organization and projects are. There are times I've had a heavy hand upfront for transformative projects, and then I've had to hand them over to someone else who can maintain a different rhythm. Having a good sense of organizational tempo—knowing when to apply disruption versus when to maintain a rigid cadence—is incredibly valuable."

6. **Mission-driven:** Leaders that are enablers of agile implementation are mission driven. A mission-oriented approach is critical in strengthening organizational performance in an agile project context.[9] Agility foundationally relies on projects strategic objectives, key results, and quarterly reviews to complete the project in a timely fashion. Against the traditional government system that follows reviews and monitoring of results annually, agile government leaders create short cycles of evaluating project success in terms of achieving results and monitoring success in a mission mode. Agile leaders create a bold vision tied to the mission which is promoted consistently within the team though effective communication and inclusive leadership.

9. Coleman, Lisa, et al. Ensuring Excellence: A Guide for Cultivating Healthy High-Performing Agencies. National Academy of Public Administration. 2024. https://s3.us-west-2.amazonaws.com/napa-2021/NAPA_Ensuring-Excellence-A-Guide-for-Cultivating-Healthy-High-Performing-Agencies_September-2024.pdf.

Leadership Models Incorporating the Agile Characteristics

The understanding of leadership approaches suitable for implementing agile methodologies in government projects remains limited.

A survey on agile transformation reported that leadership and culture are either the greatest enablers or barriers to a successful agile transformation.[10] In government organizations where leadership has been predominantly about directing routine affairs under defined rules, legislative structures, and policies, agile transformation is filled with skepticism, lack of interest, resources, and commitment. Agile transformation is not possible without a new leadership approach that is visionary, innovative, understands constituent needs, and is deeply committed for doing good for the public. Leadership models such as servant leadership, transformational leadership, and sometimes collaborative leadership have been often considered effective in tackling the unpredictability and uncertainty of implementing digital technology-oriented projects in government agencies.[11]

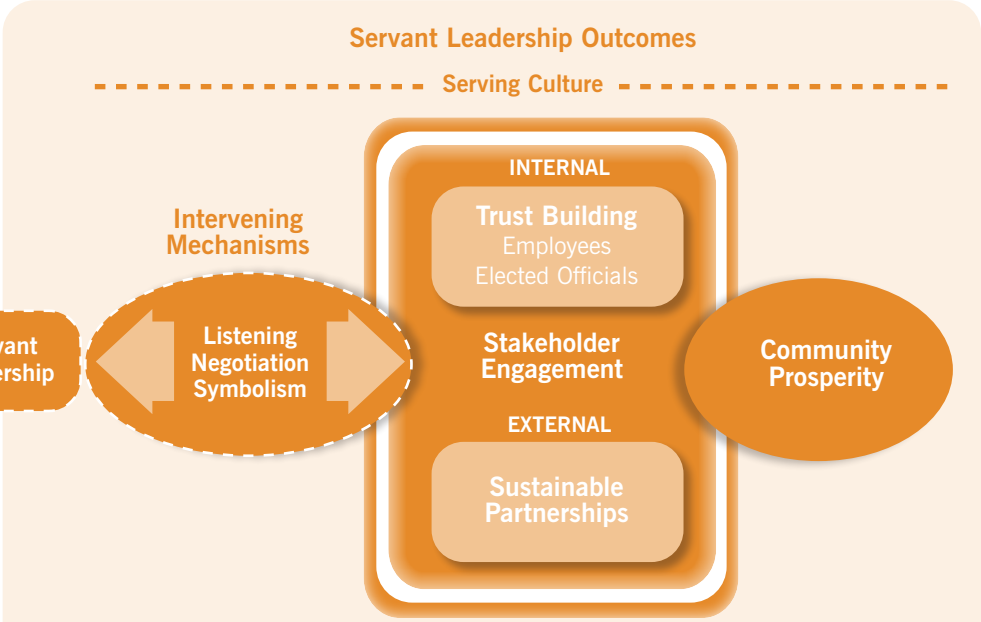
Servant Leadership Approach

Servant leadership has been a widely popular concept in the role of scrum master for agile applications. Specifically, servant leadership characteristics such as putting the customer needs, team members, and stakeholder's interests ahead of the self-interests of the leader, empathy, and allowing experimentation using the trial-and-error approach have been considered successful in an agile context. A scrum master's role as a servant leader is to support the team by removing impediments and facilitating the agile development processes. For instance, when team members encounter obstacles such as unclear requirements or technical challenges, a scrum master demonstrates servant identity by advocating for the team's needs in discussions with stakeholders and providing the resources necessary for resolution.

10. Salo, Olli. "How to create agile organizations." McKinsey Survey, October 2017.
11. Mergel, Ines, Sukumar Ganapati, and Andrew B. Whitford. "Agile: A new way of governing." *Public Administration Review* 81, no. 1 (2021): 161-165.

Prior research suggests that servant leadership prioritizes serving others first.[12] The foundation of service enables servant leaders to empower team to achieve personal and professional goals. A recent study suggests that servant leadership enables empathy for constituents and relationship building with both internal and external stakeholders in city governments to understand and fulfill community service needs.[13] As shown in Figure 1, this paradigm serves as a valuable framework for enhancing the efficacy of servant leadership, in enabling a serving culture and trust building with stakeholders to facilitate the application of agile methodologies within governmental structures. Servant leadership emphasizes the holistic nurturing of followers and stakeholders—engaging them purposefully—rather than viewing them merely as instruments for achieving organizational and communal goals.

Figure 1: Servant Leadership Characteristics for Agile Government



Source: Awasthi & Walumbwa, 2022

The following explanation expands the understanding of Figure 1 in terms of how government leaders who exemplify community-oriented servant leadership can facilitate agile transformation in government. It shows the role of multiple stakeholders (elected officials, city managers, employees, external partners, community members) as servant leaders, necessary for creating a vibrant ecosystem to facilitate the agile development process.

12. Greenleaf, Robert K. "The servant as leader." Greenleaf Center for Servant Leadership.
13. Awasthi, Pallavi, and Fred O. Walumbwa. "Antecedents and consequences of servant leadership in local governance: Evidence from three case studies." *Public Administration Review* 82, no. 6 (2022): 1077-1094.

Mayor as a Servant Leader

A mayor who exemplifies servant leadership would listen and understand what the constituents need by actively involving them in the decision-making processes, ensuring their perspectives are acknowledged and respected. By adhering to the principles of servant leadership, such a mayor can cultivate a serving culture among employees, stakeholders, and residents alike, thereby facilitating the implementation of more effective and sustainable community service initiatives. A serving culture engenders values of trust, transparency, and accountability within the community, which in turn fosters community prosperity. A serving culture is a critical requisite for agile transformation to occur.

City Manager as a Servant Leader

A city manager who identifies with servant leadership can facilitate the application of agile values by focusing on the welfare and growth of employees, fostering a sense of belonging and purpose, which can galvanize the community to engage meaningfully in government public service programs and initiatives aimed at enhancing their community. To do so, city managers embody characteristics such as effective negotiation with elected officials and stakeholders, and symbolic behaviors of empathy and listening to cultivate servant leadership among employees.

City Government Employees as Servant Leaders

City government employees embodying servant leadership qualities embrace a commitment to growth, welfare, and engagement of self, their colleagues, and the community they serve. By displaying the values of empathy, active listening, and a focus on empowering community, employees create a supportive and inclusive environment that motivates residents to actively participate in public service programs. Their approach, often modeled by city managers that act as servant leaders by engaging community at every step of the decision-making process and through effective negotiation with elected officials and stakeholders, strengthens the sense of purpose and belonging within the workforce and the broader community. Employees as servant leaders not only enhance internal collaboration but also foster a culture of public trust and service responsiveness, driving impactful initiatives that can facilitate an agile environment to benefit the entire city.

Citizens as Servant Leaders

For citizens, servant leadership not only enhances the quality of governance but also fortifies the social fabric of the community, nurturing a sense of interconnectedness and mutual support among its members. This can be observed in various contexts, such as community outreach programs led by local leaders who actively solicit input from residents, thus reinforcing civic engagement and collective responsibility. The transformative potential of servant leadership lies in its ability to align individual aspirations with community prosperity, thereby promoting a more resilient, self-reliant, and a cohesive society. A comprehensive ecosystem that involves citizens is necessary in designing and implementing agile innovation projects that are community centric.

Transformational Leadership Approach

In some cases, a transformational leadership approach has been successful in digital transformation efforts in government. Transformational leaders aim to foster leadership by directing both themselves and their followers towards creative goals and, in turn, develop innovation culture and enhance organizational performance. These characteristics facilitate the development of a vision and faster adoption of agile methodologies and practices.

This leadership style is particularly advantageous in the context of government agencies, where it can significantly accelerate the adoption of agile methodologies and practices. Research has suggested that transformational leadership facilitates innovation capability for digital transformation. Evidence also suggests that transformational leaders implement regular innovation workshops, encouraging employees to contribute ideas for improving service delivery in public sector organizations.[14] This participatory approach not only stimulates creativity but also fosters a sense of ownership among team members.

Moreover, transformational leaders emphasize the importance of a shared vision, which aligns the efforts of diverse stakeholders toward common objectives. This alignment can be crucial in navigating the complexities of digital transformation, as it facilitates collaboration across different departments and levels of government. For instance, a transformational leader overseeing a digital innovation initiative might engage various divisions—such as IT, finance, and public relations—in collaborative strategy sessions to ensure that all perspectives are considered and integrated into the transformation process.

In summary, the attributes of transformational leadership significantly contribute to agile transformation efforts in government. By orchestrating and sharing an agile project vision, nurturing a culture of innovation, and fostering engagement, transformational leaders enhance the agility and responsiveness of governmental organizations in an increasingly complex and dynamic environment.

Collaborative Leadership Approach

Collaborative leadership gained attention due to the rising needs for cross-sector collaboration to solve governance problems. The focus is on creating systems and processes in organization that facilitate power sharing and collaboration with the private or nonprofit sector partners. Collaborative leadership is particularly salient when cross-sector partnerships are needed to deliver services or solve governance issues. In digital transformation contexts that need an agile approach, collaborative leadership is particularly helpful in breaking cross-departmental and cross-sector siloes and allowing seamless partnerships to develop.[15]

In many collaborative problem-solving efforts involving the government, there is often a noticeable imbalance in power and resources between the well-equipped government agency and its less-resourced external partners, like nonprofits or community groups. To navigate these dynamics effectively, the leadership in a government agency must present itself as both decisive and supportive, while avoiding a top-down approach that could stifle collaboration. This balance can be achieved by actively training agency staff in collaborative leadership to foster respectful and inclusive interactions with their partners, ensuring that daily communications

14. AlNuaimi, B. K., S. K. Singh, S. Ren, P. Budhwar, and D. Vorobyev (2022). Mastering digital transformation: The nexus between leadership, agility, and digital strategy. *Journal of Business Research*, *145*, 636-648.
15. Crosby, Barbara C., and John M. Bryson. "A leadership framework for cross-sector collaboration." *Public management review* 7, no. 2 (2005): 177-201.

reinforce partnership rather than hierarchy.[16] For example, government leaders can focus on active listening, transparency in sharing resources, and acknowledging the contributions of all collaborators, helping to create a more equitable, productive, and a collaborative leadership environment to prosper.

Mixed Leadership Approach

It is important to note that the effectiveness of leadership styles in agile projects can vary depending on the specific context and goals of the project. While servant leadership may be effective in fostering supportive environment, collaborative leadership is helpful in breaking hierarchal systems and structural siloes to facilitate internal team building and cross-departmental collaboration. Similarly, transformational leadership may be more suitable for developing a common vision, driving innovation, and organizational change. Ultimately, a combination of servant, transformational, and collaborative leadership styles may be necessary to navigate the complexities of digital transformation in government agencies. Additionally, leaders must be adaptable and willing to evolve their approach as the project progresses and new challenges arise.

For example, in a digital transformation project within a government agency aiming to modernize their outdated systems, a leader may initially adopt servant leadership to build trust, develop confidence, and empower team members. As the project advances and the need for innovation becomes more pressing, the leader may shift towards a transformational leadership style to inspire creativity and drive vision and change. Similarly, collaborative leadership facilitates acquisition of resources and capabilities from various partners both within and outside government, and creates alignment and joint action across departments that are necessary for executing agile projects. Collaboration is non-negotiable in an agile setting in governments as they have limited resources by themselves to implement agile in government.

By effectively blending the servant, collaborative and transformational leadership styles, the leader can successfully guide the agency through the complexities of digital transformation while remaining agile in response to emerging obstacles. While blending servant and transfor-

16. Nambisan, S. (2008). *Transforming government through collaborative innovation*. IBM Center for The Business of Government.

mational or collaborative leadership styles may be beneficial in some cases, it could also lead to confusion and inconsistency in leading the execution of agile, potentially hindering team performance and cohesion. It is important for leaders to carefully assess the needs of their team and project before deciding on a specific leadership style or a combination. Table 1 summarizes the core values of the servant, transformational, and collaborative leadership styles and the associated agile practices in government settings.

Table 1: Leadership Models Incorporating Agile Characteristics

Leadership Style	Core Values	Agile Characteristics	Application in Agile Government
Servant	Consequentialism for both internal (employees and elected officials) and external (partners, customers, community) stakeholders in the form of community prosperity, growth, and well-being for all. Utilizes empathy, listening, community building, ethics	Community focus, Empowerment, Allowing mistakes, Continuous improvement, Stakeholder engagement, Self-organized	Prioritizes the needs of residents and public servants, fosters an inclusive culture that encourages feedback from all stakeholders, ensuring government services are user-centric and responsive to community needs.
Transformational	Achieving organizational growth by influencing followers, and ensuring efficiency, productivity, and performance of both followers and the organization. Utilizes visionary thinking, inspiration, intellectual stimulation, change-oriented, individual consideration	Adaptability, Innovation, Vision and purpose, Change	Inspires public servants to embrace change and innovation, encourages creative problem-solving and the pursuit of a shared vision, driving agile initiatives in response to evolving public needs.
Collaborative	Public problem-solving by creating integrated systems, cross-agency collaboration, reducing ambiguity, and enhancing resource sharing. Utilizes systems approach, shared decision-making, alignment across departments and sectors	Cross-functional collaboration, Alignment of resources and capabilities, Stakeholder engagement across sectors.	Facilitates collaboration across departments and sectors, engages various stakeholders in decision-making processes, ensuring diverse perspectives are integrated into agile governance strategies.

Illustrative Multilevel Leadership Competencies Framework for an Agile Government

In a world characterized by growing complexity and interconnectedness, coupled with an accelerating pace of change, governments recognize the imperative to reimagine operational methodologies.

This necessity manifests through various avenues, including the formation of strategic partnerships, the adoption of innovative leadership practices, and the recruitment of a highly skilled workforce. Governments are increasingly confronted with the challenge of navigating uncertainty by enhancing their agility. The need for a comprehensive leadership approach that seamlessly facilitates agile transformation in government is more pronounced than ever.[17] Leadership for agile government primarily rests on the central ability of government leaders and agencies to deliver services that meet community needs in a timely manner, irrespective of external pressures or contextual factors. In essence, leadership competencies for agile government prioritize characteristics of empathy, responsiveness, flexibility, creativity, and a deep understanding of the people's needs.

The illustrative leadership competencies framework for agile government presented in this report offers a set of characteristics needed for an iterative and incremental change in government towards innovation and agile development. Leadership for agile government is anticipated to enhance the capacity to deliver more effective and responsive governance. Considering contemporary challenges, transitioning to a leadership model that encapsulates the agile government principles, such as those identified in studies from the IBM Center and the National Academy of Public Administration's Agile Government Center,[18] presents compelling advantages—such as fostering greater trust through improved public outcomes, increased customer satisfaction, and reducing complexity while enhancing governmental efficiency. While the concept of agility has long revolutionized software development, its principles are increasingly recognized as applicable to broader governmental contexts, necessitating substan-

17. Mergel, Ines, Noella Edelmann, and Nathalie Haug. "Defining digital transformation: Results from expert interviews." *Government information quarterly* 36, no. 4 (2019): 101385.
18. https://napawash.org/agile-government-center.

tial reforms in leadership and management practices. The leadership principles for agile presented in this report can be adopted to oversee innovation projects, large-scale programs, and comprehensive innovation efforts in government that are highly dependent on technology programs and tools.[19]

Discussions with technology leaders from the city governments such as Miami, Philadelphia, Boston, and Louisville elucidate agile leadership capabilities at four levels: individual, team, organizational, and community. Individual-level agile competencies pertain to the attributes leaders must possess to effectively implement civic innovation projects utilizing digital technologies. Literature on agile governance suggests that technology leaders require a high degree of empathy towards both constituent needs and their team members, and taking a human-centric approach for adoption of agile work practices in government.[20]

Team-level agile leadership competencies focus on the characteristics required of leaders and their teams to successfully direct and execute government projects heavily dependent on modern technologies. Organizational-level competencies encompass the features of the organization and system that enable digital leaders and their teams to effectively implement technology-driven government projects. Similarly, certain community-level competencies are crucial for the success of any government digital project ensuring responsive service design, delivery, and comprehensive growth for constituents.[21]

Based on information gathered from the interviews, an illustrative multilevel leadership framework is presented in Figure 2 addressing the four different levels of leadership competencies for an agile government. Table 2 summarizes the specific lessons learned about leadership for agile implementation in the cities of Louisville, Miami, Philadelphia, and Boston that were effective in agile and innovation practices. Figures 3, 4, 5, and 6 show the critical competencies at the individual, team, organizational, and community level that emerged from the interviews with the city leaders. Each competency level is discussed in detail in the next sections.

19. Mergel, Ines. "Social affordances of agile governance." *Public administration review* 84, no. 5 (2024): 932-947.
20. Eggers, William D. *Delivering on Digital: The Innovators and Technologies That Are Transforming Government*. RosettaBooks, 2016.
21. Lukensmeyer, Carolyn J. and Lars Hasselblad Torres. *Public Deliberation: A Managers Guide to Citizen Engagement*. IBM Center for The Business of Government, 2006.

Figure 2: Illustrative Multilevel Leadership Competencies Framework for Agile Government

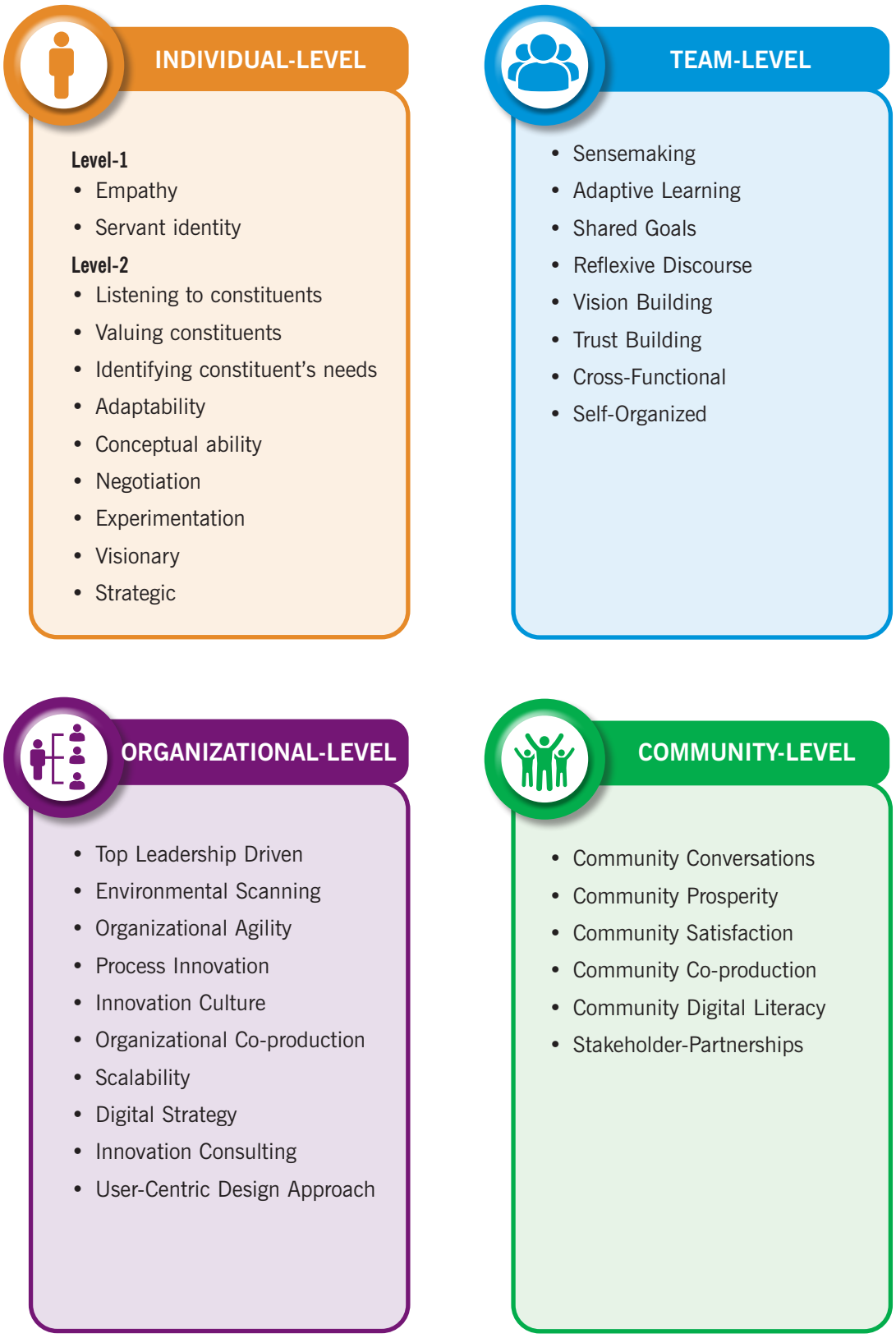


Table 2: Leadership Approaches and Agile Strategies in Innovative City Governments

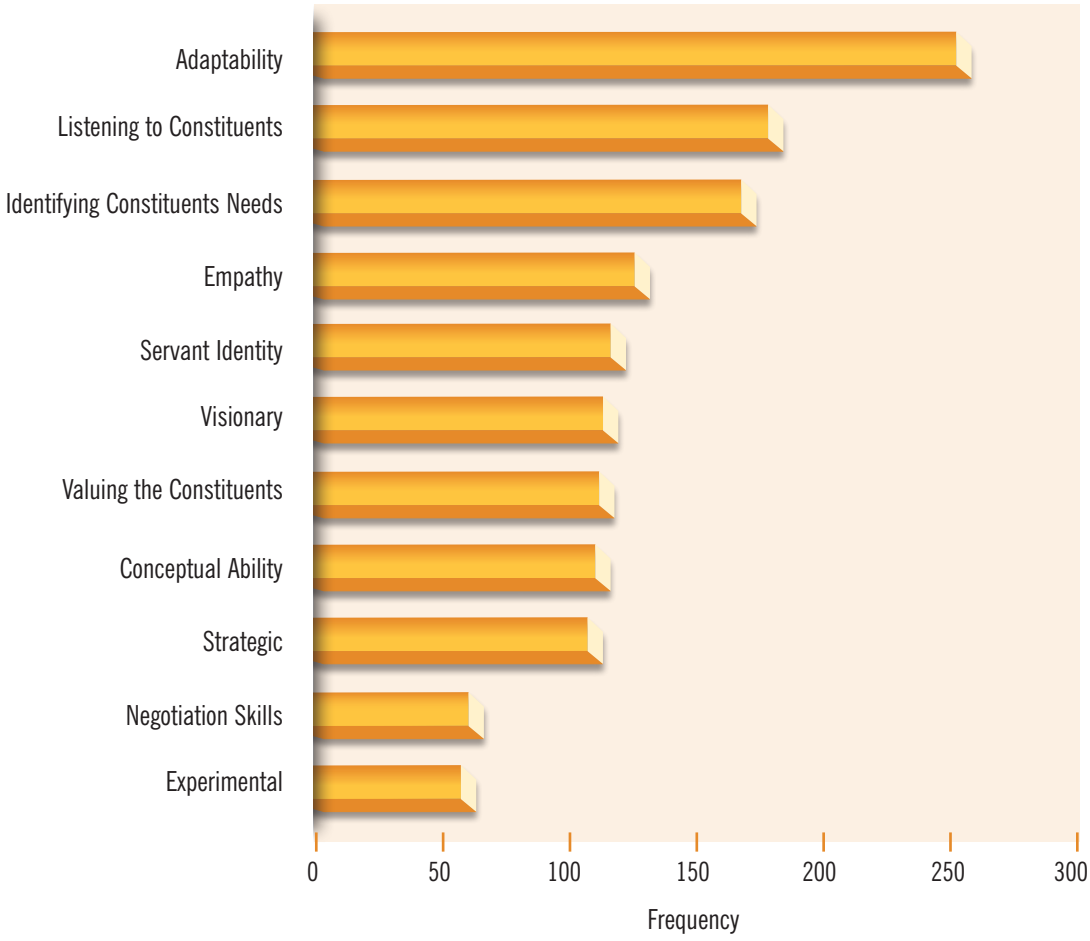
City	Leadership Approach	Agile Strategies
Louisville	Strong Mayor led; **Mayor's entrepreneurial mindset leads the charge** in treating the city as an **"urban laboratory"** for innovation encouraging experimentation and risk-taking. Chief Innovation Officer leads Civic Innovation & Technology, promoting agility and risk embracing culture in project execution. Additional focus on building a culture that integrates community and stakeholder input, including hackathons and interdisciplinary collaboration.	**Separation of Roles:** Divides innovation and performance management to allow for focused innovation efforts. **Culture of Tolerance:** Encourages comfort with ambiguity and risk-taking through leadership and communication, focusing on public value rather than perfection. **Partnerships for Funding:** Secures external funding for agile projects through collaborations with local, regional, and national partners. **Diverse Teams:** Builds agile, diverse teams using tools like the Predictive Index for complementary skills. **Process Redesign:** Transitions from a waterfall model to agile methods for more flexible, user-driven solutions. Implements milestone-driven project funding, prioritizing continuous improvement over rigid planning. **Iterative Development:** Supports projects with iterative design, feedback loops, and adjustments based on user and community input (e.g., smart city initiatives, COVID-19 tracing). **Clear Vision and Communication:** Aligns teams around actionable, project-specific goals while fostering openness to change. **Resource Management:** Uses milestone-based payments to drive accountability.
Miami	Strong Mayor led; **Mayor leads the charge with dynamism and openness to innovation.** Chief Innovation Officer leads the city's tech innovation efforts, advocating for agile adoption across the public sector. Plays a key role in fostering cultural change, balancing traditional leadership with agile methodologies. **Transitions between directive leadership for initial change and supportive leadership for maintaining ongoing improvements.** Prioritizes flattening hierarchies and empowering teams. Navigates resistance from staff by offering training and clear communication about agile's benefits.	**Cultural Change for Agile:** Uses iterative project management to break complex tasks into manageable steps, reducing overwhelm and encouraging continuous learning. **Training and Support:** Senior leaders commit to training and empowering employees in agile methods. **Acceptance of Incomplete Products:** Leaders foster a tolerance for early-stage work, embracing failure as part of the learning process. **Training via Innovation Academy:** Provides staff with iterative, small-scale problem-solving training. Helps employees tackle issues incrementally, fostering a culture of continuous improvement. **Managing Resistance to Change:** Gradual implementation of Agile practices reduces resistance, balancing new and old approaches. **Performance Accountability:** Performance metrics focus on meaningful outcomes (e.g., customer wait times), tying front-line work to broader organizational goals. **Feedback Loops:** Ensures continuous feedback from stakeholders, incorporating real-time input to guide project iterations and align with community needs. **Roadmap for Digital Services:** The city's website redesign was broken down into manageable steps, focusing on 30–50 critical services for online access.

City	Leadership Approach	Agile Strategies
Philadelphia	Strong Mayor led; **innovation has been more centralized, Chief and the Deputy Innovation Officers lead the city's innovation efforts** and plays a critical role in driving the adoption of agile methodologies within the public sector, focusing on cross-department collaboration and innovation. Ability to build teams with diverse skill sets, **blend subject matter expertise with generalists,** and foster a culture of continuous feedback. **Leadership emphasizes servant leadership, empathy, collaboration, innovation, and alignment with city goals.** Using trusted community organizations to build more credible community engagement opportunities.	**Formation of Innovation Team:** Established a dedicated team for technology innovation, which grew to 11 members and included roles like Smart Cities Director. Funded positions creatively through grants and operational budgets to attract specialized talent. **Strategic Team Development:** Used salary-splitting techniques to efficiently manage budget and staffing across departments. **Innovation Ecosystem:** Built a structured process for testing and iterating new ideas, ensuring a methodical approach to innovation. The team blends specialized knowledge with the ability to execute operational solutions. **Performance Management:** Regular, ongoing feedback and discussions about employee performance create a dynamic work culture focused on continuous improvement. **Cross-Department Collaboration:** Fostered a consultation framework that encouraged the innovation team to engage with departments to identify and solve unique challenges collaboratively. Emphasized empathy to integrate innovation into established departmental processes. **Inclusive Culture:** Built a culture where all voices were valued, and team members were empowered to engage with innovation goals across departments. **Stakeholder Involvement in Innovation:** Addressed the challenge of involving residents in service design by leveraging partnerships with trusted community organizations. **Incentivized Participation:** Offered incentives (e.g., gift cards) to encourage public participation and feedback, although results were mixed.
Boston	Strong Mayor led; **Mayor with an entrepreneurial mindset drives excitement for innovation. Boston's Office of New Urban Mechanics** was created by the mayor and **co-chairs were recruited to lead** Boston's civic innovation efforts. Their leadership emphasizes collaboration, risk management, and building trust across departments and with the community. Focused on **Servant, Adaptive, and Transformative Leadership** to empower teams, cultivating trust, and experimenting with new ideas. Their approach blends risk management with support for responsible experimentation. Fostered a culture where **employees were encouraged to take calculated risks** and adapt rapidly to challenges, helping them move beyond traditional, bureaucratic structures.	**Collaborative-Based Innovation:** The Office of New Urban Mechanics works directly with various departments like Public Works and Transportation. Sidewalk reconstructions were executed through cross-departmental partnerships, using department-specific budgets for more impactful outcomes. **Institutional Innovation Space:** Became an "innovation lab," enabling cross-departmental collaboration and experimentation. This structure supported agile experimentation while mitigating the risk of failure through iterative testing and feedback. **Fellowship Programs & Talent Retention:** Programs were introduced to engage students and recent graduates in real-world projects, offering them a sense of purpose and creating a pipeline for future talent within the city. Job descriptions were revised to highlight the impact of public service roles, attracting individuals motivated by civic innovation. **Community Engagement:** Boston used hackathons, competitions, and focus groups to involve the public in co-creating solutions, ensuring projects like Citizens Connect align with community needs. Digital platforms were used alongside face-to-face methods to encourage diverse input.

Individual Level Leadership Competencies

The individual-level leadership competencies for agile government provide an understanding of the specific skills and traits essential for leaders in government to be effective. Specifically, these competencies offer insights into what qualities leaders should possess in order to successfully navigate the complexities and the need for rapid changes inherent to the nature of agile government. Individual competencies guide the development of a comprehensive illustrative framework for leadership in an agile government by focusing on the competencies that leaders need to cultivate in themselves and the team members, in order to effectively lead government projects applying agile methodologies. Interviews with the city leaders highlighted the individual competencies presented in Figure 3. The analysis of interview excerpts highlights adaptability, listening to the constituents, identifying constituent needs, empathy, and servant identity as the critical competencies.

Figure 3: Individual-Level Learship Competencies for Agile Government



Referring back to Figure 2, **Level 1** competencies are foundational for leaders to create an innovation ecosystem that requires the application of agile methods to problem-solving in government. Government leaders suggested that empathy and service orientation are necessary to understand the constituent's problems and needs, and to orient the actions to design appropriate solutions to address complex public problems.

- **Empathy:** Wicked government problems such as homelessness, affordable housing, or mental illness require a deeper understanding of user problems and needs. Empathy allows understanding of the constituent's needs by putting oneself in their shoes. Empathy

also creates a level of emotional intelligence to develop an interpersonal dynamic with the team. Thus, empathy serves as a prerequisite for leadership effectiveness in an agile project development context.

- **Servant identity:** Government work is founded on public service values such as service orientation, integrity, accountability, to name a few. Especially during sprint retrospectives, a servant identity is manifested when team leaders actively solicit feedback and foster a safe environment for candid discussions. By prioritizing the input of all team members, leaders exemplify a commitment to collective improvement and inclusivity. For example, a leader might ask, "What challenges did we face this project cycle, and how can we support each other to overcome them in the next cycle?" This emerges from a servant identity framework that prioritizes serving and empowering team members to encourage open dialogue and shared accountability.

Level 2 competencies are the additional characteristics that enable collaboration, transparency, and adaptability to facilitate agile methodologies in government processes. These competencies include:

- **Listening to constituents:** Listening to the community within agile frameworks encompasses the active and intentional practice of engaging with various stakeholders—such as team members, customers, and broader organizational participants—to gather insights, feedback, and perspectives that inform the project development process.
- **Valuing constituents:** Valuing constituents in agile environments refers to the principle of recognizing and prioritizing the needs, perspectives, and contributions of all stakeholders involved in the development process, including team members, customers, and organizational partners. This principle is rooted in the Agile Manifesto's emphasis on collaboration and responsiveness, thereby fostering a culture that enhances engagement, satisfaction, and overall project success.
- **Identifying constituent needs:** The identification of constituents is foundational to effective stakeholder management within agile methodologies. A clear understanding of stakeholder's needs and interests is essential for aligning project goals with user needs and organizational objectives. By comprehensively mapping out constituents, leaders and teams in an agile setting, government agencies can better anticipate potential challenges and harness opportunities for collaboration.
- **Adaptability:** Adaptability within agile frameworks is fundamentally linked to the principles of flexibility, responsiveness, and continuous improvement. An agile environment emphasizes the importance of welcoming changing requirements, even late in development, as a means of enhancing community satisfaction and ensuring service relevance. This necessitates a cultural and structural foundation that promotes experimentation, learning, and iterative progress.
- **Conceptual ability:** Conceptual ability in agile environments refers to the capacity of individuals and teams to understand complex systems, identify patterns, and translate abstract ideas into actionable strategies and solutions. This cognitive skill is critical in agile methodologies, where teams must navigate uncertainty, rapidly changing requirements, and multifaceted project dynamics.
- **Negotiation:** Negotiation in agile environments refers to the collaborative process through which stakeholders, including team members, customers, and product owners, engage in discussions to reconcile differing perspectives, interests, and objectives concerning project requirements, priorities, and resource allocation. This dynamic process is integral to agile methodologies, where adaptability, stakeholder collaboration, and continuous improvement are paramount.

- **Experimentation:** In agile environments, experimentation refers to the practice of adopting a hypothesis-driven approach to software development, characterized by acceptance of failures and iterative cycles of experimentation, validation, and learning. This framework enables teams to test assumptions, explore innovative solutions, and refine processes through empirical evidence and real-time feedback, thereby fostering a culture that allows mistakes and failures, but facilitates continuous improvement and adaptability.

A Digital Team Member

"It wasn't done particularly well. And then you also saw the side of politics involved, because while we were trying to do this automation, the mayor at the time was trying to reorganize the housing offices. So anyway, it failed. Five million dollars' worth of failing. That's okay. You learn from it.

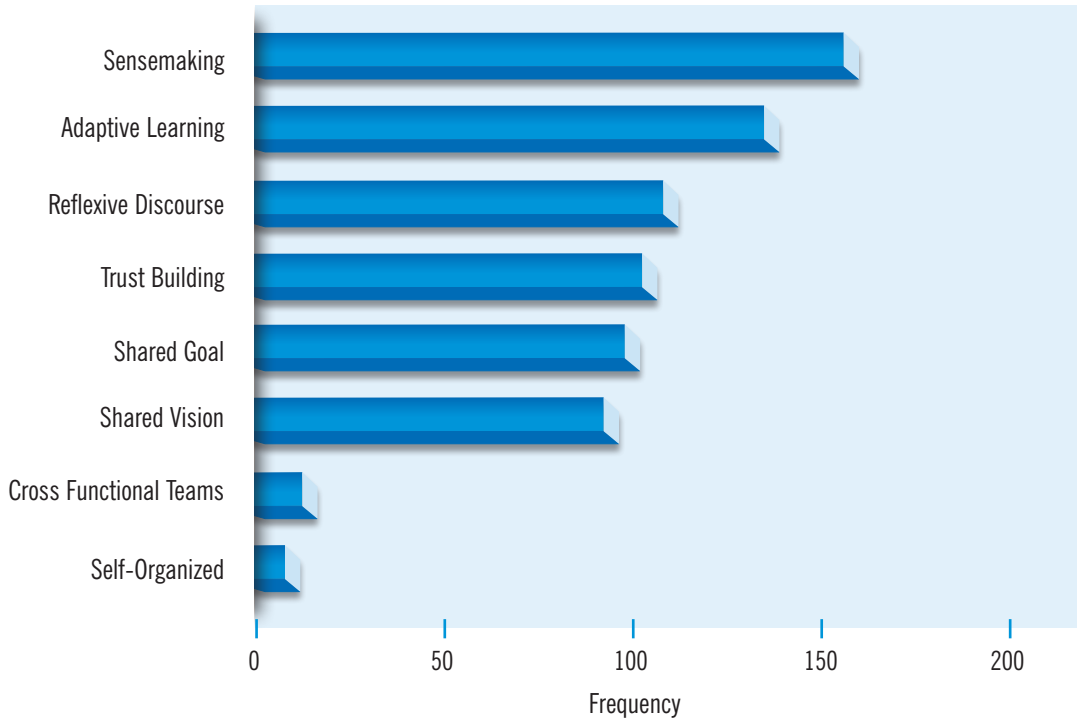
"Before I tell you about the open data work. We did basically that housing, that grandiose housing application was interesting because the technology was quite innovative. It won a lot of awards from one of the magazines, I don't remember, but ultimately it failed, and it was because people didn't use it."

- **Visionary:** In agile environments, the term "visionary" refers to an individual or leader who possesses the foresight to articulate a compelling, long-term direction for the team and the organization to continuously improve service delivery, inspire stakeholders to align their efforts toward shared vision. This role is pivotal in cultivating a shared identity and purpose within agile frameworks, where risk or disorientation in team, rapid changes in technology, and user needs are commonplace.
- **Strategic:** In agile environments, being strategic refers to the deliberate planning and prioritization of goals, initiatives, and resource allocation to achieve long-term objectives while remaining adaptable to changing conditions. Strategic focus is essential for guiding agile teams in aligning their short-term actions with the broader vision and mission of the organization, thereby ensuring that iterative development efforts contribute meaningfully to overall success.

Team Level Leadership Competencies

The team-level leadership competencies for agile government leaders are specific skills and abilities needed to lead teams for agile implementation. Team competencies allow an understanding and development of practical and actionable strategies that leaders can employ to effectively navigate the complexities of agile government environments, fostering collaboration, innovation, and adaptability within their teams (see Figure 4). Team level competencies enable a framework for understanding and developing leadership competencies for the team for promoting agile practices and achieving success in agile government projects.

Figure 4: Team-Level Leadership Competencies for Agile Government



- **Sensemaking:** Sensemaking in agile environments refers to the process through which individuals and teams interpret and understand complex, ambiguous situations to inform decision-making and action. This cognitive and social activity is critical in agile methodologies, where rapid changes in user needs, market conditions, and technological advancements necessitate continuous interpretation and reevaluation of information. Sensemaking enables teams to navigate uncertainty effectively and align their efforts toward a shared goal of the agile project in government.[22]
- **Adaptive Learning:** Adaptive learning in agile environments refers to the continuous process of acquiring knowledge and skills through iterative experiences and feedback, enabling teams and organizations to adjust their strategies and practices in response to changing conditions and new insights. This concept is integral to the agile methodology, which prioritizes responsiveness and flexibility in the face of uncertainty and dynamic requirements. In agile frameworks such as scrum, teams operate in iterative cycles (sprints) that include planning, execution, review, and reflection. After each sprint, teams hold retrospectives to discuss what went well and what could be improved. For example, a team might identify that their communication during daily stand-ups could be more efficient. This reflection enables them to adapt their practices for subsequent sprints, exemplifying the principles of adaptive learning.
- **Shared Goals:** In agile environments, shared goals refer to the collective objectives that align the efforts of all team members and stakeholders towards a common purpose. These goals serve as a guiding framework that fosters collaboration, enhances team cohesion that drives project success. The establishment of shared goals is pivotal in agile methodologies, where adaptive planning and iterative development necessitate a unified direction to navigate complexities and uncertainties. In scrum, each sprint begins with the estab-

22. Pittaway, Jeffrey J., and Ali Reza Montazemi. "Know-how to lead digital transformation: The case of local governments." *Government information quarterly* 37, no. 4 (2020): 101474.

lishment of a sprint goal that defines the intended outcome of the sprint. For instance, a team might set a goal to enhance the user experience by implementing feedback from previous user testing. This shared goal ensures that all team members focus their efforts on specific deliverables, promoting alignment and collaboration throughout the sprint.

- **Reflexive Discourse:** One of the most explicit forms of reflexive discourse occurs during sprint retrospectives, where team members engage in reflective conversations about their performance in the preceding sprint. For instance, a team might discuss the challenges they faced while implementing a new feature, exploring what contributed to their success or difficulties. This discourse allows them to generate actionable insights for future sprints, exemplifying the principles of reflexive learning. Reflexive discourse in agile environments refers to the dynamic and iterative conversation among team members that promotes critical reflection on practices, processes, and decisions.[23] This discourse enables teams to examine their assumptions, question established norms and collaboratively derive insights from their experiences. By engaging in reflexive discourse, agile teams foster a culture of continuous learning, adaptability, and innovation, which is essential for responding to the complexities of modern software development.
- **Vision Building:** Agile teams often create a product vision statement that articulates their long-term objectives and desired impact on users. For example, a software development team may develop a vision statement emphasizing the creation of an inclusive platform that fosters community engagement. This shared vision serves as a motivational tool, guiding the team's decisions and actions toward achieving this overarching goal.
- **Trust Building:** Trust building in agile environments refers to the process through which team members develop mutual confidence in each other's abilities, intentions, and commitment to shared objectives. This foundational element is critical for fostering collaboration, enhancing communication, and facilitating high performance in agile teams. Given the iterative and often fast-paced nature of agile work, establishing trust is paramount for enabling effective teamwork and responsiveness to change.
- **Cross Functional:** In an agile environment, shared goals can extend beyond individual teams to include cross-functional collaboration. For instance, a service team and a development team may jointly establish a goal to launch a new product feature that addresses a specific community need. By aligning their efforts, both teams can leverage their unique perspectives and expertise to achieve a common objective, enhancing the overall effectiveness of their initiatives.

A Chief Innovation Officer

"I was in the housing office, as I mentioned earlier, and that was when we had the joint effort with the technology office. That was an attempt to fix what was a broken process around a couple of things. I was like the business director on the housing side, and then we had a technology director who was within the technology office. So, I think it was kind of a collaborative effort across departments."

23. Schön, Donald A. *The reflective practitioner: How professionals think in action*. Routledge, 2017.

- **Self-Organized:** In agile environments, the term "self-organized" refers to a team's ability to autonomously manage their work processes, make decisions, and adapt to changing circumstances without the necessity of external direction or micromanagement. This characteristic is a fundamental principle of agile methodologies, facilitating enhanced responsiveness, creativity, and ownership among team members.

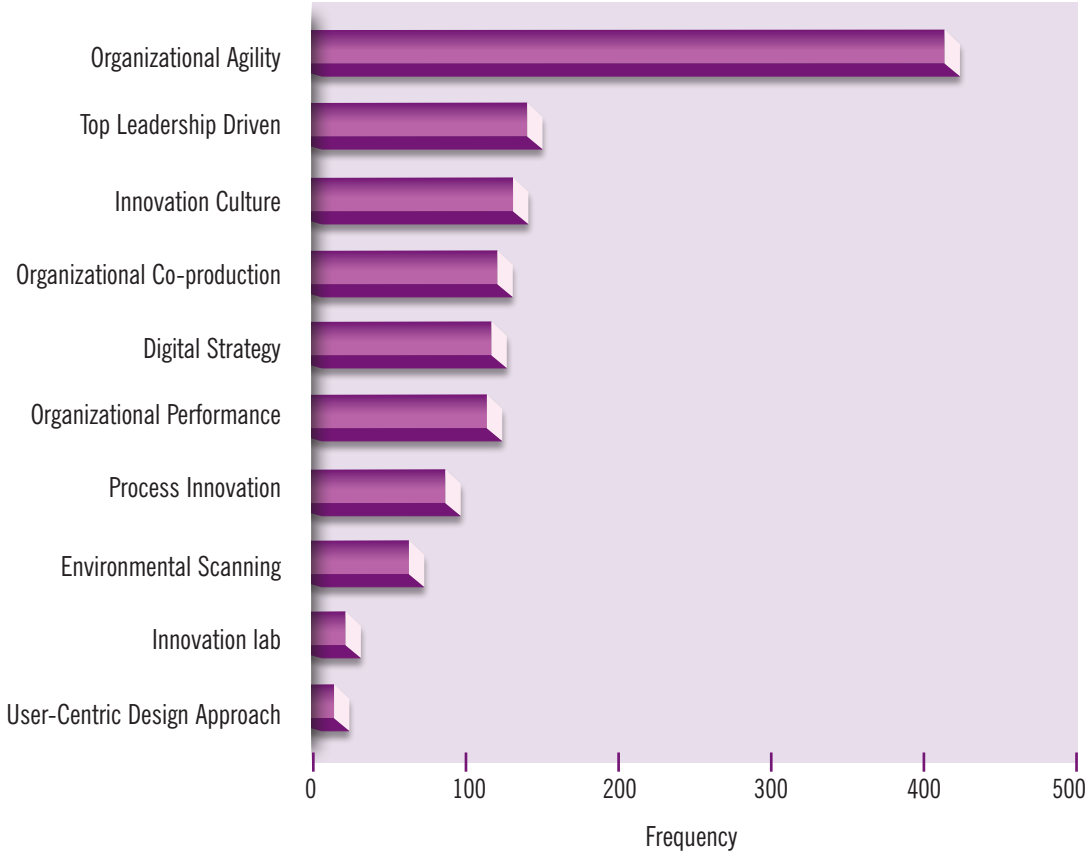
A City Innovation Leader

"So that's something I always tell other cities like, if you're asked, how do you build an innovation team? Or how do you do this kind of work which is not traditional to city government? Probably like filling potholes or picking up trash or policing, or something. How do you fund this work? I would say, well, you have to find some. You have to be creative with finding people and finding money, and then you do find them. You find the people and the money. You need to figure out how to move forward."

Organizational Level Leadership Competencies

The organizational-level leadership competencies are the skills and qualities needed to successfully navigate the complexities of an agile implementation (see Figure 5). Competencies at the organizational level provide insights into the key abilities and characteristics that leaders must develop within the organization that values agility and adaptability to implement agile government projects, as described below.

Figure 5: Organizational-Level Leadership Competencies for Agile Government



- **Top Leadership Driven:** To adopt and implement agile, top leadership plays a pivotal role in fostering an organizational culture that embraces agility, innovation, and responsiveness to community needs. As public sector organizations face increasing complexity and demand for effective service delivery, the role of top leaders becomes crucial in creating and sharing a vision of innovation and steering their organizations towards agile practices that enhances operational efficiency and public trust. In Boston, Louisville, and Philadelphia, civic innovation projects were driven by mayors. Mayors prioritized civic innovation and enabled the creation of dedicated departments and offices of innovation by bringing the initial resources and talent, which later were integrated as a city-wide innovation culture.

  The City of **Boston Mayor's Office of Urban Mechanics (MONUM)** has championed initiatives to streamline processes and encourage interdepartmental collaboration, demonstrating a commitment to agility that inspires other leaders and staff members.

  One interviewee from the City of Boston digital team noted: *"I would say, from the mayor or the people with whom mayor directly had been working with such as the heads of the housing office. So that was a top-down thing at the time."*

- **Environmental Scanning:** Environmental scanning in an agile government setting refers to the systematic process of gathering, analyzing, and interpreting information about external trends, threats, and opportunities that could impact public policy, service delivery, and organizational performance. This practice is essential for enabling government entities to remain responsive and adaptive to rapid changes in the socio-political landscape, technological advancements, and shifting expectations. In the context of agile government, environmental scanning serves as a mechanism to identify and understand emerging issues, thereby facilitating timely and informed responses to changing conditions.[24] This aligns with the principles of agility, which emphasize flexibility, responsiveness, and a proactive approach to governance.

  The **City of Boston** has established initiatives like "**Boston's Open Data**" that collects insights from community members, enabling leaders to scan the environment for public sentiment and priorities. This engagement informs policy decisions and enhances the responsiveness of city services (Boston Mayor's Office, 2024).

- **Organizational Agility:** Organizational agility in governance refers to a government's ability to restructure and reallocate resources quickly in response to new information, emerging challenges, or shifting public priorities. It involves a shift from rigid, hierarchical structures toward more decentralized, network-based models of governance.

24. Rigby, Darrell K., Jeff Sutherland, and Hirotaka Takeuchi. "Master the Process That's Transforming Management." *Harvard Business Review* 94, no. 7-8 (2016): 16-16.

Louisville's organizational agility is demonstrated by its **AIR Louisville** project, a collaborative initiative aimed at improving public health by leveraging data from smart inhalers to track air quality and asthma patterns. This project involved multiple iterations of data analysis and policy adjustments to improve health outcomes in the city, representing a dynamic, data-driven approach to governance.

- **Process Innovation:** Process innovation in the context of agile government strategies refers to the redesign of organizational workflows, decision-making protocols, and service delivery models to better align with the principles of flexibility, continuous improvement, and responsiveness to stakeholder needs. This process innovation reflects a departure from traditional, linear policy development toward more flexible, feedback-driven models of governance necessary for civic innovation.

An illustrative example is the **City of Boston's CityScore**, which monitors city's performance across various metrics such as public safety and infrastructure. This tool enables city officials to make data-informed decisions quickly and adjust policies as needed, reflecting an agile approach to performance management.

- **Innovation Culture:** An organization-wide innovation culture is paramount for developing an agile government, ensuring open government approaches and experimentation to understand user needs and service design solutions. In government settings, innovation culture promotes risk appetite, experimentation, cross-sector collaboration, and iterative problem-solving. The cities of Boston, Miami, Philadelphia, and Louisville exemplify how innovation culture enables the agile transformation of governmental processes to meet complex governance challenges.

Boston's Office of New Urban Mechanics (MONUM) was created as a hub for civic innovation. MONUM tested early prototypes of public service innovation along with real-world users, allowing them to collect data and improve the solution incrementally before city-wide deployment.

The **Miami Innovation Academy** exemplifies how training city employees in design thinking and agile methodologies fosters a workforce that is equipped to experiment and iterate. The **Miami Open Data Hub** is a core initiative that enables agile governance by centralizing real-time data from various city departments to support decision-making. For example, through this platform, Miami has been able to rapidly address issues such as traffic congestion and urban flooding by deploying small-scale, data-informed interventions and scaling them based on measurable success.

The iterative development of the "**Philadelphia 311**" mobile application, a citizen-centered tool for reporting non-emergency issues, illustrates this process. Through multiple rounds of testing and refinement based on user feedback, the city was able to enhance the app's functionality and user experience, directly aligning with the agile principle of continuous improvement.

- **Organizational Co-production:** Organizational co-production plays a critical role in implementing agile government strategies by fostering collaborative partnerships between government entities, residents, and other stakeholders. Co-production involves the joint creation and delivery of public services, wherein residents and other nongovernment actors actively participate in shaping policies, decision-making processes, and service delivery.

  Through platforms such as the Miami Open Data Hub, the city collaborates with residents, businesses, and academia to co-create solutions for urban challenges, such as traffic congestion and climate resilience. This co-production model enables agile governance by allowing the city to gather real-time data from various stakeholders and adjust policies accordingly. Residents are involved in the co-production process by contributing data through mobile applications and sensors, while businesses and universities provide analytical expertise to help refine solutions.

- **Scalability:** Scalability in government organizations refers to the capacity to expand agile strategies from small, pilot projects to broader, city-wide applications, while maintaining efficiency, responsiveness, and adaptability. In the context of agile governance, scalability ensures that innovative practices tested on a smaller scale can be replicated and adjusted to serve larger populations and more complex challenges without losing agility or effectiveness. Scalability allows cities to institutionalize flexible governance structures, enabling continuous improvement and expansion of services in response to evolving public needs.

  Boston exemplifies scalability in agile governance through its **Office of New Urban Mechanics (MONUM)**, which fosters small-scale pilot projects designed to be scaled across the city. Initiatives such as Street Bump, initially tested in specific neighborhoods, were later scaled city-wide to enhance road maintenance. This scalability is facilitated by iterative feedback loops that allow solutions to be continuously improved and expanded.

  Philadelphia's Pitch & Pilot initiative exemplifies how scalable frameworks support agile governance. The program begins with small-scale pilot projects, such as the Philadelphia 311 app, and scales successful initiatives across departments, allowing continuous improvement while addressing more extensive civic needs. The scalability of such platforms enables Philadelphia to enhance public engagement and public service delivery incrementally.

- **Digital Strategy:** Digital strategy plays a crucial role in enabling agile strategies within government organizations by integrating technology to enhance flexibility, responsiveness, and public engagement. By leveraging digital tools, platforms, and data, government entities can streamline operations, create real-time feedback loops, and implement iterative processes that are essential to agile governance.

A Digital Official

"We have digital strategy, which is kind of what I was doing even before the innovation, we have the smart city platform. We have creative services, which is basically print and digital design."

- **Innovation Consulting:** Innovation consulting plays a pivotal role in implementing agile strategies within government organizations by providing external expertise, fostering new mindsets, and guiding public entities in the design, testing, and scaling of innovative solutions. Consultants bring specialized knowledge and frameworks that help cities embrace agile methodologies, streamline operations, and foster a culture of continuous improvement.

The City of Miami launched in late 2017 the **Miami Innovation Academy** a series of innovation/process improvement workshops where employees learn valuable techniques (process mapping, waste identification, experiment design) that help them clearly see and solve problems from the community perspective. The city's procurement department took the lead in having the entire department trained, and used the techniques learned to streamline procurement processes and achieve savings in time and money. The Academy trains city employees in design thinking and agile methodologies. Consultants have played a key role in guiding the city's transition to a more agile governance model by introducing frameworks for data-driven decision-making and iterative policy design.

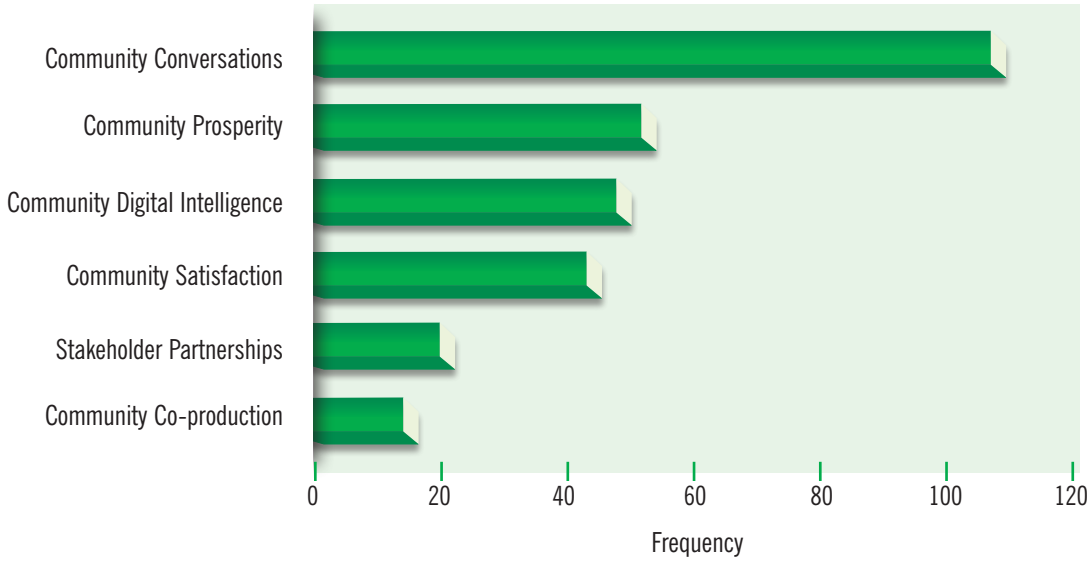
- **User-Centric Design Approach:** User-centric design plays a crucial role in implementing agile strategies in government organizations by prioritizing the needs, experiences, and feedback of people in the design and delivery of public services. This approach aligns with agile principles, emphasizing iterative processes, continuous feedback, and responsiveness to evolving user needs. Although user-centric design is a critical competency, the digital innovation leaders in interviews emphasized public engagement rather than using the term user-centric design.

Philadelphia's **Philadelphia 311** app is a prime example of user-centric design in action. This platform enables residents to report non-emergency issues and receive updates on service requests. The app's iterative design is continuously refined based on user feedback, ensuring that it remains responsive to the needs of the public. By incorporating real-time user insights into the development process, Philadelphia has made its civic engagement platforms more accessible and effective, exemplifying how user-centric design enhances agile governance

Community Level Leadership Competencies

The community-level leadership competencies for an agile government provide insight into the specific competencies and skills that leaders need to effectively navigate at the community level to thrive in an agile environment (see Figure 6). Identifying and understanding community level competencies ensure that leaders possess the necessary skills to drive agile practices and initiatives at the community level. This highlights the importance of grassroots community leadership and the specific qualities that are essential for government leaders to successfully implement agile practices within any local government setting. These competencies are described below.

Figure 6: Community-Level Leadership Competencies for Agile Governance



- **Community Conversations:** Community conversations are orchestrated communication forums designed to directly engage residents and public officials. These dialogues provide a platform for residents to express their problems, needs, concerns, and ideas, allowing government agencies to understand what their communities most essential need are and how to address them. Community conversations also enable government agencies to integrate community feedback into government decision-making processes and demonstrate that government cares.

For instance, initiatives such as the **Boston's Civic Tech Events** invite residents to collaborate with city officials and technologists to co-create digital tools that address local issues. This approach allows Boston to iteratively refine its services based on direct resident's feedback, embodying agile principles of responsiveness and adaptability.

- **Community Prosperity:** An engaged community approach to design public services leads to a prosperous and a resilient community. Leaders that are oriented towards incorporating agile start from conducting community prosperity survey to define and understand gaps in socioeconomic indicators such as education, employment, housing, general happiness, etc. Such efforts help leaders examine the city's strategic priorities for innovation that necessitate agile application in problem-solving.

For example, **Miami's climate resilience strategies** incorporate people feedback to prioritize initiatives that protect vulnerable communities. By leveraging data to address pressing challenges, Miami promotes community prosperity through sustainable development and improved quality of life.

- **Community Satisfaction:** An agile government organization can achieve community satisfaction by fostering a responsive, transparent, and participatory governance model that actively engages residents in the decision-making process. By prioritizing adaptability, utilizing data-driven insights, and promoting collaboration among stakeholders, agile governments can effectively address the diverse needs of their communities.

The **AIR Louisville** project engages residents in monitoring air quality and asthma patterns by utilizing smart inhalers that collect real-time health data. This project exemplifies community engagement by incorporating resident feedback into public health strategies, ensuring that policies are responsive to the needs of residents. By actively involving the community in health initiatives, Louisville enhances public well-being and satisfaction, demonstrating that agile governance can lead to improved health outcomes and greater public trust.

- **Community Co-production:** Community co-production plays a significant role in implementing agile strategies within government organizations by fostering collaborative relationships between residents and public officials in the design and delivery of public services. This approach emphasizes the active involvement of community members in co-creating solutions, which enhances responsiveness, adaptability, and overall service effectiveness. Through community co-production, governments can leverage local knowledge and resources, enabling them to better meet the dynamic needs of their constituents.

Philadelphia has successfully implemented community co-production through its **Participatory Budgeting Initiative**, which directly involves residents in determining how to allocate city funds for local projects. Through community meetings and discussions, residents identify and propose projects that address pressing neighborhood needs. This model of co-production empowers residents to take ownership of their local environment while providing city officials with valuable insights into community priorities. The iterative nature of this process aligns with agile strategies, allowing for continuous adjustment of budgets and projects based on direct community engagement.

- **Community Digital Literacy:** Community digital literacy is pivotal in implementing agile strategies within government organizations, by equipping people with the skills necessary to effectively engage with digital tools and platforms. This empowerment fosters active participation in governance processes, enhances communication between residents and public officials, and facilitates the co-creation of solutions to urban challenges. By enhancing digital literacy, the city empowers residents to actively participate in civic life, providing feedback and utilizing digital tools to engage with city services.

  Miami has embraced community digital literacy as a critical component of its smart city initiatives. The city's **Miami Innovation Academy** conducts workshops that focus on enhancing digital skills among residents, particularly in using data-driven platforms like the Miami Data Hub. By building digital literacy, Miami ensures that residents can engage meaningfully with data about their neighborhoods, report issues, and participate in community discussions.

  In Boston, community digital literacy is promoted through initiatives such as the **Boston Public Library's Digital Literacy Program**, which offers residents training in digital skills, including the use of online government services and civic engagement platforms.

- **Stakeholder-Partnerships:** Stakeholder partnerships are essential for implementing agile strategies in government organizations as they enhance collaboration between public agencies, community groups, businesses, and residents. By leveraging the diverse expertise and resources of various stakeholders, government entities can foster innovation, improve service delivery, and respond more effectively to the needs of their communities.

  Philadelphia has effectively utilized stakeholder partnerships to enhance its agile governance strategies, particularly through initiatives like the **Rebuilding Community Infrastructure** program. This program involves collaboration between city agencies, community organizations, and residents to identify and prioritize infrastructure needs in underserved neighborhoods. By incorporating stakeholder feedback and expertise, Philadelphia can implement responsive solutions that reflect the unique challenges faced by different communities.

Leadership Training and Development for an Agile Government

Effective and training within an agile government setting should highlight the importance of developing leaders who can understand the complexities of implementing an agile project.

This section of the report highlights applying a leadership needs assessment, leadership measurement metrics, and developing a leadership development curriculum and training program to learn methods and tools for executing agile projects in government. Additionally, utilizing data-driven performance measurement, refining job descriptions based on the needs for agile projects to attract talented individuals, and holistically evaluating candidates to ensure competency and cultural fit, provides insights into assessing and developing suitable leadership traits in agile project teams. These elements are discussed further below.

Leadership Needs Assessment

A leadership needs assessment is a systematic process that identifies the specific skills, competencies, and behaviors required for leaders to effectively implement agile strategies within government organizations. For example, a McKinsey report highlights four broad skill categories—cognitive, digital, interpersonal, and self-leadership—that are essential for the future world of work.[25] The assessment for these leadership skills sets helps determine the gaps between current leadership capabilities and the skills necessary to drive agile transformations. By focusing on key leadership competencies, agencies can cultivate agile leaders who can respond effectively to rapidly changing environments, foster collaboration, and engage people. Some of the leadership needs assessment tools can measure characteristics such as servant leadership, servant identity, digital transformational leadership, and organizational agility (see Appendix 1 and 2).

25. Dondi, Marco, Julia Klier, Frédéric Panier, and Jörg Schubert. Defining the skills citizens will need in the future world of work. McKinsey and Company, June 25, 2021.

Miami utilizes a leadership needs assessment framework in its **Innovation Academy**, focusing on developing agile leadership competencies that enable process mapping, waste identification, experiment design. The assessment includes evaluating leaders abilities to drive data-driven decision-making and collaborative problem-solving, ensuring that they can adapt to the dynamic challenges posed by smart city initiatives. The assessment allows the city to:

- Assess existing leadership skills within the organization through surveys, interviews, and performance evaluations to determine strengths and areas for improvement.
- Forecast the skills needed for future challenges based on emerging trends, community needs, and technological advancements.

Measuring Leadership Effectiveness

Measuring leadership effectiveness in an agile government environment involves assessing how well leaders foster adaptability, collaboration, and responsiveness in their organizations. Agile leadership emphasizes continuous improvement, stakeholder engagement, and the ability to navigate complex challenges. To measure organizational leadership effectiveness that is conducive to the agile implementation, the following assessment tools and approaches can be utilized. For example, organizational agility measures factors like organizational ability to respond to customer needs, adapt processes and practices as per the external fluctuations, etc. (see Appendix 1). Similarly, departmental level performance metrics could measure number of projects executed by collaborating across different departments. Such metrics could address areas that include:

1. Organizational Agility Assessment
2. 360-Degree Feedback
3. Innovation Metrics
4. Performance Metrics
5. Professional Development and Learning Opportunities
6. Employee Engagement Surveys
7. Community Feedback and Satisfaction Surveys

Leadership Development Program for an Agile Government

A model level leadership development program for an agile government is provided in Appendix 2. This proposed approach is designed for current and aspiring leaders in government to enhance their capabilities in agile leadership, focusing on servant leadership, transformational leadership, and collaborative leadership as well as assessing individual, team, organizational, and community level competencies for agile leadership. Participants would learn how to foster an inclusive, innovative, and responsive governance framework that meets the dynamic needs of local communities. By assessing and developing these competencies at various levels and within governmental processes, leaders can facilitate a systematic and consistent application of agile strategies in government agencies.

Leadership Best Practices for an Agile Government

For governments to lead in an agile way, practitioners can follow certain best practices and approaches to align with organizational and community needs forsustained application of agile government.

Community Centric Approach: A community-centric approach in agile government prioritizes the active engagement and empowerment of community in the government decision-making processes that affects their lives. This approach recognizes that effective governance relies not only on the actions of government officials alone, but also on the voices and contributions of community members and larger set of stakeholders that play a critical role in the government. Allowing community participation in financial and government budgeting decisions fosters transparency and responsiveness in improving service delivery and builds trust between government agencies and residents.[26]

Philadelphia's implementation of **Participatory Budgeting** exemplifies a community-centric approach in agile governance. This initiative invites residents to propose and vote on budget allocations for local projects, ensuring that community members have a direct influence on resource distribution. By involving people in the budgeting process, Philadelphia not only enhances transparency and accountability but also aligns spending with community priorities. This approach fosters a sense of ownership among residents and promotes inclusive decision-making, key elements of agile governance.

Digital Commitment and Ownership: Digital ownership and commitment play a crucial role in implementing agile strategies in city governments by fostering a culture of accountability, enhancing community engagement, and facilitating real-time feedback mechanisms. This concept encompasses the responsibility of both government entities and community to engage actively in digital platforms and processes, ensuring that technology serves the needs of the

26. https://www.phila.gov/programs/participatory-budgeting/.

community effectively. City governments can create educational sessions to promote interest among residents to learn essential digital skills. Cities such as Louisville have adopted best practices such as digital skills training in collaboration with Google for residents to understand and use modern technology.[27]

The **Louisville Metro Housing Authority** has partnered with **Google Fiber** to help underserved community members learn necessary computer skills and create an online presence on the Google Suite.

Innovation Fund: To execute nontraditional civic innovation government projects, governments face the challenge of securing consistent funding. A dedicated innovation fund is a critical component to enable consistent progress on agile government projects, as it provides continued support for acquiring competent human and financial resources to support experimentation, development, and implementation of new ideas and solutions that address governance challenges. By acquiring and allocating financial resources specifically for innovative projects, governments can drive continuous improvement[28] and enhance public service delivery.[29]

Leaders in Philadelphia and Boston created a pipeline and expertise to secure grants from corporation and philanthropic foundations to fund their civic innovation projects. A good example of civic innovation funding is the **Bloomberg Philanthropies City Labs, What Works Cities, Ideas Exchange** programs which provide funding to civic innovation projects in cities like Philadelphia.

Digital Citizenry: Digital citizenry involves vital components for the success of agile governance both at the city organization and the community level. City leadership needs to ensure that all community members have equitable access to digital tools and resources necessary for meaningful participation in civic life. In the context of agile government, digital citizenry emphasizes the need for accessible computer lab facilities, affordable internet, and digital literacy programs such as formulating community level digital literacy alliance, thereby empowering people to engage actively in government co-production processes. Leadership in the cities such as Philadelphia, Louisville, and Austin have focused on prioritizing digital citizenry as one of the critical pillars for the success of digital innovation and implementation of agile government practices.

27. https://louisvilleky.gov/government/metro-technology-services/digital-inclusion.
28. https://whatworkscities.bloomberg.org/.
29. https://www.bloomberg.org/approach/.

Philadelphia's **DigitalEquityPHL** aims to ensure that all residents have access to affordable internet and digital literacy resources. The city collaborates with local nonprofits, schools, and businesses to provide training and outreach to underserved communities.

Louisville's Metro Technology Services **Digital Inclusion** program has three focus areas such as connectivity, digital skills, and availability of computers and laptops to ensure digital skill development for underserved communities.

Austin has created a network of educational institutions, nonprofits, and several other stakeholders called as **Digital Empowerment Community of Austin (DECA)** to address disparities in access to technology to create a digitally inclusive Austin. The city's initiative focuses on providing affordable broadband, enhancing digital literacy, and ensuring that marginalized communities can effectively engage with city services.

Digital Literacy Alliance: A Digital Literacy Alliance in the context of agile government refers to a collaborative initiative involving various stakeholders—including government agencies, technology companies, educational institutions, nonprofit organizations, and community groups—focused on enhancing digital literacy among residents. Such an alliance aims to ensure that all members of the community, especially those from underserved or marginalized populations, possess the necessary skills to effectively use digital technologies and participate fully in civic life. Philadelphia has established a digital literacy alliance that brings together educational institutions, community organizations, and city agencies to improve digital skills and access, particularly for low-income residents.[30]

National Centers of Innovation: National centers of government innovation play a crucial role in facilitating learning about agile government by providing resources, best practices, training, and collaborative platforms for public sector leaders and officials. These centers aim to enhance the capacity of governments to adapt, respond to change, and innovate in service delivery. They offer frameworks, tools, and methodologies that support agile governance principles, such as flexibility, public engagement, and data-driven decision-making.

30. https://www.phila.gov/programs/digital-literacy-alliance/.

The **Government Innovation Lab** at the Harvard Kennedy School offers executive education programs that teach public leaders about agile practices. Cities like Philadelphia and Miami have engaged with these programs to enhance their capacity for innovation, particularly in implementing participatory budgeting and community engagement initiatives.

The **What Works Cities initiative**, supported by **Bloomberg Philanthropies**, facilitates collaboration among cities by providing a platform for sharing data-driven best practices. Cities like Louisville and Miami have participated in this initiative, leveraging shared insights to enhance their own agile governance strategies, particularly in areas like public health and community engagement.

The **National League of Cities** supports pilot projects in urban innovation areas that focus on agile governance strategies. For instance, Austin has collaborated with this lab to pilot a smart city initiative that uses data analytics to improve transportation systems. The insights gained from this pilot have informed the city's broader smart city strategy.

In addition to the I**BM Center for The Business of Government**, the **Boston Consulting Group's Centre for Public Impact, McKinsey Center for Government, Deloitte Center for Government Insights** provide a learning ecosystem to encourage cities to embrace experimentation in governance.

Intergovernmental Knowledge Transfer: Intergovernmental knowledge transfer is a critical mechanism for fostering collaboration, sharing experiences, and learning best practices among government entities at various levels. By sharing knowledge, resources, and lessons learned, governments can adapt successful practices from each other's jurisdictions, thereby improving their capacity to respond to dynamic challenges and meet community needs timely and effectively. Digital Services programs provide models for how to onboard the engineering and design talent to modernize government technology at the federal, state, and the local level.

Digital services programs bring private sector data science and user design practices for creating a lean and responsive government. Some of the focus areas depend on intergovernmental and cross agency knowledge transfer to improve programs like the social security system, optimizing benefits for families, or changing how government hires technical talent. Such initiatives develop an interdependent learning ecosystem for the development and implementation of emerging technologies in government.

Ultimately, through prioritizing adaptability and a mission driven direction governments, can significantly enhance their capacity to leverage new technologies for driving economic growth and enhancing the well-being of their people.

Barriers to Agile Development in Government

Implementing agile methodologies in government settings faces barriers, particularly from a leadership and organizational perspective.

These barriers can be categorized into several dimensions: cultural inertia, structural rigidity, stakeholder engagement challenges, skill gaps, disjointed communication, regulatory constraints, and difficulties in performance measurement. Some examples from interviews at various cities, including Miami, Boston, Philadelphia, and Louisville, highlight the following challenges under leadership and structural framework.

Leadership

Leaders may exhibit resistance to adopting agile principles due to a fear of losing control or disrupting established processes. For instance, the Boston Mayor's Office initially struggled to embrace agile methodologies in its digital service initiatives due to a culture deeply rooted in bureaucratic processes. Additionally, when the new mayor took over the office, the civic innovation approach slightly shifted away, and more attention was paid to routine government work. Similarly, the Philadelphia Department of Innovation and Technology faced significant challenges to continue certain innovation projects due to limited understanding of the new leadership about process innovation in government. Leaders in such contexts must navigate these structural constraints, which can stifle innovation and limit the capacity for cross-functional collaboration essential to agile success. In Philadelphia, leaders encountered significant challenges in aligning agile methodologies with the expectations of various stakeholders, including city officials and community organizations.

A City's Chief Innovation Officer

"And so, of course, anytime people see that, they see technology next to it, and they assume technology is going to replace their jobs. This happened to us when the mayor changed, who thought about technology from a very old school standpoint. He believed the technology office should only be doing cross departmental operational support that put our work in a very difficult position because he wasn't interested in anything public facing. So, when we think about change management in government, it is not done particularly well due to limited understanding of need for a new and open mindset to embrace technology as an enabler of innovation—not just a tool to do X, Y, Z tasks well."

The successful adoption of agile methodologies necessitates a leadership workforce that is not only familiar with agile principles but also possesses the requisite skills for effective collaboration and iterative problem-solving. Cities like Miami have experienced significant skill gaps among public sector employees, which hindered the implementation of agile practices. In Miami, the city's efforts to build agile teams were hampered by a lack of training resources and expertise, underscoring the critical role of leadership in fostering a skilled workforce. In Philadelphia, the integration of agile methodologies was complicated by existing performance evaluation frameworks that did not align with agile principles, leading to resistance and change of leadership.

An Innovation Officer

"I think what you learn with new administrations and new leadership is that you will be forced to pivot your work to some extent to meet the interests and needs of the new administration."

Structural

Traditionally, government organizational structures are often characterized by multiple layers of hierarchy and a clear delineation of roles, which can inhibit the cross-functional collaboration essential to agile methodologies. Additionally, there are barriers to secure dedicated funding for innovation projects. There is no often definitive budget line item for civic innovation, partly because there is some unpredictability associated with the monetary success of civic innovation projects in government.

In **Boston**, for example, the **Mayor's Office of New Urban Mechanics** initially encountered resistance when attempting to implement agile practices in their digital initiatives due to existing hierarchical protocols that prioritized top-down decision-making. This rigidity stifled the iterative nature of agile and limited the ability of teams to respond flexibly to emerging needs.

In **Louisville**, efforts to implement agile methodologies in various city departments were often undermined by silos that prevented effective collaboration and information sharing. In Philadelphia, the **Department of Innovation and Technology** encountered difficulties in aligning agile practices with existing procurement processes and regulatory requirements, which stifled innovation and slowed down project delivery.

Recommendations for Leadership Practice for an Agile Government

Based on the research in this report, several recommendations consistitute a practical roadmap for government leaders to move forward effectively in building leadership models, competencies, and agile programs.

- **Initiate an Agile Mindset**
  Government leaders should actively promote a mindset shift towards agility by emphasizing constituent-centered solutions, adaptability, experimentation, and embracing iterative processes. Such leaders can establish clear communication channels to articulate the importance and benefits of agile practices, laying the foundation for agile culture adoption.
- **Implement Targeted Leadership Training**
  Agencies can develop a structured leadership training program emphasizing servant, transformational, and collaborative leadership models. This program can focus on specific competencies including empathy, stakeholder engagement, cross-sector collaboration, and managing ambiguity. Leaders can utilize assessments to pinpoint skills gaps and design customized development pathways.
- **Establish Dedicated Agile Teams and Processes**
  Governments can form specialized teams and committees tasked explicitly with adopting and propagating agile methodologies. Such teams can be empowered with autonomy, dedicated resources, and the flexibility to experiment and iteratively improve governmental processes, particularly within acquisitions, HR management, and policymaking.
- **Invest in Innovation and Community Engagement Initiatives**
  Agencies can secure dedicated funding streams for innovation and pilot programs. This will allow prioritizing community-centric initiatives that enhance digital equity, offer skills training, and encourage civic technology use. Leaders can facilitate regular community dialogues and feedback loops, ensuring that policy decisions and agile practices remain relevant and responsive to evolving citizen needs.
- **Systematically Address Organizational Barriers**
  Governments can proactively identify and address barriers that impede agile adoption, including leadership resistance, organizational rigidity, skill shortages, regulatory constraints, and communication gaps. Agile leaders can create mechanisms for continuous feedback and performance measurement to allow timely course correction, and to build resilience and readiness within the organization.

Questions for Future Research on Leadership for Agile Government

The following questions could help extend the practice and research of leadership for agile governance, while guiding future research and practical application of leadership in building an agile public sector.

- How can the leadership framework for agile implementation be adapted to different levels of government (local, state, federal) to enhance responsiveness and efficiency?
- How do different leadership models (servant, transformational, collaborative) impact the effectiveness of agile government?
- What measurable impact does leadership for agile implementation have on public service delivery, policy implementation, and community engagement?
- What strategies can government agencies use to overcome cultural and structural barriers to adopting agile methodologies?
- How can digital transformation and technology integration be leveraged to accelerate agile leadership practices in government agencies?
- What role does leadership training and continuous learning play in sustaining agile practices in government over the long term?

Conclusion

This report emphasizes the critical need for effective leadership within government to adopt agile work practices and effectively implement digital innovations that address the dynamic challenges of contemporary governance.

By highlighting the experiences of city governments in Boston, Philadelphia, Louisville, and Miami, the report illustrates the leadership approaches necessary for successful adoption of agile methodologies—which prioritize characteristics such as empathy, adaptability, and iterative problem-solving. For example, Boston's Office of Urban Mechanics demonstrates how servant leadership can foster a culture of innovation and responsiveness, while Louisville's AIR project showcases the power of data-driven decision-making to improve public health outcomes through community engagement.

The city government case studies presented illustrate leadership best practices for establishing an agile government framework, emphasizing the importance of collaboration across departments and with community stakeholders. The Participatory Budgeting initiative in Philadelphia exemplifies how empowering people in the budgeting process not only builds trust, but also aligns government spending with community needs.

Similarly, Miami's Innovation Academy serves as a model for developing digital skills among residents, ensuring they can actively participate in civic life and contribute to the governance process.

Moreover, the report outlines key principles and competencies necessary for leadership in an agile environment, including adaptability, empathy, and a focus on continuous experimentation and improvement. Effective training and development programs are essential to equip leaders with the skills required to foster an agile culture. For example, incorporating feedback mechanisms and prioritizing digital literacy can enhance community satisfaction and facilitate a more engaged community.

Last, the report addresses barriers to implementing agile practices in government, such as cultural inertia and structural rigidity, urging leaders to embrace a mindset of change and innovation. By creating environments that encourage experimentation and cross-functional collaboration, government practitioners can overcome these challenges and effectively respond to the evolving demands of their constituents.

In summary, embracing leadership principles conducive for agile work practices is crticial for government leaders aiming to enhance esponsiveness and effectiveness in public problem-solving for a rapidly changing world. By investing in agile leadership, governments can significantly adopt and implement agile work practices as necessary to encourage innovation in service delivery for a resilient and better future.

.

Appendices

Appendix 1. Leadership Tools for Agile Assessment

Servant Identity

Think about your typical actions and rate your level of agreement with how each statement applies to your behavior.

1. I strongly believe that one's vocation and mission in life is to serve others.
2. I derive spiritual satisfaction from serving others.
3. I search for opportunities that help others to fulfill his or her calling as a servant.
4. I value the skills and capabilities of others.
5. My position and accomplishments do not stop me from learning or receiving criticism from others.
6. My position and power are unimportant when dealing with others.
7. I am happy for others to benefit from my work and accomplishments.
8. I'm aware of the emotional states of others even if they don't explicitly disclose them to me.
9. People come to me for advice and support when they are down.
10. Helping others in their time of need is not a waste of time.
11. I love others as much as I love myself.
12. Loving others fulfills my spiritual need.
13. When others suffer, I want to do something about it.

Servant Leadership

1. My manager can tell if something work-related is going wrong.
2. My manager makes my career development a priority.
3. I would seek help from my manager if I had a personal problem.
4. My manager emphasizes the importance of giving back to the community.
5. My manager puts my best interests ahead of his/her own.
6. My manager gives me the freedom to handle difficult situations in the way that I feel is best.
7. My manager would NOT compromise ethical principles in order to achieve success.

Digital Transformational Leadership

1. Our leaders inspire all members with the digital transformation plans for our organization.
2. Our leaders provide a clear digital transformation vision for the organization's members to follow.
3. Our leaders motivate team members to work together for the same digital transformation goals.
4. Our leaders encourage all members to achieve digital transformation goals for our organization.
5. Leaders in my organizations act by considering the digital transformation beliefs of all members.
6. Our leaders stimulate all members to think about digital transformation ideas.

Organizational Agility

1. We can rapidly respond to customers' and government's needs.
2. We can rapidly adapt production, process, and activities to meet demand fluctuations.
3. We can cope with problems from suppliers and partners rapidly.
4. We rapidly implement decisions to face market and government changes.
5. We continuously search for forms to reinvent or redesign our organization.
6. We see the market and government changes as opportunities for rapid capitalization and growth.

Digital Strategy

1. In my organization, we integrate digital technology and business strategy to attain strategic alignment with the government and other partners.
2. In my organization, we create a shared vision of the role of digital technology in business strategy.
3. We jointly plan how digital technology will enable the business strategy.
4. In my organization, we confer before making strategic decisions.

Organizational Digital Transformation

1. In my organization, we aim to digitize everything that can be digitized.
2. In my organization, we collect large amounts of data from different sources.
3. In my organization, we aim to create more robust networking with digital technologies between the different business processes.
4. In my organization, we aim to enhance an efficient customer interface with digitality.
5. In my organization, we aim at achieving information exchange with digitality.

Appendices

Appendix 2. Leadership Program for Agile Government: Key Elements of Phased Workshops with City Government Leaders/ Innovation Officers

1. Conversational forums with city leaders/innovation team

2. Leadership for agile assessments: individual, team, organizational, community

3. Leading in an agile way: What is it?
    - The servant leadership way—Focus on understanding community problems, and empowering teams to design products and solutions that address community problems. Allow teams to fail, iterate, and retry to get to the appropriate solution.
    - Transformational leadership way—Build a shared vision and purpose with team members for agile project success. Measure and evaluate performance and outcomes, and establish new goals based on evaluations.
    - Collaborative leadership way—Emphasize the importance of collaborations in agile government setting. Identify mechanisms and strategies for successful collaborations for agile success.
    - A mixed leadership approach—Emphasize on agile project contexts that need the application of servant, transformational, or collaborative leadership styles.

4. Problem Identification: Engage stakeholders such as elected officials, city managers, employees, partners, community.
    - Empathy—Empathy building exercise for all stakeholders
    - Listening—Active listening exercise for all stakeholders
    - Visioning—Vision building exercise with all stakeholders
    - Negotiation—Art of negotiation exercise with all stakeholders

5. Project Execution
    - Innovation Academy—Process improvement workshops where innovation teams and employees learn techniques such as process mapping, waste identification, and experiment design that help them clearly see and solve problems from the community perspective.
    - Design and Development—Identify product design and service delivery applications and solutions that are easy and seamless for residents to use and addresses their needs.
    - Piloting and Testing—Test solutions with a set of users.
    - Evaluation—Collect user feedback, and if needed iterate and change program delivery and product design based on user feedback.
    - Implementation—Large scale city-wide implementation of the product or service.

About the Authors

Pallavi Awasthi, PhD
Associate Professor of Public and Nonprofit Management, Nova Southeastern University: H. Wayne Huizenga College of Business and Entrepreneurship, Department of Public Administration and Real Estate Development

Pallavi Awasthi, PhD, is an Associate Professor of Public Management at the H. Wayne Huizenga College of Business and Entrepreneurship, Nova Southeastern University. Pallavi completed a PhD in Public Affairs. Additionally, she also has two master's degrees in public personnel management and public administration. She has about 15 years of research and consulting experience in public sector leadership development, strategic planning and management, and sustainable community capacity building. Pallavi's has consulted organizations such as United Nations Development Program (UNDP), Ministry of Personnel-Government of India, and Family Network on Disabilities. She has consulted on matters related to local government leadership, strategic planning and management, digital innovation, and sustainable community development in the public sector. Her current research explores successful leadership approaches in city governments, particularly 'servant leadership' and how it enables the development of lean processes and strategies for faster adoption of emerging digital innovations and sustainable community development practices in local governments.

Expertise: Leadership development, digital innovation, sustainable community development, strategic management and planning, performance management, qualitative methods.

Kuang-Ting Tai, PhD
Assistant Professor of Public Administration
Nova Southeastern University: H. Wayne Huizenga College of Business and Entrepreneurship, Department of Public Administration and Real Estate Development

Kuang-Ting Tai, PhD, is an Assistant Professor of Public Administration joining NSU in 2021. He holds a doctoral degree in Public Administration from Rutgers University-Newark. Kuang-Ting's research interests mainly focus on the applications of advanced information technologies in the public sector with a specific purpose to examine how information technologies can reshape the interface between the public and government. His prior studies have addressed the related issues regarding transparency, e-participation, and open government. After joining NSU, he teaches multiple courses related to public administration or nonprofit management, including public administration theory and application, public budgeting, public finance, information technology management, nonprofit financial management, and nonprofit program evaluation. In addition, he also served as a reviewer for a number of journals, such as *Public Administration Review, International Public Management Journal*, or *Journal of Urban Affairs*.

Acknowledgments

We acknowledge the chief innovation officers and their team members from the cities of Miami, Boston, Louisville, and Philadelphia who extended their time to share insights on leadership enablers and barriers to effectively execute agile projects in city governments.

Recent Reports from the IBM Center for The Business of Government

Digital Modernization for Government: An Implementation Framework

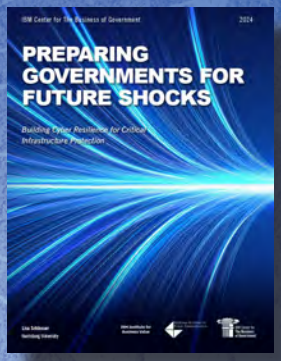
by Dr. Gregory S. Dawson, Dr. James S. Denford, Kevin C. Desouza and Marc E. Barda Picavet

Enhancing Government Payment Integrity: Leveraging AI and Other Emerging Technologies

Contributing authors:
Richard Hoehne and Karen Kunz

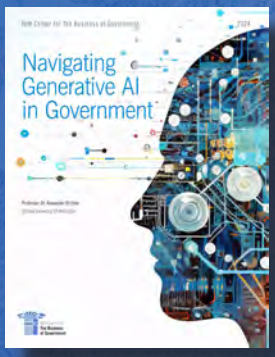
Resilience in action: Crisis leadership through innovation, collaboration, and human-centered solutions

by Challenge Grant Case Study Recipients



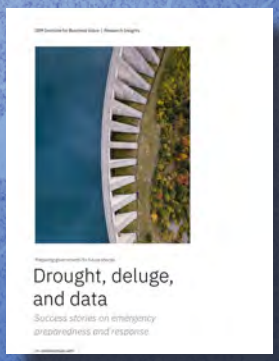
Preparing Governments for Future Shocks

by Lisa Schlosser



Navigating Generative AI in Government

by Alex Richter



Drought, deluge, and data: Success stories on emergency preparedness and response

by Samanta Varela Castro, PhD, Keri K. Stephens, PhD, Jongeun You, PhD, Wendy D. Chen, PhD

IBM Center Research Announcement

by Dan Chenok

How TECHNOLOGY Can Drive GOVERNMENT EFFICIENCY

by Dan Chenok

For a full listing of our reports, visit businessofgovernment.org/reports

About the IBM Center for The Business of Government

Through research stipends and events, the IBM Center for The Business of Government stimulates research and facilitates discussion of new approaches to improving the effectiveness of government at the federal, state, local, and international levels.

About IBM Consulting

With consultants and professional staff in more than 160 countries globally, IBM Consulting is the world's largest consulting services organization. IBM Consulting provides clients with business process and industry expertise, a deep understanding of technology solutions that address specific industry issues, and the ability to design, build, and run those solutions in a way that delivers bottom-line value. To learn more visit ibm.com.

For more information:
Daniel J. Chenok
Executive Director
IBM Center for The Business of Government

600 14th Street NW
Second Floor
Washington, D.C. 20005
(202) 551-9342

website: www.businessofgovernment.org
e-mail: businessofgovernment@us.ibm.com

IBM Center for The Business of Government