WHY BUILDING A CONNECTED COMMUNITY IS EVERY LEADER'S JOB

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Keeping Pace With the Digital World

Local governments sit at the precipice of a digital, connected landscape. While they are uniquely positioned to create and carry out solutions to some of society's most pressing problems, effectively implementing the organizational changes necessary to keep pace with the digital world remains a challenge.

Success and sustainability in a world of data and rapid technology advancements requires a long-term strategy centered on building a strong digital foundation. This is in line with Gartner, Inc.'s April 2019 Market Insight, which noted, while "the progress of government organizations has been generally slow in adopting digital technologies to effectively achieve their mission and program outcomes ... Government organizations continue to view digital initiatives as their top priority."

But who drives these initiatives and the long-term strategy? This is the role – perhaps the most important one – of today's government leader. Building a modern, digital infrastructure that connects government systems to create more proactive, targeted city delivery enables governments to overcome current challenges and adapt to emerging issues.

When leaders champion an organization that works across silos to take advantage of data to "learn at the speed of digital," employees at all levels are empowered and the community benefits. "Strategically connecting line-of-business systems leads to immediate and quantifiable efficiency gains," says Jeff Green, CTO of Tyler Technologies, Inc. "Bringing data together across these systems can provide leadership with insight into the organization's mission." Staff with access to real-time information and the ability to easily understand and communicate around it will leverage new insights to make their jobs easier. The public will be served better and faster and in a more coordinated fashion. New opportunities for resident involvement and public-private partnerships will emerge, contributing to the community's overall health and vibrancy.

What's more, growth, successes, and efficiencies are not limited to agencies within one government. The greatest potential for government to be a true agent of change lies in connecting data and processes across jurisdictions. These connections make communities safer, smarter, and more responsive to the needs of residents.

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Leadership Insight from Mayor Sandy Stimpson,
City of Mobile, Alabama

VISION

"We passed a vision statement and that was to become the safest, most business- and family-friendly city in America in 2020. That's a bold vision, but I believe that if you cast bold visions, you're going to do bold things."

TECHNOLOGY

"I am a huge proponent of looking at technology to see how it can help you because cities are incubators for new ideas in government. We are really close to having what I think is going to be a first-class system for our permitting and inspections, and modern technology has facilitated that."

DATA-DRIVEN DECISIONS

"Almost everywhere you go, visiting with mayors, they talk about the data-driven decision. You've got to get good data from your systems and then be able to finesse it in such a way that it gives you information to make wise decisions. Tyler plays a huge part in that for us in getting it right."

What is a Connected Community?

Connected communities unite data, systems, and people for better public services to solve many of society's greatest issues. In a world of connected communities, local government agencies share information and integrate workflows across departmental, political, and geographical boundaries.

Positive outcomes abound when agencies share data and information easily and integrate processes among departments and jurisdictions. Seamless communication of important data improves public services and strengthens public safety. Connected communities enhance public engagement by making more types of data publicly available, giving people new insight into their immediate and surrounding neighborhoods. Emerging technology platforms offer electronic portals that gather information from disparate departments. These allow internal and external stakeholders to access and work with real-time information to create efficiencies and community solutions.

IN OUR VIEW, CONNECTED COMMUNITIES ARE MADE UP OF GOVERNMENTS THAT:

- Connect across the enterprise. The majority of stakeholder frustration comes when the left hand of government doesn't talk to the right hand. With data, departments can coordinate in real time and operate from a single source of truth, putting everyone – including the public – on the same page.
- Connect across jurisdictions. Society's most pressing problems – such as an environmental quality, transportation, and public safety – are not confined to arbitrary political boundaries. Local governments see great gains in efficiency by connecting processes and workflows outside of traditional boundaries. Governments can connect horizontally, city-to-city or county-to-county, or vertically, city-to-state or county-to-state.
- Connect with residents. Using data to inform, engage, and enable action creates successful, user-centered policy and program design and delivery. Open data facilitates innovative public-private partnerships, and digital self-service increases residents' access to government while reducing staff burden and saving resources.

Digital Transformation is More Than Technology

Like modern digital infrastructures, connected communities don't happen overnight. Turning vision into strategy into results involves incremental progress toward achieving meaningful data sharing, beginning inside the organization. Leaders can drive change by defining integration and data sharing between internal line-of-business systems and departments and streamlining interactions with the public. As internal efficiencies become natural byproducts of these connections, leaders can drive new connections across geographic boundaries to link together or automate business processes across jurisdictions.

Experience teaches us that this evolution is just as much an organizational challenge as it is a technology project. Gartner's research shows that 37% of government CIOs say business culture blocking change is a significant barrier to achieving digital progress. Leaders often focus solely on technical challenges by directing linear, prescriptive solutions. Digital innovation in government, however, is largely an adaptive challenge. Adaptive challenges require different leadership methods: ones that pull rather than push, enable rather than require, and mobilize rather than direct.

As noted by Ron Heifitz in "Leadership Without Easy Answers," "Public leaders fail when they confuse technical problems and adaptive challenges." Technical problems are those that can be solved with prescribed solutions. Leaders who have the requisite expertise and credibility can direct their teams to leverage the best available methods and tools to address the problem at hand. Technical problems can take an enormous amount of preparation and knowledge, but at their core, they can be reduced into smaller pieces and addressed in a systematic, linear fashion. Putting a human on the moon, building the interstate highway system, and eliminating leaded gasoline are all examples of formidable technical problems that American government leaders have been able to solve in the past century.

Adaptive challenges, unlike technical problems, require the affected constituencies to change their norms and behaviors. Public leaders in these contexts cannot simply direct a solution by edict, they must mobilize their constituencies to address their own issues. Expertise and seniority by themselves are not sufficient. Leaders need to be able to earn stakeholder trust through results. Because adaptive challenges tend to be complex and require changes to individual behavior, progress is made incrementally. Women's rights, smoking, and poverty reduction are all examples of adaptive challenges in which significant headway has been made by American public leaders, with work still ahead.

Adapting for Digital Maturity

Moving toward digital maturity is more than integrating systems. It requires changes in organizational norms and behavior. This happens through leadership influence and change management. Government innovation becomes a reality when people are appropriately trained and paired with a technology investment. Success cannot be measured by datasets integrated or rows downloaded. Real success occurs when employees are empowered by data to make more informed decisions and improve performance iteratively — simultaneously improving trust with co-workers and residents.

TECHNICAL PROBLEMS	ADAPTIVE CHALLENGES
Solvable with programmable, prescriptive solutions	Require changing hearts and minds
Leaders can direct solutions by edict	Leaders must mobilize constituency to address their own behaviors, values, norms
Legitimacy = Expertise	Legitimacy = Buy-in
Linear	Complex
Ex: Take medication to lower blood pressure	Ex: Change lifestyle to encourage healthier choices

If leaders are central to creating connected communities, they should begin by understanding the transformative potential of data and its use as an asset that can be cultivated to promote efficiencies and improved services. But, what comes next?

Oliver Wise, former director of New Orleans' Office of Performance and Accountability, and current Socrata Data Academy director, Tyler Technologies, faced this dilemma.

His charge from Mayor Mitch Landrieu was straightforward: use data to help set goals, track performance, and drive results across city government. The challenges to accomplish that charge – an entrenched bureaucracy, a culture of low expectations, and a legacy of mismanagement – were formidable.

At first, Wise researched best practices to propose a performance management framework that aligned operational metrics to the organization's strategic goals. When his team began to implement that framework, however, they encountered resistance from city employees who were concerned more with possibly releasing damaging information than the elegance of their models. After months of stakeholder meetings, Wise realized that imposing a textbook model on a beleaguered organization would not work. Instead, the team needed to earn the buy-in of employees and prove that measuring performance could help them be more productive.

To cultivate that trust, the team developed a communications strategy that framed performance management in terms of the opportunities it creates to further employees' own objectives:

- Document accomplishments;
- Substantiate resource requests; and
- Elevate issues requiring action from leadership.

By earning the trust of colleagues, Wise's team was able to create a comprehensive performance management system that is transforming a city government once notorious for problems into one that is accountable for results. In a community still recovering from the devastation of Hurricane Katrina, those efforts have led to demonstrable improvements in municipal services. The count of blighted addresses is down by more than 15,000 in five years. The proportion of functional streetlights is the highest it has been since Katrina. The city's capital recovery program is on track after cutting contracting processing times by more than 40% in delivering much-needed facilities to the public. Attending to adaptive challenges made these outcomes possible.

Oftentimes, there is a fear among department staff of losing control of data or of what a close examination of data might actually show. Leaders can overcome this fear through adaptive change. Software tools can put data in one place to quickly improve the decision-making process, making everyone's live easier. Shane Marshall, former deputy director of the Utah Department of Transportation (UDOT), notes, "Data allows you to ask really cool questions that you couldn't ask before, and you can do it yourself, right away." UDOT's open data platform, for example, moves beyond a query for car crashes over the last five years,

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> **Shane Marshall**, former deputy director of the Utah Department of Transportation

and allows staff to drill down into queries such as car crashes over the last five years on pavement with poor conditions. "When data is shared," says Marshall, "you have 1,600 eyes looking at it, not just one, and everyone expects and wants the data to be there – the culture is changing, and the fun really begins."

It's a Win – Recommendations for Leaders

Many leaders have recognized the power of a strong digital infrastructure and are solving problems and creating opportunity as they guide their organizations to digital maturity. In Mobile, Alabama, for example, the city's move to the cloud began with a relatively mundane need for a new financial software system. Rather than acquire another stand-alone system based only on the finance department's needs, Mayor Sandy Stimpson facilitated a small but radical shift in thinking: He asked staff to include all the other city systems in the software update.

This type of vision and action pushed progress toward real digital maturity and new operational efficiency. By 2017, Mobile had moved all departments to the cloud by working with a single software vendor that supported comprehensive integration and provided cloud-based modules for all city functions. By linking police and court records, police department paperwork shrank by 98% and the city saved more than $500,000 annually.

The Mayor of Henderson, Nevada, Debra March, has been known to give out plaques stating, "If you don't have data, you're just another person with an opinion." Laura Shearin, Henderson's Office of Performance and Innovation manager, views her biggest data win as the "real, substantial change in culture" in the organization. Moving from a siloed structure in which people were protective of their information to making decisions in a collaborative way has made lives easier on the job and in the community. The city saved millions of dollars. Rather than relying on anecdotes, the city improved fire department response times by acting on analysis of those times and geographic data. An enterprise-wide willingness to view and trust data also streamlined Parks & Recreation inspections for better capital allocations. A closer look at safety statistics across the organization reduced OSHA-reportable injuries.

These early successes are creating employee and public buy-in and are paving the way for broader connections. In Henderson, bringing diversity of experience and diversity of data to the table and sharing information across boundaries at a regional level has resulted in new collaborations around homelessness and the opioid crisis. This can happen because all stakeholders, from the ground up, are on board and used to seeing and using data every day.

To achieve such results, leaders can take the following steps to start their cities on the pathway to digital maturity:

Set a vision

1. Set a vision.

"Technology product managers have immediate opportunities to establish a sound foundation for helping sustain digital government transformation initiatives," noted Gartner's Market Insight. "Product road maps, messaging, and positioning could address several "mini-initiatives" and deliverables that will deliver immediate business value as well as support long-term sustainable improvements."

These managers and other agency leaders should set the organization's direction and help employees see the forest through the trees. In Fulton County, Georgia, for example, officials wanted to develop a clearer picture of crime patterns. Authorities wanted to look at crime rates across various neighborhoods, see where individual crimes were committed, note when someone is apprehended and determine where the offender resides. To connect these dots and turn the vision of a safer community into reality, county officials integrated the flow of information between law enforcement, judicial, and property tax systems.

"We see the areas where criminal activity is most active thanks to our work in creating a connected community," says Glenn Melendez, Fulton County's Deputy CIO. "With that information, we can decide how best to assign law enforcement resources and be more preemptive in crime fighting." The county's common technology foundation modernizes communication between agencies and across jurisdictions for better crime analytics and smarter resource deployment.

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With a cloud-based index of criminal justice records that is immediately accessible to many agencies, officials can search, link, and analyze data across jurisdictions. An officer who picks someone up in one municipality can look at relevant judicial records sometimes even nationwide. A self-service, central repository also eliminates the time and hassle involved with making numerous phone calls to track down an answer.

Fulton County's Executive, Dick Anderson, also envisioned presenting progress on the county's strategic plan in a concise, intuitive manner for constituents while enhancing collaboration between the county and its municipalities. To follow through on this vision, he extended the opportunity for all cities to participate in a transparency program that highlights community indicators, program measures, and benchmarking and performance reporting data. The result is a joint, interactive dashboard that is accessible to the public and offers insight into cost, spending, and timelines for programs under the Transportation Special Purpose Local Option Sales Tax.

The vision is strengthened when outcomes are aligned to the organization's strategic priorities. In the case of the Utah Department of Transportation, open data program outcomes were aligned to three strategic goals: zero fatalities, preserve infrastructure, optimize mobility. The natural link that forms between the vision and the outcomes is effective measurement. Instead of a bunch of performance measures that baffle people with data, modern transparency tools can show stakeholders how goals are being met in near-real time. Making these measures accessible to the public and legislature is not only important for trust, engagement and buy-in, but it also shows a return on investment, something important to legislatures and constituents.

2. Show, don't tell, the value of a connected community.

Solve problems and let the rest follow. Sometimes it really is that easy. When leaders marry newfound capacity with discrete problems, data's value is readily apparent, and additional

capacity builds up over time with increased buy-in. Whereas a data analytics initiative may start with the study of the best measures or the landscape of available data, it is more fruitful to focus on specific applied data projects that address urgent needs and develop capacity along the way. This flips the conventional "capacity-first" approach to a "problem-first" one. Leaders must:

- Assess the policy problems facing the community and service delivery, as well as the availability of related resources.
- Study the operational challenges faced by those working to address the problems day to day.
- Develop prototypes of interventions that help address those challenges.
- Use feedback on those prototypes to refine the interventions.

Better data capacity is a natural byproduct of such work. When officials in Kansas City, Missouri, began implementing a data program in 2000, they had lofty goals but realized the city's data capacity was lacking. Jean Ann Lawson, chief performance officer for the city manager, said, "We couldn't do much of anything without having the data."

Through that experience, the city designed and launched its 311 system in 2007 with the intention of collecting not just more, but better data. While it replaced a patchwork of hundreds of agency lines for service requests and complaints, it was also positioned to improve responsiveness to requests and provide more meaningful data to measure performance. Through the enhanced system, the city could now improve the use of existing assets and help city leaders strategically pursue areas for growth.

In practice, however, it wasn't that simple. "We needed people to appreciate the value of knowing their data," Lawson said. The city shifted its position to start holding agencies more accountable. It mapped data on calls and responses, which improved contractor services and even uncovered some instances of fraud, waste, and abuse.

In New Orleans, a blight reduction strategy that streamlined enforcement and provided new redevelopment resources was closely tailored to the city's needs at the time: accountability, transparency, coordination, and goodwill with the public. The resulting BlightSTAT program brought personnel together from across agencies to account for their performance according to objective metrics and in full view of the public. The initial intervention delivered eye-popping returns, including a five-fold increase in code enforcement inspections in just 10 weeks with no additional investments in staff or technology. Even more powerful was the ability to leverage a feedback loop to pinpoint additional innovation. While BlightSTAT initially opened new opportunities for public participation in meetings, it became apparent that the public also needed access to discrete data about enforcement and redevelopment actions for particular parcels in their neighborhoods. To fill this need, the city partnered with Code for America fellows to create a mobile app, BlightStatus, that gave residents easily accessible information where specific parcels fell in the code enforcement pipeline. The city also changed how blight abatement decisions – e.g., whether to demolish or sell – were made by creating a statistics-based "blight coin-sorter." At no additional cost, this system made blight decisions more transparent and consistent while eliminating a 1,500-case backlog.

Operational impact, stakeholder buy-in, and successful long-term implementation of data strategies are strengthened if initial data analytics initiatives are paired with precisely defined use cases.

3. Empower your staff.

Provide staff with access to data, the skills that allow them to make sense of that data, as well as leeway to make adjustments in their own work based on what the data reveals. When employees are empowered to use data to derive and communicate around insights critical to their work, their buy-in of executive or overall strategic direction grows. Not only that, their front-line expertise can be meaningfully used to solve real-world problems.

Little Rock, Arkansas, started down its data journey three years ago. But, part-way through 2017, Melissa Bridges, the city's performance and innovation coordinator, realized the data program was missing a key component. They had a functioning data governance group in tow, a new data website on the verge of launching, and a partnership with What Works Cities. However, frontline employees had not been pulled in.

"We included department directors, mid-mangers, and a handful of staff who held the keys to data pieces," Bridge said. "We didn't include enough of the frontline people who could give us the real answer of where things live. We needed to take a step back and pull this group in, because we knew if we didn't this program would never succeed."

Aiming to improve public safety and economic development along the city's 12th Street Corridor, Bridges held a "data retreat," in which frontline staff from the housing, finance, and parks departments met with neighborhood groups to develop a plan to strategically put city data to action. "Staff saw the importance and the simplicity of the framework ... being able to structure a problem statement, think outside the box, and pull data points together to look at a question differently, rather than through one filter," Bridges said.

Using publicly available data and maps, the group analyzed crime, housing, and neighborhood data to develop a pilot project that fixed 37 broken and 27 blocked street lights, inventoried blighted structures, and cleaned up the corridor. The project is continuing under a program called Lights on Little Rock.

Revisiting Henderson, Nevada, the driving force behind data use was to give high-performing teams the tools they needed to advance and make an impact. Data sharing began with a simple framework to integrate departments organization-wide with goals aligned to one strategic vision. Department heads chose the high-level performance metrics that mattered most to them and thought through how, exactly, they wanted to measure success.

One of Shearin's main goals in the city was to "use data to collaboratively work together to solve problems." She continues to facilitate regular data discussions in which every department shares its KPIs in a comfortable, open forum. These sessions highlight not just successes, but also include brainstorming around real challenges. Technology and a centralized database are key to these meetings, as modern dashboards with accessible

visualizations give everyone a way to quickly see, understand, and discuss information. Shearin also created a physical collaborative space in which people can connect in person, in a central location, to brainstorm and innovate.

This type of performance management compels everyone to look at data and make data-driven decisions. An intangible benefit is that data can take emotion out of decisions and make tough conversations easier. Moving from silos to sharing can come with a learning curve, as managers decide which data to share, how it will be analyzed, and specifically how it can move teams forward. The bottom line is to empower staff, so that better-informed decisions – from budgeting to resource allocation – will make their daily work lives easier while also improving service to the community.

The Time is Now

Given the rapid evolution of technology, the Internet of Things, and the public sector workforce, embarking along a path of digital maturity cannot wait. And, although the necessary innovation is digital, it cannot be delegated to technologists. Executives must own it.

Establishing a long-term vision, creating buy-in through early successes, and empowering staff are crucial steps that only leaders can meaningfully take to address this evolution's adaptive challenges and create a truly data-enabled organization. According to Gartner, "Digital government transformation is a long-term journey, requiring significant change in technical and organizational capabilities." Leaders "should continuously enhance their vision and road maps to support and contribute to this journey."

It should also be noted that giving cover for your team to try new things, to learn from failure, and to improve iteratively, is critical. As Shane Marshall of Utah stated, "Change in culture is necessary in order to move to innovation." "You have to change the cultural idea that failure is a bad thing," he said, "and move to where it's just another form of feedback; another attempt at doing something and learning something."

Visionary leaders who facilitate culture and policy that prioritize digital infrastructure, invest in back-end synergies, and result in data-driven decision making are, in effect, mobilizing connected communities. Local government's unique ability to solve problems is thereby multiplied, improving operations, improving communities, and improving lives.

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> **Gartner, Inc.**

About Tyler Technologies, Inc.

Tyler Technologies (NYSE: TYL) is the largest and most established provider of integrated software and technology services focused on the public sector. Tyler's end-to-end solutions empower local, state, and federal government entities to operate more efficiently and connect more transparently with their constituents and with each other. By connecting data and processes across disparate systems, Tyler's solutions are transforming how clients gain actionable insights that solve problems in their communities. Tyler has more than 21,000 successful installations across 10,000 sites, with clients in all 50 states, Canada, the Caribbean, Australia, and other international locations. A financially strong company, Tyler has achieved double-digit revenue growth every quarter since 2012. It was also named to Forbes' "Best Midsize Employers" list in 2018 and recognized twice on its "Most Innovative Growth Companies" list. More information about Tyler Technologies, headquartered in Plano, Texas, can be found at tylertech.com.

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