COVID-19 and its Impact:
Seven Essays on Reframing Government Management and Operations
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The loss of life and the fear caused by the pandemic disrupted governments around the world at an unprecedented speed and scale.
On behalf of the IBM Center, we are pleased to publish a new special report, COVID-19 and its Impact: Seven Essays on Reframing Government Management and Operations with essays from academic and government experts around the country edited by Center Leadership Fellow Michael J. Keegan.

Key Themes
In fall 2020, the IBM Center for The Business of Government initiated a Challenge Grant Competition soliciting essays from academics and practitioners describing how government can best transform the way it works, operates, and delivers services to the public in light of the impact of this pandemic. In re-framing government management and operations, this compendium of seven essays highlights several key themes:

• **Changing the nature of how government works** focuses on government jobs best suited to shift virtually, the new “workday,” best practices, government as a model workplace, and workplace health, safety, and privacy.

• **Reimagining how government operates and delivers its missions to the public** explores ways to improve operational effectiveness by addressing engagement, equity, and culture in government service delivery.

• **Managing risk and building resilience** focuses on building supply chain resiliency making them immune to unpredictable shocks, emphasizing the critical importance of managing risks and vulnerabilities effectively while also identifying principles that fosters trust in institutions and how they operate in times of crisis.

We hope that government leaders and stakeholders across the country and around the world find the insights in this special report helpful as they adopt changes necessitated by the COVID-19 pandemic into their longer term operations.

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Executive Summary

The COVID-19 pandemic has changed economic, social, and health care activities across the world, and the consequences of this historically significant global event will have lasting effects. The loss of life and the fear caused by the pandemic disrupted governments around the world at an unprecedented speed and scale. As result, governments today face serious, seemingly intractable public management challenges that go to the core of effective governance and leadership, testing the very form, structure, and capacity required to meet these problems head-on. Government leaders—have found it necessary to go beyond established parameters and institutional strictures, working across organizational boundaries in pursuit of multilayered, networked approaches that better respond to system and societal shocks brought by the pandemic. Governments saw this play out in real time—agencies worldwide moved swiftly to deploy tools to measure and predict the spread of the virus, marshal resources to support healthcare systems, provide economic assistance, and apply new models of work.

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Essays on Reframing Government Management and Operations

In re-framing government management and operations, this compendium of seven essays highlights several key themes.

THEME ONE: Changing the Nature of How Government Works

Richard Feiock, in Five Ways COVID-19 Changes How Local Government Do Business, explores the policy, technology, and management changes the COVID-19 pandemic ushered in, and assesses the likely impact of these changes on local governments and citizens. Just as the pan-
demic challenged municipal governments to reconsider how things are done and to accelerate or scale up the use of digital technologies, the post-pandemic era will challenge leaders in new ways.

Sherri Greenberg, in The Future of Work in Local Governments Beyond COVID-19, acknowledges how the pandemic has accelerated many large changes in local government operations, processes, and service delivery such as remote services, online services, and curbside and delivery services. The future of local government work requires rethinking and expanding to include new modes of public engagement and service delivery. There will need to be a combination using new technologies and remote techniques combined with in-person services.

THEME TWO: Reimagining How Government Operates and Delivers its Missions to the Public.

Tad McGalliard and Laura Goddeeris, in Transforming Local Government Service Delivery in the Wake of COVID-19 point out that innovation and transformation are often born out of necessity. The challenge of the current pandemic has produced creative change in local government administration and operation. Across the spectrum of strategies, polices, programs, and service delivery, figuring out which actions are truly transformative and will stand to become prevailing practices versus those that may flame out in the post-pandemic ecosystem is the purpose of this essay.

Maya McKenzie and Gurdeep Gill, in Community Driven Government—Reimagining Systems in a Pandemic, posit that the current public sector service delivery systems are failing, and government needs to address a real-time emergency while concurrently implementing structural change based on equitable practices and community resilience. King County’s Community Mitigation and Recovery (CMR) effort has laid the foundation for just that. CMR is changing the nature of government work to reimagine how services are delivered during COVID-19 and beyond.

THEME THREE: Managing Risk and Building Resilience

Zach Huitink, in COVID-19 and the Resilience Imperative in Public Procurement: Building Back Better, underscores that this pandemic reinforced the need to harden public procurement against significant threats and disruptions. To meet what the author calls “resilience imperative,” governments must integrate comprehensive risk management into procurement systems, policies, and business practices.

Rob Handfield, in Achieving Supply Chain Immunity: Planning, Preparation, and Coordination in National Emergency Response, identifies four key characteristics to making a national supply chain system immune to potential disruptions and shocks: flexibility, traceability, responsiveness, and global independence. These characteristics reflect lessons learned from the recent and evolving pandemic response. Building supply chain immunity will require significant changes in the way national supply chains are managed, including the creation of a new governance structure for overseeing and directing activity between the public and private sectors.

Rodney Scott and Eleanor Merton, in Trust and Resilience: How Public Service Principles Encouraged Compliance with COVID-19 Public Health Guidelines in New Zealand, explore the role public trust has played in New Zealand’s success at combatting COVID-19. Trust drove voluntary compliance with social distancing measures that eliminated community transmission of the virus. The authors analyze how New Zealand was able to earn and cultivate this trust.
Key Takeaways

The pandemic accelerated changes in the way government works and delivers services that were already underway. The COVID-19 pandemic disrupted and displaced many long-accepted practices in government management and operations and almost overnight forced a shift to online processes and digital technologies. It also changed how and where many municipal employees do their work. This change has unlocked opportunities to build a new civic future.

Changes sparked by the pandemic will likely become standard practice. The post-pandemic “next normal” can be seen as a product of deliberate choices and planned efforts. This provides an opportunity to reshape local government and accelerate changes already underway, such as personalized citizen services through digital delivery and streamlined, online business and development services.

Local leaders will need to address numerous policy issues raised by these changes. The pandemic surfaced many government workplace issues, such as working remotely and cross-functional job sharing, and the introduction of artificial intelligence to support service delivery. This shift may become permanent and raises a number of policy issues that have implications for employees and those they serve in the public.

Governments must anticipate risks and develop data-driven programs to mitigate risks, respond to events, and be resilient in the aftermath of inevitable threats that face agencies at all levels. Both physical and cyber risks can pose existential challenges to government interactions with the public, and government leaders can best respond by incorporating risk as a critical operational component for all programs.

Many organizations are rethinking the nature of who work gets done, based on lessons learned from productivity of telework during the pandemic. Developing flexible workspace arrangements, secure access for “work from anywhere” organizations, and a culture that focuses on the outcome of work done will contribute to a new model of success for government.
Key Takeaways

Expectations of individuals and communities will focus on access to continued online services, even after conditions merit reopening of government facilities. Building a hybrid operating model to engage with citizens that adopts consistent standards for customer experience will be necessary for successful government performance.

Cities and counties across the country are leading the way in understanding how to deliver COVID and other services to communities in need, who suffer disproportionately during the pandemic. Governments are looking at data on impact and interventions that show how programs can be tailored to ensure equity in response, so that traditionally underserved communities are not left behind.

Unprecedented demand on public procurement in response to COVID-19 pandemic reveal significant vulnerabilities in government supply chains and procurement processes. The pandemic offers the opportunity to consider how governments can make contracting more resilient going forward. This pandemic reinforced the need to harden public procurement against significant threats and disruptions. To meet this “resilience imperative,” governments must integrate comprehensive risk management into procurement systems, policies, and business practices.

Developing an effective federal supply chain system that is more resilient and immune to shocks and disruptions and better positioned to respond to future national emergencies must have the following attributes: flexibility, traceability, responsiveness, and global independence.

More than any other factor, be it masks or lockdowns or border closures, public trust in government has been heralded as the critical determining factor in the management of this pandemic. Communities generally trust experts and officials more than they trust politicians. New Zealand offers a successful of example of how protections around public service integrity enable the public to trust public health messages.
Changing the Nature of How Government Works
The pandemic forced both public and private sectors to fast-forward inexorable workplace and workforce trends being driven by technology and demographics. But nowhere was this change in how the public’s work gets done more evident than in thousands of local governments across the country.

Not only did many workers shift from their offices to their homes, but many government services traditionally done in-person or on paper shifted to being done online or via video. Initially, these shifts were envisioned to be temporary. However, many localities invested in mobile technology for their employees and managers found them to be more productive. The public liked how services were more convenient online or via video.

The two essays under this theme highlight the changes that will define the “next normal” for local governments and they will work and operate. Richard Feiock describes how these shifts have defined a “next normal” for government, and how local leaders will permanently embed these new ways of work into their communities. Sherri Greenberg identifies policy issues—such as equitable internet access and the use of artificial intelligence—that local leaders will need to resolve for these transformations to be sustained.

Here are key takeaways:

- **The pandemic accelerated changes in the way government works and delivers services that were already underway.** The COVID-19 pandemic disrupted and displaced many long-accepted practices in local government management and operations and almost overnight forced a shift to online processes and digital technologies. It also changed how and where many municipal employees do their work. In doing so it has unlocked opportunities to build a new civic future.

- **Changes sparked by the pandemic will likely become standard practice.** The post-pandemic “next normal” can be seen as a product of deliberate choices and planned efforts. It is an opportunity to reshape local government and accelerate changes already underway... such as personalized citizen services through digital delivery and streamlined, online business and development services.

- **Local leaders will need to address numerous policy issues raised by these changes.** The pandemic surfaced many local government workplace issues, such as working remotely and cross-functional job sharing, and the introduction of artificial intelligence to support service delivery. This shift may become permanent and raises a number of policy issues that have implications for employees and those they serve in the public.
Five Ways COVID-19 Changes How Local Governments Do Business

by Richard Feiock

The COVID-19 pandemic has challenged local governments to reconsider how government gets things done. The pandemic disrupted and displaced many long-accepted practices in local government management and operations and almost overnight forced a shift to online processes and digital technologies. In doing so it has unlocked opportunities to build a new civic future. As the pandemic recedes, cities need to consider which changes should become permanent, and how that will affect public service delivery in the future. Governments unable to implement these innovations during the pandemic have the opportunity to learn from the experiences of other governments while having plans for how they will work and operate in the “next normal.”

Introduction

This essay explores policy, technology, and management changes the pandemic ushered in, and assesses their likely impacts on local governments and citizens moving forward. Just as the pandemic challenged municipal governments to reconsider how things are done and to accelerate or scale up the use of digital technologies, the post-pandemic era will challenge leaders in new ways.

Many of the challenges facing cities as a result of the pandemic that may affect the way government works and delivers public services involve:

• Breaking down functional and agency silos in municipal government
• Citizen access to and acceptance of digital technologies
• Municipal employees’ acceptance of digital technologies
• Efforts to address health and well-being of the municipal workforce
• Efforts to create a greater culture of inclusiveness
• Improving employee morale and productivity

The essay highlights programs, innovations, technologies, and changes in services and operations initiated or accelerated during the pandemic that should be permanently incorporated into the ways that municipal governments do business.

Disrupting and Displacing Government as Usual

The COVID-19 pandemic disrupted and displaced many long-accepted practices in local government management and operations and almost overnight forced a shift to online processes and digital technologies. In doing so it has unlocked opportunities to build a new civic future. The experience of the pandemic has likely forever changed the way local government will operate. As the pandemic recedes, cities will consider whether it makes sense to return to processes such as walk-in offices with counter service and regular hours or permanently shift to online, on-demand services. While some of the conventional best practices made great sense in the past, they no longer fit contemporary U.S. society and probably have not for years.

A recent research study by noted government observer William Eggers and his colleagues concludes that disruption such as the type we’re experiencing today “can—and should—encourage us to reconsider orthodoxies. Challenging circumstances may highlight aspects of orthodoxies that represent bottlenecks or constraints. In the face of urgent needs, individuals tend to be more willing to take risks and institutions often prove more flexible.”

Embracing the Post-Pandemic “Next Normal”

According to Professor Donald Kettl, there is no going back to a pre-COVID normal. “There's certain to be a different world where the pace of change will accelerate,” says Kettl, “and where public institutions will need to run fast not only to keep up but, more importantly to lead the effort. COVID has fundamentally changed downtowns (with challenges to the centers of large cities and fuel for pods of development in regions), retail (with online services squeezing out brick-and-mortar operations), food and grocery delivery (with people discovering they can get the food they need without having to spend time in grocery aisles), among many others.”

Rather than a deterministic vision of cities constrained to accommodate the changed environment, the post-pandemic “next normal” can be seen as a product of deliberate choices and planned efforts. It is an opportunity to reshape local government and accelerate changes already underway by drawing upon experiences and learning from the pandemic. Scholars who study community resilience to natural disasters suggest the need for communities to bounce forward, rather than bounce back, after a disaster. Doing this requires they be flexible and agile in deploying resources and assets to make a pivot to a new and better future.

Five Changes That Will Define the New Normal for Local Governments

**A City Hall Permanently Telework-Driven.** By necessity local governments have become more open to distance work. Plans to return to the old normal following the crisis have been discarded as new approaches to working and managing have proven advantageous and beneficial. Many municipal jobs require work in the field: public safety, utilities, parks and recreation, public works. However, there is also an array of local government service, including support staff in frontline departments that can be performed remotely. Telework is driven by technology and internet availability and connectivity. For some small and rural towns, the lack of sufficient internet connectivity presents a seemingly insurmountable barrier to telework while in other communities the pandemic shift to telework has served to accelerate efforts to upgrade technology, increase internet connectivity, and aggressively address security issues. In many localities across the country, city hall plays a valuable civic and social role particularly for elderly residents. It is a physical place where many things happen, thus presenting a unique work environment that merits more of a hybrid approach, which means not shifting functions and services completely online.

Economic uncertainty in the wake of the pandemic has produced some, but not substantial, reductions-in-force in municipal government. That said, it has exposed workers to nonstandard work models and a shift by local governments to the use of contractors and temporary workers. The initial response to the pandemic’s economic impact for many communities was to reduce their contractor budgets. However, the need for work flexibility during uncertain times prompted a change in this approach with the expanded use of contractors and contingent workers to maintain more flexibility in the workforce. Reductions in municipal revenue due to the pandemic will continue for years beyond the pandemic itself, making it likely that some full-time positions will be replaced with contingent workers as a cost-saving measure.

**A Shift to a New Era of Synchronous Citizen-Government Communication.** Citizens looked to local governments for information in dealing with the uncertainty of the pandemic. This provided the impetus for local many governments to expand, accelerate two-way communication and engagement through digital channels. Despite wide agreement that civic participation can be increased by online communication opportunities, most cities in the U.S. had not fully availed themselves of these opportunities.

The introduction or expansion of online public meetings have been a prominent innovation. Florida, like many states, waived physical quorum requirements for public meetings allowing local officials to participate at a distance. City managers do not expect that practice to continue beyond the health emergency, but they do expect that online access and comment for citizens to continue and expand. Prior to the pandemic, the City of Lakewood, Colorado, introduced an online engagement tool to supplement their physical public meetings. “With the benefit of three years’ worth of data, Lakewood reported an over 800 percent increase in active participation since the program’s adoption. They recorded participation by the 35- to 54-year-olds to be 10 times higher, and for those under 35, 100 times higher than previous in-person levels.” Focus groups of city managers in Florida support these conclusions.

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Personalized Citizen Services Through Digital Delivery. At the beginning of the century, enthusiasm for the concept of smart cities rapidly led to predictions that digitalization would radically alter the way that cities operate and interact with citizens. This vision has been realized in many large cities that have been on the cutting edge of the smart cities' movement and yet many more cities lag. This technological ramp up coming on the heels of the COVID-19 pandemic has resulted in even more local leaders recognizing the value and potential benefits to personalized city services.

Enhancements in digital technologies can enable governments to deliver many services in a more personalized way than in-person encounters. Identifying vulnerable citizens, projecting service requirements smartly and underpinning these actions with the right technologies and infrastructure offers local governments the potential to not just operate more efficiently but to prioritize services to better serve their citizens. These changes provided a rare opportunity for local governments to radically rethink how they deliver services to their citizens as they create their next normal.

Streamlined and Flexible Business and Development Services. The ways that governments deal with local businesses are also being permanently altered. For example, one-stop-shops to streamline the building permitting process have been advocated for years, but implementation has fallen short because of entrenched bureaucratic routines and the geographic distribution of agencies and offices. The pandemic has necessitated the movement of many government activities and transactions online effectively eliminating many of these barriers, thereby influencing transformations in cities. For example, there are real estate developers in Waukesha County, Wisconsin, where they must get approval from many different government agencies for things like soil analysis, stormwater, road design, and environmental permits. Pre-pandemic, that involved in-person meetings between developers and agency review officials to coordinate their efforts. With the onset of the pandemic, developers now submit their plans electronically and they are then displayed and reviewed during video conferences. Although initially a workaround it has become the standard. Dale Shaver, director of parks and land use for Waukesha County states, “We will not go back . . . this has changed the way we work forever.”

An Expanded New Vision for Collaborative Governance. Mayors, city managers, and other local officials have faced new and unpredictable challenges in the last year. To deal with these they have had to break down internal barriers among different offices, agencies, and officials, and reach out to community organizations and neighboring governments. The result has been improved policy coherence and the chance to solve multiple problems through integrated approaches. New and creative partnerships to enable a rapid recovery, with the aim of building back better.

The COVID-19 pandemic reignited the need to address current interlinked challenges in an integrated manner, rather than acting individualistically. The COVID-19 pandemic exposed the fragility of siloed approaches to complex, cross-cutting, and interconnected challenges. Clearly the economic and health challenges are interconnected such that outcomes in each sector are shaped their interactions, interdependencies, and interrelationships.

Some local governments are taking collective action in partnership with other governments as well as with organizations at the local and regional levels on economic development efforts which have previously been characterized by competition rather than collaboration. Practitioners can learn about the collaborative economic development actions that governments are taking and how these partnerships can stabilize their local economies.

CONCLUSION

If one thing is clear, it is that local governments are not going to be returning to business as usual. The pandemic disrupted the old ways of doing business that allow local leaders to plan and implement changes that can improve the efficiency of operations and enhance the experience of citizens interactions with government.

The five responses to COVID-19 that are described above, promise to deliver positive changes far beyond the current crisis. Many components of the “next normal” do not sound radical because many of these changes have been advocated for and in the works for some time. The pandemic has pushed empowered and facilitated local leaders to take the steps that will carry citizens and municipal workers into the digital age. According to Kareem Buyana, “History shows that pandemics often seed transformations in cities through fluid contexts of emergent changes in governance, urban design and patterns of human interactions with nature. Endeavors around mitigation and containment of pandemics need to be rooted in a culture of trans-disciplinarity, if research and policies are to collaboratively influence transformations in cities.”

Local leaders now have an opportunity to use this as a pivot point to build more resilient local economies and governance systems for the future.

Acknowledgment

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About the Author

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Local government is at the core of people’s lives, and it can, and should, serve as a model workplace for the future of work. During the COVID-19 pandemic, local government workplace issues surfaced that present many serious questions for how local governments will work and operate. These questions encompass the effective use of remote and hybrid working arrangements, what jobs become obsolete, what new jobs arise, the changing office space needs, and the economic impact of how work will be done in a post-pandemic environment. Many local governments are also implementing new technologies such as artificial intelligence (AI), which range from requiring new policy direction, new positions, and employee training; to working via virtual platforms; to providing broadband and device access. These are the government workplace questions, challenges, and opportunities.

Introduction
The COVID-19 pandemic has caused seismic shifts in our daily lives. This includes the changing nature of who works, and where, and how people work. Local government is at the core of people’s lives, and it can, and should, serve as a model workplace for the future of work. Various local governments provide different services in workplaces such as cities, counties, and special purpose districts for healthcare, transportation, and utilities. During the COVID-19 pandemic, many local government workplace issues have surfaced including:
• Working remotely
• Changing jobs
• Fairly paying employees

• Implementing technology
• Workforce training
• Diversity and equity

And these issues raise questions, such as:
• What will remote and hybrid working arrangements mean for planning within the local government workplace and planning within cities themselves?
• Will cities need less office space, with many people continuing to work from home, entirely, or partially?
• What jobs will permanently shift in how work gets done, what jobs will be obsolete, and what new jobs will arise?

Some of these issues are internal to local governments, and they require near-term solutions inside the local government workplace. Other issues are external to local governments but they have implications for residents, and they require longer-term solutions.

Accelerating Changes Already Underway
The COVID-19 pandemic has accelerated numerous large changes in local government operations, processes, and service delivery such as remote services, online services, and curbside and delivery services. Frankly, many of these changes, which have been needed for some time, have been too slow to materialize.

Suddenly, the pandemic shifted many local government workforces to move entirely to telework. All meetings and collaborations became virtual. There are many jobs in local government that still require a combination of remote and in-person work. Building inspections still demand entirely in-person work. The pandemic required an immediate pivot, and it required some new and complicated arrangements for managing, supervising, and training employees. For some employees there are significant advantages to working from home, including reduced commute times and flexible hours. For other employees, there are significant obstacles to working from home, including a lack of appropriate workspaces, lack of technology, lack of childcare, and lack of reliable high-speed internet service.

Furthermore, with COVID-19, there have been huge shifts in how services are delivered, such as many providers in public health and healthcare changing to predominantly using telemedicine and telephonic medicine. Additionally, there has been an uptick in traditional in-person government services rapidly moving to online processes—from permitting for construction projects, to public engagement, to obtaining short-term home rental licenses. Some people who had barriers to getting in-person public services, due to transportation or physical or time limitations, now can access services and engagement that they could not previously by using remote services and at times that are more convenient. This has provided the opportunity for more equitable service delivery for some residents. However, local governments have found that other residents cannot participate in these new service delivery modes, without access to devices and training, and high-speed internet.

Likewise, COVID-19 accelerated the adoption and implementation of new technologies in local governments, such as artificial intelligence (AI), which require policy direction, new positions,
and employee training in areas from algorithm bias, to working via Zoom, to providing broadband and device access. AI has the possibility to make local government jobs more effective, efficient, and rewarding by replacing rote work with more interesting work. Additionally, city employees are using AI for such diverse purposes as analyzing large data sets, to traffic control, to call centers. However, employees must transition to new jobs which requires training and ongoing education. Also, the potential equity and bias issues with AI algorithms, and with AI in the workforce—from telework surveillance, to call centers, to hiring—are real and must be addressed.

These are the workplace policy questions, challenges, and opportunities of the future that city leaders are already facing. Some of these workforce issues are internal to local government such as office space configuration, and supervising employees who work remotely from home. Other workforce issues are external to the actual local government workplace, but they affect the policies and work of local government employees—and the lives of local residents. Examples of external workforce issues that require new city policies and procedures include code and zoning changes to accommodate working from home and different uses of newly-vacant commercial office space. All of these policy issues require analysis and expert practices so that city governments can lead the transition to the model future workplace beyond COVID-19.

**Internal Issues Affecting City Workers and Their Work**

To address the future of work issues with local government we need to start by asking the age-old questions of: who, what, when, where, why, and how? We need to apply a systems approach to these challenges, and we cannot approach them in an independent, fragmented fashion.

- **WHO, WHAT, and HOW?**
  - Who is performing the local government jobs of the future and how we train and transition the workforce is critical?
  - What services do we need to deliver and how?
  - How we determine where local government employees work—whether from home, or an office, or in the field, or some combination—is imperative.

The responses to these questions affect the rest of our local government workforce decisions.

Additionally, local governments must address the availability and security of the technologies that their employees use to work from home and in the office. Also, accessing data and documents requires attention by a city’s leadership team. Workflow processes need reimagining and human resource issues including hiring, training, and supervising are paramount. Lastly, the “soft” human elements of work, such as social and professional networks, are of serious value and cannot simply be jettisoned. How will people who work remotely form the bonds and shared experiences to successfully collaborate? How will working remotely affect people’s emotional health?
Moreover, the future of local government work requires rethinking and expanding to include new modes of public engagement and service delivery. We will need a combination of using new technologies and remote techniques combined with in-person services. For instance, since the inception of the COVID-19 pandemic, many local governments have shifted to virtual public hearings at city council meetings and virtual hearings for trials and court cases. However, there still will be a need for in-person options. New technologies and service delivery modes are here to stay, but so are some aspects of traditional service delivery.

External Issues Affecting Residents and the Community

Local governments also must tackle a plethora of longer-term future of work issues that are external to the operations of a local government, but that greatly affect residents and businesses. These include rethinking and redesigning the configuration of urban and public spaces. Challenges include rethinking sidewalks and other infrastructure to accommodate social distancing, open space, office space, parking, and transportation. Will we see decreases in vehicle traffic if more people continue to work remotely on a permanent basis? Will we be able to convert parking lots and garages for alternative uses such as housing? Can we decrease air pollution? Who in local governments will be tackling these issues and how will they do so?

Furthermore, how will local government policies and jobs change to help residents with training and transitioning to new jobs? With artificial intelligence (AI), will we likely see accelerations in losing some jobs but gaining other, new jobs? We already have seen vast changes in call centers with automated calling and help lines. Examples in the future could include decreases in the need for all kinds of drivers such as ride hailing and taxi drivers, bus drivers, truck drivers, and delivery drivers. They could be replaced with various autonomous vehicles, drones, and robots. However, we also could see increases in the need for technicians and people working with robots, and an increase in professions such as data scientists, psychologists, and sociologists, among others. The implications are wide ranging in the service sector. Lawyers could rely on AI for routine legal documents and proof reading, and doctors could increasingly rely on robots in the operating room. Another example is home care, which is a growing need. Can we increase the supply of home health workers and create better work environments for them by using automated assistants in homes to work with home health workers? If we do, can we provide appropriate privacy for people with home health needs while also increasing their care and safety?

Can we use AI to better train and match people to the jobs of the future? What are the implications for wages and incomes? This will require changes in education and workforce training to provide a pipeline of employees in the jobs of the future. Also, it will require retraining and continuing education with a mindset and expectation of adapting to change.

Policy Challenges that Local Leaders Need to Resolve

The policy challenges regarding the future of work after the pandemic—both in local government workforces and the community at large—are numerous and wide ranging. These challenges will affect cities, counties, and special purpose districts. Devising and implementing new policies and changing existing policies requires time and focus. The policies that need to be rethought range from dealing with purchasing and procurement policies for employees who work from home, to criminal justice policies, to cybersecurity. Furthermore, equity policies are critically important whether they address providing childcare or providing broadband.
Policy Challenges

There are many social and political implications. Policy areas include, but are not limited to, the following:

Local Government Workforce
- Cybersecurity with technologies, such as ransomware attacks, for remote, in-person, and hybrid working situations
- Human resource changes

Community at Large
- Licensing repercussions
- Privacy implications of technologies
- Purchasing and procurement requirements
- Permitting solutions
- Transparency and public engagement
- Zoning and land use implications
- Equity: providing the opportunities and services for residents to prosper and reach their full potential

Cross-cutting Issues
- Childcare options so people can work in all occupations and situations
- Ethical implications of technologies and policies including bias in algorithms, surveillance, and protection of personally identifiable information
- Universal broadband as a necessity
- Workforce training for transitioning and new jobs
- Wages and income issues
Addressing this long menu of policy challenges is a tall order, but local governments are where the rubber meets the road. Their reach is far and wide in our lives, and they affect the future of work in their own workplaces and in the greater community. Local governments have shown time and again that they can rise to the challenge. They have the determination and responsibility to be the model workplace for the future of work. Local governments in metropolitan areas, suburban areas, and rural areas could form task forces or commissions with stakeholders from the community, and from the public, private, nonprofit, and academic sectors.

Some communities are beginning to address these issues by convening residents and their business community to begin a dialogue and develop joint solutions for what they want their futures to look like. For example, the Port of Los Angeles has established a Blue-Ribbon Commission on the Future of Work and the City of Seattle has a Future of Work initiative, which is included on its Performance Seattle Dashboard (see: https://performance.seattle.gov/stories/s/596j-asv2).

Several state governments also have developed task forces or commissions that might serve as models for community-based initiatives. For example, two states have created task forces: the State of Washington’s Workforce Training and Education Coordinating Board has created a Future of Work Task Force, as has the State of New Jersey. Also, several have established legislatively created commissions relating to the future of work, including: New Hampshire, Washington, California, Hawaii, and Vermont.

Metropolitan areas with their cities, counties and local governments could form joint task forces or commissions to address the policy challenges of the future of work in their regions. Also, local governments in rural areas and Council of Governments (COGs) could form collaborations to tackle future of work issues. Additionally, the International City/County Managers Association and the U.S. Conference of Mayors could form specific future of work task forces similar to The Council of State Government’s Future of Work Task Force.

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Reimagining How Government Operates and Delivers its Missions to the Public
The response and recovery to COVID-19 continues to impact how government serves the public, at the national, state and local levels. This rethinking of government operations is necessary to address immediate priorities of pandemic response and is likely to remain a core driver for public sector services and engagement in the months and years to come. Government leaders can improve operational effectiveness by addressing engagement, equity, and culture as part of their implementation strategies for service delivery.

The two essays under this theme highlight actionable strategies that have moved to the forefront of agency service delivery channels.

**Tad McGalliard and Laura Goddeiris** focus on staffing and scheduling strategies, virtual public meetings and community engagement approaches, smart city technology advances, social justice and racial equity programming, and the leadership challenges that local government executives are facing today.

**Maya McKenzie and Gurdeep Gill** explore the Community Mitigation and Recovery (CMR) team in King Country, Washington, highlighting the work it is doing to fundamentally rethink how public management systems and processes are set up and reimagining how its government works.

Here are some key takeaways:

- **Governments must anticipate risks and develop data-driven programs to mitigate risks**, respond to events, and be resilient in the aftermath of inevitable threats that will face agencies at all levels. Both physical and cyber risks can pose existential challenges to government interactions with the public, and government leaders can best respond by incorporating risk as a critical operational component for all programs.

- **Many organizations are rethinking the nature of who work gets done**, based on lessons learned from productivity of telework during the pandemic. Developing flexible workspace arrangements, secure access for “work from anywhere” organizations, and a culture that focuses on the outcome of work done will contribute to a new model of success for government.

- **Expectations of individuals and communities will focus on access to continued online services**, even after conditions merit reopening of government facilities. Building a hybrid operating model to engage with citizens that adopts consistent standards for customer experience will be necessary for successful government performance.

- **Cities and counties across the country are leading the way in understanding how to deliver COVID and other services to communities in need**, who are suffering disproportionately during the pandemic. Governments are looking at data on impact and interventions that can show how programs can be tailored to ensure equity in response, so that traditionally underserved communities are not left behind.
Transforming Local Government Service Delivery in the Wake of COVID-19

by Tad McGalliard and Laura Goddeeris

Since the start of the COVID-19 crisis, the International City/County Management Association (ICMA) has generated several datasets of information. One survey conducted in August 2020, provides useful insights about the operational changes that cities, counties, towns, and townships are implementing because of COVID-19 and in particular those changes that are expected to continue, becoming the new way of doing business. This essay explores staffing and scheduling strategies; virtual public meetings and community engagement approaches; remote permitting, plan review, and other approval procedures; smart city technology advances; social justice and racial equity programming; and the leadership challenges that local government executives are facing in these unprecedented times.

Introduction

Local government management has been impacted and transformed by pandemics before. The 1793 yellow fever epidemic in Philadelphia killed nearly 10 percent of the population and severely affected the ability of local authorities to keep up with caring for the sick and dealing with the deceased. Learning from this tragedy, the city established a Board of Health to help guide decision-making for future outbreaks; built an inspection and quarantine station for ships coming to the Philadelphia wharfs; and created a new public water works treatment facility to improve the cleanliness of and access to drinking water.
In the centuries since Philadelphia’s yellow fever outbreak, other public challenges such as cholera, flu, and other sicknesses have resulted in increased investments in capital projects such as water and wastewater treatment and solid waste management as well as inspection services for private sector establishments like restaurants, bars, and other food service.

Innovation and transformation are often born out of necessity. The challenge of the current pandemic has produced creative change in local government administration and operation. Across the spectrum of strategies, polices, programs, and service delivery, figuring out which actions are truly transformative and will stand to become prevailing practices versus those that may flame out in the post-pandemic ecosystem is the purpose of this essay. Within local government management, the coronavirus pandemic is creating enduring transformation in leadership, strategic approaches, service delivery, workplaces, and work approaches.

**Strategic Approaches**

Protecting the health, safety, and welfare of a community’s residents and stakeholders is a primary function of local governments. The pandemic has challenged those larger themes and forced rethinking about the nature of emergency response, recovery, and restoration as well as the status and social equity of those segments of a community that are the most vulnerable.

**Emergency Response, Recovery and Long-Term Restoration.** The mega disasters of the early 21st century, including the 9/11 attacks and Hurricane Katrina, illustrated the need for higher levels of local government preparedness and planning for when—not if—a disaster strikes. Since that time, more and more local governments have adopted disaster management and recovery plans, policies, programs, and partnerships for when an event happens. Data from a 2019 survey suggest that 90 percent of responding local governments have developed (or are developing) hazard mitigation plans, and a majority have developed or are developing continuity of operations plans or standalone disaster recovery plans. Nearly all local governments (98 percent) have mutual aid agreements in place to support public safety needs (police, fire, EMS) in times of crisis.¹

The nature and longevity of the pandemic has caused a collective rethinking of how local governments respond to emergencies just as other new threats such as cyberattacks have required. Strategic considerations in disaster management will likely include “hot washing” approaches used during the COVID-19 pandemic to inform and update hazard mitigation and disaster recovery plans in near-real time.

Similarly, this pandemic has disproportionately devastated segments of local economic activity including bars and restaurants, hotels and extended stays, tourism, and arts and entertainment. In response, many local governments have designed small business support programs in conjunction with Chambers of Commerce, community foundations, and other traditional and nontraditional partners. In survey after survey, local government leaders and managers suggest that local economic conditions are top priorities.² Going forward, heightened awareness of the needs of the business community is likely to increase usage of tools and programs to ensure the stability of small businesses which are often the central nervous system of the local economic ecosystem.

Social Equity. Since the late 1980s, the definition of more sustainable communities has emphasized attention to environmental, economic, and social equity considerations in policy and decision making. More than any crisis in recent history, the COVID-19 pandemic has brought into focus the widespread challenges facing the most vulnerable segments of local communities and the consequences of racial and economic inequities. Pandemic cases, hospitalization rates, and death rates are notably higher among people of color and those with lower incomes, less access to quality healthcare, and less ability to implement distancing measures. Lockdowns hinged on essential workers, disproportionately people of color, continuing to staff grocery stores, deliver packages, and operate public transportation while subjecting themselves to higher rates of virus exposure. The move to remote learning for K-12 education highlighted the technological disparity that exists as school systems and local governments scrambled to buy laptops and provide internet access for school age populations that had limited or no access to these essential tools for continued learning outside the classroom.

As the world shut down and our focus was reduced to phone, computer, and television screens, all displaying a steady stream of rising numbers and stark images from the front lines, it became increasingly impossible to ignore the consequences of these disparities. High profile incidents of civil unrest following police violence toward black residents only added to this narrative. ICMA's COVID-19 Impacts on Local Governments survey conducted in July 2020 found that about one-third of all responding local governments were monitoring local data disaggregated by race and ethnicity, most frequently related to health impacts but also economic indicators such as unemployment. Local governments must now figure out their role in reversing these realities. Only five percent report using racial equity tools or impact assessments in making decisions about allocation of resources, but in multiple surveys conducted in 2020 (even prior to the onset of the pandemic), hundreds of ICMA members asked for training, best practices, and other resources to support efforts around equity and inclusion.

Customer Centric Services: Anyplace. ICMA's COVID-19 survey also provides evidence about potential evolutions in the “virtualization” of civic engagement, staffing strategies, and some services. Notably, the pandemic increased/accelerated the adoption of several approaches to continue engagement with residents and other stakeholders. Nearly 94 percent of respondents reported an increase in virtual council meetings and other official business meetings that are open to public participation. Lakewood, Colorado, was an early adopter of virtual meetings, and they reported an over 800 percent increase in active participation and expansion in the demographics of those participating since beginning the program. Communities across the United States echoed seeing increases in participation, allowing for greater opportunities for residents to engage with their local governments. Several months into this pivot to virtual, some local governments created new positions exclusively dedicated to managing this type of engagement and technology.

A substantial (70 percent) number of places reported greater usage of social media to share information with the public. A majority (55 percent) suggested increased usage of online public engagement tools to collect feedback for programs, projects, and policies outside of official business meetings. This lower number is likely because prior to the pandemic, over the last two decades, local governments have been increasing their use of online tools to gather input on poli-

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cies and programs; strategies and plans that will affect their communities. The growth in e-government services has been expanding well before the pandemic as new tools and technology made services such as remote payments, permitting, licensure, and other transactions more possible and efficient. As one respondent to ICMA’s 2020 survey noted: “I expect truly transactional work will increasingly be done remotely.” Data from a 2017 survey—see Figure 1—demonstrates the adoption of different online options for local government engagement, services, and information.9

Figure 1: Data from 2017 E-Government Survey

Many of these are now considered prevailing, standard operating activities of well-run local governments. While ICMA’s 2020 COVID survey did not touch on an extensive list of local government services, it did capture information suggesting increased usage of remote permitting processes (64 percent) and site plan reviews (50 percent). In a follow-up question about virtualization actions and strategies, respondents provided some insight into the likelihood of transformation in several areas. Table 1 summarizes the findings from more than 500 local governments across the United States.

The data suggests that localities, like many other professional organizations, have realized that virtualization is an operational theme that is here to stay. There is growing recognition of a more customer-centric local government management approach. Residents expect that needs will be met on their timeline and not those of a traditional organization that staffs services 40 hours a week, Monday through Friday. Local government customers are increasingly adopting the mindset that information, product, and service needs should be available anytime or from anyplace through effective e-government tools. Likewise, local governments are realizing that many off-the-shelf or everyday platforms and tools—from Facebook to FaceTime—offer capabilities to effectively meet these needs without substantial investments in sophisticated systems. When one manager was asked what software platform was being used to conduct remote inspections, the response was FaceTime. Innovation does not have to be expensive or complex.

The Workforce of the Future

In March 2020, staff from organizations across the United States mass migrated from commercial office space to home offices in basements and on kitchen tables. Boardroom conversations occurred in living room settings through online video conferences. According to a study by Upwork, millions of these workers expect to maintain teleworking arrangements fully or partially in a post pandemic world.\(^1\)

Local government workforces similarly transitioned as much work as possible from city hall to home offices. According to ICMA’s survey, alternative work arrangements grew during the pandemic. Nearly 74 percent reported using staggered scheduling to increase social distancing and minimize contact among employees. Nearly two-thirds of the responding governments indicated that they had increased the adoption and application of broader telework policies in response to the pandemic.\(^2\)

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Teleworking is not new to local government workforces. Many communities have created teleworking policies prior to the pandemic that have allowed certain job categories to work remotely. A standard policy includes provisions about hours, accessibility, cybersecurity, allowable technology, and more. The local government workforce of the near- and long-term future may be one that increasingly teleworks. Again, ICMA’s COVID-19 survey offers some insight for the future as nearly 20 percent of the respondents expect to continue with broader telework policies, while 58 percent expect to have a hybrid approach that may include additional telework options. One manager noted in their response: “Our work and service delivery are going to look differently moving forward. We are looking at 40-60 percent virtual work across the organization, even after ‘re-entry’ to our offices occurs. Prior to the pandemic, we had basically zero percent virtual work. There is some good that will come out of this pandemic. I see our workplace flexibility being good for attraction and retention of team members as well.”

Another study of mayors and city managers also suggests that teleworking will take a great leap forward because many local government leaders are seeing substantial organizational benefits including increased job satisfaction and worker productivity, reduced time lost for commuting, and lower overhead costs for facilities, utilities, and parking. Almost any job or career available in the private sector can also be found in local governments. Many of those positions, however, can be hard to fill in a competitive job market where the private sector can offer higher pay, greater benefits, and more flexible working hours and locations. More aggressive usage of teleworking and reducing residency requirements for certain kinds of positions may offer opportunities for tapping talent that otherwise would look elsewhere for a similar job.

When the City of Tallahassee pivoted from town hall to remote work the “print, sign, deliver” process for documents evolved to “point, click, send,” reducing the time from 7-10 days to 7-10 hours to finalize.13 Many organizations are learning the value of collaboration software and other tools that combine communication, production, and review into a single system. Simple agile shifts in day-to-day operations such as these are likely to continue.

**Survey Insights**

According to a 2016 survey, 61 percent of the responding elected and appointed leaders felt that their local government organization responded quickly to external factors. Respondents were even more confident (nearly 75 percent) that their jurisdiction responded effectively to external

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The prolonged pandemic and widespread social unrest of 2020 put those sentiments to a stress test not seen in a while.

What guidance can we offer to keep innovation and transformation moving forward in local government management?

**Conduct after-action analyses.** Disasters and crises produce data about what went right or wrong, what systems performed well, and which could have operated much better. Just as local authorities will often produce after-action reports about their approaches and response after a natural or human-made disaster, local governments should hot-wash their strategic, programmatic, and workforce innovations that have resulted from the necessity of the pandemic.

**Nurture a creative local government culture and engaged workforce.** Besides funding, information, and expertise, organizational culture can weigh negatively on local governments ability to innovate. In fact, many (approximately 40 percent) local government leaders suggest that culture is a significant or very significant factor hindering the implementation of new practices or initiatives. The events of 2020 have illustrated the importance of a creative culture. Culture drives strategy which guides the development and implementation of tactics and operations. While the pandemic may be a hundred-year event, there will be other localized, regional, national, or even global crises that will require agile and creative organizations where the workforce is engaged to develop solutions. Of particular importance is the need to seek candid feedback from the local government workforce and to reward creative ideas. Many local officials were pleasantly surprised to learn that their organizations are more agile than they thought. When forced to regroup, they did so quickly and with great innovation and efficiency. Employing that alacrity going forward and being able to mobilize the municipal workforce, cutting across nontraditional roles, is a leadership lesson for future textbooks.

**Strategic planning for the future.** The pandemic has prompted critical reflection on what can be let go versus what is truly essential and necessary for the future. Elected and appointed leadership in local government should consider strategic planning exercises to ensure that the policies and programs that were priorities before the pandemic remain so in the post-COVID world. As one manager responding to ICMA’s July 2020 COVID-19 survey wrote, “This pandemic forces us to reevaluate our practices and processes to serve our citizens better and more efficiently. While the pandemic is unfortunate and difficult to navigate, I firmly believe it will be the largest catalyst of change in local government to occur in decades.”

**Keep engaging with the community and partnering organizations.** Community challenges and needs are not solely the responsibility of local authorities. Public and private sector organizations—nonprofit neighborhood, ecumenical, and community groups; anchor institutions such as the hospitals and medical organizations, universities and colleges, K-12 education—all have been and/or can be stronger partners with local governments. The challenges of the pandemic have accelerated this need to have a strong network of partners and providers in the community, and as a result, local governments should consider strengthening this local peer to peer network for ongoing and future needs.

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Social equity focus is more important than ever. The combined crises of the pandemic and civil unrest have challenged local governments and the people that work for them. They are also the kinds of challenges that local governments can and should lean into. Social, racial, and economic equity imbalances were laid bare in 2020; local governments are now more attuned to address these inequities as they move forward.

CONCLUSION

During this prolonged crisis, local governments learned to innovate faster than ever before. The key to transformation is not to lose momentum and fall back on the old ways, when potentially innovative practices and programs are still evolving from the crisis. When asked by a woman of the era, if the 1787 constitutional convention had produced a republic or a monarchy, Benjamin Franklin is quoted as saying “a republic, if you can keep it.” In the post-pandemic world, a contemporary conversation might ask: Will local governments continue innovating during this prolonged crisis or simply return to the ways of the past when the COVID-19 era ends? The signs are there for continued innovation, if you can keep it.

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Community Driven Government—
Reimagining Systems in a Pandemic

by Maya McKenzie and Gurdeep Gill

During times like this, it takes innovation and rapid change to address a real-time emergency while concurrently implementing structural change in government processes that will build equity and community resiliency. King County, Washington, is leading this effort of fundamentally rethinking how its public management systems and processes are set up. This is evident within the Community Mitigation and Recovery (CMR) team. The CMR has been vital and imaginative in King County’s approach to delivering services and products to the public for the mitigation of COVID-19’s health, social, and economic impact. However, the work of this group goes beyond COVID-19 response and can lead to the reimagining of how government works.

Introduction

At this moment, we are at an intersection of crisis and emergency. The COVID-19 pandemic has disproportionally affected historically underserved communities. This pandemic has made it clear that our current service delivery systems are failing. We need a government that can address a real-time emergency while concurrently implementing structural change based on equitable practices and community resilience. King County’s Community Mitigation and Recovery (CMR) Team has been laying the foundation for just that. Since the beginning of the pandemic, the CMR has worked to center the community through compensating community members to act as consultants and liaisons, creating community feedback loops, and building

1. “Underserved communities” include Black, Indigenous, and other People of Color, LGBTQIA+, differently-abled, low-income, immigrant, refugee, limited English proficient, and undocumented populations.
collaborative partnerships while acting as a convener to understand the needs of those they are serving. This structure is far from perfect, but it represents initial steps in the right direction toward transforming government systems that work for everyone. Using public health data, this essay seeks to illustrate how the system is currently failing these communities and why change is needed. Additionally, we share how the CMR is changing the nature of government work to reimagine how services are delivered during COVID-19 and reflect on the role the government should play in spaces within the community beyond the pandemic.

Understanding Systems Impact through Data

We find systemic racism is an established precursor that has set the foundation for many ongoing societal ills. It is longstanding knowledge in public health that infant mortality is a major indicator of a population's well-being. It is believed that infant mortality reveals the accumulation of negative socio-economic impacts that a person may experience. If a mother is experiencing hardship, her body maybe less likely to sustain a healthy environment for a baby to survive. As outlined in Table 1, King County’s 2018 infant mortality rate would suggest that the population’s health is relatively better off compared to the state and national rate. However, when looking at infant mortality by race, the data tells the story of King County’s failure in equity regarding health and well-being.

As illustrated in Table 2, the County's Multiracial and Black populations' infant mortality rates were over three times the rates of White and Asian populations and were more than twice the national rate. We believe the significant difference in infant mortality by race is a clear example of systemic racism's cumulative impact. These differences are greatly influenced by environmental, social, and economic factors. For example, low-resourced communities have less access to quality healthcare, education, safe neighborhoods, healthy foods, and opportunities for socio-economic advancement. The inability to easily access these necessities stems from historical institutional policies, as seen through redlining, underfunding schools within communities of color, and over-policing. These contribute to adverse social, economic, and health outcomes that we see in underserved communities.

Like infant mortality, COVID-19 disparities have emerged in King County and are persisting. As illustrated in Figure 1, Pacific Islander, Latinx, Black, and Native American populations in King County have significantly higher rates of COVID-19 than White and Asian populations.
They are also experiencing the socio-economic fallouts of this virus to a higher degree. More than one-third of Pacific Islander, Black, and Native American populations filed an unemployment claim as noted in Figure 2.

Figure 1. King County Confirmed Cases—Reported on November 2, 2020

Figure 2. King County Workers Filing Initial Unemployment Claims Per Capita by Race—March 8-October 24, 2020
Consequently, these populations disproportionately need assistance with social services like housing, healthcare, income support, food, and disaster services during this ongoing pandemic. Figure 3 illustrates this insight.

Figure 3. Crisis Connections 2-1-1 Social Services Needs in King County—Reported September 22, 2020

Some households cannot access government assistance due to their undocumented status, thus creating another level of hardship. The COVID-19 and social-economic impact data ominously reveal that disparities beget disparities. The populations facing negative disparate COVID-19 impacts have been more prone to catching the virus because they tend to hold essential jobs such as farmworkers, grocery store employees, or caretakers, putting them on the frontlines. These jobs also provide less health care access, lower wages, and less flexibility. People in these positions are less likely to miss work because they may be living paycheck to paycheck and need the income to afford basic necessities.
These dilemmas and their impacts have always existed. However, COVID-19 has created an environment for them to occur at an amplified level concurrently. These experiences make evident that our historical structures of operation are failing and that we cannot continue to rely on them. Instead, we must build new, robust, and equitable systems with those who are most negatively affected by them, which are predominantly our underserved communities. We need to build relationships with these communities because history shows they are more likely to be overlooked or intentionally excluded. By partnering with communities that have been historically harmed by our systems the most, valuing their expertise, and working to change our governmental processes, we are more likely to create structures that benefit everyone. This is because they have the lived experience to know where the systems are failing, what needs to be improved, and what strengths they have that can be built upon.

COVID-19 Emergency Response and the CMR
Since the beginning of King County’s COVID-19 Response, the CMR team has played a vital role in considering community involvement in the government process. Early on, several staff members recognized that the health and socio-economic impacts of the virus would further exacerbate disparities within underserved communities. To mitigate impacts, the CMR team was created with the purpose of supporting the diverse communities within the County. Approximately 40 staff members from across several King County departments formed 12 task forces to assist with the mitigation and recovery from COVID-19. Several are focused on supporting institutions that directly affect community members, such as the Government, Small Businesses, Faith-Based Organizations, and School and Childcare task forces. Other task forces focus on accessibility and directly supporting underserved communities like Language Access, Community-Based Organizations, Immigrant and Refugees, and the Latinx task forces. Values of equity, accessibility, health, and well-being underpin the work of the teams.

Transforming Government Practices
Knowing that COVID-19 would inevitably disproportionately impact underserved communities, new programs were created by the CMR team to quickly mitigate the impact. However, these programs were different from standard governmental operations. They required task force leaders who were dedicated representatives of underserved communities who were able to tap into
social networks and trusted relationships. As a result, they were able to lean on the underserved communities to bring their skills and knowledge to the forefront. For example, one way the CMR team shifted the County government’s course of action was through the Language Access team. Within King County, there are over 30 known languages spoken. Meaning that if we wanted to decrease the risk of the virus spreading, information would need to be translated at a rapid speed. Typically, it takes up to three weeks to get information translated, and even then, the translation can have errors that won’t get resolved until months later. The Language Access Task Force recognized that this would not be adequate for an emergency response considering information needs to be disseminated quickly. Following the City of Seattle’s model, the team decided to hire underserved community members from the region who were fluent in their language to be translators. Before this model, King County's translation services were usually contracted with large out-of-state vendors. Hiring people directly from the communities involved and compensating them hourly per project was something that was not normalized within this arena. By hiring members of underserved communities with the right language skills, they were able to translate materials within three days.

Through collaborating with underserved communities, a timely feedback loop was created to effectively make adjustments when needed. Through their consultation, the Language Access Task Force was able to identify languages that were missing within the database and hire people to translate for those populations. For instance, prior to COVID-19, King County was not aware that there was a large Marshallese community in Auburn that needed information translated. This community was contracting COVID-19 at alarmingly high rates. Because community members knew some Marshallese people, they were able to connect a few Marshallese translators to King County to help translate and disseminate information quickly. Time after time, the community has been able to pinpoint needs and bring people in who they see are missing at the table. Having underserved community members as translators not only allowed the government to provide better service, it also saved lives and created more opportunities for the community to have a seat at the table.

Like the Language Access Task Force, the Community-Based Organizations Task Force hired trusted representatives of underserved communities to serve as “Community Navigators.” In their role, they shared COVID-19 information and resources in the most suitable ways for their respective communities, for example: calling people on the phone or using social media to provide the latest COVID-19 information, delivering supplies to the most vulnerable community members, assisting community members with filling out forms, and facilitating online meetings. Navigators also provided liaison support and surfaced concerns from underserved communities to County officials regularly. They informed King County on what was needed to better support those communities. For instance, the County disseminated cloth masks to several Community-Based Organizations and community members hoping that this would increase the number of people wearing masks. King County thought it was a successful endeavor. However, within a week, the Navigators provided feedback to County employees: that masks were not being used. This was partially because some community members did not feel safe wearing a mask, particularly Black community members who worried about being racially profiled, but also because the masks shrunk after being washed. This led to people not wearing them because they were too tight. County employees elevated the issues to the resourcing team, who then ordered better masks that were more durable to benefit community members. It also resulted in more educational material being produced by the Speaker’s Bureau, who educated King County residents about racial profiling and the need to not police each other when it comes to wearing a mask. Without the Navigators, King County would not have been aware of these issue until weeks or months later, if at all.
A crucial part of working with the community is listening to them and acting on their feedback accordingly. Many government institutions, including King County, have historically solicited community feedback but did not share how it was implemented. Without sharing or acting on this information, it becomes an extractive process in which people share their input, but nothing comes of it. This creates distrust. It is not authentic engagement. The Community-Based Organization and Language Access Task forces clearly demonstrated how to create space for the community to share their expertise, experiences, and feedback while concurrently acting on it transparently, quickly, and respectfully to address their needs. In some instances, it can be hard to act on feedback if resources are lacking. If that is the case, it is important to let those who provided feedback know that resources are lacking and give updates. In serving communities, government institutions must build and extend trust actively and consistently for those they serve. That means being transparent about decisions and holding listening sessions that result in actions. The Community-Based Organizations and Language Access task-force members had already established trust with these community members before COVID-19. Because of these pre-existing relationships, they were able to call on these community members, ask them if they wanted to be a part of the process, have them bring in people, and then let them lead the way.

CONCLUSION
There are many lessons learned in the wake of this pandemic and its response, that could lead to a reimagining of government operations. In reimagining operations, it is an opportunity to compensate, value, and authentically invite communities who have been most harmed by the system to share power and be a part of the government process. Underserved communities are the experts in knowing what their respective communities need. Representatives have ideas and ways of connecting with their communities that those in many decision-making positions do not. People who are most harmed by our systems can better advise on how to fix the system because they explicitly experience those harms daily. They know what they need to not only survive but to thrive. By inviting members of underserved communities to decision-making tables, compensating them for their labor and expertise, co-creating with them, and acting on their needs and feedback, we will be able to shift governmental institutions and processes so that everyone can be served.

As we rely on community expertise, governmental institutions need to find ways to share power, build capacity within underserved communities, and use public resources in ways that uplift communities’ demands. We believe institutions also need to recognize the harms of the past and present and fix them in partnership with underserved communities. Otherwise, community members will never be able to trust these institutions. To have a community-led government, we need to prioritize authentic relationships. From these authentic relationships, there is a potential to establish community-led hubs across the state so resources and information can be easily disseminated, and communities can flourish and be resilient.
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COMMUNITY MITIGATION & RECOVERY BRANCH
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Admin & Communications, Business Taskforce, Community-Based Organizations & Faith-Based Organizations Taskforce (CBO & FBO), Governmental Agencies, Higher Education, Older Adult and People w/Disabilities, Pre K-12 Schools & Childcare, Immigrant & Refugee Taskforce, Latinx Community, Equity Response Team Liaisons, Speaker’s Bureau, & Language Access.

Data Source


“Infant Mortality.” Centers for Disease Control and Prevention, Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, 10 Sept. 2020, www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm#:~:text=In%202018%2C%20the%20infant%20mortality,deaths%20per%201%2C000%20live%20births.


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Managing Risk and Building Resilience
The COVID-19 pandemic has changed the world and the consequences of this global event will have lasting effects. Along with continued carnage left in its wake, the pandemic most assured revealed significant vulnerabilities exposing points of serious weaknesses in global, regional, and local supply chains and networks impacting all sectors of the economy including government. For sectors like healthcare and government, supply chain vulnerabilities that disrupt the delivery of critical first responder supplies, and life-saving medical products put lives in jeopardy and compromises the ability of communities to effectively address emergency situations. When this happens public trust in institutions begins to wane and the resiliency of communities faulter. Shocks to supply chains can hamstring government agencies at a time they are needed most.

The three essays under this theme focus on supply chain resilience, risk management and procurement, and core principles that foster trust in public institutions.

Rob Hanfield focuses on supply chain resiliency and offers four characteristics necessary to building supply chain systems that can be immune to unpredictable shocks.

Zach Huitink emphasizes the critical importance of integrating comprehensive risk management into government procurement systems, policies, and business practices to make them more resilient against significant threats and disruptions.

Rodney Scott and Eleanor Merton explore New Zealand’s effectiveness at combatting COVID-19 highlighting the significant role public trust plays in the success of any national emergency response and the public service principles that contributed to building and earning that social capital.

Here are some key takeaways:

- Unprecedented demand on public procurement in response to COVID-19 pandemic reveal significant vulnerabilities in government supply chains and procurement processes. During this period, attention has appropriately centered on using contracting strategies that enable government to move with speed forgoing full and open competition and using riskier contract designs. The pandemic offers the opportunity to consider how governments can make contracting more resilient going forward. This pandemic reinforced the need to harden public procurement against significant threats and disruptions. To meet this “resilience imperative,” governments must integrate comprehensive risk management into procurement systems, policies, and business practices.

- Developing an effective federal supply chain system that is more resilient and immune to shocks and disruptions and better positioned to respond to future national emergencies must have the following attributes: flexibility, traceability, responsiveness, and global independence.

- More than any other factor, be it masks or lockdowns or border closures, public trust in government has been heralded as the critical determining factor in the management of this pandemic. Communities generally trust experts and officials more than they trust politicians. New Zealand offers a successful example of how protections around public service integrity enable the public to trust public health messages that they receive.
The COVID-19 crisis has placed unprecedented demand on public procurement. Given the rush to procure essential goods and services quickly, attention has appropriately centered on using contracting strategies that enable government to move with speed, while at the same time managing risks from forgoing full and open competition or using risky contract designs. Likewise, governments have taken a number of reactive steps to sustain their vendor bases given pandemic-related work disruptions and attendant effects on vendor business viability. While the exigencies of the current situation warrant these actions, the pandemic should be an occasion to consider how governments can make contracting more resilient going forward. This pandemic reinforced the need to harden public procurement against significant threats and disruptions. To meet this “resilience imperative,” governments must integrate comprehensive risk management into procurement systems, policies, and business practices.

Introduction

Amid the race of global governments to buy everything from personal protective equipment to testing kits, medical supplies, and a variety of other products critical to managing the pandemic, attention rightly centered on moving quickly, including through forgoing full and open competition and using riskier contract designs. Likewise, governments took a number of emergency steps—schedule extensions, paid leave, and others—necessary to sustain contractors given pandemic-related work disruptions and requirements for social distancing.
While the urgency of the situation warranted these actions, the initial experience with COVID-19 reinforced the need to make public procurement more robust going forward. This will not be the last pandemic, nor the last in a range of other adverse events that could jeopardize access to essential goods and services governments rely on for their missions. What happens when a virulent influenza strain plunges society into another public health crisis? What happens in the event of a mass casualty terrorist attack? A catastrophic cyber intrusion? A spate of extreme weather brought on by climate change? How can governments ensure their procurement systems keep functioning to support mission success when one or more of these scenarios become a reality?

While governments cannot predict the future, they can—and must—seize the present, by better positioning the procurement function for when the worst occurs.

In short, governments must make procurement more resilient. Resilience—the “ability to withstand and recover rapidly from deliberate attacks, accidents, and natural disasters, as well as unconventional stresses, shocks, and threats”1—is a growing imperative for governments, given that the hazards and threats they face increasingly cut across organizational and sector boundaries, and expose key systems, functions, and assets on which they rely—procurement, especially—to risks that could result in mission failure.

Framed this way, meeting the resilience imperative in public procurement means managing risk comprehensively.

This can be done. Indeed, whereas governments have historically made risk management a small, segmented back office function, they have since grown to embrace holistic risk frameworks and practices.2 In particular, the enterprise risk management (ERM) approach—a framework to comprehensively identify and treat risks that affect an organization’s ability to achieve its goals and objectives—is now a required component of how U.S. federal agencies deal with risk issues.3 And, both ERM and related approaches like Mission Assurance (MA) are increasingly central in organizational strategy and implementation.

In short, to make procurement systems more resilient, governments need to leverage holistic risk management tools. As a recent review of the U.S. federal experience with ERM put it, the key is to further incorporate comprehensive risk frameworks “into [core] management functions and programs.”4 Such would realize the intent behind comprehensive risk management, which the U.S. federal government describes as “[enabling] information about major risk to flow up and down the organization and across its structures, to improve the quality of decision making . . . and incorporate [major] risk awareness into the organization’s ways of doing business.”5

As one of the most important ways governments do business and accomplish their missions, it is essential to operationalize comprehensive risk management in public procurement.

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To do so, governments can take six immediate actions, each under one of three major building blocks of comprehensive risk management.

Building Block 1: Risk Leadership and Governance

Comprehensive risk management starts with committed leaders who make risk an important consideration when establishing organizational goals and objectives, accounting for how risks of different kinds could affect success. To enhance resilience in public procurement, agencies can take two immediate actions in the area of risk leadership and governance.

Incorporate agency chief procurement officers into government agencies’ executive-level structures and processes for setting goals, strategies, missions, and overall risk appetites. Procurement is among the most core mission support functions of any government agency, meaning chief procurement officers should be a key participant in strategic planning and risk management processes. In this capacity, procurement heads can provide insight about how contracting enables agency missions, the agency’s reliance on contracted goods and services, and the implications of procurement-related risks for accomplishing agency goals and objectives.

A good practice in this regard is for agencies to maintain a risk steering group comprised of leaders from across the organization’s mission and business areas, inclusive of the chief procurement officer, along with leaders from other core functions (e.g., information technology, human resources, and financial management) to assess mission-relevant risks, identify points of agency risk exposure, and develop appropriate risk treatments. The Transportation Security Administration (TSA), for example, has established an Executive Risk Steering Group (ERSG) comprised of Assistant Administrators responsible for major mission and business functions, including acquisition.⁶ The ERSG forum enables administrators to identify cross-cutting risks from threats like terrorism, determining where threats could impact agency operations and how different parts of the agency, including procurement, could take action to reduce risk. If adopted, forums like ERSG could enable agencies to address cross-cutting risk in a complementary and mutually reinforcing fashion, rather than continuing to do so in siloes.

Direct chief procurement officers to collaborate with agency mission owners in identifying mission essential procurement assets (e.g., supply chains, facilities, equipment, etc.) for risk management purposes. Involvement in strategic planning and risk management processes empowers agency chief procurement officers along with their counterparts in other functions to identify procurement-related assets—people, facilities, equipment, information systems, supply chains, and so on—essential to achieving agency missions, an important part of determining precise areas of risk exposure and developing risk treatments that make assets and functions more able to withstand unanticipated disruptions.

A good practice in this regard is for agency leaders to direct the heads of each mission area and business function to collaborate in decomposing missions into essential supporting tasks and assets required for success. For the sake of enhancing procurement resilience, this process enables identification of key procurement-related assets that, if degraded or disrupted, could result in mission failure. The Department of Defense (DOD), for example, adopted a Mission Assurance policy in 2018 that emphasizes breaking missions into essential assets that can then be prioritized for risk management.⁷ Importantly, such efforts may reveal otherwise under-

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appreciated assets critical to mission success. In procurement, for instance, agencies like DOD rely on highly complex supply chains that include prime contractors but also subcontractors that may lack adequate provisions to safeguard against cyber and physical security threats. Indeed, while prime contractors may invest heavily in security measures, vulnerabilities remain, and may be especially prevalent in smaller subprime contractors. Used appropriately, mission decomposition could help agencies identify these types of vulnerable assets and take steps to enhance resilience.

Building Block 2: Risk Identification and Analysis

After establishing goals, objectives, and missions, comprehensive risk management requires identifying and analyzing risks to mission essential assets and functions. Large complex organizations operating in a variety of different environments must consider risks both inside and outside their own boundaries across the “extended enterprise.” This enterprise may extend to inter-agency partners, lower-level governments, and especially, to private and nonprofit contractors with assets on which an agency may rely heavily to perform its missions. To enhance resilience in public procurement, agencies can take two immediate actions in the area of risk identification and analysis.

Identify risks to mission essential procurement assets through identifying and documenting their vulnerabilities to government agencies’ relevant hazards and threats. The procurement function includes actors spread widely across a government agency’s “extended enterprise,” involving a diffuse, often highly geographically distributed network of contractor partners. As such arrangements grow, risk exposure increases significantly given the growing number of hazards and threats to procurement assets.

A good practice in this regard is to use an “all-hazards” threat assessment approach that aims to account comprehensively for potential sources of disruption to agency mission and business operations. Whether carried out internally, or with support from an external partner, these assessments help agency leaders develop a broader conception of hazards and threats, including in the procurement arena. Indeed, whereas agencies may focus extensively on financial or

fraud-related risks in procurement, all-hazards threat assessments also put attention on larger risks from sources like pandemic disease and climate change. In the case of DOD, for example, efforts to understand climate risk have demonstrated how commercial contractor facilities—a key procurement asset—are vulnerable to extreme weather events. And, whereas DOD has taken steps to address climate- and weather-related risks to military installations, comparable efforts focused on contractor sites, plants, and other infrastructure remain a concern. Given the widespread effects of climate change, infrastructure owned by contractors supporting civilian agencies may be similarly vulnerable, warranting agencies consider how more expansive risks could affect their procurement assets.

**Assess the likelihood and expected consequences of each identified risk and prioritize risks according to the combination of likelihood and consequences, along with agency risk appetite.** That agency procurement assets may be vulnerable to a diverse array of hazards and threats necessitates prioritization. Risks from some hazards and threats may be more likely, others less. Likewise, risks from some hazards or threats may entail more serious consequences, others less. In addition, agencies may have greater appetite for some risks than others. Such variation—in likelihood, consequences, and appetite—means agencies must think carefully about the risks on which they will focus.

A good practice in this regard is to rank risks by combining likelihood and consequences, and consider in light of risk appetite. For procurement-related assets (as well as other assets and functions across an agency), what are the expected consequences of a risk based on its likelihood and impact (e.g., in dollars lost, number of sick or injured personnel, degree of lost or diminished functionality in systems and software, failure to deliver promised numbers of units or goods, etc.), and how does this compare to leaders’ risk appetite? Once understood this way, agencies can assess how they will allocate risk management resources and periodically update priorities. For example, while pandemic events like COVID-19 may be highly unlikely, they generate significant consequences, whereas risks from other sources may be more likely but considerably less consequential. In light of the COVID-19 disruption, agency leaders may have much less appetite for low probability but high impact risk events going forward. Through developing and communicating comprehensive risk appetite statements, agency leaders can inform efforts by mission owners and functional leads in identifying and analyzing risks, which can inform risk management efforts as well as be taken into account in subsequent efforts to determine appetite for risks of different kinds. The United States Agency for International Development (USAID) published such a risk appetite statement in 2018, outlining seven key risks (e.g., security and fiduciary risk) and whether the agency had a low, medium, or high appetite for them. According to USAID, this statement aids the agency in identifying, analyzing, and prioritizing risks for management action by coupling assessment of likelihood and impact with risk tolerance per se. Other agencies could consider developing these statements going forward, and include attention to risks affecting procurement assets, thus helping the procurement community in addressing its most pressing risk challenges.

**Building Block 3: Risk Treatment and Implementation**

Identifying, analyzing, and prioritizing risks enables agencies to address them through alternative “treatments.” Four common treatments in comprehensive risk management are (1) acceptance—accept a risk given the potential upside from taking it; (2) avoidance—avoid the risk by ceasing the activity that creates exposure to it; (3) reduction—partially reduce the risk; and (4)
sharing or transfer—share risk with another party (e.g., a contractor), or transfer it to that party.\textsuperscript{10} Selecting among available treatments—and then implementing, monitoring, and communicating results—is where comprehensive risk management ultimately makes an impact. To enhance resilience in public procurement, agencies can take two immediate actions in the area of risk treatment and implementation.

**Design risk treatments—such as accepting, avoiding, or reducing risk—through changes in procurement policies, infrastructure, and business practices.** Based on risk prioritization, agencies can design treatments that address risk to mission essential procurement assets and the policies and practices governing their use. In the procurement context, assets may include facilities—either government or contractor, equipment, supply chains, information systems, and others identified through mission decomposition.

A good practice is to assess where and how different assets are used in the procurement process and implement treatments through modifying policies and practices applicable to that asset. For example, in procuring products and services, agencies follow a general process of writing requirements, developing acquisition strategies, soliciting and reviewing bids based on source selection criteria, awarding contracts, and administering contracts in the post-award stage. For risk management purposes, agencies could map procurement assets across this process to understand which assets the agency relies on at which step; to which priority risks the assets are exposed at one step or another; and which treatments could be used to address risk. As part of its own ERM effort, the Department of the Treasury has assessed risk management during quarterly strategy and performance reviews it otherwise already conducts under the GPRA Modernization Act of 2010 (an update to the original 1993 GPRA legislation that enshrined agency strategic planning and performance management in law). Agencies could include resilience as among the requirements feeding into the design of a piece of hardware or performance of a service, as well as incorporate resilience—of the product to be procured, as well as the facilities and other resources through which the contractor would design and deliver it—into its source selection criteria. Likewise, policies informing acquisition strategies and contracting practices could be modified or expanded to incorporate resilience considerations and

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encourage tailoring strategies to enhance resilience—such as through diversifying sources of supply and ensuring availability by awarding contracts to multiple vendors, as well as using flexible contract types or expedited source selection procedures.

**Implement risk treatments, monitor impact, and communicate results to support revisions and updates in agencies’ overall risk management strategy.** Well-designed risk treatments only become impactful through effective implementation, monitoring, adjustment, and communication of results to agency stakeholders. Accordingly, as part of their overall risk management and resilience building efforts, agencies should follow through by putting risk treatments into action and assessing their effects.

A good practice is to incorporate risk reviews into recurring engagements where agencies develop and discuss strategy, performance, and risk issues. This action brings comprehensive risk management “full circle”—from starting with incorporating mission owners and business functional leads, including procurement leads, in longer-term strategy and risk processes, to engaging them in shorter term, more frequent exercises at which they can communicate results of ongoing risk management efforts and specific treatment initiatives. Agencies could establish these reviews or take advantage of them if they are already carried out, to assess progress in addressing procurement-related risks, communicate results, obtain feedback from agency stakeholders, and make adjustments as needed.

**CONCLUSION**

Procurement remains a fundamental enabler of mission success for government agencies, making it imperative that procurement systems function efficiently, effectively, and robustly. In the increasingly complex and hard-to-predict environments in which agencies operate the need to position mission support functions like procurement is as urgent as ever. By leveraging comprehensive risk management approaches and operationalizing them in procurement systems, policies, and business practices, agencies can build resilience to shocks and disruptions, and continue to achieve missions on behalf of the public—even when the worst occurs.

**About the Author**

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Federal and state response to the events of the COVID19 pandemic has proven to be largely reactive and flawed. Moreover, the national response infrastructure of the U.S. federal government has never encountered an emergency of this magnitude where every industry sector was affected by disruptions at the same time due to global “stay at home” policies and an almost complete economic shutdown. This essay offers insight into developing an effective federal supply chain system that is better positioned to respond to future pandemics and similar societal disruptions. It identifies four specific characteristics of needed to foster supply chain resiliency and immunity encompassing changes to federal agency governance, technology investments, changes in the strategic national stockpile, and domestic supply base localization for critical materials.

Introduction

My 2010 IBM Center report, Planning for the Inevitable: The Role of the Federal Supply Chain in Preparing for National Emergencies, following the SARS epidemic, described the four key characteristics required for the federal government to prepare for future pandemics:

- Supply chain governance through a centralized planning team
- Supply chain risk assessment, metrics development, and identification of potential failure points
• Development of a comprehensive strategic stockpile plan
• Education and training for “at risk” agencies and suppliers of critical and required components

This approach remains largely relevant today. Yet our federal and state response to the events of the COVID19 pandemic has proven to be largely reactive and flawed. Moreover, the national response infrastructure of the U.S. federal government has never encountered an emergency of this magnitude where every industry sector was affected by disruptions at the same time due to global “stay at home” policies and an almost complete economic shutdown. This essay outlines key characteristics for developing an effective federal pandemic supply chain that is better position to respond to future pandemics and similar societal disruptions.

Supply Chain Issues Observed During Early Phase of COVID Response. February–May 2020

During the spring of 2020, I worked on a defense supply chain task force working to develop a framework for managing future widescale pandemics and disruptions. Hundreds of interviews and discussions took place with frontline government employees, DOD officers, hospital providers, physicians, nurses, and state-level emergency response officers involved in daily response planning, acquisition and contracting challenges dating from the earliest days of the crisis. The observations of failures that occurred are illustrated in this partial list of issues:

• Lack of federal level market intelligence left the government ill-prepared to act early and respond with supply chain planning activities for critical materials.

• Lack of technology to enable material visibility led to a lack of demand insights for where material was most needed, with a resulting inability to detect where shortages in critical PPE, masks, and supplies were needed in hospitals.

• Lack of a barcoding system prevented tracking and tracing of material in the transportation and warehouse supply chain and relied on manual processes prone to human error.

• Reliance on suppliers that were primarily concentrated in China, which during this same period were curtailing exports of these materials for their own use.

• Disparate communication and coordination between FEMA, DHS, DLA, and other agencies led to confused communication regarding distribution of materials, test kits, and therapies.

• A lack of acquisition and planning capability in many government organizations created a poorly executed pandemic supply chain response.
Enhancing National Supply Chain Immunity

The insights and supply chain characteristics outlined in this essay were developed in response to the problems observed from the impact of COVID-19 on the national supply chain. They focus on issues of governance, technology, strategic stockpile planning, and supply base management, providing fact-based insights that if adopted will improve the U.S. national emergency response posture as relates to vital supply chains and their management.

Many have observed a significant performance gap in the national response to the COVID-19 pandemic. What contributed to this performance and response gap? Some of the problems are inherent in the structures that have existed for some time and not only with the national pandemic response function, but also a significant reliance of the entire U.S. healthcare systems on the outsourcing of vital medical supplies to foreign countries driven solely on cost savings. Communication gaps amongst key nodes in the federal pandemic response network became evident during this pandemic response. Given my research, what was clearly missing and desperately needed is the development and use of a comprehensive governance structure that would more effectively coordinate decision-making amongst government agencies and (possibly nongovernmental organizations) with the end goal of forming a “whole of government” response to national emergencies as the COVID-19 pandemic.

Early in the pandemic response, many federal agencies operated in silos when what was needed was a “whole of government” response posture with capacity to address events and crisis as they unfolded while also dedicating resources to foresee and anticipate potential obstacles and challenges endemic to an ever evolving and fluid situation as a pandemic.

However, the government agencies were not all to blame. After all, the government is reliant on acquisition from a network of private sector healthcare distributors and group purchasing organizations, which had largely outsourced production of critical materials such as personal protective equipment (PPE), medicines, and other healthcare supplies to the lowest cost suppliers in the world. It became apparent that 90 percent of these low-cost suppliers were based in China, Vietnam, India, Malaysia, and other Asian markets. During this global pandemic, most of these countries closed their borders, and suddenly imports to the U.S. of critical medical supplies ground to a halt.
The post-COVID world is going to look very different, and we need a new pandemic and emergency response system for the U.S. This requires going beyond political finger pointing to seriously working together to address significant gaps and issues within the national emergency pandemic response system making investments in both the national healthcare and supply chain systems, respectively.

**Attributes of Supply Chain Immunity**

The basis for developing a federal response framework will be based on an emerging concept that I call *supply chain immunity.* Various sectors that comprise civilized society such as healthcare, food, and energy rely on critical supply chains to operate. What components go into designing a supply chain immune to shocks to its systems by pandemics, cyberattacks, or any other disruptions or threats? There are four key characteristics to making a national supply chain system immune to potential disruptions and shocks: **flexibility, traceability, responsiveness, and global independence.**

These characteristics reflect lessons learned from the recent and evolving pandemic response. Developing a framework that if followed could contribute to building supply chain immunity will require significant changes in the way national supply chains are managed, including the creation of a new governance structure for overseeing and directing activity between the public and private sectors.

**Flexibility.** A key component of an immune supply chain is the ability to withstand different demand requirements that arise on short notice. This requires advanced planning, effective category intelligence, and strategic sourcing plans for every key need that might arise in an emergency. Requirements should embed industry standards to create maximum flexibility and increase alternatives in the event of need. A second feature would be establishing “take or pay” distributor commitments with room to update contracted quantities over time. This approach was used by the American Red Cross in its ongoing supply strategy. A third preparation would be the direct investment in domestic supplier development to ensure availability of critical supplies. A good list to begin with is the National Response Framework (NRF) items, which then might add other requirements based on wargaming simulations to assess what might be needed under different scenarios. As I observed firsthand (while working with the Federal Emergency Management Agency), chronic shortages existed for a number of items that were not available domestically, but were produced offshore, mostly in China. When borders were shut down, the supply of materials was halted, and supply contracts that could not be fulfilled became meaningless. Planning ahead would have alleviated such bottlenecks from happening.

The ability to have a centralized planning team that can gather intelligence from multiple sources and integrate multiple state and hospital requirements into a unified whole would facilitate nimbleness. Building a nerve-center for market intelligence requires advanced planning, effective category intelligence, and advance development of strategic sourcing plans for specific requirements (personal protective equipment, pharmaceutical products, med-surge supplies, etc.) that might arise under different scenarios. This team would need to regularly perform supply market analysis, threat analysis, war-gaming analysis, and monitoring of global medical alerts. Cross-agency representation in this planning team should include (at a minimum) mem-


bers of all the agencies involved in national emergency response\textsuperscript{3} that collect intelligence from within their agency and provide it as input into the early planning phases of a response. Along with planned flexibility, a balanced strategy that weighs the cost of stockpiling of items vs. flexible contracting arrangements with a pool of trusted suppliers should be developed.

**Traceability.** The second component of an effective response is visibility: *you can’t manage what you can’t see!* In a national emergency, the most valuable commodity is information. Decision making is enabled only when information is available to see what you have in warehouses and distribution centers that is available to be deployed. Visibility of material occurs through investments in material visibility technologies, including product barcodes, track and trace technologies and real-time mobile dashboards that summarize the current state of material that is available within the supply chain. Creating material visibility does not involve expensive technology, as most of it has been around for 20 years or more, so the investment is minimal.

If material is not physically owned by the government and stored in warehouses, then contractual vehicles must be established ahead of time with the private sector, to ensure that they have material stocked and available for use. Such contractual requirements must be supplemented by inventory visibility systems that extend into the private sector which can be viewed by government agencies.

During the COVID crisis, members of the national stockpile planning team were running blind. Lack of visibility is like trying to drive a car with no speedometer or gas tank indicator—you have no idea how fast or slow you are going, and what you need to make it to your destination. Decision makers can rely inventory visibility systems, that employ barcode and QR code tracking of material through the supply chain, through a trusted network of distributors and manufacturers. Consumption of supplies should also be tracked, so that supply allocation decisions can be made in real-time based on daily or even hourly updates on what is happening.

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\textsuperscript{3} Strategic National Stockpile (SNS), Assistant Secretary for Preparedness and Response (ASPRI), U.S. Dept. of Homeland Security (DHS), U.S. Dept of Health and Human Services (HHS), Biomedical Advanced Research and Development Authority (BARDA), Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA), National Institute for Occupational Safety and Health (NIOSH), FEMA, and Defense Logistics Agency (DLA).
For example, centralized supply chain control tower technology could be used to track where products are coming from, where they are being transported to, and who is responsible for receiving them. The hoarding that occurs in the national stockpile, state warehouses, and hospitals can be prevented through inventory visibility using widely available barcode or QR tracking technologies. Becoming part of this visibility network would be a requirement for any party that wishes to engage with the federal response system of trusted suppliers, distributors, manufacturers, hospitals, and government agencies. The system should be simple to configure and add or delete new entities and provide an easy to navigate system of inventory visibility. Control tower technology requires a centralized infrastructure and standardized nomenclature that allows material data to be easily integrated into a data lake that serves as the single source of truth.

What is a Supply Chain Control Tower?

A supply chain control tower is traditionally defined as a connected, personalized dashboard of data, key business metrics and events across the supply chain. A supply chain control tower enables organizations to more fully understand, prioritize and resolve critical issues in real time. A smarter control tower should provide end-to-end visibility across the supply chain—particularly into unforeseen external events. It should leverage advanced technologies, such as AI with machine learning, to help you break down data silos, reduce or eliminate manual processes, and get real-time actionable insights. A smarter control tower will enable collaboration across teams and partners and preserve organizational knowledge to improve and accelerate decision-making and outcomes. Ultimately, this helps you better predict disruptions, improve resiliency, manage exceptions, and respond to unplanned events.

Responsiveness. A national response system must be decisive and efficient in making decisions, based on data provided by the visibility system. A leadership team cannot manage what they cannot see—and so there must be clear channels of communication to review data by the experts who are best positioned to understand and derive meaning from it. Time is of the essence during an emergency. A leadership team cannot manage a crisis if there are not lines of communication with up-to-date intelligence reports from the field. A team must also have the right experts who have the requisite knowledge and experience understand and derive meaning from the intelligence and render effective decisions that lead to actions.4 Data on inventory levels, material capacity, materials in transit, consumption levels at hospitals, emergency use authorization, specifications and standards, etc., all need to be available in real time, consumed by a team of decision makers using a sensible governance structure and deployed rapidly by senior leadership.

This new form of governance to manage the Strategic National Stockpile, the allocation of material to states, counties, and cities, and the buy-in of the states to adhere to this national policy may require some legislation to approved and stand-up ahead of time. The governance structure must also have explicit criteria and triggers that are enabled to respond to force majeure in the future. The national response team noted above must have the ability to scan markets, process information, and deploy decisions effectively.

Global Independence. Independence is a key attribute for creating supply chain immunity. There are various components within the national strategic stockpile that cannot be sourced 100 percent domestically as it may not be practical or even possible. Outsourcing of manufacturing capabilities in North America has been on-going for more than 20 years. We need government policies that can establish domestic sources where it makes sense, to support national security, and create a domestic network of trusted suppliers who are willing to become part of the response system. This may also involve partnering with risk monitoring services that monitor global events in supply markets and map these with key global suppliers. This can facilitate an understanding of the full risk picture, promote securing national needs first, with a “cold eye” on global impacts.

Early warning is the key to early action, which can prevent shortages and capacity problems from occurring if one is too late to the game. The idea is not to remove global suppliers from the field, as this is not only impossible for certain categories of material but may be detrimental to overall supply chain risk. Rather the goal is to create a network of suppliers that can flex and collaborate through a trusted co-determined future relationship with a major government agency. Many global suppliers would be pleased to be part of such a U.S.-centric network.

CONCLUSION

We cannot assume that the COVID pandemic is a once-in-a-lifetime event. Once it is in our rear-view window, we cannot simply go “back to normal” and return to federal response mechanisms that existed in the past. Development of an effective pandemic response requires that we understand the way that the whole of government and society sees a contingency or crisis. We also need an emergency response system that is prepared for such events as cyberterrorism, blackouts in our national grid, and bioterrorist threats. This requires federal investments in a centralized planning and response nerve center, coupled with investments in material visibility, acquisition expertise, and development of a domestic supply base for critical materials.

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Trust and Resilience: How Public Service Principles Encouraged Compliance with COVID-19 Public Health Guidelines in New Zealand

by Rodney Scott and Eleanor Merton

New Zealand is an island nation of five million with high rates of international travel. When COVID-19 struck, the country quickly recorded 1,500 cases. Following a public health response, community transmission of the virus was eliminated within two months. This success is best explained as an example of extremely high voluntary compliance. A “team of five million” complied with more stringent government guidelines than those of similar nations yet required significantly less enforcement activity. This essay explores the role of trust in the success of New Zealand as one standout case. Trust drove voluntary compliance with social distancing measures, which eliminated community transmission of the virus. Below we use the lens of public administration to analyze how New Zealand was able to earn and cultivate this trust.

Introduction

More than any other factor, be it masks or lockdowns or border closures, public trust in government has been heralded as the critical determining factor in the management of this pandemic. Communities generally trust experts and officials more than they trust politicians. In New Zealand, protections around public service integrity enable the public to trust public health messages that they receive.

When COVID-19 struck New Zealand, a public health response of rigorous social isolation measures included closure of all nonessential businesses, a transition to fully online learning by schools and universities, and restrictions on personal movement via a general stay home order. Following this public health response, community transmission of the virus was eliminated within two months. After over 100 days with no community transmission, imported cases led to a new cluster, which was quickly eliminated again through a second lockdown limited to the city of Auckland. At the time of writing, New Zealand had recorded 25 deaths related to COVID-19, while being one of the few countries back to enjoying concerts and live sporting events. This has secured the country the top spot in Bloomberg’s COVID resilience ranking and the Lowy Institute’s COVID Performance Index.3

Other international examples of success involved authoritarian measures such as large-scale surveillance and enforced isolation in China, Bluetooth data tracking and legal implications for non-compliance with health measures in Singapore, and stringent local containment in Vietnam. Less successful international examples that did not apply such comprehensive lockdown measures, such as the U.K., U.S., and Australia, still faced compliance issues. In contrast, New Zealand had high levels of voluntary compliance for their rigorous lockdown.

While this essay primarily explains this voluntary compliance with high trust in government, there are a few contributing factors to be acknowledged in the cultural context and structural elements of New Zealand’s system of government. New Zealand’s comparatively collectivist and communitarian mindset was key,4 reinforced with government messaging to ‘be kind’ and reference to the ‘team of five million.’5 New Zealand is a social democracy6 where the concept of ‘fairness’ dominates political discourse.7 This culture is supported by the strength of New Zealand’s social safety net, which was bolstered to protect people from the most significant hardships, and the public health system, which is mostly free or heavily subsidised at the point of service. The social safety net was very responsive, able to process new payments such as a wage-subsidy scheme within two business days8 and thereby make it easier for people to comply with social distancing measures.

Five Principles for Maintaining Public Trust in the Public Service

With this understanding of the New Zealand context, we are then able to examine how public trust led to such high levels of voluntary compliance with government instructions over the course of the pandemic to date. The link between public trust and voluntary compliance is well-established across a range of policy areas;9 populations will only mobilize in response to government instruction if they feel that the government is competent and seeking to act in their interest. The two key determinants of public trust are therefore public sector integrity and the

quality of public services.\textsuperscript{10} Visibility of the competence and values of government is even more important in times of crisis when both public servants and elected officials may be empowered to make more discretionary decisions without following the fullness of ‘peace time’ procedures. Both elected politicians and independent public servants provided this visibility in New Zealand’s COVID-19 experience, but politicians focused on making decisions in their capacity as duly elected representatives, while public servants provided trustworthy information and focused on implementation of government decisions.

In several other countries, trust in government has been falling over recent years.\textsuperscript{11} Conversely, New Zealand had been recording high public trust prior to the pandemic, which then drastically increased during the pandemic.\textsuperscript{12} This is attributed to five principles at the heart of the New Zealand public service: merit-based appointment, political neutrality, free and frank advice, open government, and stewardship.

- **Merit-based appointment** ensures that public servants who are expert in their fields ascend to leadership positions within the public service that demand that expertise. This is done absent political influence. For example, Director-General of Health Dr. Ashley Bloomfield is a medical doctor specializing in public health who became one of the ‘faces’ of the government’s pandemic response. It is unacceptable and deemed an offence for anyone (including the Governor-General, Prime Minister, or other ministers) to attempt to influence the appointment of a public servant. In New Zealand, the Public Service Commissioner—head of the public service—appoints the heads of department, who then appoint all staff within those departments. One such head of department (appointed by the Commissioner) is the Government statistician, who has sole responsibility for determining the procedures and methods employed in the collection and publication of official statistics, ensuring their political independence and impartiality.\textsuperscript{13}


\textsuperscript{13} Statistics Act 1975.
• **Political neutrality** refers to the conduct of public servants, once selected, which is required to be scrupulously nonpartisan, allowing them to equally serve under governments of any political leaning. Senior public servants typically do not make their political views known—for example, the current commissioner, Peter Hughes, claims that not even his own family know his political beliefs. Accordingly, in his figure-head role, Dr. Bloomfield did not advocate for or against decisions made by the government, but instead explained the health information and analysis that informed whatever decisions had been made.

• Public servants are required to provide **free and frank advice** directly to ministers, analyzing the costs and benefits of different approaches, and given ‘without fear or favour.’\(^{14}\) The first time they are asked to provide advice on a topic they do so based on their best professional judgement, even if they expect the government to reject it. Subsequently, they provide advice on how best to implement the policy the government has chosen.

• Records of advice to ministers cannot be destroyed\(^ {15}\) and are generally made publicly available as part of **open government**. There are very narrow grounds for withholding the release of such advice, as assessed by an independent Ombudsman.\(^ {16}\) Daily press conferences over lockdown also contributed to open government through increased transparency and opportunity for participation, with Dr. Bloomfield made available to respond to questions.

• **Stewardship** involves some nuanced balancing of the heads of departments’ independent statutory obligations against their obligations to support ministers’ stewardship responsibilities. However, the crux of the principle is maintenance of public service capability to offer free and frank advice to successive governments, and maintaining legislation, assets (including organisational health and institutional knowledge), and long-term plans. Public servants gave effect to this in having acted prior to the pandemic to maintain the capacity and capability of their departments to deal with crises.

### Applying New Zealand’s Public Service Principles in Other Jurisdictions

These five principles are common refrains in public administration around the world. Yet they are challenged by practical realities—by politicians who want to hire people they know, or who will portray them in a favourable light, or who will hide embarrassments, or who only have a view to the short term and do not value responsible management of institutions over time. New Zealand has taken extra care to preserve the principles because they have extra significance given the New Zealand system of government. New Zealand is a small country, without the capacity for maintaining separate shadow public service leaders ready to step in following a change of government. The New Zealand system has a much smaller role for lobbyists, and so the public service plays an important role in ensuring ministers are aware of contrary perspectives. There are fewer checks and balances, with responsible government (a blurring of legislative and executive branches) and a unicameral legislature, so the public service plays an important role in supporting the transparency and impartiality that in other jurisdictions might be provided by oversight from another political body. There are few think tanks, and so the public service is responsible for providing independent statistics and long-term insights.


\(^{15}\) Public Record Act 2005.

\(^{16}\) Official Information Act 1982.
So how is it that New Zealand protects these principles? To put it most simply, the principles are protected in New Zealand by law. The principles were recognised as critical to supporting public trust and confidence in public institutions in 2018. The government saw such principles being eroded in other countries and wanted to act pre-emptively to strengthen them, recognising that they would be difficult to restore once lost. Their protection was then enshrined in the Public Service Act 2020, which places legal obligation on the (politically neutral and merit-selected) head of each department to uphold the principles, owed as a responsibility to the Public Service Commissioner.

The narrative that lost principles are hard to restore might be a cause for pessimism in jurisdictions that struggle with public trust in officials and institutions. But New Zealand’s system of government was not born fully formed. The principles were constructed, progressively strengthened through successive rounds of reform. Some, like merit-based appointment, have had strong legal protections since 1912. Others, like stewardship, were introduced more informally as part of public administration discourse (in the 1990s) and then somewhat symbolically added to legislation (in 2013) before eventually being codified with instrumental legislation (in 2020). This is evidence that just as the erosion of convention can be from a thousand cuts, construction of principles and trust can be incremental from the laying of a thousand bricks. As we shift to exploring how other jurisdictions may learn from the New Zealand experience to take steps toward rebuilding public trust, we therefore acknowledge that these steps might most usefully be gradual, yet deliberate.

Some characteristics of other systems present difficulties for applying the five principles described above. In some jurisdictions, the dominance of both political party registration and political appointments in the public service complicates the application of political neutrality. For example, the U.S. political process results in a significant proportion of the population, including public servants, being registered with a political party. Media coverage will often begin “Official X, a registered Democrat/Republican, said . . . ” where such a declaration would be unheard of in New Zealand. As of 2016, there are approximately 4,000 political appointments in the U.S. federal executive branch (of which about 1,200 require Senate confirmation). At the highest level, responsibility for departments lies with politically appointed Cabinet secretaries. Although it is unlikely that all political appointments in a public service could be replaced by politically neutral merit-based career public servants, a starting point may be to review the necessity and appropriateness of each politically appointed position. An additional convention where senior officials refrain from political expression or affiliation would provide the foundations of trust in some modicum of political neutrality. Or, if such a convention were to prove too difficult to implement generally across the public service, a narrower application might be to limit the convention to those roles that involve providing trustworthy or factual information to the public.

Otherwise, mechanisms that protect the provision of free and frank advice may be a useful interim measure for increasing trust. This might involve creating distinct channels for advice from nonpartisan experts to reach decision makers without passing through layers of political management, ensuring that science and evidence are at least included as inputs of discussion by political leaders. Likewise, supporting open government might best be achieved by vesting statutory responsibility for the collection and release of official information and statistics outside the

control of executive government. Regarding stewardship, there may be targeted approaches to introducing stewardship duties (e.g., maintenance of a current pandemic response plan). Such duties may be legislated, either for the executive branch (the customary U.S. approach), politically neutral officials (the predominant New Zealand approach), or other legislative branch agencies (e.g., the U.S. Congressional Budget Office or the Ombudsman in New Zealand).

CONCLUSION

The COVID-19 pandemic is globally acknowledged as one of the most significant events of a lifetime. This also makes it one of the most significant learning opportunities. Some of these lessons are specific to policy areas like public health, emergency management, and the future of work and education. But stretching over all these policy areas, public trust has been a major factor in the relative success of different national approaches to the pandemic. This is largely because trust supports compliance, with much broader benefits across all aspects of public policy and administration, not solely in the pandemic context. In New Zealand, public trust is built and supported by the five interconnected principles, whose impact has been illustrated in the pandemic response. Public trust and confidence were built and maintained by independent experts empowered to provide their best advice, foster transparent government, and consider longer time horizons outside the churn of political demands. Although the specifics of New Zealand's application of these principles may not be directly transferable elsewhere, the various options presented above might offer initial steps toward a greater role for politically neutral public servants protected from partisan influence and censorship. As the public gains a sense of the values of their public service and pieces together evidence of its competence, the foundations of trust can be laid and built on.

THE VIEWS EXPRESSED IN THIS ESSAY ARE THE AUTHORS' ALONE AND DO NOT REFLECT THE PUBLIC SERVICE COMMISSION OR THE NEW ZEALAND GOVERNMENT.

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