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Inspiring innovative government

Open for disruption

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Edition No. 3



About @gov

@gov is a digital magazine designed to deliver forward thinking and practical insights to government professionals as they face increasing demands and emerging social needs in a rapidly changing world.

Offering insights spanning issues that affect both national and local governments, *@gov* looks at the most pressing topics faced by government and public sector organizations.

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From the editor

We are in an era of change, where technology, geopolitics, and citizen expectations are rapidly evolving. Citizens expect government to deliver today while looking forward to the future. Business as usual is no longer an option.

This edition of @gov explores how the public sector is harnessing disruption as an opportunity to transform. We take a look at how governments are becoming digital leaders and market architects, re-thinking approaches to service delivery while staying on top of emerging trends and threats.

Governments that want to lead disruption need to have digital leaders at the helm. Charles Collier, a Principal at KPMG in the US, says public sector CIOs have to work at least as hard as those elsewhere given flat or declining budgets, but the best are using data and technology to transform their organizations (page 6).

Innovative governments already lead most companies on open data, publishing information that

can be used for any purpose by the public. In an interview with Alex Benay, Canada's chief information officer, we hear how one such leader plans to revolutionize a country's approach to data, using a concept he calls "open by default" (page 10).

Our 'Spotlight' section (page 18) examines how governments are rethinking how they deliver health and human services including social care, family care and housing, as some move from direct provision to new commissioning models. While it can have benefits, commissioning requires public sector organizations to develop a new range of skills, including better use of data and understanding of customer needs.

Finally, blockchain, a technology that generates a permanent, shared and tamper-proof digital ledger, is a technology that has been touted as having huge implications for all industries including the public sector. Leonard Brody, author of the *The Great Rewrite* in partnership

with KPMG in the US, discusses how the US State of Delaware and the UK's Land Registry are testing blockchain's potential in tracking events and minimizing fraud (page 30).

If you have any comments or questions about this issue of @gov or you have subjects you'd like us to consider, please get in touch at government@kpmg.com.



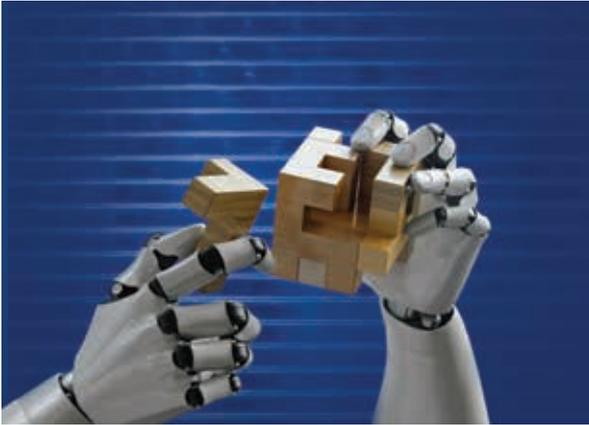
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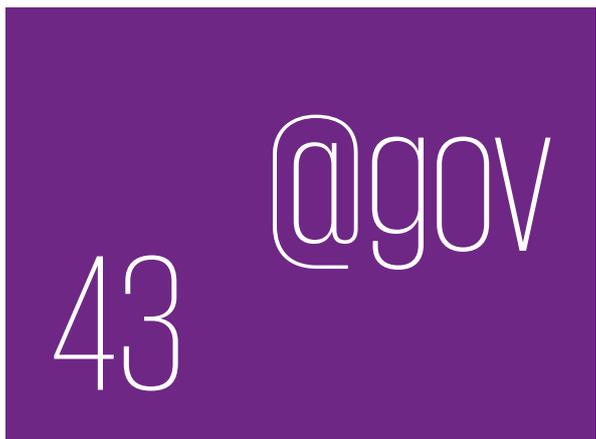


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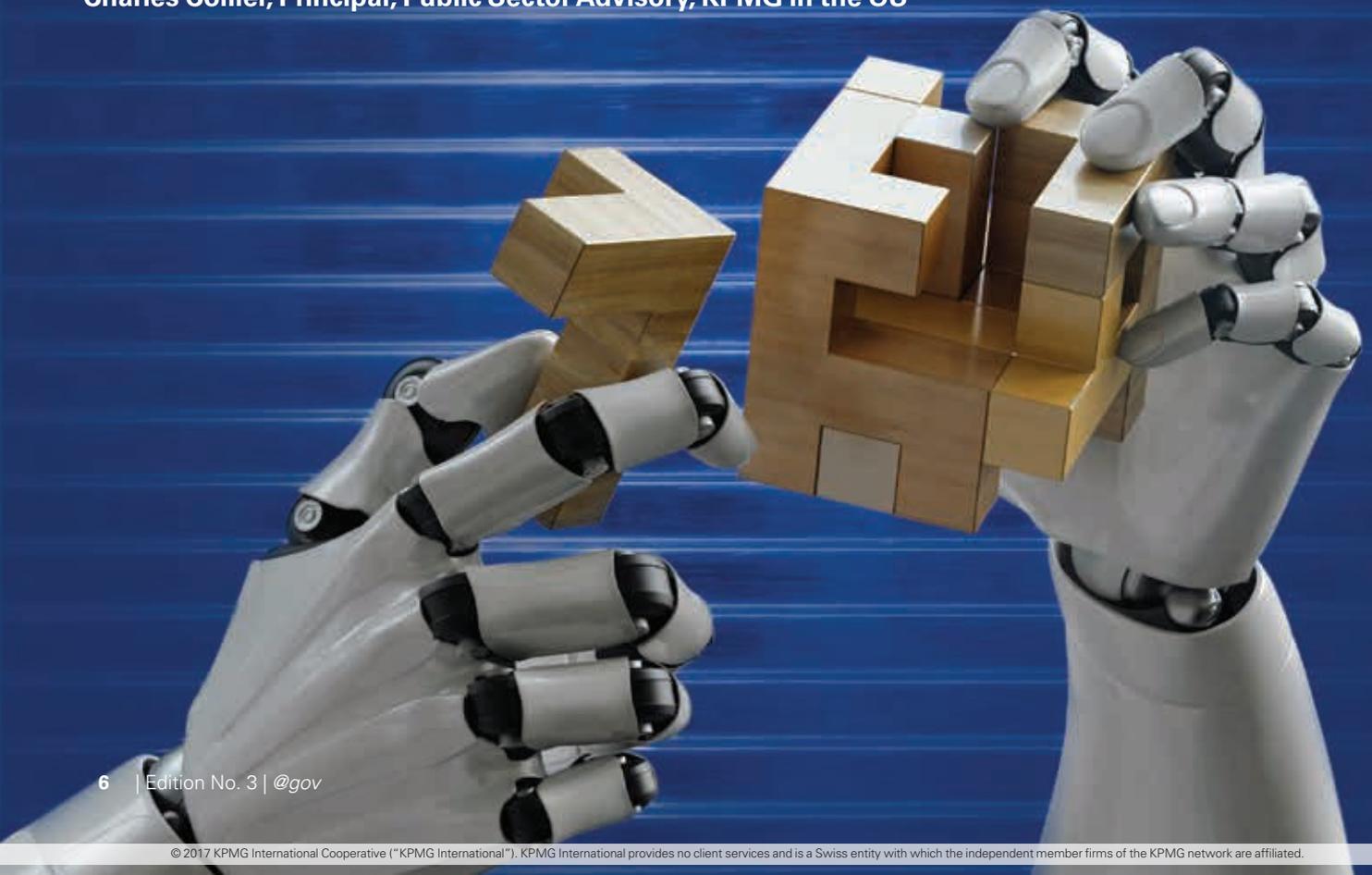


@gov Editorial Board



In tough times, government CIOs can be digital leaders

Charles Collier, Principal, Public Sector Advisory, KPMG in the US



The role of the state and local government chief information officer (SLG CIO) in the United States is at an inflection point. While there is continued emphasis on delivering a stable and secure IT environment, there is an increasing push to reduce operational and maintenance costs through IT transformation to fund the modernization of aging systems and introduce new digital capabilities that improve engagement with citizens.

In short, SLG CIOs are evolving. The best are working as service integrators and brokers who bring together capabilities from industry and internal assets to address business priorities.

I work with and talk to SLG CIOs regularly. Based on trends I see developing and the detailed results from the Harvey Nash/KPMG CIO Survey, the largest IT leadership study in the world which includes responses from 118 local government organizations, it is clear that SLG CIOs are becoming digital leaders and influencers, involved in solving business challenges and leading innovation.

CIOs who are not able to make the leap to becoming a digital leader and innovator risk having their roles diminished. As spending shifts from traditional IT departments to programs and cloud services, some organizations are creating new roles such as chief data officer and chief innovation officer to take over the strategic and visionary aspects of the CIO role.

But the best SLG CIOs are extending their influence to new areas. Technology is becoming embedded across their organizations, requiring them to engage in new ways with business strategy and operations. In fact, the CIO Survey suggests that SLG CIOs are more likely than others to be leading innovation

across their business, with 35 percent doing so compared with 26 percent in all sectors.

A few US states, such as Colorado¹, are looking at CIOs as a source of innovation and an enabler of economic development, with influence on the whole organization. Utah's Department of Technology Services has developed a reputation for innovation, recently winning a prize from Amazon for a driver's license practice app that works through the online retailer's Echo's Alexa voice service.²

IT transformation and intelligent automation

Many SLG CIOs are trapped by expensive legacy software applications and IT infrastructures that are difficult and expensive to maintain. As these systems consume more of the IT budget, less money is available for new projects and innovation, with nearly two-thirds of SLG CIOs dealing with flat or decreasing budgets. Only 38 percent of SLG CIOs expect increases in their IT budgets over the next 12 months, compared with 46 percent across all sectors.

In response, some CIOs are working to transform their IT service delivery model with aims including a lower cost structure, and more agility and responsiveness. They are doing

so with techniques like agile and modular development, moving future applications to the cloud, and using 'digital labor' — which may be better described as intelligent automation, as it often involves helping staff to do their jobs better rather than replacing them with robots.

Intelligent automation, which can include robotic process automation, machine learning, cognitive computing, and artificial intelligence, is moving from discussion topic to something being implemented by several US states. KPMG's CIO Survey find that just 11 percent of SLG CIOs are making significant or moderate investment in 'digital labor' compared with 23 percent across all industries, but this looks set to increase: KPMG in the US has met with several CIOs regarding the topic and I am aware of at least four pilot programs being launched.

There are several reasons for this shift. Many states have hiring freezes and those with tax revenues linked to the prices of oil and natural gas are seeing budgets slashed, but demands on IT increase regardless. At the same time, both software and staff are aging. Many states use applications that are in dire need of modernization, while many others have 30 percent to 40 percent of their workforce eligible to retire in the next three to five years.³

¹ Colorado Names a New CIO. Retrieved August 1, 2017, from <http://www.govtech.com/state/Colorado-Names-a-New-CIO.html>

² Nyczepir, D. (2017, April 03). Utah's Cloud Flexibility Welcomes Innovative IoT and AI Solutions. Retrieved August 1, 2017, from <http://www.route50.com/tech-data/2017/04/utah-state-cio-mike-hussey/136690/>

³ Beating the Brain Drain: States Focus on Retaining Older Workers. Retrieved August 2, 2017, from <http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2017>

States are also having a hard time attracting younger workers; several capitols are located in low unemployment cities where they compete with high-tech firms for talent, including Austin, Texas.

There are several areas with strong potential for applying intelligent automation:

- **Application testing automation** allows IT organizations to provide program areas with more enhancements by shifting resources from integration testing to development.
- **Security operations**, where automation can help detect anomalies and “smart” algorithms can dynamically analyze attacks of the past in order to present similar events in the future.
- **Call centers**, where intelligent automation can improve efficiency by automating repetitive lower-level functions. This can mean agents are less likely to quit their jobs, helping the states that either do not have the budget or cannot hire enough staff.
- **Internal functions**, including IT service management where it can improve efficiency; finance, where it can transform what at present are often manual and inefficient processes such as payment, billing and reconciliation; and program integrity work to tackle fraud and waste, where it can help select which cases to pursue.

Data and security

Government organizations are drowning in data but many do not have effective data governance or know how to use

data effectively, with just 12 percent of SLG CIOs in the survey seeing their organizations as very effective in facilitating the use of data and analytics.

Data sharing across government agencies, such as public safety sharing with education and health and human services, is still very challenging — the process of making agreements on who can have access to what data and how to share it remains an obstacle. However, the use of data analytics and business intelligence continues to increase at the agency level.

Cyber security is still an area of significant focus, with many states increasing funding, legislative mandates or both. The CIO Survey finds that 48 percent of local and state governments see improving cyber security as a key business issue, compared with 40 percent of all organizations surveyed. Many states and larger state agencies have a chief information security officer who is independent from the CIO.

There is a large shift in focus from protecting an organization’s IT perimeter defenses to developing effective cyber security policies, increasing internal controls on who has access to particular data, controls at the application level and identity access management (IAM). With my colleague Prasad Jayaraman, KPMG in the US, I have examined the particular importance of IAM to higher education providers.⁴

Hard times let the best shine

SLG CIOs have to work at least as hard as their counterparts in other industries. They are more likely than other CIOs to have flat or declining budgets, and are having to cope with aging software and retiring staff. They currently see their

organizations as less effective at using data and analytics, while cyber security is more likely to be a key business issue than in other industries.

Those who are unable to become digital innovation leaders who fully enable the business may find their roles diminish. But the best SLG CIOs are working to change their organizations through redesigned processes, IT transformation and, intelligent automation to support staff and even working to boost economic development.

They are working in tough conditions — but for some, this is allowing their leadership qualities to emerge.



Charles Collier

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⁴ Getting schooled: Identity and access management, Charles Collier and Prasad Jayaraman, April 2017: <http://www.kpmg-institutes.com/institutes/government-institute/articles/2017/04/getting-schooled-identity-and-access-management1.html>

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Alex Benay: opening Canadian government

Alex Benay, since April the Chief Information Officer for the Government of Canada, has big plans to disrupt the way its federal government buys and uses technology. With an eye on the present Government's focus on openness, Benay plans to accelerate procurement, make more use of smaller suppliers and cloud computing, and convince government organizations to design processes for users.

Benay is drawing on his diverse career, which has involved running the Canada Science and Technology Museums Corporation — where he made most of its data open by default — and working as the vice-president of enterprise information management at OpenText. As part of this issue's theme of disruption, @gov asked him about his new role.

How does your experience working in the private sector inform your new role as Chief Information Officer?

If you're in the public sector, you often hear that the private sector does it this way, and sometimes in the private sector you'll hear that government or public sector does it that way. I don't think either realize each other's realities

very well. There is a big difference: in the public sector you're spending the public's money while in the private sector it's about the bottom-line. I'd like to think being a hybrid, in my case, is a good thing, because I've lived both at senior and junior levels.

There is no set way of managing and operating — you can take the best from



both worlds. For example, the hierarchy in the public sector is not always conducive to innovation: people tend to follow the most senior person in the room, because that is how hierarchical organizations work. Whereas in the private sector, especially the tech space, you put all your bright minds in a room together, let them argue and debate, and the best idea becomes the product.

Hierarchy in government is required — we're dealing with people's lives, and if we get things wrong, it can be really bad. The right approach is to find the balance between how much innovation you need, and enabling the right environment for that innovation. We've tried to flatten the organization in the Treasury Board, and we've got a group called Braintrust, where you leave your

level and hierarchy at the door — it's all about the best ideas and trying to scale the concept. It's an idea from the [computer animation] company Pixar.

What benefits do you see from public service employees being 'open by default', publishing most information openly as it is created?

'Open by default' isn't for everything — you can't do trade negotiations out in the open, for instance. But if you're doing science or heritage, working in the open means you get to use the power of the crowd, amplify your work, develop new partnerships and probably deliver more for less. We have four or five departments that are starting to produce content open by default to the public.

At the Museum of Science and Tech, my previous employer, we believed we were the world's first public sector institution that was fully open by default. About 80-85 percent of the content was made available to the public within two hours of being created, with areas like human resources, procurement and legal matters making up the rest. People created video game apps from the museum's content — we would never have had that reach as an institution if we had not opened it up.

How do you overcome fears of such openness?

You have a conversation, educating people that the data we are working with is actually the public's information, not our information as public servants.

You also build it in as seamlessly as possible into the work. We used an enterprise-wide deployed solution for the federal government, and through business rules automated the process as much as possible. People started to realize it's easier to work this way than trying to decide what to release on a case-by-case basis. The percentage of what should not be released is much lower, so you're flipping the equation on its head.

How will Canada's plans to move to agile procurement help smaller IT suppliers to sell to the government sector, and what are you doing to encourage them?

Traditionally, most countries procure by spending one to three years defining requirements by listening to the big vendors who pitch based on their old products. Then the requirements and RFP are written, which takes a year or two, and it may take one to five years to deploy — so the current procurement process can take a decade. The private sector is used to replying to our RFPs [requests for proposals] in a certain way, and we're used to writing them in a certain way, so we perpetuate this situation.

The alternative is that we say 'here's a problem, here's what I'd like to do, please fix it'. It may not be a tech company that answers — instead it could be a research institution or another country. There are things you can't break like security policy, laws and privacy, but if I work at defining

my problem statement better, as opposed to spending three years writing requirements, I can cut my time to deployment pretty drastically.

We've just done a two-month pilot of this, on the issue of how we go open by default. We put our problem out, had 11 bids from across Canada, carried out a Dragon's Den style competition [a TV program titled *Shark Tank* in some countries] and ended with four very different solutions to the problem. We picked the best solution and issued a contract on the spot. You can scale that model to bigger challenges across the system.

You've previously said that governments' adoption of cloud systems could be slowed by the legacy of large IT departments. How do you plan to tackle this?

Cloud seems to be a very emotional conversation for us; it represents a change, whether it's public or private cloud. We estimate that the Canadian government has 8,600 applications running across the [Canadian federal] government with multiple versions. That's a lot. You don't move a mess from one environment to the next — you have to do some streamlining and cleaning, and we're looking at that as we speak.

Taking everything we have and moving it to the cloud is not a good strategy, but doing nothing is also not a good strategy. We've reinstated our practice of enterprise architecture, which we had lost for many years. This means we

ask about the business strategy, the business architecture, the information and data standards, what applications are running what and then we talk about infrastructure. Until we do this for every single new IT project launched in the Government of Canada, it will be very hard to have a proper cloud strategy.

Will the Canadian Digital Service draw on the experience of similar units in other countries, such as the UK's Government Digital Service and the US Digital Service, and why have you said that the CDS could eventually become irrelevant?

Our CDS is lucky in that it focuses exclusively on user design, user-centric testing and bringing the empathy back to designing solutions, which frankly is something we had lost. Although it differs from other countries' digital services, CDS will use lessons from elsewhere.

My statement saying 'hopefully one day they [digital service agencies] will become irrelevant' is because every single department should work this way. This way of working should be embedded in how we do digital government, whether that's in year one or year ten — although I hope it's not more than year five. If CDS only continues as a standalone organization, as with GDS or the US Digital Service, their values will not become part of the DNA of the institutions it serves, and we'll always need a CDS. If that is the case, then frankly, the experiment will have failed.

The views and opinions expressed herein are those of the interviewee and do not necessarily represent the views and opinions of KPMG International or any KPMG member firm.



Cyber defense in depth: high walls alone won't defend the castle

**Mike Stone, Global Head of Government Technology Transformation for
Infrastructure, Government and Healthcare**



For business and government, cyber security is the new arms race. We defend, and the enemy counters. We respond, and so do they. The cycle escalates in perpetuity.

A strong cyber defense is an integral part of good IT operations. Operate and defend are effectively two sides of the same coin and a denial of service (DDoS) attack is still an attack whether it comes from an external source, or as a result of an error from your own IT department. You need to be able to respond to both effectively and have a clear understanding of the routes, or attack vectors, through which the breach occurred. Whether it's a malicious attack or an error, you'll need the same business continuity and disaster recovery plans and capabilities in place.

To truly understand the potential attack vectors, you first need to have total visibility of all the assets on your network and their current status. As part of the process, you will need to evaluate the network paths across all systems and telecom carriers. While asset classification and identification are among the less glamorous aspects of information security, they are as essential to it as they are to good IT operations.

The disturbing fact is that very few organizations have such a detailed understanding of their networks. Bad guys get in (along with some of the good guys from various agencies) because they get to know your network a lot better than you do. They discover vulnerabilities and press at those points like a hot knife through butter.

To my mind, the safest approach is to assume that you have been compromised and work on what needs to be done to address this. I call this approach Cyber Defense in Depth.

Defending in depth

Cyber Defense in Depth is a proactive posture that uses multiple methods at different layers to protect IT systems against attacks. People tend to think of

Cyber Defense in Depth is a proactive posture that uses multiple methods at different layers to protect IT systems against attacks.

cyber protection primarily in terms of perimeter protection, such as a firewall, but forget about the other layers, which are equally if not more important. A medieval castle is a helpful metaphor: you can build higher walls, but the risk is that you become complacent and forget that attackers can still tunnel under or poison food and water stores to spread virus and disease.

There is another problem with living in a castle with high walls and closed doors: you have not only made access difficult for your enemies, but for your friends as well.

Getting comfortable with intruders

Perimeter protection has value, but is not the be all and end all. However, the majority of people invest their time in anti-virus and firewalls. Anti-virus software may clear 60 to 70 percent of the junk, but you have to remember that there is a likelihood that there are cracks in the firewall that can be used to get in, unless you cut your network off from the outside world entirely and even then you can't be sure!

Organizations should operate on the assumption that their firewall has been breached and that there are people already inside the network who should not be there. So, then you must ask, what needs to be true for you to be 'comfortable' with uninvited guests inside your network?

Firstly, you need to be able to detect, contain and remove malicious

software, or malware, as rapidly as possible. Secondly, if uninvited guests are still inside then you need to ensure that they can't steal any information or that what they can exfiltrate is worthless, which is where digital rights management has a significant part to play.

When developing a cyber defense strategy, remember the castle metaphor and don't let high walls lull you into a false sense of security. The most important thing is not whether a network has been breached, it's whether you can protect what is most important — the organization's 'crown jewels' — its data and information. To be successful, organizations should develop multiple approaches including planning, strengthening internal protections, training employees, as well as guarding the perimeter.

Given that most security breaches are caused by human error or omission, it makes sense to include a robust training program for employees that provides the tools to mitigate security risks. One important technical step is to improve security for devices on your network, known as end-points, as these are often the weakest link in security and are usually operated by employees.

In planning a cyber defense, assume the castle walls will be breached and plan for it.



Mike Stone

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KPMG's Global Defence Network brings together a community of practitioners with global experience to support Defence Departments through their challenges. We have a strong history of assisting Defense departments to deliver complex inputs that collectively contribute to military capability such as strategy, people, platform systems, through-life support and organization and management.

Multiple cyber defense approach



Perimeter:

- Perimeter and penetration testing
- Anti-virus
- Firewall
- End-point security
- Honey-potting



Interior:

- Acceleration and detonation of malware
- Digital rights management



People:

- People/ behavioural analysis
- Education
- Processes



Planning:

- Red teaming/ CVI
- Extreme modelling
- Business continuity planning

Source: KPMG International, 2017.



Unleashing value: commissioning in human services ecosystem

**Liz Forsyth, Global Human and Social Services Lead
KPMG International**

Spotlight: This edition of *@gov* features a "spotlight" on commissioning in human services. Commissioning is one example of how governments, enabled by technology, are responding to the rising expectation of citizens for a more customer-centric service delivery model.

In the face of unprecedented pressures on demand, expectations and resources, governments around the world are rethinking how they deliver health and human services including social care, family care and housing.

The shift involves governments letting go of their traditional roles as service providers, and instead facilitating new markets and collaborative environments that enable desired outcomes. In response to this, many governments are recognizing the need and value of reform in the human services sector. Significant reforms are underway in Canada, UK, Australia, and New Zealand in health, disability, housing, community, aged care, and child and family services.

Some countries label the new approach 'commissioning'. In others it is referred as 'contracting' or 'procuring for value'. Whatever the terminology, governments need to act fast. These ripples of progress are giving way to a possible tsunami of change that threatens to swamp traditional service delivery.

In this spotlight of *@gov*, we outline the key drivers for this change and how governments should break down barriers to foster it. We explore the respective roles of the citizen customer, government, providers and leaders in a developing commissioning system before presenting a brief roadmap for effective commissioning in human services.

What is driving the need for change?

Change is being driven by diverse issues, opportunities and challenges. These include many of the 'traditional' factors that have been shaping the

wider public services arena for the past half century, such as:

Demographic pressures due to ageing populations

By 2030, the overall proportion of the global population aged 65 and over will rise to 13 percent.¹ In the European Union, over-65s will form nearly 25 percent of the population by 2030, up from about 17 percent in 2005.² A similar increase is projected in Australia with the proportion of the population over 65 doubling from 13 percent in 2002 to 25 percent in 2040.³ In the United States, this age group will more than double between 2012 and 2060⁴, while in Canada, one-in-four people are expected to be aged 65 or over by 2051.⁵

Increasing levels of demand for long term care

In many Organization for Economic Cooperation and Development (OECD) countries, citizens aged 80-plus are over six times more likely to receive long-term care than those aged 65–79.⁶

Rising cost of healthcare

The cost of healthcare is spiraling. Total global spending on health as a proportion of gross domestic product has risen from 8.5 percent in 1995 to 9.9 percent in 2014 according to World Health Organization data,⁷ with spending in the United States increasing from 13.1 percent to 17.1 percent over the same period.⁸ In Australia, total



In Australia, the new person-centered care approach facilitated by the **National Disability Insurance Scheme (NDIS)** seeks to empower consumers within the market by providing them with direct purchasing power and the ability to exercise choice and control over the services they need. Already in place for people with complex needs and (in some limited cases) for homelessness services, the approach places government funds directly in the hands of the consumer.

¹ *Why Population Aging Matters: A Global Perspective*, National Institute on Aging, National Institutes of Health, March 2007.

² *European Demographic Data Sheet 2006*, Vienna Institute of Demography, International Institute for Applied Systems Analysis and Population Reference Bureau, 2006.

³ *Australia's Demographic Challenges*, Commonwealth of Australia, 2004.

⁴ *U.S. Census Bureau Projections Show a Slower Growing, Older, More Diverse Nation a Half Century from Now*, United States Census Bureau, December 12, 2012.

⁵ *Population projections, Canada, the provinces and territories, 2013–2063*, Statistics Canada, 2014.

⁶ *Recipients of long-term care, in Health at a Glance 2011 — OECD Indicators*, OECD Publishing, 2011.

⁷ <http://apps.who.int/gho/data/view.main.HEALTHEXPRATIOGLOBAL>

⁸ <http://apps.who.int/gho/data/view.main.HEALTHEXPRATIOUSA>



The New Zealand government has launched a 5 year strategy to overhaul **child, youth and family** services to improve the long-term life outcomes for the country's most vulnerable population. The aim is for an effective and accountable child-centered system, improved outcomes for Māori and sharing information to better respond to vulnerable children and young people. The approach involves legislative reforms, a single point of accountability focused on prevention, intensive intervention, care support services, transition support and preventing youth offending and reoffending.¹²

health spending grew by 70 percent in real terms in the decade to 2011–12.⁹ Drug prices grew by over 12 percent in 2015 in the United States alone, and are expected to increase by 10 percent to 12 percent per year through 2020.¹⁰

The fact that ongoing pressures such as these put a strain on traditional models of service delivery is nothing new. But it is among a number of critical factors which taken together mean that many governments must now radically and urgently rethink the way their services are delivered.

Influence of technology

Governments at all levels are seeking to take advantage of technology to reduce costs, improve citizen access and create smarter, more modern ways to deliver services, as shown by high profile government digital programs in countries including the US, UK, New Zealand and Australia.

Power of the individual

The influence of technology on many of our lives means that people — especially younger generations — expect to be able to interact with government in the same way they interact with other service providers, such as banks, retailers or couriers, including via digital tools like social media, mobile and cloud computing services. The human services sector needs to find ways to respond promptly to such expectations, otherwise it risks a loss of control, credibility or influence.

This trend is accelerated by moves towards giving people direct purchasing power and, consequently, more choice over which services they receive. As new delivery models are developed, service users will need to be able to choose between, and distinguish, services based on price and value. The delivery of human services is already moving in this direction in many countries, including the emergence of e-marketplaces.

Moving to a person-centered model means providers are no longer able to rely on secure, recurrent funding from governments, but are instead required to attract users in an increasingly competitive market. This places significant pressure on existing service providers to become more innovative in order to provide personal solutions that deliver the outcomes defined by commissioners. Equally, these changes challenge the sustainability of government-provided services, which may be even more limited in their ability to respond fast enough in an open and competitive market.

Global financial crisis 2.0

Many governments have been trying to achieve 'more with less' in the human services arena for almost a decade since the global financial crisis of the late 2000s. The fact that many mature economies around the world have not rebounded as expected means that resources have been cut to the bone over a sustained period of time in many countries.

The relentless pressure on finances is exacerbated by increasing levels of public debt. If current trends continue, global levels of net public debt are set to reach 98 percent of GDP by 2035,¹¹ and public debt is expected to significantly constrain fiscal and policy options until 2030 and beyond.

Governments' ability to bring debt under control and find new ways of delivering public services will affect their capacity to respond to major social, economic and environmental challenges, and make the road back to prosperity a much longer one.

Tailored care for complex problems

The latest human services models recognize the interconnectedness of people's often complex needs. For example, someone who is homeless may also struggle to find employment and have physical or mental health challenges linked to their homelessness.

⁹ *Australia's health 2014*, Australian Institute of Health and Welfare, June 2014.

¹⁰ *Medicines Use and Spending in the U.S.: A Review of 2015 and Outlook to 2020*, IMS Health, April 2016.

¹¹ Joseph Gagnon with Marc Hinterschweiger, *The Global Outlook for Government Debt Over the Next 25 Years: Implications for the Economy and Public Policy*, Peterson Institute for International Economics, Policy Analyses in International Economics, June 2011.

¹² <https://www.mvcot.govt.nz/about-us/our-journey/>



Another example is the refugee and migrant crisis weighing heavily on many European countries. Individuals and families seeking refuge after experiencing trauma are in need of multiple services, including basic needs, employment, language skills and child care. Germany has adopted a joined-up approach to integrating asylum seekers combining registration, medical examination, application filing, screening and service offerings, brought together by federal employment agencies. While aimed at all asylum seekers, these services are tailored to the specific circumstances of each individual.

As demonstrated by these examples, new models of delivery need to provide a much more flexible, integrated service that shapes itself around the individual, rather than a series of unconnected interventions, each only targeting one distinct area of need.

That is not to say that people receive a totally unique service developed exclusively for them. The challenge is to develop systems that can deliver services in a receptive way to potentially millions of people, but at the same time feel personal to those receiving them.

In the *Integration Imperative*,¹³ KPMG experts examined the characteristics of current integration initiatives around the world: the main drivers, types of integration, key enablers and necessary conditions for reforms. Some key trends were identified, including 'client pathways' that provide tiered support models. These are designed to enable the majority of consumers to self-serve, thereby reducing pressure on resources, while those with complex needs can receive comprehensive case management.

Need for a new approach

To perform effectively, different agencies need to work towards outcomes-based incentives that encourage collaboration and partnership. This requires a different model for funding and incentivizing multiple stakeholders. The current

English healthcare model, for example, encourages hospital admission but does not fully reward hospitals for developing innovative community-based solutions.

Achieving this needs leaders and commissioners of human services to innovate continually as well as being agile and adaptable to market changes. They need to be able to implement new ways of working that allow their organizations to continually change and evolve on a month-by-month basis. They also need to be prepared to give away control to other stakeholders who are better placed to achieve a particular objective.

Sharing the value

Providing 'mass' services that are tailored to individual circumstances requires commissioners and organizations to be intelligent about how they deliver services. It requires a 'shared value' approach, where instead of each organization delivering its own services all stakeholders work in partnership to ensure the desired outcomes are achieved. Such person-centered care gives people the power to shape the way services are delivered and to share in the value of successful delivery. It takes time to build up the level of trust necessary for organizations to work together effectively, but their leaders need the longer-term perspective and confidence to articulate the vision and to start moving in the right direction.

Time to overtake

This new approach to human services represents an exciting opportunity for less established countries to catch up with or overtake more established ones that in many cases are weighed down by outdated legacy models of service delivery. The traditional resource-intensive healthcare model, for example, centers around big hospitals in big cities; a model which less-developed markets struggle to implement effectively due to a lack of capital and infrastructure. The commissioning approach can bypass this model and instead focus on holistic care outside hospitals.

The Community Homelessness Prevention Initiative in **Ontario, Canada**, was a whole-of-market reform in 2013 to reduce homelessness rates in Ontario and improve the outcomes of people receiving homelessness services. Funding was consolidated across five programs that were coordinated by two ministries, and allocated based on changing needs in different areas. Within the first 15 months, the initiative assisted more than **33,100 households** experiencing homelessness, and enabled more than **83,800 households** to remain in their homes.¹⁴

¹³ See *The Integration Imperative: reshaping the delivery of human and social services*, KPMG International, 2013.

¹⁴ <https://news.ontario.ca/mma/en/2015/03/community-homelessness-prevention-initiative.html>

An aerial photograph of three swimmers in a pool. The pool has a blue tiled bottom. The swimmers are wearing blue swim caps and blue swim trunks. They are holding blue kickboards and are in a swimming stroke. The water is clear and blue. The text "The role of government in new commissioning models" is overlaid on the right side of the image in white, sans-serif font.

The role of government in new commissioning models

In a commissioning model of service delivery, the government's role shifts from direct service deliverer to being responsible for the delivery of outcomes. Services themselves are delivered by other organizations, whether private or public, to achieve the required outcomes. This represents a considerable change in the role of government, far beyond traditional policy setting and service delivery. Getting it right requires government to develop new knowledge and capabilities to fulfil its new role, otherwise it will likely be unable to improve service outcomes.

Six roles of government

In the human services sector, government must focus on six central characteristics that are fundamental to the commissioning model:

1. Service visionary

In shifting its role to commissioner, government must understand the needs of its communities for the service in question, and set a vision, outcomes and standards to be measured against. This involves looking at a service holistically, strategically and clinically, and setting a clear path for the future. The vision must incorporate the views and insights from a broad array of stakeholders, through a process of co-design.

2. Market architect

As market architect, government analyses how its desired outcomes can be achieved, what kinds of organizations (both private and not-for-profit) it needs to work with, and what the market needs to look like to attract and support those organizations.

In effect, government needs to start with the outcomes then work backwards to identify what the market needs to look like to achieve those outcomes. This includes understanding how markets and services relate to key concepts of consumer choice, quality, geographical equity, service complexity and cultural appropriateness of services. It is also necessary to ensure that the market can respond to changing service demands.

3. Market creator

Government must have a thorough understanding of how the market

should operate, and the role it can play in changing market structures to better support service outcomes. This involves understanding and reviewing the tools, incentives and levers available to create the desired market and attract service providers.

Tools may include bundling contracts together to attract bigger players, or conversely, separating them into specific lots to attract more specialized organizations. Consortium and partnerships should also be considered as they can provide scale and geographic cover. Another possibility could be providing access to other government contracts, to entice organizations to invest in the area for the long term. The objective is a stable, equitable market that allows government to meet service requirements and correct any misalignment between existing market and required market structures.

Incentives need to be aligned for all stakeholders. In New York State, for example, the Delivery System Reform Incentive Payment (DSRIP) program encourages payers and providers to work together by strengthening incentives for investment in prevention and primary care, and facilitating collaboration to improve care coordination and provide better integrated support. Crucially, it also involves rewarding success in reducing hospital use and not penalizing hospitals for helping to achieve this.

4. Performance and risk manager

While a government may no longer directly deliver services, it must monitor and manage the performance of service providers to ensure targets are met

and identify and manage risks. Its role becomes one of oversight, providing essential assurance to service users that service quality will be maintained.

5. Market steward

Markets are fluid by nature. Consumers' needs and attitudes change as do the priorities of providers. It is likely there will be situations where outcomes are not being delivered or performance standards are not met, when government needs to intervene to get service delivery and outcomes back on track.

At its most extreme, this may mean withdrawing or canceling contracts. Or it could mean providing additional support to enable the market to function more effectively, to help providers improve service delivery or to achieve better outcomes.

If the market process is too slow or misdirected, governments must be prepared to nudge stakeholders in the right direction, in the way that England's National Health Service is nudging its 200-plus clinical commissioning groups to work more closely together to focus on the health of broader populations.

Service provider

Although moving to a commissioning model could be seen as a radical evolution in the role of government, there will still be some situations where government will be required to continue the delivery of services. This may be because the market has failed, or because the government's 'duty of care' means that some types of service are not appropriate for external provision.



New responsibilities require new skills

Adapting to these new roles and performing them successfully requires governments to acquire an expanded set of skills. Even where new roles relate to existing responsibilities, such as service visionary or performance/risk manager, the depth of knowledge required to understand, develop and communicate a vision for a new market over a five-to-ten-year period is of a different magnitude.

Similarly, a performance and risk management approach based on outcomes, rather than a traditional input-based approach, will be a considerable departure for many governments. It can also mean adapting to a new perception of risk, in that while governments will not be responsible for directly providing services, they will still be ultimately accountable if things go wrong.

The roles of market architect and creator are entirely new for most government organizations. It is a considerable challenge to turn this vision into reality; to translate outcomes into market structures and understand where existing government strengths can be used to direct the market. It will require governments to be innovative, to engage in open and transparent conversations with providers, and to work collaboratively — characteristics that governments are not traditionally recognized for.

Similarly, being an effective market steward means working flexibly with partners in non-government sectors, not often seen as a strength of the public sector.

Bridging the knowledge gap

Bridging the gap between the skills and knowledge required in the traditional government model, to the skills and knowledge essential for an effective commissioning model, should not be under-estimated.

The short-term solution is to bring in consultants, but this is a short-sighted measure. Instead, governments need

to go beyond the 'quick fix' and invest in the time and resources required to embed these skills within their organizations, whether by changing their recruitment models to attract candidates with different skills or by training their existing teams to perform these new roles.

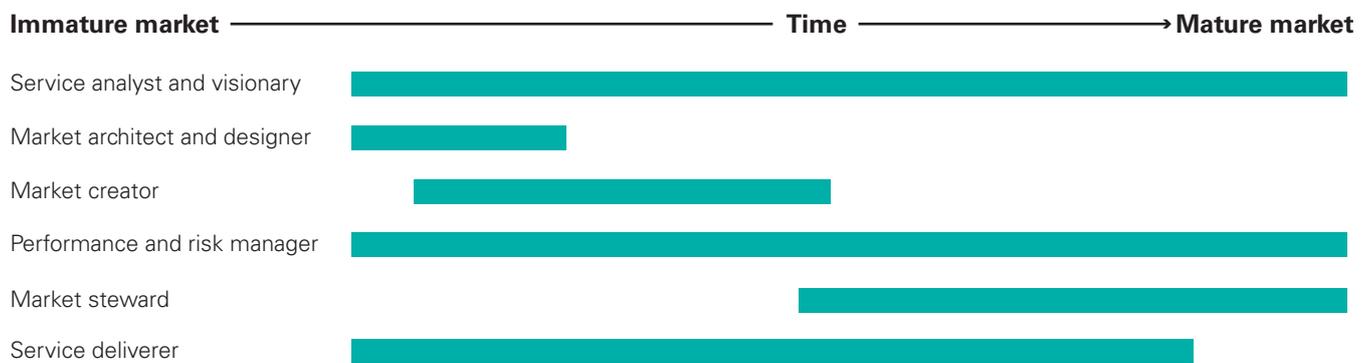
Perhaps the biggest change required of governments, however, is the least tangible one — the cultural change.

By its nature, governments tend to be risk averse and conservative. For new delivery models to succeed, governments need to do things differently, as well as create new frameworks, new ways of working and new ways of delivering services. They need to be prepared to fail, and if so fail fast, fail cheaply and move on.



Moving with the market

The extent and duration of the different roles of government will depend on the maturity of provider markets, the structure of contracting arrangements and the objectives of government.



Governments are likely to have long-term responsibilities in three areas:

1. Setting services' visions
2. Managing performance and risk
3. Service delivery (albeit as provider of last resort) given the nature of the service.

Responsibility for designing, creating and stewarding the market, on the other hand, are likely to be more time-bound. This changing dynamic will require governments to take a flexible approach and remain agile to support continued change and a 'safe to fail' mentality.

A roadmap for effective commissioning in human services



Effective commissioning in human services has enabled better outcomes for citizens and systems in many countries. For example, a review of commissioning across government in England lists increased cooperation between partner organizations, improved efficiencies, improved standards of service delivery, reduction in waiting times, better engagement of stakeholders, and in some cases improved outcomes for service users as benefits of the approach.¹

However, the realization of outcomes and benefits expected from commissioning are not easily achieved. We have shown how the world of human services is changing and requires new roles for government, providers and the customer but different sectors, client bases, stakeholders, and environments present different challenges and levels of maturity. These include:

- gaps in capability of both staff and service providers;
- a lack of support systems to execute and manage the change;
- a lack of alignment of relevant service delivery components, including policy frameworks that overlap with or are affected by commissioning; and
- the potential to destabilize the pool of providers, especially where a few major providers supply a range of interdependent services, or where present provision is a poor match for population needs.²

The following 10 steps for the effective adoption of a commissioning approach in health and human service organizations are based on the global experience of KPMG practitioners in this area.

1. Commissioning must support the vision and strategy of the organization and sector

Whether to commission or not and the organization's approach should be dictated by a range of factors, including:

- the organization's overarching strategy and how the approach contributes to objectives;
- the organization's position within the broader sector; whether it can shape the market or work within its parameters; and
- why it is commissioning and the outcomes it intends to achieve.

If the commissioning approach does not align with the direction of the organization and sector, it is highly likely that it will fail.

2. Commissioning is not a panacea

Commissioning, when used to link resource allocation with assessed needs, has a strong rationale. It is logical to use evidence of need and best practice to underpin government interventions, rather than funding on the basis of historical patterns.

However, depending on the maturity of the sector and the organization, using a complex commissioning approach may not be the right way forward. For example, an organization that is unsustainable is unlikely to benefit from a complex commissioning strategy. Other transformational options such as merger or acquisition, restructuring and optimization, or other commercial partnership arrangements may be more helpful.

In addition, if organization and sector arrangements do not require a complex approach to achieve high quality outcomes, it does not make sense to introduce one. Commissioning

must therefore be applied where it is most appropriate, and where it has the greatest chances of success in achieving desired outcomes.

3. The market must be ready

The market must be sufficiently mature to respond to commissioning in the sector or a new commissioning approach. A review of market maturity, including the regulatory environment, funding mechanisms and quality requirements, should be mandatory. In addition, the commissioner should assess whether service providers can respond appropriately. In some cases, this may require the commissioner to stimulate or develop the market.

If the market is not ready for a new approach, imposing a commissioning framework is likely to fail. Providers may not have the capacity or capability to respond to the new approach, or may be unable to provide services in the innovative way that the commissioner expects. This can lead to a complex commissioning arrangement that ultimately sees no change in service delivery but a substantial increase in administrative costs, or worse, a lack of provider engagement with the commissioner, rendering the whole process ineffective and wasteful.

4. Approach commissioning as a transformational change

Commissioning is not a process. While there are many technical aspects to commissioning processes, the 'softer' parts of this process are as, if not more, important. Commissioning

¹ Bovaird, T., Dickinson, H., & Allen, K. (2012). Commissioning across government: Review of evidence. Birmingham: Third Sector Research Centre.

² Blatchford & Gash (2012). Institute for Government (UK). Commissioning for success: how to avoid the pitfalls of open public services.

Commissioning comes with a reputation, preconceived notions and differing interpretations, raising questions such as “Isn’t commissioning just outsourcing?” and “Isn’t commissioning just a new word for procurement?”

involves a change in mindset, culture and behaviors, which will require change to people, processes, technologies and infrastructure.

A thoughtful approach to planning, managing and monitoring the adoption of a commissioning approach is therefore required, including the potential use of:

- a Project Management Office;
- a change management strategy which identifies and mitigates the magnitude of change required; and
- a staged implementation approach which seeks to create evolutionary change.

5. Capability and leadership are essential

Implementing and achieving success through commissioning processes is difficult. It requires a substantial amount of specific technical knowledge across a range of subject areas. This includes identification of population needs, contract development and management, and negotiation and stakeholder engagement skills.

Strong leadership is required to drive the process forward, bring stakeholders together with competing interests, and manage a team that is capable of developing and instituting a commissioning approach. Leadership must also hold the process to account and define priorities across the sector and/or region.

A lack of effective leadership and capability can put the whole commissioning process at risk, and increase the likelihood of substandard outcomes.

6. Communication

Commissioning comes with a reputation, preconceived notions and differing interpretations, raising

questions such as “Isn’t commissioning just outsourcing?” and “Isn’t commissioning just a new word for procurement?” Staff may perceive risks to their jobs and others may fear that commissioning will lead to widespread outsourcing of public services, diversion of resources into ‘making markets’, and erosion of public service values and culture. Service providers and partner organizations may be concerned about the impact on the market, competition and tendering process.

Effective communication is required with staff, management, service providers, clients, and the broader sector to dispel myths, create a common language and understanding, and manage expectations of change and timing.

7. Collaborate and co-design

Effective commissioning requires collaboration and partnership with service providers, adjacent sectors and customers themselves. All stakeholders must agree with both the commissioning approach and that potential changes are achievable and sustainable.

This requires engagement with all stakeholders to understand the key challenges associated with service delivery ‘on the ground’, and the critical success factors for any new approach. The commissioner needs to understand:

- Will the approach be effective for the consumer?
- Is the market ready to deliver to the requirements?
- What will be the impact of the new commissioning approach on stakeholders and consumers?
- How will stakeholders be able to adopt the new approach?

— What are the key risks associated with the new approach?

By engaging with stakeholders appropriately, the commissioner can make sure the approach reflects the needs of the sector, providers and the community, maximizing the chances of success.

8. Design the process to promote behavioral change and innovation

The opportunity to reshape and redesign services is one of the key benefits of a new commissioning approach. This will require behavioral change to instill new ways of working. The approach should incentivize the changes and innovations it wants to promote within the sector. Incentives can encourage greater collaboration, higher quality services or new and innovative delivery methods. The incentives or performance measures of staff should also be realigned to the commissioning approach.

9. Collect data-based evidence

Achievement of outcomes is at the heart of commissioning approaches and outcomes-based funding is often synonymous with commissioning. However, to understand whether outcomes are being achieved, it is essential that the appropriate data is collected. Achieving defined outcomes often requires collaboration between service providers and therefore an ability to share consumer data. This means that data collection must be robust and fit for purpose, but also that the appropriate infrastructure must facilitate data sharing while adhering to privacy and other policy requirements.

10. Commercial factors are really important

Once a commissioning approach has been agreed, the framework designed and stakeholders are engaged, then

the contractual arrangements that hold providers to account become critical. Commercial arrangements must be clearly defined to make sure providers deliver services in the way they were intended, and that the intended outcomes are achieved.

Appropriate commercial skills are imperative to develop contracts that will detail appropriate incentives, performance targets and the scope of services. In addition, providers must be held to account throughout the contract period through appropriate contract management. Poorly-designed contractual arrangements can lead to unintended outcomes, the wrong incentives and significant cost to the commissioner and consumers.

Conclusion

Commissioning is not an easy exercise and we have shown that there are a range of considerations to improve the chances of doing it effectively. It is clear that doing nothing is not an option due to the mounting pressures on human services and the fact that roles within that system are changing. The steps above lay out the new roles and some strategies for success. Though these will not solve all the challenges related to commissioning, they will help leaders of organizations trying to adopt commissioning to identify their priorities.

Commissioning as a way of delivering services in the health and human services sector is becoming increasingly complex as we understand what produces the best outcomes for communities, and the incentives available to guide providers to achieve these outcomes. Leaders must be at the forefront of the latest evidence of what works, and constantly adapt and reconfigure how they commission to achieve the best outcomes for their communities and society as a whole.



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KPMG's Global Human & Social Services (HSS) network works with a broad range of government agencies, private sector participants, civil society stakeholders and citizen groups to help create more efficient and effective human and social services. Our mission is to help governments carry out their core responsibilities to provide for the essential human needs of all citizens, and to ensure their basic social security.

Blockchain:

rewriting the way government does business

Leonard Brody, guest contributor, Forbes, *The Great Rewrite*

As consumers, we live much of our lives digitally. As citizens, that's not always the case. When we interact with government agencies — in person, by mail, on the phone — we brace ourselves and anticipate aggravation. The conveniences that online retailers have built — websites that remember who we are, what we did before, our preferences — may be uncommon experiences when we try to access government services. Most old-fashioned paper checks that are still written today are payments to and from governments.



“Today as citizens we expect to deal with government the way we deal with every other part of our life.”

Lorna Stark
National Advisory Industry Leader,
State & Local Government,
KPMG in the US

Pioneers in governments are beginning to rewrite the way things get done. And they’re embracing the same tools that have enabled transformations in private sector: more sophisticated web portals, mobile apps to crowdsource public concerns, cloud computing, data analytics and the potentially revolutionary record-keeping method of blockchain technology.

A blockchain in the simplest terms is a shared database, distributed across a network of multiple sites or institutions. It’s made to securely record transactions and ownership of assets. Blockchains could create a universal record of who owns what and allow unified access to it.

“Just think if you could put all of your required information into one government portal, into the blockchain,” Stark said. “Your name, your address, all that pertinent information. And then you don’t have to re-enter it 10 times to get your driver’s license, to get your CPA

license, to record your title transaction, to pay your taxes. Imagine that world where you only have to give the government your information one time.”

Ironically, blockchain technology was devised as a way to avoid central governments. The anonymous inventors of the digital cryptocurrency bitcoin created the methodology as a way for the community at large to maintain an agreed-upon, immutable record of who owns how much, without having to entrust record-keeping to a single authority such as a government central bank. All participants in a blockchain network can access identical copies of the ledger, and updates happen almost instantly. Digital “keys” and signatures cryptographically control who can update and view records. The assets tracked in the shared ledger can be physical or electronic, and they can be “smart” — containing computer code that can self-execute new transactions when set triggers are reached (for example, a bond that disperses its own coupon payments).

The State of Delaware embraced blockchain in 2016 when then-Governor Jack Markell launched the Delaware Blockchain Initiative. The state has unique record-keeping requirements, but its efforts merit attention. “The more we learned about it, the more we thought there’s something here for the state,” said Andrea Tinianow, director of the Delaware Blockchain Initiative.

Delaware’s interest began as a way to bolster the business it does in

company incorporations. Thousands of businesses, including about two-thirds of Fortune 500 firms and more than 80 percent of American IPOs, are incorporated in Delaware. A requirement is that companies tell Delaware how many shares they have issued and then track who owns them. Some corporations have expressed interest in using blockchain for that, in part to avoid record-keeping errors. The number of shares a company has issued often doesn’t match the number it has registered with the state, and when a material event such as an acquisition occurs, there can be disputes. Record-keeping using a blockchain — a single “golden record” — could eliminate inaccuracy. Delaware is amending its laws to make it crystal clear that it is legal for a company to issue and track its shares on the blockchain.

At the same time, Delaware is testing blockchain internally to organize the Delaware Public Archives, which contain everything from historic photos to mountains of public records. Older documents are being digitized. Databases and spreadsheets from disparate divisions are being migrated to a new distributed ledger. “Smart records” would automate compliance with state laws that dictate retention and destruction of documents. Ultimately the system will make it easier for agencies statewide to submit documents to the archive and residents to find information.

Records in the blockchain can be any asset, including physical property.



California company velox.RE, along with the International Blockchain Real Estate Association, has been working with the government of Cook County, Illinois, to create a legal blockchain version of a property deed. That could someday replace paper deeds and create a universally acknowledged, “golden record” of who owns what property. It would eliminate the need for things like title insurance. For governments that register land transfers, blockchain property records could minimize fraud committed with counterfeit deeds. “With blockchain, you can’t Photoshop a fake deed,” noted Ragnar Lifthrasir, CEO of velox.RE and founder of the association.

Elsewhere in the world, the United Kingdom’s national land registry said it will test a blockchain-based program that “would enable the ownership of property to be changed close to instantaneously.” In Singapore, the central bank has completed a trial of distributed ledger technology for interbank payments, creating a digital representation of the Singapore dollar.

One model for where things may be headed is the little nation of Estonia, which became newly independent in 1991 and built its new government to leverage digital technologies. The Estonia ID card, a digital identity card pegged to a blockchain-like infrastructure, gives citizens access to a broad range of public services, acting as a driver’s license, passport, credit card, transportation pass and more.

The rewrites happening in government services aren’t always in the most obvious places. In Utah, new drivers can practice questions and answers on the state driving exam by talking with an Amazon Echo home assistant, courtesy of a partnership between the state and Kansas-based software developer NIC. Syracuse, New York, has tested a system called SQUID — for Street Quality Identification Device — that

uses computer vision to sense and analyze potholes on streets, aiming to apply limited maintenance dollars as effectively as possible. Again, these are examples of applying tech tools made for consumer and industry applications to government services.

Cities far from traditional technology hubs like Silicon Valley or Boston are moving to become “smarter.” Columbus, Ohio, in 2016 won US\$40 million from the U.S. Department of Transportation in the “Smart City Challenge” with a plan built around better use of technology and data to improve its transportation. The Smart Columbus project will bring electric-vehicle charging stations, street lights that act as wireless internet hubs, emergency vehicles that interact with traffic signals and driverless shuttles. Data analysis will improve downtown traffic and parking.

Disadvantaged areas will get help, too. A pilot shuttle bus for the Linden neighborhood, its route determined by data analytics, is designed to give residents better access to jobs, healthcare, education and healthy groceries. “Mobility is the great equalizer of the 21st century,” said Columbus Mayor Andrew Ginther.

None of these government projects are without challenges. Becoming a smarter city requires multi-agency cooperation and ongoing funds. Migrating legacy data to a distributed ledger system can be costly. Citizens may have privacy concerns as technology becomes more common in the public sector. But governments were early adopters of computer technology, and the potential now exists to use public information in transformative ways.

“In the ‘50s, we had the advent of the supercomputer and the ‘90s the explosion of the internet,” said KPMG’s Stark. “And now, government could harness the potential of blockchain to leapfrog the public’s perception of efficiency, transparency and trust.”



Leonard Brody

Leonard is an entrepreneur, venture capitalist, author and media visionary. He was the Senior Technology Advisor to the Canadian Minister of Foreign Affairs & International Trade. His work has been featured in such publications as Fortune, the Wall Street Journal, the BBC and the New York Times and is the best-selling author that created *The Great Rewrite* concept.

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What is the *The Great Rewrite*?

This article was first published on Forbes as part of *The Great Rewrite* — a series highlighting the profound, worldwide paradigm shift in the way we do business, and consequently, the way we live our lives. KPMG in the US and Forbes collaborated with Leonard Brody, entrepreneur/creator of *The Great Rewrite*, to explore this technology tipping point and how it is affecting everything from human behaviors to the global economy.



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Local government – a challenging future

Toni Jones, Lead Partner, Local Government, KPMG in Australia
Paul Low, Partner, Government, KPMG in Australia



As residents' expectations and technology evolve, so too must local governments. Customer centricity, cloud IT and innovation must be high on the agenda of leaders.

The pressures on local government to get key investment, resource allocation and delivery model decisions right have never been greater. Increasing demand for services, rapid technology change and the constant requirement to invest in asset construction and renewal are forcing local government to reconsider traditional business models.

In responding to these pressures and re-examining the way local government is run, leadership is contending with three key factors:

1. Limitations on traditional revenue sources

Forces the reappraisal and reprioritization of the way local government run their organizations, to deliver more for less. They must challenge the way things have 'always been done', transform operating models, drive best practice and process efficiency, and investigate alternative models for service delivery.

2. The change in residents' expectations

Social media and new technology enable constituents to express themselves vocally, if they believe that issues are not being addressed or government services fall short. This is aligned to the growing perception of residents as 'customers', rather than merely ratepayers, who expect the same levels of service from government as from commercial transactions. Customer experience tops the list in many industries, and consumers are used to high quality, easy-to-use user interfaces. Residents no longer differentiate between their expectations of service delivery.

3. Rapidly advancing technologies

Technology is changing rapidly. Both those in customer-facing services, and those in support roles, must drive efficiency and deliver on the mandate of providing value for money.

We cannot see what technologies will emerge, so forward planning is increasingly difficult. However, two technologies that will impact councils are self-driving cars and drones. These will reshape the look and feel of local government, and impact on the services and infrastructure needed to accommodate them. Preparing for these changes will be a task on a never-seen-before scale.

Other factors that individual local government must address include:

— Ageing technology and under-investment

Many councils support outdated IT systems, set within a complex and inefficient infrastructure that is not keeping pace with current practices and is limiting their ability to grow. Local governments which have recognized their under-investment in IT, and are prepared to evolve the maturity of their IT function as



Regional partners at local, state and federal levels are fundamental to the achievement of better social and economic outcomes within a fiscally constrained environment.

well as upgrading to cloud-based technology, will create an advantage and be more agile.

— **Historical planning methods**

Planning has not caught up with development and is largely still run on a functional/organizational level, rather than being service-led. But service-led planning will enable strategic direction setting, realistic cost assessments, individual staff KPIs, and appropriate funding for technology or outsourcing.

Preparing for success

To succeed in this new landscape, we suggest the following key actions:

Put customer centricity first

Local and municipal governments along with councils have the greatest capacity to identify and respond to emerging community needs. This strength must be reflected in how local government determines shifting customer demands, while ensuring that its governance and resource allocation models are flexible.

Local governments are striving towards customer-centric models of service delivery that anticipate and respond to community needs in a sustainable and agile manner. Having clear views on the cost to serve and the outcomes delivered is essential.

Re-think business as usual

The ability to meet changing community expectations requires a continual process of self-reflection and evaluation. Service reviews should be an iterative program that drives a culture of continuous improvement and smarter investment in service delivery¹. This requires fresh thinking, challenging

the way 'things have always been done'. It involves critically examining every component of the organization, including redesigning operating models and organizational structures, adopting best practice processes, driving cultural change, adopting innovative methods for engaging key stakeholders, and considering alternative approaches and models for service delivery.

Revisit and reshape IT

Local and municipal governments along with councils need to invest in a future-proof IT architecture, incorporating modern technology principles and practices such as cloud based Software as a Service (SaaS), business and process led specification, and agile methods.

With today's shift towards cloud based SaaS solutions, systems that were previously out of reach are now affordable to local government. The higher rate of change requires more innovation and adjustment in what the systems offer to residents. There is an opportunity to take a fresh look at systems, and to challenge the assumptions that local government is highly specialized, with only limited options available to it.

Think collaboratively

Local governments can no longer afford to only think locally. Regional partners at local, state and federal levels are fundamental to the achievement of better social and economic outcomes within a fiscally constrained environment. In Australia for example the current Commonwealth Government has a committed Cities agenda, and a willingness to engage with state and local governments around their priorities through City

¹. ACELG (2015) "Service Delivery Review: A how to manual for local government"

Deals. We are seeing heightened collaboration with like-minded local government councils around investment in IT service profiling and reviews, operational shared services and innovative knowledge sharing. Leveraging regional and national partnerships is critical to ensuring local investment can be amplified through complementary investments.

Have an innovation agenda

Innovation is on the agenda of most local governments, but open and effective innovation management requires nurturing and ongoing development.

One example is 'Smart Cities'. Underpinned by emerging technologies such as the Internet of Things (IoT), cloud computing and universal connectivity, alongside advances in cognitive computing and machine learning (AI), Smart Cities can enable greater citizen engagement, improve quality of life, provide opportunities for economic development and unlock service efficiencies.

While Smart City initiatives can provide a range of benefits and are efficient and

cost-effective, they do have challenges. Many Smart City projects or pilots have been 'point solutions' driven by technology, rather than from the viewpoint of the citizen. These have not been sustainable nor scalable, and may have missed the mark in terms of understanding and addressing the core issues facing city stakeholders.

Therefore, creating a strategic framework and guiding principles framed around a 'citizen-centric' view is an important foundational component of Smart City thinking. Smart Cities can be an important building block of an innovation agenda, but this requires an appropriate approach and framework.

If the changes ahead appear daunting, remember that all challenges can be turned into opportunities. As we approach 2020, local government can take stock, re-evaluate and prepare. They have every chance to lead the way into a dynamic future.

A version of this article, "*Looking to the future: what's next for local government*", was previously published on Australian Govlink Issue 20, 2017.



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Turning public transit ads into powerful digital tools

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Many public transport authorities are exploring ways to introduce advanced out-of-home advertising across their transit networks, illuminating formerly dark tunnels and sterile stations with targeted advertising through digital screens and personalized advertising through mobile devices.

Digital advertising can have a transformative effect on transport operators, by providing a significant source of additional revenue, creating tools and platforms to engage the customer, and offering a rich data source to inform and improve operations.

New public transport revenues lie below the surface

Since they handle hundreds of thousands of daily commuters, major transit agencies are recognizing the often-under-tapped potential revenue to be gained by positioning strategically

placed eye-catching ads across their labyrinth-like transit routes and onboard their vehicle fleets. Considerable advertising income can be earned by providing advertisers with access to this captive audience of travelers who spend hours staring at station walls or engrossed in their smartphones.



Transport authorities are tendering out their advertising concessions to specialist media partners who eagerly oversee the program and split infrastructure costs to install digital screens, saving the transit agency upfront investments in often-overdue technology upgrades.¹

Data for optimized advertising and operations

At a basic level, digital advertising and interactive screens can bring more vibrant, appealing ads to commuters, which net premium rates and can unleash an array of sponsorship arrangements between transit agencies and advertisers.

With easily-changeable electronic screens rather than static print signage, transit authorities gain the ability to lease the same space to multiple parties and optimize the ad rates by time period and target demographic. For example, they could charge different advertising rates at rush hour or peak holiday periods. And, transport authorities can utilize these same screens to publish valuable passenger information about transit services or disruptions.

The level of sophistication can rise dramatically by adding features like Wi-Fi and Bluetooth tracking to gather information about each traveler's movements and habits. This enables geo-targeting, so different content

can be presented to the traveler on their smartphone, with customized marketing messages or personalized offers relating to a nearby retailer, in addition to journey planning tools and in-station wayfinding.

Beyond the commercial benefits, transport authorities could gain the ability to see their customer's entire journey and predict their behaviors, enabling them to better plan transport capacity and system improvements geared to traveler needs. They could potentially apply the data insights to dynamically manage operations schedules and staffing.

¹ <https://www.ft.com/content/b51173ce-f02a-11e4-ae0-00144feab7de>

Transit operators could also enhance their day-to-day operations by adding functionality to their digital advertising systems. For example, cameras, environmental (temperature, light and humidity) sensors and motion detectors could instantly alert transit control centers to changing capacity, comfort and safety conditions across the network, creating another set of ‘eyes and ears’ across the system to optimize staffing. In-station equipment connected via the Internet of Things, including ventilation systems and escalators, could be quickly adjusted. In tandem, transport agencies could issue immediate bulletins through their trip planning apps to commuter smart phones, redirecting them to less crowded, alternate routes.

A clear route to digital transport innovation

While the potential described above is impressive, newer transit authorities in emerging markets often have an easier journey, since they can introduce the latest digital communications platforms as they construct their networks from scratch. In contrast, older transit systems sometimes find themselves playing catch-up to inject digital innovation without disrupting existing operations.

That’s the case for one of North America’s largest transport authorities, which operates several thousand miles of tracks and hundreds of rail and bus routes. Although agency executives have a clear vision to introduce digital screens across the network, they face the challenge of replacing their traditional, existing print-based advertising and passenger notification signage in hundreds of stations.

To do so, they must evaluate complex bidder proposals for their transit advertising concessions, and scrutinize their advertising and revenue plans and their end-to-end technology specifications to design, install and support the system. Ultimately, they must choose the best partner to execute their ambitions. And, in light of the rapid pace of digital innovation, they must ensure that their digital system and vendor offer the flexibility to evolve with technology advancements and customer demands over a 10-year contract period.

While it sounds complex, one of the world’s oldest transport operators, Transport for London (TfL), London’s integrated transport authority, is a pioneer in the digital advertising realm. TfL has built out a sophisticated network of traditional and digital displays across its network, enabling advertisers to reach commuters on their 31 million daily journeys through its Tube stations, train depots and bus shelters.² The system has produced significant revenues for TfL.³

Regardless the stage of digital transformation a transport agency is in, there are a number of best practices for monetizing a transport system’s assets to consider. Among them:

- **Enable a culture shift:** While transit agencies must maintain their focus on providing public transport, they may need to embrace a culture shift and recognize that private sector partnerships to introduce technology and content can complement their customers’ needs and preferences. They may need to build broader partnerships with aligned objectives between agency and provider rather than traditional/transactional supplier relationships.
- **Examine vendor proposals from all dimensions:** When assessing new digital advertising concessions proposals, transport agencies must evaluate these submissions from various dimensions including financial, customer experience and hardware/software capabilities. In addition to scrutinizing the vendor’s financial assumptions regarding advertising, revenue share percentages and minimum guaranteed payment levels, they must rigorously assess their marketing, technology and support and evaluate their own digital and mobile capabilities. They also need to ensure that the new solution could be successfully integrated with the agency’s existing web of operational technology.
- **Preserve the brand and customer trust with clear policies and practices:** Set clear guidelines on the types of advertising that are suitable and brands that are appropriate to associate with. Emphasize the public benefit and ethical considerations in program decision-making and set clear guidelines on what customer data
- **Start with a blueprint of the transport agency’s business and operations objectives:** Ensure that the program takes into account related customer, digital and mobile technology priorities that respond to current and future customer needs. Determine to what degree the program should be managed internally or by an outside specialized provider.

² <https://tfl.gov.uk/corporate/publications-and-reports/annual-report>

³ <http://www.campaignlive.co.uk/article/billion-pound-battle-tfls-tube-advertising-contract/1386594>

can and can't be used and provide customers with clear opt-in/opt-out and feedback mechanisms.

- **Ensure program coherence with other digital initiatives in the customer experience lifecycle.** These could include fare payments, journey planning and passenger information services that, historically, transport authorities have provided through multiple digital solutions. Now, convergence of these solutions is possible.
- **Don't overlook non-digital options:** Remember that not all demographic groups or customers are willing or able to engage with digital solutions so provide alternatives to meet all customer needs.
- **Think bigger picture data implications:** In addition to resolving the requisite privacy and security safeguards to protect passenger data, transport agencies must ensure that vendor agreements precisely outline data ownership rights. They will want to retain ownership of the customer relationship and be able to leverage customer data for effective transport planning as well as potential future revenue streams from monetizing passenger data. This speaks to the reality that, in the near future, the consumer data itself generated through their communication systems may be far more valuable than the pure advertising revenues generated on the screens themselves. However, keep in mind that future open data initiatives could help develop innovative new customer-facing solutions by third-parties, at a minimal cost to the transport authority.

Bright opportunities at the next transit stop

In summary, transit authorities would be wise to consider more holistic approaches to monetize their advertising opportunities. With the advent of digital and mobile technologies, and with the increasing need to provide riders with an exceptional customer experience, it is increasingly possible for transit authorities to ask (and demand) more of their advertising concession partners. The best partners must still be able to demonstrate the sales, marketing and financial savvy it takes to maximize short-term advertising revenue. And increasingly, they must also be able to demonstrate integrated technical capabilities, operational credibility and a strategic vision to integrate these core elements for the benefit of the transit authority. It is therefore imperative that transport agencies carefully consider what exactly they need in a partner and be able to recognize the broader benefits and risks each bring with them. The good news is that the rewards could be as near as the next bus stop or station platform in light of the potential to create a truly dynamic digital communication system that maximizes advertising revenue while helping deliver the right customer experience and capturing rich data to create an efficient, financially-sustainable transit network.



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KPMG's Global Public Sector Transport network works with public transport authorities to embrace emerging technologies to help increase capacity, optimize asset lifecycle, leverage existing data and improve customer experience.

Further reading

Find more insight from *@gov* online at kpmg.com/atgov.

Commissioning in human services:

Further to our Spotlight, the *@gov* website features a number of articles that explore the respective roles of the citizen customer and the provider and looks at the new leadership skills required to succeed in a commissioning system.

Human services embrace customer centricity

How consumer-led models are changing the way we provide human services.

Competition in the human services market

Three ways to succeed in a competitive human services market.

Unleashing a new generation of human services leaders

Commissioning in health and human services requires a new kind of leadership. Agencies that fail to transform won't be able to keep up with the pace of change.

Parking and Autonomous vehicles

A continuation of our article series on the impact of AVs. This series looks at parking and the many implications and opportunities an AV-powered community of the future provides.

Reclaiming space in the autonomous vehicle era

An overlooked benefit of autonomous cars is the possibility of reclaiming parking space.

Parking demand in the autonomous vehicle era

Different AV ownership models and market acceptance scenarios may shape the future demand for parking in an autonomous vehicle world.

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KPMG Government & Public Sector professionals, many of whom have held senior public sector roles, consistently strive to combine their practical, hands-on local experience with insight from our global network to help our clients implement transformational strategies, economically, efficiently and effectively.

We understand the continuing impact of innovation and disruption on governments as they search for more

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Whether looking to improve operational efficiency or drive more value from existing infrastructure or manage challenges associated with delivering better services for less, KPMG's local teams bring an innovative but practical approach to problem solving that reflects their keen understanding of the public sector operating environment and relevant private sector insights to achieve sustainable results.

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