GLOBAL GOVERNMENT FINANCE SUMMIT
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The Global Government Finance Summit brings together senior public officials from treasuries and finance ministries around the world: delegates discuss their shared challenges around financial management, fiscal sustainability, digital technology and public sector reform, seeking solutions and developing relationships to help them deal with common problems. The Summit provides a uniquely informal space in which public finance leaders can share their experiences, concerns and opportunities, covering relevant topics from the use of data in policymaking to the economic changes threatening the international tax settlement.

Hosted in Berlin by the Federal Ministry of Finance in April 2018, this fourth annual event was attended by high-ranking civil servants from 11 countries, along with representatives from knowledge partners EY & Microsoft and event organiser Global Government Forum.

Although the event is held under Chatham House Rules and some of the discussions are too sensitive to put into the public domain, many of the ideas and solutions that emerge may be of value to civil servants around the world. So Global Government Forum has sought delegates' permission to use specific quotes, producing this report to help public servants understand and address some of the issues and agendas facing the world's public finance professionals.
Delegates List

Angola – Walter Aires, Director, National Treasury
Australia – Rosemary Huxtable, Secretary, Department of Finance
Austria – Louisa Unterasinger, CDO, Bundesminister für Finanzen
Canada – Bill Matthews, Senior Associate Deputy Minister and Former Comptroller General and Treasury Board Secretariat
Cambodia – Dr. Hel Chamroeun, Secretary-General, Ministry of Economy and Finance
Cambodia – Ly Vong, PFM senior specialist, Ministry of Economy and Finance
Côte d’Ivoire – Siaka Fanny, Conseiller, Ministère de l’Économie et des Finances
Estonia – Dmitri Jegorov, Ministry of Finance, Deputy Secretary General for Tax and Customs Policy, Ministry of Finance
Finland – Martti Hetemäki, Permanent Secretary, Ministry of Finance
Germany – Bettina Hagedorn, Parliamentary Secretary of State, Federal Ministry of Finance, Berlin
Germany – Torsten Arnswald, Head of Fiscal Policy Division, Federal Ministry of Finance, Berlin
Germany – Ludger Schuknecht, Chief Economist, Federal Ministry of Finance, Berlin
Hong Kong – Andrew CW Lai, Deputy Secretary for Financial Services and the Treasury, Treasury
Singapore – Ow Fook Chuen, Accountant General, Ministry of Finance
Singapore – Paul Loke, Director (Technology), Accountant General’s Department, Ministry of Finance
Singapore – Hong Yuqian, Head (Business Analytics), Ministry of Finance
Singapore – Chia Pei Xian, Associate (Fiscal and Strategic Planning), Ministry of Finance
EY – Hans-Peter Busson, CPS leader in CSA
EY – Mark MacDonald, Global Public Financial Management Leader
EY – Thomas Müller-Marquès Berger, Partner and Global Leader International Public Sector Accounting
EY – Bernhard Lorentz, Government & Public Sector Leader, Germany, Switzerland and Austria
EY – Rana Deep Islam, Assistant Director, Markets and Business Development
Microsoft – Harry Tsavdaris, Digital Architect, Digital Advisory Services
Microsoft – Anke Runge, Account Executive Public Sector
Global Government Forum – Kevin Sorkin, Chief Executive
Global Government Forum – Matt Ross, Editorial Director
Global Government Forum – Melissa Helmer, Commercial Manager
Angola – Quipipa João Boa F, Chairman, Support Fund for the Agrarian Development

Back row from left to right: Walter Aires, Angola; Melissa Helmer, Global Government Forum; Hel Chamroeun, Cambodia; Ly Vong, Cambodia; Quipipa João Boa F, Angola; Louisa Unteraisinger, Austria; Rosemary Huxtable, Australia; Harry Tsavdaris, Microsoft; Anke Runge, Microsoft; Paul Loke, Singapore; Martti Hetemäki, Finland
Front row from left to right: Andrew CW Lai, Hong Kong; Thomas Müller-Marquès Berger, EY; Bill Matthews, Canada; Mark MacDonald, EY; Kevin Sorkin, Global Government Forum; Ow Fook Chuen, Singapore; Dmitri Jegorov, Estonia; Torsten Arnswald, Germany
1. Introduction

“The Global Government Finance Summit exists to help leaders in finance ministries to learn from and build links with your peers overseas, identifying the tools and innovations that can help you overcome the challenges you face,” said Kevin Sorkin, the director of event organisers Global Government Forum, as he welcomed delegates from five continents to Berlin.

Indeed, the world’s finance ministries face some very serious challenges – as Bettina Hagedorn, the Parliamentary State Secretary of Germany’s Federal Ministry of Finance, explained in her opening speech. Following the 2008 financial crisis, “one of the great achievements of the G20 was that its members withstood the temptation to resort to large-scale protectionist measures,” noted the Parliamentary State Secretary—who joined the government this year under Angela Merkel’s coalition with Hagedorn’s left-leaning SPD party. Instead G20 nations “reiterated their commitment to open markets”, she continued; Hagedorn did not need to spell out how this approach faces fresh threats from President Trump and Brexit.

“Global challenges require global solutions,” continued Hagedorn. “This is something that, when we look around at the world, some countries maybe forget at the moment; but there is no other way to face our global problems other than with global cooperation.” In Germany, she added, “this is one lesson from the past that we’ve learned.”

The key topics

The Finance Summit, explained Hagedorn, would cover many of the most crucial issues facing civil service finance professionals — several of which had shaped Germany’s 2016-17 presidency of the G20. The country had, for example, worked “to improve conditions for private investment in Africa”: the topic of chapter 2 of this report. And it had pushed for transparency and information exchange to shore up tax takes weakened by base erosion and profit shifting, whilst launching “a debate on the tax challenges posed by digital economies”: the subject of chapter 6.

The following morning Ludger Schuknecht, the Chief Economist of Germany’s Federal Ministry of Finance, added more key topics. “Digitisation is probably the most important driving force behind future productivity progress,” he said. “Almost daily we hear of digital innovations, ranging from artificial intelligence to big data applications and distributed ledger technologies — and the question is how these changes will affect the operation of government, our efficiency, our lives as citizens, and the world of jobs.” Chapter 3 of this report covers the applications of distributed ledger tech — or ‘blockchain’ — in government; whilst chapter 5, calling on the experiences of Australia and Singapore, examines the power of data and digital platforms in shaping policymaking, public sector management and service delivery.

Finally, chapter 4 explores the major health and care sector reforms being undertaken by Finland — which, like almost all developed countries, finds its public finances squeezed as demographic changes lead to fast-rising demand for public services.

An open debate

Encouraging delegates to speak freely and openly during the Summit, Sorkin thanked Hagedorn, Schuknecht and Torsten Arnswald — Head of the Fiscal Policy Division in the Federal Ministry of Finance — for hosting the event in Berlin, and knowledge partners EY and Microsoft for their support.

“Please don’t wait for permission to speak,” he said. “It’s by contributing to an event that’s informal and frank and open that we can leave the room knowing that when we arrive back at our desks, we’ll do things differently.”

“This conference helps with the free exchange of ideas. It’s a good platform to enrich the dialogue and share best practice,” concluded Hagedorn. “And I’m convinced that economic and social progress has its roots in international cooperation. That’s how we collectively can build a better future.”
2. Promoting global development: the Compact with Africa

“This is about building a better environment for investments that will provide jobs and create prosperity and progress for everyone,” said Ludger Schuknecht. The Chief Economist of Germany’s Federal Ministry of Finance was explaining the Compact with Africa: the initiative launched under Germany’s 2016-17 presidency of the G20 to, as Schuknecht put it, “tie the African continent into the G20, and to extend there the benefits of international policy cooperation.”

Speaking to delegates after the dinner on Friday evening, the economist described the compact as a “commitment device” designed to agree, catalyse and monitor actions by participating African countries, international bodies, G20 members and other nations. The goal is to clear away the unnecessary and bureaucratic barriers to investment in Africa – strengthening the support given to investors, creating links between major firms and African nations and, crucially, assisting African governments to smooth the path of business investors.

In the developed world, Schuknecht explained, countries “commit to better coordinate their cooperation with Africa and to better adapt their programmes to the needs of African partners. In the past, we’ve been too public sector-focused in our cooperation; this is about getting private sector investment going.”

For their part, African participants identify the challenges and the unnecessary obstacles facing potential investors, and work up programmes to address them. “These agendas are self-developed and self-chosen,” Schuknecht stressed. “There’s no western push for African countries to participate; this is about what they wish to commit to.”

Lifting the barriers

Siaka Fanny, Conseiller of Côte d’Ivoire’s Ministère de l’Economie et des Finances, emphasised the value both of highlighting the opportunities in Africa, and of catalysing government action to help investors to take advantage of them. “There are so many business opportunities, but international visitors don’t know what can be achieved,” he said. “So we show them the opportunities and say: ‘This is our commitments, this is how we’re improving what we’ve been doing.’ We’re conscious that we need to do more.”

Asked what kind of problems the African nations’ reforms are designed to tackle, Schuknecht highlighted the need to create a more stable, predictable environment. “You might find your machinery gets stuck in customs for six months, and you need to pay bribes to get it out,” he said. “Where governments can simply breach rules or disregard contracts, that creates political and regulatory risk and reduces the return on investment.”

So there’s plenty of work here for the members – which include 11 countries across North, East and West Africa. As Schuknecht suggested, the other participants also need to raise their games. The international organisations involved – the G20, IMF, World Bank Group, and African Development Bank Group – “have not been famous for coordinating with each other,” he said. “But here they are doing so.”

Meanwhile, the participants among developed nations – which extend beyond the G20 to states such as Finland, Norway and the Netherlands – have pledged to reform parts of their own governments’ operations. This involves improving communications with their own private sectors to highlight investment opportunities in Africa, said Schuknecht, as well as strengthening collaboration between the relevant ministries: “In Germany, for instance, the international development, finance, foreign and economic ministries now cooperate much more effectively, creating a framework to coordinate their work.”
Held to account

On the African side, says Schuknecht, “we have over 100 reforms which are on track for implementation and there’s significant progress, particularly in terms of the macro-economic framework and the stabilisation of public finances.” And developed nations are working – via the joint country teams established in each participating African state – to help address problems and create financial instruments to channel and support investment.

Key to the model is a system of regular monitoring and reporting in the G20 ‘finance track’, designed to hold all sides to account against their promises. “The monitoring system ensures that if we say we’re going to help an African country develop a bond market or create an equity co-financing instrument for institutional investors, then we have to deliver,” Schuknecht commented. Fanny was equally aware of the drive to show progress: “We need to show investors that the country is ready to give them the necessary security,” he said. “There are many reforms that have been indicated, and we have to make those reforms a reality.”

Big challenges, big ambitions

Ultimately, in many parts of Africa the creation of better environments for business investment is linked to the development of effective democracies, argued one delegate. “The policy maker must be very close to the people who benefit from their policies,” he argued. “If I don’t have electricity or roads, I can have a good business plan but it’s very difficult to produce goods and compete with people bringing goods in from Europe. So we need very good public goods: security, infrastructure, water. And to produce these goods under better conditions, we need democracy.”

Nonetheless, as Schuknecht pointed out, many African countries are already growing rapidly: “Côte d’Ivoire has been growing at 6% for ten years,” he said. “These are successful countries that want to become emerging markets.”

In places like this, he argued, inward investment built on a strengthened business environment can help countries “reach the next stage – where local and foreign entrepreneurs have confidence, and self-sustained private sector development takes place. The battle is going to be won when local investors bring their own money, and we have investments in projects run by local people – not just foreigners.”

The Compact’s future

Such development takes time and consistent effort; and Germany has worked hard to ensure that momentum is not lost as the G20 presidency passes from its hands. That role currently sits with Argentina, and in December it will pass to Japan: “We have convinced them both to make this one of their focuses, and so the continuity of the initiative is ensured,” said Schuknecht. “We need patience, but we also need steadfast progress on the commitments.”

Schuknecht also hopes to recruit more African members: “More countries want to participate,” he said, “and right now we don’t have any from Southern Africa; so we hope more will come in, and that the success of some members will encourage other countries to join.”

Ultimately, he explained, “we hope to create a better environment for the local population in these countries, and that there’s better coordination, collaboration and advertising at the global level – and I think we’re on the way to achieving that.” But progress, he knows, will depend on a sustained, continuing commitment from all parties – developed nations, international organisations, and African states.

“We all know how long it takes to turn a big tanker around: we know it, our African friends know it, international organisations know it,” Schuknecht concluded. “We’re in this for the long haul.”
3. The power of blockchain in public finance management

“We think that this year will be the one that properly sees the growth of blockchain technology – not just within governments, but also across the corporate and private sectors,” said Mark MacDonald, EY Global’s Public Finance Management Leader. “We’re moving past concept through proofs, pilots and so forth to the full industrialisation of blockchain applications.

The delegates listened keenly, for blockchain has long been talked of as the next wave of digital transformation – yet few governments have yet got to grips with the technology.

In essence, blockchains are decentralised, digital ledgers, updated in real time and held simultaneously by all participants. Because the nature and author of any changes are immediately visible to all those with access, they can provide a trusted medium for sharing data and logging transactions. And this, said MacDonald, makes them ideal for managing interfaces “across organisational or system boundaries; it’s a powerful way to deal with conditions of information asymmetry or high transaction costs in the exchange of information.”

Drawing data from the IT systems of participating bodies, he added, “blockchain layers are essentially independent of the control and the attributes of the underlying systems: the blockchain floats on top of the existing infrastructure.”

Where’s the value?

In today’s governments, MacDonald pointed out, “there are vertical operating systems and very costly information exchange, with a lot of manual manipulation and reconciliation and so forth; perhaps some absence of transparency. And it’s very, very difficult to get real-time reporting.” The result is that “decision-making is impeded, because treasuries and finance professionals lack the ability to know what’s happening out there.”

Meanwhile, many politicians and senior officials are “looking for ways to have much more effective horizontal management”: to connect data, teams and services across organisational boundaries. Blockchains can provide these connections, he argued – linking together in real time the data held by disparate arms of the public sector to provide a common view of information and activity.

The technology could also help facilitate the public sector’s external relationships, he continued. Citizens could use blockchains to, for example, verify their identity, pay taxes, collect benefits or even vote. Businesses and charities could demonstrate compliance with regulations, receive grants, or manage government contracts.

What’s more, said MacDonald, blockchain’s ability to handle complex, multi-layered relationships makes it well-suited to managing the intricacies of public service delivery and oversight. These days, most delivery systems “extend beyond the traditional, vertically-defined ministry to involve both supply chains and delivery chains with all sorts of external actors,” he noted: blockchains can bring together data across the breadth of these systems.

Finally, they can form a platform for combining and comparing data on spending with information on performance and outcomes — “connecting the financial with the non-financial, so you get properly integrated reporting in real time: almost the ‘holy grail’ of public finance management.” This, said MacDonald, will enable managers to see how money is being allocated, to track its expenditure, and to link spending to data on productivity and the results of service delivery.

A Canadian example

To illustrate how these capabilities might be applied, MacDonald set out a pilot blockchain model that EY has developed to oversee education services. Pulling data out of various IT systems via APIs, this tracks funds from their allocation by the central budget authority, through the
education department or ministry – which distributes the money and attaches conditions to its use – and down through the local education providers which spend the money. So all the key players can check that money is being spent in accordance with policies and regulations, and local spending can be linked to data on productivity, service delivery standards and educational attainment.

“This means that you can not only deal with things from a reconciliation, consolidation, financial management and statutory reporting perspective, but also through a management view looking at things like how effective school boards are,” he explained. “And because the data comes through in real time, you can make spending adjustments.” So budget holders will learn immediately if, for example, pupil numbers change – enabling them to adjust funding allocations there and then rather than waiting for a year-end reconciliation.

Practical questions

MacDonald’s presentation prompted a welter of questions from the delegates – from pragmatic queries around delivery, to concerns around public perceptions.

“What is the real value-add that we would get out of creating another layer; one that we can’t already get through the systems that we have?” asked Rosemary Huxtable, the Secretary of Australia’s Department of Finance. “If you move to a new system, there’s potentially a very significant change to how existing relationships work: what then would you get at the end out of that? I’d really like to see Blockchain in action, operating at scale, to see the potential.”

But there’s no need to disrupt existing Enterprise Resource Planning (ERP) systems, MacDonald responded: blockchains would be used to link them together and build connections to other actors. “I’m sure there’s a series of important external agents whose performance you’d be interested in knowing in real time, both from a financial and a non-financial perspective,” he added. “Perhaps that’s the first application.”

How can blockchain users know that the data fed into the system is accurate, asked Bill Matthews, Canada’s Senior Associate Deputy Minister for Defence: “Public sectors collect a lot of data, but much of it is inaccurate and more is irrelevant.”

And Matthews pointed out another key challenge: “Our political masters are rightly nervous about new IT projects,” he said. “They’ll like the message around integrated reporting, but I’m not sure you can yet show that this is truly low-cost, low-risk.” Torsten Arnswald, Head of the Fiscal Policy Division in Germany’s Federal Ministry of Finance, agreed: “One would need to convince political leaders that risks can be controlled and that the new technology is secure in order to fully tap into its innovative potential.”

Privacy concerns

Allied to this mistrust of government IT projects, public sector leaders would also have to address internal concerns around data sharing between departments, pointed out Global Government Forum Director Kevin Sorkin. And Martti Hetemäki, Permanent Secretary of Finland’s Ministry of Finance, highlighted the public’s concerns about privacy and government’s use of personal data: “Especially if there are risks around data security, anything to do with privacy is toxic,” he said. “It would lose political support right away if there were major problems in this respect.”

In Singapore, said Ow Fook Chuen — Accountant General in that country’s Ministry of Finance — the public generally trust the public administration’s use of data, but nonetheless “there is scepticism that anything in the cyber world is totally secure. The challenge with adopting blockchain is that we do not know enough to be really comfortable about transferring that reliance and trust in good administration to the technology.”

Harry Tsavdaris, a Digital Architect for knowledge partner Microsoft, added another question around privacy. The new EU GDPR data protection rules give people the “right to be forgotten”, he said; but blockchains cannot be easily amended and hold data in perpetuity – so it’s important that all blockchain projects are properly defined and architected.
And Tsavdaris also had questions around the technology. The biggest blockchain currency, Bitcoin, can manage seven transactions per second, he said; but using blockchain on the scale suggested by MacDonald would demand transaction rates thousands of times greater than this. MacDonald was reassuring: “In the private sector, there are blockchain applications that manage millions of transactions a day,” he said. “And the technology’s development is moving at an unimaginable pace; these issues will be dealt with.”

So are we trying to run before we can walk, asked Tsavdaris. The worldwide web has been widely available since the early ‘90s, but it took ten years for new digital businesses to become so established and popular that they began to seriously disrupt existing industries. “New business models will evolve for blockchain, but it will take some time,” he said. “We should be laying out the ground for innovative start-ups to take blockchain forward.”

**Blockchain in action**

Nonetheless, Tsavdaris could see useful applications for blockchain: it could, he suggested, be used to manage hypothecated taxes – linking revenues directly to spending, and thus boosting public trust in and support for new forms of taxation.

And Dmitri Jegorov, the Deputy Secretary General for Tax and Customs Policy in Estonia’s Ministry of Finance, could point to real examples of blockchain being developed by his own government—which is famously well advanced on digital technologies. Estonian laws are enacted without print publication, he explained: instead, they’re captured in blockchain—whose distributed nature ensures that “in case of an IT disruption, you can still verify that it’s precisely the text that parliamentarians voted on.”

The country is also using blockchains to capture individuals’ medical records, said Jegorov: the technology is suitable because records must be available to a range of medical practitioners whilst remaining “absolutely secure; and you need to log every interaction and note – it must be absolutely precise,” he commented.

Looking ahead, Jegorov suggested using blockchains to track the movement of goods across borders—providing “traceability of the whole value chain and all the transactions along the way.” The issue is particularly important at the moment because the European Commission has put forward proposals to impose full VAT on all cross-border transactions, in a bid to crack down on VAT evasion scams. These scams typically involve corrupt businesses amending their records, he explained, “but with blockchain you can’t go back into your transactions and undo them without leaving a trace, so it could eliminate the potential for fraud there.”

The Commission’s current proposals, he added, would “make everyone pay, including honest businesses, in order to stop the small share of dishonest businesses. We have to look at the promise of blockchain technology instead.” Ludger Schuknecht, Chief Economist at the German Ministry of Finance, argued for a “balanced approach” to blockchain—one that keeps risks in check whilst enabling innovations. Do not “create enormous bureaucratic monsters, when there may be other solutions,” he commented.

And MacDonald pointed out that blockchain can indeed be used in this way: in some US states, major manufacturers are developing ways to add tax collection agencies “as nodes in their private blockchains, which cover all their transactions—so the reconciliation and payment of all their indirect taxes can be made automatically. It’s just a matter of time before this is up and running.”

**Last link in the blockchain**

These applications all play to blockchain’s strengths as a single point of truth, its authority guaranteed by transparency and its distributed nature. And these characteristics, argued MacDonald, will help it overcome public concerns: “It’s software and an associated business solution that enables you to demonstrate greater degrees of trust, greater control, greater customer interaction,” he said.

As to issues such as its scalability and security—these, MacDonald held, will be addressed by the technology’s incredibly rapid development. Compared to traditional
ERP systems, he added, blockchains are already extremely quick to create: “Some of the largest of the existing business applications have been built and gone live in a matter of months, rather than years; and with a hugely diminished level of investment required,” he said. “The difference is incredible.”

So some applications of blockchain have already been proved; and the technology’s development has barely begun. “This is a quiet time; the beginning of the curve,” MacDonald concluded. “There will be an immense amount of movement in a very short period of time that addresses each of these questions, from a conceptual perspective all the way down to a technical one.”

“The industrialisation of blockchain is about to take place,” he said. “By 2020 we’ll be having a totally different conversation.”

4. Market mechanisms and financial sustainability: Finland’s health reforms

As developed countries struggle to meet fast-rising demand for health and social care provision in an era of tight budgets, governments are looking for ways to improve efficiency in service delivery and the allocation of resources. Many are focusing on the value of data analysis, market mechanisms and personal choice in realising these goals — so the delegates were curious to learn from Martti Hetemäki, Permanent Secretary of Finland’s Ministry of Finance, how his country is undertaking fundamental healthcare reforms involving all three approaches.

Most Finnish health and care services, Hetemäki explained, are currently organised by its 295 local municipalities, with 20 hospital districts — owned by the municipalities — providing specialised services. But “the system is really fragmented, and one of the consequences is that data use is complicated,” he said.

One fifth of Finland’s people, Hetemäki continued, consume four fifths of health and care spending — so “if we can improve their situations and reduce their need for care, we can achieve quite large expenditure savings.” But this requires greater efficiencies of scale, more straightforward management of patients’ pathways through care, and better use of data; a goal that sits uneasily within a highly localised patchwork of nearly 300 municipalities.

The new model

So the country is undertaking a major reform of provision — passing responsibility for both health and care to 18 counties, whilst streamlining the hospital districts system to create 18 organisations with the same footprints as the counties. Existing today as “non-executive organisations with very small numbers of personnel”, these counties will take over about half the municipalities’ staff — delivering some services, and commissioning others from private sector providers. The goals, said Hetemäki, are to cut the annual rise in health and social care expenditure from 2.4% to 0.9% of GDP, and to improve access to, and the quality of, health and care services (see image above).

The counties will receive their budgets directly from central government, Hetemäki explained — and much of this funding will be drawn from the municipalities’ current incomes: there is, unsurprisingly, “some resistance from the municipalities” to the plan.

The new model should, though, provide delivery structures with the scale and reach to explore new service models: “There will be lots of experiments, lots of variations between the counties, and we can learn from that what works and what doesn’t,” said Hetemäki. In particular, an expansion of user choice and the ‘personal budgets’ model will allow patients to choose from a range of health and social care providers — with pilots starting in all 18 counties after Finland’s Parliament has passed the relevant legislation.

A drive on data

Built into the new system, said Hetemäki, are channels to gather and use detailed data on service delivery and patient
treatments: “Pioneering legislation on the secondary use of health data” is currently passing through the Finnish Parliament, with the goal of supporting preventive work and improving services. On top of this, data on local access to services, delivery costs and providers’ performance against quality benchmarks will be gathered and published online.

How have Finland’s leaders won public support for this use of individuals’ health data, asked one delegate. Given the “declining trust in public bodies”, he said, he had his doubts that “a discussion led by the government about the need to share data will necessarily sway citizens. I think we need some serious thought about how to solve this data access issue.”

The Finns have adopted an Estonian model, replied Hetemäki, under which citizens can see exactly how their data is being used – and public bodies are barred from asking citizens for information if the data is already held by another public sector body.

The Once Only Principle
This is the ‘Once Only Principle’, explained Dmitri Jegorov, Deputy Secretary General for Tax and Customs Policy in Estonia’s Ministry of Finance. “By law, you cannot ask the citizen for information if it has already been submitted to a public institution,” he explained: instead, officials must source the data from their colleagues in other parts of the public sector.

To ease data-sharing, all Estonian public bodies are connected via the ‘X-road’ network: a “specific infrastructure to exchange data between public institutions”, governed by a set of standards specifying data formats, languages and transmission protocols. The system avoids the need for a central “super database, because that would create the risk of a huge data breach,” noted Jegorov, and it’s built around open source software – making it easy for the Finns to develop their own version.

Driving up quality
With all this data, said Mark McDonald – EY Global’s Public Finance Management Leader – it should be easy for system leaders to compare the performance of counties on crucial issues such as productivity and patient outcomes: “As you go through these reforms, are you finding an opportunity to use information on the top performers to incentivise, to move, to cajole the underperformers to a higher level of outcome?”

Central government certainly does have levers here, replied Hetemäki: in the past, the government has taken direct control of poorly-managed municipalities, “so there’s a great incentive for the counties to keep their finances in order.”

The main incentives within Finland’s emerging new system of health and social care, however, emerge from two dynamics: the alignment of public sector professionals’ goals and management structures around the 18 counties – which provides coherent, unitary management of patients’ treatment throughout the health and care systems – and the introduction of more outsourced service delivery, patient choice and personal budgets, which should push funding towards the most effective and efficient providers.

“It’s extremely hard to get the incentives right in healthcare, and there are many examples of failure,” concluded Hetemäki. “So one has to be extremely careful in introducing market mechanisms, and to learn from the wealth of information available on other countries’ reforms. But the government always gets the most difficult tasks; and it is an illusion to think that the status quo would continue to be financially viable. We must be able to adapt.”

5. Technology in policymaking and service delivery

Citizens of developed countries around the world have similar expectations of the services they receive from government. “They want high-quality services, available when they want them and delivered in ways they can access,” said Rosemary Huxtable, the Secretary of Australia’s
Department of Finance. “They want government to operate much like the banking sector or Uber; they expect us to be agile.”

Yet every civil service must develop and deliver services in a unique political, constitutional, organisational, geographical and cultural environment – and the event’s session on using technology in government, which featured presentations by Huxtable and by Paul Loke, Director of Technology and Chief Information Officer at Singapore’s Accountant General Department, brought home how these factors present officials with very different challenges and opportunities.

In Australia, government is a “complex federation,” said Huxtable. “We have federal, state and territory governments as well as local government, and each level has different roles and responsibilities.” Officials must also grapple with the country’s geography; for whilst 95% of the population live in urban centres, the remainder are scattered thinly across the sixth biggest country in the world.

Intra-departmental coordination

In a bid to get the federal government’s departments working more closely together, civil service leaders have established a Public Sector Reform Committee – chaired by Huxtable – within which officials try to adopt what she called “a different mindset, where we seek to support each other. Historically, secretaries have tended to be very responsible for their organisation; now, we’re agreeing amongst ourselves to take collective responsibility for the signature initiatives that will have most impact on citizens, families and businesses.”

As an example, Huxtable cited reforms to the social and health-related payments disbursed by the Department of Human Services, where until recently “we’ve had long wait times, and complex processes that can be hard for citizens to engage with.” A new system for student payments, she said, has cut processing times from nine weeks to as little as five days.

The government is also making rapid progress on shared services – often a fraught field for civil servants, as Huxtable acknowledged. “Our approach is heavily informed by what we’ve learned from other jurisdictions, where shared services hasn’t always gone well,” she said. “And I think one of the reasons we’re having some success is that we in the Department of Finance have both the policy responsibility, but also responsibility for one of the shared service delivery hubs. So we’ve been able to inform our policy thinking with what we’re learning on the ground through practical experience.”

Delivering with data

Greater strategic coordination amongst civil service leaders has also eased the sharing of data between departments, enabling the centre to work with line departments on ways to use the data they hold to improve decision-making.

“We now have a protected data-sharing environment in which we can access the data and do collaborative work on it,” said Huxtable. “And we use data visualisation and data storytelling to make a difference in how ministers engage with this information. Rather than analysing policies based on data samples and average impacts, we can use whole population datasets.”

To illustrate the power of this approach, she showed delegates a hypothetical example built using the data on two million Australian households in receipt of family payments. Officials can use this data to model the effect of reforms to payment policies, she explained, revealing the impact of various options on the whole of the service user group. “Previously we’d have used samples and averages, and missed a lot of the detail,” she pointed out.

And are these visualisations influencing ministers, asked Mark McDonald, EY Global’s Public Finance Management Leader: “Are better decisions being taken, better policy?” Huxtable was cautious: these new capabilities are feeding into a “traditional Cabinet process, which tends to be a very verbal engagement in a closed environment where people tend to talk about their personal experience,” she replied; it’s “early days”. So the greatest influence so far has been on improving delivery departments’ policy development,
feeding into the decision-making process: “We have been able to help departments better identify where there are gaps in their policies.”

**Rewarding achievement**

The Department of Finance is also developing ways to use data to measure productivity across the civil service. Some 70% of officials are engaged in “regulatory and programme work that has a transactional element, so we should be able to measure productivity there,” she commented. “The challenge is how you measure the productivity of policy work; we’re doing some trials around that.”

Is this focus on data, service delivery and business transformation feeding through into civil service career development, asked Bill Matthews, Canada’s Senior Associate Deputy Minister for Defence. To get to the top “in most countries, your best path is to be a policy pusher,” he pointed out. “We undervalue the skillset of getting things done. I’ve yet to see a career model that properly rewards fantastic project managers and people like that.”

“[I]’ve yet to see an algorithm about how you get promoted, but usually the way you get here isn’t the way you survive here,” replied Huxtable. “As a secretary, the key thing you have to do is manage the organisation. You can have good policy people around you, but actually your role is to be a leader and work on the culture of the organisation.”

“My mantra is that as a central agency, we’re as effective as our relationships,” she concluded. “You’ve got to get out there and work with the line agencies, understand the environment they’re in, and help them to solve their problems.”

**The Singapore experience**

The city-state of Singapore, explained Paul Loke, escapes many of Australia’s challenges: it has a small geographical area with a highly urbanised, tech-savvy population. And recent legislation places an expectation on departments to share data across government: “We have the privilege of being able to pull all that data into a single data warehouse, and that allows us to look at things across the board,” he said.

In recent years, the government has focused its digital efforts on building mobile phone apps, explained Loke—for “Singapore’s a connected nation, with a 150% mobile phone penetration rate’ and 20,000 wireless hotspots. Using mobile apps maximises both coverage and accessibility, explained Ow Fook Chuen, Singapore’s Accountant General: “Many low income workers have mobile phones; they’re more inclusive than desktops,” he said; the government tries to build apps whose “usage is so intuitive that even someone without much know-how or expertise can use them.”

Given a single data pool and user access via mobile phones, said Loke, the government has built a wide range of new services for citizens and officials alike. The MyInfo data platform, for example, allows people to automatically populate online forms with their personal information. And this has paved the way for a digital signatures system that by 2022 will, Loke explained, provide online identity verification for both government and private sector services. Citizens are often incentivised to adopt new systems, added Ow Fook Chuen: “We give back the efficiency gains. So if you apply for a passport on the digital service, it’s cheaper. When we introduced a digital parking system, we allowed people to pay by the minute rather than in 30-minute blocks.”

Last year, the government launched PayNow—allowing individuals to transfer funds simply and instantaneously. Its Vendors@Gov portal allows suppliers to submit invoices to any government body; they can then see the anticipated payment date in their payment dashboard.

**Easing the operation of government**

New systems are also being developed to squeeze fraud and nepotism out of the supplier system: a new FINNET platform “pulls data from the registry of companies, from government payments, from all the different systems—including people’s addresses” to search for potential conflicts of interest. So if a director of a supplier business has, for example, a relative employed in the buying department, the potential conflict of interest can be identified and staff alerted (see image above, right).
Within the civil service, Loke continued, digital services have streamlined administration. Online platforms are used to manage pay and leave requests, and officials can submit expenses claims by photographing their receipts. Car mileage charges can be calculated by using GPS to record journey times and routes, and exploratory work is underway to use optical character recognition to detect the times printed on receipts—spotting anomalies that might suggest fraud or errors.

This requires some pretty advanced technology—and Loke explained that the government is using machine learning to analyse patterns in its vast data store. Officials are using “robotics systems to audit salaries and payments in the public sector, and machine learning to automatically classify data entries in the system,” he said (see image above).

What do the public want?

How can civil servants know how citizens want to receive services, asked Dmitri Jegorov, the Deputy Secretary General for Tax and Customs Policy in Estonia’s Ministry of Finance. “We didn’t know that we wanted an iPhone before it was invented,” he pointed out. “If we’re truly revolutionising products, I think citizens will not be able to tell us what they look like. How do you uncover citizens’ real needs?”

Citizen surveys can provide useful data, replied Huxtable, but officials need to consider people’s journeys through public services, identifying where they encounter obstacles and poor transitions. In Singapore, explained Loke, civil servants scrutinise the “pain points” experienced by service users around “the major milestones in life: buying a house, having a kid, going to school”, then they “come up with a hypothesis, and test it with citizens.”

Louisa Unterasinger, Chief Digital Officer in Austria’s Ministry of Finance, explained that her team used a similar process when developing a new company foundation service. Asking businesspeople about the existing system, they learned that “the real problems were quite different from the issues we’d identified”; then they “used rapid prototyping, testing solutions very quickly” with businesspeople through an iterative development process to identify what users really want.

Funding transformation

To build and launch new systems, civil servants need funds—and in these straitened times, investment cash is hard to come by. Even when reform projects are expected to produce big efficiency savings down the line, officials may struggle to find the capital to get them off the ground; and finance departments can play a key role here through ‘save to spend’ initiatives.

Under this approach, some of the efficiency savings made in departments are returned to them for investment in further money-saving reforms. In Australia, explained Huxtable, a Public Sector Modernisation Fund has been created: “Government agreed in the ’16-17 Budget to invest A$500m [US$380m] of the A$1.9bn [US$1.4bn] savings in new transformation initiatives. Then we went through a competitive process, asking government entities to come forward with ideas”.

It’s this fund that has helped support Australia’s data analytics work, via a “data integration partnership which brings together high-value data assets from across the public sector. Four analytical units have been created to support analysis of a range of policy problems,” she said. The fund’s other priority has been shared services, helping to explain the country’s rapid progress on this agenda.

This model is quite new for government, said Huxtable—but the private sector CEOs who sit on her reform committee consider it business as usual: “They know that to achieve efficiency, we have to invest; every private body does it,” she commented. “But that model doesn’t always exist in government.”

It is becoming more common, though—and Andrew Lai, Deputy Secretary for Financial Services and the Treasury in Hong Kong, explained that his administration allows departments to keep half of the savings when they come up with innovative ways to save money. This, he said, incentivises departments to work intelligently and uphold financial discipline.
Pursuing change in a complex environment

Even with the funds for reform projects, bigger and more complex systems of government will always find it harder to modernise processes and services. “We don’t have the same experience as Singapore; we don’t have responsibility for everything, so we can’t necessarily find the same connections,” pointed out Huxtable. And Torsten Arnswald, Head of the Fiscal Policy Division in Germany’s Federal Ministry of Finance, could empathise: “The new government has set up a taskforce which will coordinate digital processes,” he said—but “the Federal Ministry of Finance has, of course, limited scope to intervene in the affairs of the states and the municipalities.”

In Huxtable’s experience, she noted, “there has to be some sort of ‘burning platform’ that demands change.” Australian departments have been required to find substantial efficiency savings every year, “and it’s become almost impossible for secretaries to run their departments in the traditional way; so they have the incentive to work together and build shared platforms to reduce costs.”

So it’s the financial drivers that have often pushed forward change projects; none of the delegates said they’d found ministers eagerly championing civil service reform and the efficiency agenda.

“In my experience, ministers want a good outcome for the citizen, but public sector reform isn’t always the highest priority,” said Huxtable. “So they leave us to work it out, which is great: we can work together collaboratively to come up with a good outcome.”

Estonia’s Jegorov wholeheartedly agreed. “It’s not high on the political agenda to make public services more efficient,” he concluded. “So it’s up to public servants.”

6. Tax reforms in an era of globalisation and digitisation

Government tax professionals face a huge range of challenges, said Microsoft digital architect Harry Tsavdaris – including the long fiscal hangover of the 2008 financial crisis, the impact of demographic changes on tax revenue and public spending, and the need to safeguard their vast stockpiles of sensitive personal data.

Taxing individuals is also becoming more difficult, as remote working, increased mobility and ‘virtual migration’ leave a growing number of people outside the traditional tax system. “You can have citizens in your country using services, but working and paying taxes in another jurisdiction,” he said. “So you have the burden but not the benefit.” Dmitri Jegorov, the Deputy Secretary General for Tax and Customs Policy in Estonia’s Ministry of Finance, agreed: “We already have 1% of the world population as digital nomads,” he commented. “They travel the world and no one can claim jurisdiction over their income.”

And whilst the demands of ‘business as usual’ continue to evolve, many countries are asking civil servants to develop whole new fields of policy – such as using taxation to pursue social or environmental goals. “There’s a saying: ‘culture eats strategy for breakfast’,” Tsavdaris noted. “I could add that taxation can eat culture for breakfast. You can change culture by using the force of tax—it’s a powerful tool.”

Digital as a tool

Many of these challenges, of course, have a substantial digital dimension – and as Tsavdaris pointed out, modern technologies can work for tax professionals as well as against them. “We can have quicker payments; we can offer new ways to interact with tax administrations; we can improve our operations, optimising workflows and processes,” he said.
"We can forecast revenues; protect against fraud; open up our data to show taxpayers where their money is going."

Estonia is well advanced in its digital services—and Jegorov outlined some of the new services it’s developing for taxpayers. “We’re planning to do financial and business analyses for companies, and display them in their electronic tax interface,” he explained. “We’ll show them how they compare to similar companies in the salaries and tax they pay, and the risk scores that the tax administration has assigned to them—so if their risk score is high in a particular field, they can adjust their behaviour.”

**Digital as a danger**

Such digital tools have been covered in depth in previous Global Government Finance Summits—but on this occasion, the assembled civil service finance chiefs focused their attention on a huge and expanding threat in the digital field: just as ‘digital nomads’ are undermining the personal tax base, the growth of digital industries is leaving governments unable to effectively tax growing swathes of business income.

“International tax regulations are based on physical locations and on tangible assets, and none of that’s important for the digital economy: our regulations are out-dated and need to be modernised,” said Jegorov. This isn’t about tax avoidance, he added: the problem is that digital industries often generate much of their value in locations where they have no physical presence or taxable activity.

Some digital businesses may bump up individual users’ tax liabilities, pointed out Tsavdaris, but much of the value they create produces revenues taxed only in faraway countries. “Airbnb and Uber and Bitcoin are deregulated models,” he said. “How will tax administrations be able to regulate and tax these models?”

These changes have far-reaching implications for traditional models of taxation, argued Jegorov. “I believe that we’re witnessing the end of corporate income tax as we know it because of this increasing digitisation,” he said. “You can be an Irish citizen and an Estonian e-resident, with an Estonian-registered company, working with programmers from Ukraine and India to put a service on a cloud—which could be anywhere!—then selling the service to German and Finnish customers. Would someone tell me where the value is created?”

Taken together, said Martti Hetemäki, Permanent Secretary of Finland’s Ministry of Finance, these economic changes present an existential threat to aspects of the global tax settlement. The “pressures on the current system,” he said, raise questions over “whether it’s viable in the long run.”

**Taking action**

During Estonia’s presidency of the European Union Council in the second half of 2017, explained Jegorov, the country made “taxation of the digital economy one the key focal points.” The model of ‘permanent establishment’—the home of a business for income and VAT purposes—still works “as a central concept for global allocation of taxing rights,” he argued, “but it has to be tweaked a little bit to make room for aligned value creation where profit is taxed.”

A general consensus emerged in the Council, he added: long-term, global solutions are required that keep intact the main body of internationally agreed tax principles. Further, “we all agree that tax must be paid where value is created—but the value creation process is quite complicated, so the real arguments are there.”

As a broad principle, Jegorov continued, “user-generated content and data collection have become core activities for the value creation of digital businesses. So value created by users for these businesses in a particular jurisdiction should be considered as an economically significant function. And when users give data to a platform in exchange for a free service, this part of the transaction should be taxable in your country.”

Finding global agreement on changes to the long-standing arrangements for corporate tax liabilities is, of course, a major enterprise—so some EU leaders are keen to find a short-term remedy that can act as a stepping stone to a final settlement. “The economy is getting digitised day by day, so there’s great pressure to find an interim measure.
– a temporary one that will give us time to continue negotiations at the OECD to find a global, long-term solution,” commented Jegorov.

**In the short-term...**

As a result the European Commission has, he said, set out proposals for two directives. There’s a short-term plan for “an indirect tax on turnover of certain digital services”: this involves taxing advertising revenue; the sale of user data; and the “platform revenue” – the fee charged by digital businesses to users such as Airbnb hosts and Uber drivers.

Then there’s “a long-term solution, which is basically a corporate income tax on significant digital presence.” This latter proposal introduces the concept of “virtual permanent establishment: you’re not physically present in the market, but you have a significant digital presence and therefore you must pay a corporate income tax based, in most cases, on user participation.”

The Commission’s goal is, Jegorov explained, to introduce its short-term solution across the EU. “The main idea is to keep the Single Market harmonised and avoid its fragmentation. We know that 11 EU members states have implemented or plan to introduce their own measures if this short-term measure fails, which is a lot out of the 28,” he said.

Only about 120 major businesses, with turnover of over €750m (US$880m) and taxable EU sales of over €50m (US$59m), would be liable for this tax, he added; and it would be deductible from corporate income tax. Nonetheless, charged at about 3%, it should produce about €5bn (US$6bn) of revenue. A single country – designated by each business – would collect the tax, disbursing it to other member states based on the location of user activity.

**And in the long-term...**

One danger, as Jegorov recognised, is that this ostensibly interim measure morphs gradually into a final settlement. “As we know, there is nothing more permanent than the temporary,” he said. “We need to make sure that the directive states that when there is a global agreement, these measures will lapse.” But those involved are aware that tweaking the existing tax structures in this way will create complexity; and they believe that, as digitisation spreads further through the economy, a more fundamental rethink will be required.

The OECD general secretary and countries involved in the process have sped up their work on these long-term plans, he added, “perhaps to make sure that they find a long-term solution that renders the interim solution unnecessary.”

Under the European Commission’s proposals, this long-term solution would involve charging digital business a corporate income tax on their activities in EU states – even when they have no physical presence or staff based there. Companies would become liable for taxation if they have either €7m (US$8m) in sales, 100,000 users, or more than 3,000 contracts in a member state; the tax would be imposed on online services deemed impossible to deliver without a digital platform, but exclude online retail.

**Brokering agreement**

It would be helpful in agreeing a long-term settlement, Jegorov said, if the EU agrees a common position. “When the US comes to the OECD, they know exactly what they want and they’re frank about it,” he said. “But the majority of EU member states are also members of the OECD and they represent themselves there; I would love to see more European unity. We ought to know better what we want.”

Yet there is also international competition between EU members, noted Hetemäki—pointing to the race to drive down corporation tax rates: “We live in an open world,” he added. “It’s hard to have a purely European solution.” And the USA’s goals are bound to diverge from those of European nations – which are often consumers of the services offered by America’s digital giants: the US houses “a number of the leading companies: the interests of the United States are different,” said one delegate.

In an era when President Trump is championing protectionist policies, commented Torsten Arnswald, Head of the Fiscal Policy Division in Germany’s Federal Ministry of Finance, the EU unilaterally introducing a digital tax could create a negative reaction: “We should not chuck more oil on the fire with this issue of the digital economy: we need the United

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States to come in.” Clearly, given disparate interests and the America-first instincts of Trump, winning global agreement will not be easy.

Nonetheless, Arnswald continued, “in principle the common interest in the international community finding a proper framework should be clear:” Our current international taxation model was built decades ago in a very different era; and as economies change radically with the introduction of digital technologies, our taxation system must try to keep up. “This is a real case, I think, for international cooperation,” he concluded.

7. Last words

As the Summit drew to a close, Global Government Forum Director Kevin Sorkin asked delegates for their “one take-away: something that you’ll be doing differently in future.”

Martti Hetemäki, Permanent Secretary of Finland’s Ministry of Finance, focused on the tax discussion. “Fundamentally, people from the Ministry of Finance are sort of gloomy,” he said. “Trouble is our business; we constantly worry about what will happen. And one take-away is that there’s a risk of being left behind on the digital era’s effects on tax revenue.”

Mark MacDonald, EY Global’s Public Finance Management Leader, had drawn similar conclusions. “The tax issue is remarkable,” he said. “It strikes me that one of those watershed moments is right around the corner.”

He added that he’d been “struck by how easy it is to fall into conversations around shared issues — because essentially all of these issues are, context aside, the same around the world. That’s the power of an event like this.”

Lessons from across the globe

Louisa Unterasinger, Chief Digital Officer in Austria’s Ministry of Finance, had learned just how wide civil servants must cast their net if they’re to keep up with the latest developments in their field. “In Austria we’re quite well informed about what’s happening in Europe in terms of digitisation — but we should look further into what countries like Australia and Singapore are doing,” she said. “Your presentations were very, very interesting, and we’ll see if we can apply some of those ideas. The good thing about public administration is that you don’t have to invent everything; you can also copy!”

Australia’s presentation had also interested Harry Tsavdaris, a Digital Architect for knowledge partner Microsoft — who focused on the country’s introduction of a central team to support departments’ use of data: “I like the way you’ve implemented it in a collaborative way, not by forcing people,” he said. “We’ll try to replicate that in other jurisdictions.”

In turn Australia’s delegate, Department of Finance Secretary Rosemary Huxtable, praised Singapore’s prowess in government technology: “I was struck by how much we have in common, particularly in shared services development and in areas where we could make it easier for small and medium-sized enterprises to work with government,” she said. “I might send some people over to work with you.”

Her attention had also been caught by blockchain, she added: “I’ll go home and do some work on that.”

Ledgers and learning

Bill Matthews, Canada’s Senior Associate Deputy Minister for Defence, was also intrigued by blockchain: “The notion that it can sit on top of [Enterprise Resource Planning] systems means that I don’t have to wait for the central agencies to change their corporate systems before I do something with blockchain,” he commented. “We’re trying to extend our analytics shop to the army and air force supply chains, so there’s probably some applications inside my department.”

Torsten Arnswald, Head of the Fiscal Policy Division in Germany’s Federal Ministry of Finance, summed up — thanking the delegates for coming, and pointing to the Summit’s discussions on opportunities to create “a better future; better services; better government. I hope Martti’s feeling a tiny bit less gloomy now!”

“We need these free and open and close international relationships, not only to develop our reform agendas but also to define our common goals,” he said. “We all have an interest in maintaining a liberal global economic order, and these discussions help us to preserve it.”
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