Deloitte. • Insights

A report from the Deloitte Center for Government Insights

Building the digital revenue agency of the future

Seven keys to transformation

About the authors

Gustav Jeppesen | gjeppesen@deloitte.dk

Gustav Jeppesen is chair of the board of Deloitte Denmark and member of the Nordic and North South Europe (NSE) boards. Furthermore, he is the chief strategy officer/chief operating officer in consulting, Denmark, as well as NSE leader for civil government. Jeppesen has headed major transformation projects in the public sector with key competences within optimization, including cost reduction and cost assessment.

Mark Price | maprice@deloitte.com

Mark Price is a principal at Deloitte Consulting and the lead client service principal (LCSP) for Deloitte's work with the Internal Revenue Service (IRS). He is a leader in the US Government and Public Services (GPS) practice and the Global Consulting leader of our civil government sector. Price has lived and worked in North America, Asia-Pacific, and Europe, and has more than 30 years' experience leading strategy, operations, and technology transformation programs for a wide range of government, health care, and higher education clients.

Kathryn Karlman | kkarlman@deloitte.com

Kathryn Karlman is a managing director in the US Consulting practice with deep expertise in tax accounting and tax preparation and compliance. In her consulting role, Karlman has been advising the Internal Revenue Service (IRS) on the strategy and implementation of transformational efforts, including implementing the largest tax reform in recent US history. Prior to joining Deloitte Consulting in 2017, Karlman spent more than 25 years in public accounting, serving as a tax advisor to a range of public and privately held companies.

Jesper Kamstrup-Holm | jesholm@deloitte.dk

Jesper Kamstrup-Holm is a Denmark-based partner and has spent 13 years at Deloitte advising IT managers and CIOs. During this time, Kamstrup-Holm has specialized in working with large public institutions on everything from digital transformation and IT sourcing strategies to IT effectiveness analysis and business cases. For more than five years, Kamstrup-Holm has been advising the Danish Ministry of Taxation in tackling challenges such as data and socioeconomic consequences of Denmark's new customs authority and cloud migration to Amazon Web Services for a new property tax valuation system. Additionally, Kamstrup-Holm has led work to develop a digital transformation strategy for the Danish Tax Authority (DTA).

Ben Powell | bpowell@deloitte.co.uk

Ben Powell is the Deloitte NSE GPS lead on tax administrations. He is the lead client service partner for HMRC (the UK tax authority) and the UK's Department for International Trade. He is also the UK firm's Brexit lead for the public sector. Powell is a member of the UK Chartered Institute of Taxation with more than 24 years' experience in tax—having worked originally in Australia—and has particularly focused on tax in the public sector for the past 12 years. He leads Deloitte's taxation advisory partnership with CIPFA, working extensively to address local government taxation issues. He has extensively advised the central government, the local government, and the private sector on taxation issues, and has a deep insight into working with government, the machinery of indirect taxes systems, and the design and delivery of management/collection processes.

Ruairí Allen | ruallen@deloitte.ie

Ruairí Allen is a partner in Deloitte's Irish Technology Consulting practice and is a lead member of the System Integration team specializing in large-scale enterprise technology projects. With more than 15 years of experience in a variety of industries, including financial services and the public sector, Allen is currently the engagement partner for Deloitte Ireland's largest public sector technology account, leading Deloitte's support of the Office of the Revenue Commissioners in delivering their IT strategy and driving innovation across their complex multichannel IT infrastructure.

Allan Mills | allmills@deloitte.com.au

Allan Mills leads Deloitte's New South Wales (NSW) finance consulting engagement, providing advice to clients on back office transformation, including shared services and outsourcing, integrated performance reporting, and finance improvement projects. He focuses on finance and performance management, including the establishment of four shared service environments, cost reduction programs, and building a dedicated back-office transformation team within Deloitte. Mills has presented on shared services and emerging technologies, as well as supported regional development programs in response to significant employment challenges.

About the Deloitte Center for Government Insights

The Deloitte Center for Government Insights shares inspiring stories of government innovation, looking at what's behind the adoption of new technologies and management practices. We produce cutting-edge research that guides public officials without burying them in jargon and minutiae, crystalizing essential insights in an easy-to-absorb format. Through research, forums, and immersive workshops, our goal is to provide public officials, policy professionals, and members of the media with fresh insights that advance an understanding of what is possible in government transformation.

Contents

Challenges for tax agencies in today's digital world **2**

Looking inward 4

Looking outward 9

Shifting mindsets: Bridging the gap | 14

The future is now within reach **16**

Taking the next step to a better future **18**

Endnotes **20**

Challenges for tax agencies in today's digital world

Revenue agencies, perhaps more than any other part of government, must keep pace with the technology revolution reshaping our world. Why? Because to be successful, revenue agencies need to be as nimble, adaptive, and digitally savvy as the economies they tax. After all, tax agencies provide the fuel that powers government, allowing the public sector to deal with issues from health services to infrastructure investment to national security.

HIS PAPER WILL share seven key strategies to help revenue agencies thrive in the new digital economy. It's about much more than merely embracing digital technology; it's about bringing a new mindset to tax administration, workforce management, and customer experience.

The rate of technological change is accelerating, creating a rapidly shifting economic landscape. From newspapers to taxicabs, from hotels to travel agents, it's not just companies that are being disrupted, but entire industries. Revenue agencies are no different.

In this world of digital and economic disruption, revenue agencies are increasingly recognizing that yesterday's taxation models—and the systems that support them—can no longer keep pace. New forms of economic activity—such as the knowledge economy, the sharing economy, and the gig economy—represent a decoupling of economic activity from traditional models of value creation. Just "where" did that virtual transaction occur? Is that person posting videos online a worker, an owner, or an employee? And how exactly do you tax cryptocurrency exchanges? Tax agencies will have to do more than just modernize systems to ensure success in a future of fast-paced disruptive innovation.

Precisely what future success will look like for revenue agencies will differ across countries, segments, and tax types, but one thing is clear: Revenue agencies must shift from *doing digital to being digital*.

Through conversations with current and past tax agency leaders and other members of the larger government revenue ecosystem, as well as studying recent agency actions around the world, we've identified seven keys to success for revenue agencies in the age of digital transformation. The seven keys are shown in figure 1.

The seven keys to transformation include three internal shifts, three external shifts, and one strategic mindset shift. Internally, agencies will need to transform by rethinking digital workflows,



Seven keys can help revenue agencies become truly digital

Source: Deloitte analysis.

FIGURE 1

data management, and the workforce. Externally, agencies will need to become nimbler in order to enhance the customer/taxpayer experience, develop processes to keep pace with economic reality, and deepen relationships with stakeholders in the taxation ecosystem. Finally, agencies will have to address head-on the paradoxical demands of the digital ecosystem they occupy. The same technology revolution that has produced challenges also offers agencies incredible opportunities to fulfill their mission better than ever before. Many revenue agency leaders understand what this opportunity means, but few have cracked the code to unlock a "future-proof" model for mission success. What are the concrete steps that revenue agencies need to take?

Looking inward

RANSFORMING THE CORE functions of tax administration-calculating tax liabilities, collecting revenue, and enforcing compliance-will require revenue agencies to adopt a digital-first mindset, rethink how they capture and manage data, and reimagine their workforces. Investing in these capabilities has a clear return for agencies: Internal digital transformation will ultimately reduce the effort required to capture each incremental unit of revenue. In an era of constrained public budgets, relying on quick internal fixes can be more expensive over the long term; holistic transformation is likely the most cost-effective long-term solution. The first three keys provide a framework that revenue agencies can use to unlock their internal transformation goals.



OUR PERSPECTIVE

Most revenue agencies were not born digital. While some governments have made holistic strides toward comprehensive digitization of workflows, communication channels, and infrastructure, many tax agencies have instead taken a piecemeal

Revenue agencies risk failing to meet their most basic mission requirements if they do not get digital to the core.

approach, building stand-alone digital products atop legacy foundations. Too often, this has resulted in digital front ends grafted onto analog back-office processes and outdated mainframe systems.¹ The technical

Key No. 1: Get digital to the core

THE CHALLENGE

While economic innovators are pushing the boundaries of digital-based operations and taxation, revenue agencies are



struggling with outdated systems and legacy business practices. Revenue agencies risk failing to meet their most basic mission requirements if they do not get digital to the core. inadequacies at the core of most revenue agencies are not only financially burdensome, they also create outcomes that are unfriendly to citizens and revenue agency employees. Poorly documented processes supported by poorly documented systems programmed in extinct languages will constrain agencies' ability to manage risks, and they will produce risks in their own right. When a revenue agency's backbone relies upon decadesold machine languages, it is virtually impossible for the agency to leverage emerging technologies such as artificial intelligence (AI), machine learning, the Internet of Things, mobile interfaces, and cloud computing.²

ESTONIA'S DIGITAL DNA

Estonia's revenue agency isn't totally digital—but it is close enough. More than 99 percent of Estonia's tax reporting occurs digitally, making it easy for Estonian tax payers to file returns with just a few clicks. The country of 1.3 million people is one of the most digitally advanced societies worldwide.³

Estonia's commitment to digital is strategic. "Our citizens will be global soon," said Kersti Kaljulaid, the president of Estonia, during remarks to European leaders at a recent EU Digital Summit. "I am president to a digital society ... We have to fly like bees from flower to flower to gather those taxes from citizens working in the morning in France, in the evening in the UK, living half a year in Estonia, and then going to Australia."⁴

The revenue agency's commitment to digital reflects Estonia's overall digital emphasis, which includes an ID card for nationwide digital authentication and digital signing of documents. The backbone of this digital-first reality is X-Road, a government-to-business digital interchange that allows Estonia to uphold its core digital principle: Give us your data once, and we have you covered.⁵

Estonia's revenue agency arose in the aftermath of the Cold War, when the country gained independence from the Soviet Union. This enabled it to "start fresh" in a way that will be difficult for many more-established revenue agencies. Nevertheless, it is illustrative of what it means to rethink the role of digital from the ground up and explore new models of operation that are digital to the core.

Revenue agency leaders have spent years asking themselves, "What do we need to modernize?" We recommend that leaders begin asking themselves, "What do we *not* need to modernize?" While legislation and political trends may pose constraints to how creative revenue agencies answer this question, there are models for success in this arena. Some revenue agencies have championed broader governmentwide digitization initiatives that enable their own internal transformation journeys. Partnering with policymakers on legislative changes can speed progress toward achieving core digitization.

Building a truly digital core will require implementing holistic digital case management systems; developing intelligently automated tax submission review workflows; creating secure,

Only revenue agencies that are digital to the core will be able to meet these flows head-on and capture the public's fair share of digitally native economic value.

> cloud-based business-to-government data exchanges; and adopting modular, flexible approaches to systems architecture that can facilitate rapid adaptations to changing policy mandates. Taxable economic activity is increasingly flowing through digital channels. Only revenue agencies that are digital to the core will be able to meet these flows head-on and capture the public's fair share of digitally native economic value.

Key No. 2: Unlock the power of data

THE CHALLENGE

Data provides important insights, but bad or inadequate data means bad taxation. Citizens and businesses are generating data at unprecedented rates,



but many revenue agencies are unequipped to unlock its value. Moreover, the vast volumes of new types of data that revenue agencies must consume pose critical challenges to the very foundation of tax data infrastructures. New tools and mindsets can help revenue agencies fully harness the value of that data.

OUR PERSPECTIVE

Data is a revenue agency's most valuable asset but is also potentially its greatest burden. The sheer volume of data generated by digital economic transactions—salaries, sales documentation, payments, natural language, and much more—is dizzying, and many revenue agencies are illequipped to fully grasp these vast data flows. Getting data right is essential and requires leaders to understand how they can unlock the power of new types of data, while protecting the privacy of constituents and serving the public good.

Revenue authorities worldwide are already starting to use digital methods to collect and analyze taxpayer data. And some revenue authorities-such as the US Internal Revenue Service (IRS)-are spending accordingly: The IRS's 2020 budget justification to the US Congress indicated that advancing "data access, usability, and analytics to inform decision-making" is a primary goal. These priorities are a recognition of the rapid increase not only in the amount of data available but also in the new types of data that are now at an agency's fingertips, if it can reach out to grasp it. In the best scenario, these new data sets can help facilitate more accurate collection and audits, while at the same time making it easier for businesses to provide needed information. In too many cases, however, revenue agency data remains trapped in silos, limiting its value. In addition, legacy systems, including paper forms, mean that the potential for erroneous data remains very real.6

Revenue authorities across the globe are ramping up their data analytics capabilities. The potential to automate compliance and service activities opens the door to significant streamlining of revenue agencies' core tax functions. However, as the amount of data increases, so too does the risk of theft and exploitation by malicious actors. A recent survey found that 88 percent of public sector organizations had experienced at least one damaging cyberattack during the previous two years, with 62 percent of organizations having



BIG DATA AT IRS

The IRS is a leader in the use of data. The data analytical techniques driven by the IRS's Research, Applied Analytics, and Statistics (RAAS) organization helped to identify approximately 400 percent more tax fraud and recover 10 times the proceeds from other financial crimes compared to the prior year.⁷ To achieve these results, the IRS is cross-referencing numerous data sets—such as the Offshore Voluntary Disclosure Program and high-profile data leaks such as the Panama Papers—and applying advanced methods such as anomaly detection, clustering, and neural networks.⁸

The IRS also combines data with behavioral techniques to "nudge" taxpayers toward greater tax compliance. Taking a step further, the IRS has developed a "behavioral insights toolkit," which it describes as "a guide for integrating behavioral approaches into tax administration," including the role of data analytics.⁹ As Jeff Butler, associate director of data management at RAAS, stated, "In an era of persistently reduced budgets, the use of data analytics has become more important than ever to drive innovation, risk management, and decision-making across the agency."¹⁰ Big data techniques can yield value for revenue agencies and society at large, but those benefits require the type of modern information architecture that can be implemented only through wholesale infrastructure transformation.

experienced two or more.¹¹ The growing value of the data collected by revenue agencies, coupled with the growing sophistication of cyber criminals, means that data security must be a paramount concern.¹²

Key No. 3: Reimagine the workforce

THE CHALLENGE

Nothing is more important than your people. Ironically, this is truer than ever in the digital age. Sourcing talented employees adept at leveraging complex data, managing digital platforms, and leading effective teams



is becoming increasingly difficult in light of fierce competition with the private sector. Taking a holistic approach to combining innovative talent development models with a machine-augmented workforce is likely to allow revenue agencies to thrive in the midst of digital disruption.

OUR PERSPECTIVE

Core digitization and advances in data management will not happen at the flip of a switch. To be successful in the future, revenue agencies need a workforce that is both ready to tackle these complex technical challenges and able to rapidly adapt to shifting policy mandates and operational

> priorities. Revenue agencies must widen their aperture on talent, both on the type of talent they are looking for and how they are sourcing and retaining that talent. People represent the greatest asset and the greatest cost to revenue administrations, with salary costs averaging 73 percent of budgets for more than 50 administrations that provided data for the Organisation for Economic Co-operation and Development (OECD) Tax Administration Series 2019, with

salary costs approaching or exceeding 80 percent in about a third of these.¹³ Revenue agencies have a major opportunity to restructure their workforce, as experienced staff will be retiring in large numbers in the coming years. As revenue agencies increase the use of digital tools and the integration of data into daily operations, demands of their workforce will shift from data entry, manual calculations, and "paper pushing" to innovation, interpretation, and design. To adapt to digital disruption, revenue authorities worldwide must build workforces that not only combine legacy tax experts with tech-savvy newcomers equipped to take advantage of new technologies, but also best use uniquely human capabilities such as curiosity, empathy, and imagination. Revenue agencies are not alone in this shift. Deloitte's Global Human Capital Trends 2019, which surveyed leaders across global commercial and public sector organizations, indicated that more than 80 percent of respondents are making investments in reskilling and retooling their workforce in response to digital labor and machine capabilities, with 36 percent "reimagining work" altogether.14

Even today, revenue agencies have difficulty attracting, training, and retaining top talent. That challenge will only grow as revenue agencies try to attract talent in high-impact, high-demand fields such as data science, cybersecurity, and AI. To be successful, revenue agencies will need to reconsider how competitive their value proposition is to prospective and current employees and reimagine every aspect of talent management, including recruitment, hiring, skills development, advancement, and career transitions. Revenue agencies may need to create ways to tap into human resources from outside the traditional employee base. This could include gig workers, contractors, crowdsourced solutions, creative partnerships with other players in the tax ecosystem, and, yes, digital labor.

Leaders of revenue agencies must also recognize that a machine-augmented workforce will provide the clearest path to building a solid talent foundation. Digital labor—ranging from routine process automation to the more advanced forms of AI—does not replace human labor but can actually extend the capabilities of human workers, enabling revenue agency employees to shift from lowervalue repetitive tasks to higher-value intellectual, interpersonal, and technical challenges. It also enables the transfer of knowledge and responsibilities from retirees to the next generation of revenue agency staff, supporting uniform and measurable processes that can be sustained with transparency and accountability.

Revenue agencies can use technology to augment their workers to handle a more complex set of tax, technical, and human skills.¹⁵ In this way, digital transformation and workforce transformation work hand in hand. Technology will revolutionize the way in which revenue agencies manage operations, while simultaneously supporting an even more impressive goal: enabling humans to be what they are meant to be—thinkers, talkers, and doers.¹⁶

THE UNITED KINGDOM'S INNOVATIVE TAX TALENT

By modernizing digital workflows, Her Majesty's Revenue and Customs (HMRC) provides its workforce of 63,000 professionals the right tools to deliver customer service support, investigation services, and other critical tax administration functions. HMRC has implemented more than 50 robotic process automations, enabling its staff to focus less on repetitive tasks and more on customer-facing activities, totaling more than 14 million transactions. After a team of just 20 people built their first three digital exemplar services, HMRC's digital services team has grown to more than 1,000 specialists working across seven facilities around the United Kingdom. One of HMRC's priority areas, the individualized Personal Tax Account, has over 16 million users and an 82 percent customer satisfaction score.¹⁷

Looking outward

HIFTING INTERNAL OPERATIONS will take revenue agencies far, but not far enough. Revenue agencies need to look outward to deal with an increasingly interconnected, fastmoving economy. Agency success increasingly depends on interactions with taxpayers, small businesses, and multinationals, as well as revenue agencies from other jurisdictions.

Agency success increasingly depends on interactions with taxpayers, small businesses, multinationals, as well as revenue agencies from other jurisdictions.

Taxation strategies designed for the early 20th century's brick-and-mortar economy are being continuously challenged by cross-border data flows, agile supply chains, and mass digitization.¹⁸ The next three keys can help revenue agencies expand their horizons to interact with the overall tax ecosystem and meet the demands of the 21st-century economy.

Key No. 4: Elevate the tax experience

THE CHALLENGE

Estonia has legislation establishing that the state is only allowed to ask for the same information once, the Inland Revenue Authority of Singapore operates by the mantra that "no need for service is the best service," and the Australian Taxation Office aspires to a future where "tax just happens".¹⁹ While some revenue agencies have committed to moving most of their customer interaction to digital channels, implementing commercial-grade taxpayer experiences will challenge every revenue agency's user-centricity and digital design acumen.

OUR PERSPECTIVE

Taxation may never become citizens' favorite interaction with government, but it is essential and one of the most universal set of interactions that any government will have with its citizens and it's important to get it right. Spending and making money on digital platforms is easy. Paying taxes on purchases and income should be easy, too—not only because it is an

experience taxpayers expect, but because it is an experience agencies need them to have. Fair and efficient taxation builds trust and helps citizens feel invested in the broader functioning of their community, boosting voluntary compliance.

> Understanding tax obligations can be hard. The easier that experience is made for citizens—through reduction in manual calculations, increases in available data, userfriendly design interfaces, and on-the-go access—the more positive their experience and the greater their compliance. The clearest path toward elevating the tax experience for citizens is by using humancentered design techniques to meet

them where they are: on their mobile phones, in their email inboxes, or via smart home devices. Putting these ambitions into action will have a



The clearest path toward elevating the tax experience for citizens is by using human-centered design techniques to meet them where they are: on their mobile phones, in their email inboxes, or via smart home devices.

significant impact on tax compliance, but will also require serious digital capabilities—the kind that can only be built through deliberate investment and cocreation with ecosystem partners.

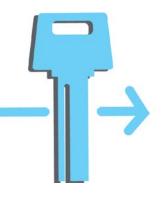
Revenue agencies around the globe recognize the importance of the citizen experience, and many are devoting resources to making it better, as well as the experience of businesses and their own employees. In a Deloitte survey of 1,200 government officials from more than 70 countries, 78 percent said digital capabilities allow their employees to be more responsive to the needs of citizens and foster trust in government and public services.²⁰

To meet rising citizen expectations, revenue agencies should work to elevate the tax experience.

Doing so will enable them to build trust, drive higher compliance, and strengthen the overall tax base.

Key No. 5: Tax new stuff fast

THE CHALLENGE Borderless transactions. Monetizing virtual assets. Electric cars and the decline of gas taxes. It is no longer enough for revenue agencies to accommodate the latest legislative mandates on annual cycles. Taxation



MOBILE-CENTRIC TAX IN AUSTRALIA

The Australian Taxation Office (ATO) is providing enhanced service by connecting tax services to their customers' lives. "We envisage a future where digital services will be integrated into the systems and practices used by the community in their everyday lives and businesses," wrote Fiona Dillon, deputy commissioner of ATO. The ATO has a bold digital vision in which Australians have a "real-time, contextual, and complete view of their interactions within the economy in a transparent and secure way ... Essentially, tax just happens."²¹

In part, this means meeting citizens where they are—which, it turns out, is on their phones. ATO's analysis of taxpayer behavior indicated that many Australians were interacting with ATO via their mobile devices, but ATO's Web content was not mobile-optimized. This created a poor customer experience, placing ATO behind the digital experience curve.

To elevate the tax experience for all Australians, ATO combined cutting-edge human-centered design techniques with mobile accessibility. One result of this initiative was the ATO app, which enables citizens to understand their tax rates, calculate tax and deductions, and interact with ATO support services. The ATO app, one of the primary channels through which ATO interacts with taxpayers, was designed, built, and delivered in just eight weeks, and is now continuously enhanced on an iterative basis.²²

must be approached with the same focus on dynamic agility that drives software development and systems engineering, addressing emerging patterns of risk by implementing systemic, responsive cultures and operating models.

OUR PERSPECTIVE

Today's economy changes at head-spinning speeds. Revenue agencies are being asked to hit a fastmoving target, guided by laws and regulations that were not designed with this reality in mind. What is the right way to tax a never-before-seen business model? What do sales taxes and value-added taxes (VAT) look like in an economy where an increasing share of transactions occur through online, distributed platforms that are less integrated into standard reporting practices than traditional markets? And if agencies can answer these questions, are they prepared for what's next?

Revenue agencies must enhance their ability to understand, track, and tax new stuff both quickly and correctly. This stuff ranges from jewelry sales via Instagram, to apartment rentals via Airbnb, to various forms of short-term "gig work" delivered via virtual global platforms. The most successful revenue agencies will close the revenue gap and tax equitably in ways that adapt to new business models as they arise. They will also leverage global, cross-border approaches-such as OECD policies and holistic digital service tax frameworks-to keep pace with rapid economic shifts. Agencies that are able to understand and engage with those driving and affected by changing business models and then respond as a revenue agency in an agile, adaptable, and forward-thinking manner are likely to succeed in taxing at the speed of business.

Taxing novel aspects of the economy has been challenging governments for centuries. Today's challenges are greater because the stakes are so much higher. The global sharing economy, which arose in the early years of the 21st century, is predicted to hit US\$335 billion by 2025. But taxation practices for sharing economy transactions remain unclear.²³ Tax compliance among gig workers and within sharing economy marketplaces is lagging. A recent report from Rice University indicated that "a significant number of taxpayers who receive income from the sharing economy are not aware of their filing and reporting obligations and therefore fail to make [...] estimated tax payments or pay self-employment taxes."²⁴

There is general agreement that the emergence of new business models and the continued digitalization of existing business models may exacerbate the "tax gap," i.e., the difference between taxes collected and the theoretical amount actually owed.²⁵ Such a gap cannot be measured precisely, but estimates across 35 nations average just over 7 percent of GDP, representing nearly US\$2.5 trillion for those countries in 2015.²⁶ Even small increases in this amount represent significant amounts of money.

Responding quickly and effectively to new business models, along with continuing efforts to increase tax reporting, transparency initiatives, and global coordination of revenue authorities, can help to avoid any exacerbation of the tax gap while also enabling individuals, small businesses, and disadvantaged communities to participate effectively in the economy in new ways that were previously impossible. Failure to integrate the sharing economy—and the multisided platforms that support it—into the formal economy could mean a continued erosion of governments' tax base at a time when public budgets are under constant pressure.

There is one proven strategy for taxing new stuff fast: Revenue agencies should get as close to the source as possible. Revenue authorities can stay on top of the newest "stuff" in the digital economy whether it's an esports tournament prize, a nonmonetary gift to an "influencer" for a product promotion, or short-term apartment rental payments—by sourcing data from the transactions themselves or from systems that can be trusted to

THE DANISH RESPONSE TO DISRUPTION

The Danish Tax Agency, like many of its peers, was vexed by how to align traditional tax processes which rely on extensive withholding and third-party data—with the growth of sharing and gig economy transactions that are difficult to track and assess. Audits based on data provided under international exchange of information arrangements found low levels of compliance. Parliament responded by enacting a bill incentivizing sharing economy platforms to provide third-party data on rentals of assets such as homes, vacation homes, cars, and boats by offering raised taxation thresholds and simplified rules for asset rentals covered by third-party data. This is a model that was already successful in migrating vacation home rentals from the underground economy to rental agencies.

While participation is voluntary—except for domestic sharing economy platforms, which are required to participate—the generous tax breaks involved offer a strong competitive advantage to participating platforms.

The bill was enacted in May 2018, and revenue agency leaders in Copenhagen quickly followed up by formalizing a partnership with a major sharing economy platform to develop an application programming interface (API) facilitating the transfer of data from sharing economy platforms to the tax administration, which is expected to be effective from 2021.²⁷

The solution—which was intended to address the urgent tax issues related to the sharing and gig economy while maintaining a climate friendly to innovation and growth—illustrates how innovative revenue agencies may collaborate with ecosystem partners to turn disruption to their advantage. It was welcomed by sharing and gig economy platforms acknowledging that "taxation has long been the Achilles' heel of the sharing economy."²⁸

reflect them. Like any effective tax policy that encourages voluntary participation, requiring source-based information reporting needs to be balanced against the compliance cost and burdens placed on the stakeholders participating in the economy. with private and public entities to drive efficiencies, capture data, anticipate issues, and tackle complex problems.

OUR PERSPECTIVE

Regardless of the national flag that they fly, revenue authorities sit at the crossroads between citizens, government agencies, private

> corporations, and members of civic society. They also coordinate with revenue agencies of different jurisdictions, locally, regionally, and globally. No revenue agency operates in isolation.

Understanding and embracing this ecosystem, which we call the

Key No. 6: Embrace the end-to-end tax community

THE CHALLENGE

Disruption is shaking up the entire revenue loop. As instability becomes the norm throughout the tax agencies' ecosystems, revenue leaders must extend their focus beyond their physical walls, forging partnerships



end-to-end tax community, is critical to mission success. In today's world of integrated product, information, and financial flows, the ecosystem represented by the end-to-end tax community is not bound by city, state, or even national borders. To prevent tax base erosion, identify evasive economic actors, and track down international fraud, revenue agencies must have a deep grasp of how their priorities impact—and are impacted by globalized markets.

Individual and business taxpayers are changing how they create value, spend money, and pay taxes. Cross-border monetary transactions and Webbased economic activity make it difficult for revenue agencies to align their geographic footprint with their digital posture. Because an increasing percentage of market-based transactions leave electronic trails, revenue agencies with robust ties to the end-to-end tax community should be able to maintain visibility into economic activity without building a new records management framework from the ground up. By mapping the economic processes driven by members of the end-to-end tax community, revenue agencies can become more adept at taxing close to the source.

Governments look to revenue authorities to provide a stable base for public investments and critical policy priorities. Revenue agencies are not just the middleman in this revenue loop; they are an essential community integrator. By partnering with private industry, government agencies, and international organizations, revenue agencies can mitigate risk and drive collaboration.

ENGAGING FINLAND'S TAX ECOSYSTEM

Corporations are one of the essential components of any country's revenue loop, and revenue agencies should view these private entities as critical partners within the tax community. Embracing the end-to-end tax community means finding novel ways to infuse collaboration into revenue agencies' relationships with these engines of the global economy.

In Finland, the Finnish Tax Administration closely integrates with the back-end data systems of corporations and other commercial partners. Through this embrace of public-private data-sharing, the Finnish government can pull VAT and other self-assessed tax data directly from corporate systems. This reduces the administrative burden on private companies and public administrations while enabling the Finnish government to capture revenues that previously may have been lost.

APIs are the core technical element of this approach to integrating the tax ecosystem. These APIs allow third parties to develop secure, real-time solutions to tough tax challenges, building trust in public institutions and strengthening the ties between key members of the global tax community.

Finland isn't the only country whose revenue agency is focused on implementing APIs. A recent report from the OECD examined in detail leading practices for APIs that serve the public good.²⁹

Shifting mindsets: Bridging the gap

REVENUE AGENCIES CAN take a hard look at their internal operations and their external relationships, but if they are still gazing through a traditional lens, the picture will remain the same—and may look confusing. Digital evolution can place paradoxical demands on revenue agencies: How can an organization share data more broadly while protecting privacy? What's the secret to adopting an agile posture within traditional bureaucratic constraints? Can you implement digital processes while maintaining a human face? The seventh and final key to revenue agency digital transformation explores how revenue agencies can balance these competing priorities.

Key No. 7: Balance competing priorities

THE CHALLENGE

Revenue agencies are often being pulled in two directions at once—being asked to catch up with innovation or maintain a risk-averse mindset, or to find a balance between sharing data or keeping it

safe. To find that balance, agencies need to shift from an "either/or" mindset to a "yes, and" mindset. This challenge is perhaps the most complex to address but carries the greatest imperative. Inaction and indecision here could lead to stagnation, leaving revenue agencies vulnerable to persistent tax base erosion, burdened with legacy infrastructure, and increasingly challenged in recruiting and retaining talent.

OUR PERSPECTIVE

Successful revenue agencies pursue seemingly opposite objectives by viewing technology as an opportunity instead of a challenge. Take a nonrevenue example from history: manufactured goods. In the 20th century, technological constraints meant that firms could make customized, but expensive, hand-crafted products, or they could make inexpensive, one-size-fits-all, mass-produced products. The 21st century advent of "mass customization," fueled by technology and a new mindset, synthesized this paradox to create customized, low-cost solutions. From modular furniture to bicycles with interchangeable parts, many producers have used technology to deliver

bespoke products at assembly-line prices.

The paradoxical imperatives facing revenue agencies are not as mutually exclusive as they might first appear. The cloud, for example, can provide a highly secure data environment that can also enable data-sharing. Digital trust can be fostered through inclusion, privacy, and security, all of which are

facilitated by cloud technologies. In this way, cloud adoption—which to this day is viewed with apprehension by many revenue agency leaders can in fact minimize the very risks to security and privacy that it previously may have represented.



The digital revenue agency of the future should seek to synthesize the paradoxes it faces by using technology to break traditional constraints. It will not be easy, and it might be confusing. But remember: New technologies are simultaneously the source of the tensions faced by revenue agencies as well as the potential solutions. We believe that revenue agencies can embrace change while respecting their legacy by synthesizing opposing demands rather than choosing one over the other.

THE UNITED STATES, THE UNITED KINGDOM, AND IRELAND FIND A BALANCED PATH FORWARD

Revenue agencies around the world are already adopting practices that enable them to capture the value offered by digital transformation opportunities, while also protecting their legacies.

In the United States, traditional procurement regulations made it difficult for leaders to invest in next-generation technologies. To address this tension—how to push the boundaries of innovation while using procurement practices that were designed for a previous era—the IRS recently created a phased, incremental contracting platform that will enable it to try out new technologies while mitigating the risk of expensive project failures and highly visible implementation delays. The initiative, called Pilot IRS, borrows leading practices from private industry and remains within the statutory boundaries of the US Federal Acquisition Regulations. The first Pilot IRS proposal requests were released in August 2019, kicking off a program that represents a substantive step toward procurement innovation.³⁰

In Ireland, the revenue agency faced a different challenge: How to pivot toward an analyticsdriven decision-making process while remaining true to its collaborative institutional culture. To address this paradox, the Irish revenue authorities established a senior management group, the Revenue Analytics Group (RAG), to manage all analytics work across the agency. The RAG consists of representatives from the business, analytics, and IT functions. It also has a direct link to the key operational and IT governance bodies. By using advanced analytics, Irish revenue authorities can identify cases for intervention, forecast revenue collections, and evaluate the impact of actions and interventions.³¹ By integrating key stakeholders from across their operating units, the RAG enabled Irish revenue leaders to innovate within existing administrative channels, ensuring that decisions were consistent with traditional agency values.³²

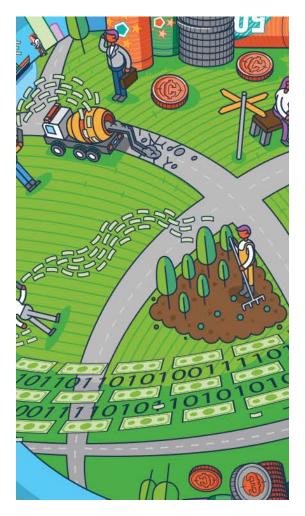
By taking a bold digital posture, HMRC in the United Kingdom provided its constituents with the opportunity to interact with revenue authorities in a more citizen-centric, convenient manner. A downside to this high visibility was the opportunities for malicious fraud that it created: HMRC is the most "spoofed" UK government brand. Through fake phone calls and fake websites, criminals scam taxpayers into handing over sensitive personal data or erroneous tax remittances. This paradox—how to foster accessibility while minimizing scam risks—has led HMRC to adopt a robust approach to cybersecurity and scam detection. It has implemented technical controls that blocked 450 million phishing emails and text messages, proactively removed more than 16,000 malicious websites, and deployed transaction monitoring tools that sense when online interactions are potentially fraudulent.³³

Revenue agency leaders are already finding ways to synthesize these perceived paradoxes into a new path forward. As illustrated by the Ireland, US, and UK examples, instead of choosing between two desired but apparently mutually exclusive options, agencies forge new paths to fully achieve both goals.

The future is now within reach

EVENUE AGENCY LEADERS should expect the disruption to continue. So, what comes after the seven keys? What's next?

After all, the future is a journey, not a destination. Embracing the seven keys will give digital revenue agencies a platform to keep pace with the dynamic economy and lay a strong foundation for future innovation. A more agile, digital organization with deeper connections to the external tax ecosystem will be better positioned to both influence the future and adapt to it as it unfolds.



No one can predict the future precisely, but past experience provides strong indications about future trends. On the economic side, business will leverage technology to evolve new forms of commerce, presenting challenges for legislators, regulators, and tax agencies seeking to appropriately tax these new forms of economic activity. Ensuring a reliable revenue stream in a manner that doesn't limit economic innovation will likely be an ongoing challenge—but one that digital "seven-key" agencies will be well-positioned to face.

From the consumer perspective, the retail experience will continue to elevate the demand for a hassle-free customer experience. Customers will want it all: anticipatory, automatic, and intuitive service, which digital technology makes possible. It may be too much to imagine a future where people enjoy paying their taxes, but one can imagine a future in which the *experience* of paying taxes will become virtually painless.

Indeed, until recently the notion of a government agency becoming a "one-stop shop" was the gold standard in customer service. This vision is being disrupted by providers of a "no-stop shop," which seamlessly identifies and delivers needed services proactively.³⁴ Observers of government trends have noted that while much remains to be done, "all signs point toward the adoption of a no-stop shop model in government. The forces pushing in that direction are simply too powerful to ignore."³⁵

What would a no-stop shop revenue agency look like? Again, no one can foretell the future. But such a revenue agency would look to make common tax events "just happen," without requiring individuals

No one can predict the future precisely, but past experience provides strong indications about future trends.

or businesses to do any more than review the result. In the same way that payroll deductions facilitate tax payments, a no-stop shop would look to apply AI and data analytics to deliver services proactively. New technology makes more seamless, proactive, and intelligent tax collection processes a realistic goal. Within five years, we believe most tax administrations will require fuller data sets to be filed or made available in real time, or close to it. Many are likely to go beyond this standard: Rather than filing the data and managing the transfer and storage of large volumes of data, they may simply run the algorithmic routines across data sets and then review the results.³⁶

The specific structure of a no-stop revenue shop will depend on local preferences, laws, and regulations. More important than the specifics is the aspirational goal of making the tax collection process as painless, transparent, and accurate as possible. It means going beyond merely digitizing existing processes to fundamentally rethinking how the tax agency interacts with individuals and businesses.

The sometimes-daunting prospect of transformational change can obscure an important truth: The future will present remarkable opportunities to use technology to improve tax collections.

Taking the next step to a better future

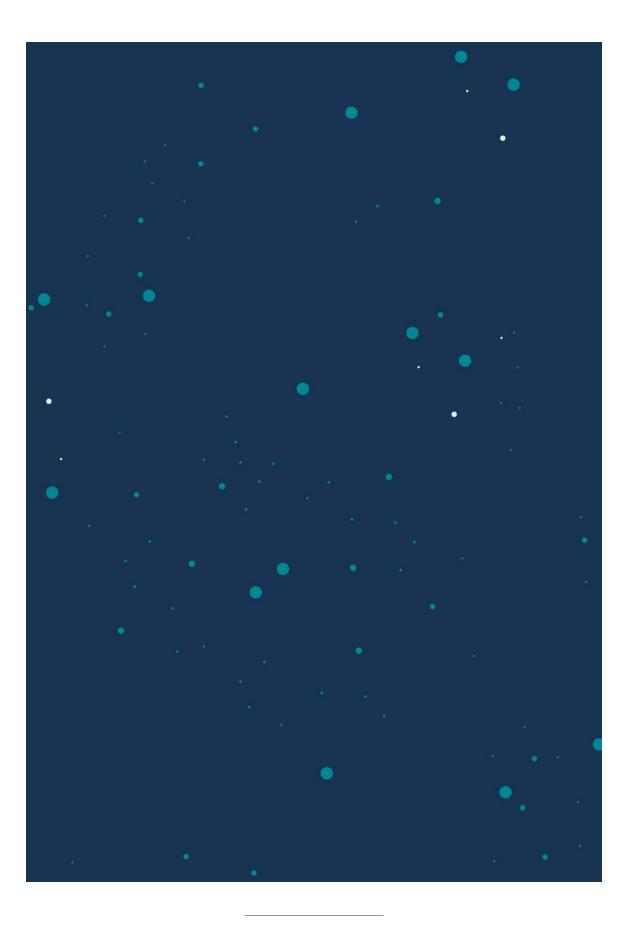
But the tech revolution reshaping our world can offer opportunities for revenue agency leaders to take their organizations to the next level. Emerging technologies can create new efficiencies, help forge deeper relationships with taxpayers and ecosystem partners, and deliver unparalleled customer service.

Each of the seven keys we have described represents a foundational change in how revenue agencies deliver on their core mission. When taken together, they outline a long-term journey of selfassessment and strategic decision-making: bold shifts in approach that yield transformational results.

The stories of bold innovation shared throughout this paper give a hint that the future is becoming reality. For Deloitte, this paper and the framework it presents is just the beginning: We look forward to sharing deeper insights around the seven keys, our experiences with clients, and cutting-edge stories of innovation from across the global revenue agency network.

The impetus for change is clear: Without effective tax collection and enforcement, government won't be able to deliver essential services. That's why governments around the world are adapting to meet the new age of revenue collection, to match the innovations taking place in a global economy.

The digital insights, tools, and technology are ready and available to future-proof your organization. Wherever your organization is on the journey, there is much to do. Engage your leaders, establish a vision, embrace the seven keys—and start the conversation today.



Endnotes

- 1. William D. Eggers and Steve Hurst, *Delivering the digital state: What if state government services worked like Amazon?*, Deloitte Insights, 2017.
- 2. Joe Mariani et al., *Cloud as innovation driver: The foundation for employing emerging technologies in government*, Deloitte Insights, June 24, 2019.
- 3. Mari Roonemaa, "Global lessons from Estonia's tech-savvy government," UNESCO, 2017.
- 4. Nathan Heller, "Estonia, the digital republic," New Yorker, December 11, 2017.
- 5. Intra-European Organisation of Tax Administrations, *Impact of digitalisation on the transformation of tax administrations*, accessed December 9, 2019.
- 6. US Department of the Treasury, Internal Revenue Service, *Congressional budget justification and annual performance report and plan, fiscal year 2020*, accessed December 9, 2019.
- 7. Jason B. Freeman, "The IRS and big data: The future of fighting tax fraud," Today's CPA, February 18, 2019.
- 8. Ibid.
- 9. Internal Revenue Service and Deloitte, "Behavioral insights toolkit," 2016.
- 10. Sean Robinson, "Wise practitioner—Predictive analytics interview series: Jeff Butler at IRS Research, Analysis, and Statistics organization," Predictive Analytics Times, September 2, 2015.
- 11. Ponemon Institute LLC and Tenable, Cybersecurity in public sector: 5 insights you need to know, February 2019.
- 12. David Schatsky, Jonathan Camhi, and Craig Muraskin, *Data ecosystems: How third-party information can enhance data analytics*, Deloitte Insights, February 28, 2019.
- 13. Organisation for Economic Co-operation and Development, Tax Administration 2019 (Paris: 2019).
- 14. Erica Volini et al., 2019 Global Human Capital Trends, Deloitte, 2019.
- 15. Erica Volini et al., From jobs to superjobs, 2019 Global Human Capital Trends, Deloitte Insights, April 11, 2019.
- 16. Amazon, "Upskilling 2025," accessed December 9, 2019.
- 17. IOTA, Impact of digitalisation on the transformation of tax administrations.
- 18. Gianmarco Monsellato et al., *Tax governance in the world of Industry 4.0: Adapting global tax regulation for connected enterprises*, Deloitte Insights, August 27, 2018.
- 19. Andrew Mills, "Tax in a changing world—change is the new black," Australian Taxation Office, January 17, 2019.
- 20. Bruce Chew et al., *Citizen experience in government takes center stage: Treating citizens like customers to drive triple value impact*, Deloitte Insights, June 24, 2019.
- 21. IOTA, Impact of digitalisation on the transformation of tax administrations.
- 22. Ibid.
- 23. Niam Yaraghi and Shamika Ravi, *The current and future state of the sharing economy*, Brookings, December 29, 2016.
- 24. Joyce Beebe, *How should we tax the sharing economy*?, Rice University's Baker Institute for Public Policy, October 24, 2018.

- 25. Organisation for Economic Co-operation and Development, *Foreword, OECD/G20 Base erosion and profit shifting project, tax challenges arising from digitalisation—Interim report 2018*, March 16, 2018.
- 26. Deloitte, "Tax news & views, Capitol Hill briefing," May 10, 2019.
- 27. Ritzau/The Local, "In world first, AirBnB to report income directly to Danish authorities," May 18, 2018.
- 28. Politiken.dk, "An Airbnb deal gives Uber hope for Danish comeback: The driving service Uber would like to commit to reporting drivers' revenue to tax," May 22, 2018.
- 29. Organisation for Economic Co-operation and Development, Unlocking the digital economy.
- 30. Derek B. Johnson, "IRS tries agile acquisition for data tools," FCW, August 13, 2019.
- 31. Kuralay Baisalbayeva et al., The data intelligent tax administration, Microsoft and PWC, 2018.
- 32. Organisation for Economic Co-operation and Development, *Advanced analytics for better tax administration*, 2016.
- 33. IOTA, Impact of digitalisation on the transformation of tax administrations.
- 34. Hendrik Scholta et al., "From one-stop shop to no-stop shop: An e-government stage model," *Government Information Quarterly* 36, no. 1 (2019): pp. 11–26.
- 35. Stephen Goldsmith, "The problem with one-stop government," Governing, August 19, 2019.
- 36. Deloitte, "Our digital future: A perspective for tax professionals," January 2019.

Acknowledgments

The authors would like to thank **Bruce Chew** and **John O'Leary** of the Deloitte Center for Government Insights for providing their valuable insights and expertise throughout the development of this article.

Contact us

Our insights can help you take advantage of change. If you're looking for fresh ideas to address your challenges, we should talk.

Industry leadership

Ronnie Nielsen

NSE Tax thought leader | Manager +45 2724 2009 | rnielsen@deloitte.dk

Ronnie Nielsen is Deloitte's NSE Tax thought leader, with substantial experience working with the Danish tax administration, the OECD, and the IMF. Since 2007, he has advised the senior management in tax administration, and worked hands-on with strategy implementation and business development initiatives across functions, segments, and taxes.



Sign up for Deloitte Insights updates at www.deloitte.com/insights.

Follow @DeloitteInsight

Deloitte Insights contributors

Editorial: Aditi Rao, Abrar Khan, Aparna Prusty, Nairita Gangopadhyay, and Rupesh Bhat **Creative:** Sonya Vasilieff

Promotion: Alexandra Kawecki

Cover artwork: Hylton Warburton

About Deloitte Insights

Deloitte Insights publishes original articles, reports and periodicals that provide insights for businesses, the public sector and NGOs. Our goal is to draw upon research and experience from throughout our professional services organization, and that of coauthors in academia and business, to advance the conversation on a broad spectrum of topics of interest to executives and government leaders.

Deloitte Insights is an imprint of Deloitte Development LLC.

About this publication

This publication contains general information only, and none of Deloitte Touche Tohmatsu Limited, its member firms, or its and their affiliates are, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your finances or your business. Before making any decision or taking any action that may affect your finances, you should consult a qualified professional adviser.

None of Deloitte Touche Tohmatsu Limited, its member firms, or its and their respective affiliates shall be responsible for any loss whatsoever sustained by any person who relies on this publication.

About Deloitte

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see www.deloitte.com/about to learn more about our global network of member firms.

Copyright © 2020 Deloitte Development LLC. All rights reserved. Member of Deloitte Touche Tohmatsu Limited