FORUM ON TAX ADMINISTRATION

Tax Administration 3.0: The Digital Transformation of Tax Administration



OECD
BETTER POLICIES FOR BETTER LIVES

This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

This document was approved by the Committee on Fiscal Affairs on 26 November 2020 and prepared for publication by the OECD Secretariat.

Please cite this publication as:

OECD (2020), Tax Administration 3.0: The Digital Transformation of Tax Administration, OECD, Paris. http://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/tax-administration-3-0-the-digital-transformation-of-tax-administration.htm

Photos credits: © Shutterstock.com, Gettyimage.com, Istockphoto.com, Alex Butterfield (cc-by-2.0), Unsplash.com

© OECD 2020

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at www.oecd.org/termsandconditions

PREFACE

Over recent years, the opportunities offered by digital tools, new communication channels and the large increase of internal and external data sources have allowed us to improve services to taxpayers and to better target our compliance activities. While this has certainly enhanced the effectiveness and the efficiency of the administration of tax, we , Forum on Tax Administration Commissioners, see the future of tax administration as something of a break with the current approach which relies on active, and sometimes burdensome voluntary compliance by taxpayers and on resource-intensive investigations and audits to address non-compliance.

The nature of the changes occurring around us through the increasing digitalisation of the economy and of society in general allow, and indeed call for, a different model of tax administration. In this model – termed Tax Administration 3.0 in this discussion paper - tax administration processes are increasingly built into the natural systems used by taxpayers in their daily lives and businesses. This will allow the automation and "upstreaming" of many aspects of tax administration, making tax administration more seamless and frictionless over time and bringing potentially significant reductions in administrative burdens. The achievement of this vision relies on co-creation with taxpayers, other parts of government and private sector partners, as well as discussions with tax policy makers. An important precursor to such wider connectivity will be reinforcing trust in the use of data and in the security of national systems.

Our intention in this discussion paper is not, of course, to suggest that this is the only possible outcome nor that tax administration will become completely automated in the future. In addition, we recognise that each tax administration will have its own different starting point and different set of priorities. The intention is rather to stimulate a debate as to how we might best work collectively, within and beyond tax administrations, on the building blocks of a new way of administering tax, more closely aligned with taxpayers' natural systems.

While not foreseen, the publication of this discussion paper comes while we are still in the grip of the global COVID-19 pandemic. It is hoped that the report may also help us in our current reflections about how to make tax administration more resilient and more agile, including enhancing our ability to join-up across government and to take on other responsibilities where necessary. Changing the nature of tax administration is, of course, a long-term endeavour with associated costs for tax administrations and taxpayers, which need to be managed. However, sharpening our focus on where we want to go and how we might get there, will help us to make the right choices now, including in our collective discussions with stakeholders about interoperability, governance and standardisation across borders.

We would like to thank our officials who led the work within the Tax Administration 3.0 Steering and Drafting Group, the Forum on Tax Administration members that participated in the project, the Digital Transformation Community of Interest and the FTA Secretariat. We look forward to continued active participation in the Tax Administration 3.0 project, including in the development of a roadmap setting out the priorities for further collaborative work.

Commissioner Chris Jordan, Australian Taxation Office
Director General Markku Heikura, Finnish Tax Administration
Commissioner General James Githii Mburu, Kenya Revenue Authority
Commissioner Nina Schanke Funnemark, Norwegian Tax Administration
Commissioner Daniil Egorov, Federal Tax Service of Russia
Commissioner Ng Wai Choong, Inland Revenue Authority of Singapore
Commissioner Jesús Gascón, Spanish Tax Agency.

© OECD 2020

ACKNOWLEDGEMENTS

Tax Administration 3.0: The Digital Transformation of Tax Administration is a discussion paper published by the OECD's Forum on Tax Administration (FTA), requested by Commissioners at the 2019 OECD Forum on Tax Administration Plenary in Santiago, to stimulate debate and conversation, both on the vision and its component building blocks.

This document was authored by Rex Arendsen and Peter Green from the FTA Secretariat, with input and assistance from Oliver Petzold and Sonia Nicolas. A particular thanks goes to Øivind Strømme from the Norwegian Tax Administration for chairing the project's Steering and Drafting Group, to Marianne Thoresen and Dag Helge Gundersen from the Norwegian Tax Administration for co-creating the tax payer narratives in Chapter 3, and to Carmel Rugolino and Percy Lara from the Australian Taxation Office for co-creating report visuals.

The authors would like to thank the members of the Steering and Drafting Group, officials from FTA members, for their guidance and valuable contributions, in particular: Carmel Rugolino, Percy Lara and John Dardo from the Australian Taxation Office; Dmitry Volvach, Elisey Balta, Marina Krasheninnikova and Maxim Kuznetsov from the Federal Tax Service of Russia; Sanna Esterinen, Anttu Osanen, Minna Rintala and Sanna Savolainen from the Finnish Tax Administration; Evelyn Khoo and Hui Yan Au from the Inland Revenue Authority of Singapore; Gladys Kitony and Mercy Kihiu from the Kenyan Revenue Authority; Lucie Aunan, Marianne Thoresen, Dag Helge Gundersen, Elizabeth Marie Baur and Kristine Stødle from the Norwegian Tax Administration; Daniel Gómez Aragón, Luz Salgado Bayo and Ignacio del Río Angulo from the Spanish Tax Agency.

Finally, the authors would like to express our gratitude to the Norwegian Tax Administration for hosting several project workshops, both physically in Oslo, Norway and virtually. Our thanks go as well to the officials from more than 20 participating FTA members as well as representatives from Deloitte, PwC, and McKinsey & Company who participated in these events.

© OECD 2020

TABLE OF CONTENTS

Executive Summary 7

Chapter 1. The Journey to Tax Administration 3.0 9

Chapter 2. A "Burning Platform" 17

Chapter 3. Tax Administration 3.0 in Practice 25

Chapter 4. The Building Blocks of Tax Administration 3.0 41

Annex A. Digital Transformation Vectors of Change 70

Annex B. Technology Trends in the Digital Era 73

References 75

Glossary of terms 76

Tables

Table 4.1. Digital identity: The journey to Tax Administration 3.0 46
Table 4.2. Taxpayer touchpoints: The journey to Tax Administration 3.0 49
Table 4.3. Data Management and Data Standards: The journey to Tax Administration 3.0 53
Table 4.4. Tax rule management and application: The journey to Tax Administration 3.0 56
Table 4.5. New skill sets: The journey to Tax Administration 3.0 61
Table 4.6. Governance frameworks: The journey to Tax Administration 3.0 65

Figures

Figure 1.1. Tax administration processes 10
Figure 1.2. Vision of Tax Administration 3.0 13
Figure 1.3. "Making Tax Just Happen" for Individuals 15
Figure 2.1. Impact of administrative burden on entrepreneurial activity 20
Figure 2.2. Emerging risks to accessing and using information 21
Figure 2.3. Drivers of siloed government 23
Figure 4.1. The core building block framework 43
Figure 4.2. Digital identity 45
Figure 4.3. The use of national digital identity by companies 47
Figure 4.4. Taxpayer touchpoints 48
Figure 4.5. Consent-based loan application 50
Figure 4.6. Payment of taxes using M-Pesa 51
Figure 4.7. Data management and data standards 52
Figure 4.8. Single touch payroll 54
Figure 4.9. Tax rule management and application 55

© OECD 2020

Figure 4.10. Picture of the virtual assistant 58
Figure 4.11. Staff usage by function, 2017 59
Figure 4.12. New skill sets 60
Figure 4.13. Finland – Skill set development along COTS 63
Figure 4.14. Governance frameworks 64
Figure 4.15. Governance frameworks – Cooperative compliance 67

Boxes

Box 1.1. What we have now 14
Box 1.2. What the future might hold 15
Box 4.1. Leading country example: Singapore – National Digital Identity 47
Box 4.2. Leading country example: Norway – Consent-based loan application 50
Box 4.3. Leading country example: Kenya – Digital tax payments 51
Box 4.4. Leading country example: Australia – Single Touch Payroll (STP) 53
Box 4.5. Leading country example: Spain – Virtual Assistant tool for VAT 58
Box 4.6. Leading country example: Finland – Skill set development 62
Box 4.7. Leading country example: Russia – Tax monitoring 67

© OECD 2020

EXECUTIVE SUMMARY

This discussion paper sets out a vision for the digital transformation of tax administration, under which taxation becomes more of a seamless and frictionless process over time. The intention of this discussion paper, requested by Commissioners at the 2019 OECD Forum on Tax Administration Plenary in Santiago, is to stimulate debate and conversation, both on the vision and its component building blocks. It is hoped that this will lead to the establishment of a common language, framework and end-point, which will assist tax administrations in their individual and collective consideration of the digital transformation journey. It is envisaged that the next step will be to develop a roadmap identifying the priority areas for future Forum on Tax Administration work.

This vision is termed Tax Administration 3.0 to emphasise the nature of the paradigm shift that it involves. Using this terminology, Tax Administration 1.0 can be characterised as largely paper-based with many manual and siloed processes. As taxpayers and the whole economy go increasingly digital, a host of new opportunities has arisen for the use of digital data and analytical tools by tax administrations, including through joining-up with other parts of government, the private sector and internationally. This is leading to improvements in the efficiency and effectiveness of tax administration processes for taxpayers and the administration in many jurisdictions in what might be termed Tax Administration 2.0, sometimes referred to as "e-administration".

As more interconnections become possible between the different systems that taxpayers use to run their businesses, undertake transactions and communicate – their "natural systems"- the more it becomes possible to move taxation processes into these systems, subject to appropriate assurance. This digital transformation – Tax Administration 3.0 - has the potential to build-in compliance in an increasing number of areas, to move taxation closer to taxable events and to significantly reduce the burdens that can arise from using different processes for taxation to those used in taxpayers' daily lives and businesses. As these opportunities increase, it may be possible to make significant inroads into the structural limitations of current tax administration which can lead to persistent tax gaps, large amounts of uncollected tax debt and continuing, and in some areas growing compliance burdens.

As noted in the discussion paper, this is a journey which will take many years and requires many pieces to fit together to realise the full benefits. This includes co-development of many of the building blocks of digital transformation with other parts of government, with private sector actors and internationally. There are, though, considerable benefits that can be realised along the way. The individual building blocks of Tax Administration 3.0 described in this report, such as digital identity and the building-in of tax rules into business software and web or mobile applications, can make a significant difference in their own right, including in improving the resilience and agility of tax administrations in responding to crises.

© OECD 2020

This discussion paper is organised into four chapters:

- **Chapter 1.** The Journey to Tax Administration 3.0: This introductory chapter briefly sets out where most administrations are now, some of the structural limitations of the current system and a high-level vision of what might be achieved through digital transformation.
- **Chapter 2.** The Burning Platform: This chapter, intended to provoke debate, sets out a case for starting to plan for digital transformation now, taking account of the changing world of work, new business models, globalisation, technological changes and societal expectations.
- **Chapter 3.** Tax Administration 3.0 in practice: This chapter expands on the vision of future tax administration and illustrates what frictionless and seamless taxation might look like in practice through a set of taxpayer storylines.
- **Chapter 4.** The Building Blocks of Tax Administration 3.0: This chapter presents a set of core capabilities that are necessary to facilitate future tax administration, how they fit together and how to move forward on "no regret" pathways, taking account of the costs of change.

Next Steps

While Chapter 4 sets out a number of options that tax administrations may wish to consider, the report deliberately does not make specific recommendations for further detailed FTA projects. There are a wide range of issues that could be explored for further collaborative work under each of the building blocks, including options for international standardisation in some cases. The recommendation, therefore, is that a medium-term roadmap should be developed, involving consultation with external stakeholders, for Commissioners' decisions on an FTA work programme focused on digital transformation over the coming years.

Towards Tax Administration 3.0





- *Forms driven (electronic & paper)*
- *Periodic, historical, aggregated data*
- *Manual, slow & costly*
- *Retrospective risk treatment*
- *Disconnected ecosystems*

- *Data driven*
- *Event based, detailed & real-time data*
- *Enables validation & automation*
- *Enables assured data*
- *Interoperable ecosystems*
- *Enables international co-operation*

Caveat

Tax administrations operate in varied environments, and the way in which they each administer their taxation system differs in respect to their policy and legislative environment and their administrative practice and culture. As such, a standard approach to tax administration may be neither practical nor desirable in a particular instance. Therefore, this report and the observations it makes need to be interpreted with this in mind. Care should be taken when considering a country's practices to fully appreciate the complex factors that have shaped a particular approach. Similarly, regard needs to be had to the distinct challenges and priorities each administration is managing.

© OECD 2020

CHAPTER 1

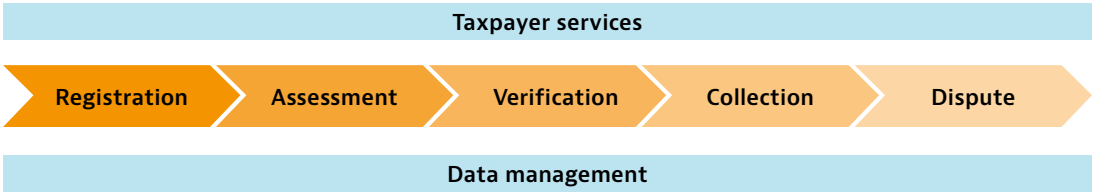
THE JOURNEY TO TAX ADMINISTRATION 3.0



THE JOURNEY TO TAX ADMINISTRATION 3.0

Current tax administration is generally carried out through a set of broadly sequential processes. At a high level, these are the identification of the taxable person or entity, required reporting of transactions and incomes, the application of tax rules and calculation of tax due, the payment of tax, audits, and enforcement and appeals processes.

Figure 1.1. Tax administration processes



Increasingly, processes which were originally paper-based and partly manual have been digitalised, allowing greater sharing of data within the administration and within government, the incorporation of third party data and the use of enhanced analytical tools. While different tax administrations are at different points in this journey, this has been a universal direction of travel among modern tax administrations.

Increased digitalisation and the development of new analytical tools has significantly increased the efficiency and effectiveness of tax administration and has helped to reduce burdens to a greater or lesser extent for different taxpayer segments. Developments include:

- **the introduction of greater verified reporting through third parties** (for example, the integration of information into administration processes coming from financial intermediaries, other parts of government, other taxpayers and other tax administrations.);
- **the adoption of more reliable reporting systems** (for example, the digitalisation of VAT invoices, online cash registers, the building of basic tax rules into accounting software etc.);
- **the improved detection of possible non-compliance** through better risk assessment modelling, using increasingly large amounts of digital data and advanced analytical techniques;
- **improvements in services for taxpayers**, including through e-filing, e-payment, online self-service tools and targeted help such as online live chats. These developments are making it easier for taxpayers to understand and to meet their obligations.

© OECD 2020

The structural limitations of Tax Administration 2.0

While these developments have benefited both taxpayers and tax administrations, the current tax administration system continues to have some significant structural limitations as to the outcomes it can achieve. These limitations, described briefly below, can lead to persistent problems for tax compliance, compliance burdens and revenue collection.

A heavy reliance on voluntary compliance

While tax is not voluntary, the widespread use of the term "voluntary compliance" recognises that in many parts of the current tax system, taxpayers make choices as to the reporting, calculation and payment of tax. These choices are not just whether to comply or not to comply, but also cover choices as to the effort made in order to get things right, such as record keeping, taking the time to fill in forms correctly, resolving any lack of understanding and meeting reporting requirements and deadlines.

Tax administrations currently put a lot of effort into supporting voluntary compliance, including through the development of new digital services, new communication channels and the development of more taxpayer-centric approaches. However, where compliance choices remain, inevitably some of the choices made will result in significant amounts of tax not being paid, whether deliberately, or by failing to take reasonable care or through mistakes. To measure the impacts on revenue, a number of administrations estimate the difference between how much tax should be collected and how much tax is actually collected through tax gap analysis. Based on the tax gaps as measured in a number of FTA countries, a reasonable estimate for the average tax gap across FTA members is probably in the range of 5% to 10%.

Meeting tax requirements can take a lot of effort and cost

In the case of pay-as-you-earn systems for salaried employees (discussed further below), tax is something that can usually be built into the systems that employers use for payroll purposes. For many other parts of the tax system, including other personal tax liabilities (such as capital gains, rental income etc.), meeting tax requirements is usually not built-in to the systems that taxpayers use for their own purposes (such as business accounts). Instead, taxpayers have to take additional active steps to understand, process, calculate and report tax liabilities as well as keep records for tax assurance purposes. While the overall costs of compliance are difficult to measure, many studies find that both monetary and opportunity costs can be significant.[1] For example, the European Commission *Action Plan for Fair and Simple Taxation Supporting the Recovery Strategy* noted that the cost of tax compliance for SMEs may amount to up to 30% of taxes paid (European Commission, 2020[1]).

Tax is often a "downstream" activity

The calculation, reporting and payment of tax is often done at the end of a tax period, usually more frequently for VAT than for personal or corporate income tax. This information is then subject to verification checks within the administration and when risks are identified, or in some cases through random selection, tax audits are conducted. These range from desk audits of specific issues to full on-site audits. The downstream nature of taxation can lead to tax uncertainty, with implications for financial planning, cash-flow management and investment, as well as additional costs from verification processes. The often long gap between taxable

1 See, for example, a 2020 article published by Benzarti looking at the cost of filing taxes (Benzarti, 2020[9]), a 2019 article by Blaufus, Hechtner and Jarzembski on the income tax compliance cost of private households (Blaufus, Hechtner and Jarzembski, 2019[11]), a 2014 working paper published by Eichfelder and Vaillancourt looking at tax compliance costs (Eichfelder and Vaillancourt, 2014[10]) and a 2007 European Commission study analysing tax compliance procedures for SMEs.

© OECD 2020

events and the payment of tax can also create payment risks. For example, the latest figures reported by FTA members show collectable tax debt amounting to EUR 820 billion (OECD, 2019[2]).

Taxation is often a stand-alone activity

While more attention is being given to the development of whole-of-government approaches to improve service and compliance, in general the different systems used by different government agencies make it difficult to share data or use common processes. This can result in a number of issues. It can create additional frictions for taxpayers as citizens, for example by being unable to use their identity credentials across government and potentially being subject to multiple different reporting requirements. It can mean that some miss out on benefits they may be entitled to, particularly more vulnerable groups. It can also make it more difficult to address fraud if information available to one part of government is not able to matched and analysed with other relevant information.

Digital Transformation - Tax Administration 3.0

The digitalisation of society, moving at an increasingly rapid pace, now offers opportunities as well as challenges to all parts of society, including tax administration[2]. These changes provide an opportunity to address some of the structural limitations of the current system of tax administration, moving away from sequential taxpayer-facing processes and beginning to integrate taxation processes into the systems used by taxpayers as part of their daily lives and businesses. Such integration will allow compliance-by-design outcomes to an increasing extent as well as possible step-change reductions in compliance costs for taxpayers. This will, of course, be easier where the tax affairs of an entity or individual are less complex, but even where taxpayers have highly complex structures, such as multinational enterprises, some more straightforward aspects of taxation may still be capable of being put into the background in this way. A visualisation of Tax Administration 3.0 is in figure 1.2.

The core elements of Tax Administration 3.0 are set out below. While this digital transformation will take some time, not least because of the need to spread the costs of change for administrations and taxpayers, in this vision tax administration is increasingly:

Embedded within taxpayer natural systems

- Paying taxes will become a more seamless experience over time integrated into daily life and business activities as much as possible. Natural citizen and business behaviours and systems will increasingly be the starting point of taxation processes. Tax administrations and private sector organisations will increasingly collaborate in creating innovative and joined-up services, adding value to the taxpayer, reducing administrative burdens and assuring secure, transparent and highly reliable outcomes. Adapting taxation processes to fit in with taxpayers' natural systems will facilitate compliance by design and "tax just happening". Free-riding and being non-compliant will increasingly require deliberate and burdensome additional activities.

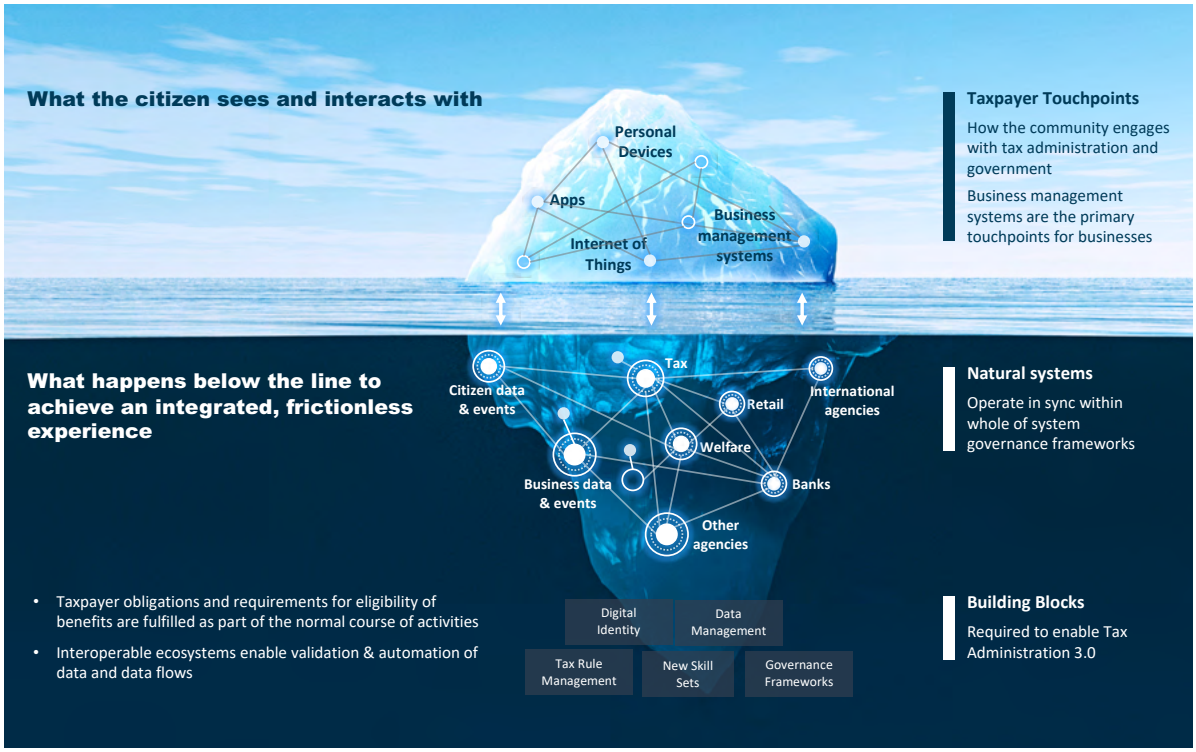
Part of a resilient "system of systems"

- In addition to tax administration tasks currently carried out by businesses, such as Value Added Tax (VAT) and pay-as-you-earn (PAYE) systems, many digital platforms will also become "agents" of tax administration carrying out tax administration processes within their systems. Tax authorities will

2 See Annex A for a description of the "Digital Transformation Vectors of Change" as identified in the 2019 OECD report Going Digital: Shaping Policies, Improving lives (OECD, 2019[4]). These describe the underlying nature of the changes being brought about by digital transformation and their implications.

© OECD 2020

Figure 1.2. Vision of Tax Administration 3.0



no longer be the single point of data processing and tax assessment. Instead, tax administration is conducted within a resilient network of seamlessly interacting trusted actors without one single point of failure. Some digital platforms are collecting tax and transferring payments instead of data, while others identify taxpayers and liabilities and share results and tax relevant information rather than all transaction data. Public and private actors join-up in collaborative governance models. Governmental bodies ultimately oversee and assure the quality, robustness and reliability of operations and outputs.

Real-time tax certainty provider

- In order to stay synchronized with daily life and business transactions and events, tax administration processes will be increasingly real-time or close to real-time. Not all tax liabilities can be settled in such a short cyclic manner, so additional balancing mechanisms may be needed, such as real-time taxpayer accounts (possibly with crediting and debiting of tax payments and refunds). In most cases, swift and accurate provision of tax certainty is provided. Artificial intelligence tools and algorithms will support the characterisation and assessment of liabilities and will increasingly support decision-making.

Transparent and trustworthy

- Taxpayers will have the opportunity to check and question taxes assessed, paid and due in real-time. It will be clear which rules have been applied to which data, reflecting facts and circumstances. This will allow taxpayers to challenge both automated and human decision-making. Citizens and businesses can check the origin and accuracy of the data used and can grant or deny access to personal data sources not required for tax purposes. Although the tax legislation might still be complicated, to

© OECD 2020

taxpayers the underlying tax administration process and results will be increasingly accessible and transparent.

An integrated part of whole of government

- Taxation is increasingly joined-up with other government services and functions, as well those of private actors, employing common engagement models with citizens and business. One digital identity will support a seamless connection between processes and data sources. Payments, benefits and refunds are matched and balanced from a citizen and business perspective.

A human touch and high tech adaptive organisation

- Although change is the only constant factor, a taxpayer-centric perspective will be the focal point around which tax administration processes are structured and governed. The key success factor is the intertwining of human staff and skills with advanced analytics and decision-supporting tools such as AI. This combination will support taxpayer compliance in the reducing number of areas where compliance choices still remain. It will also detect anomalies, leakages and flaws in the tax system. The agility of people, processes and systems assures that the tax administration can stay aligned with societal and economical change as well as respond to changes in circumstances, including crises.

Such a transformation requires many things to come together which, although incremental in nature, should ideally be designed with the end goal in mind. Otherwise, the incremental changes could become dead-ends or result in what, over time, may become expensive and inefficient legacy systems. This will requires a comprehensive long-term strategy, including the involvement of other parts of government and the private sector, and long-term funding.

Before unpacking this further in chapters 3 and 4, below are two example of systems where compliance might be built-in and burdens reduced or, in some cases, largely eliminated. The first concerns the possible future development of automated self-driving cars, already being piloted to a limited extent. The second, is a more familiar example of how personal income tax is already being addressed in a largely seamless and frictionless manner from the perspective of the taxpayer.

The move to automated self-driving cars

Box 1.1. What we have now



Currently safety in cars is a combination of:

- preliminary requirements – namely age limits, eyesight requirements, tests to qualify to drive, insurance, car safety requirements etc.;
- rules that need to be obeyed when driving – speed limits, restrictions on movements and priority rules etc.; and
- enforcement processes – cameras to detect speeding and other moving violations, traffic police, parking fines etc.

In essence, driving now is currently largely based on voluntary compliance with high burdens on drivers.

© OECD 2020

Box 1.2. What the future might hold



In a world of driverless cars, the car is an integral part of a wider system which builds in safety through:

- the use of algorithms to make complex decisions;
- sensors picking up information from the road, other cars etc.;
- the integration of other data from other systems, for example weather, traffic conditions, car performance;
- alerts for exceptional cases where human intervention is needed.

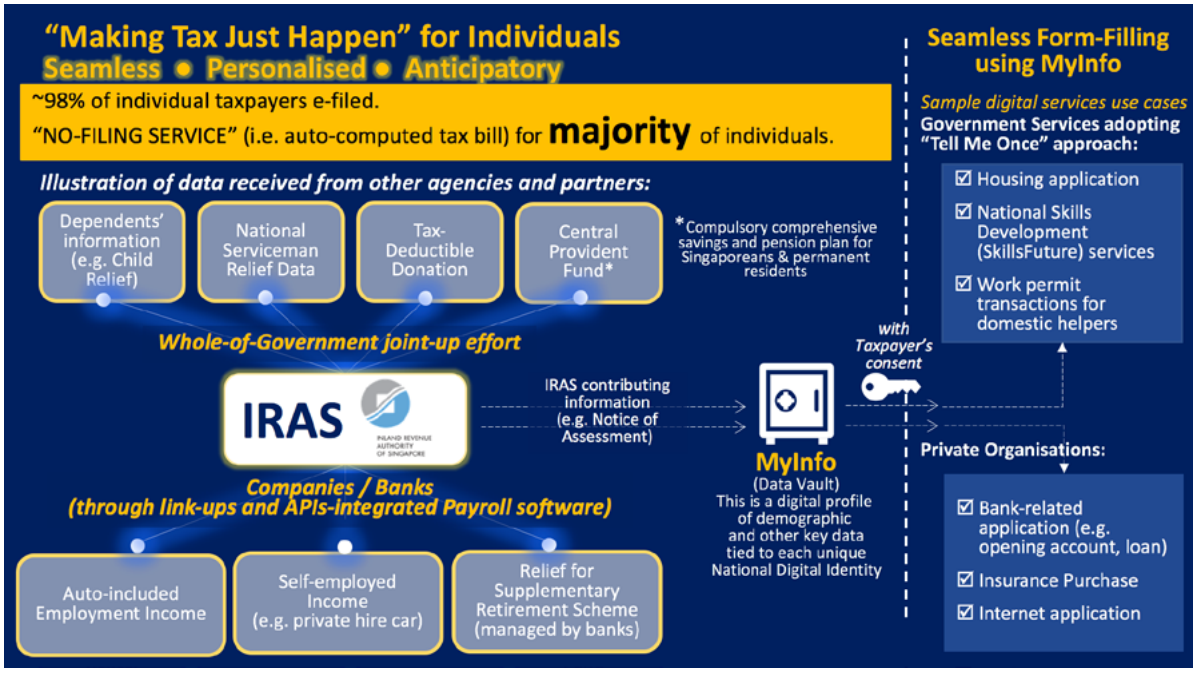
In this future vision, driving is largely based on compliance-by-design systems with drivers freed-up to undertake other activities.

Pay-as-you-earn and pre-filling of tax returns

Closer to home for tax administrations is the long-standing compliance-by-design example of PAYE systems. From the perspective of salaried employees, this is transparent in its outcome (i.e. notification of the amount of tax deducted) but largely invisible and burden-free in its operation. Where the employer has complete information about the individual taxpayer's taxable position from verified sources (including from the tax administration) and there are no special allowances for the individual (e.g. for children or specified expenses), then there are no compliance choices for the employee to make. (Of course the employer will still have compliance choices, for example remitting payroll taxes on time and in full.)

With PAYE systems, tax is just something that happens and any changes in the tax burden at the individual level can only be sought through political processes and not through exercising compliance choices. For

Figure 1.3. "Making Tax Just Happen" for Individuals



Source: Inland Revenue Authority of Singapore (2020)

© OECD 2020

the tax administration, there will be no need to interact with the individual employee other than in a few circumstances. Of course, in most countries, complications are increasingly being put into the background (see figure 1.3).

Last words

Two closing thoughts to end this chapter:

- First, the vision of Tax Administration 3.0 is neither a futuristic debate nor something that will be arrived at naturally by continuing to develop the current system of tax administration with its inherent structural limitations. To use the analogy above, getting to the self-driving car does not come from continued incremental improvements to current car design.
- Second, to note that there is some urgency to the journey to Tax Administration 3.0, both because of the scale of possible benefits presented in this chapter and the new challenges arising from increased digitalisation described in the next chapter.

© OECD 2020

CHAPTER 2

A "BURNING PLATFORM"



A "BURNING PLATFORM"

Aspects of the burning platform

Chapter 1 set out some of the limitations of the current system of tax administration, in particular as regards:

- The ability for current service offerings and enforcement tools to narrow tax gaps substantially; and
- The difficulty of making further substantial reductions in compliance burdens.

These limitations might be described as part of a "burning platform" given that they are likely to become issues of increasing concern over time for governments, taxpayers and tax administrations, including as a result of the growing pressures on public finances and the economy currently being experienced. Within this context, starting the journey to a different system of tax administration has a degree of urgency. While Tax Administration 3.0 does not hold all the answers, it has the potential to make large inroads into non-compliance and tax debt while significantly reducing compliance costs and wider administrative burdens for taxpayers.

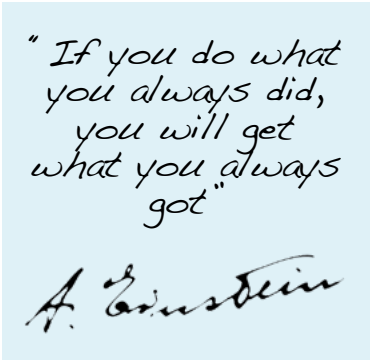
The importance of change is likely to be reinforced by a number of additional and foreseen challenges from the rapid digitalisation of society and the economy that may also increasingly test the current system of tax administration. These concern issues around:

- Accessing and using information in the light of changing work patterns, changing business models and the use of opaque digital assets such as virtual currencies.
- Changing societal expectations about joined-up government processes.
- Privacy, security and transparency concerns around the use and control of large data sets.

In addition to overcoming some of the limitations of the current tax system, the increasing connection to taxpayers' natural systems within Tax Administration 3.0 will also allow tax administrations to more easily adapt to these as well as future challenges that will inevitably arise from the different ways the economy and society will change over time. Rather than playing "catch up", tax administrations will be more aligned with the changing systems that taxpayers use themselves, helping to minimise the chances of new tax gaps and compliance burdens from arising.

© OECD 2020

Reaching the limits of current service and enforcement instruments



Over recent years, most tax administrations have been investing heavily in enhancing the performance of their service delivery, in a range of tax certainty and cooperative compliance approaches, and in the better targeting of enforcement processes. In many cases communication, interaction and transaction processes are either fully digitalised or supported by digital means. Websites have been created, call centre and chat functionalities improved and tax returns are often partially pre-filled and able to be sent in a digital manner. In addition, data analytics is increasingly used to search for anomalies, detect fraud and guide interventions.

These approaches can be effective at supporting elements of voluntary compliance (in particular those taxpayers who are already compliant) and improving the detection of non-compliance. However, depending on the context in individual jurisdictions, in some cases they may be reaching the end of their ability to further impact the tax gap or reduce burdens in any significant way.

Unpacking this further:

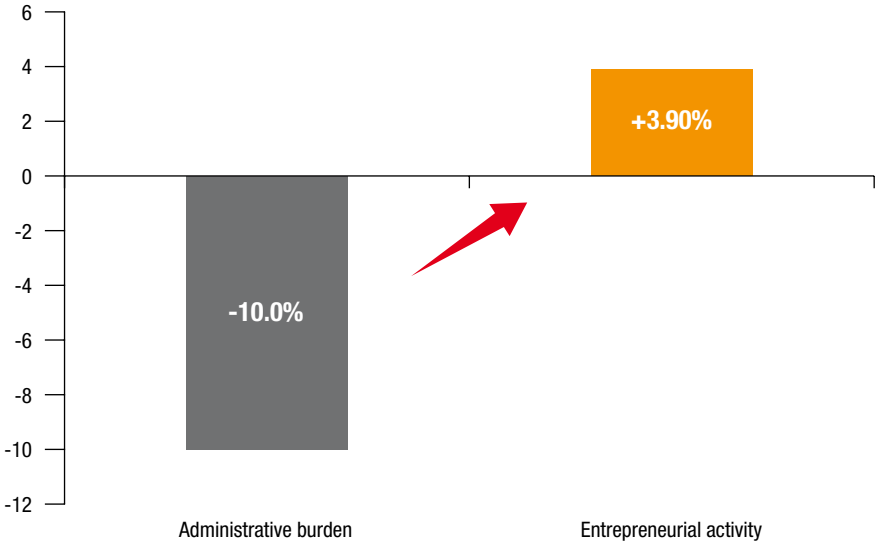
- Where necessary given improved compliance relationships, enforcement instruments such as audits are used to detect and correct mistakes and deliberate non-compliance. However, this backward-looking approach can be a costly and time-consuming process and may not lead, in itself, to long-term structural changes in compliance behaviour.
- Tax returns compiled by taxpayers (as opposed to fully pre-filled returns) are a way of feeding in inputs reflecting past taxable events, which may be derived by the taxpayer from a multitude of sources, into tax administration processing systems. The ability to submit returns electronically has certainly made things easier for taxpayers, although not dramatically so.
- Although the amount and quality of communication and service efforts have increased substantially over the last decades, large numbers of taxpayers still make unintended mistakes.
- The design and implementation of many tax administration service offerings are based on the assumption of active and self-reliant citizens. However, for many self-service for tax is not a priority and may often be seen as more of a burden than a service.

The impact of compliance burdens

Businesses and citizens have to comply with a range of information collection and reporting obligations, with tax being a substantial part of this. Compliance requirements are a significant cost for all businesses, although can disproportionately impact small and medium sized enterprises. Some taxpayers find it burdensome to meet all of the requirements, which can change frequently in some jurisdictions, due to resource costs and complexity. Others pay significant amounts to outsource tax related tasks to third parties for example, bookkeeping and reporting obligations.

© OECD 2020

Figure 2.1. Impact of administrative burden on entrepreneurial activity



Note: As regards **Entrepreneurial activity**: This is for entrepreneurs that have survived the first 3 months.
Source: Braunerhjelm, Eklund, Thulin (2019), Taxes, the tax administrative burden and the entrepreneurial life cycle, http://dx.doi.org/10.1007/s11187-019-00195-0.

A large part of tax compliance costs relate to the collection and reporting of data. These costs include:

- Translating business transaction data into the reporting semantics required by the tax administration (which will impact different taxpayers differently depending on the interactions with their own reporting systems). This can be a particular issue for businesses operating in multiple jurisdictions.
- Implementing and updating data reporting systems including the digital interface with business management systems.
- Implementing organisational processes to assure the quality and timing requirements of reporting schemes.

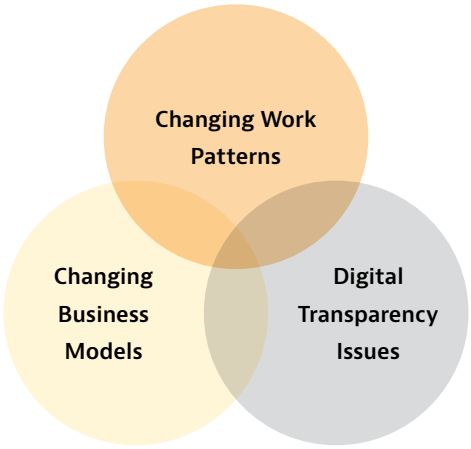
The tax administration-driven reporting relationship represents and preserves a clear, and often costly, distinction between the 'daily life and business sphere' and the 'tax administration sphere'.

Accessing and using information

The tax administrations leading the development of this discussion paper identified three emerging risks as regards the access and use of information that may create increasing difficulties for tax administrations over time. While these are, of course, not the only risks that might emerge, they are already present to some extent and may be expected to grow over the coming years with the increasing digitalisation of the economy.

© OECD 2020

Figure 2.2. Emerging risks to accessing and using information



Changing work patterns

While currently relatively small in scale, the rapid growth of sharing and gig economy platforms is an early manifestation of how changing work patterns, new business opportunities and increased opportunities for the outsourcing of economic activity can create issues for revenue collection. The emergence of these online platforms has led some people to move out of salaried employment, where income is currently subject to withholding in the compliance-by-design system of pay-as-you-earn (PAYE), and into self-employment (fully or partially). This creates challenges for tax administrations in terms of visibility of the activities and opportunities for non-compliance (either deliberate or through a lack of understanding of tax obligations). This is particularly the case as the amounts of income may be relatively small and derived from the use of a number of different platforms, including those located in other jurisdictions. While access to information can be addressed by domestic legal requirements and multilateral exchange of information, unless the information can be easily incorporated into and joined-up within tax administration systems, this can increase the complexity of tax administration and may increase opportunities for non-compliance.[3]

In addition, the current options for facilitation of different work patterns are likely to evolve over time. For example, there are a growing number of platforms which do not act as payment intermediaries or which segment aspects of the process (for example payments), potentially making it harder to automate reporting responsibilities. To adapt to this, tax administrations will have to rethink how to best interact with the different aspects of taxpayers' own natural systems to join up individual taxpayers with potentially multiple sources of income automatically, including in cross-border situations.

Changing business models

As the global economy becomes increasingly interconnected and digitalised, some businesses are able to generate profits through participation in a significant and sustained way in the economic life of a jurisdiction without a local physical presence. This trend is expected to increase as the digitalisation of the economy accelerates. The OECD/G20 Inclusive Framework on BEPS and its 137 member jurisdictions are currently working on a two-pillar solution to address the tax challenges arising from the digitalisation of the economy, with a view to reaching a global and consensus-based solution by mid-2021. Policy changes resulting

3 For further information see the 2019 OECD report *The Sharing and Gig Economy: Effective Taxation of Platform Sellers* (OECD, 2019[12]) and the 2020 Model Rules for Reporting by Platform Operators with respect to Sellers in the Sharing and Gig Economy (OECD, 2020[7]).

© OECD 2020

from the current international discussions will need to be implemented by tax administrations, potentially requiring access to highly complex, large and geographically dispersed information sets.

With multiple jurisdictions potentially looking at multinational businesses with complex supply chains, financial arrangements and dispersed data storage, the optimal system might be an increased reliance on the building-in of tax rules into the different business accounting systems used by different businesses. Those systems could then be verified by the involved tax administrations as necessary either through certification processes in advance or through interrogation and verification increasingly carried out by algorithms and remote processes.

Digital transparency issues

The move to the digital recording of payments, record keeping and identity presents many opportunities for tax administrations to increase transparency and to prompt compliance, as seen in the adoption of the G20/OECD Common Reporting Standard (OECD, 2014[3]). There is a flip-side, though, as digitalisation may also produce transparency holes, for example through the use of virtual currencies, crypto-currencies and opaque digital assets. In addition, as digitalisation makes it possible to take actions in real-time across any geographical boundaries, new risks may arise from the time gaps between the point of tax liabilities arising and the related reporting and payment obligations, particularly in cross border situations. This gap can provide opportunities for very large-scale fraud, as has been seen in VAT carousel fraud.

Changing societal expectations

The digitalisation of many aspects of daily life, including through the use of mobile devices which are rapidly increasing in functionality and speed, is changing citizens' expectations in terms of time-scales, the ease of processes for the purchase and payment of goods and services, record keeping and so on. These changing expectations are not simple conveniences but change the way that the economy works, helping to improve efficiency, demand, competition and social welfare as well as reducing burdens. (See Annex B "OECD Technology Trends in the Digital Era")

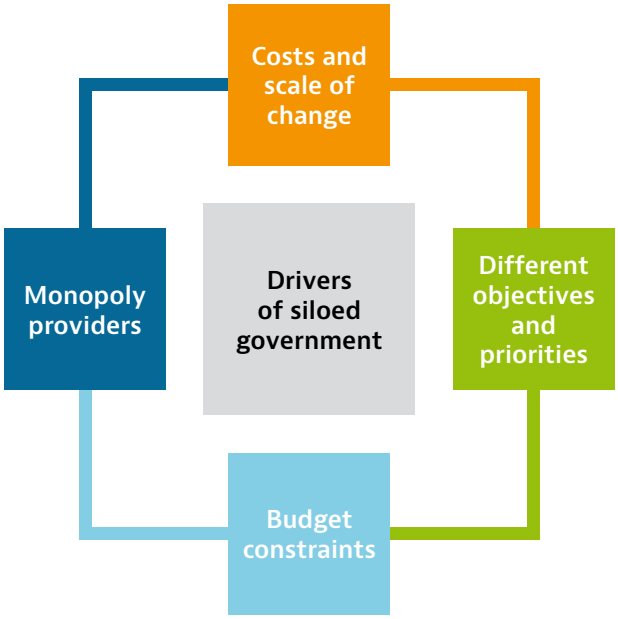
Many parts of the private sector are now in a process of continuous improvement of their digital offerings to respond to changed and changing customer expectations. This includes allowing for the sharing of information internally and externally through the use of application programming interfaces.[4] There are a myriad of examples in daily use, such as applications which allow customers to see a range of flight options, comparisons of the cost of goods and services, real-time information, as well as a vast range of options to purchase goods and services.

Government agencies are catching-up but in many jurisdictions they still act as siloed entities rather than a single government body treating citizens and entities as a single customer across government functions. This is not surprising given the scale of many government services, the rigidity of their legacy IT systems and different legislative requirements. It also has a lot to do with public sector budget constraints, different current priorities and the inertia that comes with being monopoly providers.

4 For further information see the 2019 OECD report *Unlocking the digital economy: A guide to implementing application programming interfaces in government* (OECD, 2019[6]).

© OECD 2020

Figure 2.3. Drivers of siloed government



The result of these silos is that additional burdens are placed on citizens and businesses when they need to interact with many parts of government. This will often involve different identities, the repetition of information already provided to another government agency, different payment methods, different means of communication and reporting systems and time-consuming sequential processes.

The lack of joining up also leads to inefficiencies, extra costs for administrations and citizens as well as financial risks within government. For example:

- Payments may not be made to people eligible for benefits even though other parts of government have proof that they meet eligibility requirements.
- One government agency may make payments or refunds to citizens who have debts with other parts of government.
- Fraud may not be detected by one agency despite another agency having details which would reveal the fraud (such as benefit payments to people whose incomes make them ineligible).
- Credit or security risks known by one agency may not be communicated to others, for example contractors which have not met tax obligations may be appointed by another agency or granted licences.

While joining-up of government services requires a whole-of-government strategy and governance, tax administrations can play a central part in this given that in many jurisdictions they, along with social security agencies, are both the biggest holders and biggest processors of data. At the least, when considering the building blocks of Tax Administration 3.0 described in Chapter 4, tax administrations should ideally make progress in a way which facilitates joined-up government, as well as joining-up with other private sector actors.

© OECD 2020

Privacy, security and transparency concerns



There is a temptation to look at enhanced access by the tax administration to increasingly large pools of digital data as the route to better tax administration. While data of course has a large role to play in future tax administration, relying solely on ever-larger data sets being processed by tax administrations raises a number of concerns:

- **Privacy and data ownership:** the potential amalgamation of a large amount data underlying tax computation can raise "big brother" concerns since it can be seen as potentially allowing the piecing together of personal information on an individual's patterns of expenditure, whereabouts and relationships. Gathering such large amounts of data may raise issues of trust and needs to be carefully explained, justified and protected (legally and practically).
- **Data security:** While of course tax administrations put great efforts into data confidentiality, there will always remain a risk to the security of large data sets. The risks of deliberate compromise might be expected to rise as people seek to breach increasingly old legacy systems and as technology allows the quicker exploitation of stolen data.
- **Data usage and transparency:** a lot of data is currently collected for the purposes of compliance monitoring and risk assessments and may have less direct relevance to the computation of tax. It is important to justify why data needs to collected for these functions against the alternatives that might be available from using trusted outputs of taxpayers' own natural systems. Without this, there can be a loss of trust as well as unnecessary costs and security risks.

Rather than systems which rely on large amounts of data to be reported to the tax administration, the key design feature of Tax Administration 3.0 is that use is made, where possible and appropriate, on the outputs of trusted systems used by the taxpayer rather than provision of the underlying data within those systems. In more concrete terms, for individual taxpayers or businesses it may be that the tax liability computed by the taxpayer's own accounting systems or software is sufficient. This is subject to the proviso that the tax administration has sufficient assurance as to the reliability of those systems, for example through validating the incorporation of the relevant tax rules, record keeping requirements and requirements for interrogation of taxpayers' systems where necessary.

© OECD 2020

CHAPTER 3

TAX ADMINISTRATION 3.0 IN PRACTICE



Chapter
3

TAX ADMINISTRATION 3.0 IN PRACTICE

This chapter explores what Tax Administration 3.0 might look like in practice and compares that vision with the outcomes and challenges arising from the current system of tax administration. The vision presented is not the only aspirational state possible, but seeks to illustrate the direction of change and the core attributes of future seamless tax administration, which may be plausible to achieve based on our current knowledge and insights. In that respect, the storylines are not the result of a strategic scenario analysis of different future states nor of new technologies. Instead, they are a creative visualisation of technology-neutral aspirational states based on the characteristics described in Chapter 1.

© OECD 2020

Setting the Scene

Three different narratives are presented, resonating with the current dominant taxpayer segmentation of private individuals, small and medium sized enterprises (SMEs) and multinational enterprises (MNEs). One of the challenging questions regarding future tax administration is whether this traditional segmentation will still be as relevant in the future. For example, private incomes are already becoming increasingly intertwined with entrepreneurial incomes and many SMEs now engage in international trade relationships that were previously largely the domain of large businesses.

A common structure is used in the narratives:

- A short introductory section identifies the taxpayer and describes current issues. In addition, future seamless tax administration is described in terms of taxpayer experiences, engagement with the taxpayer's natural systems and areas of continued human support.
- A three page section containing five life events illustrating the change, bridging today's issues and a future aspirational state. These life events, while generally following a sequential pattern in the example, can occur at any time or multiple times across segments, reflecting the dynamic nature of the individual or entity.

The three narratives are intended to help the reader envisage what seamless tax administration might look and feel like, seen from a system and taxpayer-centred perspective. The building blocks underpinning this vision are set out in Chapter 4.

© OECD 2020

DYNAMIC INDIVIDUAL

Today's issues:

Digitalization has already simplified how many private individuals relate to tax and other public services domestically. On the other hand, digital transformation of the wider economy is creating an increasingly more complex and global environment for creating income, challenging the basic concept of tax and how government agencies deal with citizens. For example sharing and gig economy workers and those working digitally across borders are challenging current domestic tax systems, often substantially increasing both burdens and compliance risks for taxpayer and the tax administration. Adapting to the dynamic and digital nature of work is necessary.

DYNAMIC INDIVIDUAL
MARY'S STORY IN 2030



About Mary:

Meet Mary in the 2030s, as she gets her first job and finds herself having to pay tax for the first time. We follow her through important life events and changing circumstances – and see how tax is a natural and integrated part of her daily life.

© OECD 2020

CHAPTER 3 - TAX ADMINISTRATION 3.0 IN PRACTICE

Mary's experience

Mary has embraced the use of the My365 platform and app which supports her in many aspects of her life. She connects with many different public and private actors supporting her life events in a coordinated and holistic manner via My365.

Mary is not particularly concerned with tax, but she acknowledges its important role in financing society and wants to contribute. She trusts that her taxes are mostly taken care of automatically by her digital ecosystem, and that the processes are working correctly in the background using her personal digital information safely and securely.

She know that her tax status is always available to her in a simple and easy to understand manner and that she will be notified with necessary guidance if her attention is needed. The few interactions that she has needed to have with the tax administration have been friendly, professional and specific to her situation

The ecosystem

Mary's main connection to tax is through My365 which is conveniently available as webservices and apps for different internet devices. My365 supports an integrated set of government and business services for citizens, and is one of several 3rd party platforms competing to create an ecosystem for citizens.

The different services in My365 work together to support the different life events of citizens, utilizing secure API's for a myriad of available customer services from government and private actors. Tax administrations have made tax services seamlessly available for different life events by creating API's and partnering with other relevant actors.

Mary's tax status is always updated and available to her through My365. Artificial intelligence-supported help services are available, supplemented by personal contact with experts when necessary. Personal Information is exchanged between different services only to the extent needed and when properly authorized by the citizen, secured from unauthorised access and changes. At the core of the ecosystem is a national digital Identity connecting Mary to her digital information by biometrics.

The human touch

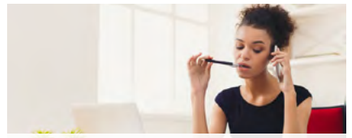
Even if Tax services are now embedded within the taxpayer's ecosystem, support from the tax administration or trusted agents to individual taxpayers will still be needed when AI support is not sufficient. Person and context specific support is available from tax experts via text, audio and video after secure identification of the taxpayer is established. The service can facilitate a whole of government approach when needed.

The tax administration will perform compliance activities, highly supported by advanced analytics. These will focus on whether the systems are running as they should.
If needed, the tax administration will initiate dialogue with Mary directly to correct mistakes or make further enquiries. Systematic errors and risks will be followed up in dialogue with the appropriate actors in Mary's natural systems.

© OECD 2020

Life Events	 BECOMING AN EMPLOYEE	 PROPERTY ACQUISITION
Today's issues	• Burdensome enrollment in multiple governments systems • Difficulty identifying all citizens that should pay tax • Verifying ID can be complex	• High burdens for citizens • Several actors and isolated processes • Late tax settlements giving potential tax risk and cash flow issues
Tax Administration 3.0 Strategies	• Known, validated and trusted digital identities usable in a seamless manner with government and private actors. • Taxpayer enrollment by birth, other life events or at the time of immigration. • Secure digital identification when starting work as an employee.	• Instant granting of mortgage supported by up to date digital tax information • Potential tax consequences available to taxpayer up front • Property registration and updated tax status immediately available when the transaction is completed.
Taxpayer experience	Mary applies for a job through an online recruitment platform. She is lucky to get a job in a shipping maintenance company. Mary and the company sign the contract digitally using trusted digital identification. The company representative also verifies that she is now a legal representative of the company. Mary grants access to her relevant personal information connected to her digital ID in different relevant registers, to create an employee profile. This includes relevant data for tax, including any allowances, social security as well as a bank account for salary payments. This prepares her for receiving her salary and benefits for the company and paying tax, social security and pension contributions. Taxes are automatically withheld. She has no need to be involved with the tax authorities in the process	After renting an apartment for some years she wants to buy. Available through My365 she finds an online real estate agent platform to begin her search. She finds several interesting properties and wants to check if she can afford to buy. Through the platforms mortgage application module she gets mortgage offers from several financial institutions tailored to her situation. As part of the process she grants them a limited permission to access her up-to-date personal records with the tax administration. She is also able to simulate the specific tax outcomes of the different properties and loans on offer. She decides to go ahead with a purchase. Representatives from the real estate platform make sure that the transaction is lawfully completed. Her tax status is updated with information about her new property and the mortgage.
The Ecosystem	• A trusted national digital ID-system • A register of companies' legal representatives • A recruitment platform where both employer and employees can match • HR and salary system as part of the business solution from the company • A government platform ensuring rules and her personal record in the HR, social security and salary system is continuously up to date	• A trusted national digital ID-system • Based on consent, personal tax information is open to selected banks • Real estate agent platform supports all aspects of completing the transaction, including changes in property registration and forwarding relevant property transaction taxes. • Functionality exists to support a seamless and once only address change for all her personal services to all relevant actors and systems.

© OECD 2020

 SHARING AND GIG INCOME	 WORKING ACROSS COUNTRIES	 STARTING A FAMILY
• Burdensome taxation of income involving actors outside a taxpayer's jurisdiction • Different and complicated national rules • Low tax compliance for sharing and gig economy income	• Burdensome process in registering for tax in a new jurisdiction • Separate rules and processes in each country can create confusion and risk non-compliance	• Challenging to know all required actions in different situations. • Burdensome, isolated and redundant processes towards several government/business actors
• PAYE taxation for income generated from digital platforms to the jurisdiction with the taxing rights. • Country and possible taxpayer specific PAYE tax rates available to platforms • Globally standardized formats for real-time reporting or withholding	• Close to real time taxation at source • Geolocation to determine place of taxation • Automatic registration for tax on arrival and real-time notification of tax registration status to taxpayer on arrival	• Whole of society approach to the life event. • Personalization of service delivery • "Tell us once"
After some years she wants to invest in a holiday apartment in another country. For a period of time she decides to rent it out to get extra income. She also decides to rent out one of the rooms in her home. A house rental platform takes care of all the practical issues, subject to her permission. She can happily observe the flow of income from both her properties in her app services connected to her bank account. She can also recognize how the platform deducts, reports and pays her taxes. Her total tax status is continuously updated accordingly and kept in balance.	Mary gets a new position working on projects abroad and moves to another country. On arrival her electronic passport is checked biometrically and immediately My365 notifies her about permit changes in her tax status in her host and home countries. When she gets her first salary abroad, she notices in My365 that her income and PAYE taxation are split between her home country and the new country. Throughout the year she works in several countries. On January 1st she is notified that her final tax status is ready in My365. She notices that it includes her tax status in each of the countries she has worked in last year.	Mary's international career takes an unexpected turn when she falls in love and gets married to Bono. Soon they are expecting their first child. After a hospital visit confirming the pregnancy, My365 is ready to support the process around pregnancy and birth. My365 suggests needed administrative actions involving different actors. At the suggested time, My365 notifies them about recommended actions and supports the necessary dialog, including birth registration, application and approval of maternity and paternity leave dates, changes to tax allowances and social security. As they go along with the process their current and projected tax status will change and My365 notifies them about all relevant changes.
• National Digital ID in home country used to verify identity to the government in another country, e.g. for property ownership and taxation. • House rental platform withholds and remits the correct PAYE amount to the home and host tax administrations. • Government platform supports the rental platform with updated rules for tax rates, deduction rules, thresholds, personal allowances etc.	• National Digital ID that can be used for identification across borders. • Enterprise wide HR/salary module with standardized connections to different government platforms. • An international platform updates rules for each country and tax agreements between countries in the employer's business solution.	• Life event module for starting a family - supported by services from hospitals and different government agencies • Company HR/business solution with maternity/paternity leave functionality • Digital ID enrollment module for newborns • Functionality for adjusting tax status with family related tax grants

© OECD 2020

DYNAMIC ENTITY

Today's issues:

There is an growing mismatch between the increasing dynamic and global nature of doing business and the static and silo-based handling by the national tax administrations today. This is particularly challenging for people starting and growing a business. Formal transitions creates burdens as the business expands or changes its nature or form. Without bold action from Tax Administrations, this will become growing issue in the future.

THE DYNAMIC ENTITY
KIM'S STORY IN 2030



About Kim:

Meet Kim in the 2030s, as she starts out in her profession. In the beginning she is just earning additional income on side of other activities in a busy life. We follow Kim as she gradually becomes self-employed before transitioning to a Limited Company with growing international operations.

© OECD 2020

CHAPTER 3 - TAX ADMINISTRATION 3.0 IN PRACTICE

Kim's experience

Kim is not particularly concerned with tax, and she perceives it as an unproblematic part of her growing business. She knows that it is mostly taken care of automatically through her business solution MyBusiness. She is always able to see an up-to-date and detailed statement of her tax affairs.

She has already experienced receiving notifications from MyBusiness when her attention is needed. This has been especially important through transitions in her business development, where she is given advice up front on how and when to proceed.

Her few personal interactions with the tax administration haves been friendly, professional and specific to her situation.

The ecosystem

Tax administration processes are fully embedded within the government trusted business solution MyBusiness that Kim is using for her business. It contains autonomous algorithms that take care of tax related issues - for all tax types - in all her business transactions. Tax is reported and collected automatically according to the nature of the different tax types.

Every automatic action from the system is transparent to Kim. The AI driven system is giving Kim personal and context-specific tax guidance in business decisions. Other administrative tasks related to the same business transactions, for instance salary and HR, are simplified in a similar manner within her natural systems. She is also able to use her digital identity when interacting with other parts of government and private actors.

The human touch

Skilled tax professionals are available for support and guidance when Kim needs it and she feels the AI support is not sufficient.

Ecosystem audits of MyBusiness guided by the tax administration provides reassurance to the tax administration of the functioning of the various interconnected and seamless systems. The tax administrations can also intervene with individual taxpayers like Kim, as well as with MyBusiness, when errors or unusual patterns are detected.

© OECD 2020

Life Events	 ADDITIONAL INCOME	 BECOMING SELF- EMPLOYED
Today's issues	• Tax Compliance – new taxpayers • Income unreported for tax • The rules can be complex and taxpayer education, guidance and support is needed	• Complex to understand when irregular income has become business income and new obligation apply e.g. VAT • Burdensome registration processes • Risks of non-compliance with tax rules
Tax Administration 3.0 Strategies	• Transactions automatically taxed by business platform within taxpayers' natural systems Tax status always available	• AI classifies business status based on activity and supports registration • Platform-supported transition, including with other government agencies and private actors • Tax rules integrated into business transactions and accounting systems
Taxpayer experience	Kim is a student who wants to earn extra income, leveraging her video editing skills. She registers on the business platform MyBusiness which is both a marketplace for her services and also takes care of all formalities around transactions MyBusiness takes care of her obligations and rights toward the government. Tax for all transactions are withheld and reported to government in real time from MyBusiness. Mary can always view her up-to-date tax status on MyBusiness.	The number of editing jobs Kim receives increases. MyBusiness classifies her activity volume close to reaching a level for self employment. She soon decides to register as self employed. MyBusiness helps her to register, to choose reliable cloud –based Enterprise Resource Planning (ERP)-software and financial services integrated with MyBusiness for a fully digital business solution. The book-keeping module keeps track of income and expenses automatically and gives her updated status and business forecasts, including all relevant tax types. Reporting and paying taxes is handled automatically by the platform.
The Ecosystem	• A trusted digital ID • Capturing all business transactions with her customers. • Making sure taxes for her video editing job transactions are withheld and paid to the government. • Updated tax status in real time • Government platforms support MyBusiness with updated rules and rates for correct PAYE taxation and API's provide updated tax status.	• A trusted digital ID • Government supported API's to integrate registration service in business platforms • Government platform supporting her business solution with updated tax rules for all her transactions • Fully automatic bookkeeping and invoicing for income and expenses, calculation of tax liability and payment of tax.

© OECD 2020

	 TRANSITION TO LIMITED COMPANY	 HIRING PERSONNEL AND PAYING SALARIES	 INTERNATIONAL EXPANSION
Today's issues	• Limited knowledge about pros and cons of transition to a limited company • Complicated to register and set up • Administrative burdens for assigning and managing roles	• Burdensome registration of employees and reporting of PAYE taxation to the government and other reporting requirements (e.g. social security) • It can take time to ensure correct personal withholding tax rates and amounts	• Burdensome registration overseas. • Complex set of tax rules from more than one country • Significant compliance burdens
Tax Administration 3.0 Strategies	• AI based decision support regarding transition to a limited company • Semiautomated registration process based on digitally available information and AI support • Secure digital ID to ensure real people represent the company	• Tax registration is done alongside the creation of digital ID at birth, on immigration or at other defined points/life-events • Personal PAYE deductions based on real time updates of tax status available to employers	• International standards for distributing national tax rules to platforms and business ecosystems • International government platform for distributing rules, rates and information • Digital ID's supporting secure identification and authentication across borders
Taxpayer experience	Kim gets personalized and business specific advice from MyBusiness to consider the transition to a limited company. The advice is based on predictive analysis of available information about her business activity in the MyBusiness ecosystem and a specific assessment from the tax administration. She contacts a legal expert through MyBusiness for advice before she decides to register as a limited company. MyBusiness helps Kim with classifying and organizing the business as a limited company, and how to "close" her self-employed status. This includes tax status and the interactions with other government agencies and private actors consequent on the change in status. Soon all new business transactions flow into her new limited company and are treated according to relevant rules.	As her business expands, Kim wants to hire her first employee (in addition to herself). She is searching for candidates via the recruiting platform JobRecruite, which also helps her to conduct video meetings with candidates. She signs a contract with her selected candidate Rick remotely. Trusted Digital ID ensures both parties that they have a valid contract. She is also granted access to Rick's personal information to set up the HR-module in MyBusiness which is also used for government registration of employees and PAYE taxation and social security of the new employee. Soon Rick gets his first salary, and he notices he is taxed according to his expectations.	Kim registers the new limited company through an international service platform integrated with MyBusiness. Registration and ERP setup for the new country is easy, based on digital records of her company in her home country and supported by artificial intelligence to adjust to new tax rules. As income and expenses in the new country start to occur, the correct set of taxes is automatically applied. Tax status and forecasts for each country are updated in real time as documentation becomes available in her business solution. Local personnel are hired using the same platform as at home, JobRecruite, which also automatically includes employees in the HR module in the company's ERP system. Taxing of employees is handled in a similar manner as at home, even if things differ behind the scenes.
The Ecosystem	• Trusted Digital ID • A register of the company's legal representatives • AI supported analysis of her business transactions • Transformation services from government for "closing" status as self-employed for tax, other government services and relevant private actors	• A trusted Digital ID • A register of company's legal representatives • Hiring platform supports the whole recruitment process and integrates an HR-module in the business solution • Private/public platform ensures correct rules for withholding PAYE tax for employees and possible employers tax	• A trusted digital ID authorized for use across jurisdictions • Services ensuring company registration in the new country is consistent with home country registration • Registration processes supported by AI • International platform ensures the business system is updated with local tax rules both for business transactions and for employees

© OECD 2020

MNE IN TRANSITION

Today's issues:

Multinationals have to adapt to different countries' business environments, including different business standards and how tax systems are designed and implemented. Taxation of digital services and how to deal with intangible assets across borders represents a major concern for enterprises. Digitalisation of tax administration processes differs extensively across countries. Lack of internationally standardised requirements adds to compliance costs. Tax administrations' compliance activities normally happen a long time after the taxable business transaction has occurred, creating heavy documentation burdens, tax uncertainty and compliance risks.

THE MNE IN CONTINUOUS TRANSITION –SMART FALCON'S STORY IN 2030



About Smart Falcon

Meet Smart Falcon in the 2030s, a big international company competing in the expanding dronecar service delivery business. The company is renting out self driving cars and personal travel drones as integrated travel experiences for people traveling across countries using a personalized mix of road, air and sea travel. The company is exploiting state of the art technology for continuous business monitoring across their subsidiaries in all countries. Complex tax issues arising from the different jurisdictional rules they face is largely dealt with in the background.

© OECD 2020

© OECD 2020

The company's experience

The drone business triggers many different tax consequences in the countries in which Smart Falcon operates . Indirect taxes hardly give them any concern since tax is seamlessly integrated within business processes. They also feel quite confident that they have an updated view of their current tax positions on direct taxes.

They feel confident that the software integrating business with tax rules and standards in each country will handle their daily issues. They experience that the tax consequences of international business transactions can be clarified up front in a coordinated dialog with tax authorities in the involved countries including through the use of AI. The company's tax function can comfortably give top management an overview of the tax situation for the company to inform the company's strategic business decisions. Automated compliance activities from the tax administration mostly happen close to real time focusing on the functioning of the systems.

The ecosystem

The company's business solutions are provided by government trusted vendors. Tax is thus fully embedded within Smart Falcon's digital business solutions in all countries in which they operate. Their business systems are updated with current tax relevant rules, algorithms and data from government platforms before business transactions are completed, leading to fewer mistakes and unintended errors. Smart Falcon's tax decisions are supported by AI in their business system.

Tax is assessed, reported and collected automatically in line with the different tax types and rules in the different countries. Even if periods, rates, etc. can differ, this is still supported by a standard reporting format for all the countries in which the company operate in. The business system is able to show an up-to-date overview of the tax status, positions and risks for the whole company.

The human touch

The tax administration uses AI to flag risks that the company's digital business solution might be producing questionable results. This prompts the company to review the issues and, where necessary, tax administration experts are available to engage with MNE's in real time when possible risks and deviations are detected, including to review the rules within the business solution.

In legal disputes between the company and the tax administration all decisions are transparent and contestable to both parties with AI used to review precedent and narrow the range of relevant issues.

When there is a dispute involving several tax authorities and the company, AI supported negotiations between tax authorities are used without unnecessary involvement of the company.

	SERVICE DELIVERY ACROSS BORDERS	TRANSFER PRICING
Business events and transactions		
Today's issues	• Allocating VAT and excise taxes correctly among countries	• Burdensome to document compliance • Compliance activities can happen years after transactions are completed, creating tax uncertainty
Tax Administration 3.0 Strategies	• Transportation infrastructure taxes based on tracking of use • Taxation of E-services delivery based on tracking location of consumption • Use of GPS and sensors in the vehicles • Automatic tolling	• AI based algorithms and rules for transfer pricing made available from the government • Governments compliance activities focused on system revision in the enterprise • Semi automatic dialog between government and company on transactions only in exceptional cases
Taxpayer experience	Smart Falcon is renting out self-driving cars and drones. They are expanding into integrated travel and entertainment experiences for people travelling across countries. They offer a personalized mix of air, sea and road travel. Dronecars flying along regulated corridors is part of the service. The holistic experience includes different kinds of tailored services that trigger different VAT and excise taxes in several countries. They have pioneered the business model by testing new ways of supporting the taxation of this kind of integrated service in close co-operation with the governments in several countries. Smart Falcon's business system is automatically reporting and paying taxes to the relevant tax administrations according to the rules in each country.	There is a comprehensive business activity across the different entities in the enterprise involving goods, services and intangibles. New technology, including 3-D printing, has led to production of dronecars closer to their consumer markets. Internal leasing of dronecars and connected services is extensive. Correct pricing of intangibles has become a more prominent part of their discussions with tax authorities. Correct pricing is supported by AI based algorithms and rules made available from the government. They experience a predictable up-front dialogue with the tax authorities whenever ambiguities occur.
The Ecosystem	The dronecar is a smart object opening new options for taxing business users. The vehicles are measuring location, time and distance for each customer's total travel. The correct VAT and excise taxes for the different services and the use of roads, ferries and airspace in each country are calculated and assessed in real time, as are allowable business expenses. The Business system is connected to government platforms in each country, updated with rules and algorithms for indirect taxes and with digital interfaces for reporting and paying taxes.	The government certifies a transfer pricing AI solution to the company. This is based on updated regulations and historical pricing data. The government's compliance activities are supported by a standard interface to the company's business systems. Rule-based filtering flags transactions and outcomes that the company should review and which may be subject to audit where the administration, supported by AI systems, is not satisfied.

	CROSS BORDER LOGISTICS	HOLISTIC INTERNATIONAL REPORTING	ACQUISITION OF A COMPANY IN NEW COUNTRY AND NEW SECTOR
Business events and transactions			
Today's issues	• High cost of documentation to ensure compliance along the logistics chain • Fast changing and complex rules specific for sectors and countries, creating potential tax risks	• Country specific reporting requirements and standards • Obtaining adequate data and ensuring necessary quality	• Complex reconciliations needed due to differing systems and different national standards. • Tax adds to the integration complexity.
Tax Administration 3.0 Strategies	• Tax included in development of fully digital logistic chains, enhancing value of real time value chain management • Supporting real time risk assessment and updates for logistics activities, including tariff changes and timing of customs requirements	• International reporting standards and formats • Real time updates of national rules on how to apply the standard • Increasing ability for real time taxation	• International standard for integrating systems from different vendors • International standard for transferring relevant data between systems
Taxpayer experience	Smart Falcon manufactures high quality dronecars by selecting vendors producing high quality parts and predictable deliveries for dronecar production. They monitor and analyse the whole end-to-end production chain in real time through their logistics solution. If any logistical risks occur, they will be notified by the system and can take actions swiftly. They experience an efficient cross-border taxation process. VAT, excise duties and customs fees are declared and settled automatically as goods cross borders. Physical interruption of transportation rarely occurs, and when it does inspections are swiftly handled by tax and customs authorities.	Smart Falcon experiences tax reporting as a relatively simple embedded process. Reporting has been increasingly harmonized between governments. Reporting requirements are embedded in the systems used for running the business and for financial reporting. There are still differences in tax rules, especially for direct taxes, but the descriptions of the facts are harmonized across countries. When rules are changed the system keeps track of local changes and makes sure Smart Falcon is notified and can adapt quickly. The company has an updated overview of its tax status in each country and they feel they can predict tax risks reasonably well.	Smart Falcon has wanted to acquire a company that can enable them to deliver food and other products to their dronecars while in flight as a commercially available service. Drone Connect Inc. is a startup in this new segment and has promising technology that fits with Smart Falcon's strategy. Drone Connect is located in a country new to Smart Falcon and has a different business solution. Integrating Drone Connect into the enterprise still goes smoothly. There is no urgent need to switch to Smart Falcon's business solution. Nevertheless, after a short period of time the new company is an integrated part of Smart Falcon's fully digital management system. This includes nearly real-time tax status and risk management for Drone Connect
The Ecosystem	Smart Falcon's logistics solution is connected to relevant actors in their logistics ecosystem, including suppliers, freight forwarder companies and government services etc. This supports real time analysis of their logistics. The company tracks status and location of goods across countries, suppliers, storage locations and transportation methods. All underlying sales documents and payments are digitally available. With government authorities as part of the same ecosystem – and through the use of monitoring devices and AI - a more effective customs process is enabled. Physical inspection is targeted and efficient.	Smart Falcon's business solution is always updated in line with changing requirements and rules for reporting by government platforms in the countries in which they operate. Rules for taxing transactions and reporting still have differences, but the formats and the structure for the rules and algorithms are the same, based on a harmonized descriptions of these facts. The international standard formats covers both the transaction level (i.e. e-invoicing) and reporting to the government. The descriptions and delineations of these relevant facts are harmonized with financial reporting.	Both companies use business solution services that have integrated international standards for exchanging information between systems and for converting from one system to the other for all relevant tax types. Smart Falcon uses a management information system that integrates well with the different ERP systems and modules used in the enterprise even if they are from more than one vendor.

© OECD 2020

© OECD 2020

CHAPTER 4

THE BUILDING BLOCKS OF TAX ADMINISTRATION 3.0



THE BUILDING BLOCKS OF TAX ADMINISTRATION 3.0

Thinking about the end of the journey along the pathway

While Tax Administration 3.0 as described in this document represents a paradigm shift in how tax is administered, the change process will, of course, be incremental. This is partly for resource and prioritisation reasons – in particular dealing with the huge day-to-day job of collecting public revenues - and partly because it is a journey that has to be taken in close co-operation with other parts of government, the private sector and internationally.

In particular, Tax Administration 3.0 requires the development of a new infrastructure underpinning future tax administration as described in the narratives in Chapter 3. The building blocks for this new infrastructure will provide benefits in their own right. However, it is the fitting together of the building blocks over time that will achieve the more significant benefits of seamless and frictionless tax administration, including through joining-up with other parts of government, with the private sector and across borders. Collaborating with other actors to achieve these outcomes is hugely important to avoid potential dead-ends. In order to build something which brings together many different actors and different moving parts, both a common vision and close collaboration between the actors are essential.



Take the example of digital identity. To reap the full benefits from the development of a digital identity system, it has to be fully compatible with other digital identity systems, reducing the time and money burdens that arise from the use of multiple identities, log-in and authentication processes. In particular, it should work with systems used by other parts of government, by private sector intermediaries, with the systems that taxpayers use in their daily life or business and with what is used in other countries. Building a new digital identity system without thinking about the pathway towards that end goal of far reaching compatibility, may result in useful improvements, for example, improving security, the ability to match data and to carry out administration functions more efficiently. However, it may not work with other processes outside of tax administration and correcting that could require significant additional costs.

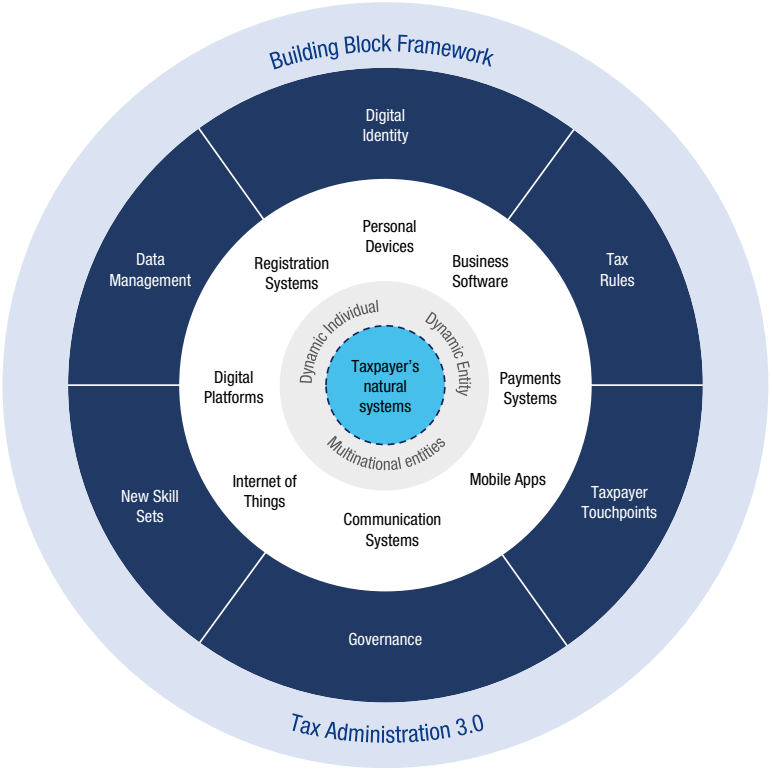
© OECD 2020

The core building blocks

Six core building blocks of future tax administration were identified by the tax administrations which led the work on this discussion paper. These are:

- **Building Block 1: Digital Identity:** supporting secure and unique identification of taxpayers and citizens in a joined-up way, helping to reduce burdens and helping to move processing into the background, connecting taxpayers' natural systems.
- **Building Block 2: Taxpayer touchpoints:** facilitating the engagement of taxpayers with tax administration processes as and when necessary (for example through access to real-time support), increasingly looking for opportunities to put such touchpoints into taxpayers' natural systems, including in more automated ways.
- **Building Block 3: Data management and standards:** creating the framework for how the administration manages data most effectively to maximise compliance and minimise burdens. In particular, this concerns the choices around where data is processed for different tax functions (within the administration, within the taxpayers' natural systems or both), and the requirements for quality, availability and reporting of tax relevant data as well as metadata on the operation of taxpayers' systems.
- **Building Block 4: Tax rule management and application:** creating and distributing tax laws in administrable and verifiable formats to allow stakeholders to integrate tax rules within their own preferred systems, including as they evolve, while providing robust and increasingly remote reassurance to the administration.

Figure 4.1. The core building block framework



© OECD 2020

- **Building Block 5: New skill sets:** planning for the new skills that will be required for the development and operation of digitally transformed tax administration, with human intervention taking place less frequently and with increasing support from artificial intelligence processes.
- **Building Block 6: Governance frameworks:** guiding the development, implementation and connectivity of the other building blocks both within the tax administration and in co-operation with other actors, both domestically and internationally.

Each building block is described below, looking at the following elements:

- ***Core added value:*** describing how the particular building block helps to achieve seamless tax administration in a digitally transforming society and economy.
- ***Building block architecture:*** setting out the core set of interrelated functions and processes that will need to work together to achieve the outcomes of Tax Administration 3.0.
- ***The journey to Tax Administration 3.0:*** outlining the characteristics of the current system of e-administration and how that changes over time, including through a first draft of a digital transformation maturity model which sets out the broad characteristics of different stages of digital maturity. This part also suggests what may be starting points of the move to Tax Administration 3.0 (which will be considered further in the development of the proposed road map on future FTA work).
- **A current leading example:** These examples have been provided by the tax administrations who led on this discussion paper to indicate actions currently being taken under each of the building blocks.

Building Block 1: Digital identity

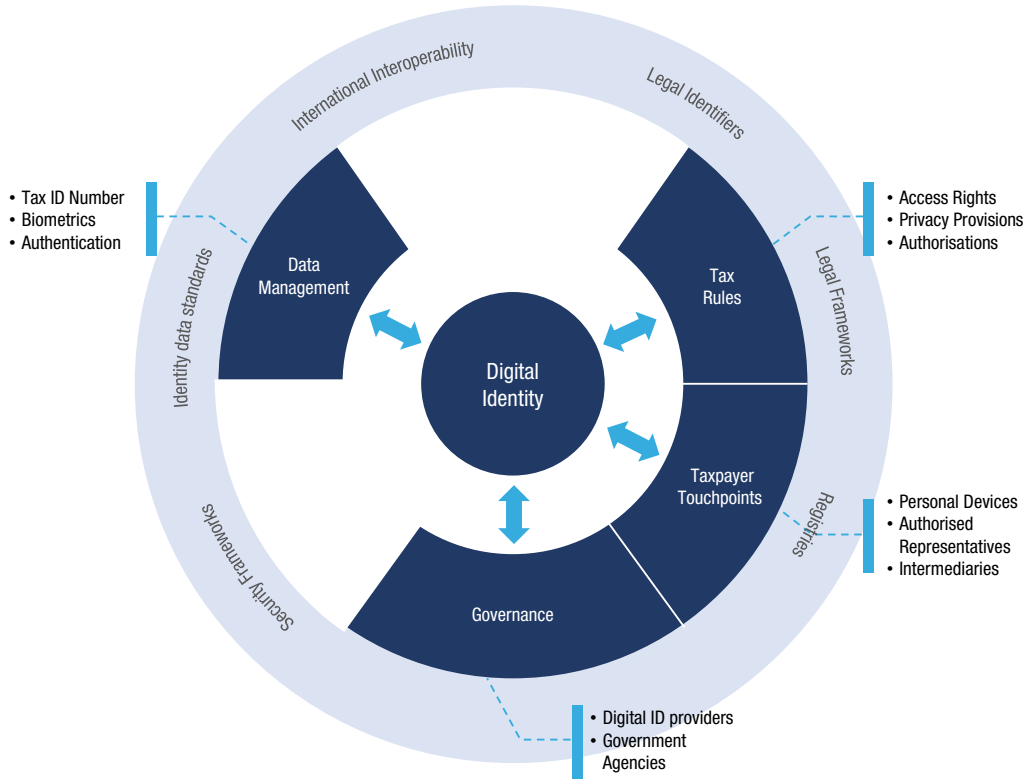
Core added value

Tax policy sets out who and what is to be taxed. The secure and unique identification of taxpayers is then the starting point of modern tax administration allowing the matching of administration processes (communication, tax return filing, incorporation of other data sources, self-service options etc.) to individual taxpayers.

In a society where digital identity is used in multiple different personal and official processes, and in different roles (e.g. as an individual taxpayer and a business representative), the establishment of one unique and secure identification system for citizens and businesses is a prerequisite for the greater joining-up of systems required to make tax a more seamless process. This does not mean that the different organisations need to have the same digital identity system. The key is that the systems used by the taxpayer and the administration can interact with each other in a frictionless manner.

© OECD 2020

Figure 4.2. Digital identity



Building block architecture

The digital identity building block needs to perform the following functions to enable Tax Administration 3.0, namely:

- Providing certainty regarding the identification of all actors in the system, including for the taxpayer in terms of security of their identity and ease of use (i.e. not requiring multiple different log-ins).
- Allowing systems to interact with each other on the basis of this unique identity, enabling the sending and matching of personal data and instructions in real-time, giving access to secure services and facilitating seamless movements between portals.
- Allowing the delegation of representation (for example to a tax agent, personal representative or between officers of a business) subject to different levels of permission.
- Supporting the automatic application of tax rules as an integral part of daily and business life, for example confirming identity and reporting (or withholding) information through the applications facilitating digital transactions.

© OECD 2020

The journey to Tax Administration 3.0

Table 4.1. Digital identity: The journey to Tax Administration 3.0

Description	Emerging	Progressing	Established	Leading	Aspirational
Digital Identity	Taxpayer registration function in place. Taxpayers identity themselves at the tax administration office. Passports and paper domestic ID documents are basic credentials.	Every taxpayer has a Tax Identification Number (TIN). Enrolment of first digital identities started to support e-filing. Authentication by means of passwords.	Every taxpayer has a tax administration specific digital identity related to its TIN. Digital taxpayer services and data can be unlocked by Digital Identity (DI) Piloting national DIs. Two-factor authentication in use. Legal framework in place	Tax administrations use national DIs (private and with some other parts of government) Digital Identity by Mobile devices. Delegation of authorization to representatives. Digital Identity is used to support public private exchange of information with e.g. platforms.	Whole of society Digital IDs Digital IDs support the identification of international taxpayers.

The "established" maturity level described above is intended to represent where most advanced administrations are currently. In general, taxpayers who have the capability to do so, can now generally avoid paper documents and visits to the tax office and use their digital tax identification at digital taxpayer touchpoints such as websites, e-forms, web and mobile applications.

The main characteristics of an established implementation are:

- Every taxpayer has a form of tax identification number (TIN) which, together with other identifying elements (such as date of birth, passwords for citizens and place and date of incorporation, registered address for businesses), creates a digital identity within the tax administration.
- A range of digital taxpayer services and data can be unlocked at specific taxpayer touchpoints by using the taxpayer's digital identity.
- A framework is in place around the use of digital identity to ensure privacy and security including, in the international context, to help facilitate the cross-border transfer of a wide range of data.

The next steps in digital identification maturity will increasingly allow the same digital identity to be used in multiple interactions with other parts of government, with third party data providers and in private sector applications domestically and across borders. Citizens will use the same identity to interact with tax administration processes in different roles, at different moments in time, e.g as private taxpayer, a small business taxpayer, a business representative or as the proxy of an elderly family member.

To begin this journey, tax administrations may wish to consider:

- Mapping of the benefits and potential challenges of digital identity solutions that arise from the integration of digital identity with other aspects of citizen's and businesses daily lives.

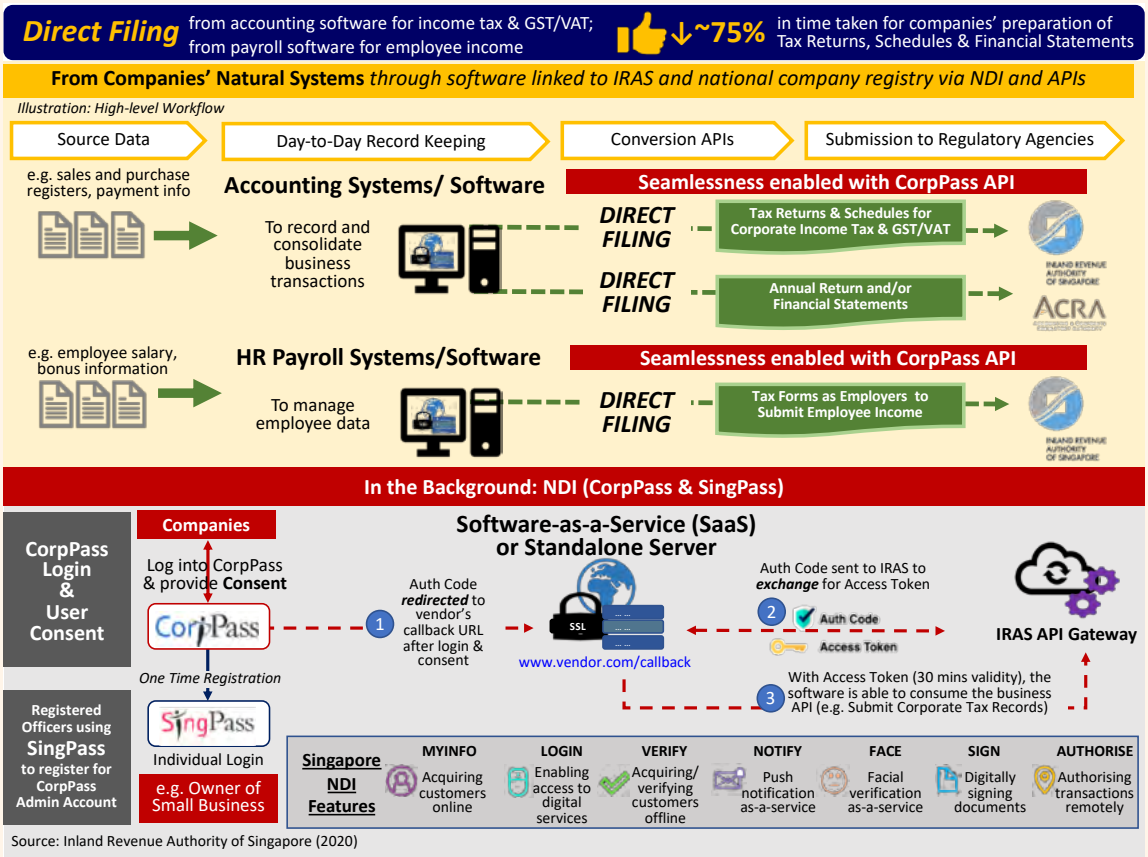
© OECD 2020

- Developing a high-level digital identity architecture in co-operation within government, with the private sector and with other tax administrations, to help minimise the risk of non-compatibility, including through the development of possible global standards.
- Understanding the flexibilities needed within the architecture to future-proof digital identity verification in order to keep the system secure in the light of future developments (for example through the integration of blockchain solutions).
- Identifying priorities for the integration of digital identity functionalities between the tax administration and other public or private sector organisations so that early benefits are realised for the tax administration and taxpayers.

Box 4.1. Leading country example: Singapore – National Digital Identity

National Digital Identity (NDI) is the cornerstone of Singapore's Smart Nation Vision to harness technology to improve lives and livelihoods for all. NDI consists of SingPass (Singapore Personal Access, currently for all residents), a digital identity for individuals and CorpPass, a corporate digital identity for businesses and other entities. SingPass supports authenticated login to government e-Services, including myTax Portal, instantaneous approval for e-payment application via myTax Portal and a pilot-phase face biometric recognition. Via CorpPass, companies can harness various NDI features to interact with customers, transact with government agencies and other entities securely and easily, with the necessary authorisation and consent. For instance, companies can file returns to both IRAS and the national company registry via CorpPass and API's seamlessly.

Figure 4.3. The use of national digital identity by companies



Source: Inland Revenue Authority of Singapore (2020)

Learn more about Singapore's National Digital Identity — Click here

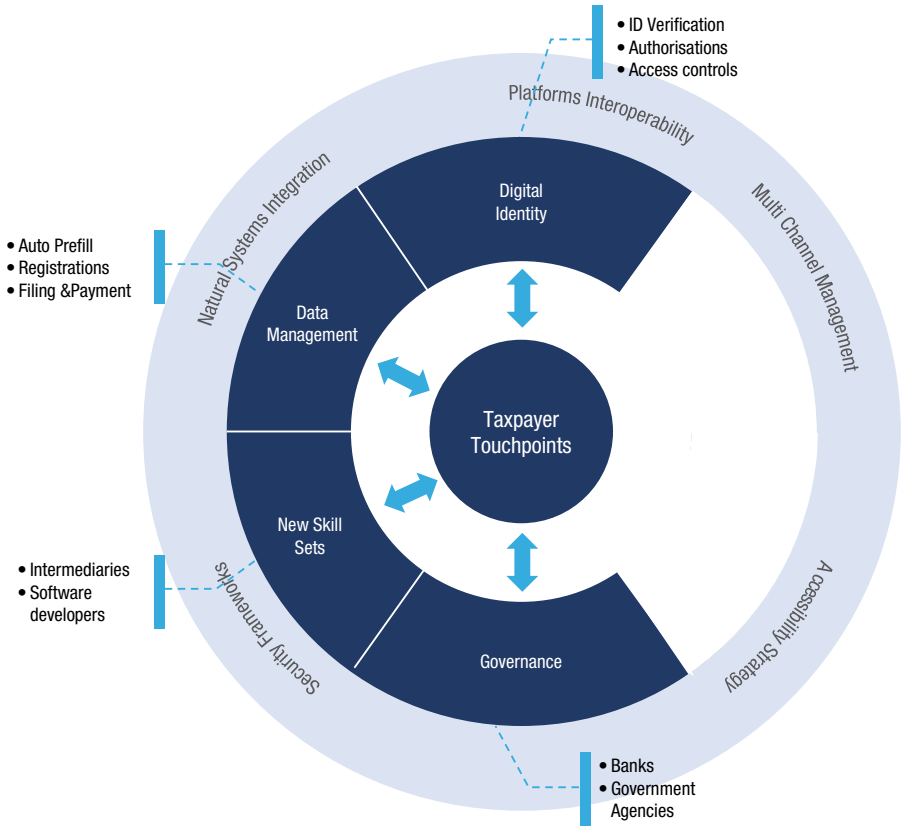
© OECD 2020

Building Block 2: Taxpayer touchpoints

Core added value

Communicating, interacting and facilitating engagements with taxpayers is core to the smooth running of tax administration. This is managed and supported through a number of touchpoints, varying from: face-to-face interactions, phone calls, multifunction websites, e-services, to business management systems. These taxpayer touchpoints help to resolve friction where it arises, for example a lack of understanding, unusual circumstances that require further discussion with the administration, processes not working as they should etc.

Figure 4.4. Taxpayer touchpoints



Building block architecture

The taxpayer touchpoints building block needs to perform the following core functions to enable Tax Administration 3.0:

- Providing real-time support where friction cannot yet be eliminated within the administration's processes or arises due to external events (for example changes in legislation, significant changes in circumstances or in a crisis). The key is that such support is effective at resolving the issue rapidly and, where possible, in adapting itself (for example through the use of machine learning).
- The touchpoints should be capable of providing analytical data to facilitate understanding of where friction arises and how it might be resolved through changes to systems and approaches.
- Enabling integration through application programming interfaces with other systems within government, business management systems for example accounting systems and cash registers, and other appropriate applications for example, bank accounts and transactional applications.

© OECD 2020

The journey to Tax Administration 3.0

Table 4.2. Taxpayer touchpoints: The journey to Tax Administration 3.0

Description	Emerging	Progressing	Established	Leading	Aspirational
Taxpayer Touchpoints	The majority of taxpayer engagement is supported by paper documents to be presented at the tax office. Tax administration website publishes tax laws. Cash tax payment is broadly supported.	Electronic forms can be downloaded from the website. Some first online filling functions implemented. Call center in place. Payment via electronic banking applications.	The website offers a joined-up suite of e-services. Private and business taxpayers have a personal account to check status updates and conduct transactions. Digital PAYE-like systems implemented. Accessibility for disabled and (digitally) illiterate assured. Digital payments for all transactions and tax types available.	Full pro-active pre-filling for individuals and some business taxes. Taxpayer services like registration and debt management integrated within a whole of government approach. First touch point integration into digital platform functions. Settlements based on taxpayer account basis, balancing debts and contributions.	The majority of taxpayer touch points integrated in natural systems and whole of government services. AI-support integrated in touch point service provision. Real-time settlement option available for the majority of tax liabilities.

The established state is already the result of a lot of former progression in which the taxpayer touchpoints migrated from counters at the tax office and paper documents into online taxpayer portals for e-filing, e-payments and online help functions etc. A lot of burdensome administrative paper based and unnecessary tasks have already been removed from engagement processes while continuing to provide accessibility to those who may not have digital access.

The main characteristics of an established implementation are:

- A tax administration website or mobile channels offering a joined-up suite of e-services (e-filing, digital payments etc.), often including taxpayer portals for private and business taxpayers supporting status updates and secure interactions.
- Support offered through call centres or via web chat.
- The use of digital PAYE-like or other systems which substantially remove or eliminate burdens on employees (which may be cumulative or require year-end adjustments).
- The implementation of an accessibility strategy for those unable or less able to use digital channels.

The next steps in taxpayer touchpoint maturity will involve greater integration of those touchpoints into taxpayers' natural systems. This will be one of the major contributions and prerequisites of moving to seamless experiences. In addition to businesses conducting tax administration tasks within their systems (as is often the case with PAYE and VAT), all kinds of digital platforms will form part of a network of trusted third parties. Artificial intelligence tools and algorithms within taxpayers' natural systems will support the characterisation and assessment of liabilities and support taxpayer understanding and choices.

© OECD 2020

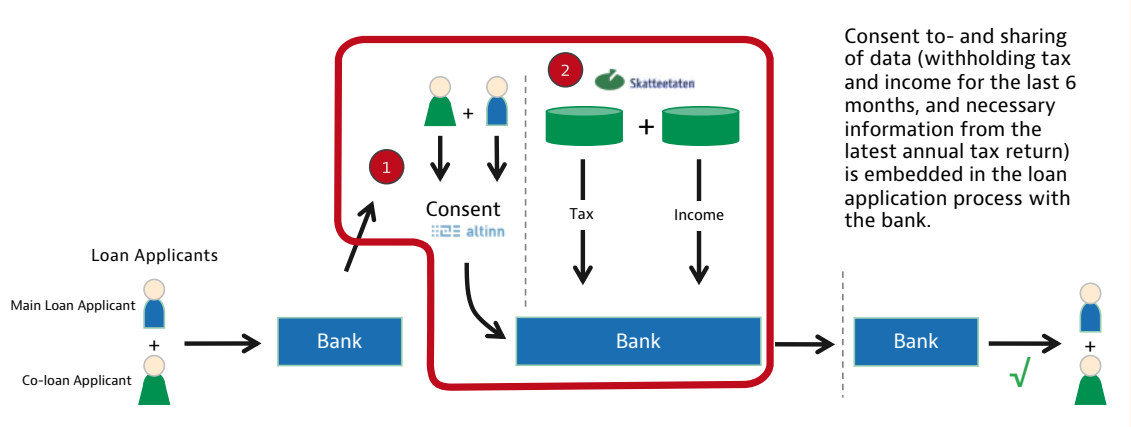
To begin this journey, tax administrations may wish to consider:

- Increasingly automating the pre-filling of tax returns (or tax assessments) for individuals and some business taxes (such as VAT).
- Developing their understanding of the main friction points for different types of taxpayers and strategies for minimising them at the point they occur while looking to eliminate them over time.
- The introduction of taxpayer accounts in which payments and liabilities are set out with supporting explanations, providing taxpayers with an increasingly real-time picture of their tax affairs.
- Integrating taxpayer services like registration, digital identity and debt management within a whole of government approach.
- Identifying opportunities for joined-up tax service provision with digital platforms and other third parties.

Box 4.2. Leading country example: Norway – Consent-based loan application

Norway has developed a new scheme to help simplify loan applications. In the past, applicants had to gather together and submit specified documentation on their income to the lending bank. This would then be subject to appropriate due diligence checks by the bank. Under the new scheme, instead of receiving information from applicants, banks are now able to receive the necessary information digitally from the Norwegian Tax Administration where the taxpayer has given his or her consent on a single use basis. The high reliability of the information in turn allows many loan applications to be assessed automatically within a matter of minutes, reducing costs and allowing quicker responses to applications. All Norwegian banks now participate in the scheme. The expected savings for taxpayers, businesses and government are estimated to be in the range of EUR 600 million to 1.3 billion over a ten-year period.

Figure 4.5. Consent-based loan application



Source: Norwegian Tax Administration (2020)

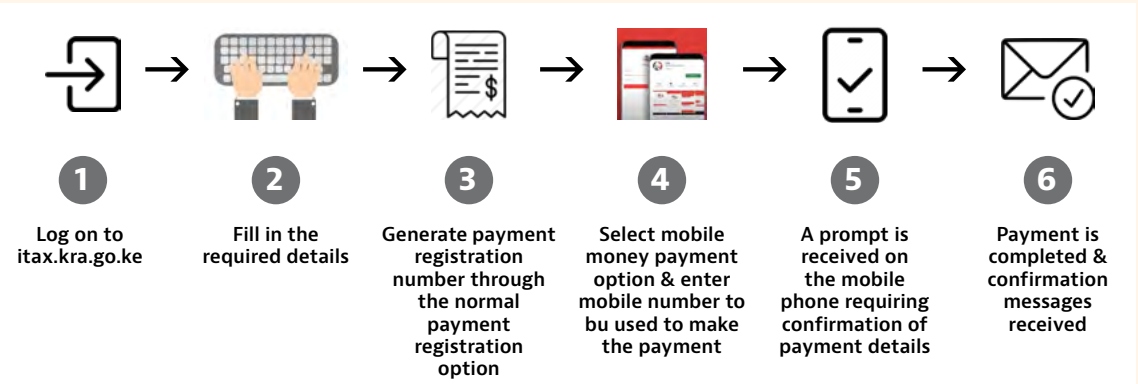
Learn more about Norway's concent-based loan application **Click here**

© OECD 2020

Box 4.3. Leading country example: Kenya – Digital tax payments

Kenya is a global leader in mobile money. The country continues to register phenomenal growth in the number and value of mobile money transactions. As of December 2019, the country had 58.4 million mobile money subscribers (regards a population of 47.5 million inhabitants), 12 years after the launch of M-Pesa in 2007. In 2013, the Kenya Revenue Authority (KRA) in a bid to improve service delivery to taxpayers expanded the scope of payment channels to include mobile money payments via M-Pesa. Lipa Ushuru na Mpesa (Pay taxes via Mpesa) allows taxpayers to pay taxes swiftly and conveniently using their mobile phones. The payment process is a seamless experience. After entering a uniquely generated payment registration number and a phone number into the KRA payment application, the taxpayer receives a message on their mobile phone asking for approval for tax payment to the KRA. After user approval a confirmation message is being send out from KRA and the taxpayer's ledger is updated in real-time.

Figure 4.6. Payment of taxes using M-Pesa



Source: Kenya Revenue Authority (2020)

Learn more about Kenya's Digital tax payments — Click here

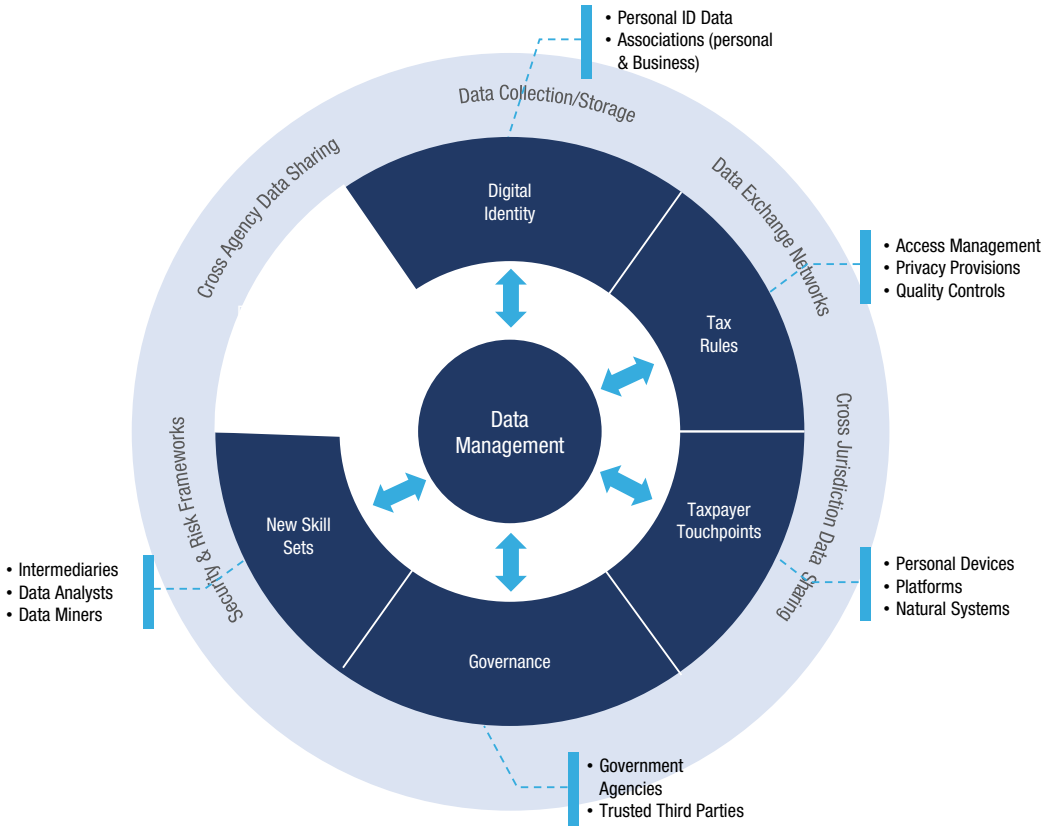
Building Block 3: Data management and data standards

Core added value

Current tax administration is, at its heart, a data processing operation heavily reliant on the availability and quality of data. With increasing digitalisation, more tax related data from taxpayers and third parties has been increasingly taken within the tax administration and processed (for example data from e-invoicing, online cash registers and financial account information). The difference in Tax Administration 3.0 is that the location of the data (which can be in business systems, the cloud, third parties etc.) becomes less important. What changes is that rather than managing the data, the tax administration is increasingly managing the availability, quality and accuracy of data to be drawn remotely from taxpayers' wider natural systems as and when needed.

© OECD 2020

Figure 4.7. Data management and data standards



Building block architecture

The data management and data standards building block needs to perform the following functions to enable Tax Administration 3.0:

- Ensuring that there is robust and continually updated data security in place, protecting against misuse of data within the administration and by external actors.
- Setting the high-level framework of data sources and the minimum requirements for the content, quality, transferability, availability and archiving of tax relevant data as well as metadata (which allows the administration to verify that processes are working as intended and to identify any anomalies).
- As far as possible, avoiding the specification of rigid and inflexible formats for the provision of data which would impose constraints on the systems used by businesses and other holders of data.
- Continuous mapping of the data sources that would enable particular tax administration functions to work as seamlessly as possible, and working with relevant partners on bringing them into the framework.
- Supporting data re-use to help other government bodies in delivering their functions, governed by an appropriate legal framework.

© OECD 2020

The journey to Tax Administration 3.0

Table 4.3. Data management and data standards: The journey to Tax Administration 3.0

Description	Emerging	Progressing	Established	Leading	Aspirational
Taxpayer data management	First implementations of digital databases. Partial tax type specific data models in place. Data managed within specific tax type systems. Manual synchronization between databases	Taxpayer data available in digital formats, in tax law specific systems. First integrated data (governance) models in place. Data sharing and re-use within tax administration. Third party data exchange implemented together with banks and domestic governmental bodies. Data security measurements implemented.	Taxpayer data available in digital customer databases Data sharing and governance arrangements in place with relevant public and private stakeholders. Data privacy legal frameworks implemented. International public and private data exchange networks implemented.	Data quality and integrity defined and assured together with public stakeholders. Usage of global message and data standards and exchange infrastructure. Migration from scheduled bulk data exchange to granular, data sharing at time of transaction. Transparency mechanisms developed.	Data ownership and privacy assurance frameworks implemented and governed. High quality data available in real-time for tax administration processes; distributed (rules to the data) or centralized (data to the rules). Transparency and permission mechanisms nourish societal trust.

In the emerging and progressing phases, taxpayer data was often adapted for and contained within different tax administration functions and not easily available across the administration. At the established maturity level, different aspects of taxpayers' data are increasingly combined in central databases. This allows for a more taxpayer-centric implementation of service and enforcement instruments and strategies.

The main characteristics of an established implementation are:

- Most taxpayer data which has come into the administration is available within databases that are accessible across the tax administration, supporting the fully digitalised data exchange with the tax administration and the use of data analytics (which is still primarily within tax types).
- Data collected from third parties is gradually increasing in a move to greater pre-filling of tax returns, although issues of data quality remain. In some administrations, more systematic data collection is being undertaken, particular e-invoicing and online cash registers, as part of compliance strategies.
- Formal models and arrangements implementing data privacy and security legal frameworks govern the public-private electronic exchange of taxpayer data.
- Some data is exchanged automatically on an international basis and is primarily used for risk assessment and compliance purposes rather than fully integrated into assessment processes.

At the leading and aspirational maturity levels, administrations will increasingly take more of a stewardship role in regards to data, maximising compliance and the efficiency of tax administration while minimising costs on taxpayers. This will call for a balance to be struck between large amounts of data coming into the administration to be assessed and the use of trusted outputs from taxpayer's systems. (This is broadly the difference between e-invoicing systems where all of the information comes into the administration and

© OECD 2020

PAYE data where, broadly speaking, the results of payroll software report the amount of withheld tax for each employee.) Both have their place.

To begin this journey, tax administrations may wish to consider:

- Developing high-level standards for data collection, transfer and assurance, ideally in an international context to minimise the costs for businesses operating in more than one location. As far as possible, these should be flexible enough to allow taxpayers to use their own preferred systems or technologies (such as blockchain), including for reporting.
- Building business cases for areas where the administration would process bulk data or would rely on outputs processed within taxpayers' systems (subject to the ability to verify those processes, increasingly automatically), as well as cases where these different models would coexist. These will need to take account of data privacy and protection issues.
- Developing the requirements for adequate legal gateways for both models, including reviewing the restrictions on the purposes for which data is collected. For example, for tax administrations as well as in joined-up government, it will be important that data collected for, say, social security purposes can also be used for at least some tax purposes and vice versa. This will also require further international discussions.

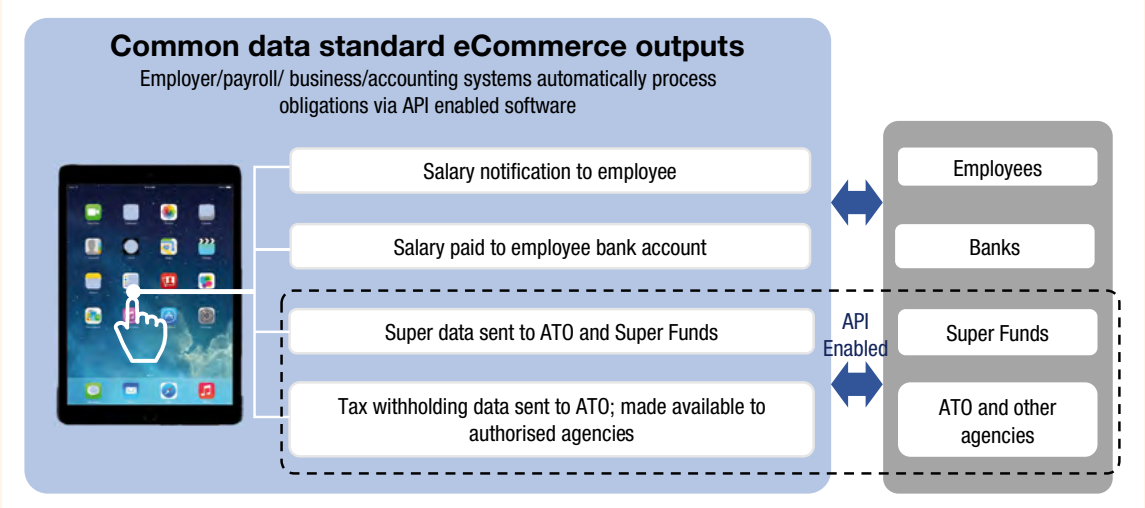
Box 4.4. Leading country example: Australia – Single Touch Payroll (STP)

Australia launched Single Touch Payroll, an API enabled digital channel in July 2018 to improve the way payroll data is reported to the Australian Taxation Office (ATO).

STP introduced the *real time reporting* of payroll information by employers to the ATO. It leverages existing payroll cycles and business software systems to enable the reporting of salary, taxation and superannuation data to the ATO, each time employees are paid. The ATO collaborated with partners in the natural systems of taxpayers and businesses on the concept, design and delivery of STP.

As STP continues to be enhanced, opportunities are being realised across government to utilise the information already provided by employers through their STP reporting to reduce regulatory burden, deliver better government services and improve the administration of the social welfare system.

Figure 4.8. Single touch payroll



Source: Australian Taxation Office (2020)

Learn more about Australia's Single Touch Payroll Click here

© OECD 2020

Building Block 4: Tax rule management and application

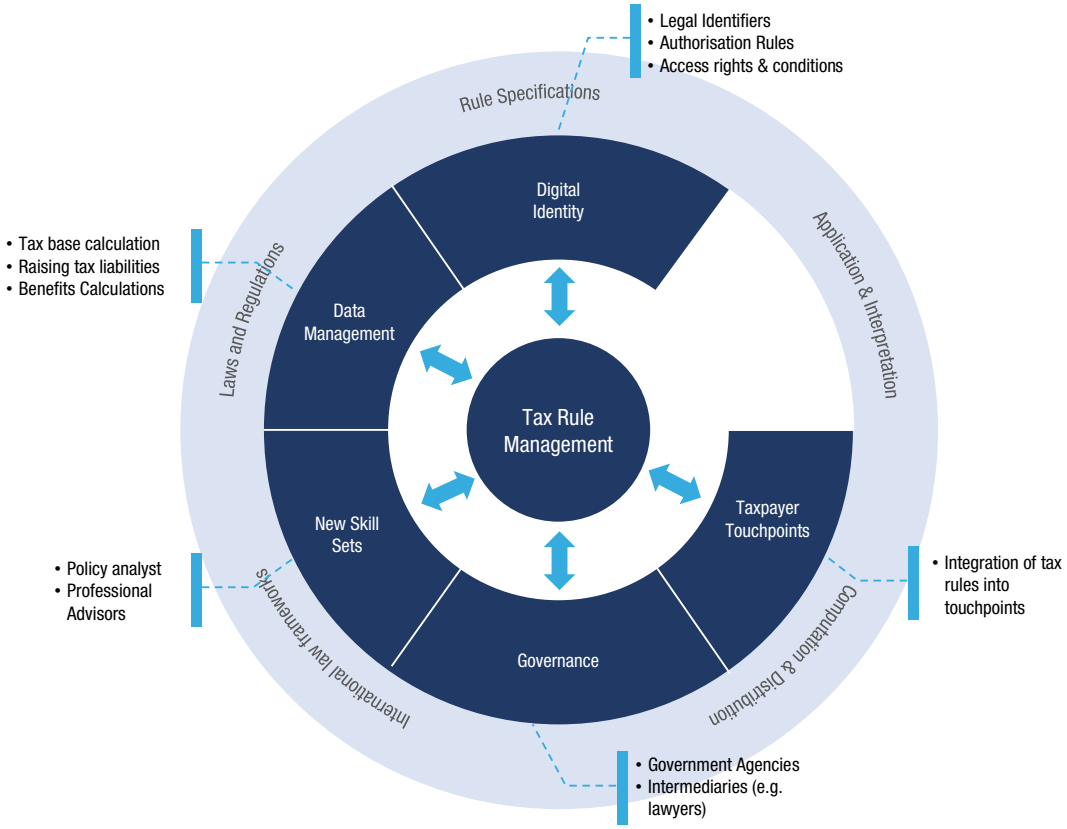
Core added value

Currently tax rule management and application is primarily undertaken within tax administration-driven or supported processes. This usually involves a number of steps including:

- guidance on tax law compliance and deadlines (through a variety of channels, including websites, direct communications, tax agents etc.);
- the use of forms and e-forms which require the input by the taxpayer of specific tax relevant information (which may be for registration purposes, tax return filing etc.);
- the finalisation of the relevant process within the administration (for example, the registration of the taxpayer, computation of the final tax liability, acceptance of payments etc.).

In Tax Administration 3.0 what changes is that the tax administration provides the technical rules and information needed for elements of tax processing to take place within taxpayers' natural systems. This could be, for example automatic registration and deregistration of the taxpayer at specified points, the incorporation of tax law rules and computations into accounting software or the use of applications to withhold tax or to automatically send information to the administration.

Figure 4.9. Tax rule management and application



© OECD 2020

Building block architecture

The tax rule management and application building block needs to perform the following core functions to enable Tax Administration 3.0:

- Providing clear specifications of the tax rules, including changes over time, which can be incorporated into software systems and applications used by taxpayers.
- Developing an assurance framework for the approval of software incorporating tax rules in order for the outputs for those rules to be accepted by the administration, together with any appropriate metadata allowing for ongoing reassurance.
- Developing libraries of application programming interfaces (APIs) which can be used to receive information from the tax administration (for example about identity, allowances, changes in rates and thresholds, changes in status etc.) and transfer information from the taxpayer's natural systems into the appropriate tax administration systems.
- The development of mechanisms to address uncertainty within the application of tax rules, including through the use of artificial intelligence services (AI).

The journey to Tax Administration 3.0

Table 4.4. Tax rule management and application: The journey to Tax Administration 3.0

Description	Emerging	Progressing	Established	Leading	Aspirational
Tax rule management and application	Fiscal legislation on paper translated into system designs. Tax rules implemented in tax type specific back office systems. Taxpayers register at the tax administration office and are invited to file their tax returns.	Separate rule modeling and management systems in place, basis for design of internal test cases. Tax rules implemented in front office services to support error prevention. Taxpayers and their liabilities are identified via several channels amongst others employers, financial institutions, governmental organizations and other tax administrations.	Tax administration wide business rule management system implemented. Rules published and shared with private partners for joint testing and integrating in taxpayer natural systems. Full compliance to international guidelines; exchange of information support identification and tax levying.	Rule specification integrated within the law drafting process. Fully automated production of software packages and test scenario's. Artificial intelligence implemented in public and private taxpayer advisory and engagement processes. Tax policy and Administration cooperate in designing and evaluating digital friendly legislation. Platforms in addition to traditional businesses are agents of tax collection and support taxpayers in fulfilling their obligations.	Autonomous tax algorithms available and implemented, informing persons upfront regards tax consequences and liabilities. Open AI services providing tax certainty and arbitrage solutions. Smart contracts settle tax liabilities in real-time Transparency of international financial transactions supports the identification of beneficial owners and evasive tax planning

© OECD 2020

At the established maturity level management, staff in close co-operation with the IT department govern the maintenance and operations of rules which are integrated into taxpayers' systems (for example PAYE processes, e-invoicing systems, online cash registers and online platforms) or validity of tax rules can be ensured via API-interfaces offered by tax administrations. Frequent rule changes have often caused these legacy systems to become inflexible and hard to adapt. Many tax administrations are looking for ways to migrate towards more agile and sustainable systems architectures.

The established maturity level of tax rule management and application is characterised by:

- The publication and distribution of rules for a number of taxes or reporting systems which are processed in the internal systems of some taxpayers, for example pay roll taxes and VAT. These may be difficult and expensive to change.
- Verification of such systems is varied, with some certified by tax administrations and others assured through audits. Assurance over the application of such systems is generally done through risk based audits (for example as to whether the inputs into payroll tax systems are accurate).

At the leading and aspirational levels, tax administrations are devoting more resources to enable the integration of tax rules into taxpayers' natural systems, working closely with businesses and developers to maximise flexibility and agility in order to avoid being tied into what may become outdated solutions (for example, highly specific reporting formats). On the taxpayer side, machine learning is likely to be used to apply tax rules where there is a degree of uncertainty, providing explanations which can be assessed through similar systems on the administration side. Uncertainty may be minimised over time as such systems take on the results of dispute resolution cases and identify where legal clarifications may be needed.

To begin this journey, tax administrations may wish to consider:

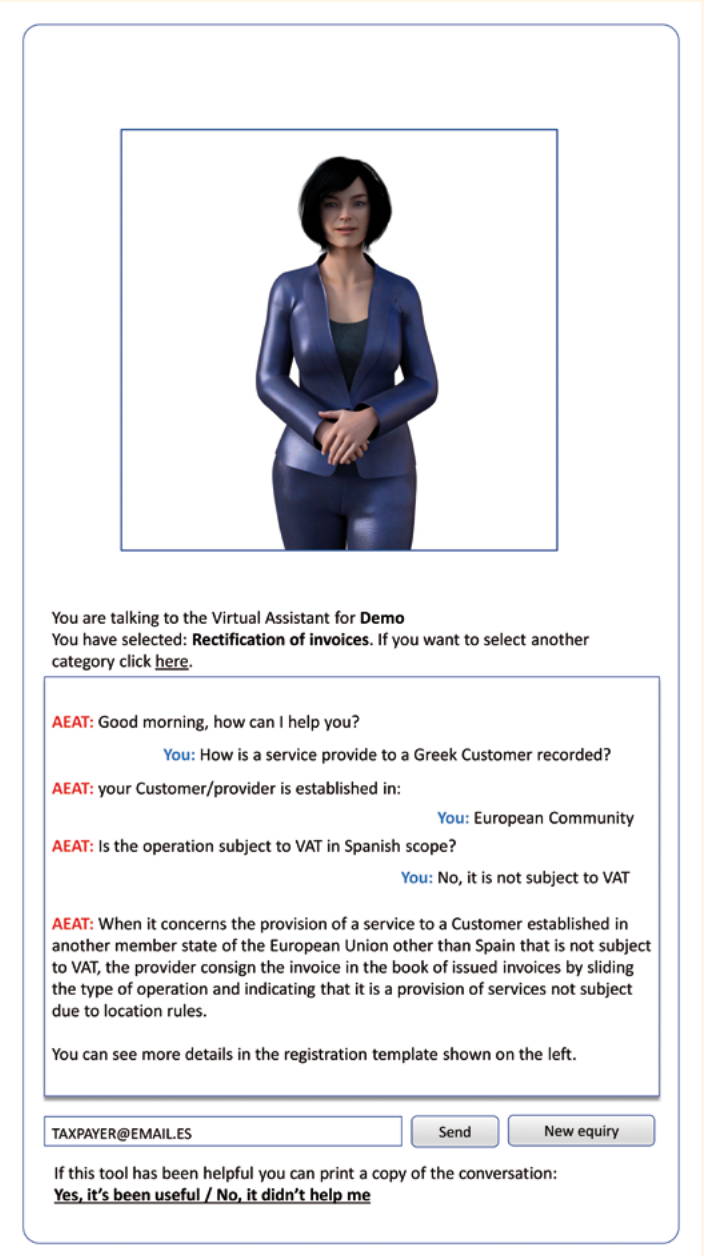
- Implementing systems-independent tax rule specification for integration into taxpayers' own business management systems (for example, in regards to digital identification, e-invoicing and reporting or withholding by digital platforms).
- Piloting the development of tax rule specification, in co-operation with developers, alongside the development of new tax legislation.
- Piloting the implementation of artificial intelligence in tax administration advisory and assessment processes aimed at minimising tax uncertainty.

© OECD 2020

Box 4.5. Leading country example: Spain – Virtual Assistant tool for VAT

Spain has developed a Virtual Assistant tool for VAT based on artificial intelligence with the purpose of advancing towards a quality information provision with unique criteria and facilitating the understanding of complex regulations. The system provides information about registration and rectification of invoices, obligations related to foreign trade, chargeability, taxable amount, tax rate, exemptions and deductions on real state transactions, by using a chatbot where both taxpayers and tax officers can ask in a natural language. The Virtual Assistant helps them to complete their questions with the necessary information to obtain the sought answer. They just need to follow the conversation with him / her to get a homogeneous response, which is offered including links to other pages with related information, regulations and information banners. In addition, a copy of the conversation can be saved. This tool provides advantages such as 24/7 instant information and immediate response, less administrative burdens, interactive information and greater legal security.

Figure 4.10. Picture of the virtual assistant



Source: Spanish Tax Agency (2020)

Learn more about Spain's virtual Assistant tool for VAT — **Click here**

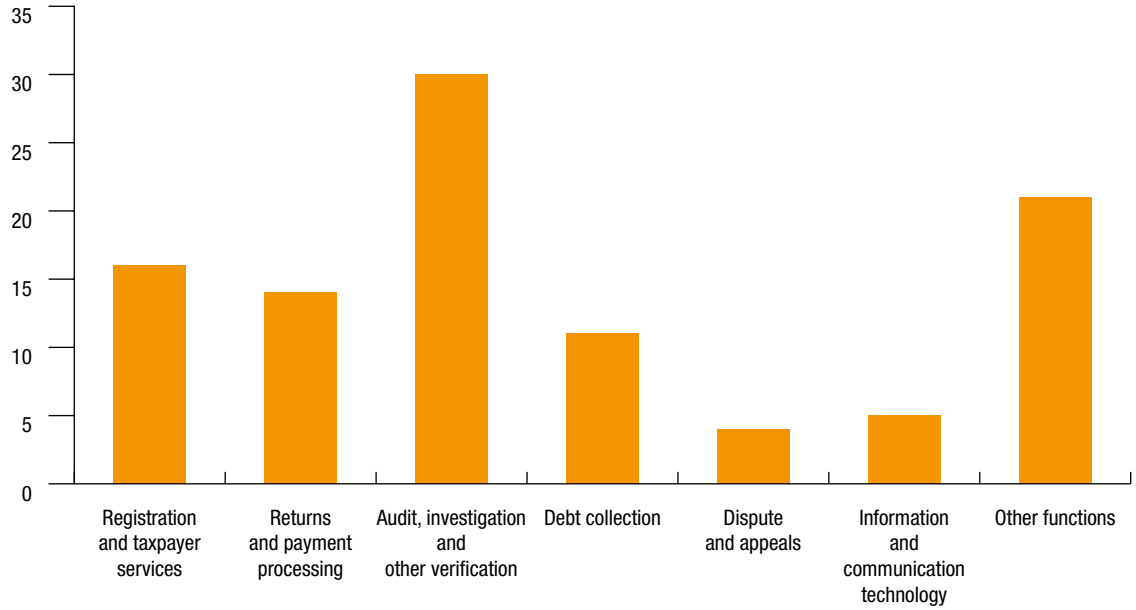
© OECD 2020

Building Block 5: New skill sets

Core added value

The skill sets within the current system of e-administration have been adapting over recent years to support more customer-centric e-services and the greater use of analytic capability across the organisation, including in applications such as risk assessment and remote verifications. However, to support the functional processes of current tax administration, a large percentage of tax administration staff are reported as engaged in auditing, in debt management functions, customer support and registration, and in tax return and payment processing.

Figure 4.11. Staff usage by function, 2017



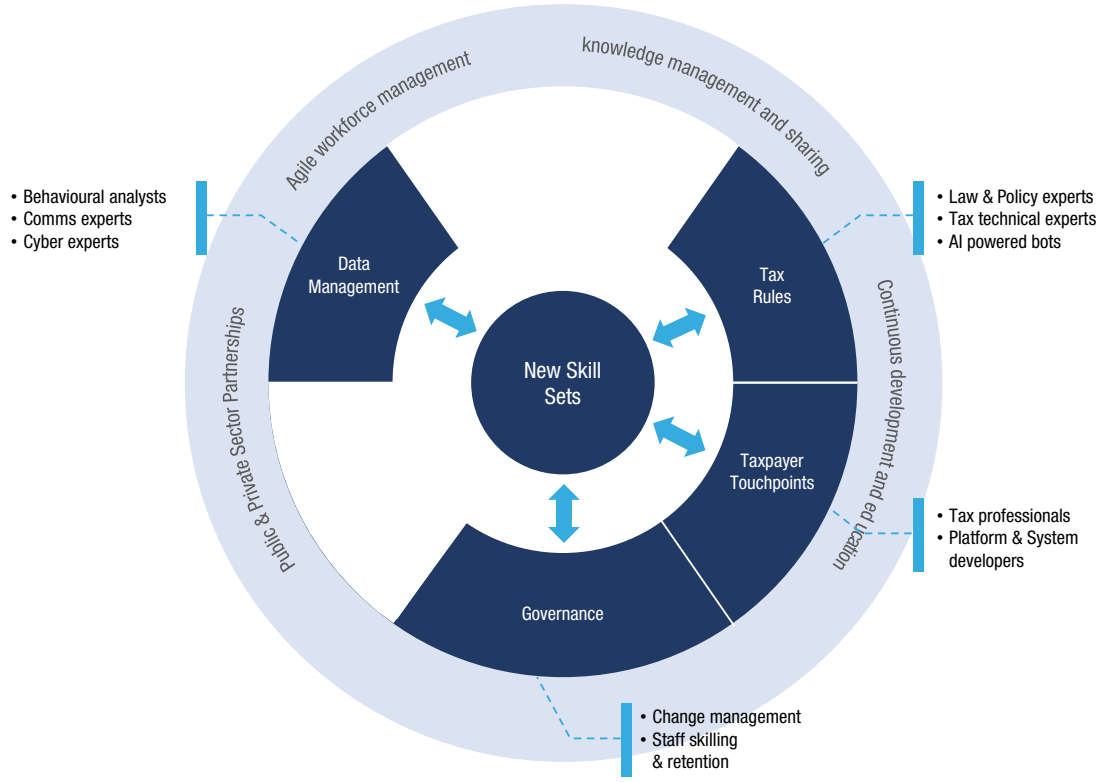
Source: OECD (2019), Tax Administration 2019: Comparative Information on OECD and other Advanced and Emerging Economies, https://doi.org/10.1787/74d162b6-en

Anecdotally, many IT staff also seem to be primarily concerned with the maintenance of legacy systems and the development of new functionality around those systems.

In Tax Administration 3.0, these processes will ordinarily be run automatically (and AI-enabled) within the tax administration, including through inputs from other organisations, or within taxpayers' natural systems. The skills required will be more focussed on supporting the operation and evolution of the tax administration system as a whole. This will require an expansion in the number of IT professionals, programmers, data scientists, behavioural scientists and strategists. Tax professional roles will remain highly important, inputting to the development of domestic and international rules, the identification of possible compliance issues and dealing with more complex cases, including internationally where differences in tax rules or their application may cause issues.

© OECD 2020

Figure 4.12. New skill sets



Building block architecture

The building block on new skill sets needs to perform the following core functions to enable Tax Administration 3.0:

- Management and professional technical skills appropriate for operating within a highly integrated ecosystem bringing together over time an increasing number of public and private sector partners. This will involve co-managing and co-creating external networks with different objectives, responsibilities and risks.
- Being highly agile to respond to changes in tax rules, business models and taxpayers' behaviours, including changes in their natural systems, and crises.
- Understanding of new phenomena and the consequences of the measures required, skills appropriate for system modelling and understanding of new business models.
- A shift in the mix of skills. Among other skills needed within the administration, this is likely to mean bringing together people with:
  - an understanding of complex tax rules and compliance risks;
  - the ability to translate tax rules into instructions which can be incorporated into the different natural systems used by taxpayers and the tax administration's own systems;
  - technical audit expertise to assure and verify systems;
  - relationship managers to support the implementation and ongoing operation of tax processes;
  - designers, including behavioural scientists and communication experts, to help develop appropriate taxpayer touchpoints; and
  - cybersecurity and data protection professionals.

© OECD 2020

The journey to Tax Administration 3.0

Table 4.5. New skill sets: The journey to Tax Administration 3.0

Description	Emerging	Progressing	Established	Leading	Aspirational
New skill sets	Awareness of critical capabilities. Specific training programs in place to support key functions and processes.	Knowledge management implemented. Awareness of role of taxpayer attitudes and behavior. Development of data analysis capabilities. Emerging awareness of disruptive digital impacts on staffing.	Co-operation between tax inspectors and separate data analytics department Taxpayer behavior is studied and influences decision-making. First proof of concepts of AI applications. Awareness of disruptive digital impacts on staffing capability and availability. Staff is aware of changing organization and environment	AI-powered 'bots' are beginning to assist in characterization and interpretation of transactions. Hiring staff based on new future proof skill sets. Digital disruption is seen as a potential for the future, Staff is aware and committed to change.	Tax professionals, collaboratively and with assistance of AI, assure overall systems performance and govern the development and deployment of algorithms. Taxpayer behavior can be predicted using AI and other digital tools Staff is able to able to refine and enrich information assisted by AI New digital portfolios operating in the natural system, such as data content management and compliance by designs Staff is aware and committed to continuous change.

At the established maturity level tax administrations are likely to be mainly recruiting new staff to perform the current functions of tax administration to ensure that the administration continues to operate effectively and efficiently in collecting taxes to fund public services. Increasingly specialist staff are being recruited to support data analytics and the development of e-services and there is increasing awareness of the need to recruit people with new skill sets, if not necessarily the budget.

The established maturity level of the new skills building block has the following main characteristics:

- The mix of skills within administrations is focused on the performance of current functions, with a focus on compliance management, customer services and internal process. This is supported by increased use of digital tools and training programmes.
- The use of data analytics skills has become an important part of the overall compliance risk management system both as regards individual applications (for example, in audit selection) and the identification of potential areas of concern (for example, compliance patterns). It is often organised within a separate function. More administrations are also starting to use behavioural scientists to help address particular issues.

© OECD 2020

- The recruitment and training of staff for the development of new e-services for taxpayers and with the administration. This includes the development of mobile and web applications, robotic processes and, in some cases, the development of AI supported communications. In many administrations most IT staff will be mainly focussed on the maintenance of existing legacy systems and bridging between them.

During the transition to Tax Administration 3.0 the new skills building block, together with the governance building block, will be critically important for ensuring progress in the more technical parts of the new infrastructure. This is likely to require additional staff for a period since they will be doing different things than the staff focused on managing the current tax system. The expertise of existing staff will still be crucial in supporting the redesign of tax administration over time given their in-depth knowledge and experience on taxpayer behaviours, compliance risks and the incidence of administrative burdens.

To begin this journey, tax administrations may wish to consider:

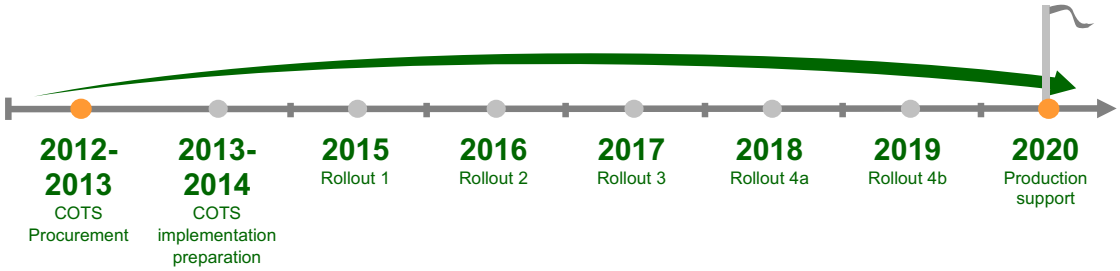
- Defining the future skill sets which may be required during the transition period, likely to be over the course of a decade or more. This will likely include a combination of in-house and outsourced human resources given the potential scarcity of specialists in some areas.
- Developing an understanding of where administrations may be able to cooperate in the development and maintenance of the new infrastructure (for example in collaboration with the private sector and other government organisations)
- Building a framework setting out the expected involvement of tax administration staff in decision-making in automated systems (for example, in taking final decisions, in assisting taxpayers and in dealing with appeals and complaints).
- Creating and enabling a culture of change, including retraining and reskilling, focussed on realising the benefits of Tax Administration 3.0.

Box 4.6. Leading country example: Finland – Skill set development

Finland replaced more than 70 old legacy systems with new COTS software. The whole implementation was done in planned time and below the budget. The annual savings in IT costs range from 15 to 20 million Euros. Operations and practices were developed to operate more effectively. The development of high-quality services to our customers was one of the main focuses. Increases in the level of automation allowed the movement of personnel to more meaningful tasks without risking operational reliability. Personnel's well-being and competence were supported during the change and it increased personnel's capability to adapt to continuous change. One of the major advances in implementing COTS software is to be able to form comprehensive understanding of taxpayers and it has helped in developing ability to process and analyse data.

© OECD 2020

Figure 4.13. Finland – Skill set development along COTS



What we did and why

Development of practices
Operations and practices were developed to operate more effectively. Personnel's well-being and competence were supported during the change.

Introducing a new taxation software
Taxation processes and software were made to work seamlessly. The execution of the cutovers from old systems to the new one was planned and done.

Key success factors

Leadership's commitment, sponsorship and support were of crucial importance throughout implementation process.

Open and transparent change management communication; Engaging the supervisors, making sure people know what´s in it for them and keeping the "why" in the communication.

Trainers were key change agents after implementation. The actual learning happened at work, and the desk-side support was of crucial importance.

In COTS Program

from ~ 5000 total personnel

4080 End users trained

1999 Training events organized

261k Test scenarios tested

964 FTA personnel with a role in the Program

~70 Legacy systems decommissioned

€15-20M Annual savings in IT costs



The way forward with developed skill sets

The new, integrated taxation system enables major changes to the organization structure and the way we work. The **personnel's capabilities** for adapting continuous changes in agile way have significantly increased.

Competence development and recruitment are based on a **strategic personnel plan**. We want our staff members' tasks and competence to reflect comprehensive taxpayer understanding and constantly changing environment.

Breaking down old organizational barriers enables us to enhance our operations and increase co-operation both internally and externally. This enables us organize and focus our operations around our customers' needs. Operation model supporting **self-management and skillset development** enables an agile organization where the teams constantly find ways to improve their performance and operations.

In order to support **leading by data**, different levels of organization are being provided real-time view of performance metrics vis-a-vis target-setting, based on strategic objectives, makes data-driven management a reality

The implementation of COTS has enabled centralized data warehouse and analytics over all operation. **Ability to process and analyze data** has increased exponentially with centralized data repositories and multilayered analytics services based on the data from the COTS system.

Ensuring that our personnel has current relevant skillsets combined with technical capabilities enables our organization to proceed with the objective of **being an integrated part of our customers' natural systems**. This enables us to proceed towards merging taxation into our daily lives.

Source: Tax Finland (2020)

Learn more about Finland's skill set development along COTS — Click here

© OECD 2020

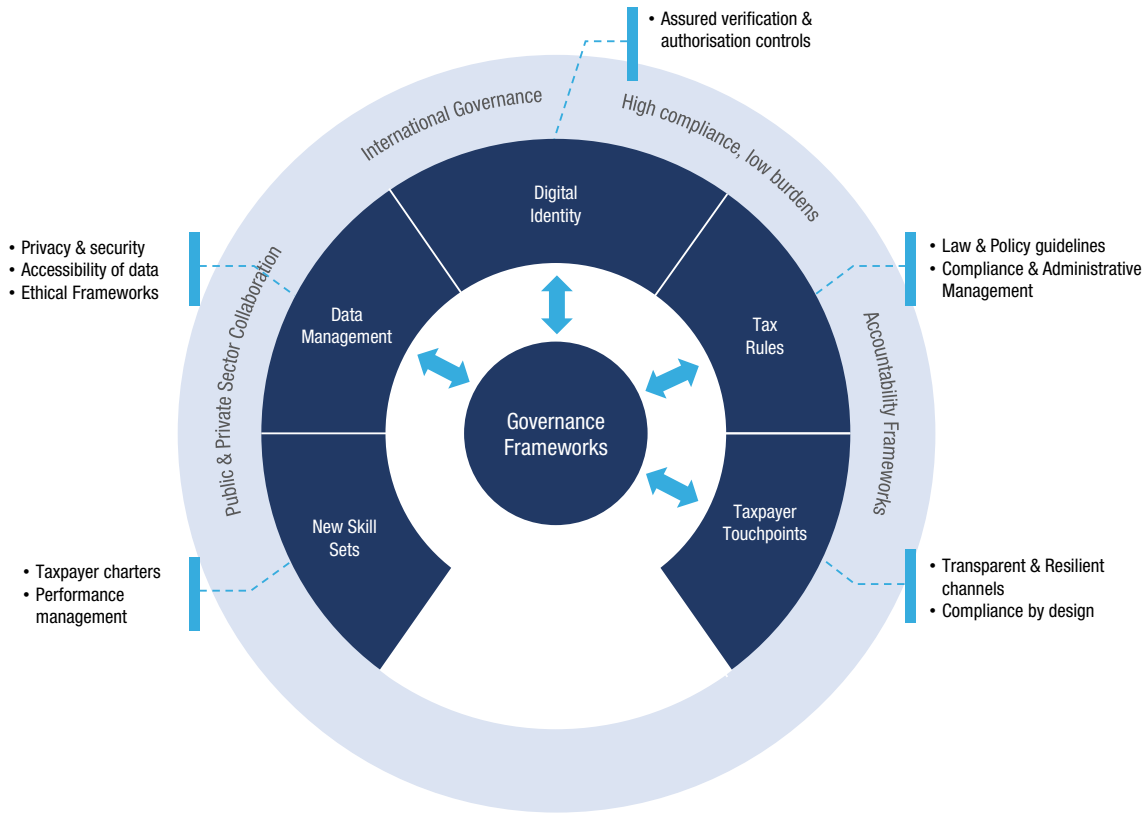
Building Block 6: Governance frameworks

Core added value

The way in which tax administration is governed depends on political, cultural, societal and technological factors. This does not just regard the organisation and control of the tax administration itself, but also includes co-operation with businesses, other governmental organisations and non-governmental organisations, including taxpayer representative groups. In many countries, businesses have become important partners, 'agents' of taxation, administrating VAT and salary taxes. Along with societal changes, new tax governance frameworks, including formal consultative processes, taxpayer rights mechanisms, offices for tax simplification and co-operative compliance programmes, have enhanced transparency and accountability.

The nature of the transformation to Tax Administration 3.0, requires the joining-up of systems and processes across the public and private sector, as well as internationally. This calls for a structured form of governance if it is to succeed, bringing organisations together to partner in the management of change.

Figure 4.14. Governance frameworks



Building block architecture

The building block on governance frameworks needs to perform the following core functions to enable Tax Administration 3.0:

- Providing governance structures that bring together public and private sector representatives, including internationally, to ensure that the objectives of high compliance and minimal burdens are

© OECD 2020

achieved in a way which balances other concerns, including data protection, security, accessibility and fairness. This would include clarity about the role of tax administrations in whole of government approaches.

- Agreeing on the key priorities for collective work and delivering the high quality resources needed to support that work.
- Providing reassurance on the effectiveness and efficiency of the overall tax administration system as well as its resilience and agility for handling change and for responding to undesirable outcomes and behaviours.
- Providing mutual reassurance as to the security and protection of data by all actors in the system.

The journey to Tax Administration 3.0

Table 4.6. Governance frameworks: The journey to Tax Administration 3.0

Description	Emerging	Progressing	Established	Leading	Aspirational
Governance Frameworks	Tax inspectors assess taxpayer returns in a randomized manner focusing on specific tax types. Onsite audits are part of tax type specific inspection strategies. Software and hardware providers are the major digital partners.	Compliance risk management programs are in place. Automated assessment of tax returns flag risks and anomalies. Audits are an important part of the overall quality assurance process, focusing on all taxpayer aspects. Governmental bodies and (financial) third parties are major external partners.	Compliance and administrative burden reduction strategies aligned with eternal stakeholders. Taxpayer behaviour is understood and is supported by specific instruments and interventions. First implementations of compliance by design solutions. International public and private data exchange networks implemented.	Upstream compliance support is implemented. Tax administrations support the implementation of compliance by design within taxpayer natural systems. Continuous monitoring implemented within business systems assures quality, enhances tax certainty and diminishes the need for audits. Agile tax administration processes joined up with (platforms supporting) citizens and business transactions.	Different engagement models in place based on ecosystem trust levels Tax administration is a transparent part of resilient tax system of systems. Quality is assured at the transactional level Assessment and collection of tax increasingly done in a seamless and frictionless manner. Frictionless international co-operation between tax administrations.

At an established level, tax administration is embedded within a societal network of checks and balances, and communication and data exchange relationships with stakeholders. Compliance strategies and the administrability of tax laws are discussed with political and policy stakeholders. Digital exchange of information is the backbone of public-private compliance arrangements.

The established maturity level of the implemented governance framework is characterised by:

- A clear distinction between the setting of tax policy and the role of the administration in administering tax policy in a fair and independent way.

© OECD 2020

- Legal frameworks governing data privacy, accountability, taxpayer rights and formal dispute resolution and appeals.
- Internal and external accountability frameworks, including complaints mechanisms, consultative arrangements, standing stakeholder groups, taxpayer charters and performance management measurement and reporting.
- Cooperative arrangements with other tax administrations governed by tax treaties for the exchange of information, prevention of double taxation and dispute resolution.

The digital transformation of tax administration will offer new possibilities for allocating activities, responsibilities and accountability among public and private sectors stakeholders, allowing more seamless tax administration by embedding many tax administration processes within taxpayers' natural systems. In the end, tax administration is a transparent part of a wider system which includes taxpayers' natural systems, where its networked nature is resilient to external shock waves and crises and flexible enough to swiftly respond to societal needs. This will require new governance arrangements to ensure the smooth development, implementation and oversight of the building blocks of Tax Administration 3.0.

To begin this journey, tax administrations may wish to consider:

- Taking a leading role in explaining the need for Tax Administration 3.0 and bringing together stakeholders to flesh out the vision for their jurisdiction.
- Developing strategic toolkits to support the prioritisation of activities, enhanced co-operation between stakeholders and to help reach agreement on forms of co-operation and next steps.
- Articulating strategies and accountability frameworks regarding public/private co-operation on the digital transformation of tax administration, including sustainable engagement models and consultation arrangements with societal stakeholders.
- Piloting projects on digital identity and e-invoicing to help develop effective models of co-operation in practice, including internationally.

© OECD 2020

Box 4.7. Leading country example: Russia – Tax monitoring

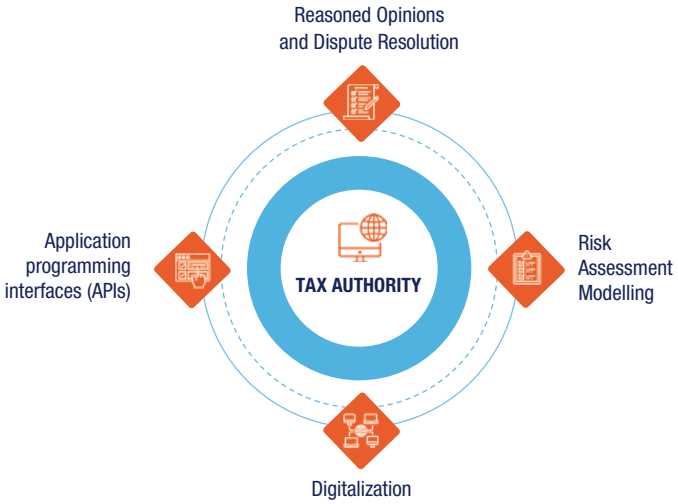
Since 2016, the Russian tax authorities have enacted a new tax compliance regime - the so-called Tax monitoring (also referred to as Cooperative compliance). Rather than bringing a new regime across the entire tax system, the Tax monitoring is an optional new system that taxpayers can participate, which runs in parallel to the existing tax system.

The most digitally advanced largest taxpayers with the highest level of process automation volunteered to participate in the pilot testing, since they could get more time to adapt their systems to the new regime ahead of it becoming mandatory.

The core principle of Tax monitoring is based on developing robust and secure authentication and authorization to grant the tax authority with remote access to the taxpayer's accounting and tax reporting system(s) through application programming interfaces (APIs). Direct access to the taxpayer ecosystems based on a risk-based approach (RBA) embedded at a transaction-level provides for ongoing due diligence and monitoring to determine whether transactions may contain emerging risks or early warning signs.

In the framework of Tax monitoring, the state control is naturally embedded within the taxpayer ecosystem. Being in touch and in sync with the taxpayer ecosystems facilitates tax compliance by design, thus creating a seamless, omnichannel customer experience carried out due on time in an effective and efficient manner.

Figure 4.15. Governance frameworks – Cooperative compliance



TAX GOVERNANCE

- Voluntary cooperative tax compliance approach
- Continuous monitoring enhances tax certainty and diminishes the need for desk and field audits
- Online access to all transactions and source documents
- Factor analysis of taxable base assists to reveal hidden tax evasion and enhance tax collection

TAX CONTROL

- Generating an encryption key to ensure quality and accuracy of data
- Standardized Tax Audit File ensured by machine-encoded nature
- Enhanced transparency and accountability

Source: Federal Tax Service of Russia (2020)

Learn more about Russia's Cooperative compliance — **Click here**

© OECD 2020

ANNEXES

ANNEX A. DIGITAL TRANSFORMATION VECTORS OF CHANGE

Going Digital

To better understand the cross-cutting effects of the transformation, the OECD has identified seven key 'vectors of digital transformation' that describe key properties of digital transformation (OECD, 2019[4]). These vectors of digital transformation offer an overarching perspective by describing the underlying nature of the changes induced by digital transformation and their implications.

The nature of the change will challenge the implementation of tax administration. The digital transformation changes where and how tax liabilities will occur and how taxpayers behave, and produce and store (transactional) data. The change will add international dimensions to taxpayer liabilities and jurisdictional arbitrage. In addition, from a tax administration perspective the nature of the change is all about data availability and data quality, challenging current institutional processes regards data collection and processing.

Vectors of Digital transformation

Scale without mass

Core digital products and services, notably software and data, have marginal costs close to zero. Combined with the global reach of the Internet, these products and the firms and platforms that use them can scale very quickly, often with few employees, tangible assets and/or no geographic footprint.

- This will challenge tax administration regards e.g. timely and correct assignment of tax liabilities and the provision of tax certainty, especially in a global context. The question is whether sufficient data-trails will exist in order to detect and compute tax liabilities. In addition, for both taxpayers and tax authorities within such a volatile global context it will not be easy to establish which regulations apply where, and in which context.

Panoramic scope

Digitalisation facilitates the creation of complex products that combine many functions and features (e.g. the smartphone) and facilitate extensive versioning, recombination and tailoring of services. Interoperability standards enable the realisation of economies of scope across products, firms, and industries.

- This will challenge tax administration regards e.g. the characterisation of transactions and the interpretation of rules and regulations. Uncertainties regarding tax rates to be applied may lead to unintended mistakes and disputes.

© OECD 2020

Dynamics of time

Digitally accelerated activities may outpace deliberative institutional processes, set procedures and behaviours, and limit human attention. Technology also allows the present to be easily recorded and the past to be probed, indexed, repurposed, resold and remembered.

- This will challenge tax administration regards e.g. the speed and agility of core computational and payment processes. Time lags may become loop holes that can and will be used to 'game the system' resembling current VAT carousel fraud; thus enlarging tax gaps.

Intangible capital and the new sources of value creation

Investment in intangible forms of capital like software and data is growing. Sensors that generate data allow machinery and equipment (e.g. jet engines, tractors) to be packaged with new services. Platforms enable firms and individuals to monetise or share their physical capital easily, changing the nature of ownership (e.g. from a good to a service).

- This will challenge tax administration regards e.g. the identification of taxpayers and tax liabilities. An expanding sharing and gig economy will accelerate the amount of (non-)intended non-compliance issues. In addition, massive streams of sensor data might impact the effective use of big data volumes fuelling administrative and enforcement processes.

Transformation of space

Thanks to their intangible and machine-encoded nature, software, data, and computing resources can be stored or exploited anywhere, decoupling value from borders, and challenging traditional principles of territoriality, geographically based communities and sovereignty. This separation creates opportunities for jurisdictional arbitrage.

- This will challenge tax administration regards e.g. the availability of data assuring the timely and complete allocation of tax liabilities, the quality of audits, and the effective prevention and settlement of tax disputes.

Empowerment of the edges

The "end-to-end" principle of the Internet has moved the intelligence of the network from the centre to the periphery. Armed with computers and smartphones, users can innovate, design and construct their own networks and communities through mailing lists, hyperlinks and social networks.

- This will challenge tax administration as regards the engagement with taxpayers in their natural, decentralised, ecosystems. These 'always-on' taxpayers will probably want, and need, answers and useful inputs instantaneously. Being part of these natural systems creates possibilities to get tax 'right from the start'. This puts more pressure on the ability to connect to and be part of a system of systems.

© OECD 2020

Platforms and ecosystems

Lower transaction costs of digital interactions reflect the development not only of direct relationships but also digitally empowered multi-sided platforms, which in turn contribute to further reducing transaction costs in many markets. Several of the largest platforms essentially serve as proprietary ecosystems with varying degrees of integration, interoperability, data sharing and openness.

- This will challenge tax administration regards e.g. the availability of data, partnership relations with third party data providers, registration and identification of taxpayer as well as identification and payment of tax liabilities. These platforms and ecosystems can become 'agents of tax administration' facilitating 'tax just happening'. On the other hand, some might turn into areas of tax evasion hard to detect and open up. In addition, smart cloud software solutions are reducing administration transaction costs and challenging current accountancy business models. This will among others affect third party data exchange relationships, and thereby impact data availability and data quality.

© OECD 2020

ANNEX B. TECHNOLOGY TRENDS IN THE DIGITAL ERA

The following are selected technology trends in the digital era taken from the 2019 OECD report *Measuring the Digital Transformation: A Roadmap for the Future* (OECD, 2019[5]):

- ***Faster and cheaper.*** Thanks to sustained technological progress, ICT products have become much cheaper and more powerful over time. Infrastructure capacity is increasing, as is content. Mobile connectivity has undergone major improvements and 5G is now in the early stages of roll out.

- ***Global data infrastructure.*** Capacity for data transmission is increasing everywhere, including developing economies. Cross-border data flows enable businesses to effectively co-ordinate their, supply, production, sales, after-sales, and research and development processes in global markets.

- ***Data at the centre.*** Data ownership is concentrating as the volume of data continues to rise, but its overall value remains unknown. The growing importance of data analytics – the analysis of Big data coming from ubiquitously networked end-user devices and the Internet of Things (IoT) – has added to the value and growth of data centres.

- ***Cloud and software.*** Cloud services mark a paradigm shift in ICT provision, allowing businesses and individuals to access on-demand IT services over a network, without the need to make large investment in physical ICT capital.

- ***Transforming production.*** Robots, including service robots, are transforming manufacturing. Advances in fields such as Big data, 3D printing, machine-to-machine communication, and robots are transforming production.

- ***Transforming the world of work.*** Digital technologies are perceived as having diverse impacts in the workplace; in particular, their adoption is resulting in more time being spent on learning new tools and acquiring new skills. The introduction of digital tools in the workplace entails learning and adaptation and also affects workers' tasks and work organisation.

© OECD 2020

- ***Mind the gap.*** While Internet uptake is reaching saturation for the younger generation, there remains room for older generations to catch up. Today's digital economy is characterised by connectivity between users and devices, as well as the convergence of formerly distinct parts of communication ecosystems such as fixed and wireless networks or voice and data.

- ***Always-on lifestyle.*** Many young adults spend at least a quarter of their day online, with instant messaging and social media enabling an "always-on lifestyle". Improvements in mobile technologies have made online access possible for people who were previously unable to afford fixed broadband connections or found it difficult to use computers. Mobile connectivity contributes to always-on behaviour.

© OECD 2020

REFERENCES

Benzarti, Y. (2020), "How Taxing Is Tax Filing? Using Revealed Preferences to Estimate Complinace Costs", *American Economic Journal: Economic Policy*, Vol. 12/4, pp. 38-57, http://dx.doi.org/10.1257/pol.20180664. [9]

Blaufus, K., F. Hechtner and J. Jarzembski (2019), "The Income Tax Compliance Costs of Private Households: Empirical Evidence from Germany", *Public Finance Review*, Vol. 47/5, pp. 925-966, http://dx.doi.org/10.1177/1091142119866147. [11]

Braunerhjelm, P., J. Eklund and P. Thulin (2019), "Taxes, the tax administrative burden and the entrepreneurial life cycle", *Small Bus Econ*, http://dx.doi.org/10.1007/s11187-019-00195-0. [13]

Eichfelder, S. and F. Vaillancourt (2014), *Tax Compliance Costs: A Review of Cost Burdens and Cost Structures*, http://dx.doi.org/10.2139/ssrn.2535664. [10]

European Commission (2020), *Communication from the Commission to the European Parliament and the Council: Action Plan for Fair and Simple Taxation Supporting the Recovery Strategy*, https://ec.europa.eu/taxation_customs/sites/taxation/files/2020_tax_package_tax_action_plan_en.pdf (accessed on 3 November 2020). [1]

OECD (2020), *Model Rules for Reporting by Platform Operators with respect to Sellers in the Sharing and Gig Economy*, OECD, Paris, http://www.oecd.org/tax/exchange-of-tax-information/model-rules-for-reporting-by-platform-operators-with-respect-to-sellers-in-the-sharing-and-gig-economy.htm (accessed on 6 October 2020). [7]

OECD (2019), *Going Digital: Shaping Policies, Improving Lives*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264312012-en. [4]

OECD (2019), *Implementing Online Cash Registers: Benefits, Considerations and Guidance*, OECD, Paris, http://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/implementing-online-cash-registers-benefits-considerations-and-guidance.htm. [8]

OECD (2019), *Measuring the Digital Transformation: A Roadmap for the Future*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264311992-en. [5]

OECD (2019), *Tax Administration 2019: Comparative Information on OECD and other Advanced and Emerging Economies*, OECD Publishing, Paris, https://dx.doi.org/10.1787/74d162b6-en. [2]

OECD (2019), *The Sharing and Gig Economy: Effective Taxation of Platform Sellers : Forum on Tax Administration*, OECD Publishing, Paris, https://dx.doi.org/10.1787/574b61f8-en. [12]

OECD (2019), *Unlocking the Digital Economy - A guide to implementing application programming interfaces in Government*, OECD, Paris, http://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/unlocking-the-digital-economy-guide-to-implementing-application-programming-interfaces-in-government.htm. [6]

OECD (2014), *Standard for Automatic Exchange of Financial Account Information in Tax Matters*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264216525-en. [3]

© OECD 2020

GLOSSARY OF TERMS

Algorithms. A set of rules to be followed in calculations or decision-making operations, especially by a computer. An example of how an algorithm might work would be the instructions set out in a recipe as to precise measurements, the sequencing and detailed descriptions of tasks, cooking heat and time etc.

Application programming interface (API). A digital interface that defines interactions between multiple software systems. For example, when using a price comparison App on a mobile phone, the API is what allows for interactions between the App and the databases containing the price lists of various companies which are used to assemble the price comparisons.

Artificial intelligence (AI). The ability of computer systems to perform tasks normally requiring human intelligence, such as learning and problem solving.

Beneficial owner. Natural person who ultimately owns or controls a legal entity or arrangement, such as a company, a trust, or a foundation.

Burning platform. An image used to indicate that change is urgently needed as the current position is inherently unstable and, without change, will become increasingly difficult to manage. Within a business context the term is often used as a driver of strategic change.

Cloud computing. Using computers on the Internet to store, manage, and process data.

Compliance. The fact of conforming to legal obligations.

Compliance-by-design. Supporting people in following the rules by embedding regulatory requirements into manual and digital tasks and processes. By doing so, it is easy to be compliant and hard to be non-compliant.

Cybersecurity. The application of technologies and processes to protect computer networks and data from unauthorized access and use.

Digital identity (Digital ID or DI). A set of attributes related to an entity (individual, organization or electronic device) that exists online, for example unlocking digital services with unique SMS authentication and electronic passports containing embedded fingerprints.

Digitalisation. Converting data into digital, computer-readable, formats. This allows for the substitution of paper-based business processes by digital data processing applications, enhancing overall efficiency levels.

© OECD 2020

Digital transformation. Refers to the (disruptive) economic and societal effects of digitisation and digitalisation. It is changing the way people interact with each other and society more generally, raising a number of pressing issues in the areas of jobs and skills, privacy and security, education, health as well as in many other policy areas.

e-Administration. Electronic (tax) administration referring to the digital support of data collection and processing activities. In most cases concerning the digitalisation of former paper processes like electronic submission of tax declaration files, downloading and e-mailing forms or digital payments.

e-Invoicing. Electronic invoicing, the digital exchange of invoice data.

e-Services. Electronic service, digitally supporting the communication, interaction and transaction with tax administration via forms on websites, electronic filing of tax declarations and digital payments.

Information and Communication Technology (ICT). A broader term for Information Technology (IT), that refers to electronic equipment and applications like computers, software, cell-phones and the internet to collect, store, use, and send data enabling interaction and transactions.

Mobile channels. Digital applications on mobile devices like laptops, tablets and mobile phones via which tax administration e-services are provided.

Pay-as-you-earn (PAYE) systems. In general refers to a system of income tax withholding by employers.

Self-driving car. An autonomous computer-controlled car in which human drivers are never required to take control to safely operate the vehicle.

Sharing and gig economy. Activities related to the giving, sharing, or swapping of services supported by an online platform, for free or for a fee (also: platform economy), e.g. the provision of temporary accommodation or ride-sharing services.

System of systems. A network of dedicated systems that combine capabilities and resources to jointly offer a higher quality of service than simply the sum of the separate components. In the 'tax system of system', tax administrations together with e.g. financial institutions, other governmental organisations, employers and software providers offer joined-up seamless taxpayer experiences.

Tax identification number (TIN). A specific string of numbers uniquely identifying a taxpayer in addition to other identifying elements such as date of birth, place and date of incorporation, name, address etcetera.

Taxpayers' natural systems. Often termed ecosystems, are the set of interconnected elements through which they engage with customers, other businesses, third parties as well as their own accounting, software and technology solutions.

Taxpayer touchpoints. Services facilitating the engagement of taxpayers with tax administration processes, e.g. via websites, call centres or software interfaces embedded in natural systems.

© OECD 2020





FORUM ON TAX ADMINISTRATION

Tax Administration 3.0: The Digital Transformation of Tax Administration

This report sets out a vision for the digital transformation of tax administration, under which taxation becomes more of a seamless and frictionless process over time. The intention of this discussion paper, requested by Commissioners at the 2019 OECD Forum on Tax Administration Plenary in Santiago, is to stimulate debate and conversation, both on the vision and its component building blocks.

OECD
BETTER POLICIES FOR BETTER LIVES

For more information:

www.oecd.org/tax/forum-on-tax-administration/

fta@oecd.org

@OECDtax I #TaxAdministration