ANNEX 5 – CHAPTER 1

PART 1 – DIGITAL TAX ADMINISTRATION ROADMAP

In recent years, an increasingly connected digital society has been reshaping the economy by creating new products, services and business models. The whole global economy is rapidly becoming a digitalized new economy, so original commercial channels have been developing while unfamiliar ways to produce, consume, work and earn are being taken in place. Disruptive technologies are changing the way taxpayers and tax authorities interact and altering the way taxes are paid and information is stored and used. From this perspective, no tax administration is released and all need to address this challenge in a cooperative manner. Also developing countries are prompted to deal with this, despite difficulties such as lack of resources could obstruct or slow down the process.

Tax administrations are facing more and more challenges to keep up with technological development and globalization in the performance of their tax functions. Emerging technology such as big data, data analytics, artificial intelligence and machine learning have penetrated and disrupted the way tax administrations traditionally function at an unprecedented scale and speed.

By adopting appropriate technologies and designing whole new procedures and structures, together with instituting ways to monitor and measure their operations and performances through best practices, tax authorities will increase their efficiency and organization of work progress. Such huge transformation necessarily should lead to new ways to engage taxpayers bringing out a major improve in voluntary compliance, enhancing trust and contributing to a better revenue collection.

To ensure a successful digital transformation, administrations should take a strategic rather than opportunistic approach to digitalization; thus, before beginning the process of digitalization, tax administrations should develop a digital tax administration roadmap (i.e., a step-by-step plan of principles to be followed) having in mind the long-term goals of the administration and the government in general.

When designing a digital roadmap, several factors should be considered such as the legal framework of the country in which the administration is inserted, the technological availability of resources, the cost of adopting new technologies, the adequacy of each technological tool to deliver the desirable result, and the objectives of each tax administration. And while use of Information and Communication Technology (ICT) present many opportunities to Tax Authorities, challenges remain and are mostly related to the collection and use/management of data, the respect of due process and taxpayers' rights, budget constraints and lack of digital skills among the tax authority's personnel.

The aim of Part 1 of the UN Guide to Digitalization of Revenue Authorities is to highlight, based on best practices and experiences from tax administrations, the environment and conditions for a successful digital transformation and the principles to follow when building a digital tax administration roadmap, as well as the constraints faced by authorities when implementing digital tools. This part comprises two chapters; 1.) Introduction and overview and 2.) Developing a roadmap to digitalization.

CHAPTER 1 – INTRODUCTION AND OVERVIEW

Digitalization of a tax administration refers to the conversion of data into digital formats, and the automation of manual processes. But beyond that, it also means moving from basic to more advanced and efficient forms of digital operation, such as replacing segregated ICT systems with a single integrated system, or fully automating semi-automated processes. Digitalization also has the capacity to provide tax administrators and taxpayers with new innovative tools that are integrated and automatic.

Developing countries need to finance the spending necessary for sustainable development, with domestic revenue mobilization (DRM) critical to achieving that goal. In the quest to mobilize more resources to finance public expenditures for economic and social development, it is important that governments design effective tax systems that will facilitate the achievement of DRM. Well-planned, efficient, and equitable taxation helps to pursue economic growth, reduce inequalities, combat poverty, and provide social services. A key component of efficient tax systems is digitalization. Manual processes and procedures limit the efficiency of tax administrations and greater efficiency could be achieving by digitalizing these processes. Moreover, in an increasingly digitalized business environment, tax administrations need to digitalize their processes to effectively tax digitalized businesses.

Information and Communication Technology (ICT) has made technologies cheaper, more powerful, and widely standardized, improving business processes and bolstering innovation across all sectors of the economy. As a result of this, the economy has become digitalized, changing many business models and giving rise to new ones.

Rapid technological change is taking place globally due to the development of new instruments and techniques, their creative deployment and application. External events, such as the COVID-19 pandemic, have also accelerated their demand and enhanced their use cases. Tax administrations around the world have also embarked on individual journeys of transformation and digitalization, benefitting from this technology boom.

Tax administrations need to adopt some of these technologies, as they realise the benefit of doing so in keeping up with the changing business scene as well as effective taxation of the digitalised economy, which is becoming the mainstream economy. The Covid-19 pandemic has accelerated this transformation and many businesses have had to become digitalized to remain relevant and afloat. Over this period, many tax administrations have had to move many of their processes online as the pandemic stopped many manual process that required physical presence.

A survey by the OECD Forum on Tax Administration (FTA)[1] completed by some of its members showed that this move allowed them to substitute in-person communication with a virtual or digital means during the crisis and shift a significant percentage of communications from paper to digital, in many cases 75% or more. This development was further reinforced during the crisis. While about half of the administrations considered their digital channels sufficient to deal with the increased demand, the others addressed shortcomings through introducing enhancements to existing services or by developing new services such as applications and virtual assistants.

For improved revenue collection, it is important for tax authorities to improve administrative efficiency. Use of information technology enables the authorities achieve substantial efficiency gains. For countries beginning their digital transformation, AI-enabled data capture of paper-based records can speed up the digitalization and reliability of the data. Others find significant value through the simplification of procedures and matching of filing information with third-party data sets.

For more advanced tax administrations, the use of advanced analytics to identify underreporting will be a key value driver. Following the COVID outbreak, some administrations are also rethinking their balance between offsite and onsite audits. It also becomes easier to implement the one-stop-shop concept, making it easier for taxpayers to be tax compliant.

Further, it is important that tax authorities seek to minimize the compliance burden for taxpayers. A survey of 190 economies has shown that it is getting easier for people and businesses to pay taxes. There are now 106 economies using electronic filing systems, double the number in 2004[2]. Digital technology is reducing the time spent on paying taxes, as well as the total number of individual payments taxpayers must make each year.

1.1. Importance of Digitalization

The COVID-19 pandemic accelerated the adoption of digital technology by governments, including in tax administration. As economies recover, tax authorities can reform their operations to bolster tax collection and tax compliance which declined during the pandemic. In an ideal fully digitized tax administration, technology tools may address the leakages in the revenue pipe by changing the paradigm for how a tax administration operates (e.g., implementing direct streaming tax at the taxable event – making tax invisible to the taxpayer or part of broader government services to citizens).

[1] Tax Administration: Digital Resilience in the COVID-19 Environment (reference document, PDF, webbook), published 21 April 2021

[2] https://www.pwc.com/gx/en/services/tax/publications/paying-taxes-2020.html

Digitalization of tax administration offers an opportunity to improve the efficiency and effectiveness of tax collection, allowing tax authorities to process and manage large amounts of data quickly and accurately. This can reduce the burden on taxpayers, making it easier for them to comply with their tax obligations and free up time and energy for other productive endeavours. Efficiency and effectiveness are further increased by reducing human intervention and error and improving targeted case selection for monitoring and audit implementation.

It can help to increase revenue for the government, by making it easier to identify and collect taxes that are owed, and at lower cost, and support investment in public services and sustainable development. Additionally, digitalization can help to reduce the potential for corruption and improve transparency in tax administration, by providing a clear and auditable record of tax transactions. Tax administration reform through digital transformation provides an opportunity to rethink the role and sources of data and the taxpayer experience — both critical components in the compliance process.

Further, by putting strong digital systems in place, more effective data security measures may be implemented, safeguarding private taxpayer data and financial records. This works to improve compliance as digital technology can make it simpler to monitor and enforce tax laws, which will help to guarantee that taxpayers comply with the law more closely. Digitalized often leads to improved and better taxpayer services. The public can experience an easier tax filing process with the use of digital platforms, which can provide enhanced services to taxpayers like online filing, electronic payments, and self-service alternatives.

Digitalization encourages accountability by giving real-time access to tax and financial data. This may improve revenue authorities' accountability as well increase tax transparency as tax authorities have access to and can share tax information with other jurisdictions. In a digitalized environment, revenue authorities can make decisions more quickly and intelligently when they have access to real-time data and analytics. These decisions include targeted interventions such as audits and compliance checks. Revenue agencies must change in order to remain relevant and efficient at a time of fast technological improvement. Digitalization allows revenue authorities to keep up to date with the ever-changing business environment and effectively tax a more digitalized business environment.

By creating a roadmap to digitalization, revenue authorities plan for their needs and can remain competitive internationally by adopting and learning from global best practices in digitalization. As the economy expands, they are able to manage ever-increasing volumes of data and transactions because digital solutions are frequently more scalable. Digitalization also assists in disaster recovery and business continuity. By integrating strong disaster recovery

plans into their digital systems, revenue authorities may guarantee that their activities will not stop in the event of an unforeseen circumstance.

As a result therefore, digital tax administration can:

- Result in new access to taxpayers (e.g., via new channels or additional information),
- Allow the delivery of new services to taxpayers (e.g., to reduce or eliminate compliance burdens, deliver incentives or reliefs, provide information and answers, etc.), and
- Increase the quantity and accuracy of data collected (e.g., by providing new methods and sources for cross checking data).
- Analysis of information arising from such measures may help the tax administration to better understand and relate to taxpayers.
- Finally, developing an effective digital tax administration can also act as a catalyst for increasing wider digitalization across government, improving the provision of (non-tax) public services to citizens, opening new opportunities for economic growth and driving other positive changes in a society.

Beyond these specific benefits, digital tax administration tools have the potential to radically enhance the taxpayer experience by reducing compliance costs dramatically and increasing accessibility to information and tax administration support. Taken in combination, digitization of tax administration could have strong impact both on compliance and supervision which could have a positive effect on revenue generation.

The World Bank argues[3] that modern revenue strategies, to a large extent, need to run on digital platforms because they are necessary to effectively pursue critical policy objectives including:

- **Broadening the tax base**. Data-centric approaches can be used to close gaps and take advantage of missed opportunities without necessarily increasing the level of taxation. Such measures include requiring e-commerce platforms to report sales to facilitate the collection of Value-Added Tax (VAT) and customs duties; analyzing past tax filings of citizens seeking relief under current stimulus programs to verify compliance; and supporting the collection of property taxes by matching the land registry with the taxpayer file.
- **Enhancing transparency and trust**. Establishing electronic platforms for tax registration, filing, payment, and dispute resolution makes processes clear for citizens, provide assurances that tax payments received in an actual government account, and reduce the risk of officials abusing their discretion.

[3] Marcello Estevão (2020), *Why digital transformation matters for taxation*, Why digital transformation matters for taxation (worldbank.org)

- **Reducing the compliance burden**. By 2020, there were 106 economies that used electronic filing systems, double the number in 2004.[4] Digital technology is reducing the time spent on paying taxes as well as the total number of individual payments taxpayers must make each year.

- **Improving administrative efficiency**. As governments mature in their use of information technology, they will be able to achieve substantial efficiency gains. For countries beginning their digital transformation, AI-enabled data capture of paper-based records can speed up the digitalization and reliability of the data. Others find significant value through the simplification of procedures and matching of filing information with third-party data sets.

- **Digital methods can also be substantially cheaper for governments to operate than the various analogue or partially analogue methods**. One Australian estimate showed that, for every Australian dollar spent on digital service provision, the same service would cost 16 times more to process over the phone, 32 times to deal with by post and 42 times in person.[5]

- **Advancing growth and other policy objectives**. As a central repository of tax and non- tax data, tax administrations play an increasing role in advancing non-tax related objectives. For example, by using taxpayer data (with sufficient data privacy rules in place) to verify beneficiaries under cash transfer programs, monitor the consumption of goods with detrimental health impacts (e.g., alcohol and cigarettes), model tax policy responses to curb carbon emissions, identify growth drivers in the economy, detect labour market violations, and ascertain the well-being of vulnerable groups in society.

In addition, technological solutions that target big data handling, accuracy, efficiency, and speed offer the possibility of attacking old tax administration problems with new tools. For example:

- Increasing taxpayer visibility (e.g., by development of a unique unified government-issued ID (such as a taxpayer identification number (TIN), use of automated third-party data, or other measures) can allow better targeting of non-compliant entities with greater accuracy. This enhanced ability to identify taxpayers offers new possibilities to tackle issues such as identifying shadow economy non-compliance.

[4] Ibid.
[5] CAEW (2022), *Digitalisation of tax, international perspectives*, Digitalisation of tax, international perspectives

- Better targeted supervision and audit using predictive technology (e.g., Artificial Intelligence (AI)) to model taxpayer behaviour, calibrate risk assessments, and better target enforcement.

- Simple digital solutions such as using digital document recognition for paper processes can reduce mistakes, increase accuracy, efficiency, and speed of processing. However, a more sophisticated process of using real-time third-party data may eliminate the need for some paper processes altogether.

In addition to the above benefits, the FTA has identified four key areas in which digitisation may specifically benefit the tax administrations of developing countries[6]:

- **By increasing revenue** through expanding the tax base, or through more effective collection, supervision, and enforcement.

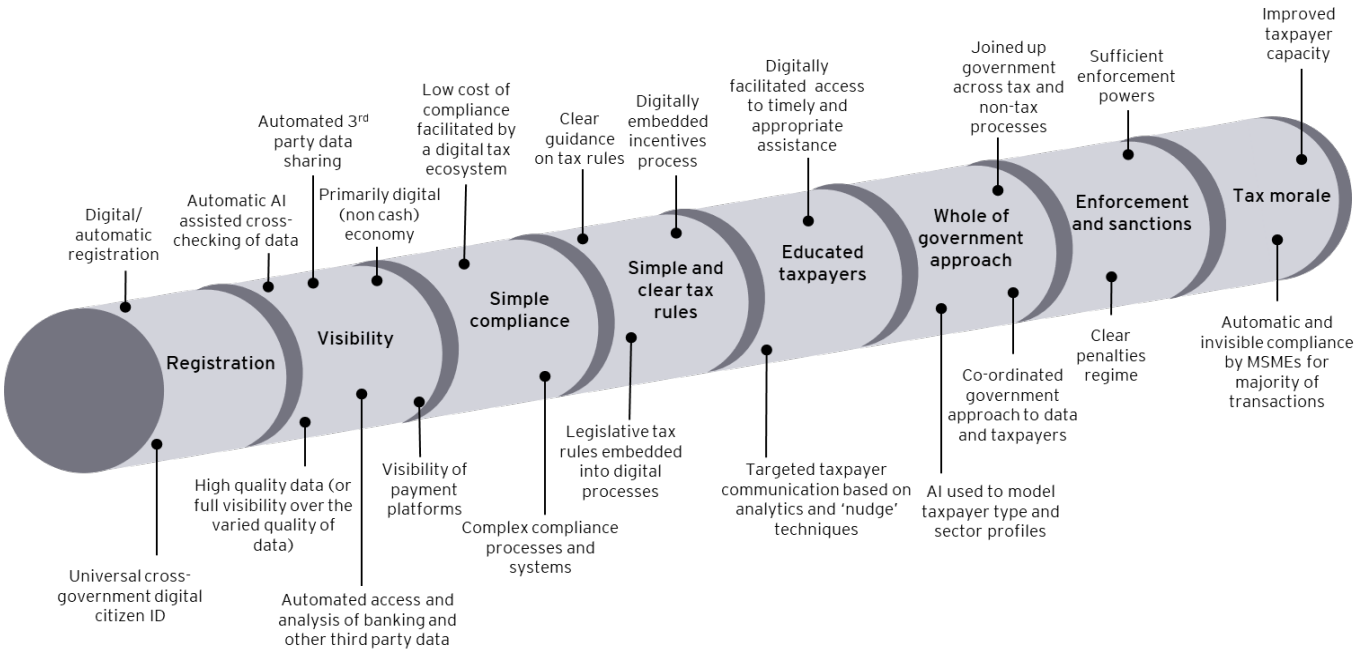
- **By increasing efficiency and effectiveness** through simplifying processes, using cheaper and more accessible digital channels to interact with taxpayers, moving to more self-service approaches, and effectively exploiting data to focus resources more effectively. In the case of some countries, digital tax administration may allow delivery of services that might not be able to be delivered or accessible to some taxpayers via another channel.

- **By reducing the administrative burden on taxpayers** by making it easier to comply with obligations, in some cases by building taxation processes into the processes that people and entities use in their everyday lives and businesses.

- **By helping to drive meaningful change in society.** Tax administration is one of the largest government functions, and the drive towards a digital tax administration can help increase wider digitalization across government and across society. In turn, this could open new opportunities for economic growth.

The figure below illustrates what a future digital tax administration may look like:

[6] OECD (2021), *Supporting the Digitalisation of Developing Country Tax Administrations*, https://www.oecd.org/tax/forum-on- tax-administration/publications-and-products/supporting-the-digitalisation-of- developing-country-tax-administrations.pdf



Source: Sanger, Stern, St John, EY, 2021

1.2. Challenges Faced by Countries in Digitalization

In the quest for digitalization, revenue authorities face a number of challenges. A number of these challenges will be heightened for developing countries.

1.2.1 Existing electronic systems and integrating legacy systems

Most countries already have some electronic element to their tax administration. Integrating new digital systems with these older technologies can be complex and may require substantial investment and planning. However, some developing countries may benefit from a 'blank slate' approach if they do not have as many existing complex systems that need to be integrated into new technology or replaced. This can allow such countries to leapfrog digital tax administration efforts in high income countries as there may be less costly and cumbersome integration and data migration processes.

1.2.2 Data security and privacy:

Digitalization involves the storage and processing of sensitive taxpayer information, hence ensuring the privacy and confidentiality of taxpayer information becomes critical. Digital platforms are susceptible to cyber threats and attacks. Revenue authorities deal with sensitive financial data, and any breach could lead to unauthorized access, data manipulation, or theft. Ensuring robust cybersecurity measures is crucial to protect against data breaches and unauthorized access. Data security and privacy require a fully specified legal foundation, covering data protection, along with procedures and protocols in place to specify access, accountability, and enforcement measures for breaches (including protections from hacking).

Striking a balance between efficient data management and safeguarding individuals' privacy is a challenge.

1.2.3 Capacity

Most countries, regardless of the level of development, will face constraints such as funding, technology capacity, and data management capabilities. However, these limitations can be severe in developing countries[7]. Lack of capacity and resources can impact the ability to carry out 'normal' tax administration and the increasing requirements of international commitments (such as tax transparency measures). The introduction of digital tax transformation can stretch limited resources even thinner before efficiency gains are seen.

The initial cost of implementing digital systems, including software, hardware, and training, can be high. Securing budgetary allocations and managing costs effectively are ongoing challenges. Digital transformation solutions intended to reduce the need for human intervention can require the development of new skills to run new systems. Consideration of how capacity will be allocated and retained should be a critical part of the cost-benefit analysis of a digital transformation program.

Limited taxpayer capacity can also magnify risks and can result in low levels of uptake or compliance for digital measures, particularly for more complex taxes. Ensuring that all segments of the population have equal access to digital services can be challenging. This includes addressing issues related to digital literacy, language barriers, and accessibility for people with disabilities.

1.2.4 Technological depth and absorption

Developing countries face two different but related types of challenges regarding baseline digital capability:

a.) The tax administration itself may currently make limited use of technology due to any number of reasons, such as funding or strategic priority.

b.) Taxpayers may not have access to, or the ability to use, the technology implemented due to a variety of reasons (e.g., lack of financial resources or lack of infrastructure such as internet coverage). If taxpayers do not have reliable digital access, the implementation of a digital tax administration will be more challenging. Also, socioeconomic disparities may lead to a digital divide, where certain segments of the population lack access to digital tools. This can result in inequitable access to tax services and information.

[7] Haque, Knight, and Jayasurya (2015), "Capacity Constraints in Public Financial Management in Pacific States". In Asia and Pacific Policy Studies, https://onlinelibrary.wiley.com/doi/epdf/10.1002/app5.79 P.612

However, the growth in mobile technology globally is reducing these barriers. Greater and more widespread access to internet in developing countries continues to grow, alongside the use of new mobile-based electronic payment systems. This is increasing access for taxpayers who may not have previously had a traditional bank account. Educating users about new digital processes, filing methods, and online tools is crucial for widespread adoption

In addition, the COVID-19 pandemic accelerated, mostly due to necessity, the adoption of digital technology by society as well as by tax administrations and governments, in both developing and developed countries. While this acceleration and some of the resulting transformation was ad hoc and unplanned, it provides an opportunity to leverage the progress made, and plan the way forward in a more strategic manner. This leap in technology also creates opportunities for tax administrations.

Where a tax administration implements a digital transformation, taxpayers may not be able to participate, access or provide data. Where this is the case, a digital transformation program will need to include measures to address taxpayers who may not be able to access digital tools or processes (e.g., accessibility measures or collection of data from alternative sources).

1.2.5 Availability and accessibility of data

An important driver of efficiency is the ability for a tax administration to use different external sources of data relating to taxpayers (e.g., banking information, customs information, and other third-party information for profiling and adjudicating arms-length pricing). In developing countries, data is not always available and in many instances the data needs to go through a form of cleaning to ensure that it is accurate and up to date. Ensuring the accuracy and integrity of digital data is essential for reliable tax collection. Issues such as data entry errors, system glitches, or manipulation risks need to be addressed to maintain trust in the system.

Tax administrations can adopt internal digital tools that streamline, simplify, and make better use of internal or third- party data (e.g., cross checking of data, and development of a universal whole of government digital identification number). This can lead to significant improvements, irrespective of the technology uptake in a country. Technology adoption itself can often also drive improvements to data quality and management; for example, e-invoicing can lead to the adoption of systems with more rigorous processes.

Security of data should be central to a project, given the increasing access to private information, analysis and conclusions that might be drawn. Strict legal frameworks and provisions should set out when data are able to be collected, and how may be used.

1.2.6 Governance and transparency

Governance and transparency issues can be a serious challenge to implementation of digital tax initiatives in developing countries[8]. For a successful digital transformation, procedures and tax treatment should be designed with good governance, compliance, and transparency at the centre. Without proper legal basis for digital projects establishing, responsibility, reporting and processes digital tools may be open to abuse and taxpayer trust may be eroded.

Digital transformation can also in itself increase transparency and strengthen governance through "seamless" compliance by design (e.g., data streaming in real time).

1.2.7 Identification of taxpayers

Visibility over taxpayers, and the ability to monitor and enforce compliance are key precursors to any digital tax administration (whether in a developed or developing country). An International Labour Organization Report published in 2018 found that over two thirds of those employed in developing countries are in informal employment. This type of employment is more likely to be hidden from taxation, but digitalization can help to resolve these issues by creating links between tax administrations and employers[9], and using new methods for identifying taxpayers and economic activity.

1.2.8 Change management and adoption of technology:

The right environment is required to manage, train and make the best use of new processes and technologies. Employees and stakeholders may resist the shift from traditional manual processes to digital systems due to concerns about job security, unfamiliarity with new technologies, or resistance to change in general. Training programs and change management strategies are essential to address resistance and ensure a smooth transition.

1.2.9 Future proofing:

This refers to ensuring that change done today is relevant in the future. This is particularly important for developing countries which may have constrained future capacity or resources to change systems.

1.2.10 Legal and Regulatory Framework:

Adapting legal and regulatory frameworks to accommodate digital processes can be challenging. Ensuring that digital transactions comply with existing tax laws and regulations is crucial. Keeping up with evolving tax regulations and compliance requirements can be

[8] Dickinson (OECD, 2011), Tax and Good Governance in OECD Journal: General Papers, Volume 2010 Issue 1, pp. 69-76.
[9] OECD (2021), Supporting the Digitalisation of Developing Country Tax Administrations, Forum on Tax Administrations, OECD, Paris

challenging. Digital systems must be adaptable and regularly updated to align with changing legal frameworks. The digitalization of revenue authorities may also face political opposition beside the legal challenges. Clear policies and legal frameworks need to be established to support the digital transformation and address any potential controversies.

1.2.11 Digital Infrastructure

Some regions may lack the necessary digital infrastructure for seamless implementation. This includes reliable internet connectivity, access to digital devices, and IT infrastructure. Revenue authorities must ensure that their digital systems are reliable and available at all times. Downtime or system failures can have significant consequences on revenue collection and taxpayer services.

Addressing these challenges requires a comprehensive approach that involves technological solutions, stakeholder engagement, and strategic planning to ensure the successful digitalization of revenue authorities.