



BUILDING A GROWTH-FRIENDLY TAX ENVIRONMENT

Digital Transformation of Tax Administrations

Virtual Seminar

Title:

Exploring the opportunities and challenges of new technologies for tax administration and policy

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Current technology trends

Technology tools	Definition
Cloud computing	Shared use of storage, computational capacity and application software provided externally and interconnected by internet
Big data and data analytics	Big data = "5 Vs" (volume, variety, velocity, veracity and value). Data analytics allows for autonomous examination of big data or content using sophisticated techniques
Internet of things	Category of devices that contain electronic sensors and software with online connectivity allowing the devices to collect and exchange data
Artificial intelligence	Allows for the application of advanced analysis, including machine learning and natural language processing, to interpret events and support automated decisions
Blockchain and smart contracts	Distributed ledger of network nodes maintaining a list of registries or transactions gathered in data blocks that are resistant to modification and work with smart contract, which automate the consequences of an event.
Quantum computing	Supercomputers that have the capacity to rapidly process a high amount of data and solve complex problems, regardless of the number of variables involved.



Digital maturity levels of tax administrations

Level 1	Level 2		Level 3	Level 4		Level 5	Level 6
"E-file"	"E-accounting"	Paradigm shift	"E-match"	"E-audit"	Transformational	"E-assess"	"E-government"
Use of standardized electronic form for filing tax returns required or optional; other income data (e.g., payroll and financial) filed electronically and matched annually	Submit accounting or other source data to support filings (e.g., invoices and trial balances) in a defined electronic format to a defined timetable; frequent additions and changes at this level		Submit additional accounting and source data; government accesses additional data and begins to match data across tax types, and potentially across taxpayers and jurisdictions, in real time	Level-2 data analysed by government entities and cross-checked to filings in real time to map the geographic economic ecosystem; taxpayers receiving electronic audit assessments with limited time to respond		Government entities using submitted data to assess tax without the need for tax forms; taxpayers allowed a limited time to audit government-calculated tax	All government interaction with citizens and enterprises digitalized; seamless international digital exchange of information between law enforcement and tax authorities in different countries



Why DIGITAL TRANSFORMATION?

VOLUME

To handle large amount of unstructured data coming from an increasing number of reporting entities, sectors, and transactions.

VELOCITY

To process data received at high speed to detect and disrupt non-compliance and provide better service to taxpayers

VARIETY

To process and analyse data received from different databases, in different formats and structures



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What are the DRIVERS?

INCREASE EFFICIENCY

Need to streamline the repetitive manual process of collecting large volumes of unstructured data from a huge number of reporting entities.

ENHANCE QUALITY of SERVICE

Need to prioritise services that can lead to a better voluntary compliance.

OUTCOME: A FULLY
AUTOMATED TAX
ADMINISTRATION

OPTIMISE RESOURCE DEPLOYMENT

Allow for better assignment of finite human resources.

ADOPT A RISK-BASED APPROACH TO REDUCE THE TAX GAP

Lay down the essential precondition for the implementation of a dynamic risk-based approach in tax compliance.



Developing a DIGITAL TAX ADMINISTRATION ROADMAP: six key steps

1. VISION-SETTING: WHAT ARE THE GOALS?

Define the objectives, principles, and goals, and articulate intermediate and long-term goals, business value, and positioning of the programme.

Align a common vision shared within the Tax Administration (TA), both across different units and between senior executives and frontline analysts.



2. MAPPING AND BENCHMARKING: HOW?

Review the existing workflow and available data/information, available resources and capacity.

Understand the gaps of needs, resources, and capability of the TA, and identify available technologies or tools to help TA to identify potential solutions



3. PRIORITISATION: WHERE TO START?

Identify the most urgent needs of the TA and the most crucial steps of the workflow that would be benefiting most from the programme.

Start small and strategically by finding a small but significant problem, and experiment with possible solutions.

Review existing tax laws and regulation

Identify any confidentiality/ security-related potential issues



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Developing a DIGITAL TAX ADMINISTRATION ROADMAP: six key steps (continued)

4. BUILD AN ENABLING ENVIRONMENT: rolling out a programme that supports decision-making and digital development

Control for data quality.
Seek stakeholder buy-in from government leadership, TA staff/analytics and taxpayers.

Build a digital and change-friendly environment by providing the necessary resources through the change management program.



5. MONITORING AND EVALUATION: HAVE THE OBJECTIVES BEEN ACHIEVED?

Measure, monitor, and track the development to ensure that objectives are achieved.

Test-and-learn through gathering feedback from users. If the process works, repeat and scale it up. If not, review and fine-tune.



6. COOPERATION: WHOM TO LEARN FROM AND HOW TO COOPERATE?

Engage with both internal and external stakeholders (such as business entities, other TAs or foreign competent authorities) to understand their needs, their experiences, and to obtain their feedback on the program.

Adopt a team approach based on open communication between developers and users to ensure the proposed digital application will bring meaningful results.
Use platforms such as the WB to exchange experiences.



Main barriers to achieving full automation

- Budgetary considerations and legacy systems
- Legal issues
- Human factors
- Data quality
- Diversity in digital maturity levels
- Regulatory uncertainty
- Fear of disruption



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Blockchain and tax applications

Digital currencies

- First use-case of blockchain technologies
- Peer-to-peer decentralised cryptocurrency transactions

Smart contracts

- More financial functionality than cryptocurrency transactions processor
- Decentralized applications based on programmable language and autonomously executing algorithms

Blockchain potential

- Larger-scale of applications of non-cryptocurrency-related Distribute Ledger Technology (DLT)
- Improved performance with more scalability and interoperability

TRANSFORMATIONAL AND DISRUPTIVE



Under what conditions is DLT most useful?

- Information is sensitive or related to valuable assets
- Coordination of multiple entities or a complex chain of intermediaries
- Real-time visibility of events is required or important to the related activity
- Maintaining immutable record of all data relevant to the activities



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Examples of blockchain based solutions

DLT and smart contracts are rapidly moving from pilots to mainstream

Taxation

- **The Netherlands:** smart contracts for payroll tax (in process)
- **Estonia:** digital services based on keyless signature infrastructure (KSI) to allow citizens and government to verify the integrity of their records on government databases
- **China:** STA VAT pilot on use of Blockchain and CBDC
- **Thailand:** VAT Refund for Tourists
- **Indonesia:** exploring use of blockchain in the VAT area

Customs and trade facilitation

- **UN Centre for Trade Facilitation:** electronic blockchain based on certificate of origins
- **WCO:** initiated pilots of blockchain based trade facilitation

Role of businesses

- Many **MNEs** (e.g., Siemens/Henkel) have already in place blockchain based solutions for tax and customs compliance



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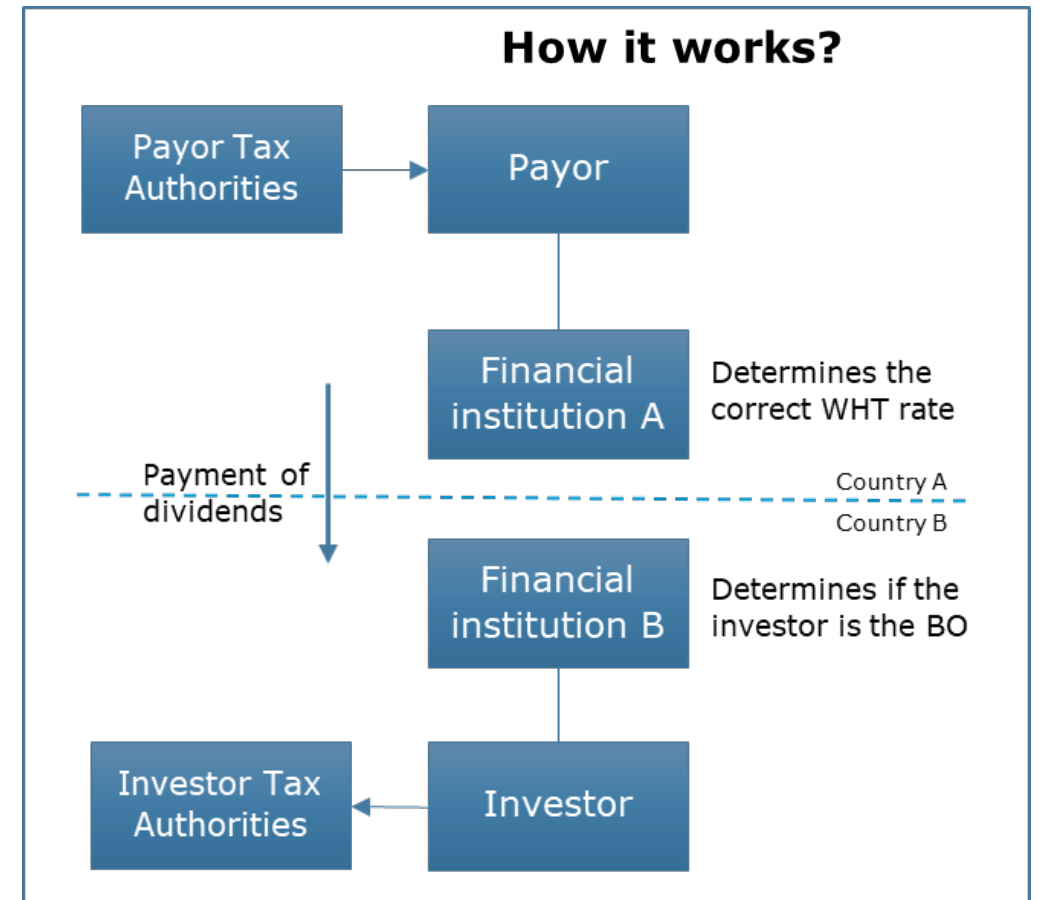
Blockchain based withholding tax system

Global withholding tax challenge

Governments
Inefficient process and fraud

Financial institutions
Inefficient process, risks and lack of trust among the parties

Investors
Payment of more taxes than legally due





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Suggested BRI Action Plan

- Identify the taxes and tax measures which have the greatest impact on the BRI economies and therefore could be a **priority** for digital procedural cooperation
- Focus on coordinated action to achieve the **interoperability** of tax administrations' technical systems by setting blueprints for "technical standards"
- Develop a framework for a **BRI Digital Tax Administration Road Map**
- Provide a **common framework** for assessing the maturity of BRI digital tax programs
- Set up a digital tax **capacity building program** for BRI tax administrations under **BRITACEG**
- Create a **Tax Technology BRI Observatory** to monitor emerging technologies which could be applied in the tax area



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THANKS