



FISCAL AFFAIRS

Using Digital Technologies to Enhance DRM: How to Think Through Options

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Joshua Aslett
Senior Economist
Fiscal Affairs Department

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Caveats For this Presentation

Operating Contexts Matter

Administrations can vary dramatically along many important dimensions, including within regional groupings

Dimensions of Special Importance

- ▶ Political-economic issues and cultural perspectives on tax
- ▶ Existing levels of maturity with digital operations

Cross-Country Comparisons are Complicated

What is more important is the **lens through which reform decisions and planning are made** – the focus of this presentation

Core Tax (and Customs) Administration Missions

Implementation of Policy Frameworks

Tax Administration

- **Compliance** (Taxpayer)
 - ▶ Service
 - ▶ Enforcement
- ➡ Revenue

Customs Administration

- Revenue Collection *
- Trade Facilitation
- Border Security
- Protection of Society
- Statistics

Important Characteristics

- ✓ Domestic (Inland) Focus
- ✓ Periodic Processing (Tax Periods)
- ✓ Emphasis: Behavioral Modification
 - **Compliance Risk Management**

Important Characteristics

- ✓ International Focus (Foreign Trade)
- ✓ Near Real-Time Processing
- ✓ Emphasis: Transactions and Enforcement
- ✓ Different Priorities in Low-Income Countries

Global State of Digitalization

Tax Administration

- **96%** - Operational ICT Solution*
 - ▶ **72%** - E-Filing Channel
 - ▶ **69%** - E-Payment Channel

Sources: ISORA. Note that in ISORA, questions relating to the “operational ICT solutions” of tax administrations were removed in the latest survey. Prior results are shown here to summarize a global perspective. E-filing and e-payment figures describe the percent of administrations with at least one channel.

Global Challenges: Digital Tax Administration

Global Challenge #1: Productively Increasing ICT Expenditure

Country Group	ICT Expenditure ¹ (Median % of Op. Exp.)			General Gov. Revenue (% of GDP)		
	2023	2022	2021	2023	2022	2021
Advanced Economies	12.43	9.37	11.34	35.69	37.39	36.97
Euro Area	12.01	6.29	6.79	45.97	46.52	46.91
Major Advanced Economies (G7)	15.15	14.20	13.64	35.48	37.61	37.08
Other Advanced Economies	12.75	14.21	14.58	32.14	33.19	32.65
European Union	12.12	7.72	7.80	45.41	45.90	46.43
Emerging Market and Developing Economies	4.28	4.54	5.36	26.00	25.79	25.56
Emerging and Developing Asia	5.05	5.39	5.36	23.82	23.35	23.90
Emerging and Developing Europe	4.29	4.56	7.64	34.76	34.16	35.24
Latin America and The Caribbean	6.44	6.25	6.85	29.30	30.20	28.79
Middle East and Central Asia	0.36	0.66	1.72	27.45	28.38	25.52
Sub-Saharan Africa	3.57	3.50	1.28	17.39	17.44	16.84
Worldwide	5.63	5.44	6.50	-	-	-

¹ Direct ICT expenditure by tax administrations (excluding DPI, e-government, other shared services).

Source: IMF ISORA and WEO Databases. Includes survey results of 172 countries.

Global Challenge #2: Addressing Weaknesses in Cybersecurity

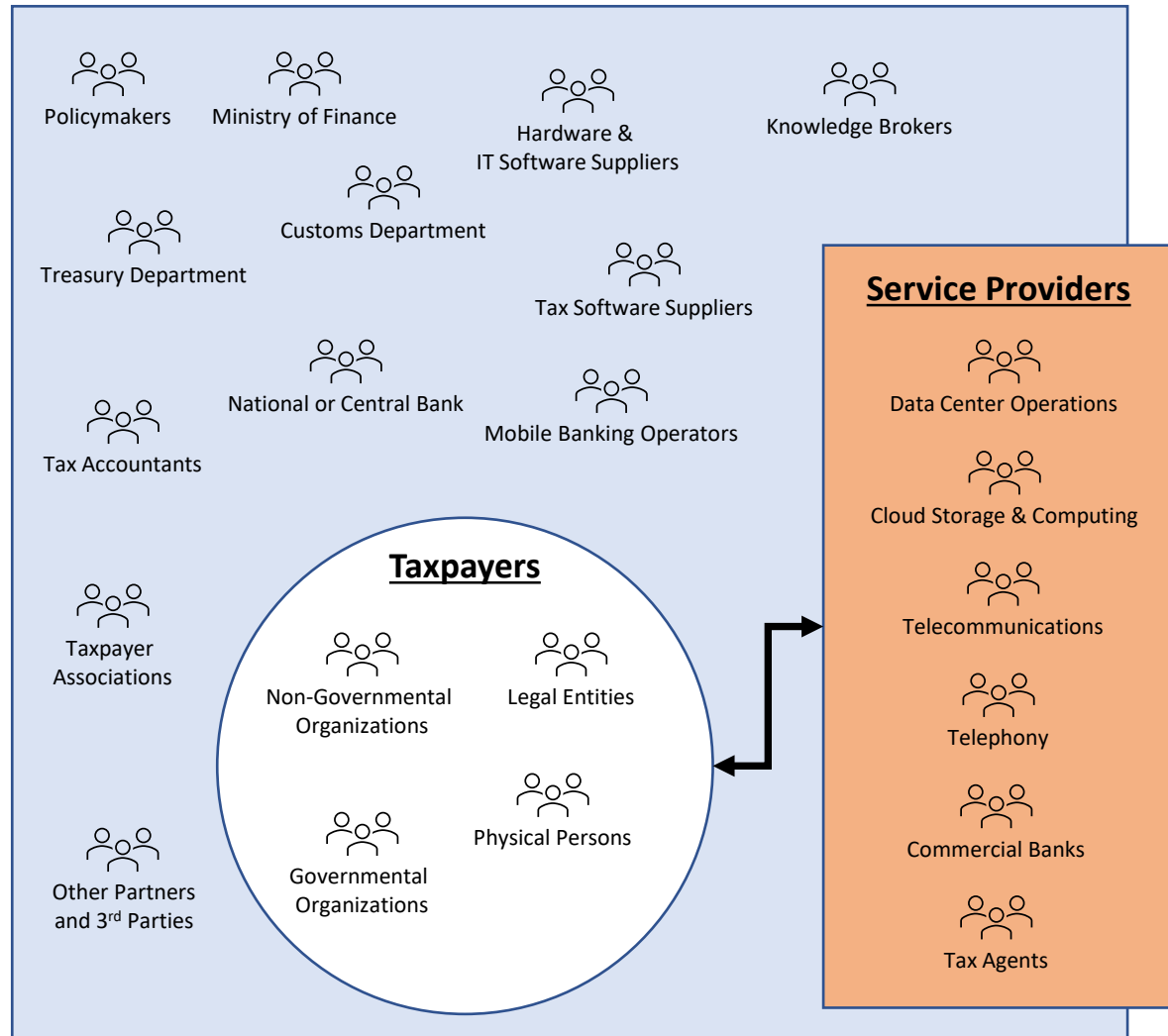
WannaCry (2017): One of the most damaging cybersecurity attacks in history

- Started via a breach in e-invoicing (tax reporting) software
- Spread globally, taking major shipping companies, police, hospitals, and other essential services offline
- Economic damages between \$10 and \$20 billion dollars

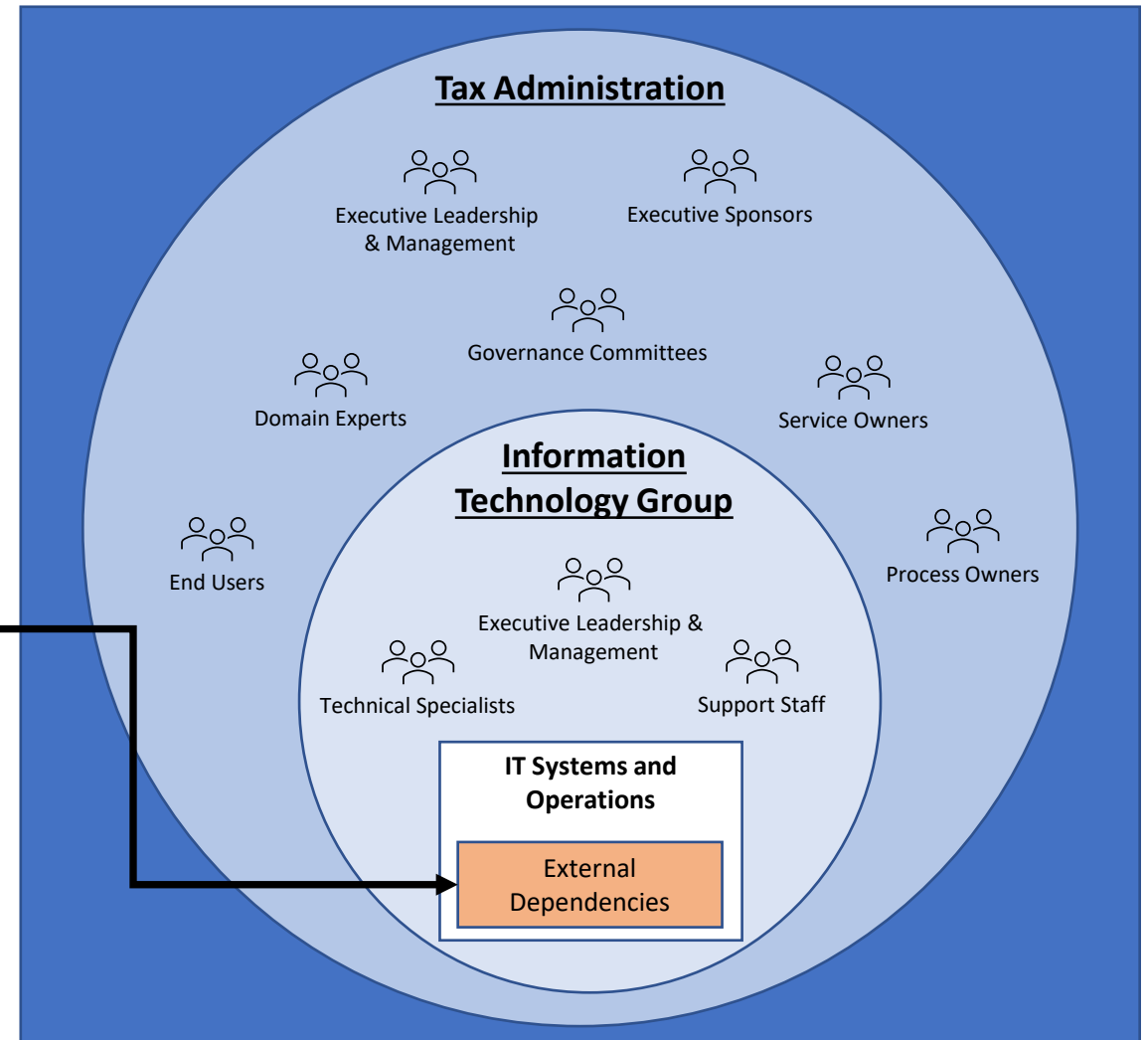


Global Challenge #3: Developing Digital Ecosystems

External Stakeholders



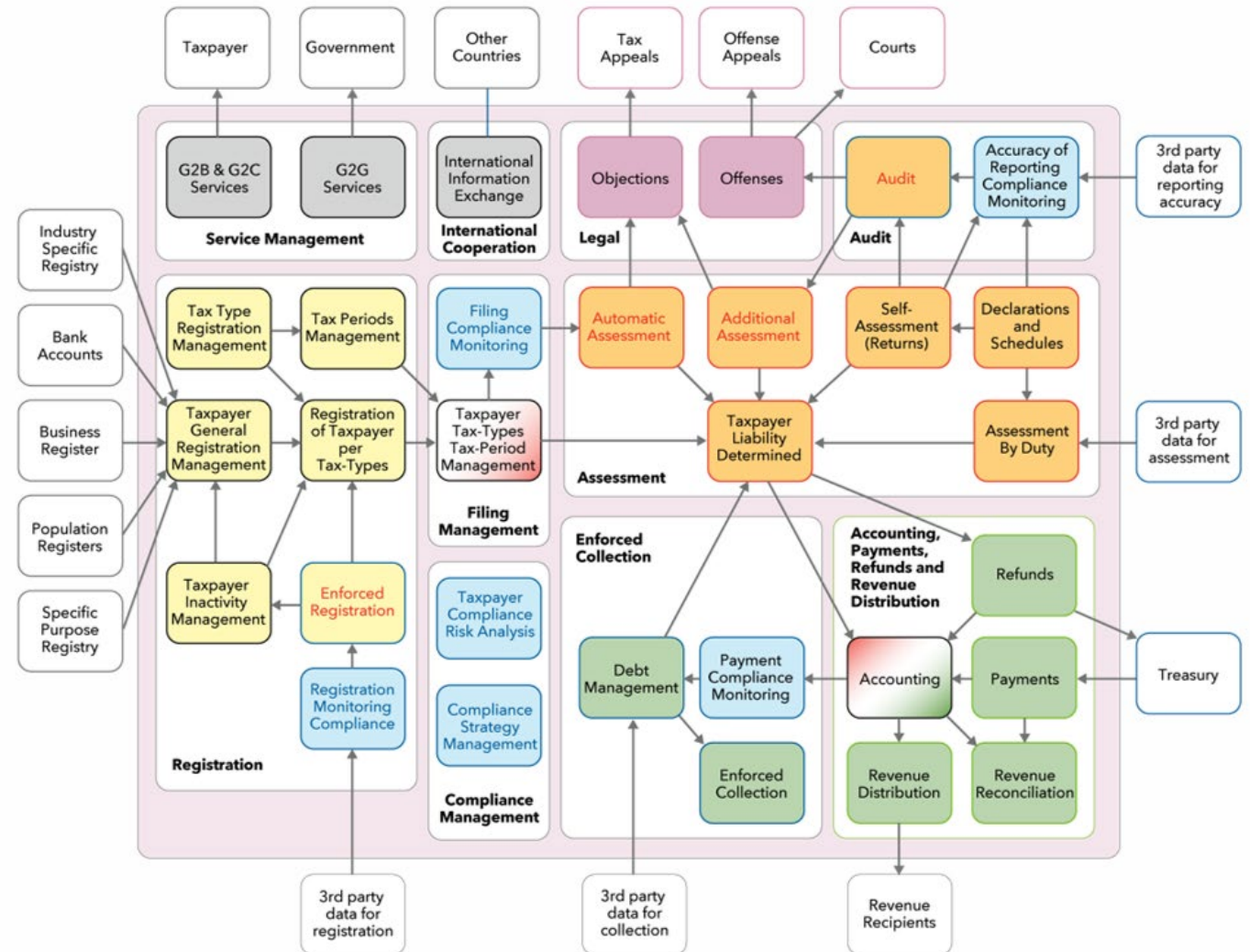
Internal Stakeholders



Global Challenge #4: Accessing Domain Expertise

Digital Business Models

- Capture the complete “business” of tax administration
- Are ideally based on integrated functions and processes
- Require a depth of knowledge to design and translate into effective digital services

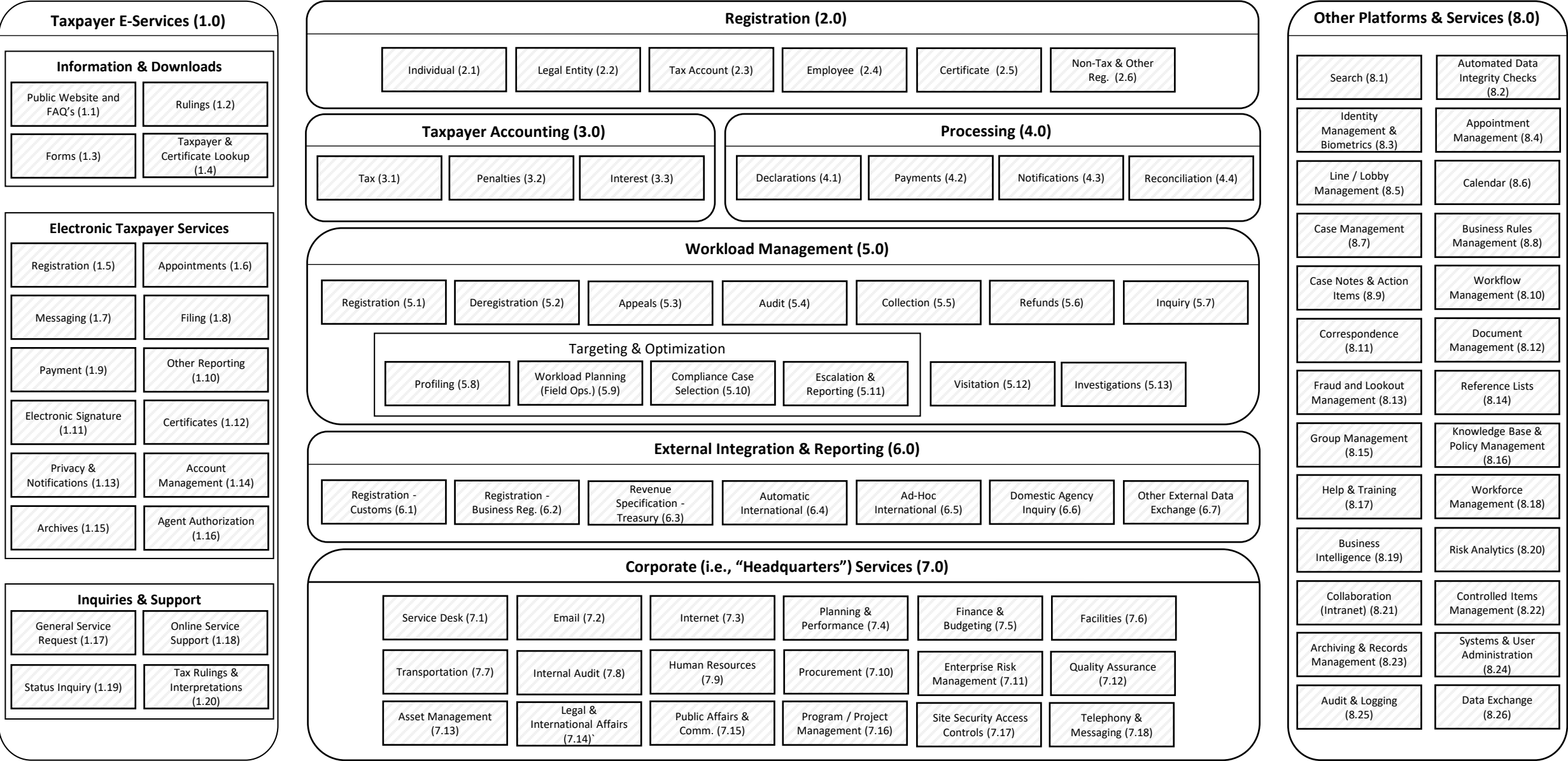


Source: IMF Staff

Global Challenge #5. Prioritizing Investments to Strengthen Fundamentals

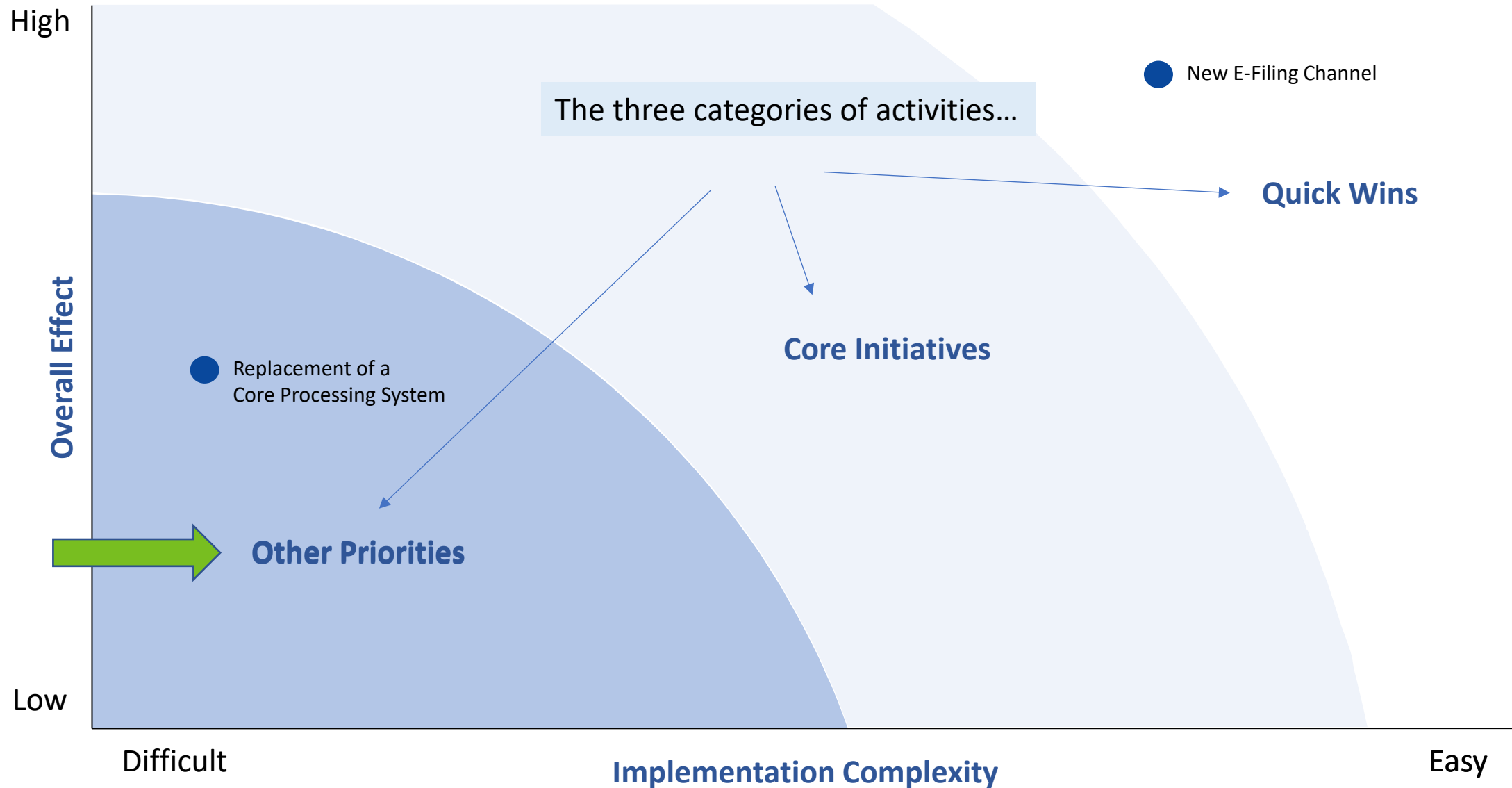
Priority #1: Ensuring High-Integrity, Secure IT Fundamentals	
Core IT Infrastructure	The portfolio of IT assets and services already online.
Enterprise IT Services	
Core Processing Platforms	
Electronic Taxpayer Services	
Other Essential Systems and Services	
Priority #2: Supporting Prioritized Reform Initiatives (From a CE Matrix)	
Quick Wins	New IT support for initiatives in a portfolio of reforms.
Core Initiatives	
Other Priorities	

Investment Planning: Services Often Forgotten...



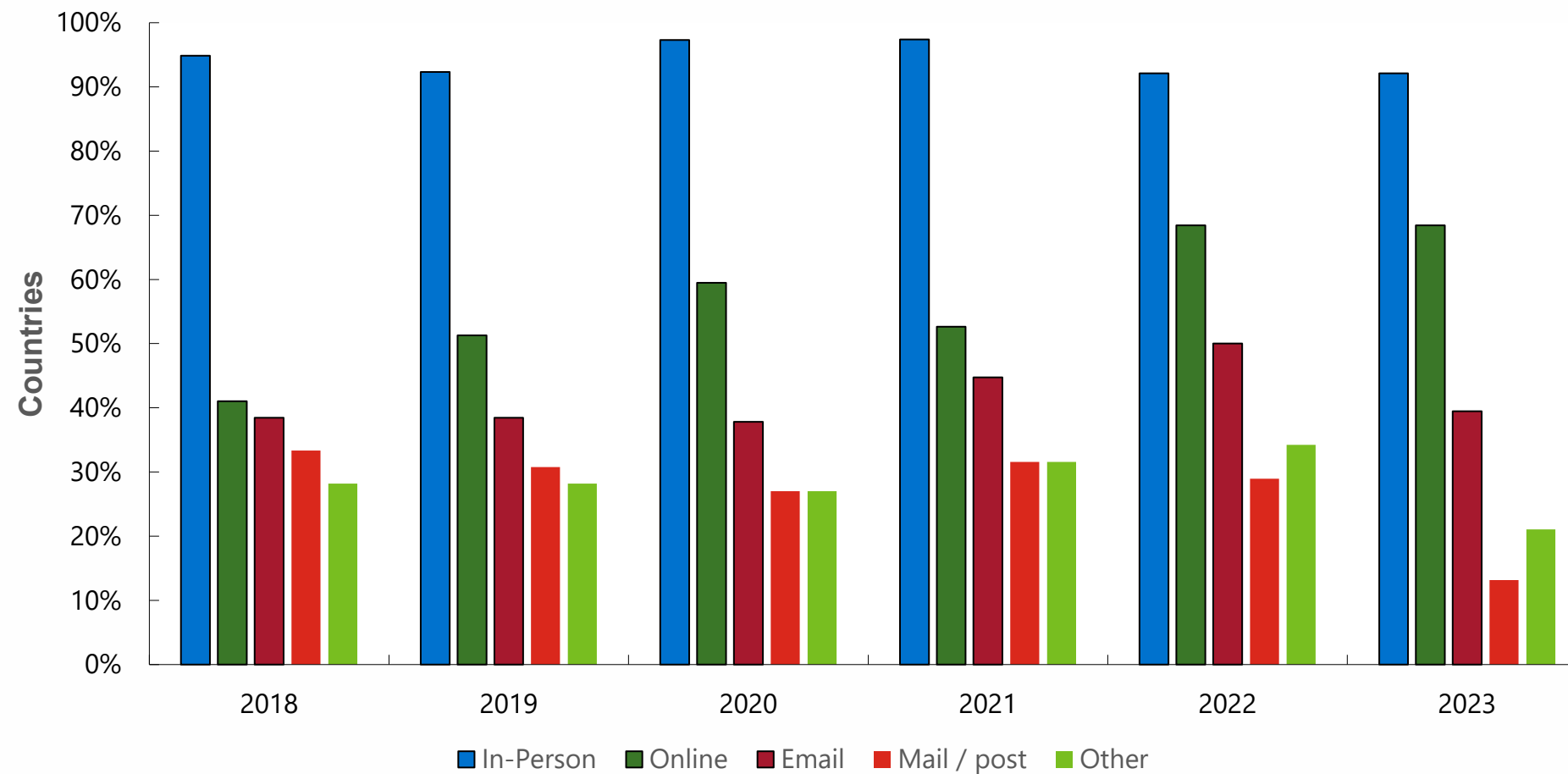
Investment Planning: How to Prioritize Reform Initiatives

● Human Capital ● Organization Design ● IT ● Strategy & Operations

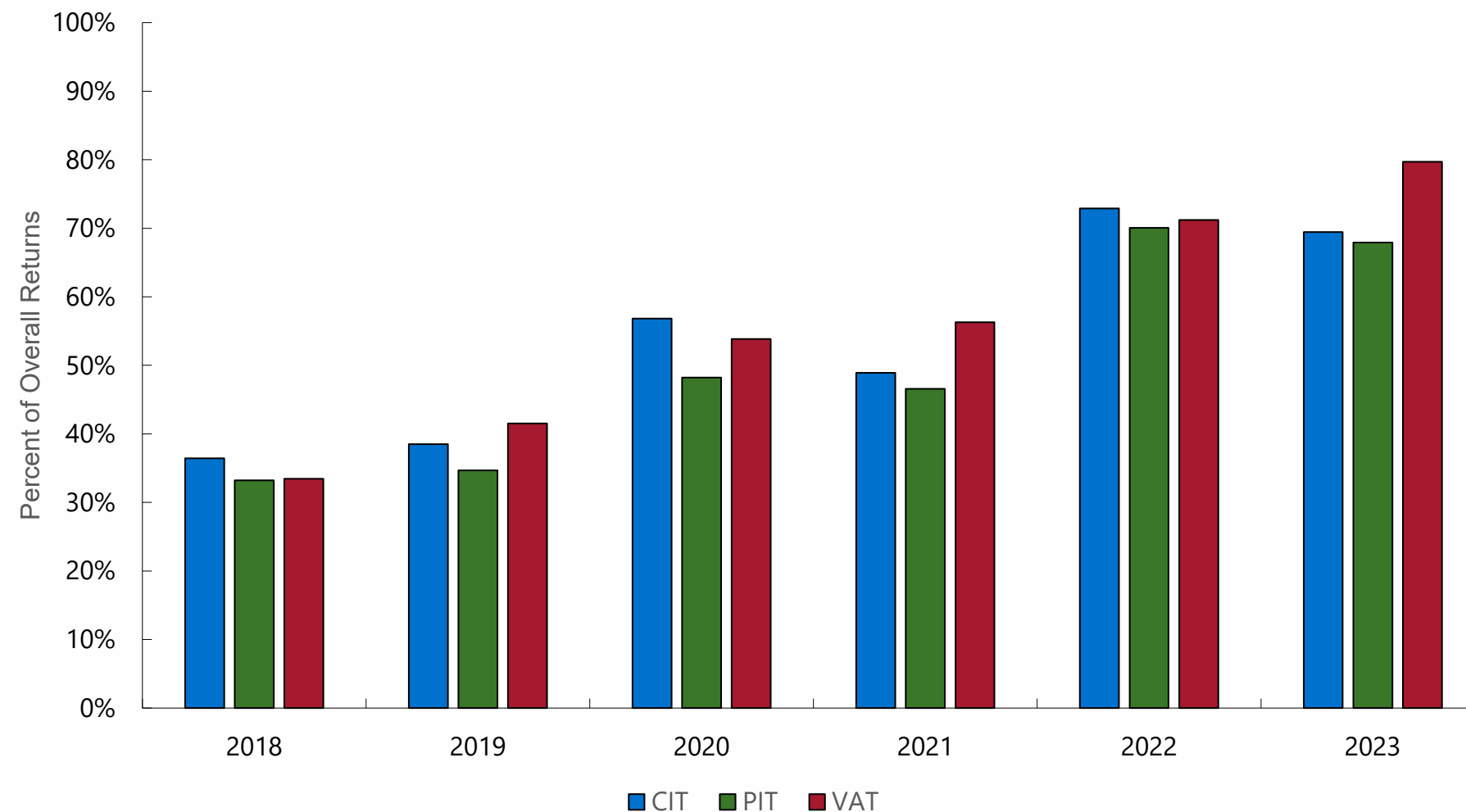


Digital Tax Administration in Africa

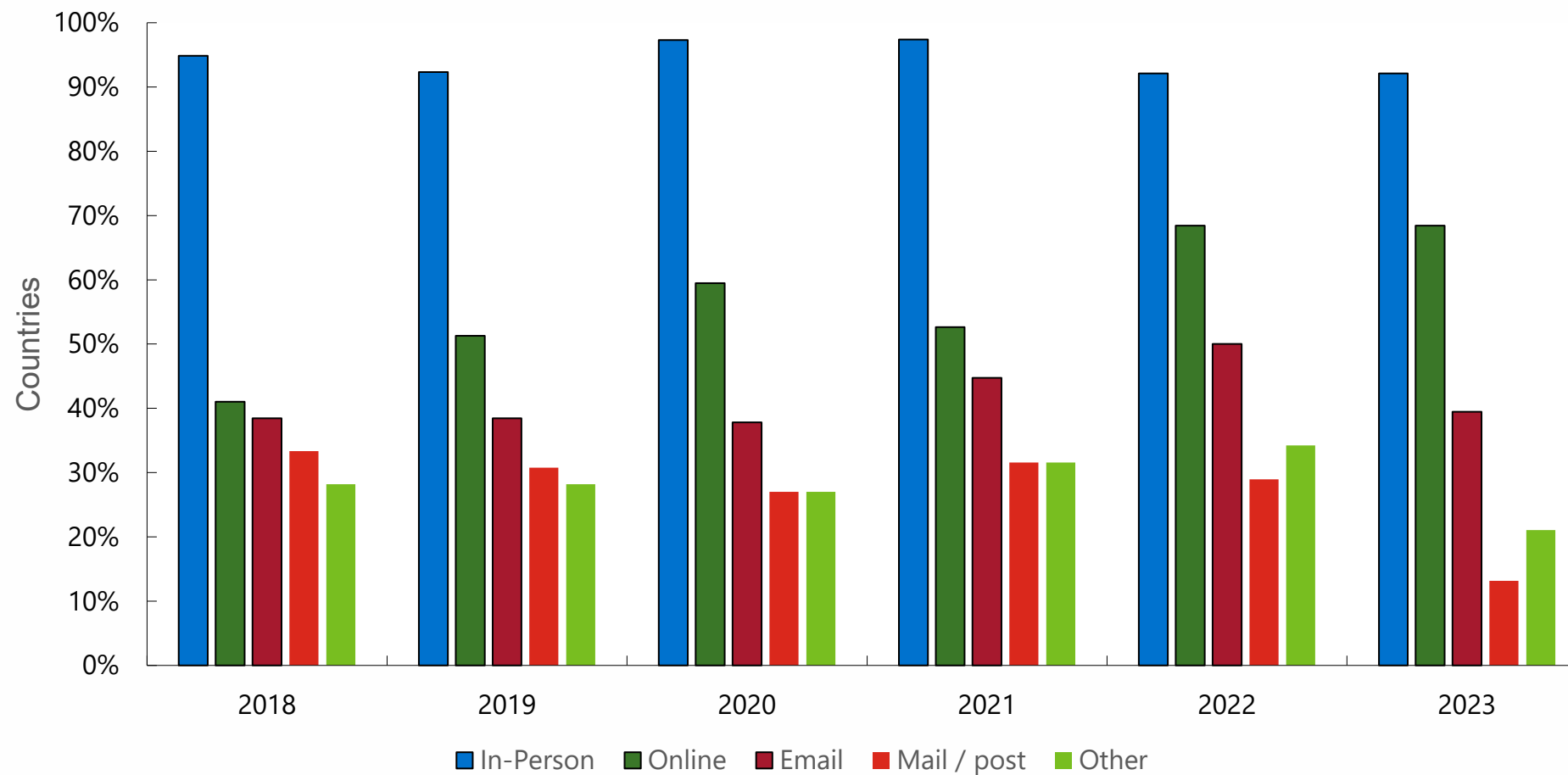
Africa: Channels for Registration



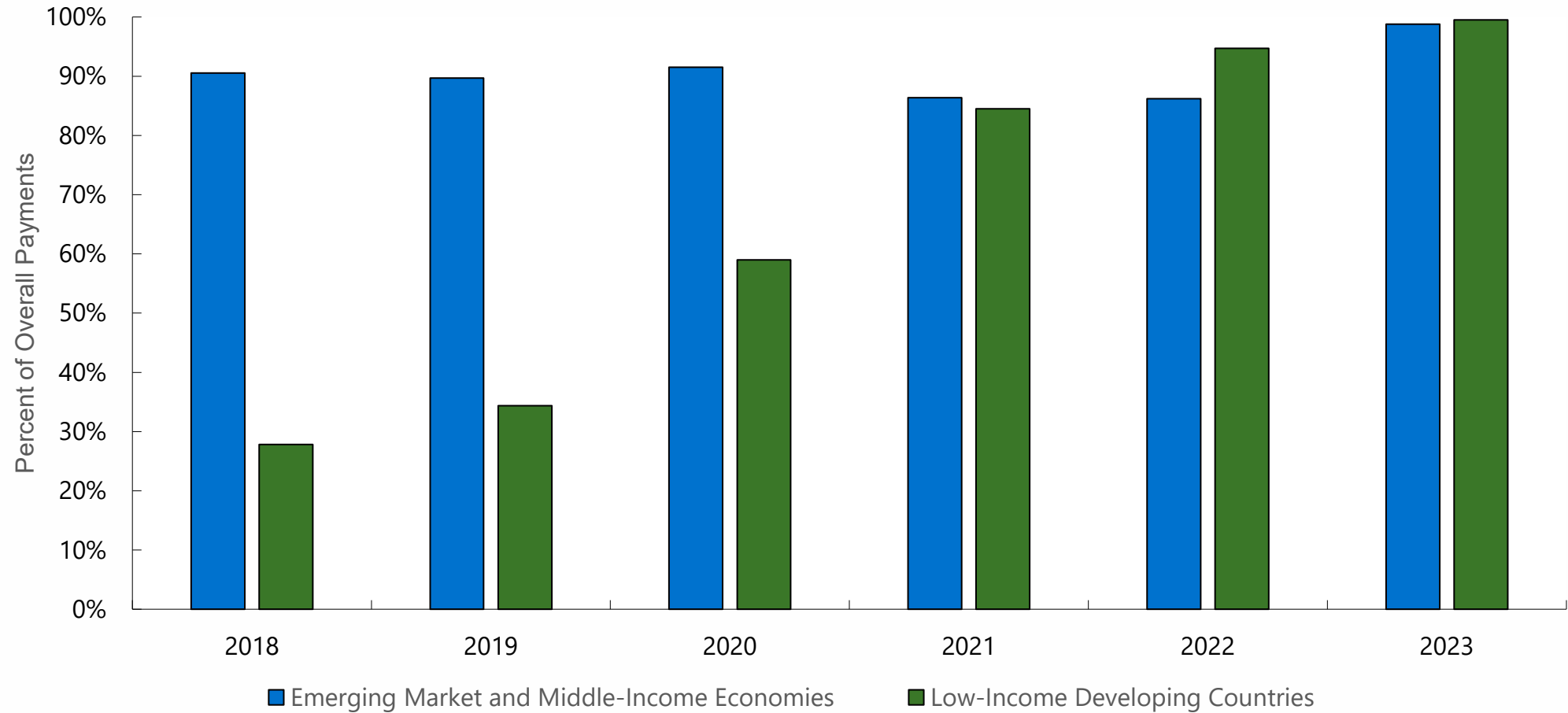
Africa: Percent of Returns Filed Electronically



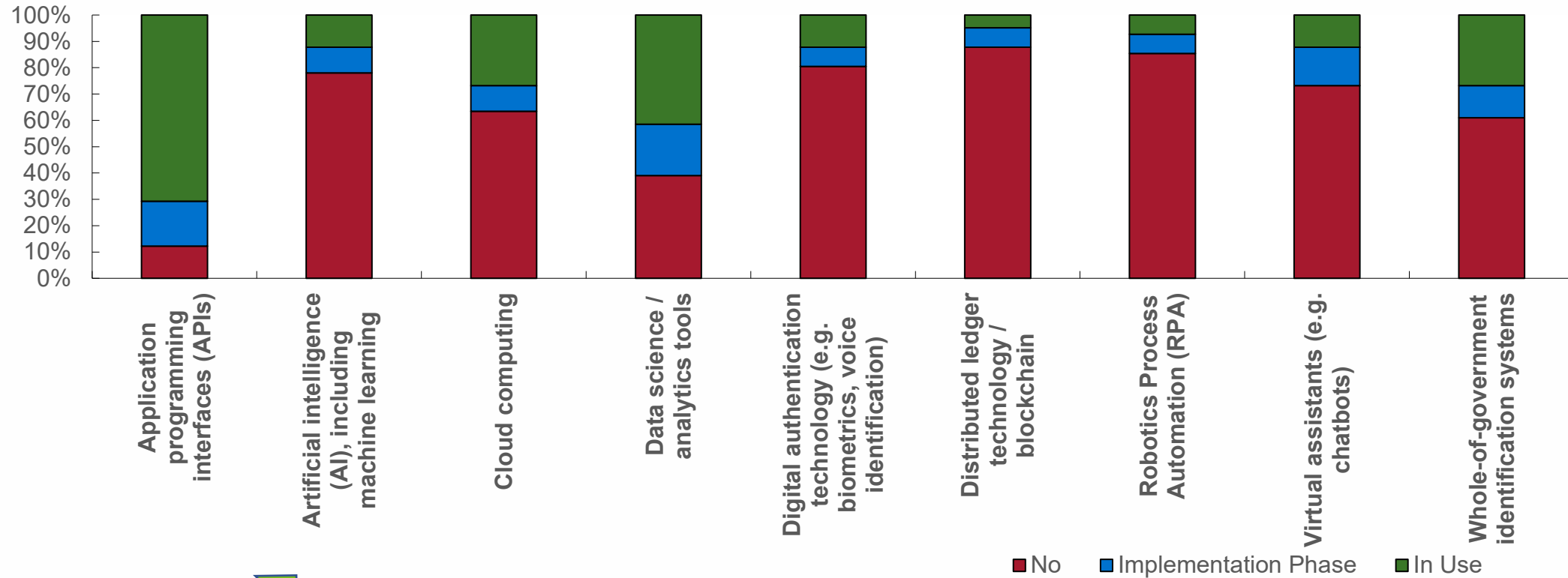
Africa: Channels for Registration



Africa: Percent of Electronic Payments (by Value)



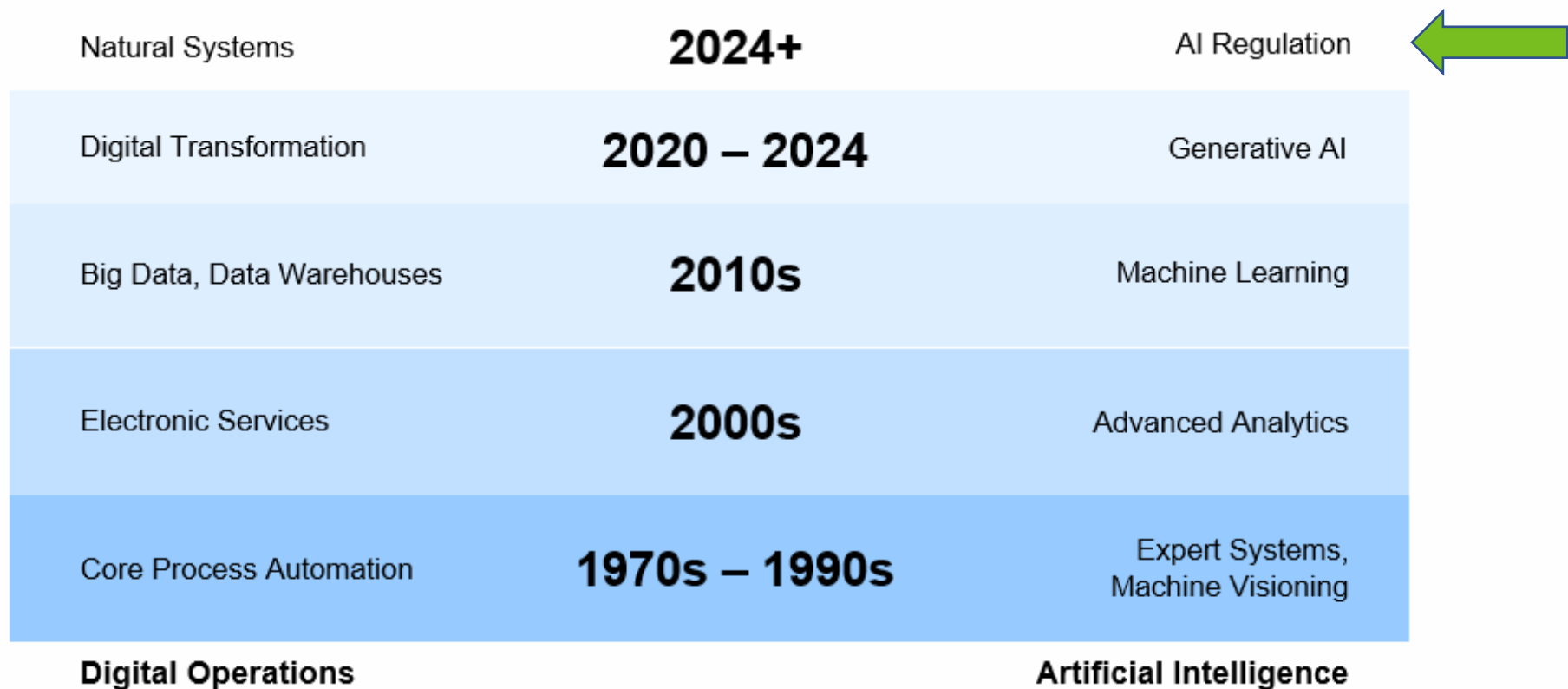
Africa: Use of Advanced Technologies



What to Know About AI

AI in Tax and Customs Administration

Figure 1. Digital Operations and AI: Fifty Years of Thematic History



Source: [Understanding Artificial Intelligence in Tax and Customs Administration](#)

AI is Likely to Become Ubiquitous in Digital Environments

Remember that Generative AI can
interact in natural language

What if this analyst was
actually an AI bot?



And this one too?

Real examples are emerging
and very impressive

Risk Reviews of Large Taxpayers...

Are We Getting Results from AI...?

AI Can Have a Positive Impact...

What We Know

Some leading administrations have measured AI impact

One Example: Australian Taxation Office

- ▶ Investigation of Data Leaks (e.g., Panama Papers): AUD \$242 million
- ▶ Nudging Programs: AUD \$142 million

* Estimates from 2022

In the IMF's work supporting analytics in other administrations, we have also compared the predictive power of AI and non-AI systems – and, in the right circumstances, ***AI is usually more effective.***

...But AI Also Presents Real Challenges...

The Most Famous Example?

Kinderopvangtoeslagaffaire (“Dutch childcare benefit affair”)

- ▶ Dutch government resigns in January 2021 after wrongfully classifying 35,000 parents as fraudsters
- ▶ Over a seven-year period, 2013 to 2020, around 40,000 individuals were incorrectly requested to reimburse benefits in amounts between €36,000 and €250,000

Final Thoughts

A Responsibility to Advance Public Interests

Imagine you have \$100 for investments in digitization...

Start with fundamentals and proven use cases first...

Three basic scenarios

1. Core operations are still on paper
2. Core operations are mixed paper and digital
3. Core operations are fully digitalized

As core operations are digitalized, more of the \$100 can be put toward innovation in context of compliance strategy

Thank you!

**Dive into the world of tax and customs
with the help of the new IMF portal**

IMF.org/RevenuePortal