Tax-AI-tion and the digital divide

How does artificial intelligence (AI) impact on tax practice

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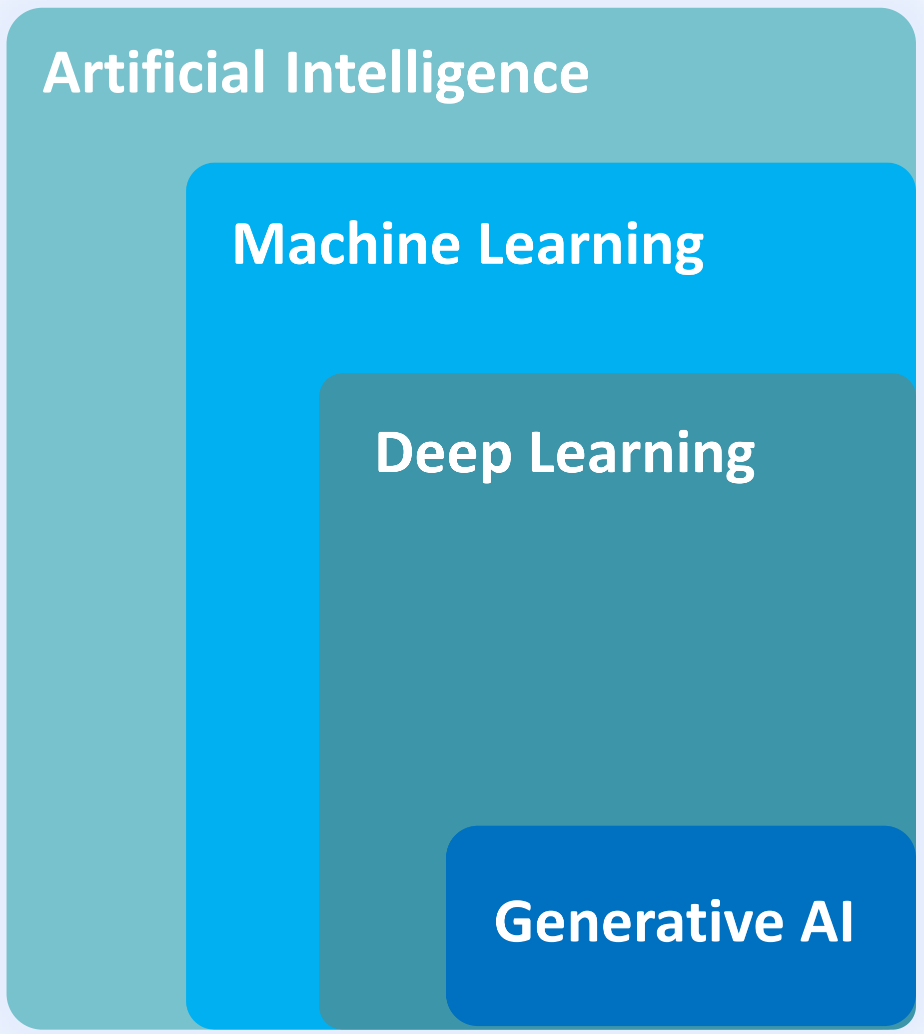
How did we get here?



Artificial Intelligence

The field of computer science that seeks to create intelligent machines that can replicate or exceed human intelligence

Machine Learning

Subset of AI that enables machines to learn from existing data and improve upon that data to make decisions or predictions

Deep Learning

A machine learning technique in which layers of neural networks are used to process data and make decisions

Generative AI

Create new written, visual, and auditory content given prompts or existing data.

What generative AI is and isn´t

It **is**

- ✓ A **predictive algorithm** that does math
- ✓ A tool used by humans, a "co-pilot"
- ✓ A process to make knowledge more accessible and useful

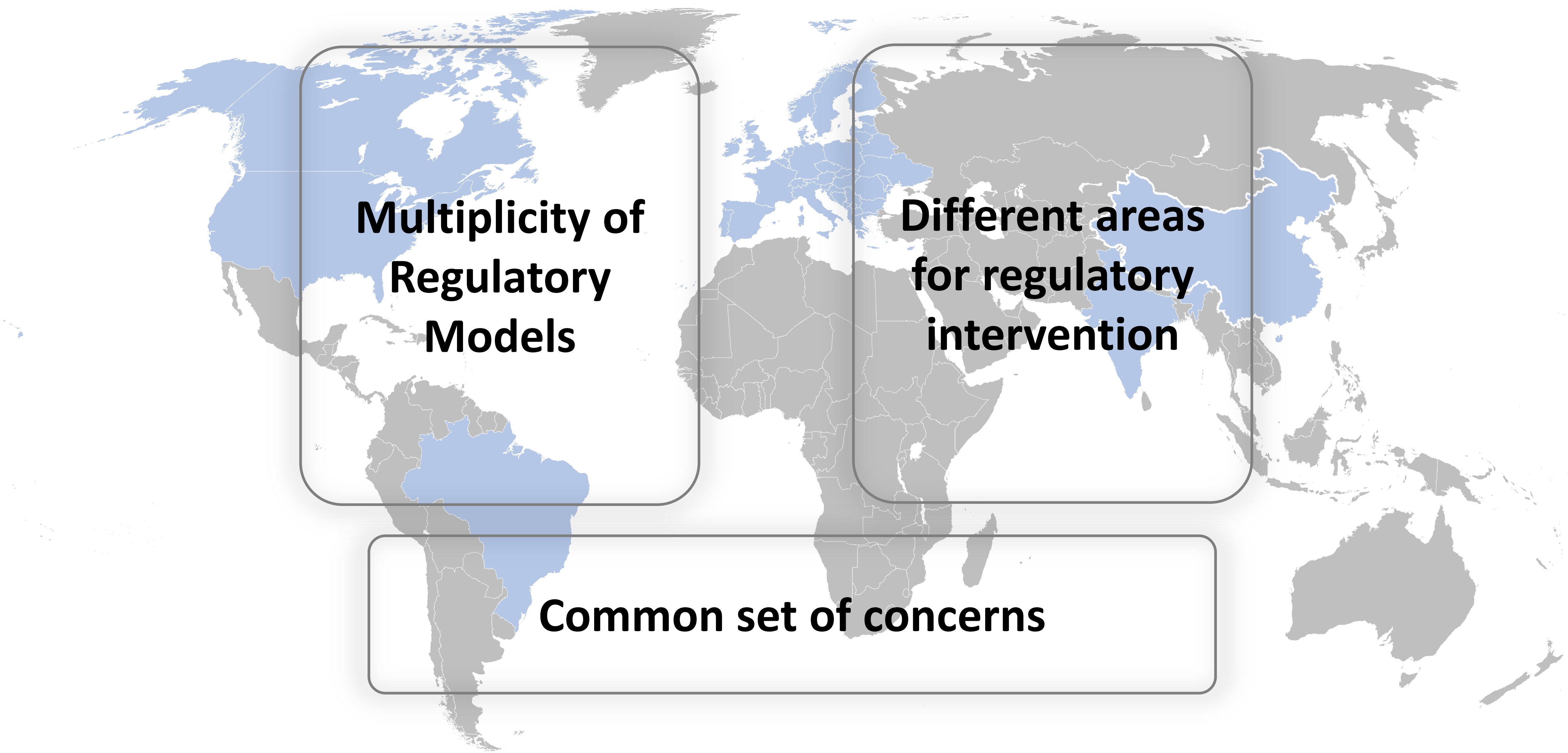
It **is not**

- × A **copy machine**
- × A **database**
- × Capable of applying **judgement** or having human cognition

What is a GPT Model?

General-purpose language prediction models that analyze, extract, summarize, and generate content based on information they've learned from extensive training data.

- Generative: Produces content, such as text and imagery.
- Pretrained: Trained on a large dataset.
- Transformer: Transforms input into output based on a deep learning.



Multiplicity of Regulatory Models

Different areas for regulatory intervention

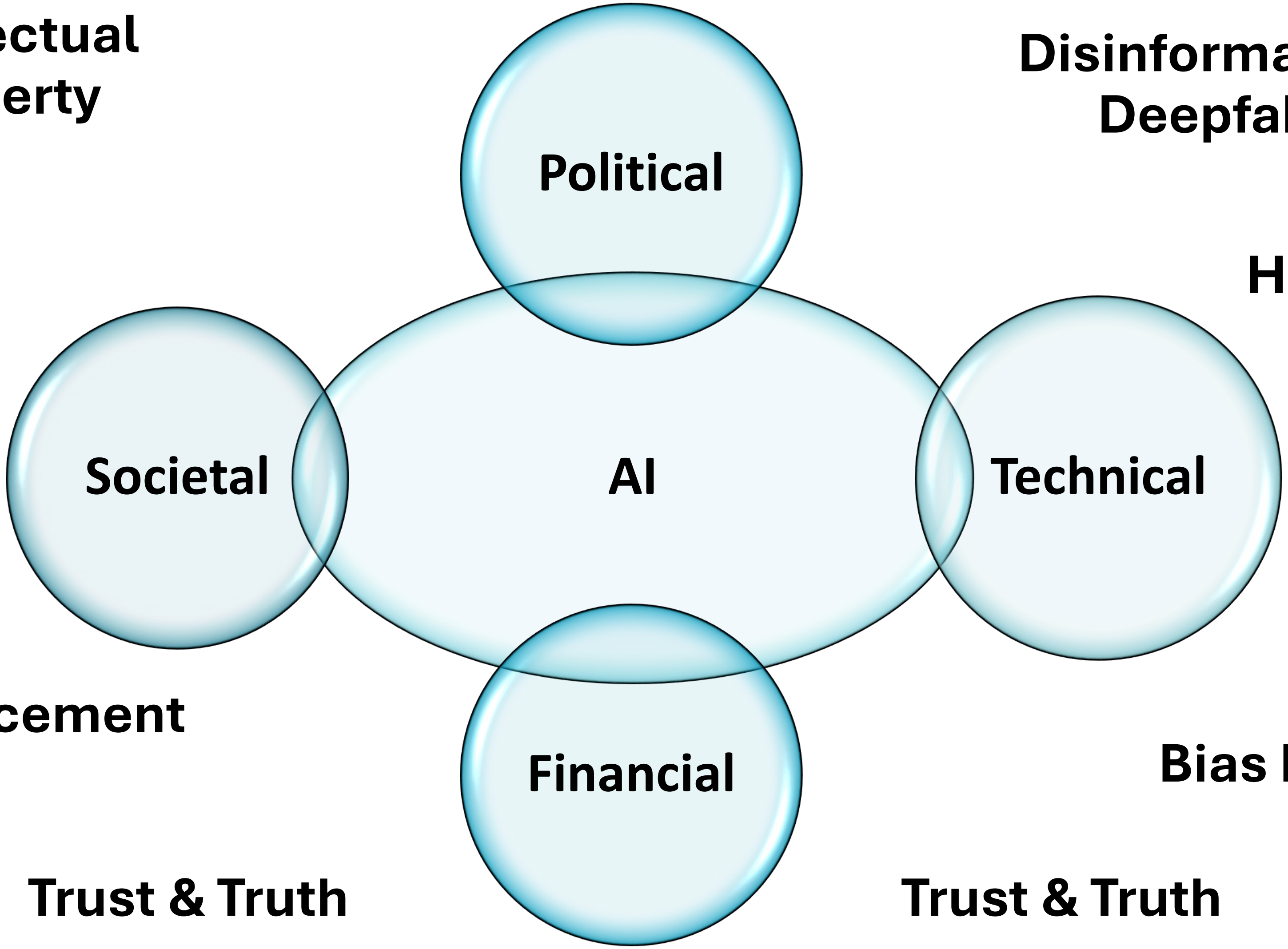
Common set of concerns

Intellectual Property

Disinformation & Deepfakes

Privacy

Hallucinations



Security

Copyright

Safety

Job displacement

Bias harm

Trust & Truth

Trust & Truth

EU AI ACT (Regulation 2024/1689)

Council of Europe AI Framework Convention

ISO/IEC 42001

White House Voluntary Commitments

NIST AI Risk Management Framework

UNESCO Santiago Declaration

G7 Hiroshima AI Process Code of Conduct

Bletchley Declaration

Legal departments and Law firms challenges

- Pressure to deliver greater business impact
- Information overload
- Consistency across teams
- Knowledge management
- Budgetary constraints
- Talent attraction and Retention
- Continued education
- Pace of technology innovation

AI in Tax: Core Areas

Taxpayer Experience

- Taxpayer Digital Agents.
- Digital Onboarding.
- Targeted Services/ Next Best Action to Taxpayers.
- New eServices Powered by AI: real time translationvoice/image to text etc.

AI Empowered Employees

- Taxpayer Intelligent Contact Centers.
- Tax compliance Advisory.
- Risk and Compliance: Fraud/Error detection, Products origin etc.
- Robotics Process Automation: data captura, audit case management etc.
- Financial Forecasting.

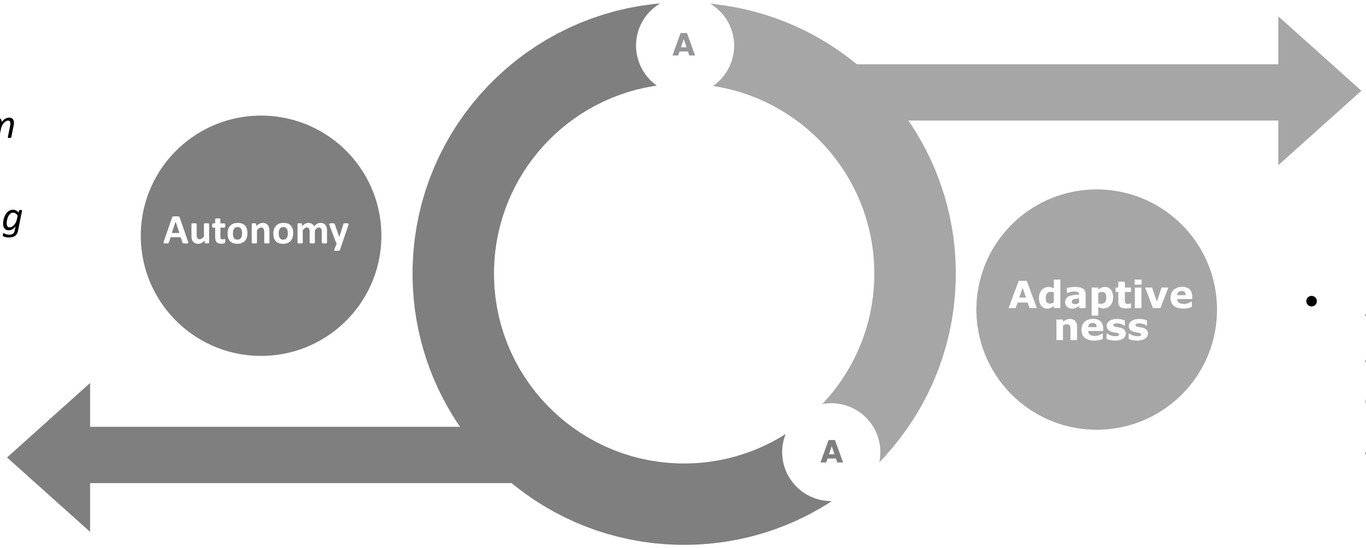
Compliance Insights & Action

- Identity Protection.
- Fraud prevention.
- Payments/AML Fraud prevention.
- Risk Scoring.
- Non-Compliance-Court trial.

AI – OECD View

AI system: *a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment.*

- *the degree to which a system can learn or act without human involvement following the delegation of autonomy and process automation by human.*



- *is usually related to AI systems based on machine learning that can continue to evolve after initial development.*

Memorandum on the Updated OECD Definition of am AI System, OECD Artificial Intelligence Papers, March 2024 No. 8

AI – OECD View

AI used by Governement Administrations may:

- Increase the productivity with more efficient internal operations and more effective public policies.

- Help the design and delivery of public policies and services more inclusive and responsive to the evolving needs of citizens and specific communities.

- Strength the accountability of governments by enhancing their capacity for oversight and supporting independent oversight institutions.

Governing with Artificial Intelligence: Are Governements Ready? OECD Artificial Intelligence Papers, June 2024, No. 20

Limits for the use of AI by Tax Administration

Legality Principle

- Taxable events cannot be presumed

General Data Protection Regulation (April 2016)

- **Decision c-175/20** – tax authorities may request personal data, but limited to the period of collection and as long as it does not exceed the duration strictly necessary to achieve the general interest intended

Artificial Intelligence Act (effective as of August 2024 , but several provisions will apply as of August 2026)

- High risk AI systems – (i) processing personal data aiming at assessing economic situation, and (ii) AI system related to law enforcement
  - Prohibited to be used for (i) assessing the risk of an individual committing criminal offenses and (ii) social scoring purpose
  - Must conduct data governance aiming at avoiding errors and completing according to the intended purpose

AI - Transformation of the Tax Administration

- Korean National Tax Service (NTS) introduced big data center in 2019
- Uses data to conduct broad analysis to assist with taxpayers' payment needs, to achieve efficiency in tax administration and fair taxation
- For taxpayers' ease in reporting, the big data center provides customized reporting information and pre-filled tax returns
- To ensure fair taxation, the big data center also manages tax evasion, malicious tax evasion tactics, unfair behavior

AI - Transformation of the Tax Administration

- NTS also introduced the ‘AI Tax Consulting’ platform to assist taxpayers with their annual tax reporting
- Provides 24-hour assistance to taxpayers
- With the introduction of the ‘AI Tax Consulting’ platform, the success rate of consultations increased from 26% to 98%
- Number of consultations increased by 2.6 times to 1,420,000 calls
- AI consultant handled 74% (1,060,000) calls
- System automatically recognizes the taxpayer’s phone number and provides customized assistance

AI - Transformation of the Tax Administration

- Majority of calls from taxpayers may be addressed by customized assistance or AI consulting

1
Taxpayer Information (29%)

2
AI Consulting (45%)

3
Advice sent Via Messaging

4
NTS Operator (24%)

- **Customized Assistance**
  - Name, address
  - Type of reporting
  - Main issue

- **AI Consulting**
  - AI conduct research of database and provides assistance

- **Real-Time Advice**
  - AI sends real time advice via phone messaging to taxpayer
  - Frequently asked Q&A, videos, how-to instructions

- **Complex Questions**
  - May speak with NTS operators for more complex questions

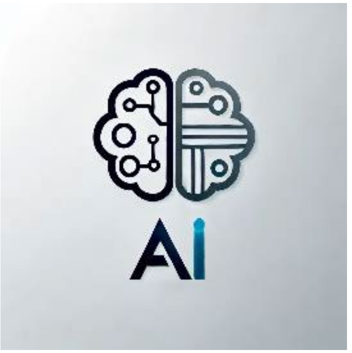
AI - Transformation of the Tax Administration

- Provides reporting assistance to SNS markets and platform services via data collected from platform operators
- Provides advance notice of capital gains tax based on collected financial information
- Combination of AI and big data to analyze tax avoidance tactics
- Tax invoices, cash invoices, data collected from family members, data collected from employer

AI – Tax Technical Challenges

Income characterization

- Multiple activities with different nature
- Subscription-based pricing
- Jurisdictional differences
- R&D incentives



Indirect taxation

- Hard to classify
- Place of supply rules
- Turnover taxes

Transfer Pricing

- AI as a new type of intercompany transaction
- Greater functional complexity
- Separate entity approach
- AI as a HTVI

Permanent establishment

- Digital presence
- Fixed place of business

Source of income

- Taxation of data
- Place of performance *vs* place of use
- Country of payer vs country of user

AI - Case Studies

Case 1 - AI-integrated Cameras System

COMPANY A

Sale of cameras / Lease of cameras.

COMPANY C

License to use software, including updates and technical support.

COMPANY D

Regular maintenance of cameras and software updates.

Pays to

Sale to

Pays to

COMPANY B

Installation of cameras in client's retail locations.

Installation and adaption of software integrated with AI in client's servers / third party provider's servers.

Remote ongoing monitoring services from provider's operations center, where algorithms continuously analyze the videos and automatically issue reports daily.

Sales to end-user

AI - Case Studies

Case 1 - AI-integrated Cameras System

Income taxation

1. Income characterization (business profits, royalties, technical services).
2. Withholding taxes.
3. PE exposure
4. R&D incentives available.

Indirect taxation

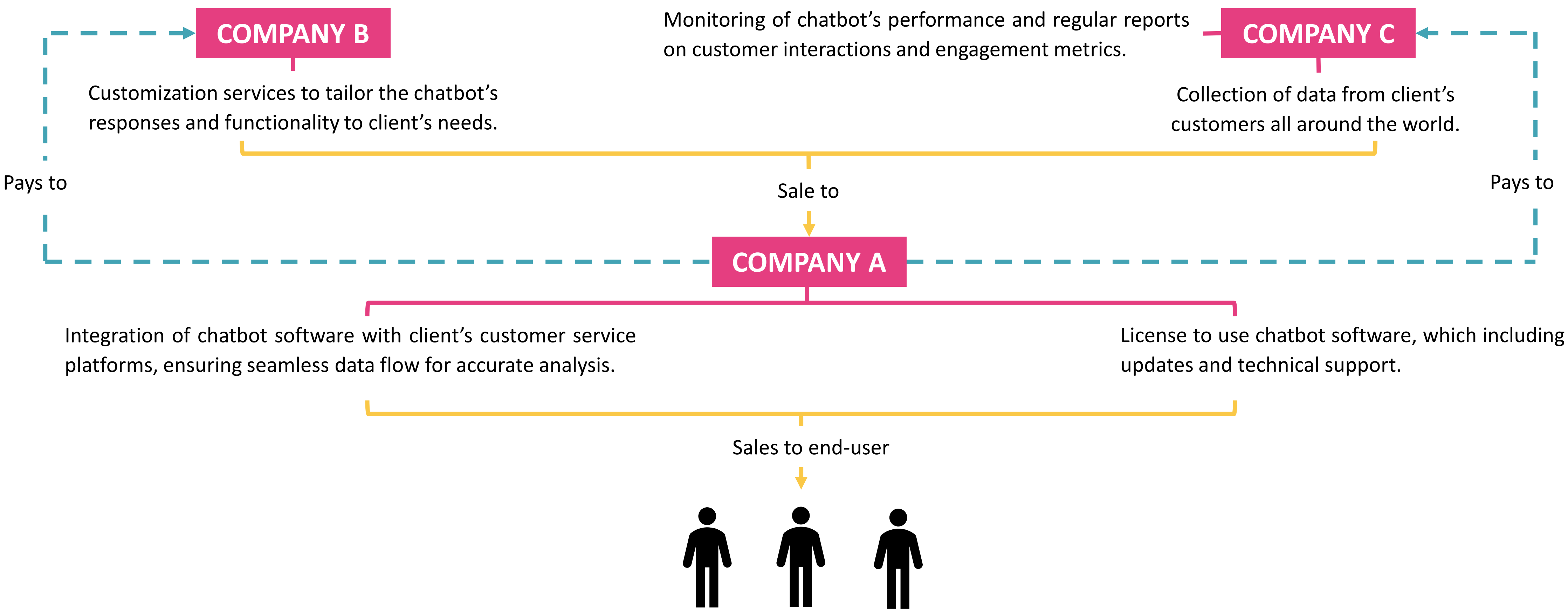
1. Classification for VAT purposes.
2. Location of each service for VAT purposes.
3. Self-assessment vs. Reverse charge mechanism.
4. Application of digital service tax.

Transfer Pricing

1. Identification and characterization of intercompany transactions.
2. Allocation of functions, assets and risks between related parties.
3. Identification of the value drivers of the business model.
4. Selection of the transfer pricing methods applicable and attribution of arm's length remunerations.

AI - Case Studies

Case 2 - AI solution on Customer Service



AI - Case Studies

Case 2 - AI solution on Customer Service

Income taxation

1. Income characterization (business profits, royalties, technical services).
2. Source income. User country?
3. Withholding taxes.
4. PE exposure
5. R&D incentives available.
6. Taxation of data collected.

Indirect taxation

1. Classification for VAT purposes.
2. Location of each service for VAT purposes.
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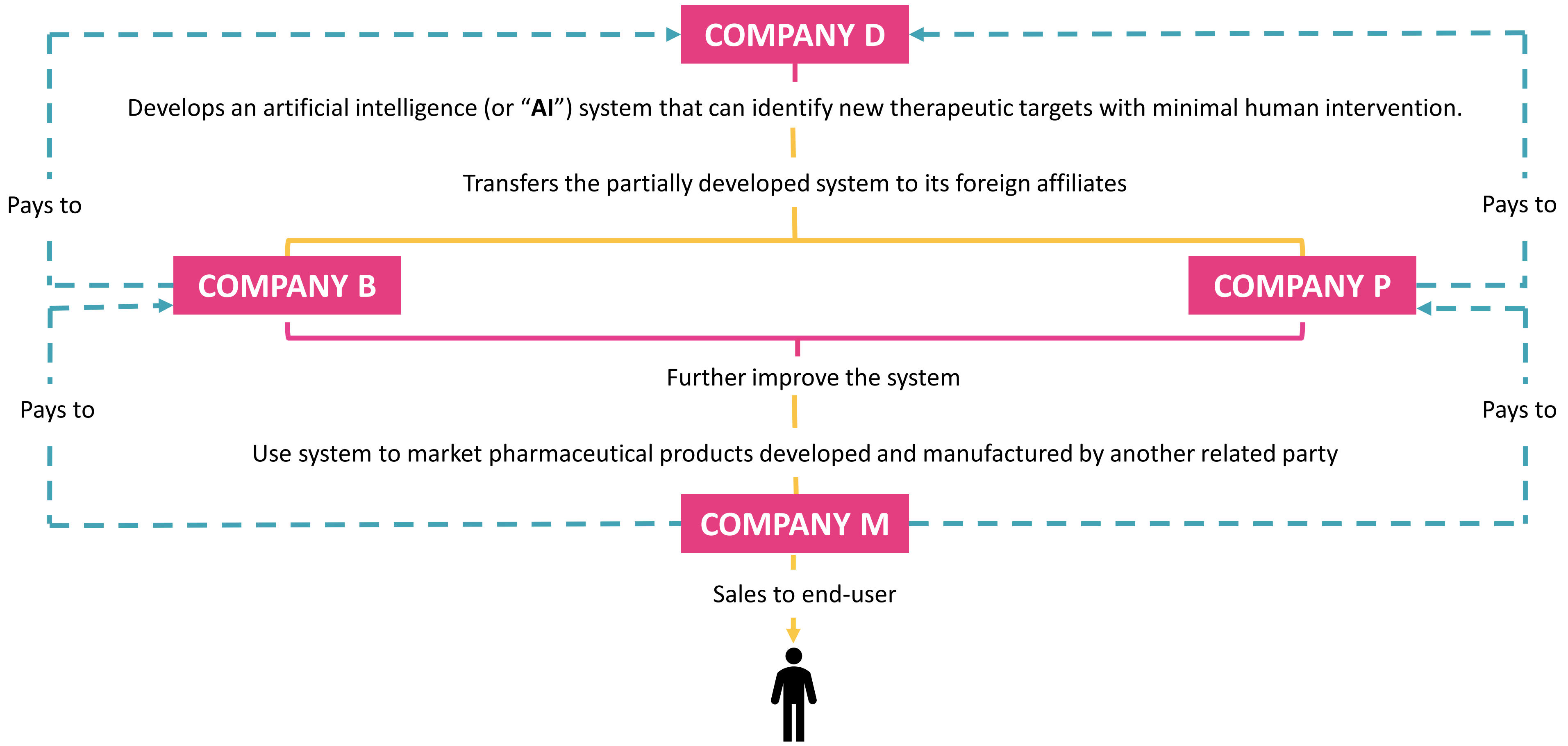
Transfer Pricing

1. Identification and characterization of intercompany transactions.
2. Allocation of functions, assets and risks between related parties.
3. Identification of the value drivers of the business model.
4. Selection of the transfer pricing methods applicable and attribution of arm’s length remunerations.
5. Integration vs fragmentation

AI - Case Studies

Case 3 – AI-Generated Intellectual Property



AI - Case Studies

Case 3 - AI-Generated Intellectual Property

Income taxation

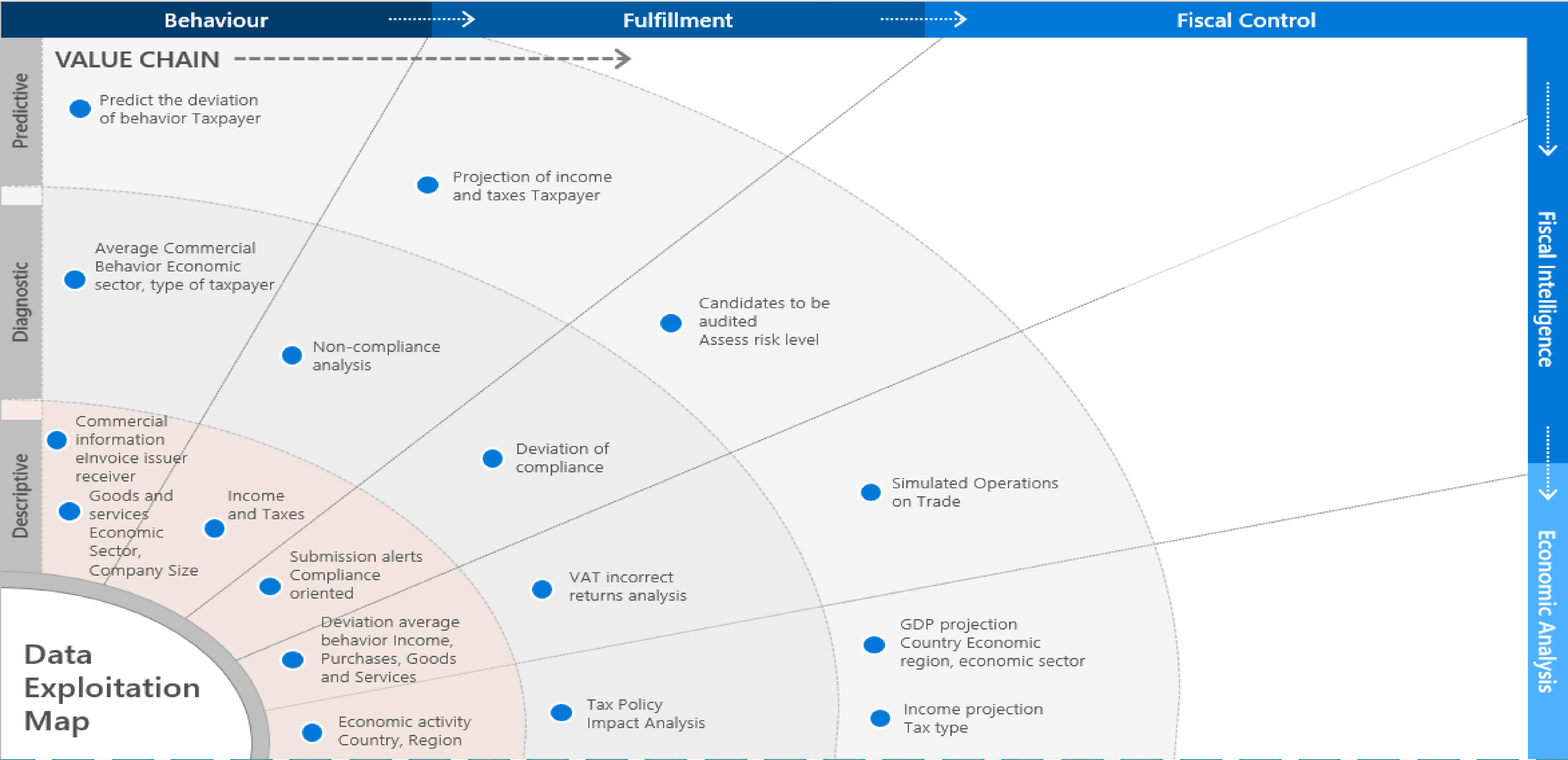
1. Income characterization (business profits, royalties, technical services).
2. Withholding taxes.
3. R&D incentives available.
4. Taxation of data collected.

Indirect taxation

1. Classification for VAT purposes.

Transfer Pricing

1. Identification and characterization of intercompany transactions.
2. Allocation of functions, assets and risks between related parties.
3. Identification of the value driver for the business model.
4. Identification of DEMPE functions (shared vs individual).
5. Identification of the intangible asset/ HTVI.
6. Legal vs economic ownership of the intangible asset.
7. Selection of the transfer pricing methods applicable and attribution of arm's length remunerations.


Behaviour
Fulfillment
Fiscal Control
VALUE CHAIN
Predictive
Diagnostic
Descriptive
Fiscal Intelligence
Economic Analysis
Predict the deviation of behavior Taxpayer
Projection of income and taxes Taxpayer
Average Commercial Behavior Economic sector, type of taxpayer
Candidates to be audited Assess risk level
Non-compliance analysis
Commercial information eInvoice issuer receiver
Deviation of compliance
Simulated Operations on Trade
Goods and services Economic Sector, Company Size
Income and Taxes
Submission alerts Compliance oriented
VAT incorrect returns analysis
Deviation average behavior Income, Purchases, Goods and Services
GDP projection Country Economic region, economic sector
Tax Policy Impact Analysis
Income projection Tax type
Economic activity Country, Region
Data Exploitation Map

EU AI Act enforcement timeline

May / June 2024	AI Act Entry into force
6 months **Nov / Dec 2024**	Prohibitions apply
9 months **Feb / Mar 2025**	Finalization of Code of Practice for GPAI models
12 months **May / June 2025**	Application of requirements on GPAI models placed on the market after May/June 2025
24 months **May / June 2026**	Application almost in full incl. high-risk requirements for use cases listed in Annex III
36 months **May / June 2027**	Application of requirements on GPAI models placed on the market before May/June 2025 Application of high-risk requirements on products covered by existing EU product safety laws

Regulation follows a risk-based approach

- **Unacceptable Risk**
  - AI systems that manipulate behavior to circumvent a users free will; systems that allow social scoring; real-time remote biometric identification in publicly accessible spaces by law enforcement (with exceptions)
  - *Use Prohibited*
- **High Risk**
- **Limited Risk**
  - AI – Human Interaction, emotion recognition, biometric categorization, content generation – for example, chatbots or deepfakes
  - *Transparency (notice)*
- **Minimal Risk**
  - not in one of the other categories – like, AI-enabled video games or spam filters

- **Critical infrastructure** – where life and health at risk (like utilities)
- **Remote biometric identification**
- **Education** – determine access to education
- **Safety components in products** – medical devices, for example, robot-assisted surgery, automobiles
- **Employment, workers management and access to self-employment -** recruitment, termination/promotion of employees, or evaluating or monitoring performance
- **Essential services** – like determining creditworthiness or public benefits
- **Law enforcement** - that may interfere with fundamental rights
- **Migration, asylum and border control**
- **Administration of justice or democratic processes**

High-Risk

- Establish risk management system for the lifecycle of the AI system
- Conformity assessment (ex-ante) & post-market monitoring
- High quality datasets
- Ensure transparency in design and development to provide and adequate information to the user
- Enable logging of activity to ensure traceability of results
- Create detailed technical documentation
- Enable appropriate human oversight
- Meet level of robustness, security and accuracy
- CE mark & registration

Obligations for High-Risk AI Systems

Impact of the Regulation

- Understand how AI systems are intended to be used or could be used.
- Assessment of systems, including focus on identifying and mitigating discrimination.
- Technical documentation and recordkeeping – capabilities and limitations, data, training, testing, validation processes, algorithms.
- Transparency – for high-risk systems as a provider will have to at a minimum explain systems to users.
- Ensure data quality.

Initial Reactions to Requirements

- Definition of AI – includes “search and optimization” – is overbroad
- Aspirational – vs. technically feasible, for example, data sets must be “error free” and “complete,” or determining the “expected lifetime” of a system
- Allocation of responsibility of providers/developers and users/deployers needs clarification – for example where providing foundational vs. finished systems
- Articulating (and testing) intended uses could be a challenge – we may not know uses our customers may make of our systems
- What will be sufficient to meet regulatory obligations – for example, determining level of accuracy that may turn on customer use and data

Annex III

High-Risk AI Systems

ANNEX III
HIGH-RISK AI SYSTEMS REFERRED TO IN ARTICLE 6(2)

High-risk AI systems pursuant to Article 6(2) are the AI systems listed in any of the following areas:

1. Biometric identification and categorisation of natural persons:
   (a) AI systems intended to be used for the 'real-time' and 'post' remote biometric identification of natural persons;
2. Management and operation of critical infrastructure:
   (a) AI systems intended to be used as safety components in the management and operation of road traffic and the supply of water, gas, heating and electricity.
3. Education and vocational training:
   (a) AI systems intended to be used for the purpose of determining access or assigning natural persons to educational and vocational training institutions;
   (b) AI systems intended to be used for the purpose of assessing students in educational and vocational training institutions and for assessing participants in tests commonly required for admission to educational institutions.
4. Employment, workers management and access to self-employment:
   (a) AI systems intended to be used for recruitment or selection of natural persons, notably for advertising vacancies, screening or filtering applications, evaluating candidates in the course of interviews or tests;
   (b) AI intended to be used for making decisions on promotion and termination of work-related contractual relationships, for task allocation and for monitoring and evaluating performance and behavior of persons in such relationships.
5. Access to and enjoyment of essential private services and public services and benefits:
   (a) AI systems intended to be used by public authorities or on behalf of public authorities to evaluate the eligibility of natural persons for public assistance benefits and services, as well as to grant, reduce, revoke, or reclaim such benefits and services;
   (b) AI systems intended to be used to evaluate the creditworthiness of natural persons or establish their credit score, with the exception of AI systems put into service by small scale providers for their own use;
   (c) AI systems intended to be used to dispatch, or to establish priority in the dispatching of emergency first response services, including by firefighters and medical aid.
6. Law enforcement:
   (a) AI systems intended to be used by law enforcement authorities for making individual risk assessments of natural persons in order to assess the risk of a natural person for offending or reoffending or the risk for potential victims of criminal offences;
   (b) AI systems intended to be used by law enforcement authorities as polygraphs and similar tools or to detect the emotional state of a natural person;
   (c) AI systems intended to be used by law enforcement authorities to detect deep fakes as referred to in article 52(3);
   (d) AI systems intended to be used by law enforcement authorities for evaluation of the reliability of evidence in the course of investigation or prosecution of criminal offences;
   (e) AI systems intended to be used by law enforcement authorities for predicting the occurrence or reoccurrence of an actual or potential criminal offence based on profiling of natural persons as referred to in Article 3(4) of Directive (EU) 2016/680 or assessing personality traits and characteristics or past criminal behaviour of natural persons or groups;
   (f) AI systems intended to be used by law enforcement authorities for profiling of natural persons as referred to in Article 3(4) of Directive (EU) 2016/680 in the course of detection, investigation or prosecution of criminal offences;
   (g) AI systems intended to be used for crime analytics regarding natural persons, allowing law enforcement authorities to search complex related and unrelated large data sets available in different data sources or in different data formats in order to identify unknown patterns or discover hidden relationships in the data.
7. Migration, asylum and border control management:
   (a) AI systems intended to be used by competent public authorities as polygraphs and similar tools or to detect the emotional state of a natural person;
   (b) AI systems intended to be used by competent public authorities to assess a risk, including a security risk, a risk of irregular immigration, or a health risk, posed by a natural person who intends to enter or has entered into the territory of a Member State;
   (c) AI systems intended to be used by competent public authorities for the verification of the authenticity of travel documents and supporting documentation of natural persons and detect non-authentic documents by checking their security features;
   (d) AI systems intended to assist competent public authorities for the examination of applications for asylum, visa and residence permits and associated complaints with regard to the eligibility of the natural persons applying for a status.
8. Administration of justice and democratic processes:
   (a) AI systems intended to assist a judicial authority in researching and interpreting facts and the law and in applying the law to a concrete set of facts.

AIMS: ISO/IEC 42001

Published December 2023.

International standard certifiable by third parties

Specifies requirements for establishing, implementing, maintaining and continually improving an AI management system *e.g.*, societal impacts, data governance, AI lifecycle.

Help an organization develop, provide or use AI systems responsibly in pursuing its objectives and meet applicable regulatory requirements.

- Assessed use of AI in their line of business
- Identified risk levels
- Implemented appropriate level of governance to mitigate those risk levels

Global regulators are identifying the role for AIMS in showing compliance with AI regulatory frameworks.