IOTA Digital Workshop
"Using AI Solutions to Detect Tax Evasion"

3-4 December 2025
Digital Event via Microsoft Teams

SUMMARY OF GROUP DISCUSSION SESSION 1 – How to plan, implement and evaluate AI solutions for detecting tax evasion

DAY 1 - Wednesday, 3 December 2025, 11:50 - 13:00 (CET)

GROUP 1

1. Key Organisational, Data, and Regulatory Conditions for Designing and Implementing AI Solutions

Organisational Conditions

- **Multidisciplinary teams**: Combining tax experts, IT specialists, and data scientists is essential for effective AI implementation (Portugal).

- **Training and education**: Staff must be trained to interpret AI outputs; AI developers need guidance on tax-specific contexts (The Netherlands).

- **Dedicated resources and time**: Successful projects require exclusive teams, sufficient time, and management buy-in (Portugal).

- **Cultural readiness**: Promote awareness and acceptance of AI within tax administrations.

Data Conditions

- **Data quality and governance**: High-quality, well-documented, and consolidated data is critical; poor data undermines AI effectiveness (Bulgaria, Spain).

- **Clear definitions**: Precise definitions of tax evasion and risk indicators are necessary for model accuracy (Portugal).

- **Data integration**: Ability to combine and analyse diverse data sources for meaningful insights.

Regulatory Conditions

- **Compliance with legal frameworks**: GDPR and fiscal regulations must be respected; risk analysis for personal and tax data is essential (The Netherlands, Bulgaria).

- **Internal guidelines**: Policies on AI usage, transparency, and ethical standards should be established (Portugal).

2. Integrating AI-Driven Insights into Compliance and Enforcement Processes

Integration Strategies

- **Human-in-the-loop**: AI should support, not replace, human decision-making; final enforcement decisions remain with auditors (Portugal, Spain).

- **Workflow integration**: AI outputs should feed into existing case management systems with clear recommendations (Spain).

- **Incremental adoption**: Start with compliance checks and risk scoring before moving to complex enforcement tasks.

Transparency and Trust

- **Clear communication**: Inform taxpayers that AI is one of several tools used, not the sole basis for selection (Portugal).

- **Proportionality and fairness**: Avoid over-reliance on AI; maintain traditional selection methods alongside AI-driven insights.

Operational Considerations

- **Bias mitigation**: Use random audits and feedback loops to detect and correct bias in AI models (The Netherlands).

- **Risk scoring and cut-offs**: Apply thresholds to reduce false positives and limit intrusive follow-ups (discussion points).

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3. Criteria and Performance Indicators for Evaluating AI Solutions

Technical Metrics

- **Accuracy and false positives**: Monitor false positive rates and overall precision of case selection (Portugal).

- **Model robustness**: Test performance over time and under changing tax laws (Portugal).

Operational Indicators

- **Hit rate**: Percentage of AI-selected cases that lead to confirmed non-compliance or fraud (The Netherlands, Portugal).

- **Efficiency gains**: Reduction in manual checks, improved case handling time, and resource savings.

- **Historical back-testing**: Apply models to past data to validate predictive power and relevance (Portugal).

Strategic and Ethical Considerations

- **Bias detection**: Compare AI-driven selections with random audits to ensure fairness (The Netherlands).

- **Business impact**: Track cost reduction, time saved, and revenue uplift from AI-driven processes (Bulgaria).

- **Continuous improvement**: Implement feedback loops for model refinement and process optimization.

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GROUP 2

1. Key Organisational, Data, and Regulatory Conditions

Organisational Conditions:

- Strategic leadership and political commitment (Example: Greece stressed that top management must invest in AI).

- Dedicated multidisciplinary teams (Example: Bulgaria highlighted collaboration between tax experts and IT specialists).

- Skills and capacity building (Example: Sweden actively recruiting AI programmers).

Data Conditions:

- Data quality and completeness (Example: Belgium emphasised accurate datasets).

- Scope of data (Example: Bulgaria exploring internal and open-source data).

Regulatory Conditions:

- Adoption and compliance with key regulations as GDPR and the EU AI Act (Example: Sweden interpreting AI Act for crime prevention).

- Clear accountability and governance frameworks (Example: Bulgaria stressed strong national frameworks).

2. Integrating AI-driven Insights into Compliance and Enforcement

Transparency and Explainability:

- Highlighting the presentation of the Danish colleague that the tax administration developed models explaining risk scores to taxpayers.

- An example of a transparency mechanism for AI systems would be the UK public 'Algorithmic Transparency Records'.

Proportionality and Fairness:

- Belgium ensures human review of AI outputs.

- Sweden monitors for bias in supervised models.

Operational Integration:

- Bulgaria highlighted the importance of risk scoring taxpayers for follow-up audits.

- Advisory bodies suggested ethical oversight of AI solutions.

3. Criteria and Performance Indicators

Effectiveness Indicators:

- Detection speed (Example: Poland and Bulgaria emphasised reducing the time between fraud occurrence and the audit detection, as it should be closer to real-time).

- Accuracy of data provided by taxpayers and reduction of errors (Example: Romania uses automated validation for SAF-T).

Financial Impact:

- Amount of liabilities identified and recovered (Example: Belgium measures success by recovered tax).

Operational Efficiency:

- Number of cases initiated from AI outputs.

- Real-time capabilities (Example: Sweden exploring real-time error detection).

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GROUP 3
Executive Summary

Introduction

This summary captures the key insights from a group discussion on how tax administrations can design, implement, and evaluate AI solutions for detecting tax evasion. The conversation focused on organisational, data, and regulatory prerequisites; strategies for integrating AI into compliance processes; and criteria for assessing the effectiveness of these solutions. The goal is to ensure responsible, transparent, and impactful use of AI while maintaining taxpayer trust.

1. Key Organisational, Data, and Regulatory Conditions

Organisational

- **Cross-functional collaboration**: Legal, IT/data analytics, and compliance teams must work together.

- **Skills development**: Retraining tax/customs professionals as data specialists and hiring new graduates through internships.

- **Cultural readiness**: Promote awareness and acceptance of AI within the organisation.

Data

- **Data inventory and quality**: Comprehensive, well-managed data assets are essential.

- **Clear definitions**: Define tax evasion precisely for effective model training.

- **Security and privacy**: Ensure secure environments and offline AI solutions for sensitive data.

Regulatory

- **Compliance with frameworks**: Adhere to GDPR, EU Data Act, and anticipate EU AI Omnibus.
- **Internal rules**: Establish clear guidelines for AI tool usage and data sharing.

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2. Integrating AI-Driven Insights into Compliance and Enforcement

Integration Strategies

- **Human-in-the-loop**: AI provides recommendations; humans make final decisions.
- **Explainability**: Models should be documented, reproducible, and interpretable.
- **Feedback loops**: Audit outcomes should feed back into models for continuous improvement.

Transparency and Trust

- **Clear communication**: Inform taxpayers when AI is used in case selection.
- **Proportionality challenges**: Address shrinking datasets through synthetic data or randomised audits.

Operational Considerations

- **Randomised audits**: Used to evaluate model performance and maintain fairness.
- **Collaboration with auditors**: Encourage feedback for better data labeling and model refinement.

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3. Criteria and Performance Indicators for Evaluation

Technical Metrics

- **Beyond accuracy**: Use operationally relevant metrics, not just classical ML scores.
- **Forward-looking testing**: Assess models on future data for robustness.

Operational Indicators

- **Hit rate**: Success rate of audits selected by AI compared to previous methods.

- **Desk audit success**: Use "hit or miss" indicators from auditors.

- **Efficiency uplift**: Even modest improvements (50–60%) in case selection are valuable.

Strategic and Ethical Considerations

- **Economic and ethical impacts**: Evaluate fiscal outcomes, fairness, and compliance improvements.

- **Composite KPIs**: Combine tax revenue gains, compliance rates, and benchmarking against previous systems.

- **Transparency of results**: Public reporting of outcomes to demonstrate value and maintain trust.

Key Takeaway:

Successful implementation of AI in tax administration requires strong organisational coordination, robust data governance, clear regulatory frameworks, and continuous evaluation using multidimensional indicators. Transparency and human oversight remain critical for maintaining taxpayer trust and ethical standards.

Recommendations:

- **Invest in capacity building**: Develop internal expertise through training and targeted recruitment.

- **Establish governance frameworks**: Create clear policies for AI use, data security, and ethical standards.

- **Prioritize explainability and transparency**: Ensure models are interpretable and communicate AI involvement to taxpayers.

- **Implement feedback mechanisms**: Collect operational input to refine models and improve performance.

- **Adopt multidimensional evaluation**: Use technical, operational, and strategic indicators to measure success.

- **Benchmark and share results**: Compare outcomes with previous methods and publish results to build trust.