Tax Intelligence System

Test Drive Introduction
How can Situational Reasoning help me with tax compliance issues?

The HMX Tax Intelligence test drive enables you to explore the many ways situational decision support improves tax law compliance through monitoring of transactions, detection of non-compliance, and learning of new non-compliance patterns.

Goal-Driven

Tax Authorities focus on the goals that must be achieved to maintain and enhance compliance and creating a fair business environment.

Situational

Tax Authorities satisfy their goals through a process of assessing situations, like non-compliance and other important patterns of behavior in the tax-paying community.

Learning

Tax Authorities continually learn new patterns of behavior, relying on historical and real-time data as well as their own expertise to build a better knowledge base.

Decision Support

New capabilities enhance organizational decision support in multiple ways including case management, reporting, tracking, auditing, automated bots.

Let's consider the ways to benefit from Tax Intelligence

HMX Corporation/ 2021
TAX INTELLIGENCE SYSTEM
Detailed Walkthrough

Log in
Overview
Case Management & Fraud Dashboards
Real-time Business Intelligence
Sales Suppression Use Case
Learning from Tax Data
About & More

Managers apply the Case Management Dashboard to review tax revenues and tax filings flagged by auditors.

Auditors view details of tax transactions and analytics in monitoring dashboards, which are updated in real time to reflect current conditions in a Situation Report focused on meeting Tax Authority goals.

Furthermore, when Auditors want to review compliance effectiveness, a modelling tool is available for insights on taxpayer segmentation.

Auditors set up follow-up processes with owners, view the number of incompliance issues cases reported each month and develop treatments for each issue to move them to resolution.

Auditors use the Fraud Dashboard to spot potential areas of incompliance, see how Tax Authority goals for fairness and revenue capture are met by configuration of incompliance situation-rules, and assess the ongoing effectiveness of these rules.

Tax Authorities in many jurisdictions are concerned about sales suppression to create a fair business environment and capture lost tax revenue.

Auditors and other tax authorities use visualizations to see trends develop in real-time.

Technical users apply Tax Intelligence to detect new patterns.

New patterns in vendor behavior occur with changing business models and economic conditions.

Incompliance patterns continually shift and move, and Big Data amplifies the problem of finding patterns.

Technical users apply Tax Intelligence to detect new patterns.

Learn more about Situational Reasoning at HMX and how Tax Intelligence can help you.

Log in with your Microsoft email address.

Free 30-day trial.

Describes the different organizational roles in a Tax Authority benefiting from Tax Intelligence, from Managers to Auditors and the Taxpayer community.
Meet the Team
Tax Officials face many challenges

The team challenges are:
- Gaining insight into tax returns
- Maintaining a fair business environment
- Eliminating fraud
- Forecasting tax revenues
- Sharing knowledge
- Creating strong and resilient government

The Team
Managers, Auditors, Analysts

Tax administration teams want solutions that provide insights into the overall collection process, risk assessments, case management and decision support that enhance the performance of the entire team.
What are the important organizational roles involved?

- Case Management & Fraud Detail dashboards
- Business intelligence from real-time monitoring data
- Detecting sales suppression in a real-time tax scenario
- Learning patterns in tax data
Trial Test Drive log-in

Opens with a description of roles

Accesses the dashboards

Identification
Margaret, Tax Official

Trial Test Drive log-in

Opens with a description of roles

Accesses the dashboards

Identification

Trial Access

Gather Insights

Remote Office

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The Tax Dashboard provides Tax Officials with a high-level view of activities, audit personnel, and tax revenue related to compliance - in real-time where available.

Challenges include:
- Gaining insight on revenue
- Identifying fraud
- Forecasting revenue
- Preventing fraud

Click on the Tax Auditor list to view their cases.

Ctrl-click numbers in the middle center to view impact on Tax Revenue Projection.

Numbers reflect tax authority level of compliance monitoring (0=none, 0.3=extensive)
Tony, Tax Auditor

Access Fraud Dashboard

Real-time monitoring of sales suppression

Accesses the Tax Dashboards

Trial Access

Sales Suppression
Access the Fraud Dashboard

Real-time monitoring of sales suppression

Learning new patterns from tax data

Click the Play button to simulate a sales suppression scenario

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Tony, Tax Auditor

Access the Fraud Dashboard

Real-time monitoring of sales suppression

Learning new patterns from tax data

Tony, Tax Auditor

Use Power BI’s interactive features to change dates and view cash-to-credit ratios reported by different vendors.

The display at right is a situation report with details on situations of interest to Auditors.

Click on a vendor name at center-top to display transactions and cash-to-credit information for that vendor.

Several vendors are connected to a Virtual Sales Data Collector (VSDC). Click on a VSDC to see the VSDC’s vendors and transactions.

For one of the non-compliant vendors identified on the previous display, use the visual interactions on this display to confirm low cash-to-credit ratio for the vendor.

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Tax data in this case show a pattern of missing transactions:
- at a certain time of day,
- by a group of vendors located close together and owned by the same parent company.

The pattern suggests either deliberate sales suppression or an equipment problem.
Linda, Tax Analyst

*Real-time monitoring of sales suppression*

*Learning new patterns from tax data*

*Get more information on HMX Tax Intelligence*

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**Learning Patterns**

**Detect System Anomalies**

A goal of the tax authority is to detect system anomalies that might indicate fraudulent practices.

Transaction counts over time can indicate disconnected monitoring devices.

On the previous display a cluster of four vendors reporting zero transactions was detected during a period of several hours.

Use visual interactions to confirm that the 4 vendors in the cluster have a gap in reported transactions during the same time period.

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Use Power BI's interactive features to change dates and vendors to identify those not reporting transactions.
Strengthening the partnership between human experts and AI

At HMX, we believe human experts, augmented by machine learning, make better decisions than either can make alone. To bring this human-machine partnership to the market we have opened the AI “black box” with explainable artificial intelligence (XAI).

Accelerating detection of fraud, eliminating corruption with CRex™ explainable AI

Our XAI solutions go beyond traditional pattern matching, profile segmentation and rules processing to detect fraud, providing explainability that makes AI actionable in real-world compliance.

Visit us at hmx.ai or email us at info@hmx.ai.