



Australian Government
Australian Taxation Office

Artificial intelligence for compliance risk management in domestic and cross-border trade

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Our approach to AI augmentation

Manual activity
 Staff-driven, semi-automated activity
 AI-powered, fully-automated activity

Our analytics cycle

	1. Data Acquisition	2. Data Validation	3. Data Preparation	4. Data Analysis	5. Strategic Insights
<p>Original approach 2024</p> <p>End-to-end manual analysis</p>	<p>Acquire aggregate transaction data from the banks via a formal notice</p> <p>Stakeholder engagement</p> <ul style="list-style-type: none"> Initial acquisition in 2023 with some data quality issues Long lead time due to the initial set up of providers' data extraction algorithms Incomplete data 	<p>Undertake data quality assessment and refine as required</p> <p>MS Excel</p> <ul style="list-style-type: none"> Long lead time due to the need for the banks to refine the dataset 	<p>Consolidate and cleanse datasets to create a unified entity view of offshore merchants</p> <p>MS Excel / RStudio (basic)</p> <ul style="list-style-type: none"> 'Fuzzy' match of offshore merchants (names only) through basic scripting Consolidate the population size by 51% (from 17,781 to 9,002 merchants) 	<p>Transform the prepared dataset into actionable insights for compliance treatment</p> <p>MS Excel</p> <ul style="list-style-type: none"> Manual profiling of a sub-set of data (600 entities) by sales. Manual research of public information, including legal names, websites, addresses, emails. 	<p>Identify population-level insights to inform critical trends</p> <p>MS Excel</p> <ul style="list-style-type: none"> Strategic insights at a subset of the entire population Limited insights across the entire population
<p>Current approach 2025</p> <p>Setting up the foundation for AI-driven automation</p>	<p>Stakeholder engagement</p> <ul style="list-style-type: none"> Early stakeholder engagement Settled data extraction algorithms Shortened lead time Accurate and complete data 	<p>MS Excel</p> <ul style="list-style-type: none"> Accurate and complete data 50% reduction from 16 weeks to 7 weeks. 	<p>RStudio (advanced)</p> <ul style="list-style-type: none"> Accurate matching through advanced scripting (names and other variables) Consolidate the population size by 60% (from 21,261 to 8,598) 87% time reduction from 8 weeks to 1 week. 	<p>Co-pilot</p> <ul style="list-style-type: none"> Co-pilot reduced profiling time from 10 weeks to 3.5 hrs. Full dataset coverage improved population view Automated (small batches) research of public information and profile document generation. 	<p>MS Excel / Co-pilot</p> <ul style="list-style-type: none"> Stratification of 100% of population. Population-level insights on industry trends, churn rate, shifts in the country of incorporation. Co-pilot query supplemented by manual analysis through Excel.
<p>Next phase (by June 2026)</p> <p>Automation across most analytics activities</p>	<p>Stakeholder engagement</p> <ul style="list-style-type: none"> Settled data extraction algorithms Timely responses Accurate and complete data 	<p>MS Excel</p> <ul style="list-style-type: none"> Accurate and complete data 	<p>RStudio (advanced)</p> <ul style="list-style-type: none"> Auto-run pre-defined R-script to consolidate future datasets Human validation 	<p>Co-pilot / Fivecast / Nexus</p> <ul style="list-style-type: none"> Automated (at scale) research of public and internal information through specialised, AI-powered intelligence tool. Human validation 	<p>Co-pilot/Fivecast/Nexus</p> <ul style="list-style-type: none"> Automated population analysis and insight generation Human validation
<p>Beyond the horizon (From July 2026)</p>	<p>ATO AI Acceleration Program</p> <ul style="list-style-type: none"> An enterprise-wide project to move beyond co-pilot by building core AI infrastructure capabilities tailored for targeted ATO taxpayer, legal and risk-specific datasets. Aimed at scaling AI throughout the ATO to increase compliance, assurance, and confidence in the tax system. 				

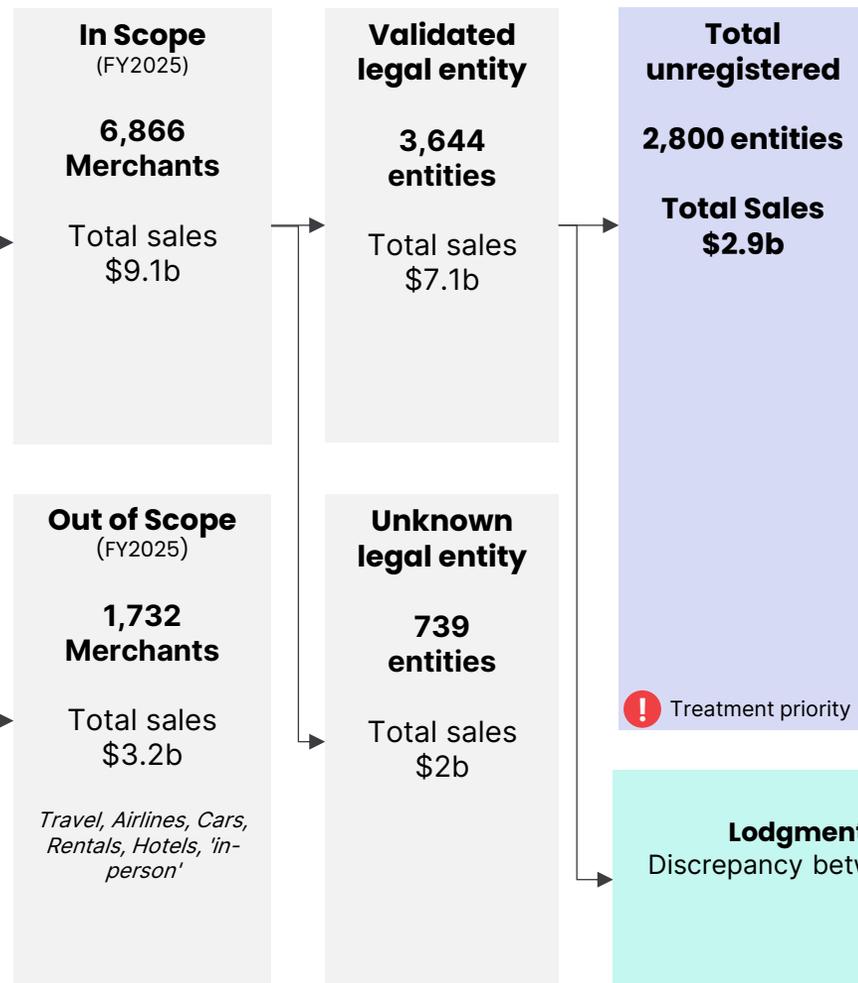
Strategic insights (1): population analysis

- Data source:** 'Card not present' transaction data from the 4 largest Australian banks.
- Data Set:** All 'card not present' transactions of purchases made by Australian residents from offshore businesses for FY2023 and FY2025.
- AUD Values:** Aggregate value of offshore charges to Australian retail consumers.

Data Acquisition & Validation



Data Preparation & Analysis



Data Analysis



Strategic insights (2): registration risk

Unregistered offshore merchants with potential Australian GST obligations.

Risk category	Risk category description	Product type	Number of candidates for FY27	Average GST at risk between FY23 and FY25	Total potential GST at risk between FY23 and FY25
Red	New entities or those with rapid growth and significant sales (over \$5m in 2025FY)	Review	12	\$1.2m	\$14.7m
Amber	New entities or with rapid growth and sales between \$3m to \$5m in 2025FY	Review	17	\$650k	\$11.2m
Yellow	Entities with sales between \$2m to \$3m in 2025FY	Review	34	\$400k	\$13.6m
Yellow	Entities with sales between \$1.8m to \$2m in 2025FY	Review	12	\$350k	\$4.2m
Yellow	Entities with sales between \$1m to \$2m in 2025FY	Letter	125	\$250k	\$30.8m
Green	Entities with sales below \$1m in 2025FY	Letter/one to many	2,534	\$65k	\$160.4m
Green (rapid risers)	Entities with sales below \$1m in 2025FY and growth over \$500k 2023FY to 2025FY	Letter	66	\$125k	\$8.3m
TOTAL					\$245.45m

Reflections

Lessons we've learned along our AI journey so far:

- 1** **Start small.** Our AI journey began with a simple task. This approach allows controlled exploration and provides an opportunity to familiarise with how the AI tool works. In the ATO, within 6 months, hundreds of use cases have been developed, and projects have been established at an enterprise-level to explore and scale AI solutions.
- 2** **Be specific** with the desired outcomes and measures of success at both the use case and program level. Identify which tasks can benefit the most from AI integration, measure testing outcomes through time motion studies, and spend time on crafting and revisiting the prompts by providing clear instructions on:
 - What you are trying to achieve
 - What information you are using
 - What format you require to output to be in
- 3** **Be open-minded** about what AI can and cannot do. Think bold to re-engineer existing procedures, respect the need for human judgment, and recognise not all efficiency enhancements involve AI. As the AI evolution continues, be receptive to new concepts and consider how, and if, these can be incorporated into your AI plan. Keep records and update your governance regularly along your journey.
- 4** **Be honest** with ourselves and consider:
 - What capabilities do we actually need (e.g., coding, analysis or engineering)
 - Do we clearly understand the existing processes and policies and the changes required for agentic AI

We welcome any question and look forward to sharing further findings in the future and exploring opportunities to collaborate.