



Australian Government

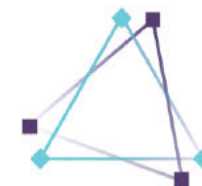


AI Driven Liaison Analytics Tool

Extracting insights from RBA Liaison's records using AI

Reserve Bank of Australia





Executive Summary

Problem Faced

The Reserve Bank of Australia (RBA) conducts around 900 business liaison meetings each year, gathering insights from over 22,000 conversations with firms since the program began. These meetings provide timely, on-the-ground information about economic conditions across industries and regions.

However, as these notes are recorded as free-text summaries, it is challenging for analysts to search, compare, or extract trends. This limits their ability to respond quickly to policy questions, track emerging risks, or use the full value of the data in forecasting. Manual processes may also introduce inconsistency or bias, especially when dealing with large volumes of information.

Solution Overview

The Liaison Analytics Tool is a secure, in-house AI tool that helps turn 25 years of business liaison meeting notes into a structured, searchable dataset. The tool is designed for use by the liaison team, helping them quickly find relevant insights, track topics, and extract firm-reported data.

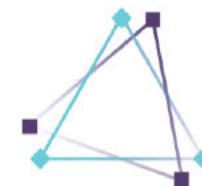
Key features include:

- Fast keyword and topic-based search across 22,000+ liaison records
- Automated tagging of topics, tone, and uncertainty
- Extraction of numerical data (e.g. wage growth, prices) from text
- Visualisation of trends over time
- Daily updates from internal systems

Benefits and Impact

This tool has significantly improved how the RBA uses business intelligence to support economic analysis and policy decisions.

- **Faster insights:** Reduces time to find relevant information to seconds
- **Improved accuracy:** Enhanced wage growth forecasting accuracy by up to 40%
- **Timely decision-making:** Enables real-time tracking of business sentiment
- **Better use of existing data:** Unlocked the value of 25 years of liaison records
- **Supports transparency:** Makes it easier to explain how business insights inform policy
- **Scalable and secure:** Built to handle large volumes of sensitive data.



Target Audience and Stakeholders

The Liaison Analytics Tool was designed to support a range of internal users and stakeholders across the RBA:

- The Regional and Industry Analysis team in the Economic Analysis Department.
- Senior leaders and the RBA Board, who rely on timely, aggregated insights from liaison, to inform monetary policy.
- Liaison officers and data scientists who maintain the tool and ensure the quality of the underlying data.

The tool was developed through close collaboration between economists, liaison staff, and technical teams. Feedback from users has shaped the interface, features, and tagging logic to ensure it meets operational needs.

Risks and Mitigation Overview

The development team identified several key risks early in the project and implemented targeted strategies to manage them:

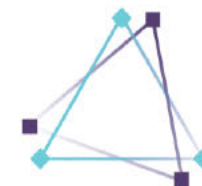
- **Confidentiality of firm data:** Mitigated through very strict access controls and secure internal hosting.
- **Misclassification or bias in AI outputs:** Mitigated by using both language models and keyword-based methods, with human validation and adjustable thresholds controlling how confidently the model classified a topic before tagging.
- **Over-reliance on automated insights:** Mitigated by positioning the tool as a decision support system, not a replacement for expert judgment.

Use Case Status

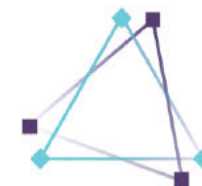
Implemented

Use case timeline

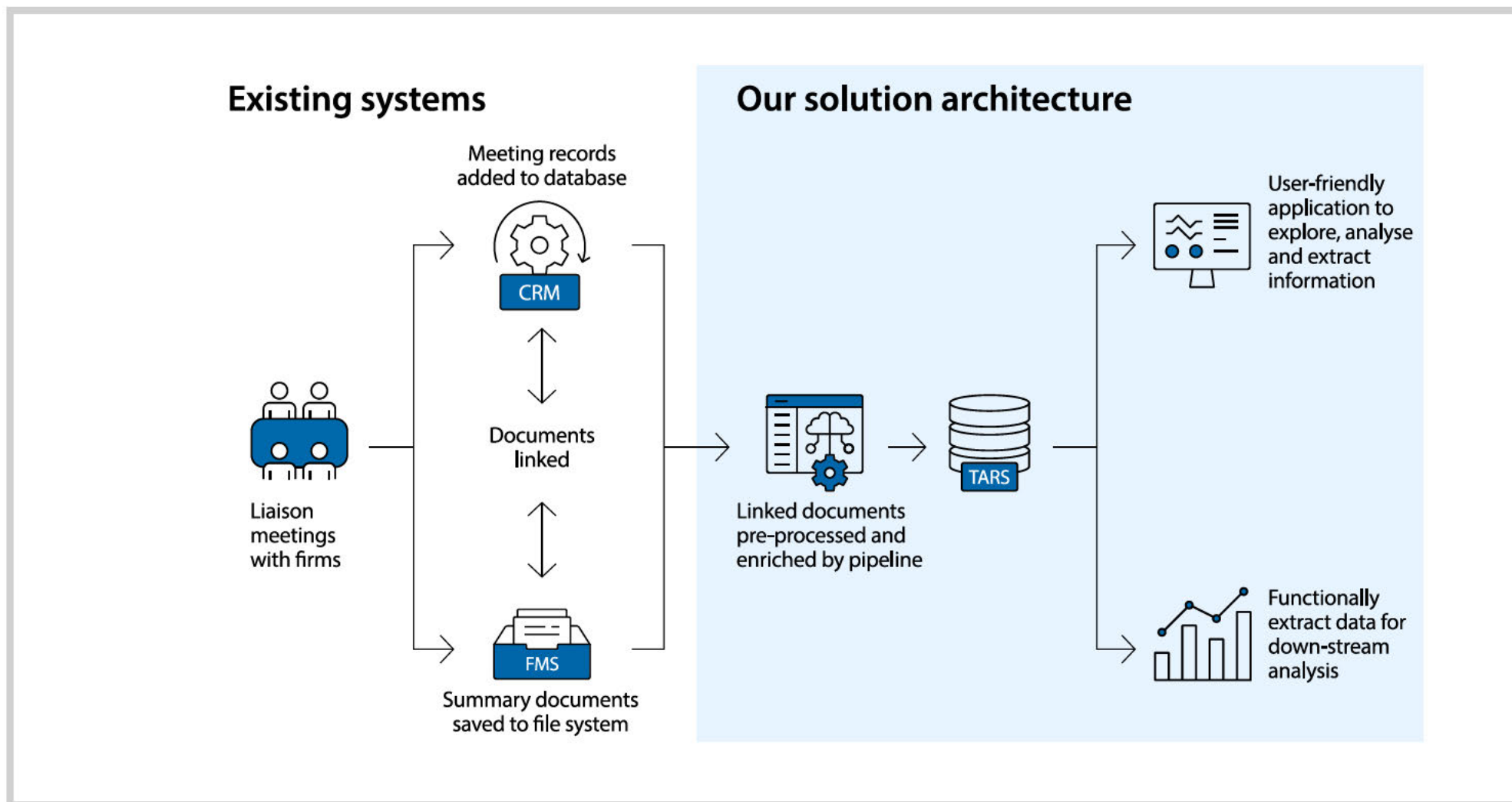
- **Early 2022:** Data pipelines built
- **Mid 2022:** Off-the-shelf Language Models (LMs) validated; historical data integrated and analysed. User-interface developed.
- **Late 2022:** First version deployed to staff.
- **Ongoing:** Daily updates, user feedback, and feature enhancements

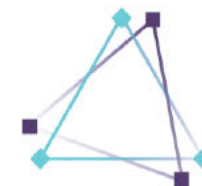


Additional Information		Lessons Learned		Contact information	
The tool was designed to support deeper, more systematic use of qualitative intelligence. Beyond simply making text searchable, the tool enables structured analysis of tone, uncertainty, and topic exposure over time. It also supports the extraction of firm-reported numerical data, such as wage and price growth, which had previously been difficult to access at scale. The tool's architecture supports both no-code access for analysts and programmatic access for advanced users, enabling flexible use across workflows.		• AI can turn text into useful data: Natural language processing (NLP) helped extract structured indicators from free-text fields. • Well-chosen indicators are more effective than more data: A small number of features, such as firm-reported wage growth and tone on labour topics, provided stronger forecasting performance than using many loosely related variables. • Small LMs models performed well: For this task, smaller, off-the-shelf LMs, worked well in categorising the liaison summaries into various topics of interest. • Human oversight is key: The tool supports expert analysis rather than replace it. • Strong data foundations are critical: The tool's success relied on consistent, high-quality records.		Responsible Entity Name Reserve Bank of Australia	Open for Collaboration? Yes
				Area of Entity Data Science Hub Economic Research Department	Use Case Contact s 22 [REDACTED] s 22 [REDACTED] @rba.gov.au
				Use Case Website/s N/A	Use Case Owner s 22 [REDACTED] s 22 [REDACTED] @rba.gov.au



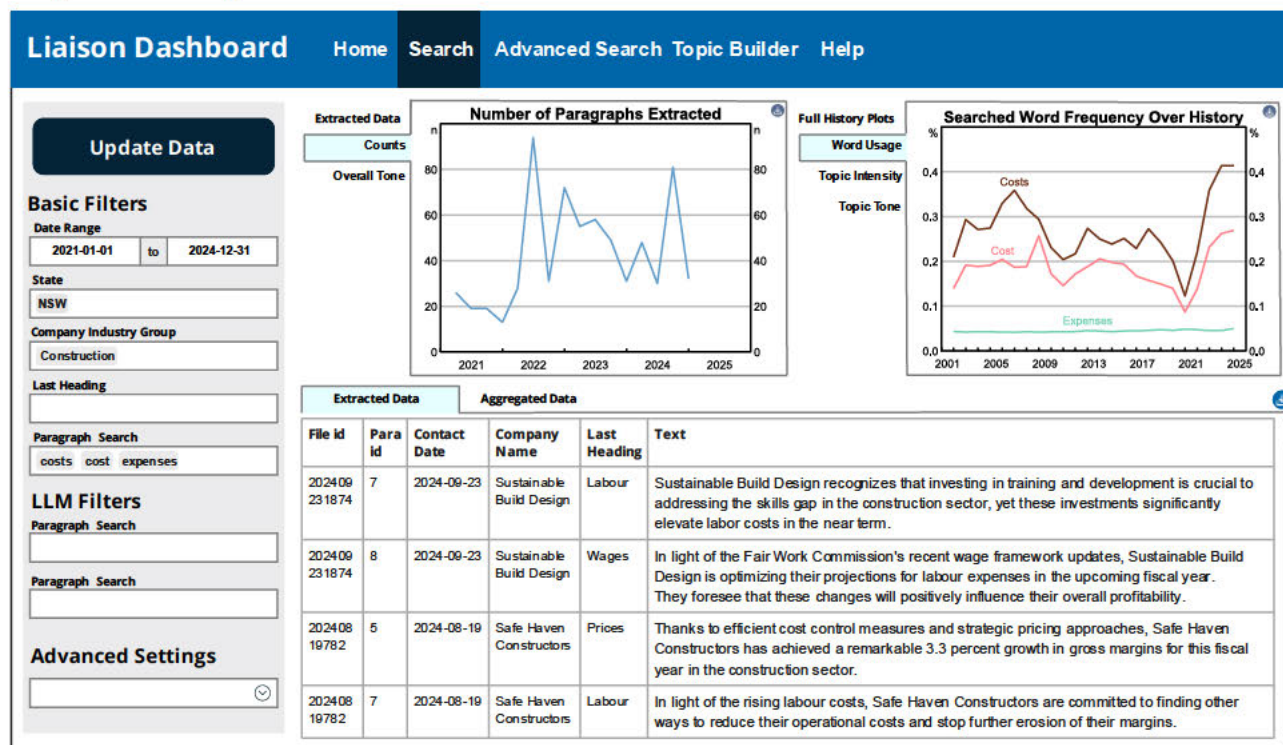
Screenshot/s





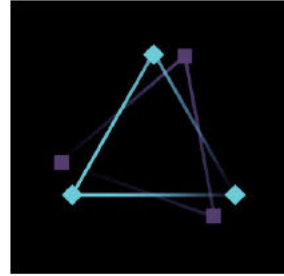
Screenshot/s

A Stylised Example of the Search Interface



Note: This purely illustrative example shows mock firms and liaison data generated by ChatGPT because of the confidential nature of the information collected and is intended to be illustrative only.

Source: RBA



Detailed Overview

Version Control

Version	Date	Author	Description of Changes
1.0	3 Feb 2025	GovAI	Version 1 created
1.1	17 Mar 2025	GovAI	Modified based on feedback

Index

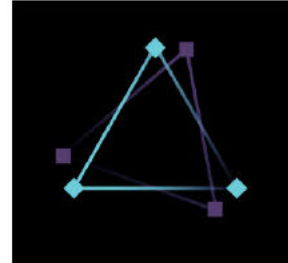
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Note: For details about category items in the detailed overview, see *APS AI Use Case Repository Guidance- Guidance for Use Case Owners and Editors*.

Responsible Organisation Category

Select the Classification of the Functions of Government - Australia (COFOG-A) 3-digit category that best identifies the functional area associated with your AI use case.

☐ 01 - General Public Services	Choose an item.
☐ 02 - Defence	Choose an item.
☐ 03 - Public Order and Safety	Choose an item.
☒ 04 - Economic Affairs	041 - General economic, commercial and labour affairs
☐ 05 - Environmental Protection	Choose an item.
☐ 06 - Housing and Community Amenities	Choose an item.
☐ 07 - Health	Choose an item.
☐ 08 - Recreation, Culture, and Religion	Choose an item.
☐ 09 - Education	Choose an item.
☐ 10 - Social Protection	Choose an item.
☐ 11 - Transport	Choose an item.



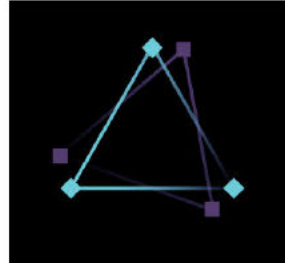
Scope of the Use Case

Use the dropdown menus below to identify the scope of your use case.

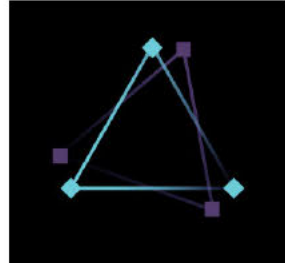
Geographical focus Choose the region for implementation from the dropdown list	National
Primary type of government interaction Choose the type of government interaction from the dropdown list	Government-to-government (G2G)
Cross-features - Sector Indicate if the use case describes a solution that can be used across sectors or in cross-sector scenarios (Yes/No).	Yes
Cross-features - Jurisdiction Indicate if the use case describes a solution that can be used across State/Federal borders or in cross-border scenarios (Yes/No)	Yes

Ethical Considerations

Accuracy, Fairness, Accessibility, Bias and Discrimination	The Liaison Analytics Tool was designed to support fair, accurate, and inclusive use of AI in economic analysis: • Accuracy The tool's topic classification models were benchmarked against human-labelled data. For example, the model achieved an F1 score of 0.83 for identifying paragraphs about wages. This score reflects a strong balance between precision (how often the model is correct when it tags something) and recall (how often it finds all relevant examples). • Fairness and bias mitigation The tool uses two independent methods to classify topics and tone: language models and keyword dictionaries. This dual approach helps reduce the risk of bias from any single method. Regular
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	spot checks and validation exercises are conducted to monitor performance across different topics. • Accessibility The tool is designed for non-technical users, with a no-code interface that allows analysts to search, filter, and visualise data without needing programming skills. • Transparency Users can view the original text alongside AI-generated tags and are encouraged to apply professional judgment when interpreting results. The tagging logic and thresholds are documented and adjustable.
Privacy	The tool is built to protect the confidentiality of firms and individuals: • Highly restricted access Given the highly confidential nature of the liaison summaries, the tool is only accessible to the RBA's liaison team, who have all completed required declarations. Highly aggregated, de-identified, summaries of information are used to inform policy on a need-to-know basis. • Access controls Only authorised staff can view raw summaries. All processing occurs within the RBA's secure IT environment. • Data handling The system integrates with internal databases and file systems, with nightly updates and audit trails to ensure data integrity and compliance.
Rights of Users	While the tool is used internally and does not make automated decisions about individuals, user rights and feedback mechanisms are still a priority: • Transparency Users are informed about the tool's purpose, capabilities, and limitations through training, documentation, and internal briefings.

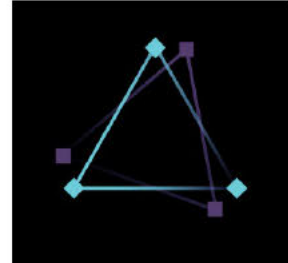


	• Feedback and improvement Liaison and policy teams are encouraged to provide feedback, which is used to refine tagging models, improve usability, and ensure the tool remains aligned with operational needs. • Human oversight All outputs are subject to expert review. The tool is designed to support, not replace, human analysis and professional judgment.
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Value of the Use Case

Identify the public value that the solution provides or is expected to provide. Select from the multi-select options.

Improved public service This category refers to solutions that enhance the services provided to end users, whether they are citizens or businesses.	☐ Personalised services ☐ Public (citizen)-centred services ☐ Increased quality of public information and services ☐ More responsive, efficient and cost-effective public services ☐ New services or channels
Improved administrative efficiency This category refers to solutions that increase efficiency, effectiveness, and quality while reducing costs within administrative processes, systems, and services.	☒ Cost reduction ☒ Responsiveness of government operation ☒ Improved management of public resources ☒ Increased quality of processes and systems ☒ Better collaboration and better communication ☐ Reduced risk of corruption and abuse of the law by public servants ☐ Greater fairness, honesty and equality enabled
Open government capabilities This category refers to solutions that enhance the level of openness, transparency, engagement, and communication within public organisations.	☒ Increased transparency of public sector operations ☐ Increased public participation in government actions and policymaking ☐ Improved public control of and influence on government actions and policies

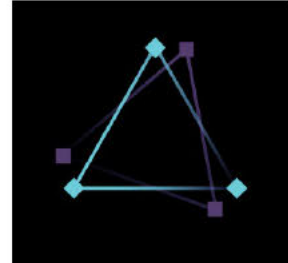


AI Process Type

Select the types of tasks within government operations that the AI solution is performing or expected to perform

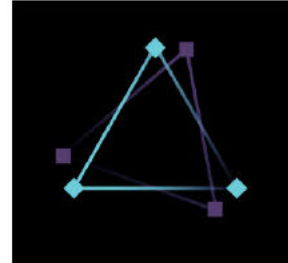
Supporting Decision Making- Tasks that support formal or informal agency decision-making on benefits or rights.	☐ Taking decisions on benefits ☐ Managing copyright and intellectual property rights
Analysis, monitoring and regulatory research - Tasks that collect or analyse information that shapes agency policymaking.	☒ Information analysis processes ☒ Monitoring policy implementation ☐ Innovating public policy ☒ Prediction and planning
Enforcement - Tasks that identify or prioritise targets of agency enforcement action.	☐ Smart recognition processes ☐ Management of auditing and logging ☐ Predictive enforcement processes ☐ Supporting inspection processes ☐ Improving cybersecurity ☐ Registration and data notarisation processes ☐ Certification and validation processes
Internal management - Tasks that support agency management of resources, including employee management, procurement, and maintenance of technology systems.	☐ Internal primary processes ☐ Internal support processes ☐ Internal management processes ☐ Procurement management ☐ Financial management and support
Public services and engagement - Tasks that support the direct provision of services to the public or facilitate communication with the public for regulatory or other purposes.	☐ Engagement management ☐ Data-sharing management ☐ Governance and voting ☐ Payments and international transactions ☐ Supporting disintermediation ☐ Authentication of self-sovereign digital ID services ☐ Service integration ☐ Service personalisation ☐ Tracking of goods and assets along the supply chain

AI Technologies Utilised



Select the types of AI technologies proposed / utilised to deliver the use case.

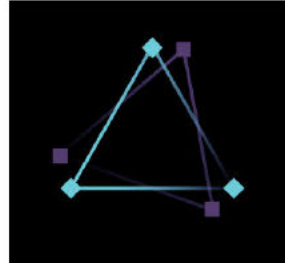
Reasoning or Knowledge Representation AI systems that store, structure, and process knowledge to make inferences, derive conclusions, or support decision-making.	☐ Knowledge Representation ☐ Automated Reasoning ☐ Commonsense Reasoning
Planning and Optimisation AI techniques that generate, refine, and optimise action sequences or resource allocation to achieve specific goals efficiently.	☐ Planning and Scheduling ☐ Searching ☐ Optimisation
Learning and Adaptation AI systems that identify patterns, extract insights, and improve performance over time based on data.	☒ Machine Learning ☒ Deep Learning ☐ Generative AI
Communication and Natural Language Processing AI systems that process, interpret, and generate human language for interaction, comprehension, and automation.	☒ Natural Language Processing (NLP) ☐ Text Generation ☒ Text Mining ☐ Machine Translation
Perception through the Senses AI systems that process and interpret sensory data, such as visual, auditory, or tactile inputs, to understand and respond to their environment.	☐ Computer Vision ☐ Audio Processing
Integration and Interaction with the Environment AI systems that interact with physical or digital environments, including autonomous agents, robotics, and interconnected systems.	☐ Multi-agent Systems ☐ Robotics and Automation ☐ Connected and Automated Vehicles (CAVs)
AI as a Service AI capabilities delivered through cloud-based platforms, offering tools, models, and infrastructure for AI-powered applications.	☐ AI Services (e.g., cognitive computing, machine learning frameworks, bots) ☐ Infrastructure as a Service (IaaS) ☐ Platform as a Service (PaaS)



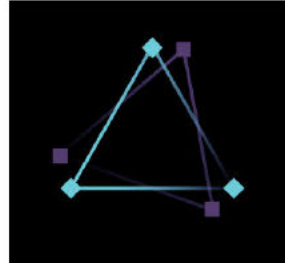
	☐ Software as a Service (SaaS)
Additional Comments or Explanation:	If you have selected any of the subcategories above, feel free to provide more detailed comments or a description of how these elements apply to your specific use case.

Technical Elements

Platform implementation	The Liaison Analytics Tool is hosted entirely within the Reserve Bank of Australia's secure IT environment. It integrates two core internal systems: the Client Relationship Management (CRM) database and the File Management System (FMS). Liaison summaries are extracted from the FMS using unique identifiers recorded in the CRM, then processed through a text-preprocessing and enrichment pipeline. This pipeline converts documents into XML format, applies heuristics to tag structural elements (e.g., headings, paragraphs), and enriches paragraphs with NLP-generated tags (topics, tone, numerical extractions). Processed data is stored in a relational database indexed at the paragraph level, with nightly updates ensuring near real-time availability. The tool supports both a no-code front-end interface for analysts and programmatic access for advanced users. All data processing and storage occur within the RBA's internal network, with strict access controls and audit trails in place. The architecture supports scalability and resilience, and the codebase for both front-end and back-end components is available on GitHub (link available upon request).
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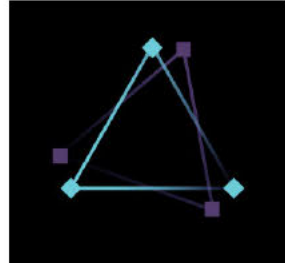
Model / Algorithm used	The tool employs a hybrid approach combining transformer-based language models and keyword-based methods: • Topic Classification: BART-large-MNLI, a transformer-based model, is used in multi-label mode to assign probabilities across 14 macroeconomic topics. Thresholds are applied to convert probabilities into binary topic tags. • Sentiment Analysis: FinBERT, fine-tuned on financial text, provides sentiment scores between -1 and +1 for each paragraph. • Numerical Extraction: A two-stage pipeline uses RoBERTa-base for extractive QA to identify numerical values (e.g., "4-5 per cent") and BART-large-MNLI to determine the sign (increase/decrease/no change). • Keyword Expansion: Word2Vec, trained on the liaison corpus, supports topic dictionary expansion through semantic similarity. Model selection was guided by the need for interpretability, speed, and compatibility with secure internal compute environments. BART-large-MNLI and FinBERT were chosen for their strong performance on financial and policy-relevant text, while Word2Vec was selected for its efficiency and domain adaptability.	
Data Sources Select the types of data sources used and provide relevant details.	☒ Internal ☒ Public	☒ Third-party ☐ Synthetic
	Details: • Internal: 25 years of liaison summaries, CRM metadata, staff scores. • Public: Benchmarking against ABS wage and CPI data, external uncertainty indices (e.g., EPU-Australia). • Third-party: Pre-trained models (e.g., BART-large-MNLI, FinBERT) from HuggingFace.	



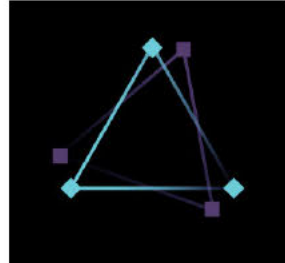
Risk Assessment and Mitigation Details

The development and deployment of the Liaison Analytics Tool involved a comprehensive risk management approach across data integration, model performance, and operational use:

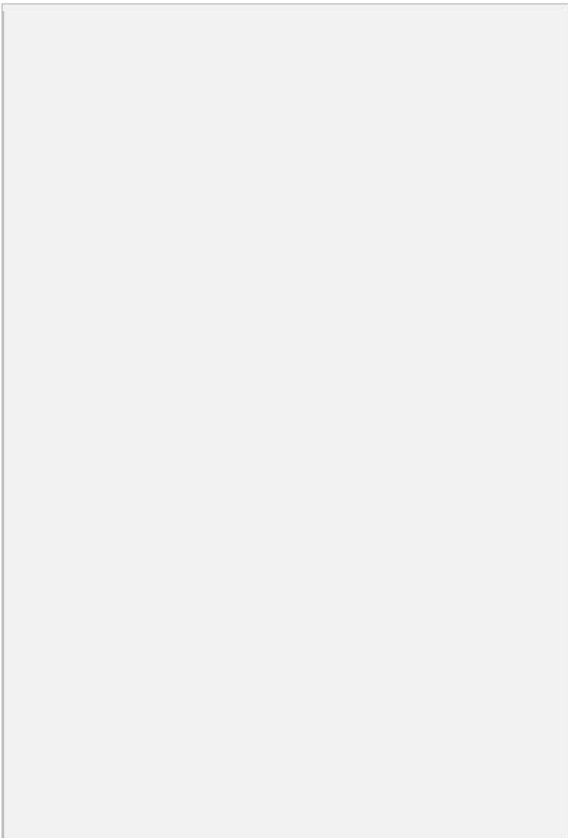
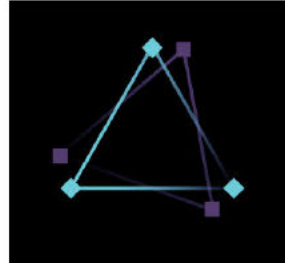
- **Data Integration Risks:** Historical liaison records were stored across multiple legacy systems. To ensure completeness and accuracy, a robust matching process was implemented using unique identifiers and fuzzy matching techniques to reconcile inconsistencies in early records.
- **Model Misclassification and Bias:** The tool uses a dual-layered classification system combining transformer-based language models and keyword-based methods. Adjustable thresholds and human validation were used to benchmark and calibrate model outputs. Stratified sampling and spot-checking were employed to assess and improve classification accuracy.
- **Prompt Ingestion and NLP Tuning:** Custom-trained embeddings and topic dictionaries were developed to improve semantic relevance and reduce false positives.
- **Over-reliance on Automation:** The tool is explicitly designed as a decision support system. Analysts are provided with both AI-generated tags and the original text, ensuring transparency and encouraging professional judgment in interpretation.
- **Cybersecurity and Data Protection:** All data processing occurs within a secure internal environment. Access to the tool and raw summaries is restricted to authorised personnel, and audit trails are maintained to ensure traceability.



Security and Compliance Frameworks Select the security and compliance frameworks and measures implemented. Provide details or additional artifacts if relevant.	☐ Authority to Operate (ATO) ☐ System Security Plan (SSP) ☐ Security Risk Management Plan (SRMP)	☐ Information Security Registered Assessors Program (IRAP) ☐ Penetration Testing
	Details: The system is hosted within a secure internal infrastructure with the following measures in place: • Access Controls: Role-based access ensures that only authorised staff can view raw or sensitive data. Broader access is limited to de-identified, aggregated output on a need-to-know basis. • Data Handling and Auditability: All data processing is logged, and nightly updates ensure data integrity. Audit trails are maintained for all data transformations and access events. • Internal Security Governance: The system adheres to internal security protocols for handling sensitive economic data, including encryption in transit and at rest, secure credential management, and regular internal reviews.	
Assurance and Government Frameworks	The design and governance of the tool reflect alignment with national AI assurance principles and internal policy standards: • Transparency: Users can view original text alongside AI-generated tags. The tagging logic and thresholds are documented and adjustable. • Human Oversight: Outputs are designed to support—not replace—expert analysis. All insights are subject to professional review. • Bias Mitigation: The use of both language models and keyword-based methods, combined with regular	



	validation exercises, helps reduce systemic bias and improve fairness.
Record maintenance	The system maintains comprehensive documentation and traceability of AI decisions and data assets: • Version Control: All models, keyword dictionaries, and classification thresholds are versioned and documented. • Paragraph-level Indexing: Each paragraph is tagged with metadata and NLP outputs, stored in a relational database for auditability. • Evaluation Logs: Accuracy assessments and validation exercises are recorded and reproducible, supporting continuous improvement and transparency. • Update Cadence: Nightly updates from source systems ensure the database reflects the most current information.
Disengagement	The system is designed with modular disengagement in mind: • Data Archiving: Historical summaries and enriched data can be archived for future reference or analysis. • Access Revocation: User access can be revoked at the database or application level, ensuring secure shutdown. • System Shutdown: Components can be decommissioned individually (e.g., disabling numerical extraction while retaining search functionality), allowing for graceful degradation. • Fallback Procedures: In the event of failure, liaison teams can revert to manual analysis using original summaries stored in internal systems.
Performance Metrics and Results	The tool's effectiveness is measured through both operational and analytical metrics: • Search Efficiency: Time to retrieve relevant insights has been reduced from



hours to seconds, enabling rapid response to policy queries.

- **Forecasting Accuracy:** Incorporating text-based indicators into nowcasting models improved wage growth forecasting accuracy by up to 40% using machine learning techniques.
- **Model Validation:** Topic classification models achieved high precision and recall scores, with F1 scores exceeding 0.8 for key economic topics.
- **Correlation with Official Data:** Extracted numerical indicators (e.g., price inflation) show strong alignment with official statistics, validating the tool's analytical value.
- **User Adoption:** The tool is actively used by the liaison team for daily briefings, model inputs, and ad-hoc analysis, demonstrating its operational impact.