



**AI Universal Translator**  
for Inclusive Government

# CHALLENGES

## AI in Governance

*How can governments use AI to boost efficiency and transparency in public sector operations while addressing concerns regarding ethics, data privacy, and public trust?*

## Improving the Accessibility of Online Government Services

*How can we leverage AI to design inclusive digital solutions that ensure seamless and equitable access to essential services for people with disabilities?*

## Use AI to transform bureaucratic jargon into plain English

*How can we use AI to create clear, accurate and user-friendly government content? Specifically, how can we use AI tools to apply Australian Government Style Manual (Style Manual) rules and guidelines to create, edit and review content? Content that is clear, accurate and understandable helps people make informed decisions and comply with their obligations.*

## Civic participation for a more resilient, cohesive democracy.

*How can we help more people to understand their democracy, have an opportunity to participate in civic life, contribute to their community, and/or feel a sense of belonging and responsibility?*

**"We're committed to increasing cultural participation, and helping businesses to innovate, adapt and grow."**

-City of Sydney

**"Australia is a prosperous, safe and united country. Our inclusive national identity is built around our shared values including democracy, freedom, equal opportunity and individual responsibility."**

-Department of Home Affairs

# OUR MISSION

- Our mission is to enhance civic life, driving democratic renewal and build a **sense of belonging** by fostering social inclusion.
- We aim to **empower all citizens** - regardless of language, background, ability, or accessibility needs—to fully participate in society by improving their access to vital information and services.
- Additionally, we strive to equip government staff at all levels - local, state, and federal - with AI-powered tools that serve as co-pilots, reducing administrative burdens and improving overall efficiency in delivering public services.

# Use Cases

**Non-English speaker engaging with local council on potholes without filling out a form**

**Help me understand complex citizenship forms**

**Accessibility for Low Literacy Levels**

**Time-Poor Citizen Receiving Summaries**

**What's on in my local area from multiple government sources e.g. join choir, volunteer**

**Reporting Issues in Plain Language**

**Government Employee Ensuring Document Compliance\*\***

**Data Source Verification**

**Disinformation Detection**

**Increasing Volunteering Through AI-Driven Awareness**

# MVP

- We are developing a universal translator, a trusted and personalised tool designed to bridge communication gaps between the government and the diverse population it serves. This tool will be especially impactful for individuals with disabilities, ensuring that communication barriers are removed and that they have equitable access to information.
- In our approach, we have developed a **\_\_minimal viable project (MVP)\_\_** or **\_\_prototype\_\_** showcasing a range of AI-powered services designed to form the foundation of a universal translator for inclusive government.
- This translator adapts to multiple access channels, focusing on the ones most relevant to citizens, tailored to their context and accessibility needs.

**Citizenship queries**

**Language translation**

**Text-to-speech**

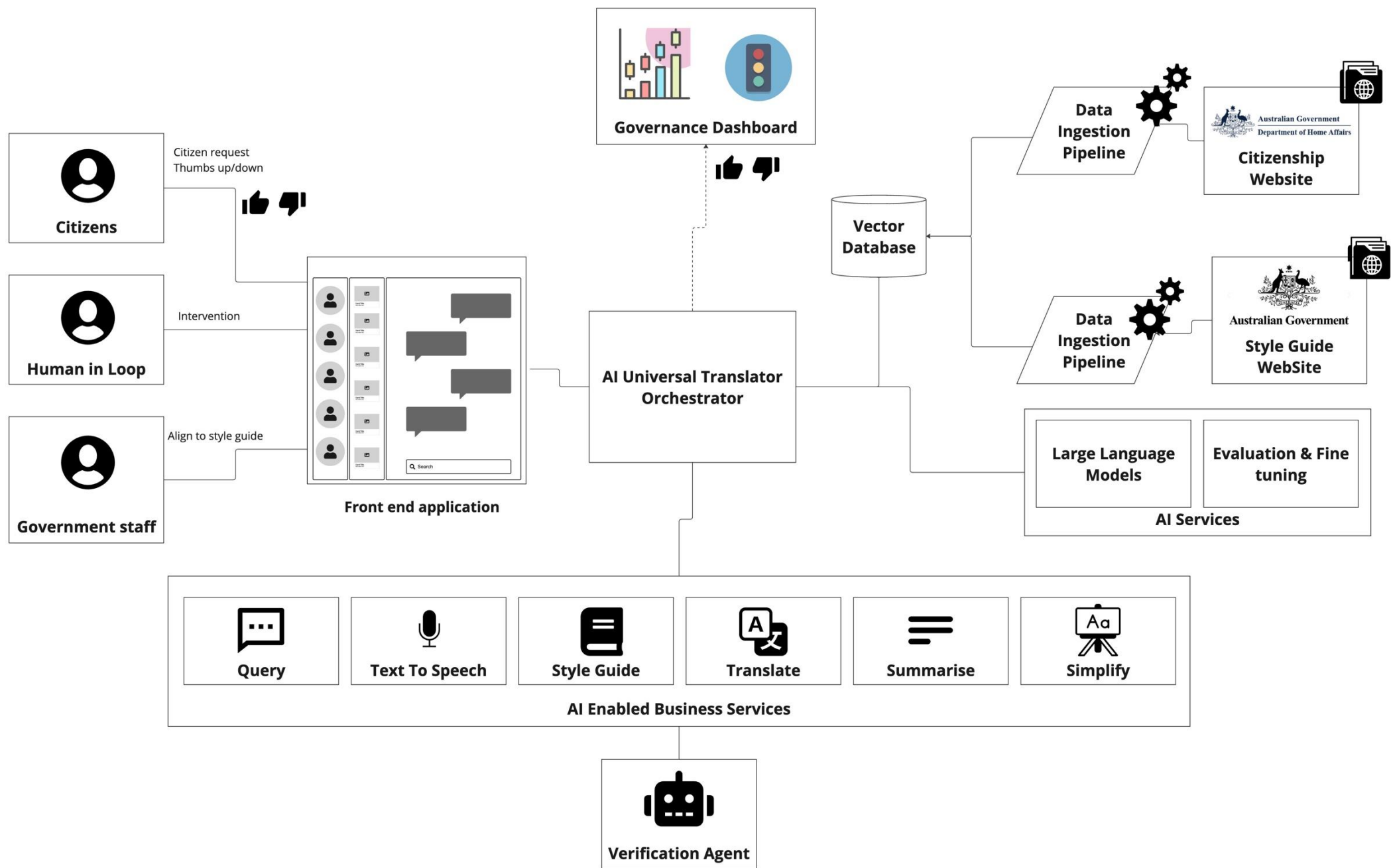
**Plan language style review**

**Summarization**

**Autonomous verification**

**Simplified language**

**Transparency dashboard**








# RESPONSIBLE AI

## Risk Summary: Highest risks identified



Document the highest risk for each Principle area. The overall highest risk rating will determine your next steps, detailed in the following section “Self-assessment mitigation and next steps”.

N/A / Low / Mid-range / High / Very High

 Community benefit AI must prioritise community outcomes, ensuring alignment with laws, minimising harm, and maximising benefit.	 Fairness Use of AI will be fair, ensuring not to perpetuate bias and inequality by leveraging diverse representative datasets, monitoring performance, and using rigorous data governance	 Privacy and security Ensure secure, transparent, compliant data use, and adhere to <u>PPIP Act</u> preserving public trust.	 Transparency The use of AI will be transparent, allowing concerns to be raised and addressed, <u>GIPA Act</u> compliant, cyber secure and ethical.	 Accountability Decision-making remains the responsibility of organisations and Responsible Officers.
Low risk	Mid range	Very low risk	Low risk	Low risk



# TECHNOLOGY STACK

**Python** for backend processing.

**Vue.js, Vuetify, Vite** for front end development

**Langchain** and **LangServ** for managing language models and agent-based workflows.

**Large Language Models(LLM)** for natural language understanding and generation.

**Agentic autonomous agents** for validating outputs and ensuring ethical standards.

**Text-to-Speech** for accessibility, offering auditory assistance to those who need it.

**Vector database** Index and store embeddings from data ingestion pipelines

**Docker containers,**



# DATA STORY

- Unstructured data represents a traditionally difficult data type to take advantage of.
  - It can include text from official government documents, government websites, social media interactions, and more, holds invaluable insights that structured data alone cannot provide.
  - By tapping into this resource and using AI techniques we can create a more comprehensive and responsive AI Universal Translator that better meets the needs of all citizens, including the diverse long tail that makes up modern Australia.
- **Retrieval-Augmented Generation (RAG):**
    - **Data Ingestion:** Converts unstructured data into a vector database-friendly format.
    - **Semantic Search:** Identifies semantically equivalent terms for more intuitive query responses.
  - **Vector Databases:**
    - **Scalability:** Ensures efficient data retrieval as the dataset grows.
    - **Contextual Understanding:** Provides nuanced and precise responses by understanding the context.
  - **Governance and Compliance:**
    - **AI Principles Alignment:** Ensures fairness, transparency, and accountability.
    - **AI Principle aligned performance metrics:** Tracks accessibility, accuracy, and fairness via a governance dashboard.

# THE BIGGER PICTURE

- Boosting Operational Efficiency
- Improving Transparency
- Ensuring Ethical Use
- Data Privacy and Security
- Building Public Trust
- Future Adaptations

# **Boosting Operational Efficiency**

- **Understand business opportunities, risks, and rewards of using AI**
- **Create lean business cases to evaluate at high level**
- **Put through governance process**
- **Led by governance executive stakeholders**
- **Align with practices of state and federal government**
- **Look to partner for underpinning common scaffolding logic**
- **Use data science projects to ensure ideas are sound before significant investment**

# Ensuring Ethical Use

- The NSW AI Assessment Framework (AIAF)
- Australia's AI Ethics Principles
- Development of Key Performance Indicators (KPIs)
- Addressing Algorithmic Bias
- Ensuring Transparency and Accountability

# Data Privacy and Security

- Adhering to OWASP Top 10 for Large Language Mode Applications
- DevSecOps Practices
- Advanced Security Measures

# Building Public Trust:

- Providing beneficial tools
- Co-design with citizens
- Delivering tangible results
- Ensuring accountability
- Setting and monitoring kpis
- Governance and transparency
- User acceptance testing
- Feedback from users
- Publishing evaluation results
- Effective communication and change management
- Community engagement

# Future Adaptations

- AI Futures
- Digital Identity
- Cybersecurity
- Multi-Agent Systems
- Updating Legislation
- Public Education