

JARGON SIMPLIFIER

[Document subtitle]



SEPTEMBER 7, 2024
VARUN MAGGON, CENTELON PTY. LTD

varun.maggon@centelon.com

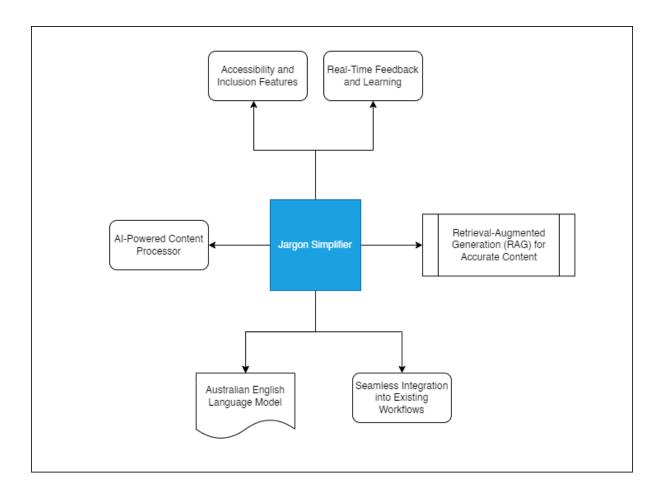
Al Driven Content Transformation

Contents

1	Over	view	2
2	Key C	Components	2
	2.1	AI-Powered Content Processor	2
	2.2	Australian English Language Model	3
	2.3	Retrieval-Augmented Generation (RAG) for Accurate Content	3
	2.4	Accessibility and Inclusion Features	3
	2.5	Agentic Flows with Small AI Models	3
	2.6	Real-Time Feedback and Learning	3
	2.7	Seamless Integration into Existing Workflows	1
	2.8	Al-Driven Benefits	1
3	Exan	nple Use Cases	1
	3.1.1	Banking and Finance Content Simplification	1
	3.1.2	Superannuation Policy Clarity5	5
	3.1.3	Economic Forecasting Accessibility5	5
	3.1.4	Business and Industry Guidelines5	5
	3.1.5	Housing and Social Policy5	5
	3.1.6	Simplification of Workforce Mobility Policies	5
	3.1.7	Workforce Strategy Translation 6	3
	3.1.8	Training Program Guidelines6	3
	3.1.9	Crisis Response and Mobility Initiatives	3
4	Tech	Technology Stack	
	4.1.1	AI/NLP6	3
	4.1.2	Backend	7
	4.1.3	Frontend	7
	4.1.4	Accessibility Tools	7
	4.1.5	Data Sources	7
5	Cond	clusion	7

1 Overview

This solution aims to leverage AI to transform bureaucratic government content into clear, accurate, and user-friendly information. The focus is on operationalizing the Australian Government Style Manual's guidelines, improving inclusivity, accessibility, and accuracy, while integrating AI into existing workflows for measurable benefits.



2 Key Components

2.1 Al-Powered Content Processor

Core Functionality: Use Natural Language Processing (NLP) and Machine Learning (ML) models trained on the Australian Government Style Manual to transform complex government documents into plain English.

Features:

- Grammar and punctuation correction.
- Transformation of bureaucratic jargon into clear, understandable language.
- Suggestions for inclusive language (gender-neutral terms, diverse cultural contexts).
- Highlight relevant sections of the Style Manual for user feedback and education.

2.2 Australian English Language Model

Challenge: Large language models often rely on US English standards. To ensure content adheres to Australian English conventions, a custom AI model is trained to apply Australian-specific spelling, grammar, and style guidelines.

Solution: Leverage domain-specific fine-tuning and correction mechanisms to consistently apply Australian standards (spelling, terminology).

2.3 Retrieval-Augmented Generation (RAG) for Accurate Content

Purpose: Mitigate risks of hallucination in AI-generated content by integrating authoritative government resources.

Approach: Implement RAG, where AI consults expert datasets (government databases, official publications) before generating responses, ensuring accuracy, factual consistency, and reliability.

2.4 Accessibility and Inclusion Features

Screen Reader Compatibility: Ensure that content output is readable by screen readers for visually impaired users.

Captioning and Transcription: Automatically generate captions and transcripts for government content in video and audio formats, enabling broader access to information.

Readable Content: Simplify language structures and enhance readability for audiences with varied literacy levels, focusing on diverse populations (CALD communities, regional audiences).

2.5 Agentic Flows with Small AI Models

Design: Implement agentic flows to divide content analysis into specialized small models. Each model is responsible for handling specific aspects of the Style Manual (e.g., punctuation, tone, inclusive language), streamlining the content improvement process.

Efficiency: This modular approach allows for easier updates and enhanced precision in applying guidelines.

2.6 Real-Time Feedback and Learning

User Feedback: Provide users with instant, real-time feedback on how their content has been improved, referencing specific Style Manual sections. Users can learn from the feedback to improve future writing.

Interactive Learning Interface: Incorporate a user-friendly dashboard where writers can upload documents and receive suggestions, corrections, and style feedback, with the option to compare before and after versions.

2.7 Seamless Integration into Existing Workflows

Adopt an API-first strategy to ensure easy integration with various platforms and tools commonly used by government and public sector workers. By leveraging open APIs, the AI-driven solution can be incorporated into any system that supports API consumption, including word processors, spreadsheets, presentation tools, and other content management platforms.

API Integration: Instead of functioning purely as a plugin or add-in for specific tools (e.g., Microsoft Word or Google Docs), the AI tool can expose RESTful APIs. This allows developers to build integrations with a wide range of software environments (such as ERP systems, intranets, or custom content management systems) by consuming APIs for document analysis, language transformation, and content enhancement.

By focusing on an open API approach, the AI tool becomes accessible across more platforms and can easily integrate into diverse workflows, enhancing scalability and flexibility for various user needs.

Plain Language Rewriter: Offer rewriting suggestions to ensure content complies with plain language standards, enhancing the readability of official communications.

2.8 Al-Driven Benefits

- **Consistency:** Maintain consistent use of the Style Manual across all government documents.
- **Efficiency:** Automate content review processes, significantly reducing manual editing time.
- **Inclusivity:** Ensure that content reaches diverse audiences, especially those with disabilities or from varied cultural and educational backgrounds.
- **Accuracy:** Guarantee that government communications are error-free, clear, and reliable.

3 Example Use Cases

3.1.1 Banking and Finance Content Simplification

Terms like regulatory reforms, resilience of financial systems, and sustainable finance can be difficult for the general public to understand. These refer to improving financial system strength, making processes simpler, and aligning financial activities with environmental goals.

Al can convert regulatory language like "improving resilience of financial systems" into simpler terms such as "making our banking system stronger and safer for consumers."

3.1.2 Superannuation Policy Clarity

Technical terms such as *retirement income arrangements* and *tax legislation reforms* are often hard to interpret by the average person. These categories cover policies around managing funds post-retirement and adjusting tax laws.

Al can help rephrase detailed retirement policies, explaining "retirement income adequacy" as "ensuring people have enough money for retirement."

3.1.3 Economic Forecasting Accessibility

Terms like economic modelling and domestic and global economy forecasting can confuse readers unfamiliar with financial analysis. This category involves predicting economic trends to guide policy-making.

Al tools could translate complex economic forecasts into everyday language, making it easier for citizens to understand government economic predictions without needing financial expertise.

3.1.4 Business and Industry Guidelines

Jargon like competition policy, franchising codes, and productivity analysis complicate understanding for small business owners and the general public. These relate to laws governing business competition, franchise operations, and efficiency metrics.

Al could simplify competition policy by explaining it as "rules that ensure businesses compete fairly, so customers get better choices and prices".

3.1.5 Housing and Social Policy

Terms like affordable housing programs and National Housing Infrastructure Facility (NHIF) are complex. These describe initiatives aimed at improving housing affordability and support.

3.1.6 Simplification of Workforce Mobility Policies

Terms like APS Mobility Framework, strategic workforce management, and surge capacity often involve complex policy language about managing personnel across government roles. This can confuse employees and managers unfamiliar with technical HR practices.

Example: The APS Mobility Framework allows for more porous boundaries across public service roles.

Al could translate the APS Mobility Framework and related policies into clear guidelines for employees, helping them understand the benefits and application processes for temporary moves or secondments.

3.1.7 Workforce Strategy Translation

Technical jargon such as strategic workforce planning and data-driven workforce management describes the efforts to align employee capabilities with government goals. These terms are not immediately clear to a general audience.

Example: Strategic workforce planning ensures that government employees have the right skills for future challenges.

Al can transform strategic workforce management jargon into more accessible terms, making the APS Workforce Strategy 2025 easier for a broader audience to comprehend.

3.1.8 Training Program Guidelines

Terminology like APS Learning Board, Talent Management, and Job Family Framework are used to define the processes of employee skill development and leadership training but can be ambiguous to those outside HR or management.

Example: Talent Management is the process of systematically identifying and developing highpotential employees

Al-driven tools can rewrite complex learning and development strategies into actionable steps that are easier to follow for employees looking to build new skills.

3.1.9 Crisis Response and Mobility Initiatives

Jargon such as secondment, micro-assignments, and surge reservists refers to temporary employee mobility for crisis management or specialized tasks. These terms may be unclear to non-HR staff.

Example: Secondment allows employees to work temporarily in other roles or sectors for skill development.

Al could provide plain language summaries of crisis management tools such as the APS Surge Reserve, helping volunteers and employees better understand how and when they might be deployed.

4 Technology Stack

4.1.1 AI/NLP

Custom-trained transformers (e.g., GPT-based models) fine-tuned for Australian English and the Style Manual.

4.1.2 Backend

Scalable microservices based Zero Code/Low Code Platform for model training as well as inference, RESTful APIs and seamless integration into other processes

4.1.3 Frontend

A zero-code configurable Web-based interface in Angular for real-time feedback, document upload, and interaction with AI tools. Responsive and engaging forms which are easy and quick to create and update. Those can be used in standalone mode or Integrated/embedded in other applications or websites.

4.1.4 Accessibility Tools

Integration with assistive technologies (screen readers, transcription tools).

4.1.5 Data Sources

Style Manual API, government content databases for RAG model integration.

5 Conclusion

This solution will transform how government content is written, making it more accessible, accurate, and user-friendly for all Australians.