ARM HUB
AI ADOPT
CENTRE

Australian Government
Department of Industry, Science and Resources

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

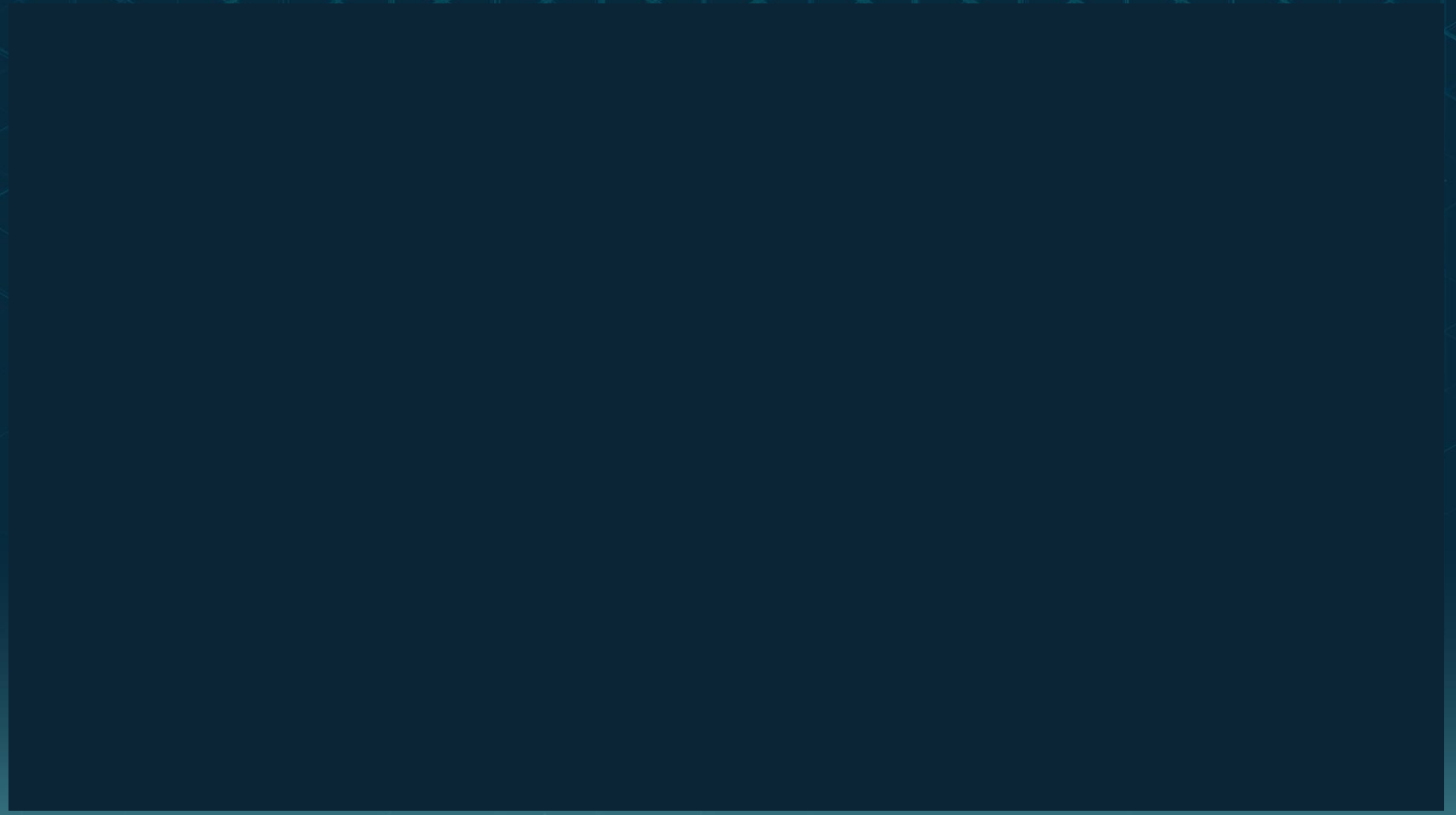
TECHNOLOGY TRANSFORMATION IN REGIONAL MANUFACTURING

A FOCUS ON INCREMENTAL INTELLIGENCE

Accelerating industry's adoption of AI to grow sovereign capability and global competitiveness

www.aiadopt.ai info@aiadopt.ai

UAP – Robotics and AI



This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

ARM HUB'S KEY CAPABILITIES

ROBOTICS

AI

MIXED REALITY

DATA INFRASTRUCTURE

ARM HUB AIADOPT CENTRE

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government
Department of Industry, Science and Resources

WHY ME, TO TALK TO YOU?

Michael Hunter – AI Adopt Centre Manager

- Manager of the AI Adopt Centre.
  - *(Today will have an AI focus)*
- I facilitate co-design workshops with manufacturers and SME's around the country.
- Workshops in Forbes, Parkes, Dubbo, Adelaide, Melbourne, Sydney, Newcastle, Townsville, Echuca and Bendigo.
- Over 45 workshops in the past year

ARM HUB AIADOPT CENTRE

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government Department of Industry, Science and Resources

TODAY'S TALKING POINTS

Common Challenges

Three Practical Lessons

Industry - Research - Government Collaboration

Workforce Capability and Inclusion

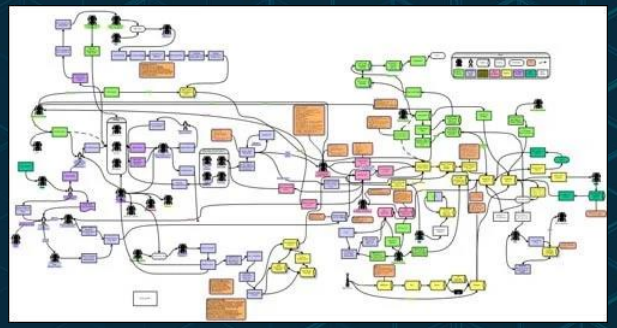
Becoming regional champions

ARM HUB AIADOPT CENTRE

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

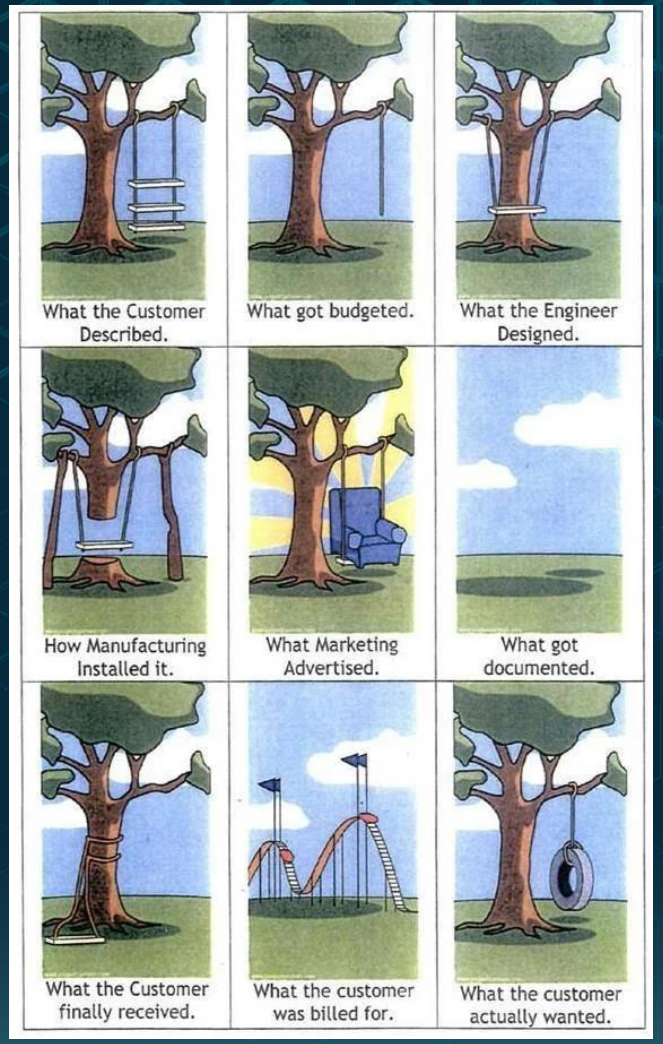
Australian Government
Department of Industry, Science and Resources

COMMON CHALLENGES

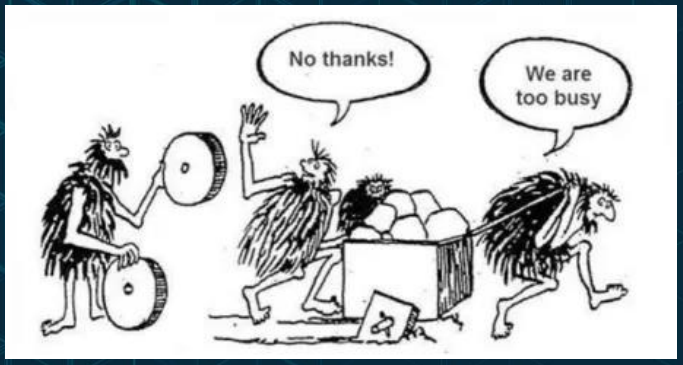


Complex Systems, Fragmented Data, Manual and Digital Workflows

Labour Shortages and Labour Retention



Complex Projects and Scoping, Policy Requirements



Escaping BAU

ARM HUB AIADOPT CENTRE

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government
Department of Industry, Science and Resources

Here are some of the voices we heard

Non-digitised firms

Digitised firms

Manufacturing – Weighing Instruments:

*"Our customer interactions are **scattered** — whether it's technical questions, site visits, or sales workflows, **nothing is connected**. We don't know which leads are worth pursuing first."*

*"We use multiple digital platforms, but **none talk to each other**. Data is siloed, duplicated, and our reporting is always backward-looking. Executives don't get real-time profitability insights."*

Modular Construction & Fit-out:

Logistics:

*"Unpacking quality and pallet checks are **heavily manual**. We have **no real-time visibility** — errors only show up after the containers are moved."*

*"Proposal writing is **slow and repetitive**. Every project requires mapping standards and compliance clauses — junior staff struggle, and errors creep in."*

Environmental Consulting Firm:

Manufacturing SME:

*"Our quoting process is **inconsistent**. Supplier data is **fragmented**, quality checks vary, and it undermines the reliability our brand is supposed to stand for."*

*"We are using only inventory management feature in our ERP but paying **$140k per year**."*

Diversified manufacturing:

Plastic foundry firm:

*"Our quoting process is inconsistent. Supplier data is **fragmented**, quality checks vary, and it undermines the reliability our brand is supposed to stand for."*

ARM HUB AIADOPT CENTRE

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government Department of Industry, Science and Resources

PRACTICAL LESSONS

- Data first, Transformation second
- Start Small, but start
- Augment, don’t automate

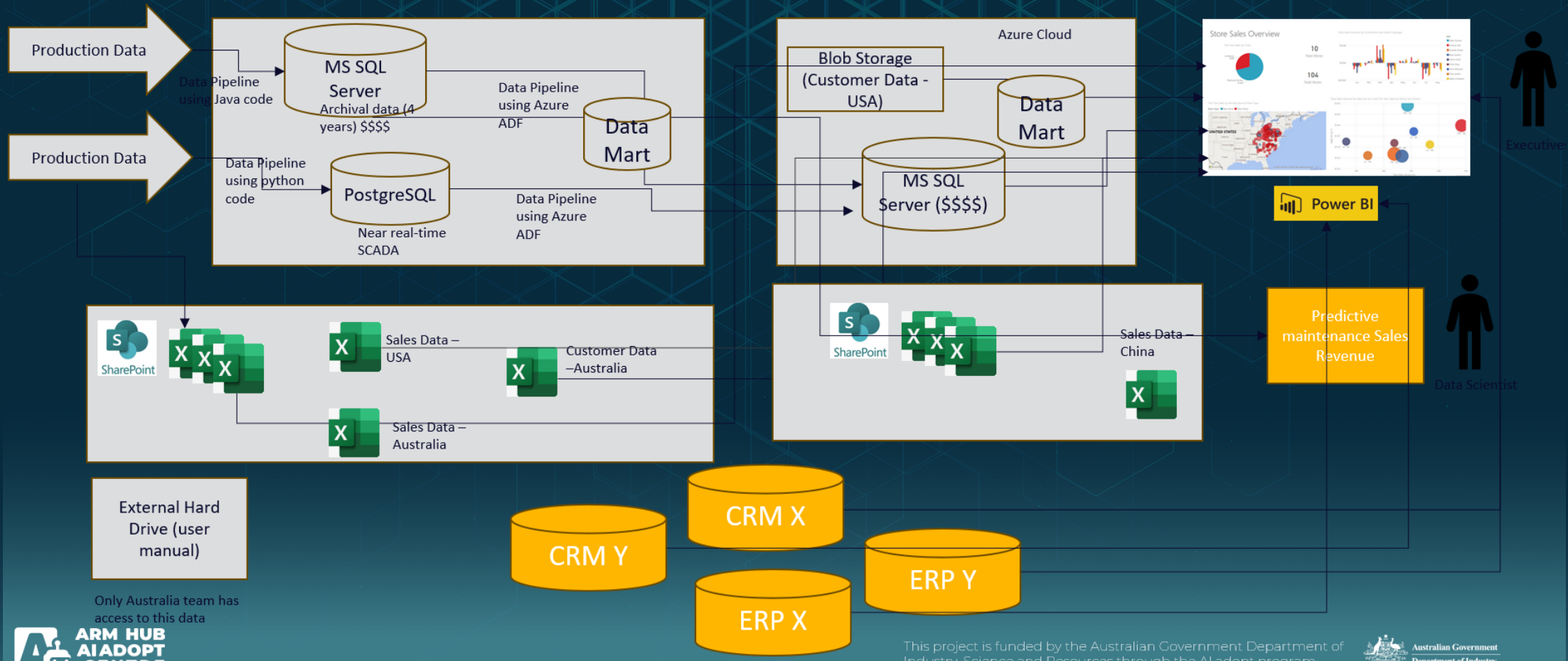
Processes > Technology
People > Processes

ARM HUB AIADOPT CENTRE

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government
Department of Industry, Science and Resources

Data first, Transformation second

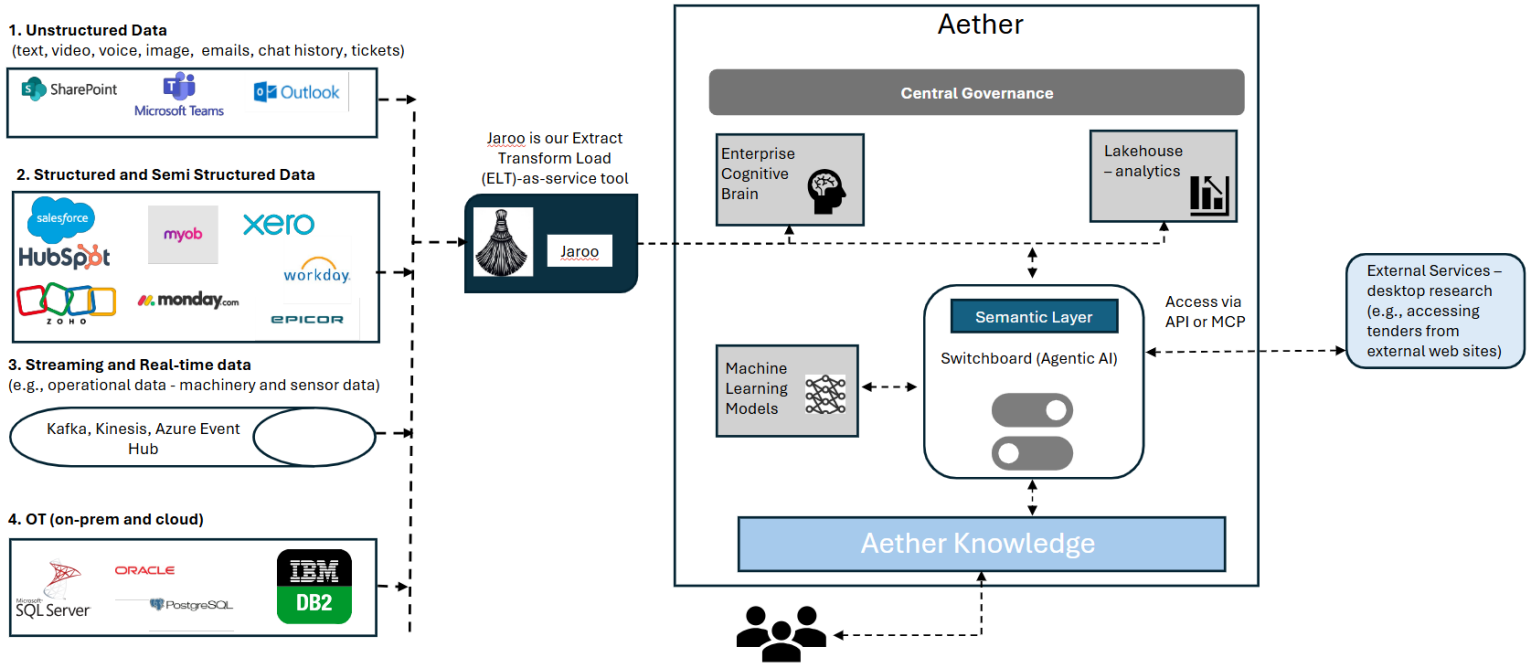


This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Data first, Transformation second

Aether – to build Zero-Waste knowledge Organization



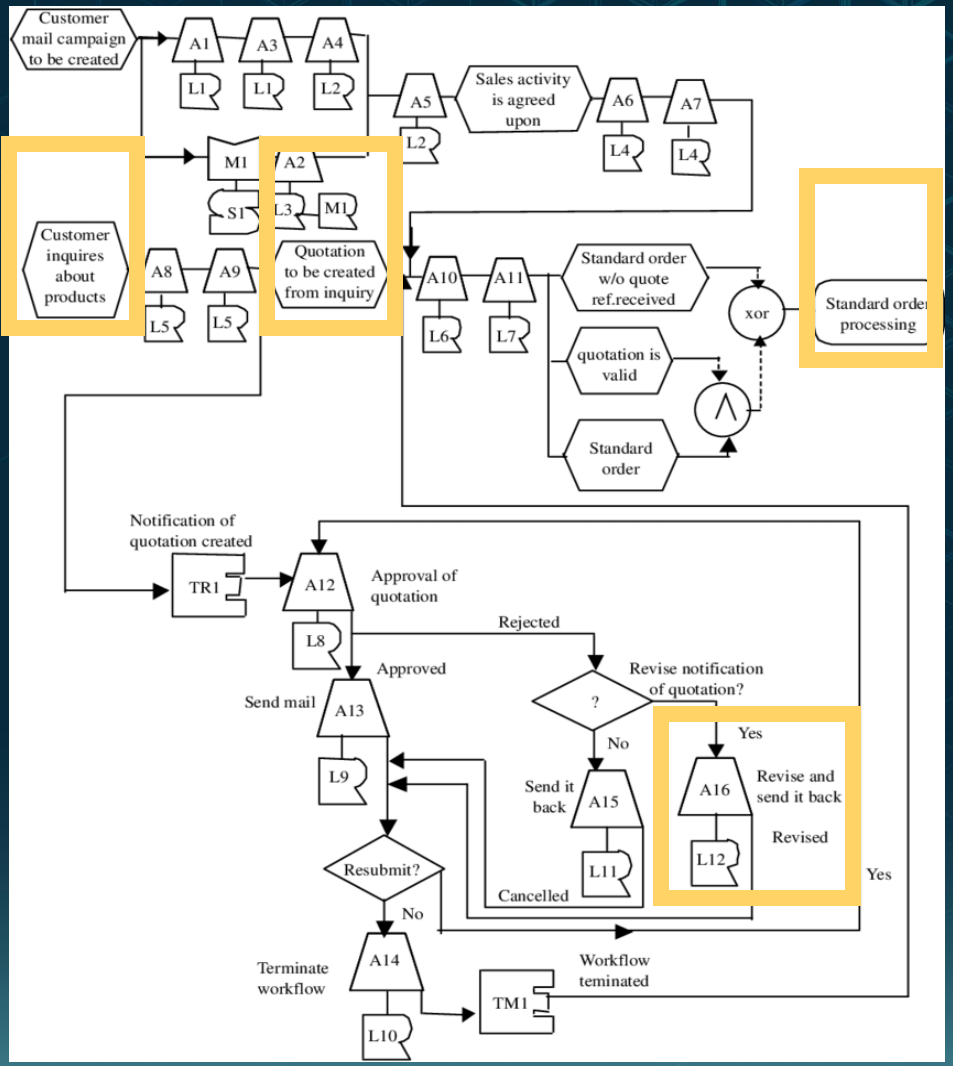
A **semantic layer** is a centralized, machine-readable model that encodes an organization's metrics, business logic, relationships, and rules. It gives LLMs the context needed to reason correctly about data.

- Cross-functional insights are where the value is
- Robots need good data
- Good data -> good measures -> good ROI

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government Department of Industry, Science and Resources

Start small, but start



1. Small, quick wins, narrow scope (even if big projects)
2. Proof of Delivery in 14 weeks

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Use Case Scoping (EXAMPLE)

(If struggling to identify a use-case, the AI conversational tool can be a helpful way to identify what sort of questions or information you're frequently asking it to retrieve)

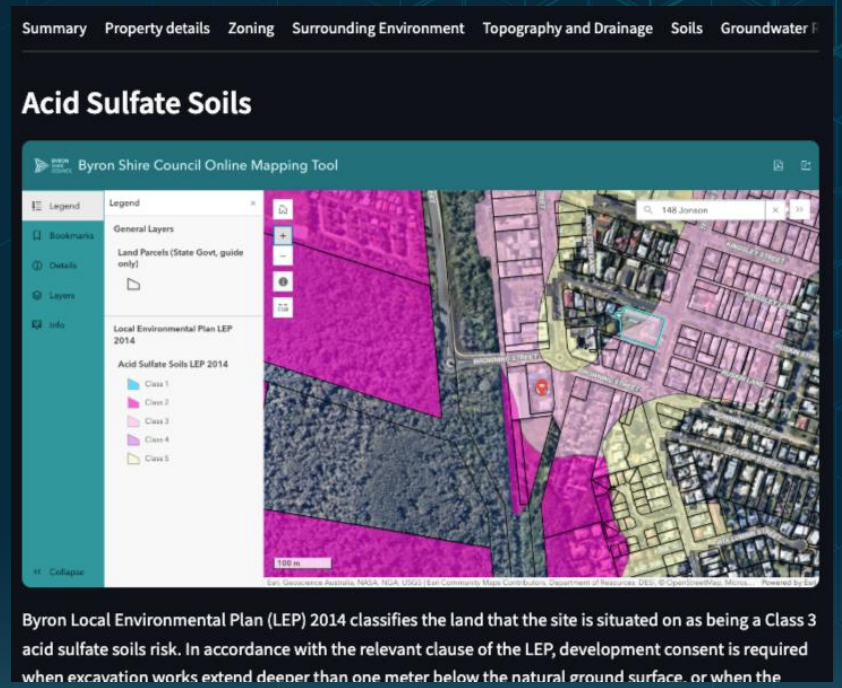
- **Problem Statement**
  - Proposal writing is slow and inconsistent; engineers spend hours drafting technical and compliance documents.
- **Key End Users & Process**
  - Sales engineers → interpret inquiry → assemble proposal → review → send to customer.
- **How & Where AI Helps**
  - Extracts requirements from customer inquiries
  - Generates first-draft proposals (scope, compliance text, BOM, timelines)
  - Standardises format and reduces manual effort
- **Data Sources**
  - Past proposals, product catalogues, pricing rules, templates, customer RFQs.
- **Success Criteria / KPIs**
  - Proposal Turnaround time reduced by 40-60%
  - Sales engineer time saved per proposal (4-6 hours down to <2 hours)
  - Increase in proposal throughput (15-30% more quotes sent)
- **Exercise**
  - **Feasibility** – Data and templates exist; technically straightforward.
    Viability – Saves time, reduces backlog, improves win rate.
    Desirability – Engineers prefer less admin and more technical work.

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government
Department of Industry, Science and Resources

Augment, don’t automate (to begin with)

Environmental research



Before robots, assistive lighting

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government
Department of Industry, Science and Resources

ARM Hub – ‘Aether 360’ Order Management Automation

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Building Industry, Research, Government Collaborations

- **Where to look –**
  - CRC-P
    - https://business.gov.au/grants-and-programs/cooperative-research-centres-projects-crcp-grants/customer-stories/sunpork

- **Aligning technology, novelty and problem space**
  - What is the challenge? How does it relate to broader macro challenges in Australia?
  - What is the technology?
  - What is the novel research? What are the specific framings for research?
    - (you can leave this up to the researcher, once you find the partner institution)

Measuring the quality of Australia's meat industry

Miniprobes is developing and bringing to market a tool to quantify meat quality for Australia's sheep meat industry.

A tool to measure meat quality

Australia is the world's largest exporter of lamb and mutton, but we have no practical, commercial way to measure meat quality.

Miniprobes is working with Meat & Livestock Australia and The University of Adelaide to develop a 'smart needle'. With a $1.5 million Cooperative Research Centres Project (CRC-P) grant, they aim to develop and commercialise the Miniprobe. The Miniprobe contains a fibre-optic probe that will measure intramuscular fat and quantify meat quality. Intramuscular fat is a critical factor in rating the quality of red meat. It impacts consumer perception of juiciness, flavour and overall satisfaction.

Building the Future – Printing 3D homes in remote locations

Luyten 3D and University of NSW test 3D printing to develop affordable housing for remote communities.

Luyten 3D is working on a 3D printing solution to make housing cheaper in regional and remote Australia.

While most Australians live in major cities, a significant proportion of people reside in remote settlements from farming and mining locations to Indigenous communities. A major challenge affecting housing affordability in these communities are the additional costs required to transport building materials and labour over vast distances.

With the support of a $3 million Cooperative Research Centres Project (CRC-P) grant, Luyten 3D is working with the University of New South Wales, Giraffe Technology, and Ark Built to develop new housing manufacturing technologies to address this challenge.

ARM HUB AIADOPT CENTRE

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government
Department of Industry, Science and Resources

WORKFORCE CAPABILITY AND INCLUSION

How do we upskill and retain staff? What is the role of STEM?

- **Start Small**
  - no large projects = no big onboarding/training
  - Staff develop their own capability
  - Self-determination theory (staff retention)
    - **Autonomy, Competency, Relatedness**
      - *Conditions supporting the individual's experience of **autonomy, competence,** and **relatedness** are argued to foster the most volitional and high-quality forms of motivation and engagement for activities, including enhanced performance, persistence, and creativity.*
- **Identify pain points -> identify champions**
  - Listen to your staff, look at your processes, find pain
  - Scoping out narrow improvements that directly relate to those staff will encourage them to join the conversation, and champion it's adoption

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government Department of Industry, Science and Resources

Developing Workforce Capability

Shared Infrastructure

Shared data platforms for publicly available knowledge – Weather, Compliance, etc

Shared robotics, shared industry – Investment in one project at a time, with learnings shared to the next

Shared Intelligence

Learnings from one project to inform the next

Capability enhanced across staff in the region, **shared site-visits and learnings**

Shared Innovation

Low up-front cost per business, collective transformation rather than individual

Bottom-up grass-roots innovation, championed by those who need it

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

How can regions position themselves in AI-enabled supply chains?

- Across every region I visit, the biggest differentiator isn't technology - it's **the strength of local networks and word-of-mouth collaboration**.
- Local champions share lessons across projects, helping everyone avoid pitfalls and accelerate adoption.
- This creates a **unified regional mindset** where businesses, educators, and makers lift each other through shared knowledge and collective problem-solving.
- The result is a region that **attracts and retains talent, develops capability internally**

1. **LEVERAGE REGIONAL STRENGTHS**
   - Word of mouth, Collaborate with neighbours, Industry specific advantages and knowledge

2. ESTABLISH SHARED REGIONAL INFRASTRUCTURE –

- Is this local weather data? Is this a robot that everyone can access for a specific task?

3. BUILDING REGIONAL STAFF CAPABILITY –

- So much value in staff exchanging site visits, can't beat hands on training of technology, up-skilling through informal, bottom-up participation with technology

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

THE ARM HUB AI ADOPT CENTRE

We support companies to build awareness, gain skills and understand how to derisk AI implementation, enabling them to set up for long term success.

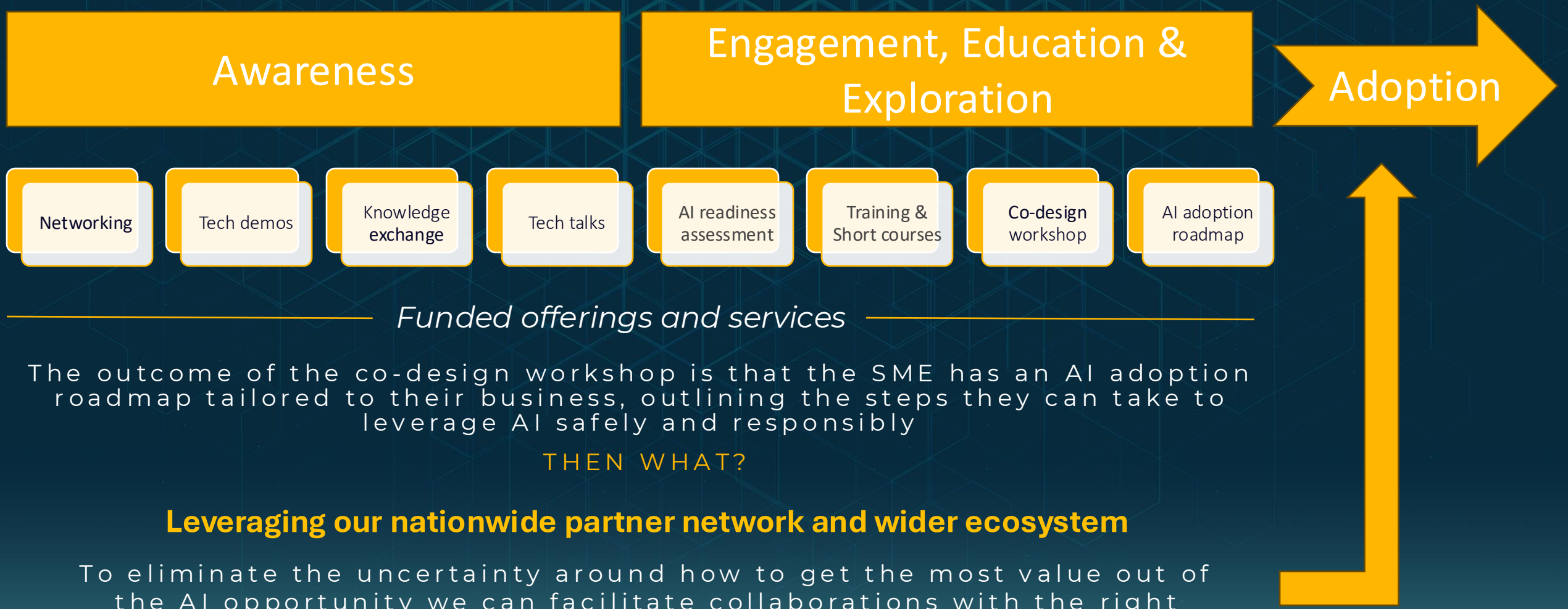
- Promoting safe and responsible AI
- Uncovering key AI use-cases through free AI adoption roadmap co-design workshops for SMEs
- Navigating clear pathways to quick and de-risked AI adoption

FOCUS ON REGIONAL & REMOTE, FEMALE FOUNDED, & FIRST NATIONS BUSINESSES

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government
Department of Industry, Science and Resources

OUR AI ADOPT CENTRE



The outcome of the co-design workshop is that the SME has an AI adoption roadmap tailored to their business, outlining the steps they can take to leverage AI safely and responsibly

THEN WHAT?

Leveraging our nationwide partner network and wider ecosystem

To eliminate the uncertainty around how to get the most value out of the AI opportunity we can facilitate collaborations with the right partner to help make it happen.

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government Department of Industry, Science and Resources

Thank you

Any questions?

ARM HUB AI
ADOPT CENTRE

53 Holland Street
Northgate Queensland
Australia

+61 491 200 260

aiadopt.ai

This project is funded by the Australian Government Department of Industry, Science and Resources through the AI adopt program.

Australian Government
Department of Industry, Science and Resources