



Foundations for the Future (MortarCAPS Data Standard)

Date of Presentation

15 July 2025

An introduction to MCDS

An introduction to the MortarCAPS Higher Learning Data Standard (MCDS), including benefits, University Partners, Work to Date and Next Steps.



About Us

MortarCAPS Higher Learning Data Standard (MCDS) is the **first unified Commonwealth data standard, built by the sector, for the sector.** It supports interoperability, AI readiness, and cross-border student mobility.

With over **70 institutions** across Australia, New Zealand, and Canada contributing, MCDS is helping modernise tertiary education by:

- **Skills Alignment with Industry Needs**
 - Embedding skills and competencies into learning to meet evolving labour market demands, including microcredentials and work-integrated learning.
- **Digital Transformation & Interoperability**
 - Streamlining data systems, investing in edtech, AI, and automation, and enabling portability of credentials across systems and borders.
- **Lifelong Learning & Access Pathways**
 - Supporting learner mobility, credit transfer, and upskilling/reskilling across all stages of life.
- **Equity, Diversity & Inclusion (EDI)**
 - Addressing barriers to participation and success for underrepresented groups.
- **Sustainability & Resilience**
 - Enabling environmental and financial sustainability while future-proofing against geopolitical, technological, and demographic change.

Funded by software vendors—not institutions—MCDS offers a future-focused foundation to drive productivity, collaboration, and student success at scale.





Commonwealth Standard

MortarCAPS is an independent charity governed by the sector via its Board. Its purpose is to deliver and maintain an open Commonwealth focused data standard for higher learning.

Key Objectives:

- ✓ Enable institutions to simplify systems and leverage technology that is built for OUR educational ecosystems.
- ✓ Foster collaboration across education, government, industry, and tech providers.
- ✓ Enhance student outcomes and decision-making through better data.
- ✓ Support vendors to align solutions with sector needs.
- ✓ Shift investment from commoditised systems to innovation.





MCDS Board Members



Warwick Calkin
Board Chair
Navitas CIO



Niranjan Prabhu
CAUDIT President



Kyle Dunsire
Ingenuity
Holdings
CEO



Brian Stewart
CUCCIO Board
Representative



Shane Rigby
LIXI Data Standard
CEO



Rebecca Ostergaard
CSIRO CDO



Michael Burgess
Independent Advisory



Our partners

We are excited to announce our partners who are supporting the build of the standard.





Founding Vendors

We are grateful to the founders of this initiative **who have chosen to prioritise what's best for the sector** and fund the beginning of this revolution.

We look forward to finalising the partnerships with other critical vendors across the ecosystem.



Our **founding partners** are critical to ensuring the benefits of the standard are realised across the sector through RND investment in alignment with the standard.



We are also grateful to the implementation partners who are bringing this to life within institutions.



**Designed by the Sector, Built by the Sector,
Owned by the Sector.**



Australian Working Group Leads



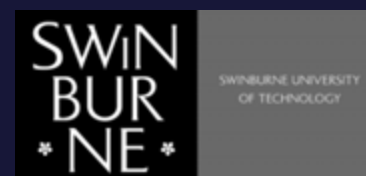
THE UNIVERSITY OF
SYDNEY



UNSW
SYDNEY



UNSW
College



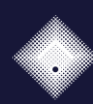
THE UNIVERSITY OF
MELBOURNE



MONASH
University



THE UNIVERSITY OF
WESTERN
AUSTRALIA



VICTORIA
UNIVERSITY



Flinders
University



TAFE
NSW



UNIVERSITY OF
CANBERRA



MU Murdoch
University



UNIVERSITY of
TASMANIA



MACQUARIE
University
SYDNEY · AUSTRALIA



JAMES COOK
UNIVERSITY
AUSTRALIA



Charles Sturt
University



University
of Otago

QUT



LA TROBE
UNIVERSITY



Southern Cross
University



Australian
National
University



BOND
UNIVERSITY



ACU
AUSTRALIAN CATHOLIC UNIVERSITY



WESTERN SYDNEY
UNIVERSITY



Canadian Working Group Leads





MCDS provides the foundation to **finally address sector and national priorities** — from skills alignment and learner mobility to equity and workforce productivity — while **preparing institutions for an AI-enabled future** through consistent, interoperable data.

The Challenge & Solution

Skills Alignment with Industry Needs

- **Challenge:**
Learning outcomes and qualifications are not consistently mapped to real-world skills, making it hard for employers to understand graduate capability and for institutions to respond quickly to workforce needs.
- **MCDS Solution:**
MCDS embeds structured, machine-readable skills and competencies into credential records, enabling alignment with national and international skills frameworks and making it easier to adapt curriculum to industry demand.

Learner Mobility and Credit Portability

- **Challenge:**
Transitions between VET and higher education, or across institutions, are administratively complex, inconsistent, and often disadvantage learners—especially those from underrepresented backgrounds.
- **MCDS Solution:**
MCDS standardises enrolment, credit, and credential data, supporting seamless credit transfer, and stackable credentials that move with the learner across sectors and borders.

National Productivity and Workforce Planning

- **Challenge:**
Policymakers and institutions lack consistent, real-time visibility into skills supply, educational attainment, and credentialing activity—undermining national productivity, migration, and workforce strategies.
- **MCDS Solution:**
MCDS provides a harmonised data layer that links learning to skills and employment outcomes, enabling government, industry, and education to collaborate on strategic, evidence-based planning.





The Challenge & Solution

Equity and Access to Lifelong Learning

- **Challenge:**
The current system favours full qualifications and traditional pathways, limiting access for learners needing flexible, bite-sized, or re-entry education options.
- **MCDS Solution:**
MCDS supports the recognition and portability of microcredentials and partial qualifications, reducing entry barriers and enabling inclusive, lifelong, skills-based learning models.

Digital Transformation and AI Readiness

- **Challenge:**
Legacy systems, siloed platforms, and lack of common architecture prevent institutions from realising the benefits of digital infrastructure, automation, and AI.
- **MCDS Solution:**
MCDS provides a future-proof, open standard designed for interoperability across student systems, credential platforms, and government databases—accelerating transformation and innovation.

Cost Efficiency and Cross-Sector Collaboration

- **Challenge:**
Institutions are duplicating effort and spending on custom data fixes, bespoke reports, and one-off integrations—with limited opportunities to pool resources or scale solutions.
- **MCDS Solution:**
MCDS is governed by the sector and funded by vendors, enabling shared infrastructure, standardised reporting, and cross-sector coordination—reducing cost and complexity at scale.

MCDS provides the foundation to **finally address sector and national priorities** — from skills alignment and learner mobility to equity and workforce productivity — while **preparing institutions for an AI-enabled future** through consistent, interoperable data.





A Global Leadership Story for Australia

Australia has a **once-in-a-generation opportunity to lead the world** in how education and skills are recognised, shared, and used, not just within classrooms, but across entire careers and industries.

By developing the MortarCAPS Data Standard (MCDS) and supporting it with bold government Australia can:

- Set a **global benchmark** for how learners can own and use their data safely, securely, and with impact.
- Create a model that other countries are watching — one that balances trust, innovation, and public value.
- Proving that the **sector can lead, not just respond, to national challenges** around productivity, skills shortages, and digital transformation.
- **Build a future-fit education system** that works across universities, colleges, polytechnics, short course providers, and industry.
- Drive **innovation that's locally built and globally scalable**, with Australian ideas, and technology at the core.

This is a good news story for Australia, one where the sector takes the lead in solving real problems, working together across government, education, and business.

It's a story of **smart collaboration, public interest design, and national pride**, showing that the Australian tertiary system is not only ready for the future, but shaping it.

Productivity at the core

- Tertiary education is at a crossroads, with relevance to industry waning, costs of delivery increasing, and a shift away from the reliance on International Students.
- Australia needs an **urgent pivot towards "Skills Based" education at all levels**, and a shift towards life-long-learning.
- The Australian tertiary sector is now leading a Commonwealth initiative to modernise the sector, from ground up.

We are seeking your support to bring this to life and enable the next generation of learning for our country.





Driving National Productivity

- **Smarter Workforce Planning:** With real-time, skills-based data, businesses can hire faster, retrain workers easily, and respond to change more effectively.
- **Boost to Export Education:** Australia's education sector can offer more flexible, globally recognised learning options — attracting new international markets.
- **Lifelong Learning = Lifelong Earning:** Workers can upskill and reskill as industries shift, helping reduce unemployment and boost average incomes.
- **Higher Output per Worker:** Matching skills to jobs and removing training waste means more productivity per person — especially in priority industries like health, tech, defence, and clean energy.
- **New Business Opportunities:** An open skills ecosystem will spark innovation in EdTech, workforce tools, and data-driven platforms — creating jobs and exports.





Benefits to Government

1. Enhanced Regulatory Oversight

- **Real-time, standardised data access** allows governments to monitor provider performance and student outcomes more efficiently.
- Improved visibility into **course structures, delivery modalities, and assessment practices** supports evidence-based quality assurance and risk assessments.

2. Streamlined Reporting & Reduced Burden

- MCDS enables **automated, interoperable data sharing**, reducing manual reporting burden for both government and providers.
- Institutions can report once via MCDS-compliant systems, meeting multiple regulatory and government requirements simultaneously.

3. Stronger Sector Collaboration

- MCDS facilitates a **nationally consistent approach** to learning data, supporting the goal of promoting best practice and sector-wide standards.
- Partnership positions Australia as a **leader in modernising tertiary regulation**, working alongside CUCCIO and other global bodies.

4. Future-Ready Regulation

- As credentials diversify (microcredentials, hybrid delivery, AI-assisted learning), MCDS ensures Australia can **adapt its regulatory models** to reflect evolving learner pathways.
- Enables Australia to play a key role in shaping the digital infrastructure needed for **AI-enabled credit recognition, student mobility, and quality benchmarking**.

5. Global Recognition & Influence

- MCDS is a globally aligned initiative spanning Australia, NZ, Canada, and the soon the UK.
- Australia's involvement elevates our international standing in **education quality assurance, digital credentialing, and data governance**.

6. Operational Efficiency and Risk Mitigation

- Consolidated data architecture via MCDS reduces data duplication, version control issues, and inconsistencies in audits.
- Provides the sector & governments with **faster access to reliable, standardised data**, enhancing its ability to respond to emerging risks or provider performance issues.



The Future

Benefits for Industry

- Quicker access to real, verified skills data.
- Easier hiring and workforce planning.
- Better match between training and job needs.
- More innovation and productivity from a skilled workforce.

Today's System	Future with MCDS & Reform
Education is stuck in silos	Education connects across systems and jobs
Only full degrees are recognised	Short courses and skills also count
Credit and RPL/PLAR is slow/manual	Automated and consistent recognition
Industry kept at arm's length	Industry co-designs learning pathways
One-time education experience	Lifelong learning supported and portable



Ex. Open Banking

What is Open Banking?

- A government-led initiative that lets consumers safely share their banking data with other banks and apps to get better deals and more personalised services.

Why Do Data Standards Matter?

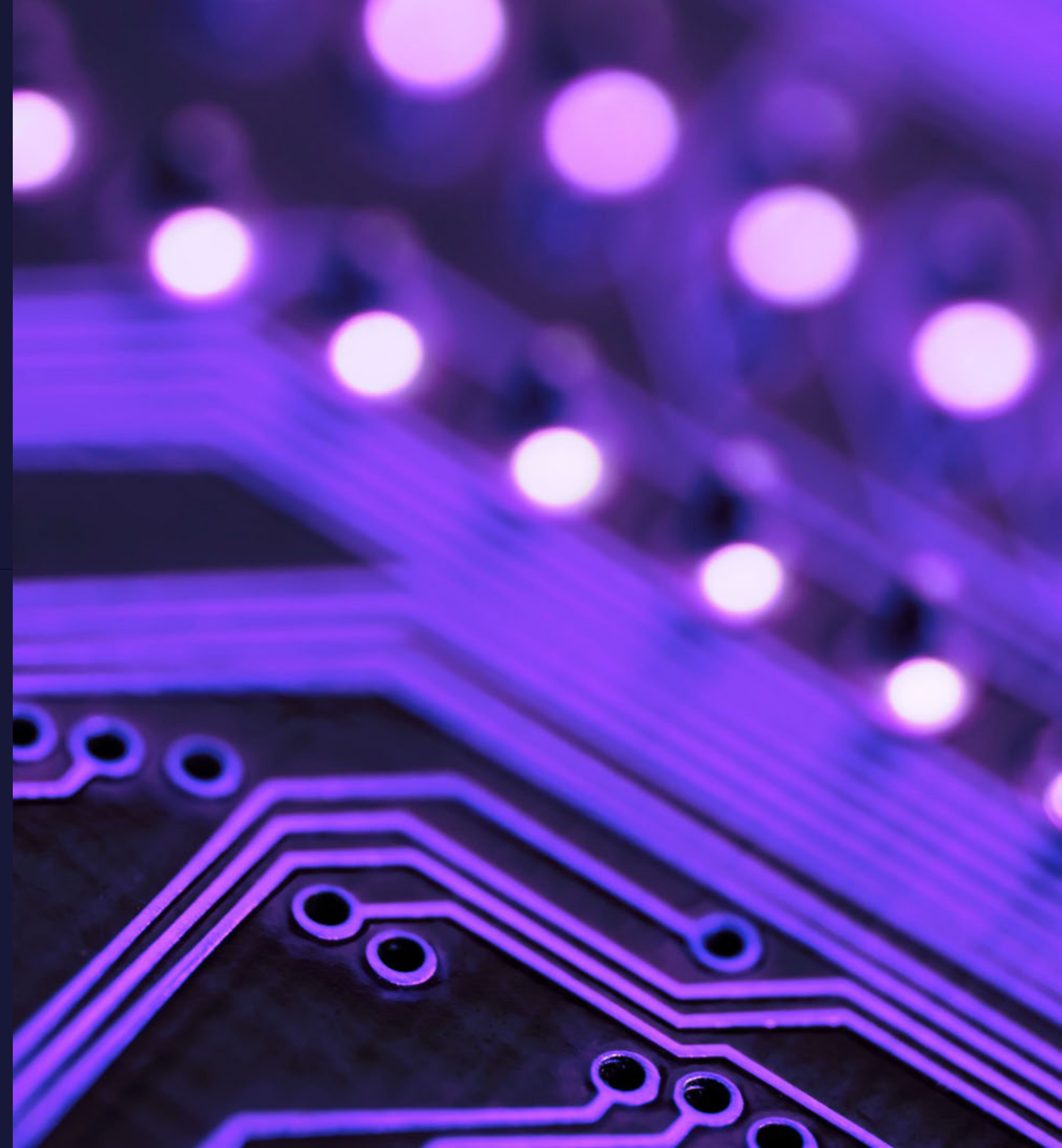
- Everyone uses the same “language” to share information, which makes it fast, accurate, and secure.
- Standards make sure data flows smoothly between systems, even if they’re run by different companies.

What This Means for Consumers:

- **Easier switching** between banks or providers
- **Smarter tools** to manage money, savings, or credit
- **More control** over who sees their data and for what purpose

What This Means for the Sector:

- Reduces costs and duplication of effort & data
- Encourages innovation by new players
- Increases trust in digital services



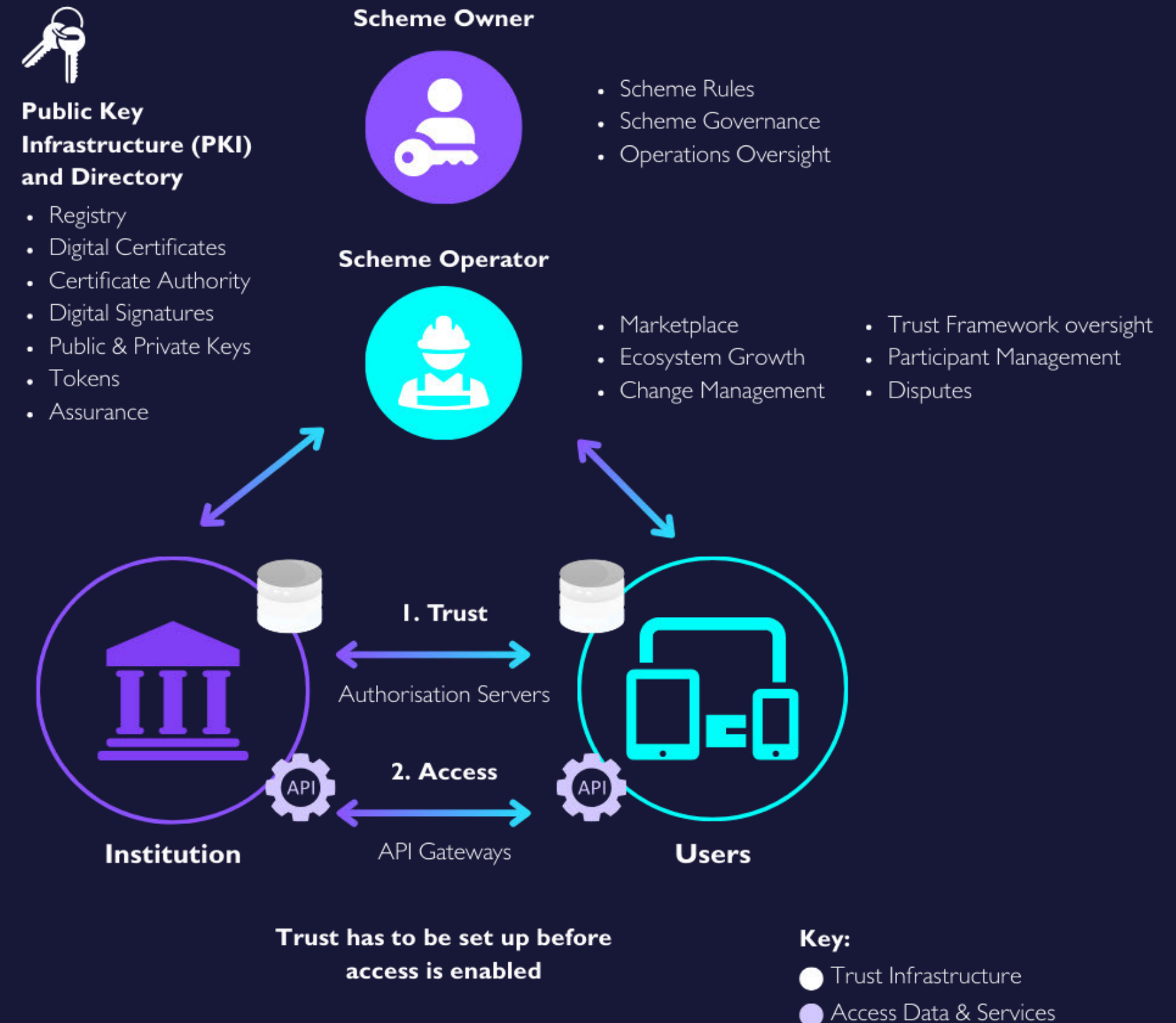


Future Vision Open Education

Before one institution can securely and privately access a student's data and services in another institution, digital and commercial "Trust" needs to be set up between the two.

In this model, Open Education will use the secure encryption of Public Key Infrastructure to maintain secure, private data exchange between **Data Providers** and **Data Consumers**.

This system allows for more than just transcript data to be shifted securely – enabling the wellbeing and support services data also to remain in the student's hands.





Protecting Data and System Security

- **Privacy by Design:**
 - The system is built to keep personal learning data secure and under the learner's control.
- **Student-Owned Data:**
 - Just like with Open Banking, students decide who can access or use their data — not institutions or companies.
- **No Central Database:**
 - Data is decentralised and flows securely between verified systems using encrypted standards.
- **Government-Backed Frameworks:**
 - Security, access, and consent rules are designed with strong public oversight.
- **Built for Trust:**
 - The scheme builds confidence in the digital learning economy by putting citizens first — protecting identity, history, and choice.

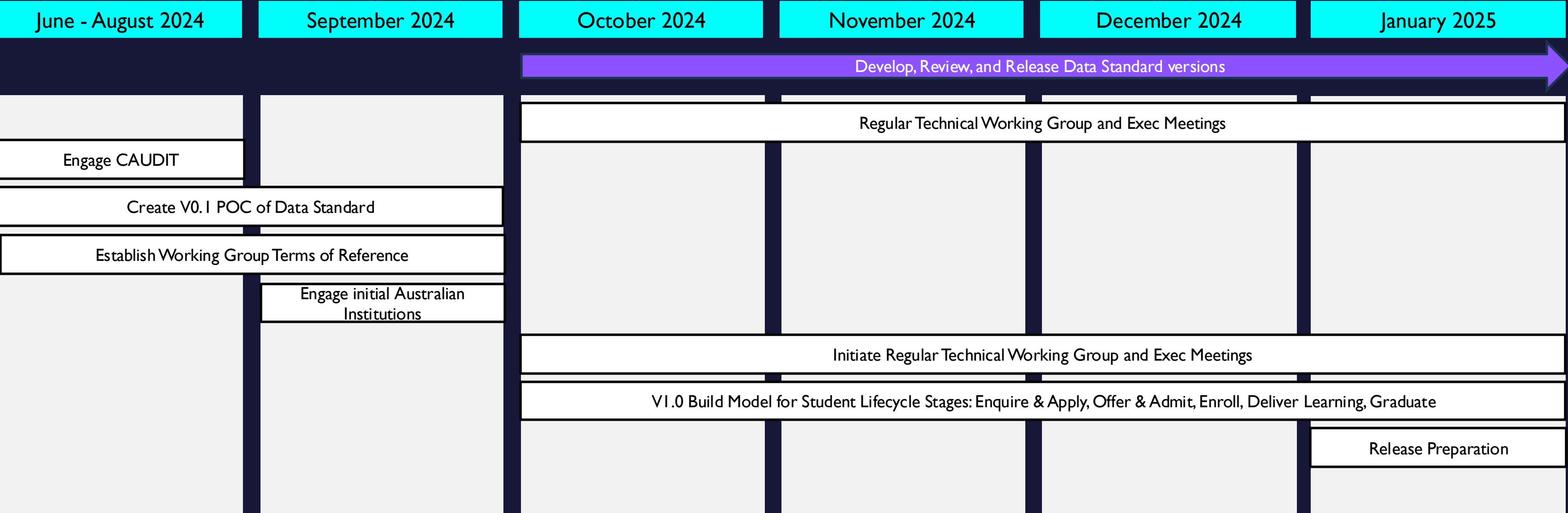




The Future is here...



V1.0





Progress So Far

We've had a lot of productive discussions in our technical working groups over the past months and have already tackled a few hard topics.

Party: Person & Organisation

Contact Point & Location

Calendar, Learning Period, & Intake

**Programme Of Learning
Availability, StudyPreference**

Document: ID & Recognition

Credit → Recognition

Fee & Financial Benefit

Entry Requirements

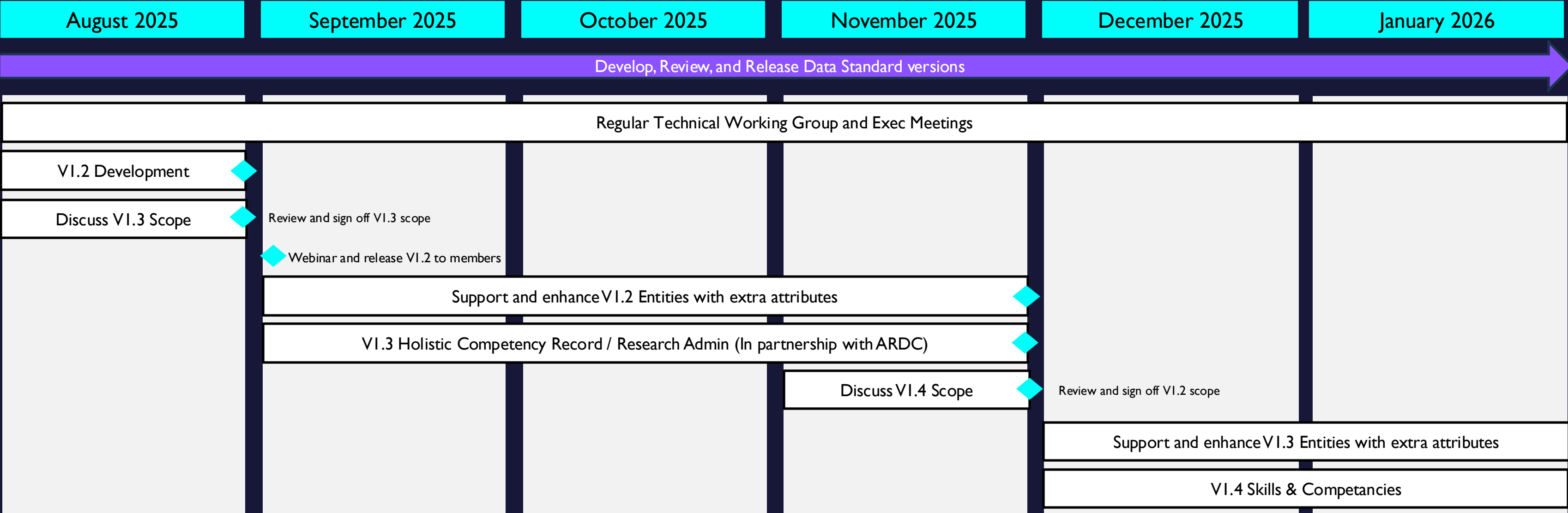


V1.1 & V1.2





V1.2, V1.3, & V1.4





Thank You!

Website

www.mortarcaps.org

MCDS Introduction