

## Maturity Levels

NONE	No identifiable capability
EMERGING	Early signs of progress towards some capability
ESTABLISHED	Capability exists (quality variable)
ADVANCED	High quality capability exists and is widely available/implemented


CC BY-NC-ND 4.0

### 1. INFRASTRUCTURE & RESOURCES

Category I	Category II	Category III	Category IV	Australia's Maturity	
1.1 Compute & Data Infrastructure	1.1.1 Data Centres			Established	
	1.1.2 Training Compute	1.1.2.1 Private Sector Training Compute	1.1.2.1.1 Cloud Training Compute Infrastructure as a Service (public cloud)	Established	
			1.1.2.1.2 Private Training Compute Clusters		Emerging
		1.1.2.2 Public Sector & Public Interest Training Compute	1.1.2.2.1 Public Sector & Public Interest AI Training Infrastructure		Emerging
			1.1.2.2.2 General-purpose Public Sector & Public Interest High-Performance Compute Infrastructure		Emerging
	1.1.3 Inferencing Compute	1.1.3.1 Private Sector Inferencing Compute	1.1.3.1.1 Cloud Inferencing Compute Infrastructure as a Service (public cloud)	Established	
			1.1.3.1.2 Commercial Edge Inferencing Compute Deployments		Emerging
			1.1.3.1.3 Private Inferencing Compute Deployments		Emerging
		1.1.3.2 Public Sector & Public Interest Inferencing Compute	1.1.3.2.1 Public Sector & Public Interest High-performance Inferencing Compute Clusters		Emerging
			1.1.3.2.2 Public Sector & Public Interest Edge Inferencing Compute Deployments		Established
		1.1.3.3 Consumer or Personal AI Inferencing Devices			Advanced
	1.1.4 Data Storage Infrastructure			Established	
	1.2 Hardware Supply chain	1.2.1 Strategic & Critical Minerals	1.2.1.1 Natural Resources		Advanced
			1.2.1.2 Extraction		Established
1.2.1.3 Refinement & Processing			Emerging		
1.2.2 Producing Accelerators		1.2.2.1 Designing Accelerators (Fabless)		Emerging	
		1.2.2.2 Manufacturing Accelerators		None	
		1.2.2.3 Packaging Accelerators		None	
1.2.3 International Agreements for Accelerator Supply			Not enough data		
1.2.4 Other Critical Data Centre Hardware & Construction Inputs			Established		
1.3 Supporting Infrastructure & Resources	1.3.1 Electricity	1.3.1.1 Clean Electricity Generation		Established	
		1.3.1.2 Electricity Transmission & Distribution		Established	
	1.3.2 Network & Connectivity	1.3.2.1 Broadband Capacity		Established	
		1.3.2.2 Subsea Cables		Established	
	1.3.3 Water Supply			Emerging	
	1.3.4 Suitable Land			Established	
1.3.5 Permitting and Approvals Process			Established		

### 2. DATA ASSETS & LIFECYCLE MANAGEMENT

Category I	Category II	Category III	Australia's Maturity	
2.1 Commitment to Indigenous Data Sovereignty			Emerging	
2.2 Domain Specific Datasets	2.2.1 Language, Arts, Culture & History		Established	
	2.2.2 Medical		Advanced	
	2.2.3 Geospatial		Advanced	
	2.2.4 Environment & Resources		Advanced	
	2.2.5 Economic		Established	
	2.2.6 Enterprise & Business Data		Not enough data	
	2.2.7 Scientific, Synthetic and Simulated Research Data		Not enough data	
	2.2.8 Community & Citizen Science		Not enough data	
	2.2.9 Demographic		Advanced	
	2.2.10 Infrastructure		Advanced	
	2.2.11 Public Administration		Emerging	
2.3 Data Lifecycle Management	2.3.1 Data Creation & Sourcing	2.3.1.1 Standards & Provenance		Established
		2.3.1.2 Responsible Data Sourcing		Emerging
	2.3.2 Data Preparation & Curation	2.3.2.1 Data Quality & Validation		Emerging
		2.3.2.2 Annotation & Curation (for reusability)		Emerging
	2.3.3 Data Access & Use	2.3.3.1 General Use Access		Emerging
		2.3.3.2 Availability of Government Data		Established
		2.3.3.3 Restricted Access – Copyright/IP		Emerging
		2.3.3.4 Offshore Data Access (trusted transfers)		Established
	2.3.4 Data Stewardship & Assurance	2.3.4.1 Data Retention & Archiving		Emerging
		2.3.4.2 Data Deletion & Oversight		Emerging

3. MODELS & APPLICATIONS				
Category I	Category II	Category III	Australia's Maturity	
3.1 Models	3.1.1 Model Development	3.1.1.1 Computer Vision	Advanced	
		3.1.1.2 Computer Audition	Emerging	
		3.1.1.3 Computer Linguistics	Established	
		3.1.1.4 Robotics & Physical AI	Established	
		3.1.1.5 Forecasting	Established	
		3.1.1.6 Discovery	Emerging	
		3.1.1.7 Planning / Optimisation	Emerging	
		3.1.1.8 Creation / Generative	Emerging	
		3.1.1.9 Culturally & Nationally Inclusive Models	Emerging	
	3.1.2 Model Adaptation & Alignment	3.1.2.1 Domain Adaptation	Established	
		3.1.2.2 Cultural and Linguistic Alignment	Emerging	
	3.1.3 Model Tooling	Emerging		
	3.1.4 Model & Agent Orchestration	Emerging		
	3.1.5 Safety and Value Alignment	Not enough data		
3.2 Applications	3.2.1 General Applications		Advanced	
	3.2.2 Sector-specific Applications		Established	
4. INNOVATION & ADOPTION				
Category I	Category II	Category III	Australia's Maturity	
4.1 Innovation	4.1.1 Support & Investment Availability		Emerging	
	4.1.2 AI Native Companies		Emerging	
4.2 Rate of Adoption	4.2.1 Private sector adoption	4.2.1.1 Large Enterprises	Established	
		4.2.1.2 SMEs & Startups	Established	
	4.2.2 Public Sector Adoption	4.2.2.1 Government Adoption	Emerging	
		4.2.2.2 Defence & National Security	Established	
	4.2.3 Public Interest Adoption	4.2.3.1.1 Civil Society Adoption	Emerging	
		4.2.3.1.2 Research & Academia Adoption	Established	
	4.2.4 Inclusive AI Adoption		Emerging	
4.3 Culture of Adoption	4.3.1 Discerning Adoption		Established	
	4.3.2 Trust in AI Deployment	4.3.2.1 Trust in Public Sector	Emerging	
		4.3.2.2 Trust in Private Sector	Emerging	
		4.3.2.3 Trust in Public Interest Sector	Established	
5. SKILLS				
Category I	Category II	Category III	Australia's Maturity	
5.1 Skills for building AI infrastructure and developing AI	5.1.1 Building Physical AI Infrastructure		Advanced	
	5.1.2 Building Accelerators (AI Chips)		Emerging	
	5.1.3 AI Research Skills		Established	
	5.1.4 AI Development & Application Skills		Emerging	
	5.1.5 Research and Development Capabilities (translation)		Emerging	
	5.1.6 International AI Talent Collaborations		Emerging	
5.2 Skills for Deploying & Maintaining AI	5.2.1 Business and Commercial Skills		Established	
	5.2.2 Interdisciplinary and Domain Expertise		Not enough data	
5.3 Skills for Governing & Securing AI	5.3.1 Assurance and Risk Management (safety, bias, explainability)		Emerging	
	5.3.2 Cybersecurity and Technical Robustness		Established	
	5.3.3 Policy and Legal Skills		Established	
5.4 Skills for Living with AI	5.4.1 General Public AI Literacy and Engagement		Emerging	
6. GOVERNANCE				
Category I	Category II	Category III	Australia's Maturity	
6.1 Government Strategy	6.1.1 National AI Strategy and Leadership		Emerging	
	6.1.2 Policy Coherence		Emerging	
6.2 Legal, Regulatory, Standards & Assurance Frameworks & Capabilities	6.2.1 Legal & Regulatory Frameworks		Established	
	6.2.2 Ethics, Standards & Assurance Frameworks		Established	
	6.2.3 Regulatory and Oversight Capability		Emerging	
6.3 Institutional Capacity to Govern AI Deployment	6.3.1 Public Sector Institutional Capacity		Emerging	
	6.3.2 Private Sector & Public Interest Institutional Capacity		Emerging	
6.4 Civic Engagement and Democratic Legitimacy			Established	
6.5 International Engagement	6.5.1 Influence and Norm Shaping		Established	
	6.5.2 Access and partnerships		Emerging	