

Enhancing Productivity and Digital Capability in Tasmania's Care Sector

Submission to the Economic Diversification and Investment Strategy

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Acknowledgement of Country

The University of Tasmania pays its respects to elders past and present and to the many Aboriginal people that did not make elder status and to the Tasmanian Aboriginal community that continues to care for Country. We acknowledge the profound effect of climate change on this Country and seek to work alongside Tasmanian Aboriginal communities, with their deep wisdom and knowledge, to address climate change and its impacts.

The Palawa people belong to one of the world's oldest living cultures, continually resident on this Country for over 65,000 years. They have survived and adapted to significant climate changes over this time, such as sea-level rise and extreme rainfall variability, and as such embody thousands of generations of intimate place-based knowledge.

We acknowledge with deep respect that this knowledge represents a range of cultural practices, wisdom, traditions, and ways of knowing the world that provide accurate and useful climate change information, observations, and solutions.

The University of Tasmania likewise recognises a history of truth that acknowledges the impacts of invasion and colonisation upon Aboriginal people, resulting in forcible removal from their lands.

Our island is deeply unique, with cities and towns surrounded by spectacular landscapes of bushland, waterways, mountain ranges, and beaches.

The University of Tasmania stands for a future that profoundly respects and acknowledges Aboriginal perspectives, culture, language, and history, and a continued effort to fight for Aboriginal justice and rights paving the way for a strong future.

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1. Introduction

This submission responds to the Economic Diversification and Investment Strategy consultation focus area of lifting productivity and growing Tasmania's capability in artificial intelligence (AI) and digital technology. It uses the care sector as a worked example because it is one of Tasmania's largest, fastest growing, and most strategically important industries. The care sector, broadly defined as health care and social assistance services, is already Tasmania's largest employing industry, accounting for approximately 46,600-50,000 workers and around 17% of total employment (Jobs & Skills, 2025). Employment in the sector has grown by almost 50% over the past decade, significantly outpacing population growth and reflecting rising demand associated with population ageing, disability support needs, and increasing demand for health and community services.

The sector's importance is likely to increase further. Tasmania has the oldest population of any Australian state and faces above-average demand for aged care, disability support, and community services. At the same time, providers face persistent workforce shortages, rising service demand, and increasing cost pressures (Laud.et.al, 2025). These challenges are not unique to Tasmania but are particularly acute given the state's demographic profile and regional service delivery context. As a result, improving productivity within the care sector will be critical to maintaining service quality, workforce sustainability, and fiscal sustainability over the coming decades.

Nationally, the Productivity Commission has identified the care economy as a central pillar of Australia's future productivity agenda, recognising that productivity improvements in care services are essential to supporting economic participation, workforce capability, wellbeing, and long-term economic growth. The Commission's inquiry into delivering quality care efficiently (Smith.et.al, 2025), highlights the need to improve efficiency while maintaining service quality and outcomes, placing particular emphasis on workforce capability, digital technologies, and service innovation.

Against this backdrop, the focus of this submission is on improving productivity in Tasmania's care sector through three of the Productivity Commission's five reform pillars: building a skilled and adaptable workforce, harnessing data and digital technology, and delivering quality care more efficiently. We argue that AI offers a significant opportunity to address productivity constraints across the sector, but only if technological adoption is accompanied by investment in human capability and organisational readiness. The care sector therefore provides an instructive case study for how Tasmania can leverage AI to improve productivity while maintaining the quality, safety, and human-centred nature of essential services.

2. Case example: AI and productivity in the care sector

Care productivity is an important measure of how effectively the care economy, which includes health, aged care, disability, and early childhood services, delivers high-quality outcomes in relation to the resources and labour invested. Given that care is fundamentally rooted in human relationships rather than automation, there is significant potential to enhance productivity through human-AI collaboration. By focusing on systemic efficiency, quality of care, and preventive measures, we can achieve substantial improvements that go beyond

merely accelerating service delivery. Understanding the productivity of the care sector at three distinct levels, listed below will help us identify opportunities for growth and innovation:

- Micro (frontline, individual care),
- Meso (organisational and facility management), and
- Macro (system and policy settings).

At every level, some activities are

- Ready now - AI tools exist and can be adopted directly.
- AI assisted - AI supports the work, but a trained person must stay in control.
- New opportunity - an entirely new activities that AI has made possible.
- Stays human – value depends on touch, trust or judgement which AI cannot replace.

Below, we provide an overview of the human and AI capabilities, necessary for each specified level. By highlighting the capability gaps, the discussions establish an essential framework that both government entities and industry stakeholders can utilise to drive progress and implement effective strategies. This information is vital for understanding how to bridge the divide between human skills and AI proficiency in care sectors, ultimately fostering collaboration and innovation across levels within the sector.

2.1 Micro level - individual / frontline care

In the care sector, a ***micro-level*** activity refers to the direct, day-to-day interactions that occur between a caregiver and a client. These activities take place in real time and involve providing personal care, monitoring a client's physical and emotional condition, administering medication, engaging in conversation, offering emotional support, and making numerous small decisions that respond to the client's immediate needs. Such decisions often require professional judgement, empathy, communication skills, and an understanding of the individual's preferences and circumstances. Whether assisting an older person with daily living tasks, supporting a person with a disability, or caring for a patient in a healthcare setting, the quality of care is largely determined by these close interpersonal interactions.

Within this context, the role of ***AI remains supportive rather than replacement***. AI can assist caregivers by collecting and analysing data from sensors, identifying potential risks such as falls or changes in health status, generating reminders and prompts, and automating administrative tasks such as documentation and reporting. It can also help caregivers access relevant information more quickly and improve the accuracy of records. However, AI cannot physically assist clients, provide hands-on care, or replicate the human qualities that are central to effective caregiving, including empathy, compassion, trust, and emotional understanding.

AI's contribution at the micro level is primarily to enhance the efficiency and quality of care delivery, while the caregiver remains responsible for direct care, relationship building, and professional decision-making.

What the data shows at this level

- In the sector closest to care - health and education — only around 31% of businesses reported adopting AI as of late 2024, with 28% saying they were not even aware how it could apply, trailing higher-adopting sectors such as retail (45%) and services (48%). *(National AI Centre, Department of Industry, Q4 2024 Adoption Tracker)*
- Australia's residential aged care sector supported 196,313 people in FY25, with occupancy pushed up to 89.9% as capacity pressure grows. This demonstrates a workforce-constrained environment, where frontline productivity tools have the most to offer. *(KPMG Aged Care Sector Analysis, 2026)*
- The 2021 Royal Commission into Aged Care Quality and Safety specifically recommended greater technology investment in frontline care, a recommendation still being implemented through the National Aged Care Data Strategy 2024–2029. *(Royal Commission into Aged Care Quality and Safety; Department of Health, Disability and Ageing)*

2.2 Meso level – organisational / facility

At the ***meso level***, AI supports healthcare organisations in managing operational functions such as workforce rostering, budgeting, compliance, patient flow, and performance monitoring. This level ***offers some of the most immediate productivity gains*** because AI tools can optimise resource allocation, predict service demand, and automate routine administrative tasks.

However, AI remains ***primarily a decision-support tool*** rather than an autonomous management system. Human oversight is still required to interpret recommendations, account for contextual factors, and ensure that decisions align with patient safety, workforce wellbeing, and regulatory requirements.

In practice, the ***greatest value of AI*** at the meso level lies in ***augmenting managerial and administrative*** capabilities by enabling them to capture and integrate productivity gain from micro level activities, while reducing the burden of routine, data-intensive tasks and providing timely insights for decision-making. This allows healthcare leaders and managers to devote greater attention to strategic planning, workforce development, quality improvement, and ultimately the delivery of patient-centred care.

What the data shows at this level

- The national waitlist for Home Care Packages grew 41% year-on-year to 96,709 people by June 2025, illustrating the scale of operational pressure facility and network managers are working under. *(KPMG Aged Care Sector Analysis, 2026)*
- Industry analysis recommends aged care providers embed automation, digital integration, and AI directly into scheduling, billing, compliance workflows, and reporting to reduce administrative burden – precisely the Meso-level activities set out below. *(KPMG Aged Care Sector Analysis, 2026)*
- Nationally, 43% of Australian small and medium businesses report some level of AI adoption, but health and care adjacent organisations still sit closer to 31% - a gap the Strategy could specifically target with organisational-level tools. *(National AI Centre Adoption Tracker, Dec 2025–Feb 2026; NAB SME Survey, 2026)*

2.3 Macro level - state level

At the macro level, AI shapes how governments plan, fund, regulate, and oversee the care sector. By analysing system-wide data, AI can help forecast future care needs, identify workforce shortages, target funding, and evaluate policy outcomes. The key lever at this level is not only the adoption of AI by care providers and health care organisations, but also by government itself. When governments use AI to strengthen planning, commissioning, regulation, and performance monitoring, they can improve system-wide efficiency, direct resources where they are most needed, and create the conditions for AI-enabled innovation across the entire care sector.

However, macro-level implementation also raises important challenges relating to data governance, privacy, accountability, and equity. Consequently, the role of government extends beyond funding technology adoption to creating the policy, ethical, and institutional conditions necessary for AI to contribute safely and effectively to improved care outcomes.

In this sense, the macro level provides the foundation upon which AI-enabled transformations at both the organisational (meso) and frontline (micro) levels can occur.

What the data shows at this level

- Tasmania's Health Care and Social Assistance sector is the state's largest employer, generating approximately 47,900 jobs in 2024/25 and accounting for around 17% of total employment. The sector continues to face significant workforce shortages and increasing demand driven by population ageing, creating opportunities for technology-enabled productivity improvements and workforce development initiatives
- Tasmania's technology sector contributes $1.1 billion to the state economy and employs over 11,200 people, with the workforce projected to grow toward 32,000 within a decade - a pipeline the Strategy could direct toward priority service sectors such as care. *(Deloitte Access Economics / ACS Digital Pulse, 2025)*
- The Australian Government has committed close to $30 million to AI-enabled health research, alongside the National Aged Care Data Strategy 2024–2029 -federal settings a state-level strategy could align with and build on. *(Department of Health, Disability and Ageing; eCase/Evaran industry analysis)*

2.4 AI-enabled productivity framework for health care

The distinction between *outputs* and *outcomes* is critical for understanding how AI generates productivity gains across the care sector. As highlighted in the table below, at the micro, meso, and macro levels, AI first improves operational outputs such as time saved, reduced administrative effort, faster response times, more efficient workforce deployment, and better forecasting. These outputs represent the immediate efficiency gains produced by technology adoption. However, productivity is ultimately realised through outcomes, which capture the value created from those efficiencies.

- At the micro level, better outputs translate into improved care quality, safety, diagnostic accuracy, and client satisfaction.
- At the meso level, they contribute to stronger workforce retention, higher staff satisfaction, and improved compliance performance.
- At the macro level, more efficient outputs support better policy responsiveness, funding allocation, and sector-wide monitoring.

In this way, outputs are the direct operational improvements generated by AI, while outcomes are the broader benefits experienced by clients, organisations, and the care system. A successful AI Strategy should therefore measure both, recognising that productivity is not simply about doing things more efficiently, but about converting those efficiencies into meaningful improvements in care quality, workforce performance, and system effectiveness

A simplified Micro-Meso-Macro Framwork

Level	Where AI Adds Value	Example Activities	Productivity Measures
MICRO Frontline care	Care delivery support Clinical judgement, safety and risk practice	Documentation; monitoring; predictive alerts; communication support; client reminders. Digital training to support clinical judgement and responses to AI-based fall-detection and infection alerts.	**Output:** Time saved; reduced labour costs; response time. **Outcome:** Care quality; client and family satisfaction; incidents or falls per month; safety outcomes; diagnostic accuracy.
MESO Organisation	Organisational efficiency	Workforce rostering; budgeting; workflow management; compliance; training; performance dashboards.	**Output:** Workforce efficiency; overtime; cost per care hour; reporting time. **Outcome:** Staff turnover; staff satisfaction; compliance performance.
MACRO System	Policy and regulation	Policy modelling; funding allocation; integrated data and reporting; sector planning.	**Output:** Funding efficiency; policy responsiveness; forecasting accuracy. **System-level outcomes:** Quality of reporting and monitoring.

3. Investment priorities

The analysis identifies a clear sequence of investment priorities for maximising productivity gains from AI.

- The ***first priority*** is to scale "Ready Now" and "New Opportunity" activities, which represent the fastest and lowest-risk pathway to improved productivity because the technologies are already available and proven. The primary challenge is not technological development but adoption. Government support should therefore focus on accelerating implementation through co-funded pilots, grants that reduce the cost of trialling AI tools, and loan-book backing through the Tasmanian Development Board. These measures can help organisations overcome financial, technical, and capability barriers, allowing productivity-enhancing tools to be deployed more quickly across industries.

- The ***second priority*** is to address the human-AI pairing gap, particularly at the organisational (meso) level. The analysis shows that most AI applications require skilled workers to supervise, interpret, and act on AI-generated insights. As a result, productivity gains depend not only on technology adoption but also on workforce capability. Investment in training, digital capability programs, leadership development, and organisational change support is therefore essential to ensure that efficiency gains translate into improved organisational performance and service outcomes.
- The ***third priority*** is to apply these lessons at the macro level within government itself. Building AI capability in policy development, forecasting, funding allocation, and performance monitoring would enable government to assess and track productivity gains across sectors with greater accuracy and consistency. Taken together, these priorities suggest that a successful AI Strategy should move from the immediate adoption of proven technologies, to building the workforce capabilities needed to use them effectively, and ultimately to embedding AI-enabled decision-making within government to support system-wide productivity improvements.

4. Conclusion

This analysis demonstrates that the productivity gains available from AI in the care sector are both significant and achievable, with many opportunities already ready for implementation. However, the evidence also highlights that productivity improvements will not be realised through technology adoption alone. While AI can enhance efficiency by reducing administrative burdens, improving decision support, and strengthening organisational and system-level planning, the quality and value of care continue to depend on human judgement, empathy, communication, and relationship-building. Government investment must therefore recognise that, in care services, technology is an enabler rather than the source of value itself. The greatest gains will occur where investments in digital capability are matched by equivalent investments in workforce capabilities, leadership, and organisational readiness.

The Micro-Meso-Macro framework presented in this submission provides a practical model for understanding and capturing these productivity opportunities. At the micro level, AI supports frontline workers to improve the efficiency and quality of care delivery. At the meso level, it strengthens organisational performance through more effective workforce, compliance, and operational management. At the macro level, it enables better policy design, resource allocation, forecasting, and sector planning. Importantly, this framework recognises that productivity is created through the interaction of human and AI capabilities.

Finally, the care sector highlights a broader challenge for productivity policy. As a predominantly service sector, the value created is not always reflected in traditional productivity measures. There is increasing recognition that productivity assessment must move beyond measuring outputs alone and place greater emphasis on outcomes. In care services, success is not simply defined by more services delivered at lower cost, but by improvements in care quality, safety, wellbeing, client satisfaction, workforce sustainability, and community outcomes. For this reason, the Strategy should adopt an outcome-oriented approach to productivity, recognising that the ultimate objective of AI adoption is not merely greater efficiency, but the creation of greater social and economic value for Tasmanians.

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