



*NEXT Frontier: NEXTDC's AI in Education Series*

# AI Infrastructure in Education: Powering the Next Generation of Research and Innovation

Supercharging Research. Securing Grants.  
Elevating Institutional Prestige.



**N E X T D C**  
where AI lives™





## Why AI infrastructure is now essential to **winning grants and building reputation**

For university Vice-Presidents, Chancellors, and budget decision-makers, every investment must be weighed against its potential return. In the era of Artificial Intelligence, the question is no longer *whether* to invest in AI infrastructure, but *how* strategic investments can directly translate into tangible gains: a surge in research grants, enhanced institutional prestige, and a strengthened competitive position.

The truth is, cutting-edge AI infrastructure isn't just an expense; it's a powerful financial and reputational accelerant. Universities that strategically allocate resources to modern, robust AI computing environments are finding themselves at the forefront of a virtuous cycle, where advanced capabilities attract more funding, elevate research output, and ultimately, solidify their standing among the world's leading institutions.



# Research impact depends on compute power – and universities know it

In the highly competitive landscape of academic funding, the ability to execute ambitious, data-intensive research projects is paramount. Granting bodies – whether government agencies, private foundations, or industry partners – are increasingly scrutinizing a university's computational capabilities.

## Demonstrating capacity

Modern AI projects, particularly those involving large language models (LLMs) or complex simulations, demand immense processing power. A university that can demonstrate ready access to, for instance, high-density clusters of NVIDIA H100 or H200 GPUs, immediately signals its capacity to undertake and complete cutting-edge work. This is a significant differentiator that directly influences grant evaluators.

## Faster milestones, stronger renewals

With superior infrastructure, research teams can hit milestones faster, produce preliminary results more rapidly, and iterate on models more efficiently. This speed directly contributes to meeting grant deliverables, which in turn strengthens the case for grant renewals and secures future funding rounds. Delays due to insufficient compute, as observed across various institutions, directly jeopardise project continuity and future financial support.

## Attracting larger, more complex grants

Leading-edge infrastructure enables universities to pursue larger, more complex, and often more lucrative grants that require massive computational resources. These are the "moonshot" projects that can fundamentally redefine fields, and they exclusively gravitate towards institutions with the proven ability to deliver on such scale.

## Industry collaboration

Corporate partners seeking academic expertise for AI development are explicitly looking for institutions with commercial-grade compute capabilities. Partnerships with industry often come with substantial research funding, and the presence of a robust AI infrastructure is a non-negotiable prerequisite.



Investing in an AI research powerhouse isn't just about facilitating research; it's about actively cultivating an environment where grant applications are more competitive and successful.





# How AI infrastructure is reshaping university rankings and reputation

Beyond direct funding, strategic AI infrastructure investments wield significant influence over a university's overall reputation, global standing, and crucially, its position in international rankings.

## Direct impact on ranking methodologies

Major global university rankings like the [QS World University Rankings](#), [Times Higher Education \(THE\) World University Rankings](#), and the [Academic Ranking of World Universities](#) (ARWU/ShanghaiRanking) all place significant weight on research output and impact. Strong performance in AI, driven by cutting-edge infrastructure, directly contributes to these metrics:

### Citations per faculty/paper

Faster, more innovative AI research leads to a higher volume of impactful publications, which in turn drives up citation counts – a core component of most ranking methodologies.

### Academic reputation

Enabled by groundbreaking research, a university's academic reputation, assessed through global surveys of academics, improves when it's seen as a leader in emerging fields like AI.

### Research productivity

The sheer volume and quality of research papers, especially those indexed in prestigious databases like Scopus and Web of Science, directly contribute to ranking scores.

### Research income

Successful grant acquisition, directly tied to infrastructure, contributes to the "Research Income" metrics in rankings like THE.



## Attracting and retaining elite talent

World-class AI researchers and promising doctoral candidates are drawn to environments where they can truly excel. Access to state-of-the-art GPUs (H100/H200) and the supporting infrastructure isn't merely a perk; it's a fundamental requirement for groundbreaking work. Universities with robust AI environments become magnets for the best minds, creating a powerful feedback loop that further fuels research excellence and reinforces academic standing.

## Driving innovation and commercialisation

An AI-powered university is a hotbed of innovation. This infrastructure facilitates the development of patents, spin-off companies, and commercial applications of AI, contributing to economic development and further boosting the university's profile as a leader in technological advancement.



# Why AI infrastructure is critical to Australia's research competitiveness and funding success

For Australian universities, strategic investment in AI infrastructure presents a unique opportunity to enhance their global standing and secure a greater share of national research funding. While Australian universities consistently rank well, competition from institutions in Asia, North America, and Europe with massive AI investments is intense.

## Research quality and impact (ERA/Engagement and Impact Assessments)

Australian research funding from bodies like the Australian Research Council (ARC) and the National Health and Medical Research Council (NHMRC) is awarded based on rigorous evaluation of:

### Research excellence

Directly enabled by the ability to conduct cutting-edge, high-fidelity AI experiments.

### Potential societal or industry impact

AI infrastructure supports the development of solutions with real-world applications, directly aligning with the Engagement and Impact (EI) assessment framework.

### Track record of investigators

Researchers with access to superior compute can build stronger publication records and demonstrate greater project feasibility.

### Feasibility and alignment with national priorities

Access to advanced AI infrastructure makes projects more feasible and demonstrates a university's capability to contribute to critical national strategic areas. These are precisely the criteria measured by frameworks like the Excellence in Research for Australia (ERA) and the Engagement and Impact (EI) assessments, which underpin national research funding decisions.

## National priorities and strategic areas

Programs like the [Medical Research Future Fund \(MRFF\)](#), [ARC Linkage grants](#), or [Cooperative Research Centres \(CRC\)](#) specifically target themes such as AI, medtech, climate action, and Indigenous outcomes. Universities with leading-edge AI capabilities are inherently better positioned to secure funding in these strategically important, often multidisciplinary, areas.

## Research income and output

Past success in securing grants and publishing high-impact work, directly enabled by robust AI infrastructure makes Australian institutions more competitive in future funding rounds.

## Indirect influence on grant success

While the grant application process is merit-based, rankings do influence grant success indirectly by:

### Reputation

High-ranking universities are often perceived as lower-risk or higher-capability institutions.

### Talent acquisition

Rankings reflect strong academic staff, infrastructure, and output, factors that positively influence investigator CVs and institutional support sections in grant proposals.

### Collaborative advantage

Universities with stronger reputations and capabilities are more likely to be invited into high-profile, multi-institution bids, especially for large ARC Centres of Excellence or NHMRC partnerships.

By proactively building world-class AI research powerhouses, Australian institutions can elevate their research output and citation impact, improve their positions in critical subject-specific and overall global rankings, and attract a greater share of international research grants and collaborative projects, fostering national innovation.





# Rethinking the AI infrastructure model: smarter partnerships, stronger ROI

Recognising the profound ROI on AI infrastructure, wise university leaders are moving beyond traditional on-premise models that are fraught with high CapEx, operational complexities, and scalability headaches.

The capital demands and operational burdens of building and maintaining a 700W+ per GPU infrastructure, including advanced liquid cooling, are often unsustainable for individual institutions. This is why strategic partnerships with specialised data centre providers like NEXTDC represent a powerful pathway to unlocking these financial and reputational benefits:

## Optimised capital allocation

By leveraging a colocation model, universities can shift massive upfront capital expenditure (CapEx) away from building physical data centres, freeing up crucial funds for research programs, faculty hires, and student scholarships.

## Operational efficiency and reduced risk

NEXTDC's facilities are engineered for the specific demands of AI, including [NVIDIA DGX-Certified](#) environments and the proven capability to support the ultra-high-density power and advanced liquid cooling architectures required by NVIDIA H100 and H200 GPUs. This ensures optimal performance without the operational burden on university IT teams, reducing risks of downtime and allowing internal experts to focus on enablement.

In the global AI innovation race, strategic investment in robust, future-ready data centre infrastructure is no longer a luxury but a fundamental driver of success. It's the catalyst that transforms research ambitions into tangible grants, academic brilliance into global prestige, and institutional vision into leadership. The universities that make these smart infrastructure choices today will be the ones funding the future of discovery and securing their place among the world's elite.

## Scalability for growth

As research needs evolve, NEXTDC provides the agility to scale compute resources on demand, ensuring universities can quickly expand their AI capabilities without disruptive construction or lengthy procurement delays.

## Sustainability as a value driver

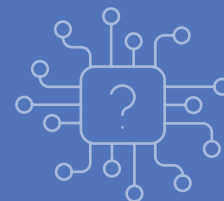
With a focus on energy efficiency and a commitment to renewable power sources, NEXTDC helps universities meet their environmental, social, and governance (ESG) targets, an increasingly important factor for institutional reputation and attracting mission-aligned funding.

## Global interconnectivity

NEXTDC's extensive network ecosystem, including proximity to international subsea cable landings, offers unparalleled low-latency connections, facilitating global research collaborations and access to diverse data sources crucial for AI.



# Every question university leaders should be asking about **AI infrastructure**



Are our researchers equipped with the compute power needed to lead in AI-driven discovery?



Do we offer the AI resources and research environment that high-performing teams expect?



Can they train and fine-tune large models in-house—or are they constrained by outdated infrastructure and long wait times?



Are we transforming our research into real-world impact—patents, partnerships, and startups?



How is our infrastructure strategy aligning with Australia's national funding priorities and sovereign capability goals?



Or is a lack of scalable, high-density AI compute delaying commercialization and innovation precinct goals?



Are we positioned to compete for grants targeting medtech, defence, climate, and digital innovation?



Is our institution's approach to AI infrastructure sustainable, secure, and future-proof?



What is our competitive edge when attracting top academic talent, PhD students, and industry collaborators?



Can we scale without construction delays, meet ESG targets, and ensure data sovereignty?





# Ready to scale where AI lives™

NEXTDC's NVIDIA DGX-certified data centres are purpose-built to support the most demanding AI workloads from foundation model training to real-time inference. With GPU-optimised designs, super high-density power, and advanced cooling architectures, we deliver the infrastructure that accelerates every stage of the AI lifecycle.

Strategically located near Australia's major international subsea cable landing stations, NEXTDC enables ultra-low-latency pathways for cross-border GPU workloads including federated learning, multi-region training, and edge inferencing.

For organisations building global AI platforms or deploying GPU-as-a-Service at scale, this means your AI workloads in Australia are just milliseconds away from key markets across Asia and the Pacific.

The institutions that ask better questions today will lead with better outcomes tomorrow.

Whether you're advancing medical research, shaping the next generation of AI talent, or building a new innovation precinct—your infrastructure must be as ambitious as your mission.

Partner with NEXTDC to unlock secure, scalable, and sustainable access to NVIDIA H100/H200-powered AI environments—certified, sovereign, and ready for immediate impact.

**Download our AI Ready Checklist**



**Speak with a NEXTDC specialist**



**N E X T D C**  
where the cloud lives™

136 398

[sales@nextdc.com](mailto:sales@nextdc.com)

**nextdc.com**

This document is correct at the time of printing and is for presentation purposes only. This document does not constitute an offer, inducement, representation, warranty, agreement or contract. All information contained in this document (including all measurements, photographs, pictures, artist's impressions and illustrations) is indicative only and subject to change without notice. NEXTDC Limited, its employees, representatives, consultants and agents make no representations or warranties as to the accuracy, completeness, currency or relevance of any information contained in this document and accept no responsibility or liability whatsoever for any discrepancy between the information contained in this document and the actual data centres or services provided by NEXTDC Limited or for any action taken by any person, or any loss or damage suffered by any person, in reliance upon the information contained in this document. © 2025 NEXTDC Limited ABN 35 143 582 521.

UNI04\_2025\_250625\_01