



Client Success Story

Improving Research Computing and AI Capabilities at a Leading Research University



Client

The client is a large, R1 research university in the United States with a broad academic portfolio spanning multiple schools and divisions. The institution supports a large and diverse research community and is nationally recognized for its contributions to science, engineering, and emerging technologies.



Issue

As part of a major investment in data science and artificial intelligence, the university launched a new interdisciplinary institute to advance research, teaching, and innovation in AI enabled disciplines. To support this vision, the institution required a research computing platform of unprecedented scale, flexibility, and sophistication relative to its existing environment. University leadership sought a

future state research computing strategy that could support advanced AI workloads while addressing financial sustainability, governance, people, and process considerations. Key challenges included ensuring equitable access to compute resources across disciplines, determining the optimal mix of on premises and cloud solutions, and establishing a long term operating and funding model capable of evolving alongside rapidly advancing technologies.



Approach

Establishing a Strategic Research Computing Framework

Deloitte partnered with university leadership to define a comprehensive research computing strategy aligned to the institute's ambitions. The engagement began with extensive stakeholder engagement across academic, research, and administrative functions to assess current capabilities and identify gaps relative to future needs. Foundational design principles were established to guide decision making and ensure scalability, accessibility, and sustainability across the institution's diverse research community.

Benchmarking and Future State Design

To inform strategic choices, Deloitte conducted a large scale benchmarking analysis of peer research institutions and national research computing centers. The analysis examined quantitative indicators such as infrastructure capacity, deployment models, and staffing, as well as qualitative practices related to governance, funding models, and cross institution collaboration. Insights from this analysis were used to

evaluate future state options and develop a cohesive research computing vision aligned to leading practices in higher education.

Implementation Roadmap and Financial Modeling

The team translated strategic insights into a detailed implementation roadmap and financial model to support institutional decision making. This included outlining phased initiatives, governance structures, and operating models needed to launch and sustain research computing environment. The roadmap supported leadership alignment, informed vendor discussions, and provided a structured path to implementation while balancing near term delivery with long term adaptability.

The resulting roadmap and financial framework positioned the institution to establish a scalable, equitable, and sustainable research computing environment, strengthening its ability to attract top faculty, researchers, and students while keeping pace with rapidly evolving AI and data science technologies. Continued collaboration supported the university in advancing funding and operating model discussions to ensure long term success.

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Impact

The engagement enabled the university to define a clear, actionable research computing strategy capable of supporting advanced AI and data intensive research across disciplines. Leadership gained a fact based understanding of infrastructure options, cost drivers, and governance models necessary to support the institute's mission.



For more information, visit www.deloitte.com/highereducation or email highereducation@deloitte.com.

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