Top Five Takeaways:

Securing a Research Mega-Grant

Higher education research seeking to solve tomorrow's problems today requires high-performance computing platforms that leverage artificial intelligence at the edge to provide the right information to the right people at the right place and the right time, and that's precisely what Hewlett Packard Enterprise offers, with a track record of success.

Susan Shapero, Hewlett Packard Enterprise, Vice President U.S. Public Sector

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Higher education is being transformed by AI and high performance computing, propelling research that benefits society and prepares students for the high-tech jobs of the next few decades. NVIDIA's accelerated computing platform enables these institutions to create high-performance computing facilities that drive AI innovation.

Cheryl Martin, Director of Higher Education and Research, NVIDIA

Working together with Hewlett Packard Enterprise and NVIDIA, WWT can source, build in our North American Integration Center, ship, and maintain a finished solution that gives higher education institutions a competitive advantage in their pursuit and execution of research mega-grants and commercial partnerships.

David Hall, Business Development Manager, World Wide Technology

Research does more than just attract the best and brightest faculty and students to higher education institutions. It leads to the introduction of next-generation technologies, cures for diseases, and improvements in the human condition. It builds an institution's brand and reputation. Also, it generates revenue at a time when budgets continue to get squeezed and the education delivery model's migration to the digital campus changes the competitive landscape.

Research has become big business. Higher education institutions now have the opportunity to drive significant new revenue through research mega-grants and commercial partnerships whose value dwarfs traditional research engagements. Success hinges on recognizing and fully leveraging these five key points:

Understand the Playing Field

Research mega-grants and commercial partnerships offer huge opportunities but are accompanied by equally high expectations and extensive functional and performance requirements. That means getting into the game can be expensive and risky, which places a premium on mapping requirements to potential solutions and their costs to maximize infrastructure spend allocations.

Given the potential rewards, higher education institutions engage in fierce competition for these awards. Winning depends on creating a compelling proposal where cost represents merely one factor. Speed of delivery, team experience and strengths, and selecting the right solutions – those that are tried and tested and reduce complexity by prioritizing well-integrated technologies – also drive success.

Legacy Infrastructures Alone Can't Get the Job Done

The research IT infrastructure must align with the scope and scale of research mega-grants, and legacy infrastructures likely do not. Legacy environments typically are comprised of infrastructure islands created over time that inhibit collaboration within and across research departments. Closed architectures limit integration options and performance. Hardware was not designed to meet mega-grant data volume and processing requirements. Systems offer little to no support for advanced graphics, artificial intelligence (AI), or machine learning (ML) – essential capabilities for tackling the challenges contemplated by these grants.

That said, legacy infrastructures still possess value. Wholesale ripping and replacing legacy increases solution cost, time, and risk. Higher education institutions should look to solutions that maximize reuse of legacy by bringing infrastructure islands together, expanding capacity, and incorporating the latest technologies.

Data Lives at the Edge

With smart devices and the Internet of Things, data exists literally everywhere. This extends the operating environment for research projects and programs out to the edge. Infrastructure must respond in kind with powerful edge computing systems with big and fast storage – like those proven in the field from Hewlett Packard Enterprise – to handle the increasingly high volumes and criticality of edge data and metadata.

With the ongoing rise of the edge, the network becomes more important than ever. Cluster and storage interconnect at the edge, as well as connectivity to the remainder of the infrastructure, are essential to meeting research mega-grant performance mandates. Higher education institutions that select NVIDIA networking attain competitive advantage with complete solutions from server connectivity to cables to switching.

Analytics Require AI, ML, and High-Powered Graphical Processing

Data represents the lifeblood of any research endeavor. With research mega-grants come dramatic increases in data frequency, volume, and complexity. That makes it vitally important to embed intelligence, in the form of AI and ML components, throughout the infrastructure to receive, process, and analyze information at lightning speed. Graphics processing units (GPUs) quickly translate raw data and results into the meaningful images and displays that bring clarity to all research participants. NVIDIA's accelerated computing platform and A100 GPUs, seamlessly housed within Hewlett Packard Enterprise servers, deliver the power to accelerate deep learning, machine learning, and high-performance computing workloads associated with research mega-grants.

No Need to Go It Alone

Higher education IT departments may not possess the bandwidth or experience necessary to provide the selection, deployment, integration, and support services for the solutions research departments require in their pursuit of mega-grants. Fortunately, they can turn to other resources for assistance.

Firms like World Wide Technology can become a single, trusted resource partner to reduce complexity and raise confidence throughout research mega-grant initiatives. Higher education institutions can conduct proof-of-concept efforts in a neutral testbed like WWT's Advanced Technology Center – allowing them to evaluate vendor and infrastructure configuration options prior to purchase to learn, avoid mistakes, and build the best solution that leads to winning proposals.

About World Wide Technology

World Wide Technology (WWT) is a technology solution provider with $13.4 billion in annual revenue that provides digital strategy, innovative technology, and supply chain solutions to large public and private organizations around the globe. Based in St. Louis, WWT employs more than 7,000 people and operates over 4 million square feet of warehousing, distribution, and integration space in more than 20 facilities throughout the world. For more information about World Wide Technology, visit **wwt.com.**

About Hewlett Packard Enterprise

Hewlett Packard Enterprise is a global, edge-to-cloud Platform-as-a-Service company built to transform your business. How? By helping you connect, protect, analyze, and act on all your data and applications wherever they live, from edge to cloud, so you can turn insights into outcomes at the speed required to thrive in today's complex world. Click **here** to learn more.

About NVIDIA

NVIDIA's invention of the GPU sparked the PC gaming market. The company's pioneering work in accelerated computing—a supercharged form of computing at the intersection of computer graphics, high performance computing and AI—is reshaping trillion-dollar industries, such as transportation, healthcare and manufacturing, and fueling the growth of many others. Click **here** to learn more.