NVIDIA | Computacenter

Modernising workstation strategy for the AI age

Use refresh cycles to build scalable, future-ready compute environments

Explore

AI adoption shifts workstations from niche to mainstream

AI is being incorporated rapidly into everyday workflows. Some 88% of organisations report regular AI use, with 64% saying AI is enabling their innovation.[1]

AI allows many employees to more efficiently complete administration and other basic tasks using standard PCs. The technology also enables engineers, developers, data scientists and designers to run more complex, compute-intensive workloads. These functions are business-critical because they deliver the innovation needed to run operations more efficiently and succeed in competitive markets.

1. The State of AI in 2025: Agents, innovation, and transformation. The State of AI: Global Survey 2025 | McKinsey

Demand extends beyond traditional specialist teams

From AI model development and simulation to advanced visualisation and data processing, modern workloads require the high processor and GPU performance of workstations. Meanwhile, applications are increasingly embedding AI capabilities, creating greater demand from additional users for more compute, memory and throughput performance.

High-performance workstations are no longer niche. AI's rise has led to an explosion in workstation options with vendors offering multiple performance configurations and form factors to meet the demands of different teams. Choosing and supporting the right workstation specification has never been more complex or more important.

Workstations: not just one category

Workstations are high-performance computers optimised for building and training AI inferencing models, as well as the visualisation and manipulation of complex data such as 3D mechanical design, engineering simulation, animation and rendering of images. They feature specifications beyond conventional laptops or desktops, including faster CPU and GPU performance, large memory and high-speed storage, professional software certification and enhanced durability.

Until recently workstation choice comprised a narrow set of towers aimed at engineers and visual effects teams. Today, as AI supports more workloads, workstations span multiple categories, from compact desktops, GPU dense mobiles and multi-GPU or multi-CPU systems tuned for AI model development, simulation and rendering.

Compute can be matched precisely to user needs. Using apps with embedded AI requires a light workstation that can run quick inference to power features inside creative, productivity or engineering tools. At the other end of the performance spectrum, building and training AI inference models for mainstream adoption demands extreme compute because the workstation is running long, parallel, GPU heavy jobs on large datasets. Today's workstation performance means such workloads are more efficient, cost-effective and secure to run locally than in the cloud.

Workstation adoption is accelerating across every major sector from engineering and financial services to media, healthcare and education. This is helping to drive substantial growth in the workstation market, which is predicted to double in size by 2035.[2]

2. Workstation Market Forecast and Outlook 2025 to 2035.

Rethinking cloud-first for AI development

Specialist users need immediate, consistent access to large compute capacity. They cannot rely on shared or external infrastructure to handle growing AI workloads and data-heavy workflows. Cloud-first strategies must evolve to meet the need for local GPU-accelerated compute that enables faster iteration and validation, as well as continuous access to enable the highest productivity.

Keeping development local gives organisations tighter control over sensitive data and intellectual property, reduces dependence on third party environments and strengthens security across every stage of the development lifecycle. Localised development maintains data sovereignty and supports compliance by retaining sensitive data in-country on local infrastructure, reducing the risk of data breaches and unauthorised third-party access.

Cost is a further consideration. Running most high-end AI workloads locally on workstations is far more cost effective than renting cloud GPU capacity which can incur spiralling costs. By keeping data local and restricting cloud GPU use to burst needs, a single workstation can replace hundreds of hours of costly cloud GPU time. It also helps to minimise the ingress and egress costs of transferring large volumes of data to and from cloud providers.

Upgradeable workstations also offer the ability to quickly and cost-effectively meet changing AI workload needs. Adding more RAM, installing a faster GPU or expanding storage allows users to keep pace with larger models, bigger datasets and more demanding creative or engineering workloads without relying on cloud capacity or waiting in queues. These upgrades deliver instant, predictable local performance with no latency and no risk of delays caused by limited cloud capacity.

Five ways workstations help users boost productivity

1. Heavy workloads such as renders, model runs or data tasks run rapidly when needed
2. Latency and cloud bottlenecks are eliminated for instant, responsive performance
3. Upgrades to the latest hardware maintain the highest performance and extend device life
4. All data and IP stay local, speeding up work and maintaining compliance
5. Consistent high-end performance anywhere, even without strong connectivity

Procurement with oversight reduces risk

Organisations that procure NVIDIA-powered enterprise-grade workstations through Computacenter are assured of ongoing support and rapid repair or replacement should a failure occur.

Specialist users have often been given free rein to specify and acquire high-end workstations outside normal IT procurement channels. Without oversight, this risks costly over-specification, less reliable hardware, inconsistent management and increased security and compliance risk. For example, while gaming PCs can perform many professional workstation tasks, they are not as robust and typically lack certified professional GPUs and the ISV validated drivers required for CAD, engineering, simulation and scientific workloads.

Furthermore, organisations that procure NVIDIA-powered enterprise-grade workstations through Computacenter are assured of ongoing support and rapid repair or replacement should a failure occur.

As the demand for workstations spreads across organisations, more structured, responsive and user centred approaches to procurement are needed to reduce the risk of poor return on investment and a fragmented environment.

A structured approach to specifying, deploying and managing workstations will help organisations to innovate more quickly, more cost effectively and with greater security. This is especially important as current hardware refresh cycles are creating an opportunity to rethink workstation strategy to take advantage of fast-developing technology and ensure the most effective investments. Organisations can use this moment to modernise their compute environments to meet the growing needs of AI-driven workloads.

Specify workstations for actual user need

An effective workstation procurement process begins with an analysis that seeks to understand how users actually work and the workloads they run.

Through structured workstyle analysis, Computacenter helps organisations to understand user personas, map workload requirements and quantify the level of compute each role genuinely needs to meet the organisation's business objectives. GPU, CPU and memory configurations can then be matched to real-world user needs to ensure the performance required without unnecessary overspend.

This approach goes beyond just fulfilling a specialist's hardware requests based on what they think they need. It ensures a workstation procurement strategy that balances performance, cost and scalability. Instead of over provisioning hardware, organisations benefit from a future-ready approach that supports growth and evolving workloads.

For example, it may be that not every user in a specialist team needs their own workstation. Instead, team members could be equipped with a standard laptop or desktop and supported by a shared high-end workstation that provides the necessary capacity and processing power when needed. This approach could offer a more cost-effective solution for many teams.

NVIDIA GPU acceleration supports specialist tasks

Having established the performance needs of users, it's essential to select the most appropriate and cost-effective hardware to unlock the full potential of GPU-accelerated workstations.

NVIDIA GPU-accelerated workstations enable specialists to work with complex models and datasets free of performance bottlenecks. NVIDIA powered workstations and AI software stack offer strong performance for GPU-accelerated tasks, broad software certification and mature AI optimisation, making them particularly effective for users working in AI, 3D, simulation and visualisation.

NVIDIA systems typically provide a highly stable, well supported experience for graphics intensive and compute heavy workloads, thanks to their large memory pools, established driver ecosystem and long running reliability under sustained load.

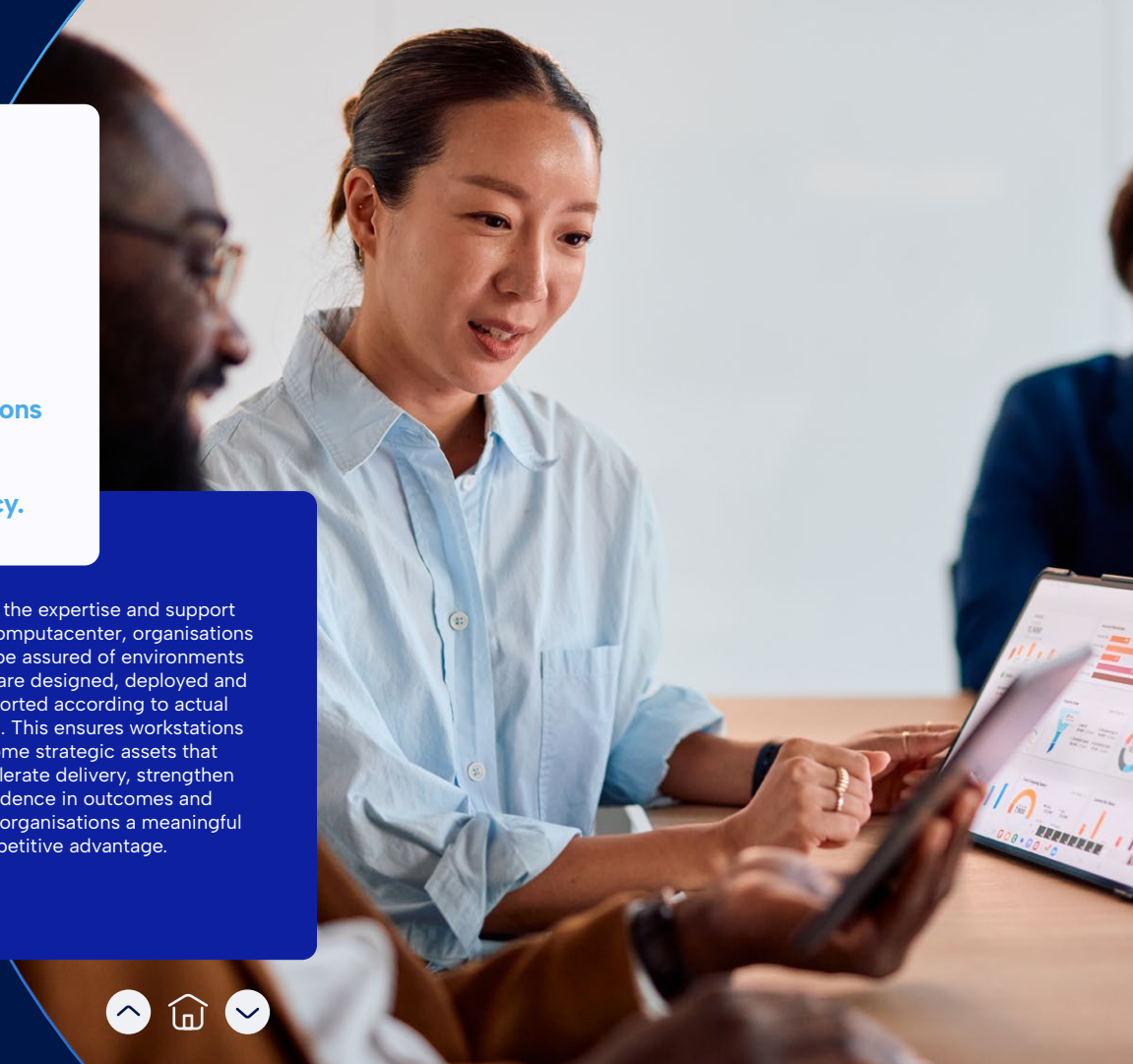
Bring AI development closer to the user

Workstations now sit at the centre of modern AI development, acting as a core part of the wider environment that spans data preparation, model training, validation and deployment. With GPU-accelerated performance, organisations can run most development workloads locally and use cloud only when scale as required, striking a balance between control and efficiency.

As AI development shifts closer to the edge, NVIDIA-powered workstations give teams dedicated GPU access, faster prototyping without queueing for shared clusters, the ability to validate models within internal security boundaries and a reliable platform for consistent, credible performance across workloads.

AI innovation is ultimately constrained or enabled by the environments behind it.

With the expertise and support of Computacenter, organisations can be assured of environments that are designed, deployed and supported according to actual need. This ensures workstations become strategic assets that accelerate delivery, strengthen confidence in outcomes and give organisations a meaningful competitive advantage.



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To discover how Computacenter can help you achieve the most effective workstation deployment, please contact your Computacenter Account Manager, call **01707 631000** or email **enquiries@computacenter.com**

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