ONNEC VIEWPOINT

THE SKILLS AI NEEDS

Why Data Centre Expertise Is Anything But Legacy

INTRODUCTION

AI growth knows no bounds.

In Europe, over €100 billion in investments has reshaped the data infrastructure landscape, which is expected to support over 80,000 jobs by 2030. European capacity rose by 21%, with further construction set to increase growth 43% year-on-year.

European AI and data centre growth is accelerating, with governments positioning facilities as critical national assets. The UK has eased planning and granted Critical National Infrastructure status, Ireland anticipates €4.5 billion investment by 2025, Germany calls them "the lifeline of the digitalised world," France considers national interest status, and Norway promotes expansion with sustainable resource strategies.

The growth is explosive; yet operators risk overlooking the infrastructure skills that keep data centres running. People and expertise must not fall behind, yet research shows staffing challenges persist. Nearly two-thirds of operators report difficulty retaining staff, finding qualified candidates, or both.

AI is an exciting opportunity, but operators risk running before they can walk if they can't build and retain the right mix of skills to build AI-ready infrastructure.

KEEP ESSENTIAL SKILLS LIKE CABLING ALIVE

As AI reshapes data centres, there is a risk that critical infrastructure skills such as cabling and racking are dismissed as “legacy”.

Yet without experienced cabling engineers, data centres will lack the reliable digital backbone AI needs.

Too often, cabling is treated as an afterthought. Engineers may be told to ‘just pull a cable’ to connect hardware, while designs prioritise hardware, power and cooling. This short-term focus means cabling requirements are based on immediate needs, not future growth. With hardware cycles accelerating – NVIDIA and others are releasing new systems every few months – installed cabling is quickly outpaced by the demands of the latest equipment.

To avoid this gap, infrastructure skills such as cabling and racking must be properly recognised and valued. They should be positioned and considered as a skilled trade to encourage new interest. Much like carpentry, these disciplines demand precision, adherence to procedures, and pride in craftsmanship. And, as with other trades, their success depends on collaboration with project managers, health and safety coordinators, and administrators to deliver reliable, long-lasting infrastructure.

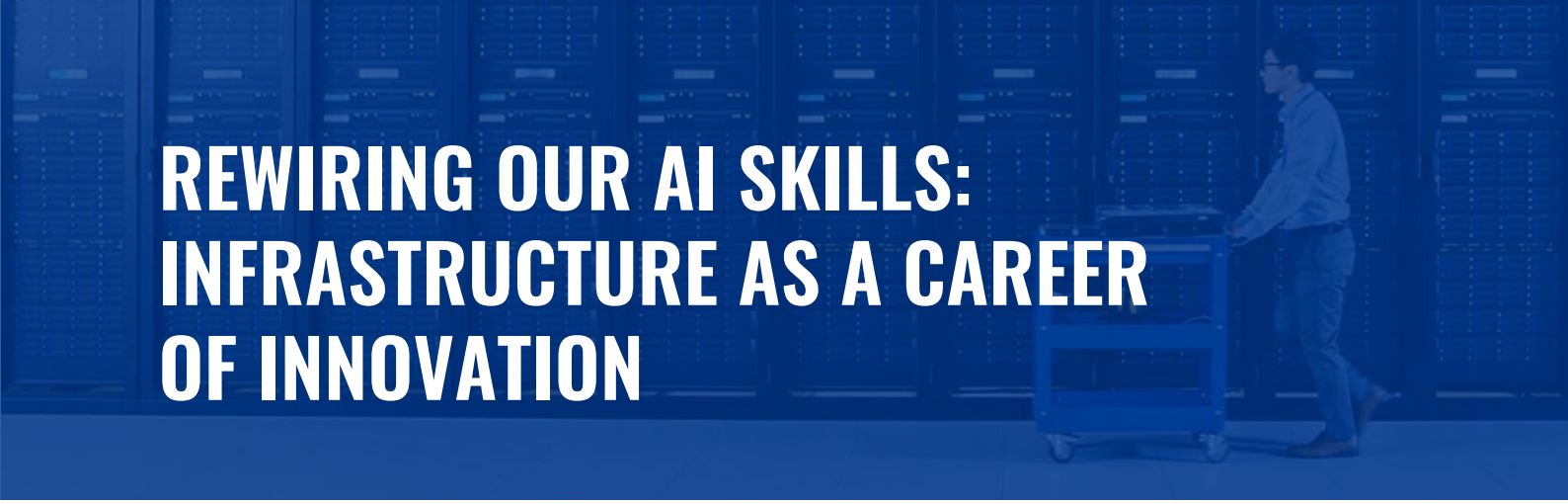
WHY SKILLED PEOPLE ARE CENTRAL TO FUTURE-PROOFING INFRASTRUCTURE

The surge in AI adoption is pushing data centre infrastructure to its limits, and cabling expertise has never been more critical.

Whether supporting the latest GPU generations or retrofitting live sites, engineers must know exactly what each cable does, how it interconnects, and how to make changes without disruption. That level of intelligence demands foresight in design.

Yet few operators leave adequate space or trays for future upgrades, creating bottlenecks when retrofits become unavoidable. Retrofitting is rarely simple: it requires new hardware, cooling, and cabling layouts that existing facilities were never designed to accommodate. Here, the skill and experience of cabling engineers are indispensable. Their ability to pull, switch, and relabel without disrupting live workloads ensures continuity while enabling AI-driven upgrades.

Building resilience and scalability depends on engineers trained to adapt layouts, validate systems, and manage live changes safely. Investing upfront in both infrastructure and people creates long-term ROI, avoiding costly rip-and-replace cycles while developing a workforce capable of supporting AI's rapid evolution.



REWIRING OUR AI SKILLS: INFRASTRUCTURE AS A CAREER OF INNOVATION

Roles dealing with infrastructure are critical to the success of AI.

But, they are often seen as repetitive, low-status roles, or as a stop gap before “better” roles in the IT or data centre industry. Cabling, racking, and on-site deployments are undervalued. They’re typically last in line for budgets and recognition. This perception undermines recruitment at a time when operators face an acute talent shortage.

Attrition is the main issue driving this trend. For example, skilled engineers are often poached by operators. Vendors, partners and operators face an endless, costly cycle of training talent, only to see them move on. This churn makes it difficult to professionalise the role of cabling and build a stable, reliable workforce.

To shift this perception, data centre operators must position infrastructure roles as being vital for AI development and progress. Without robust cabling and deployment, data cannot move at the scale AI requires. Building pride is essential: these are skilled trades, not commodity tasks. Infrastructure professionals are the enablers of the digital economy, ensuring that billions of 0s and 1s are moved, processed, and secured. Recognising and celebrating this will help attract the next generation of talent.

SPARKING CURIOSITY, POWERING EXPERTISE: TRAINING FOR THE AI ERA

As AI reshapes data centre operations and design, the demand for new technical skills is accelerating.

AI-optimised environments bring higher densities and more complex interconnects, which in turn heighten operational risk. Meeting this challenge requires not just new infrastructure, but a workforce trained to manage it. Training and retraining must therefore become a core part of daily workflows, ensuring that skills evolve in parallel with infrastructure.

Apprenticeship-style models, where junior engineers learn directly from experienced colleagues, remain one of the most effective ways to transfer practical knowledge and instil discipline.

Digital tools can enhance and accelerate this process. Digital twins, AR headsets, and SOP-linked dashboards can provide real-time guidance during live deployments, reducing errors, improving safety, and shortening learning curves. Automated design platforms and AI agents can also showcase best practice in modelling cabling layouts and power distribution.

But to make the most of these tools, staff will need new competencies in areas such as prompt engineering and system validation.

The right balance is essential: hands-on craft skills, combined with digital literacy and AI-augmented tools. Only by embedding training into day-to-day work can the industry build a workforce ready to manage tomorrow's infrastructure challenges.

ONNEC

PROTECTING THE TALENT PIPELINE

The data centre industry faces a persistent talent shortage.

Data centre operators will need to hire an additional 300,000 staff by this year, while an ageing workforce means a significant proportion of skilled labour could retire at the same time, leaving operators short on numbers and expertise.

Operators and the wider industry are all competing for the same limited pool of skilled workers, driving wages up and poaching between companies.

To safeguard the pipeline, multiple strategies are needed. Apprenticeship schemes, vendor partnerships, and internal academies can help grow skills internally. Retraining from adjacent sectors, such as the armed forces, offers another path, while early engagement with schools and universities will inspire future entrants. Diversity matters too: tapping into neurodiverse talent and widening access to underrepresented groups can help broaden the skills base.

Crucially, careers must be framed as both valuable and long-term. These roles are in a market that is growing, and one in which talent will have a job secured for a long time. With transferable skills, entrepreneurial routes, and the pride of being modern digital key workers, data centre professionals should be positioned as vital to national strategy. Strong progression pathways and ongoing training will make that proposition credible.

SUMMARY

Building the workforce for tomorrow's digital infrastructure.

As infrastructure complexity grows, deep practical knowledge will be harder to source and replace. Meeting this challenge isn't just an operator's problem — it's an industry-wide issue that demands collaboration. Success will come from working together to address the skills gap, with a focus on:

- Recognising cabling and racking as skilled trades essential to reliable AI performance.
- Reframing infrastructure roles as valued, professional careers vital to digital progress.
- Embedding training into daily operations, combining hands-on skills with digital tools.
- Safeguarding the talent pipeline with apprenticeships, retraining, and clear pathways.

Operators cannot do this alone. Trusted partners, vendors, and the wider ecosystem all have a role in providing the skills, training, on-site delivery, and long-term services needed to ensure critical expertise evolves alongside the technology it supports. Together they can bring:

- A reliable, skilled, and global workforce.
- Holistic design knowledge and cross-industry perspectives.
- Expertise across diverse environments and regulatory regimes.
- Continuity through rolling refreshes and unpredictable demand.
- Risk mitigation through coordinated planning and execution.

Only by investing collectively in people, process, and partnerships can the industry build the resilient workforce needed to power the next era of digital infrastructure.

ABOUT ONNEC

Onnec is a leading Infrastructure Solutions and Services company for tech and enterprise, specialising in structured cabling, managed services, and network solutions. Our team of experienced designers, project managers, and engineers, supported by world-class vendor partnerships, delivers top-tier services and solutions.

Onnec's expertise spans all environments and can support customers with:

- Structured cabling design and installation
- Installation of cabling, ODFs, PDUs and containment solutions
- Network hardware installations, changes and support
- Connectivity and equipment upgrades and changes
- Smart Hands support services

ONNEC

Contact us:
www.onnecgroup.com
info@onnecgroup.com
020 3929 9915