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# Evolving Workforce Training for Network Transformation

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Network transformation is the process of thoroughly changing network infrastructure to improve its efficiency, performance, and scalability. Today, many customers want gig speeds, which are a thousand times faster than the 1Mbps speeds offered when high-speed Internet services first launched twenty-five years ago. Networks have been thrust into transformation with a dizzying trajectory.



There are several [key trends](#) already simmering and shaping how today's networks support rapidly evolving technology. From autonomous enterprises to ubiquitous connectivity, networks of connected devices are communicating and must work together at ever-increasing speeds. Achieving the full potential of the ongoing network transformation depends on elevating workforce training to align with the evolving demands of the broadband industry.

This evolution in training goes beyond closing immediate skills gaps, focusing instead on empowering the workforce to anticipate and adapt to tomorrow's challenges and opportunities. For example, the hybrid fiber-coaxial (HFC) networks already incorporate fiber, and as fiber extends deeper into the networks, the need for advanced technical skills and specialized training for technicians increases.

Collaboration with content providers and educators is key to expanding and enhancing technical training for the workforce, as well as advancing certifications to reflect the industry's evolving needs. Developing new standards, such as those for fiber deployment in construction, will ensure training aligns with the latest technologies and practices. As skillsets continue to transform, training programs rooted in industry standards can help establish a universal benchmark for excellence.

## Evaluating the GRID

How can we evolve training quickly and everywhere it's needed? Much like a power grid distributes electricity and ensures it reaches the right places at the right time, SCTE is evolving to strategically deploy workforce development resources exactly where and when they are most needed. Every new standard and project launched will be evaluated through our "GRID" framework, assessing its fit and value to operators, vendors, and strategic learning partners. The GRID framework incorporates the following:

- *Global and geographical alignment* to ensure our broadband learning ecosystem, standards, and content for TechExpo support for both global trends and local needs, prioritizing the needs of operators.
- *Responsive talent system* to adapt training and talent strategies to respond to industry demands, leveraging chapters and strategic learning partners to stay current.
- *Innovative educational content* to equip our workforce with cutting-edge knowledge and skills through advanced technologies like AI, developing innovative content based on relevant workforce research.
- *Distributed chapter network* to leverage SCTE chapters as key nodes to deliver localized initiatives and foster strong networks, enhancing workforce development and employee satisfaction.

Evaluating new training through a GRID lens will ensure immediate relevancy. Today's training serves as a strategic driver of workforce readiness, requiring continuous adaptation to integrate technologies like AI, harness the strength of our communities, and modernize certifications.

## Transform Training with Technology

One of the biggest challenges today is keeping pace with the expedited evolution of technology. We have entered a new era of learning, and today's L&D leaders are innovating and embracing new methodologies. Technologies like AI and virtual reality (VR) offer new ways to empower employees with the skills they need to succeed in a rapidly changing work environment.

AI is already included in a lot of tools and software, but it can also be a tool for empowering the workforce with its potential for improving troubleshooting and testing. Some [operators](#) suggest AI can improve a technician's ability to troubleshoot to nearly 90% accuracy. SCTE, in collaboration with CableLabs, is developing initiatives to certify and operationalize data for operators' GenAI troubleshooting agents. By providing accurate, standards-based information, this effort enhances troubleshooting capabilities while laying the groundwork for on-the-job skill certifications. AI systems have the potential to capture and validate technicians' real-time actions, connecting performance to measurable achievements.

## Optimize and Empower Communities

To align workforce training with network transformation, SCTE curates and orchestrates resources by closely engaging with broadband operators, contractors, and other key stakeholders. This approach enables the development of a skilled workforce tailored to the

specific needs of local geographies. SCTE is currently testing digital platforms designed to connect chapters, enabling them to share resources seamlessly across the broader network and with one another. Career path management tools are also in development to engage a new generation of workers who may not have previously considered careers in the industry.

Backed by unprecedented governmental investment in infrastructure, joint public and private sector efforts to expand connectivity and provide universal access to high-speed, reliable Internet, nevertheless face the challenges of a looming labor shortage in the competitive talent landscape. Preparing the workforce of the future will play a vital role in bridging this divide. However, building a program in a community without an existing organizational presence requires innovative partnerships.

SCTE's collaborations with community colleges and local educators highlight the potential of such partnerships. For example, Rio Salado College in Tempe, Arizona, and Fort Hays State University in Fort Hays, Kansas, offer associate degree programs that integrate SCTE courses with accredited university coursework, empowering students to achieve their career goals.

By connecting resources and leveraging its ecosystem, SCTE enables the broadband industry to cultivate a workforce ready to meet evolving technological demands while attracting new generations of talent.

## **Creative Training and Certification Reform**

A blended approach has proved essential for effective workforce development. Learners benefit most from programs that combine classroom instruction led by skilled instructors with high-quality computer-based learning and hands-on field training. These blended experiences provide the depth and practicality needed for optimal skill development.

In addition to fostering innovative and collaborative training methods, L&D leaders can build strong relationships with operational teams to ensure training aligns with business needs and strategic goals. Grounding training initiatives in business performance helps ensure their success, supported by effective reporting and analysis. Programs that balance theoretical knowledge with hands-on aptitude are key to developing a workforce ready to meet real-world demands.

SCTE is enhancing certification approaches to emphasize real-world problem-solving over traditional testing methods. For example, emerging initiatives explore how AI technologies and on-the-job experiences can complement existing certification programs, creating pathways for technicians to develop system thinking and task-based skills. While standardized tests assess memorization, future-focused certifications intend to measure how well individuals apply knowledge in practical scenarios, reflecting the realities of troubleshooting and network management.

The broadband industry is entering a period of extraordinary growth, with over \$300 billion in new opportunities and hundreds of thousands of new jobs projected. However, this economic boom also presents significant challenges, including a growing talent shortage and skills gap that could impact business performance and growth. To address these challenges, the industry is embracing a workforce evolution. This includes creating a more inclusive environment to attract

women, underrepresented groups, millennials, Gen Z, and future generations of workers. Training programs are evolving to better prepare workers, upskill talent, and align certifications with the progression of technology and network transformation.

Traditional training methods alone cannot keep pace with these changes. By adopting forward-thinking approaches to workforce readiness, the broadband industry is positioned to meet the challenges of today and tomorrow.