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Skills, training and education in the age of digital construction

Across the region, the conversation around BIM is no longer about if it will be adopted, but how quickly organisations can build the skills to make it work in practice. Governments and stakeholders are increasingly adopting standards and mandating digital delivery, yet firms consistently report that a shortage of people with the right digital skills is the most significant barrier to progress.

The opportunities are clear. Young professionals entering the industry expect digital tools and collaborative ways of working as standard, while employers are seeking to use BIM not only to improve efficiency but also to deliver on sustainability goals and project resilience. This places training and education at the heart of the BIM agenda.

In the following conversation, Astrid Øie of Autodesk and Tomas Karlsson of KnowledgePoint explore the realities of building BIM skills, the gaps that must be addressed, and the partnerships needed to unlock the full potential of digital construction.

Astrid Øie, Autodesk: Technology doesn't have to be a barrier to BIM adoption – those who tackle the complexities of digital transformation are reaping the rewards of their efforts. However, talent remains a perennial problem, with 27% of AECO organisations experiencing a skills gap, and the majority saying lack of skilled talent is hindering growth¹. The potential of BIM is immense, but unlocking it requires a workforce that is both confident and capable.

Tomas Karlsson, KnowledgePoint: Our experience echoes this. Across the Middle East and Africa, our learning partners talk about how there's significant focus by governments and alike on closing skills gaps and opening-up opportunities in the AECO sector. They also highlight broader challenges relating to infrastructure – such as limited connectivity and unreliable electricity supplies – and accessing technology, which have a knock-on impact on adoption and upskilling.



Astrid: The gap between technology and skills needed to apply it fully, poses significant risks for projects and for industry competitiveness. The search for skilled talent is especially difficult – in our State of Design & Make report in 2025, nearly two-thirds of leaders say they struggle to find the skills they need. Moreover, the talent crunch is being exacerbated by the growing number of organisations that are letting people go because they lack the right technical skills. Autodesk is committed to addressing this issue through development initiatives and comprehensive training.

Tomas: We're seeing an emerging trend among early-career professionals (those who've grown up in a digital world). They expect digitally-connected workflows like BIM to be standard in their roles, yet they often lack practical experience and exposure to – or insights from – real-life projects during education. Employers need graduates who can contribute immediately, which makes practical training critical.

We shouldn't overlook lifelong learning – for a couple of reasons. BIM is not static, new developments are emerging all the time – cloud workflows, AI and digital twins and the like. We're also seeing a cultural shift – roles are changing and traditional work practices are being replaced. Organisations must adopt continuous upskilling strategies, or risk widening knowledge gaps with each new wave of technology.

Astrid: Hands-on learning is crucial. It allows learners to practice collaboration, project workflows and data-driven decision-making in a controlled environment – building confidence and competence. Initiatives like WorldSkills and its Digital Construction skill competition are a great example¹⁸. These programs offer valuable real-world experience and exposure to industry standards such as BIM workflows and collaborative problem-solving. These competitions help bridge the gap between academic learning and real-world application, demonstrating to both learners and employers the tangible value of skills development.

Tomas: This exposure to practical challenges at an early stage in their careers helps them to understand the impact of their work on project delivery, while reinforcing the need for continuous learning as BIM tools and processes evolve. Across our region, we see examples of this practical support happening day-in, day-out. Our learning partners are offering young people the opportunity to not only develop their skills, but also build relationships with potential employers – setting them up for success in the future job market. Often this happens in collaboration with universities and TVET institutions – critical for building capacity and resilience at a national level.

Astrid: Collaboration is key for this sector. The most effective outcomes emerge when industry, training providers, educational institutions and companies like ours work together. By aligning curricula with real project workflows, we ensure training is current, relevant and immediately applicable. Train-the-trainer initiatives are proven to boost capacity and capability. Training by industry-experts alongside certification offers immediate value.

When leaders across the AECO sector consistently express difficulty finding the skills they need, it reinforces the need for a co-ordinated approach to education, training and development.

Tomas: In my experience, that alignment benefits learners too – whatever stage they are in their career. When training is directly linked to business objectives – such as smoother handovers, stronger collaboration, or better sustainability outcomes – engagement rises. Delivery data from our learning partners reflects this – learners, and their employers, are more satisfied when they see a direct link between the training and impact of those new skills in the workplace.

Astrid: The opportunity is clear: narrowing the skills gap unlocks BIM's full potential and equips the next generation to deliver projects more efficiently, collaboratively, and sustainably. Companies that invest in integrated training approaches are not only improving project outcomes but are also building resilience into their workforce.

Tomas: BIM demands collaboration, data literacy and critical thinking – these are all competencies that cannot be developed through one-off training courses. The reality is BIM training shouldn't be treated as a cost centre, but as a strategic investment in capacity, resilience and capability. This mindset shift is essential if the sector is to keep pace with change, particularly in regions where the demand for people with BIM skills far outstrips supply.



Astrid D. Øie, Sr Autodesk Learning Partner Manager, is leading the Autodesk Authorized Training Center Channel in EMEA. The channel is key in upskilling and training the current- and future workforce.

Tomas Karlsson is the head of channel services at KnowledgePoint. This means he oversees the management of outsourced extended enterprise learning programmes, recruiting and supporting global network of training providers on behalf of organisations, including Autodesk.