

# Unlock the full potential of AR training

Learn how 5G and MEC can enhance your training strategy for employees

## Enterprises are turning to augmented reality (AR)

to enhance their training programmes for live, real-world learning environments that are impactful and scalable.<sup>1</sup>

### THE 3 AR TRAINING METHODS<sup>2</sup>:



**AR image targeting**  
Scans real-world 2D images and overlay 2D/3D objects or text, aiding job tasks and enhancing training.



**AR ground plane object breakaway**  
Projects a 3D model of an object onto a surface to view internal components and repair/installation instructions.



**AR scenario training**  
Places realistic 3D models of objects on a tabletop or floor surface to let users interact with the object and actors, or other objects simultaneously.

### THE BENEFITS OF AR TRAINING:

- ✓ Long-term retention
- ✓ Successful knowledge application
- ✓ Cost savings in heavy equipment training
- ✓ Reduced risks and guaranteed trainee safety

AR spending will grow by **42.4% IN ASIA-PACIFIC** in the five years after 2021, reaching USD 16.6 billion by 2026.<sup>3</sup>

**14 MILLION US WORKERS** plan on using smart AR glasses regularly for training and on-job tasks by 2025.<sup>4</sup>

**40% UK-BASED SMES** use AR for training, with enterprises more likely to adopt the technology.<sup>5</sup>

But unreliable internet connection can hamper AR training, particularly accessing applications from remote locations. 5G and multi-access edge computing (MEC) can improve the reliability of AR for more effective training experiences.



# Singtel

## Explore the potential of AR in your enterprise's training programmes

Singtel's Paragon empowers enterprises to quickly implement the latest AR capabilities combined with well-orchestrated 5G networks, MEC, and other relevant applications. It is best used in industries that require high levels of precision and accuracy in their training programmes:

### AR TRAINING IN 5G

- 📶 Real-time response and immediate feedback
- ☁️ Cloud computing capabilities at the network's edge
- 👥 Multiple access capability
- 📱 Support for user mobility

#### Singapore

1

### COST-EFFECTIVE TRAINING FOR STAFF

Changi Airport Group sought realistic and immersive safety training, but it needed more than traditional methods for recreating real-life scenarios.<sup>6</sup>

- ✔️ **Solution and result:** The airport adopted real-life AR/VR training applications, allowing staff to practice safety procedures remotely on a mobile device. This provided a more immersive and cost-effective training experience compared to traditional methods.
- 🔗 **5G and MEC help with real-time rendering of AR environments, allowing trainees to simulate complex scenarios and promote hands-on staff training safely. These networks also enable remote training sessions, increasing accessibility and reducing travel costs.**



#### USA

2

### SIMPLIFYING DIAGRAM-BASED LEARNING

Newly hired aircraft technicians of Virginia-based Boeing require extensive training to maintain and install aircraft electrical wiring, but they traditionally relied on 20-foot-long 2D drawings that were difficult to read.<sup>7</sup>

- ✔️ **Solution and result:** Boeing used AR technology that projected a precise 3D wiring diagram onto the aircraft, helping technicians visualise and perform their tasks more effectively.
- 🔗 **Paragon can enhance AR training for complex and highly technical job roles, with 5G and MEC enabling real-time 3D diagram rendering that affords technicians better retention and real-time feedback.**



#### Europe

3

### ACCESS TO HANDS-ON ASSEMBLY PRACTICE

Germany-based BMW wanted a more efficient way to train employees on assembly line tasks without increasing the time and effort required by supervisors, and avoiding unnecessary costs that hands-on training may entail.<sup>8</sup>

- ✔️ **Solution and result:** The car manufacturer created an AR-based training environment that allowed employees to access individual, hands-on dashboard assembly practice before working on the assembly line, improving their performance on the shop floor.
- 🔗 **With 5G and MEC's low latency and connectivity, supervisors can remotely oversee the training programme's implementation, reducing the time and effort needed. Training can also be accessed by employees not physically present at the training location.**



Contact Us

## Discover the power of AR training through Singtel's Paragon

Find out how 5G can advance your AR training programme today.

1. Deloitte, From virtual to reality: Digital reality headsets in enterprise and education, 2021.  
2. Roundtable Learning, What is Augmented Reality Training? Everything You Need to Know, 2023.  
3. FE News, AR and VR are now used by 40% of SMEs for training, 2021.  
4. Training Magazine, How Augmented Reality Is Changing the Training Industry, 2022.

5. IDC, Asia/Pacific AR/VR Spending to Reach \$16.6 Billion by 2026, 2022.  
6. Hiverlab, Changi Airport Group VR AR Safety Training, 2022.  
7. Science Soft, Augmented Reality (AR) for Training: Use Cases, Success Stories, Challenges, and Costs, 2020.  
8. Capgemini, Augmented Reality trains employees for the automotive assembly line, 2023.

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