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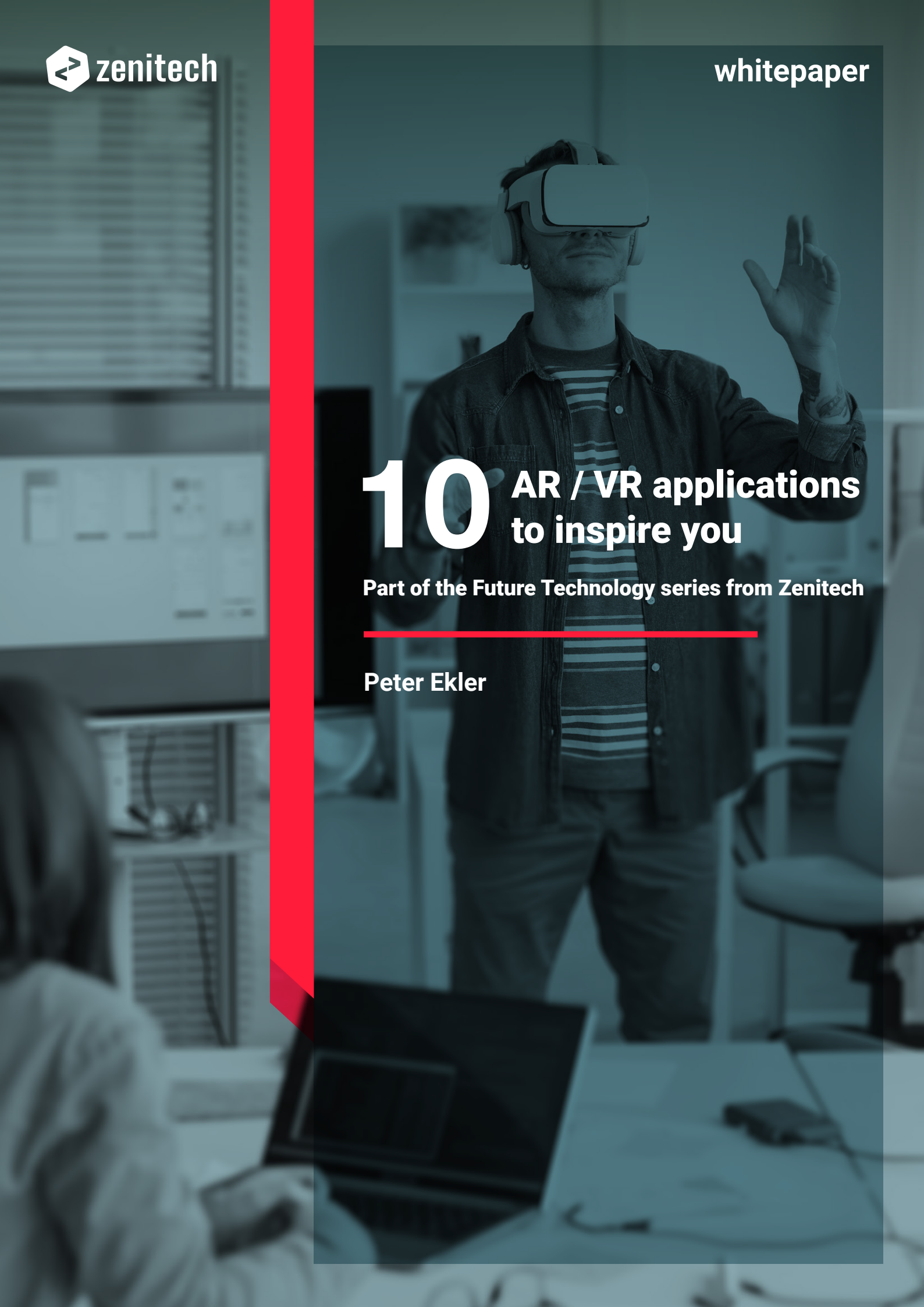

10 AR / VR applications to inspire you

Part of the Future Technology series from Zenitech

Peter Ekler

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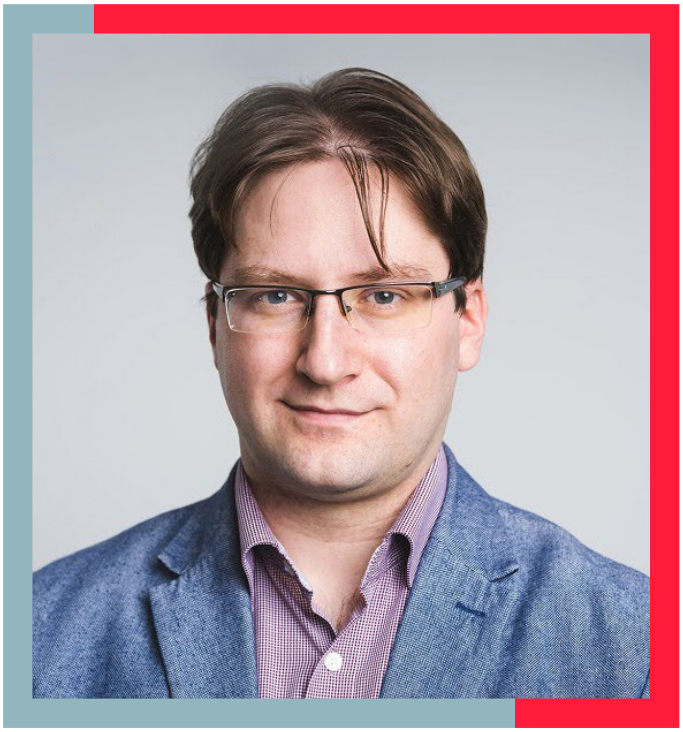

Péter Ekler
Global Head of Future Tech

Introduction

Organisations are interested in using augmented and virtual reality (AR and VR) in their business but aren't always sure of the benefits.

At Zenitech, we've established Zenitech Labs, part of the Zenitech Future Technology Think Tank, to help our clients utilise these new technologies. The Labs exists to experiment with new technologies and platforms, to prove concepts and test new technologies. We are investing in our own learning and discovery to understand what the commercial applications might be of these new technologies, and how they can benefit businesses.

The Lab's roots are in academic research and we have implemented many technology projects in this area, thanks to our acquisition in 2022 of AutSoft, the leading software development company in Hungary which has close ties to Budapest University of Technology and Economics. Our goal is to bring the research rigour of the university to our clients and help them take full advantage of the exciting new technology available.

Every business is different. Some smaller, fast-moving enterprises need extra tech and knowledge to accelerate digital processes. Others want to know how the metaverse could impact them and what the opportunities might be. One of the most common requirements for businesses right now is how they could incorporate AR and VR to achieve commercial business goals. This is the focus of this paper, and I hope it inspires you with some examples of what's possible to achieve with AR and VR.

Ten examples of AR and VR in practice

Zenitech Labs is working on dozens of AR and VR projects, some for commercial clients, and others for our external or own experimentation and proof of concept purposes.

Here are just some of the ideas we're exploring around AR/VR.

1. 3D modelling in construction. We have been working on a project in Hungary using 3D modelling to visualise a complex bridge construction project, measuring real-time weight and pressure using sensors on the bridge to send load data and alerts.
2. Virtual mapping in transport, defence and aviation. AR/VR can be used to help plan routes, map terrain and simulate critical journeys. This could be critical in training for first responders, armed forces, or pilots, for example.

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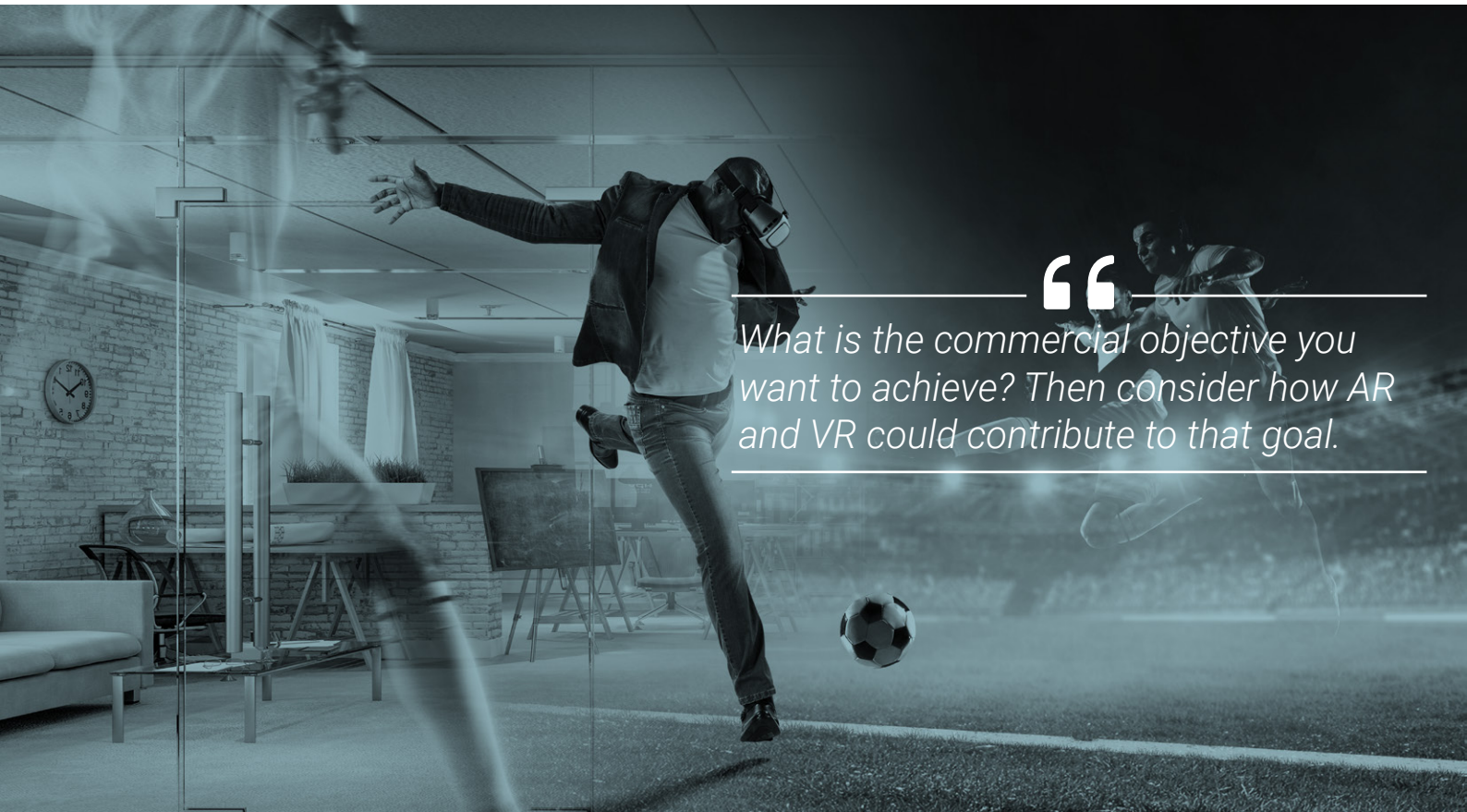
3. HoloRepair is a system we have developed to help to detect and document damage/quality to vehicles, using AR glasses. Automotive companies can use this as part of their quality assurance process after repairs are made, for example.
4. HoloTutor is another system we've developed which can be used to train staff in key skills, using mixed reality. For example, teaching in construction, warehousing, retail, or customer training - there are a myriad of possibilities across a wide range of sectors.
5. HoloMonit is a way of monitoring systems that the eye can't see. It can help businesses visualise where cables and pipes run in buildings or under cities, using AR laid over a map on a mobile phone. This has significant benefit to construction, telecoms and utility companies, as well as being used in city planning.
6. HoloAssist is a system we developed for retailers, where customers can use AR glasses or AR on a mobile and a virtual assistant directs them to the product they're trying to find in a store or warehouse.
7. Practice operations using 3D scanners and VR. Healthcare and veterinary providers can use 3D scanners to scan a subject (such as a human body) and practice conducting an operation in virtual reality. This provides vital training.
8. Digitise buildings to help practise emergency response training. VR can be used to digitise offices or school buildings, for example, to teach emergency procedures such as lockdown processes.
9. Real-time location information modelling. See locations and their use in real time, to assess (or predict) how busy they are. This could be used for transport companies, hospitals, arenas – any organistion that needs to resource based on real-time information. It could also, help people plan trips, or where to charge an electric vehicle, for example.
10. Visualisation for retail, architecture and design. 3D visualisations mean you can use a mobile phone to do anything from seeing how clothes might look on a 3D scan of a body, or visualise a space (for example, where to find your nearest ATM in a shopping centre).

The possibilities are endless. But they all start with your business goals. What is the commercial objective you want to achieve? Then consider how AR and VR could contribute to that goal.



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Seven steps to introduce AR / VR to your business

If you're wondering how AR/VR might benefit your business, consider these six steps:

Step 1: Go back to basics.
What is the business problem you're trying to solve? If it's customer experience, for example, think about the specific experience you're trying to create. If it's improved training, thinking about what you want to achieve with that training. Start by identifying the goal first, and only then how AR or VR could help.

Step 2: Get your AR/VR strategy in place.
How does it fit into your business goal? Consider your business purpose, desired outcomes, and how the wider business is approaching new technologies. Is this a proof of concept for a wider adoption, or a discrete project?

Step 3: Develop the business case.
You'll need buy in from the business at this stage. An early-stage proof of concept and clear visualisation will help you assess viability and budget. What is your desired ROI?

Identify key use cases where AR/VR makes work faster and available for a larger user base. For example, an institution may be able to make long-term savings if it invests in VR-based training.

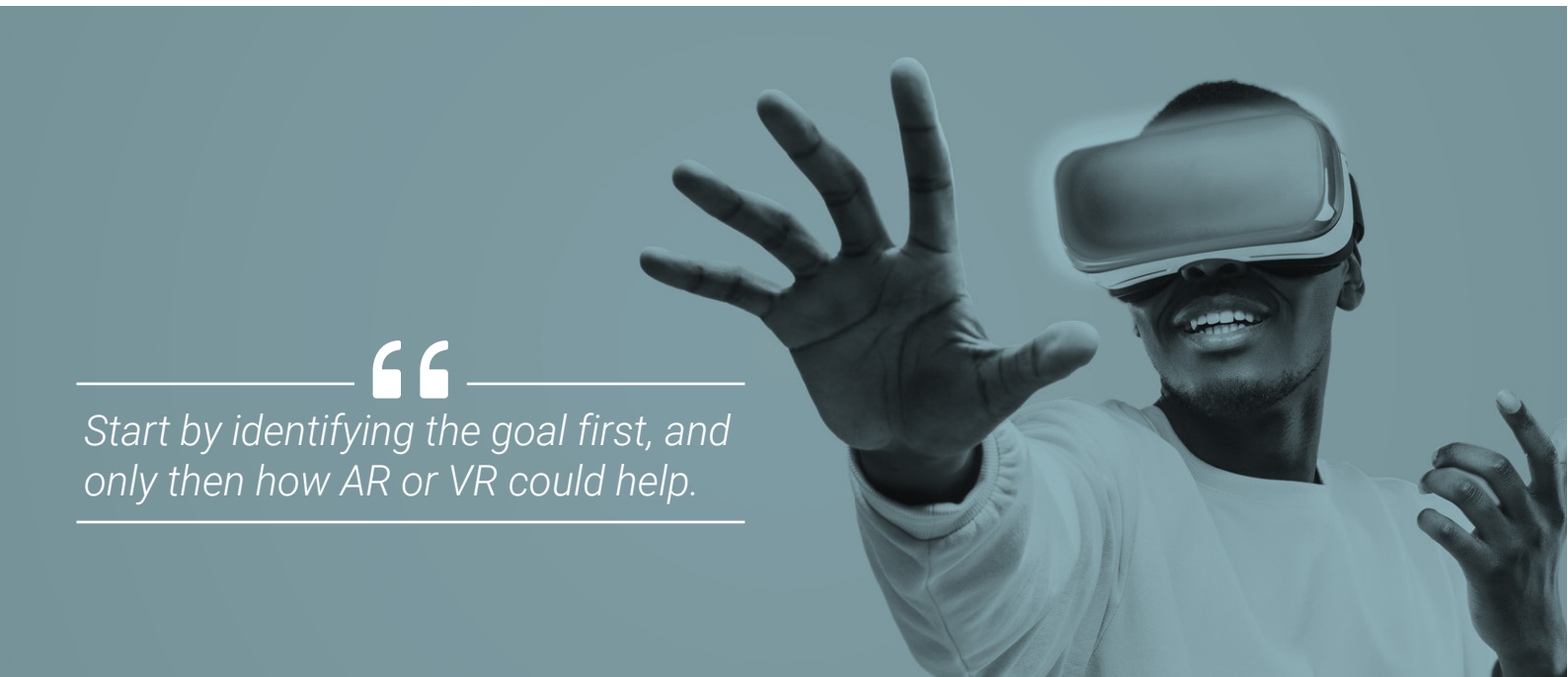
Step 4: Consider user experience.
What hardware and software will you need? How long will people be using the AR/VR tool for? What sort of experience do you want them to have (and what do you need to create for them to have the experience you want them to?).

Identify the people who will be using the products and for whom AR/VR can help and make their work more efficient. For example, will they need to travel to a site if they can see the environment in VR? Do they need to fly out to a training session, if they can conduct the practical part of it in VR?

Step 5: Development.
Select the best device for the project. Would AR or VR be better suited to the task? We can help you decide. Discover and design how the AR/VR solution is connected to existing software components, and how the data is shared among different modules to achieve the best integration.

Step 6: Deployment.
Have training programmes in place so that you know your team is using the tool as intended. Conduct regular user experience analyses.

Step 7: Learnings.
Continue to collect and analyse data and assess the return-on-investment of the project.



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The Zenitech approach

At Zenitech, we live and breathe R&D into new technologies. It's why we formed the Zenitech Labs. We start with a laser focus on the business outcome you need. The introduction of new technologies can contribute to revenue growth, business scaling, cost reduction, increased customer interactions, or competitive edge.

We will give you the advice you need to create the best outcome for your business using new technology, collaborating closely with you to create the very best technical solutions to address your business challenges.

If you want to explore how VR and AR could impact your business, contact us to see how we can help.

If you want to explore how you can transform your user experience, contact us to see how we can help.

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