Extended reality — XR

European spending on AR/VR products and services
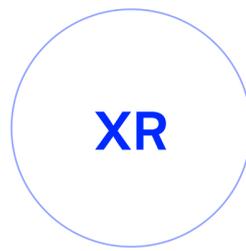
$16.84 billion

18
16
14
12
10
8
6
4
2
0

CAGR +74%

$1.06 billion

2017   2022

■ Consumers   ■ Commercial
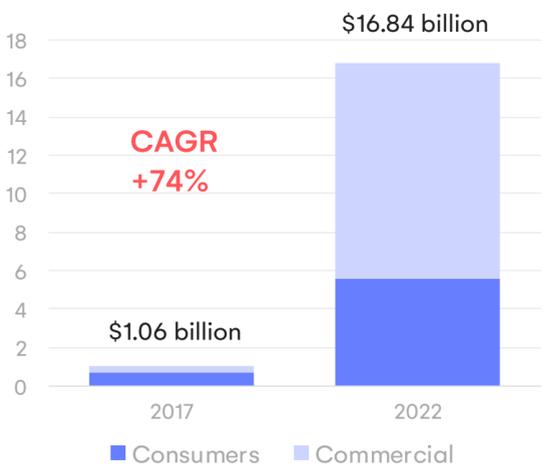
Data from International Data Corporation, 2018

XR

Virtual Reality — VR
immerses user in an entirely virtual world, replacing user's physical environment

Mixed Reality — MR
blends digital content with user's physical environment in a way that allows digital and physical to coexist and interact
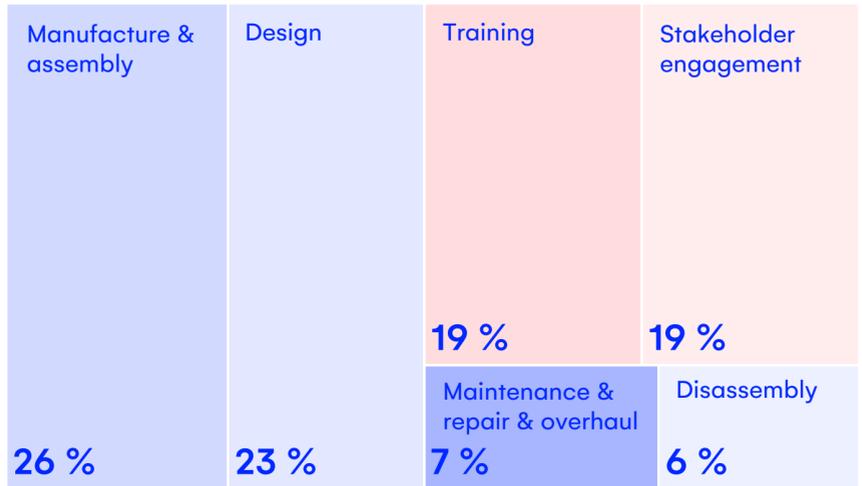
Augmented Reality — AR
overlays digital content on top of user's physical environment

Where in the product life cycle are XR technologies used?

UK manufacturing industries in 2018

Immerse UK, Digital Catapult and the High Value Manufacturing Catapult, 2018, data collected from online survey + roundtable workshop discussions + one-to-one interviews with industrial users of XR

Manufacture & assembly	Design	Training	Stakeholder engagement
		19 %	19 %
		Maintenance & repair & overhaul 7 %	Disassembly 6 %
26 %	23 %		

What business executives say about XR

80%
of executives believe XR is important to close the physical gap.

53%
are already building an XR strategy for implementation.
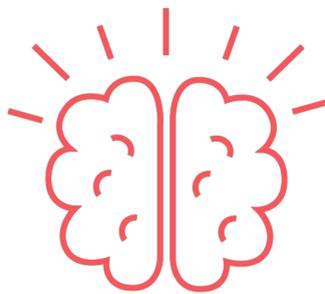
79%
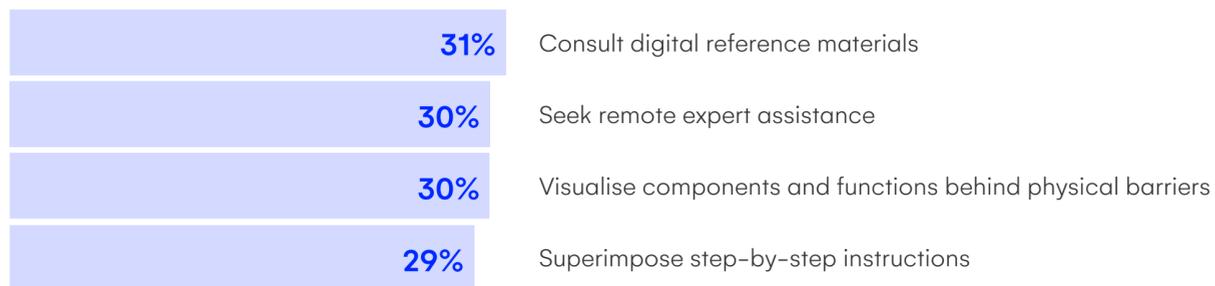believe XR will have widespread impact across most industries over next 5 years.

54%
expect ROI for XR solutions to be one year or less.

Accenture Technology Vision 2018 survey: more than 6,300 business and IT executives from 25 countries (Nov. 2017 to Jan. 2018)

## The most commonly implemented XR use cases in industrial repair and maintenance

Frequency of use case implementation among all companies implementing AR/VR

31%	Consult digital reference materials
30%	Seek remote expert assistance
30%	Visualise components and functions behind physical barriers
29%	Superimpose step-by-step instructions

Capgemini Research Institute, Augmented and Virtual Reality Survey, May–June 2018, 231 organizations that are implementing AR + 175 organizations that are implementing VR

Technician training: over

85%
preferred VR
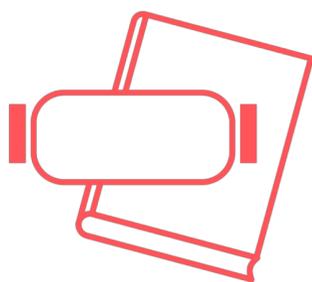
Participants preferred visual, 3D walk-through instructions offered with VR, especially if the assembly procedure was more complex and difficult to understand.

Development and Analysis of Virtual Reality Technician-Training Platform and Methods, Brigham Young University, 2017

75%
of organisations with large-scale AR/VR implementations realise over 10% operational benefits.

Capgemini Research Institute, Augmented and Virtual Reality Survey, May–June 2018

25%
overall time savings are typical for manufacturing tasks using AR.

Why Every Organization Needs an Augmented Reality Strategy, Harvard Business Review Nov–Dec 2017