



AUGMENTED REALITY

FUTURE TECHNOLOGY EDITION

#2 in the Series of 'Essential Eight' Tech Mega Trends set
to impact all markets in the coming years



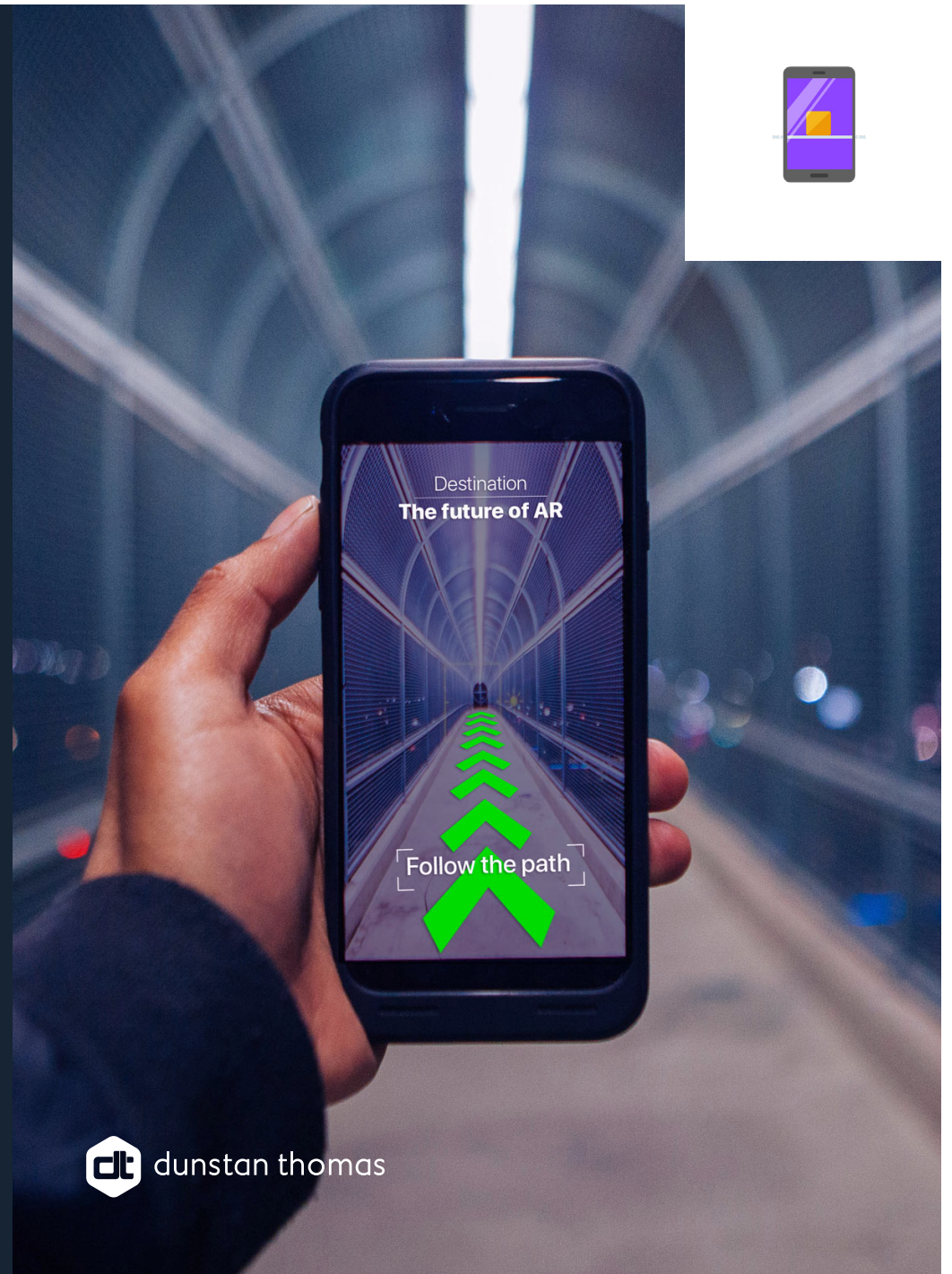
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AUGMENTED REALITY (AR)

Improve R&D and maintenance operations and build emotional engagement with products in an AR-enabled, 'visualise before you buy' world.

Augmented Reality (AR) is a visual or audio 'overlay' on the physical world that uses contextualised digital information to augment the user's real-world view. The power of bringing information to the point of action in a seamless, unobtrusive manner is increasingly evident via a growing number of use-cases.

Here are 7 good reasons and examples proving that Augmented Reality's time has come:



1

AR MARKET GROWING AT 40%+ YEAR ON YEAR

Of the companies polled in PwC's 2017 Global Digital IQ Survey, 10% said they are were investing in AR then, and 24% said they will invest in the technology by 2020. MarketsandMarkets valued the AR market at \$4.21bn in 2017 and expects it to reach \$60.55bn by 2023, growing at a CAGR of 40.29% during the forecast period. The use of AR in applications such as healthcare, retail and e-commerce are driving the market.

2

EXPERIENCE YOUR PRODUCT 'IN SITU' BEFORE BUYING

The Augment 'product visualisation platform' is used for retail, ecommerce, architecture, and other applications. It allows users to view their products in 3D in a real-life/real-time environment through tablet PCs or smartphones to enhance sales and customer engagement. Augment also enables online shoppers to view a product as 'situated' in their home before purchase. Customers can view the product images in 3D by rotating them and viewing all augmented content before a buy decision. Augment's users include Coca-Cola, Nestle, Nokia and Siemens.

3

AR FOR IMPROVING R&D

Boeing is testing AR as a solution to give technicians real-time, hands-free, interactive 3D wiring diagrams 'right before their eyes'. The aerospace company's studies have shown a 90% improvement in first-time quality when compared to using 2D information on the airplane, along with a 30% reduction in time spent doing a job.

4

AR FOLLOWS THE SUN

The Sun Seeker AR solar tracking and compass app provides a flat compass view and a 3D view showing the solar path: its hour intervals, equinox, winter and summer solstice paths, sunrise/sunset times, twilight times and 'magic hours'. It also presents a Map view that shows solar direction for each daylight hour. Sun Seeker use-cases are in architectural planning, camping, gardening, photography, estate agency and car parking (for those who want to know where the best place to park their car is for maximum shade).

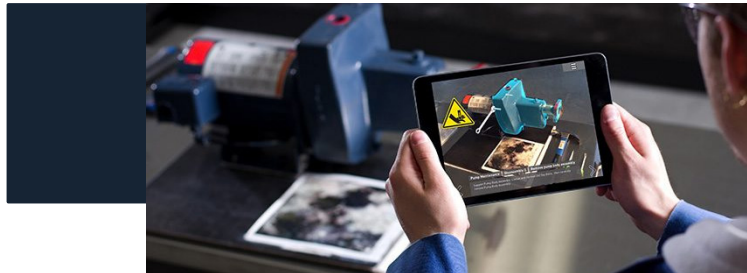




5

AR FOR IMPROVING MAINTENANCE AND SERVICING OPERATIONS

CB Insights reports that Amazon's recent patent grant, 'Vehicle Component Installation Preview Image Generation', describes a system that uses AR to let car part buyers preview the image of an auto part as if it's connected to their vehicle, and thereby check that it will fit properly before they purchase.



6

AR IS NOT ENOUGH

AR, Virtual Reality (VR) and Mixed Reality (MR) are morphing into the concept known as Extended Reality (XR) – to create 'fully immersive' virtual experiences. Example XR applications are only just becoming available. One such is SOLIDWORKS Extended Reality (XR). This is a means of publishing CAD data and bringing it to life virtually, the company says. Publishing a SOLIDWORKS file to the new XR file format retains important scene data created within SOLIDWORKS. The resulting file can then be consumed directly in a variety of AR, VR and web browser experiences.

7

AR TO SELL CARS

AR is already being used to help sell more complex products like cars. Here AR provides a more immersive experience, combined with the opportunity for imparting of more information in a much more engaging way. Other senses can be used to stimulate emotional engagement with a car as you literally go for a virtual drive without leaving the dealership.



[www.dthomas.co.uk/content/
fs/futuretech.shtml](http://www.dthomas.co.uk/content/fs/futuretech.shtml)

AR Valued at
\$4.2bn
In **2017**

Expects to reach
\$60.5bn
By **2030**

AR is growing
40%+
year on year



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