

VR — XR

VARJO

Virtual & Mixed Reality innovation: Enabling a 10X productivity leap in Simulation & Training

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Varjo Technologies

AR/VR/MR/XR has long promised to change the world

- Background: Envisioned in the 1960s, developed in the 1980s/ 1990s/2000s
- The concept thrilled potential users, **but ultimately disappointed:**
 - Fidelity (resolution, scene content)
 - Component and development costs
 - Human Interface
 - Weight, comfort, and hygiene
 - Connectivity
 - Simulator Sickness (discomfort)



Now professional VR & XR technology innovation has reached new performance levels...

COMPUTING

GPU PERFORMANCE

GAME ENGINE GRAPHICS

3D MODELLING

RESOLUTION

LATENCY

SENSOR TECHNOLOGY

AI

CLOUD

CONNECTIVITY / 5G

ERGONOMICS

EYE TRACKING



A man in a dark suit is shown from the chest up, holding a tablet computer. He is looking down at the device. The background is a blurred office interior with large windows. Overlaid on the image is a large, white, serif font quote.

“It’s a new standard in
training and simulation.”

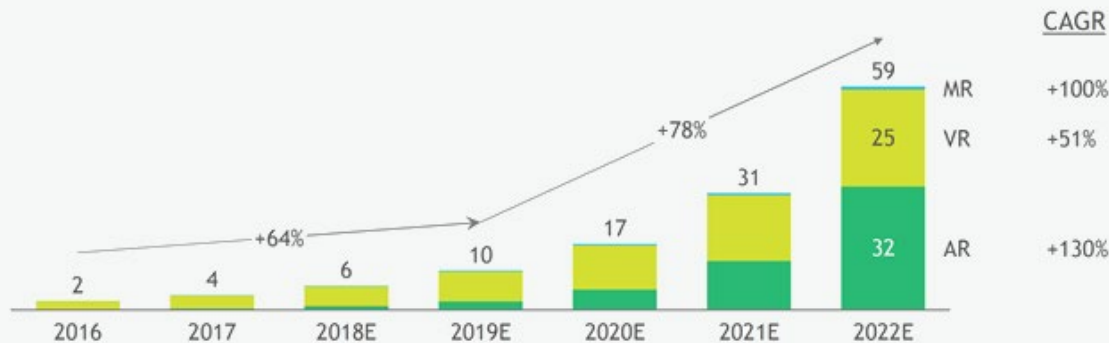
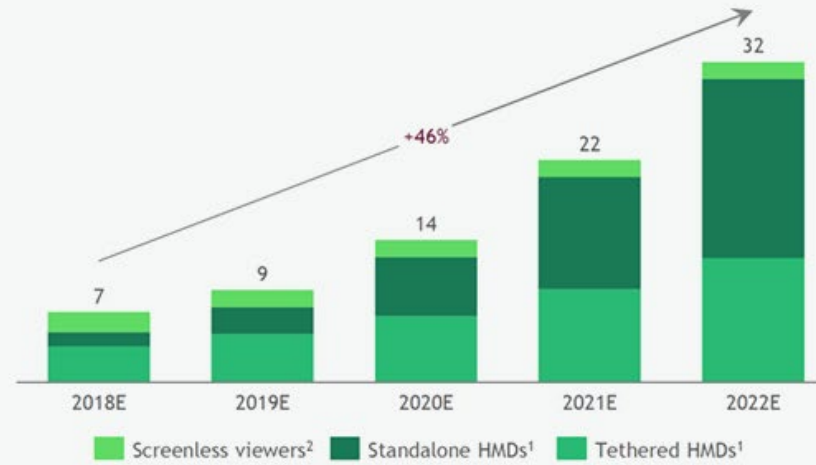
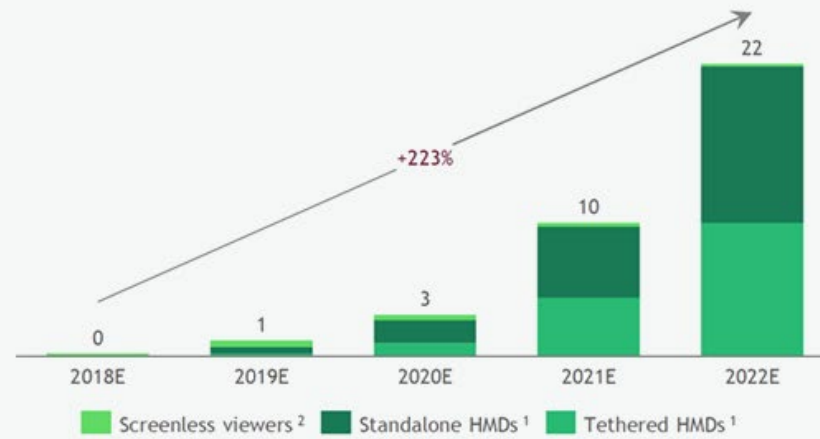
Tobias Olsson - SAAB, Stockholm



VR/XR is delivering strong business case benefits in training & simulation

- Support training that cannot be performed or with today's simulators
- Portable – deploy training to the point of need
- Drive massive cost reduction
- Increase training velocity
- Optimize student engagement
- Increase value of part-task simulators by provision of full field of view, immersive visuals using MR technology

...resulting in explosive VR&XR market growth



1. Head-mounted display, tethered HMDs connect to a computing device, standalone products have the necessary computing power integrated 2. Screenless viewers, which strap a smartphone screen to a person's face
Source: IDC, Worldwide Augmented and Virtual Reality Hardware Forecast, 2019-2023, 2019, BCG analysis

VR/XR Pilot training cases





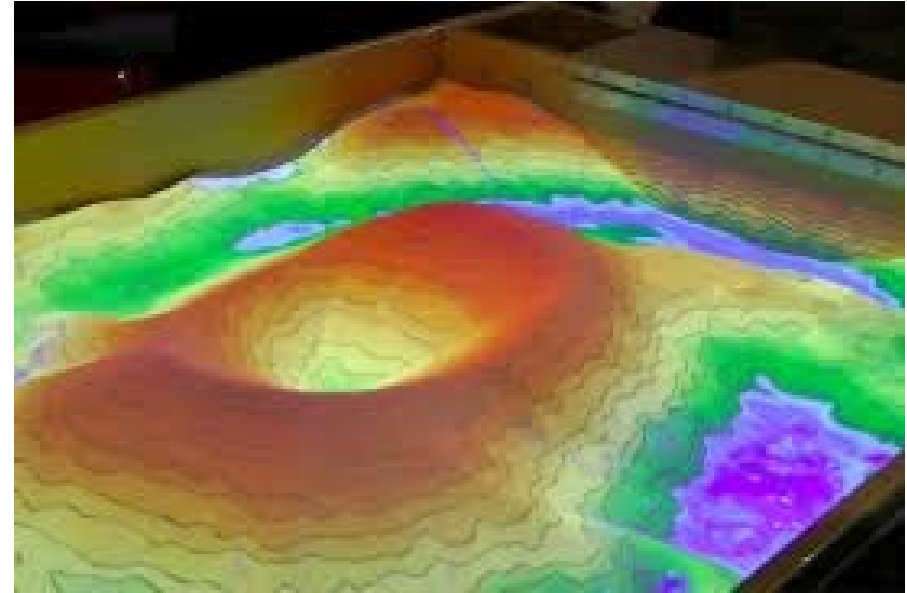
Maintenance training VR/XR use cases



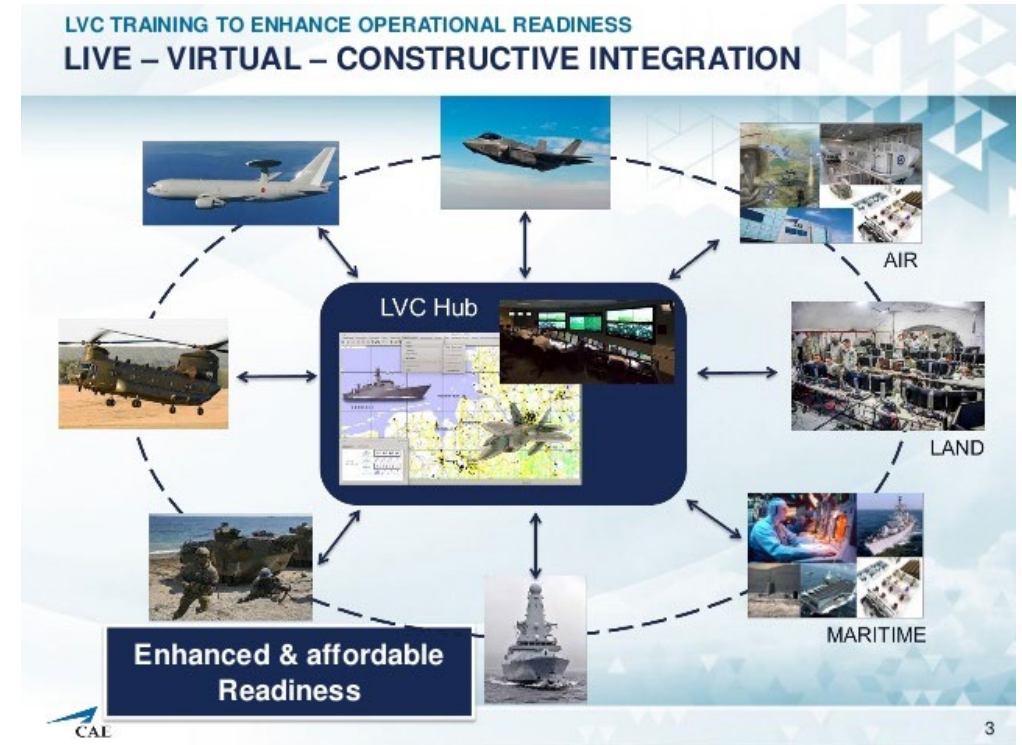
Advanced equipment VR/XR training use cases



Mission planning, control & debrief VR/XR use cases



Live virtual constructive VR/XR use cases



Thank you!

Questions ?

