

DAQRI



AR TOOLS FOR THE INDUSTRIAL WORKFORCE

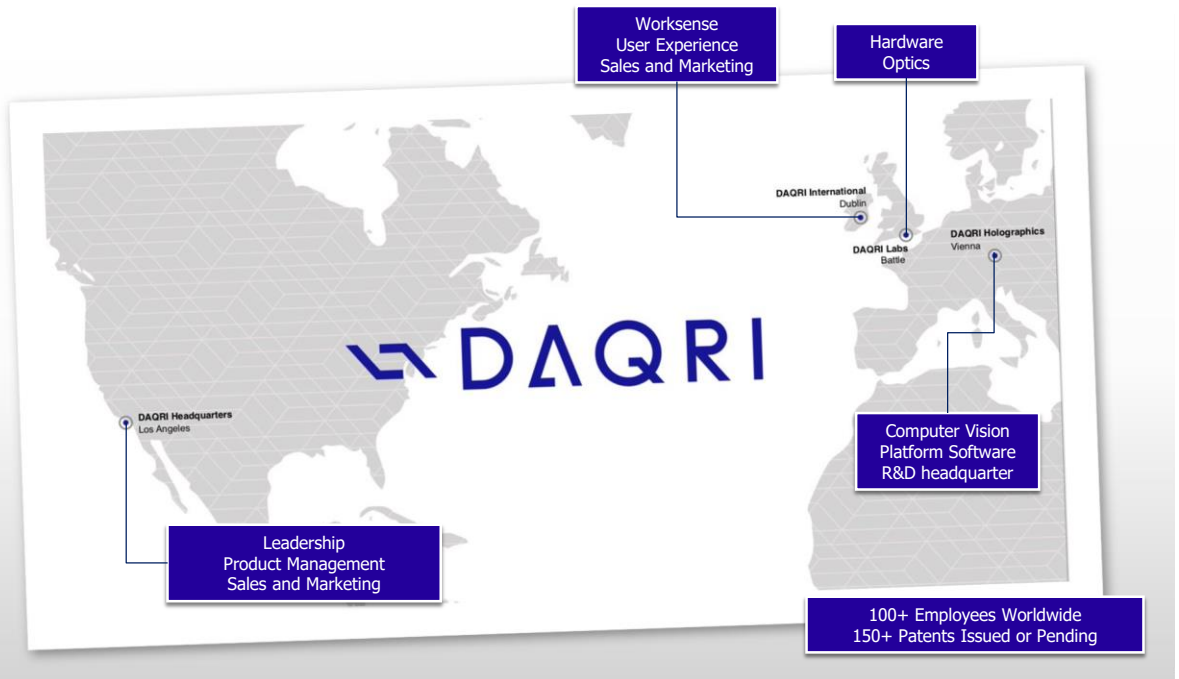
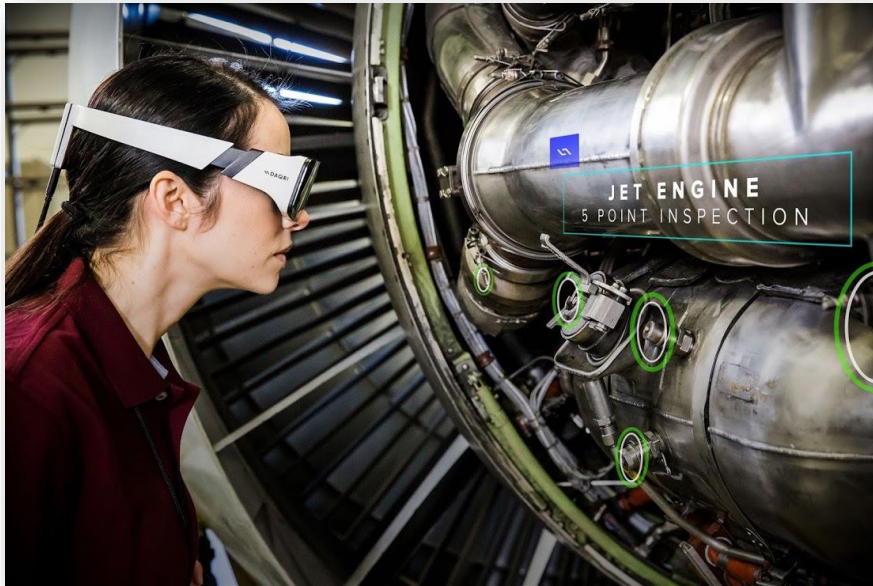
FASTER. SAFER. SMARTER.

Industrial Augmented Reality – a state of play

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Industrial grade AR



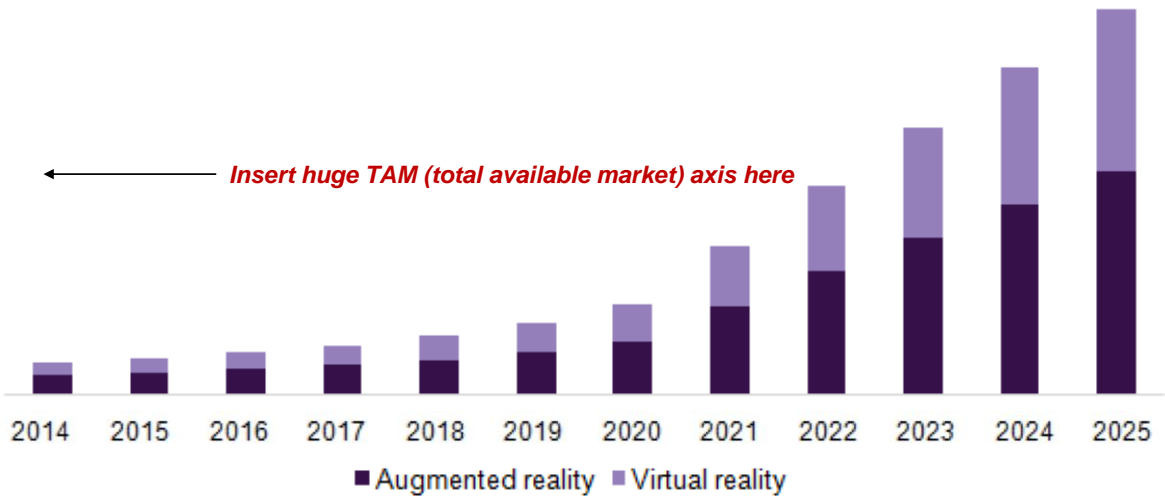


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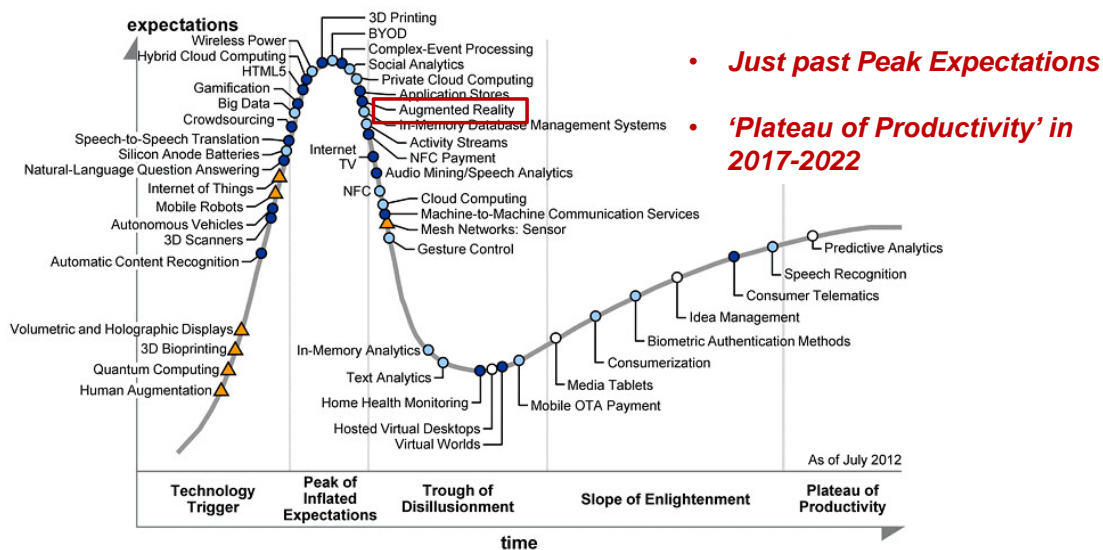
REVOLUTIONIZING THE INDUSTRIAL WORKFORCE

DAQRI IS TRANSFORMING COMPLEX BUSINESS PROCESSES & TASKS WITH HANDS-FREE AR SOLUTIONS

Market Analysis



Gartner Emerging Tech - 2012



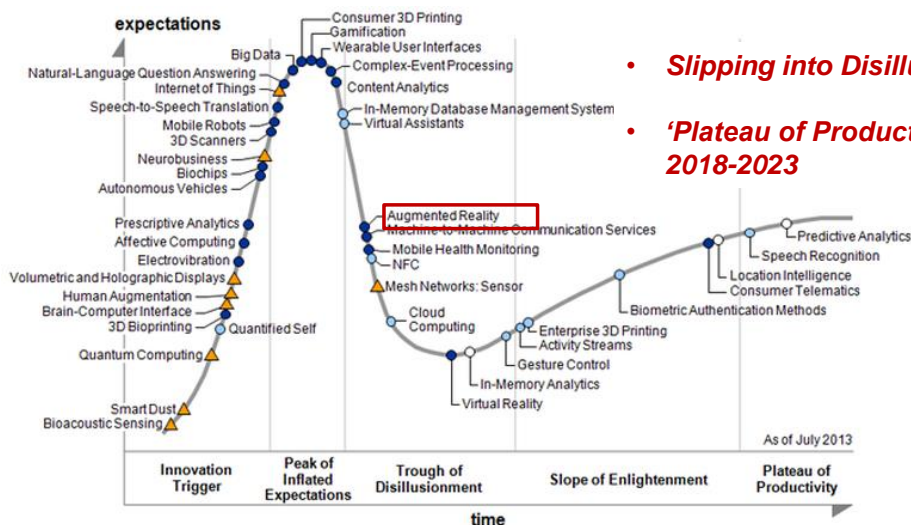
- *Just past Peak Expectations*
- *'Plateau of Productivity' in 2017-2022*

AWE – Q2 2013



In the shadow of Google Glass, an augmented reality industry revs its ...
<https://www.theverge.com/2013/.../in-the-shadow-of-google-glass-at-augmented-worl...>
 Jun 9, 2013 - Dreaming of superpowers at Augmented World Expo 2013.

Gartner Emerging Tech - 2013



- *Slipping into Disillusionment*
- *'Plateau of Productivity' in 2018-2023*

AWE – Q2 2014



Augmented World Expo 2014 Showcases The Latest In Interactive Technology

By Ubergizmo Team on 04/28/2014 08:00 PDT

4D Expo – Q3 2014



Augmented Reality products transforming the Future of Work

AWE – Q2 2015

Augmented World Expo 2015: AR gets real

By David Cardinal on June 15, 2015 at 8:41 am | 0 Comments



After years of gaming being the flagship application for both virtual reality and augmented reality, this year's Augmented World Expo had a different flavor. Business applications occupied most of the booths, and even companies who were happy to talk about games had a variety of other, more general ideas for how the technology could be used. This is a good sign for the emerging AR/VR industry. With the demise (at least temporarily) of Google Glass, there was reason to be concerned progress had stalled.

Business applications are what will make AR happen

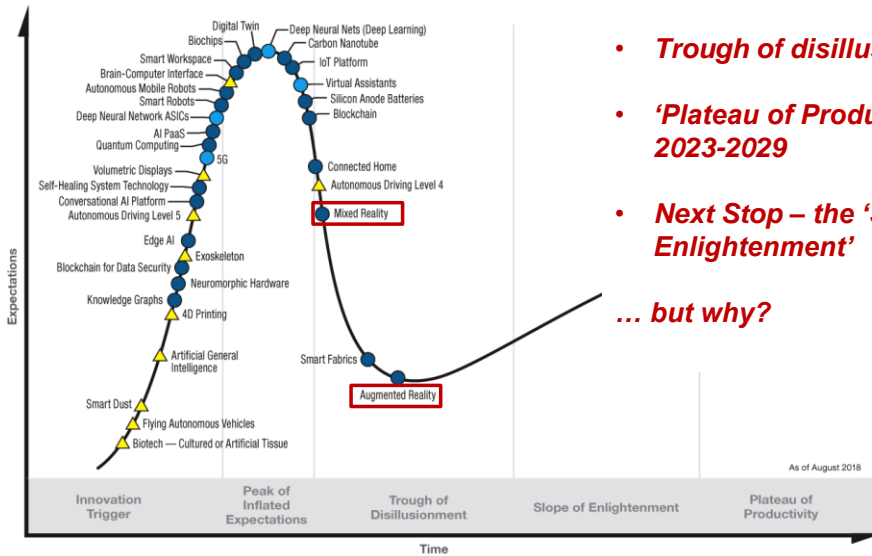
While the gaming world seems stuck in a nearly-perpetual succession of beta products, businesses have begun rolling out AR-based solutions in increasing numbers. The productivity improvements from having an always-on "heads up display" for workers in warehouses, factories, and medical facilities are both easy to grasp and justify the expense of deploying and managing high-end AR glasses. Companies like Daqri were showcasing applications across literally dozens of industries, supported by increasingly powerful and usable tools for corporate developers.

The pieces are coming together

A number of technologies are coming together to help drive the potential of practical applications for augmented reality (AR) in particular. First, there is some impressive hardware being developed. Lumus, for example, was demoing a wide-field-of-view reflective waveguide display module that provided me with a natural-feeling, stereo, view of computer-generated characters without obscuring my vision at all.

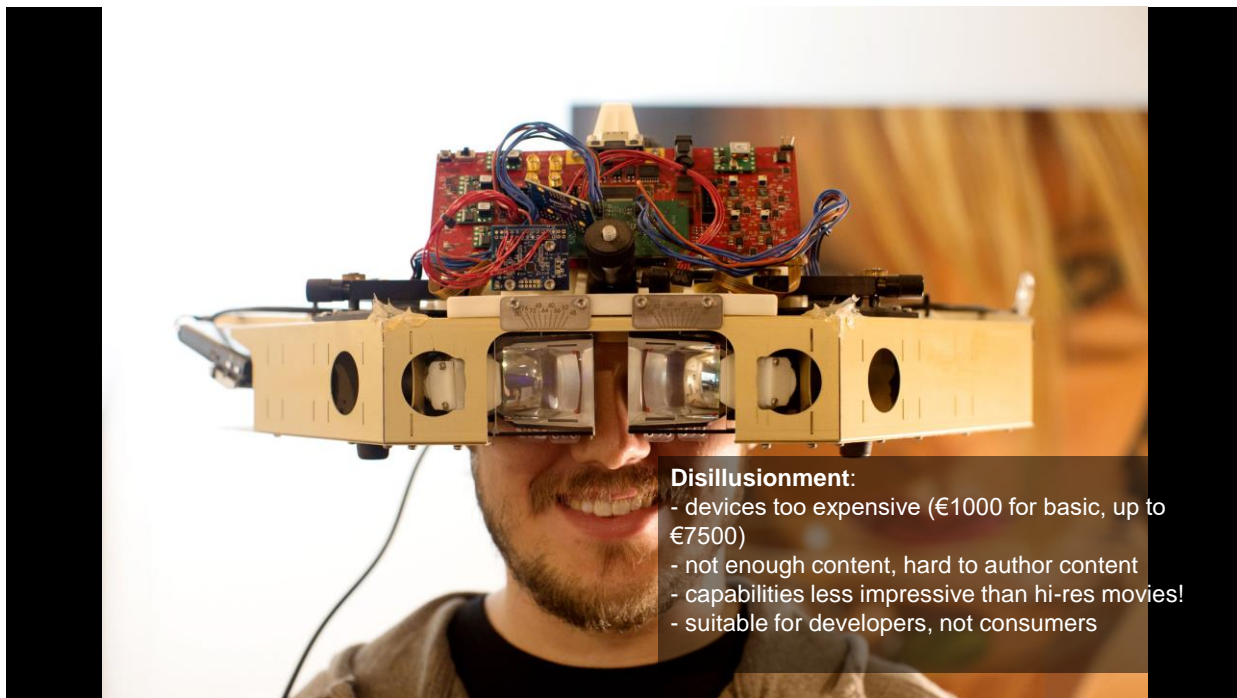
<https://www.extremetech.com/extreme/208136-augmented-world-expo-2015-ar-gets-real>

Gartner Emerging Tech - 2018



- **Trough of disillusionment**
 - **'Plateau of Productivity' in 2023-2029**
 - **Next Stop – the 'Slope of Enlightenment'**
- ... but why?





Disillusionment:

- devices too expensive (€1000 for basic, up to €7500)
- not enough content, hard to author content
- capabilities less impressive than hi-res movies!
- suitable for developers, not consumers

DAQRI SMART GLASSES

- **Notebook class processing power**
 - Intel Core m7 CPU, 8GB RAM, 64GB SSD
- **High resolution, wide FOV stereo display**
 - 1360x768 at 90Hz with 44° diagonal FOV
- **Sensing and scanning**
 - Sensors for tracking, scanning, photo and video
- **WiFi, Bluetooth**
- **VOS (Linux-based OS)**
 - Unity Extension and native C++ API
- **Lightweight, comfortable form factor**
 - 300g glasses, 400g belt-unit
 - Ability to connect other peripherals such as GPS, keyboard, network, displays, etc





Gartner Emerging Tech

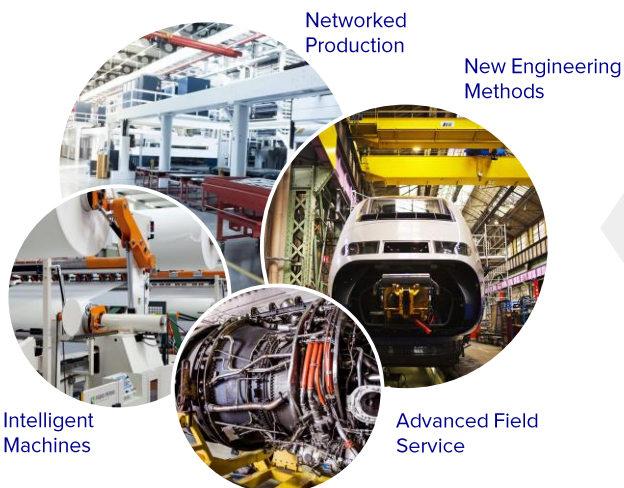
FOCUS ON REAL, TANGIBLE USE CASES AND VALUE

- **Slope of Enlightenment:** More industries are realizing that emerging technology can benefit the enterprise start to finish. The benefits are **more widely understood**. Second- and third-order use cases appear from technology providers and integrators. **Conservative companies remain to fund pilots**; conservative companies remain to fund pilots.
- **Platform:** Mainstream adoption starts to take off. Critical use cases and business provider viability are more clearly defined. The technology's broad market applicability and relevance are clearly paying off.



Are people and machines ready to work together?

The Industry 4.0 transformation means...



...critical new needs for workforces



- ✓ Collaboration onsite at the machine or facility
- ✓ Daily tasks connected to data and experts
- ✓ Hands-free tools that fit business processes

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Complex Tasks



Design
Build
Operate
Retrofit

High-value Assets

New industrial impact through digital, wearable tools

DAQRI WORKSENSE™

Most common use cases we identified for industry..

SHOW
Onsite service & expert collaboration

GUIDE
Training, configurations and lists

unity
DAQRI Smart Glasses™
Purpose-built wearable device

SCAN
Facility & asset inspections or retrofits

TAG
Manufacturing & maintenance workflows

MODEL
Design walkthroughs and approvals

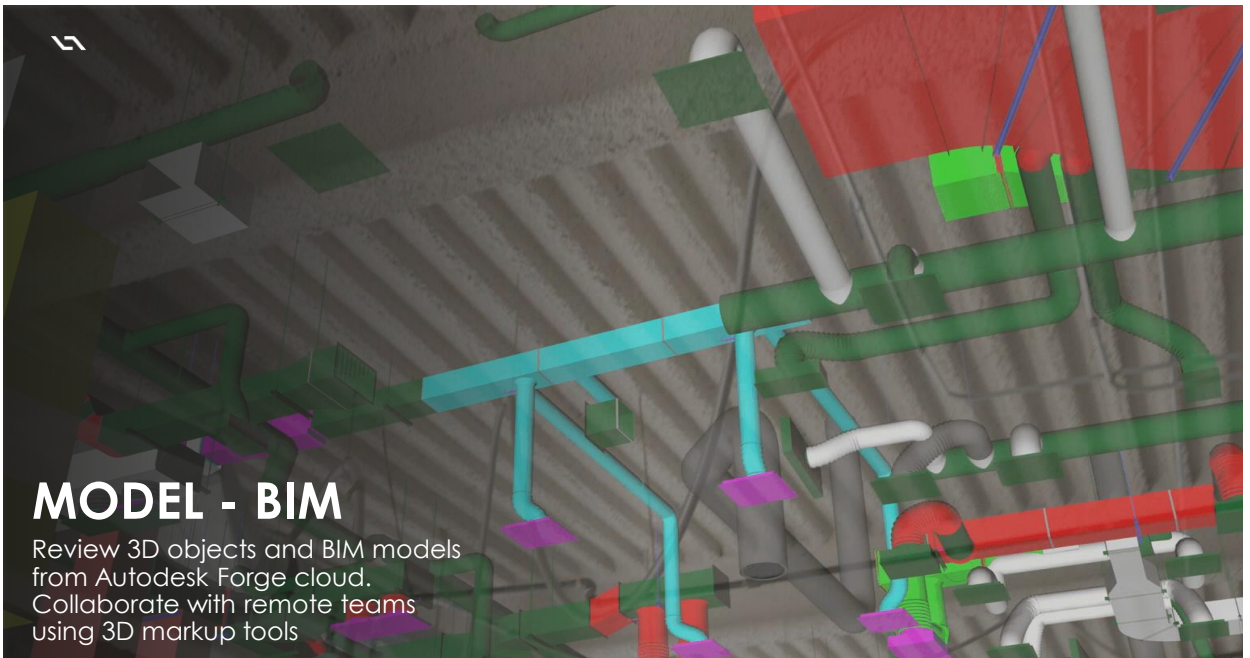


SHOW

Bring remote people to problems and provide more effective support

See 3D annotations

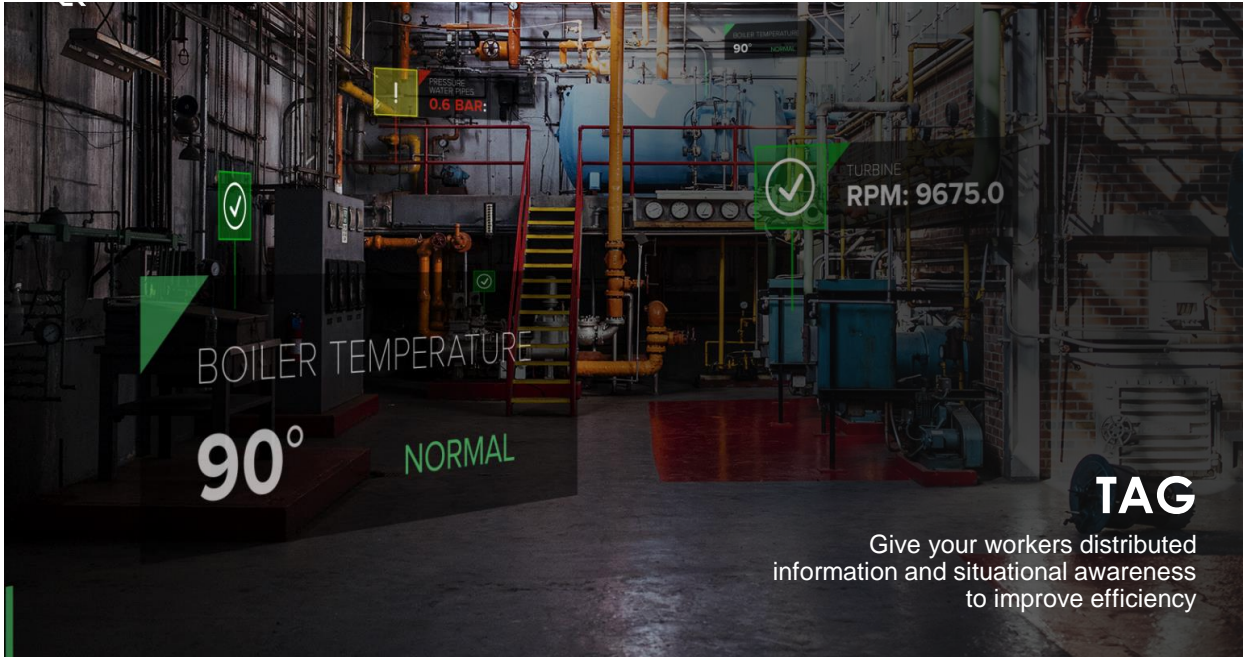
WORKSENSE™
DAQRI



MODEL - BIM

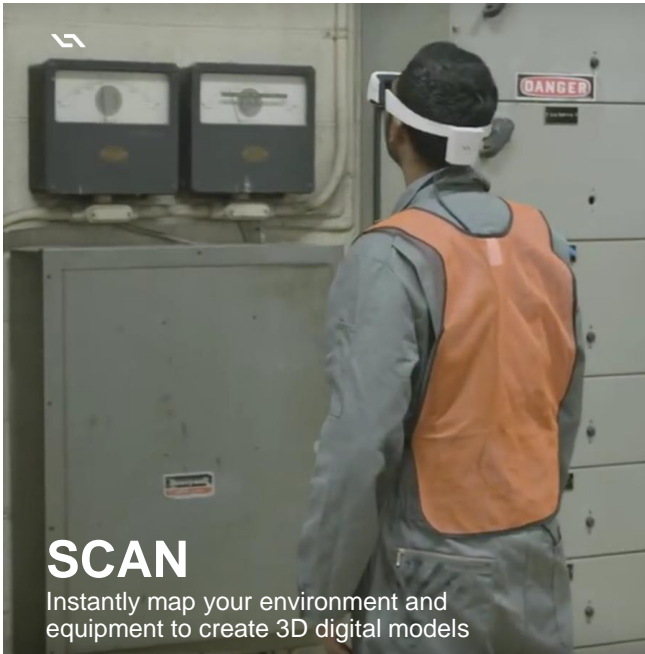
Review 3D objects and BIM models from Autodesk Forge cloud. Collaborate with remote teams using 3D markup tools

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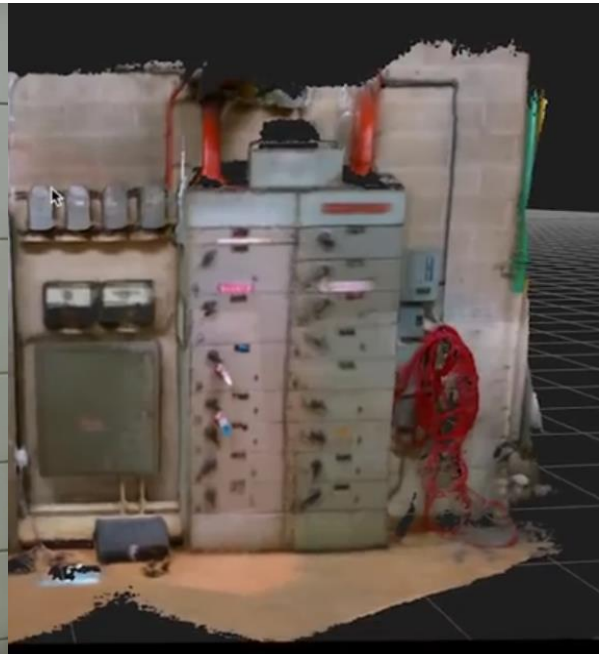
TAG

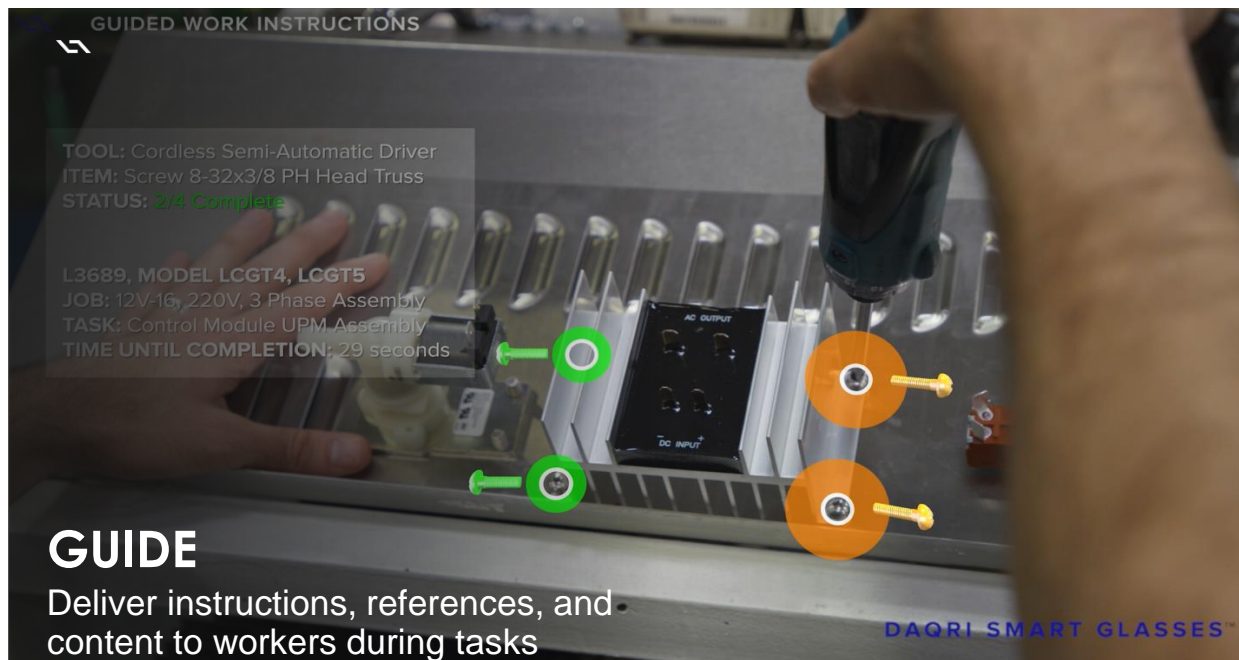
Give your workers distributed information and situational awareness to improve efficiency



SCAN

Instantly map your environment and equipment to create 3D digital models





GUIDE

Deliver instructions, references, and content to workers during tasks



DAQRI WORKSENSE™

Improving industrial processes with wearable solutions

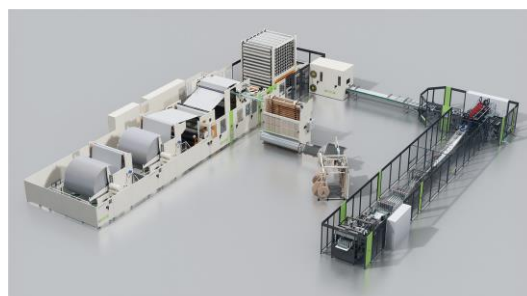
Wearable Smart Process



"We see a direct link from DAQRI AR to uptime of our auto production lines. For us, this is a practical innovation that helps people quickly learn and solve complex problems together."

Hendrik Dippe, **Volkswagen Slovakia**

Wearable Service Line



"At Fabio Perini, customer support is mission critical. DAQRI's platform lets us offer new types of digital services. We'll keep customers running with our live expertise and machine data."

Jeff Heim, **Fabio Perini**

Focus on Real Use Cases & Value

→ Use cases where **AR provides clear, measurable ROI**

- **Start simple**, prove value, **then expand**
- Use cases where AR can be deployed without large NRE (non-recurring costs) / programs
- Technology which can be deployed in an Enterprise Environment
- Integration with Enterprise IT systems is key, but only where AR **proves clear ROI over mobile or other technologies**

Bridging from industrial to consumer and media AR

- “**Cross the bridge**” from Early Adopters to **Early Mainstream**
- Industrial AR as bridge to consumer and media AR:
 - develops the features and platforms that enable future AR applications in other domains



Source: https://en.wikipedia.org/wiki/Old_Bridge,_Pontypridd

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