

VUFORIA CHALK: REMOTE EXPERT GUIDANCE WITH AR

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ptc

forum
europe



vuforia™



vuforia™



vuforia® engine

for Developers

Allows custom apps to “see” and puts content in the world



Bring that content to life with Vuforia. 

vuforia® studio™

for Enterprise Content Creators

Powerful AR content creation and publishing solution for industrial enterprises



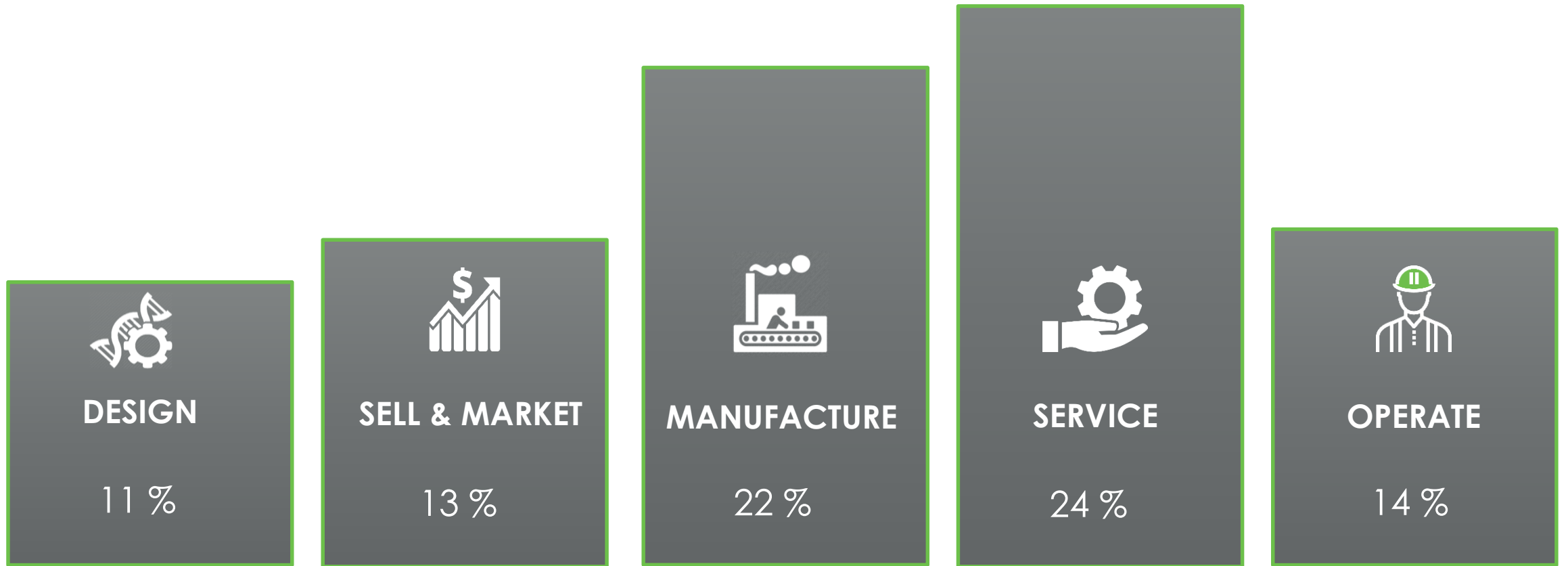
vuforia® chalk™

for Remote Assistance

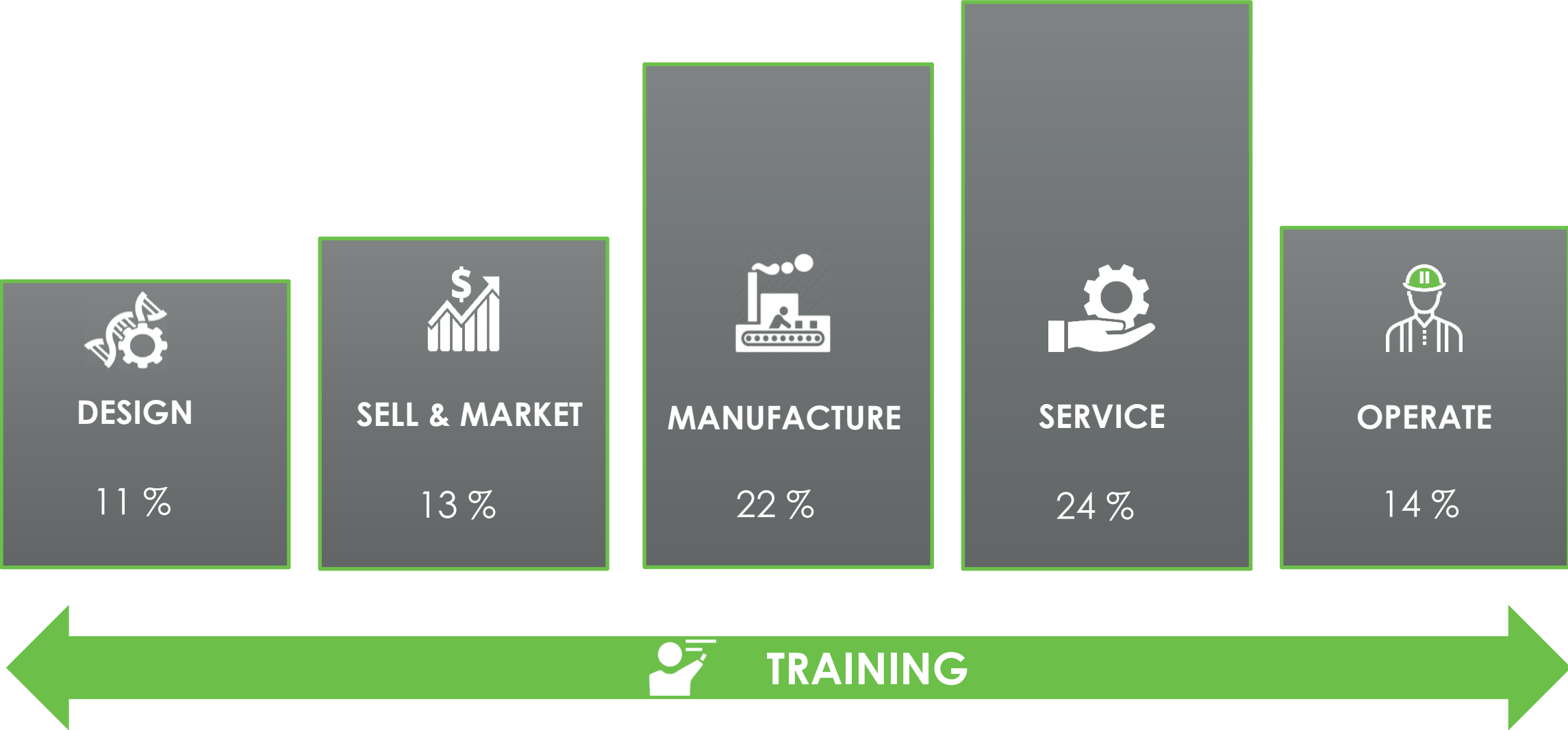
Allows an expert to “see what I see” and annotate in a shared workspace



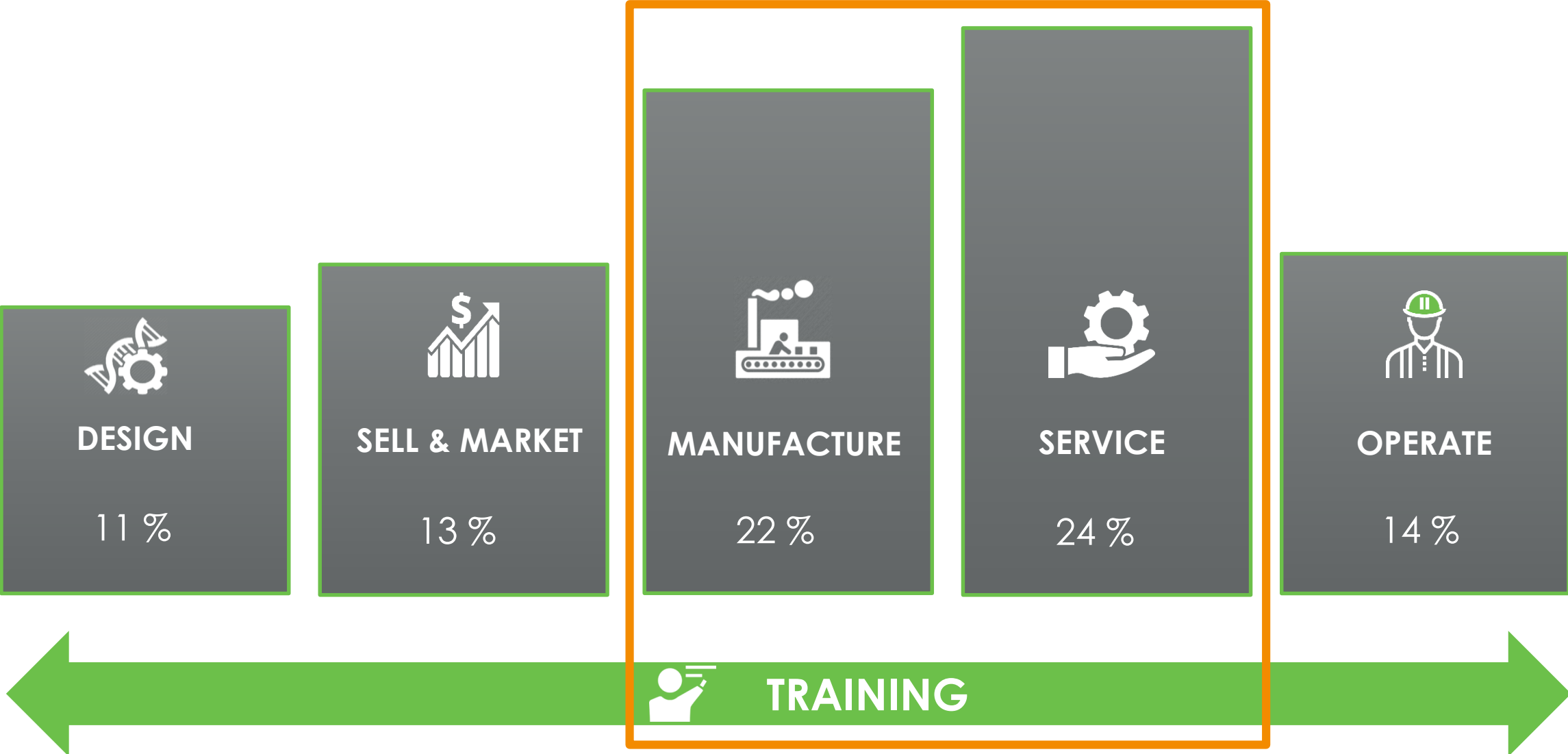
MANUFACTURING AND SERVICE PRESSURES TODAY



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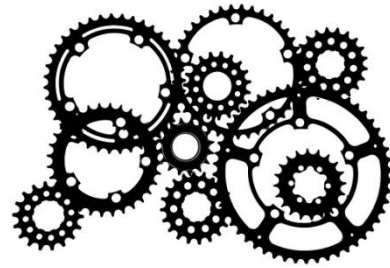


Remote Assistance is the ability for a subject matter expert to provide on the job support to a frontline worker from anywhere in the world.

WHY IS REMOTE ASSISTANCE IMPORTANT?



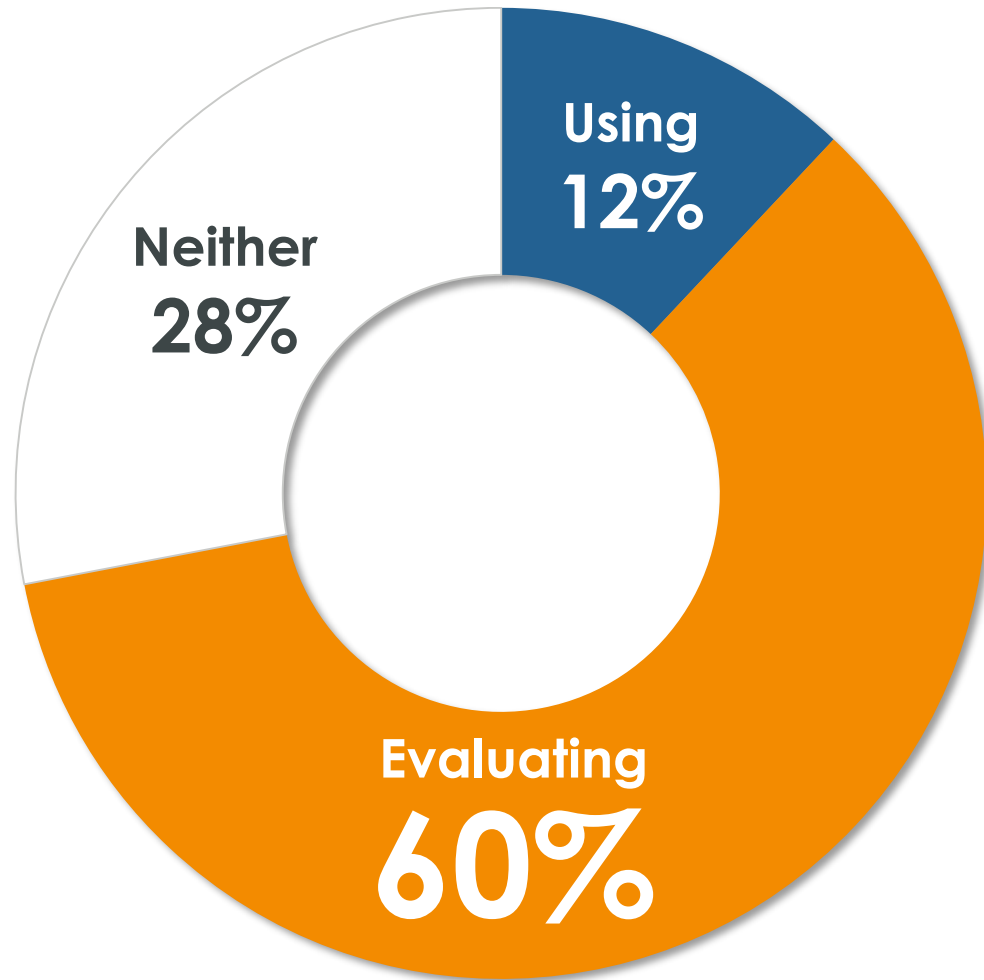
**Aging Skilled
Workforce**



**Complexity of
Service
Requirements**



**Service
Profitability**



Is your organization currently using AR for service and support?

The Feasibility of Augmented Reality in Service: The Service Council, 2017 Survey Results

AR IN THE SERVICE INDUSTRY TODAY

Market view of AR in service today....

What service business challenges are AR applications most suited to solve?

71%: Improve on the job support

What Devices will your technicians use to access AR content?

81%: Smartphones

What needs to change for AR applications to be truly market-ready?

62%: Ease of Use

See it.
Solve it.
Together.



vuforia[®] chalk[™]





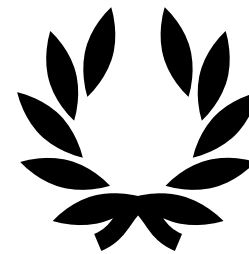
vuforia® chalk™

OUT OF THE BOX REMOTE ASSISTANCE

- Advanced 3D annotation anchoring
- Simple, intuitive user experience
- Designed for devices deployed in the field today
- Built by the global leader in enterprise AR



**Boost Workforce
Productivity**



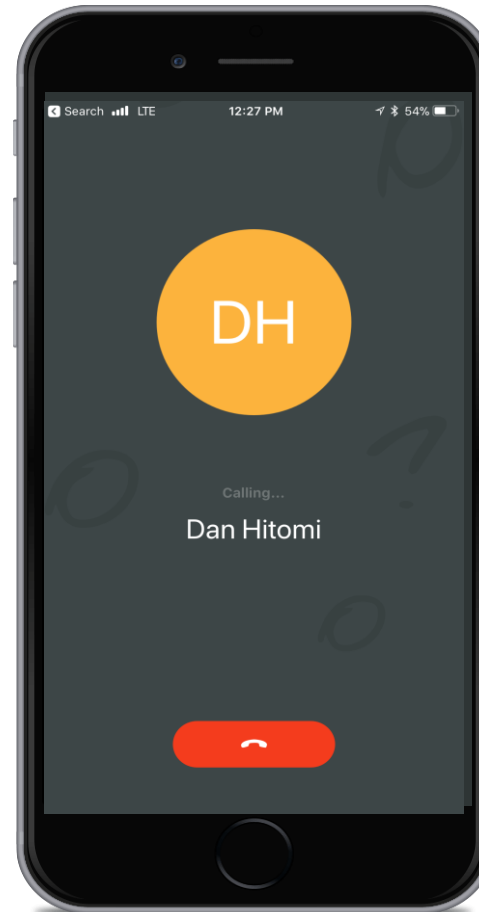
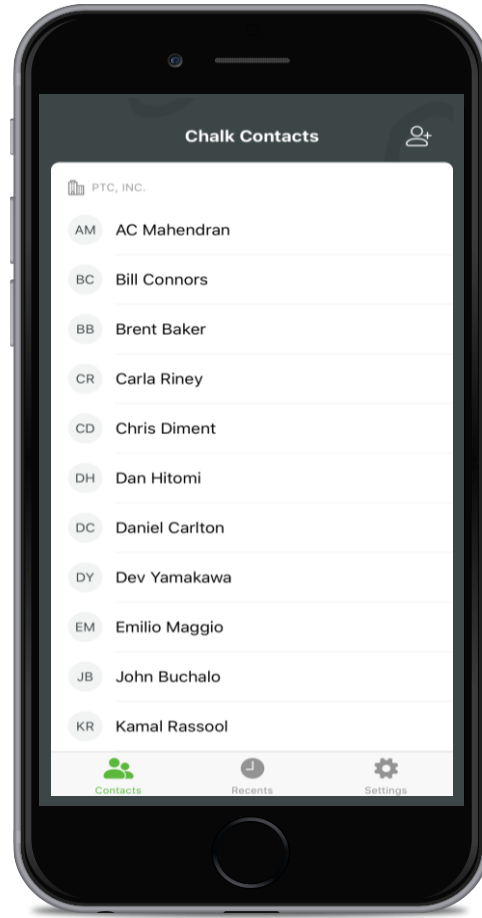
**Increase
Service Quality**



**Reduce Service
Time & Costs**

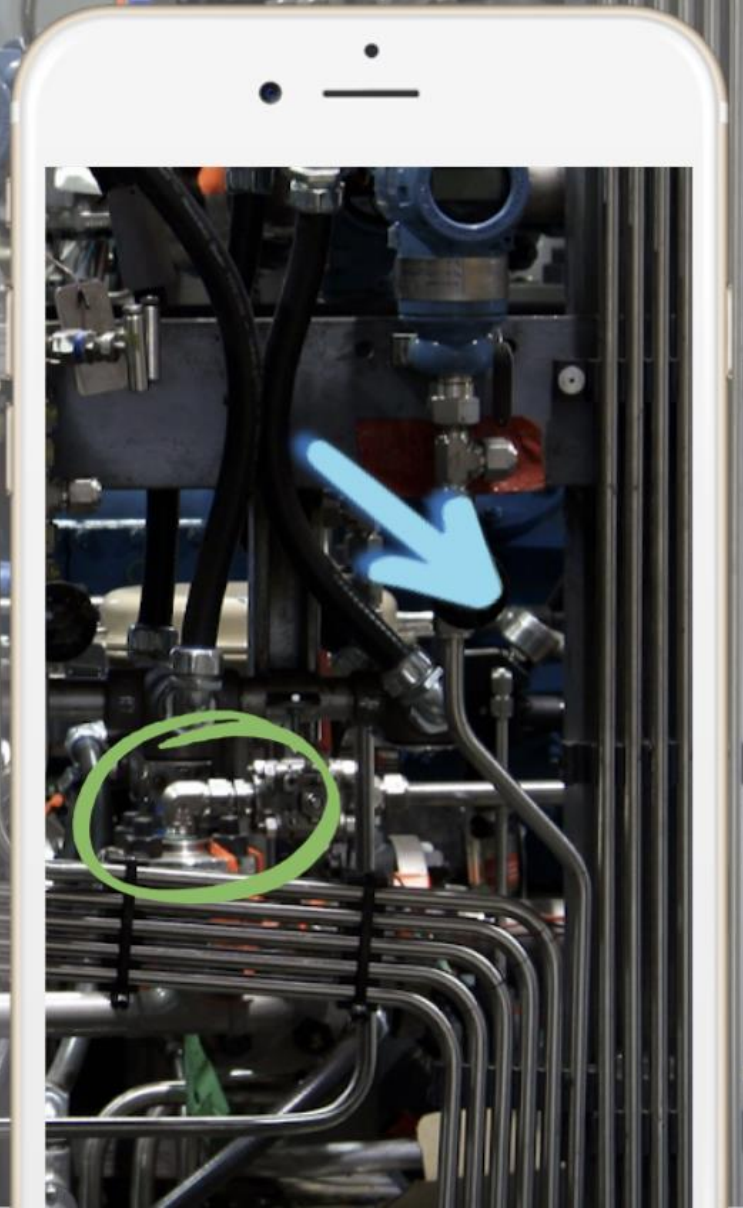
EASY TO USE

Vuforia Chalk is a simple, intuitive tool that brings your workforce together to solve problems on the devices they use today. Accessibility and ease of use makes Chalk the most effective “gateway” solution for deploying enterprise AR

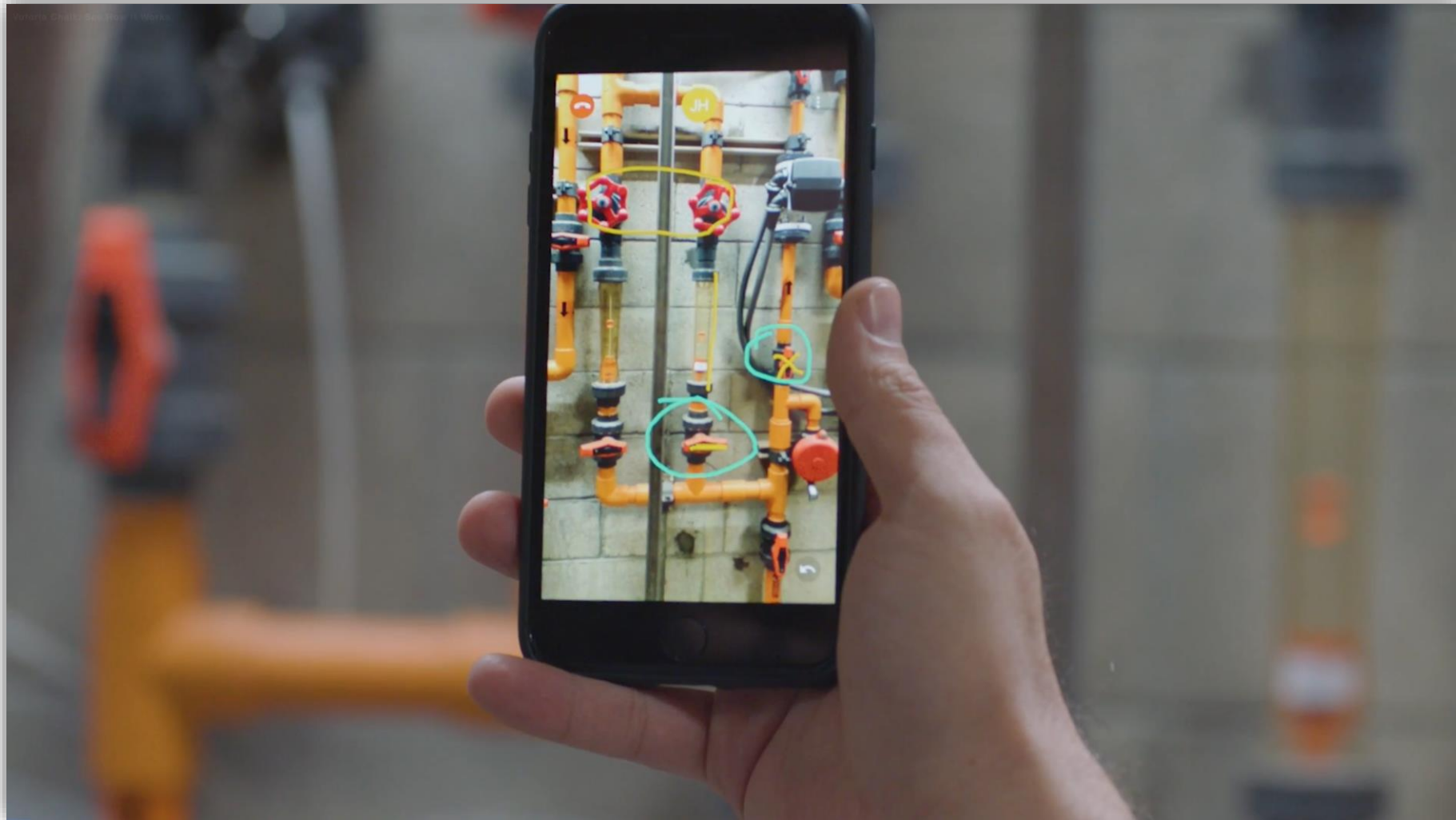




Precise visual instructions
when accuracy and
efficiency matter most



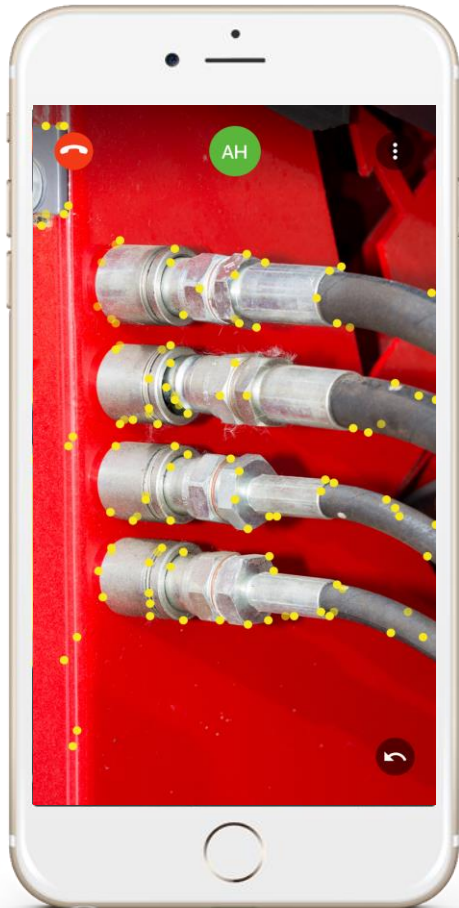
ANNOTATIONS THAT 'STICK'



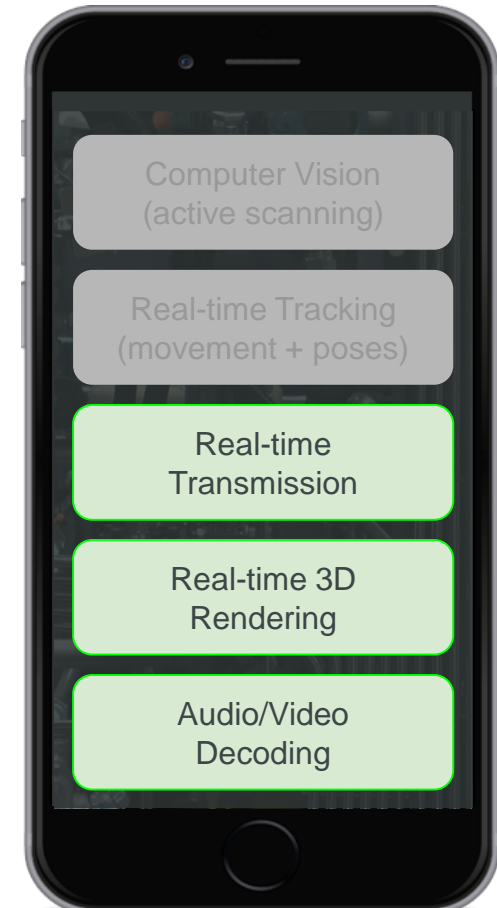
BEST IN CLASS TECHNOLOGY

Building and recognizing your environment in real-time

Local Worker
"show what I see"



Remote Expert
"see what they see"



SIMPLIFIED ENTERPRISE MANAGEMENT



- Global availability
- iOS & Android compatibility
- Enterprise-grade security
- Centralized user management and workgroup analytics
- Federated Authentication/SSO
- PTC Gold Support
- 90-day customer success package

The screenshot shows the 'Users' section of the vuforia chalk Admin Center. It features a search bar, an 'Import CSV File' button, and an 'Add User' button. Below these is a table of users with columns for First Name, Last Name, Email, Job Title, Role, Status, and Last Call. Two users are listed: Anna Smith (Lead Engineer, Primary Admin) and Bill Jones (Engineer, Chalk User).

| First Name | Last Name | Email | Job Title | Role | Status | Last Call |
|------------|-----------|--------------------|---------------|---------------|-----------|----------------------|
| Anna | Smith | asmith@company.com | Lead Engineer | Primary Admin | Activated | 11/06/2017 08:23am |
| Bill | Jones | bjones@company.com | Engineer | Chalk User | Activated | 11/06/2017 08:23am |

The screenshot shows the 'Insights' section of the vuforia chalk Admin Center. It displays three key metrics: Total Calls (542, up 120% last 30 days), Active Users (176, up 4% last 30 days), and Seats Used (8/50, down 1% last 30 days). Below these is a line chart showing Active Users over time, with a callout for 176 Call Participants on day 15. A tip suggests to 'Invite more users to Chalk'.

| Metric | Value | Trend (Last 30 Days) |
|--------------|-------|----------------------|
| Total Calls | 542 | ↑ 120% |
| Active Users | 176 | ↑ 4% |
| Seats Used | 8/50 | ↓ 1% |

The screenshot shows an email invitation from Chalk-Registration@chalk.vuforia.com. The subject is 'Your invitation to join PTC, Inc. on Vuforia Chalk'. The email body includes the vuforia chalk logo, a greeting 'Fran,', and an invitation to collaborate with colleagues on Vuforia Chalk. It includes a 'Ready to get started?' section with a 'Sign up' link and a 'Learn more about Vuforia Chalk' link. A note at the bottom states: 'This invitation link will expire in 7 days. To renew your invitation, please contact Anne Hall.'



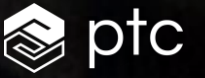
WIDE RANGE OF PILOTS AND DEPLOYMENTS



BHARAT FORGE



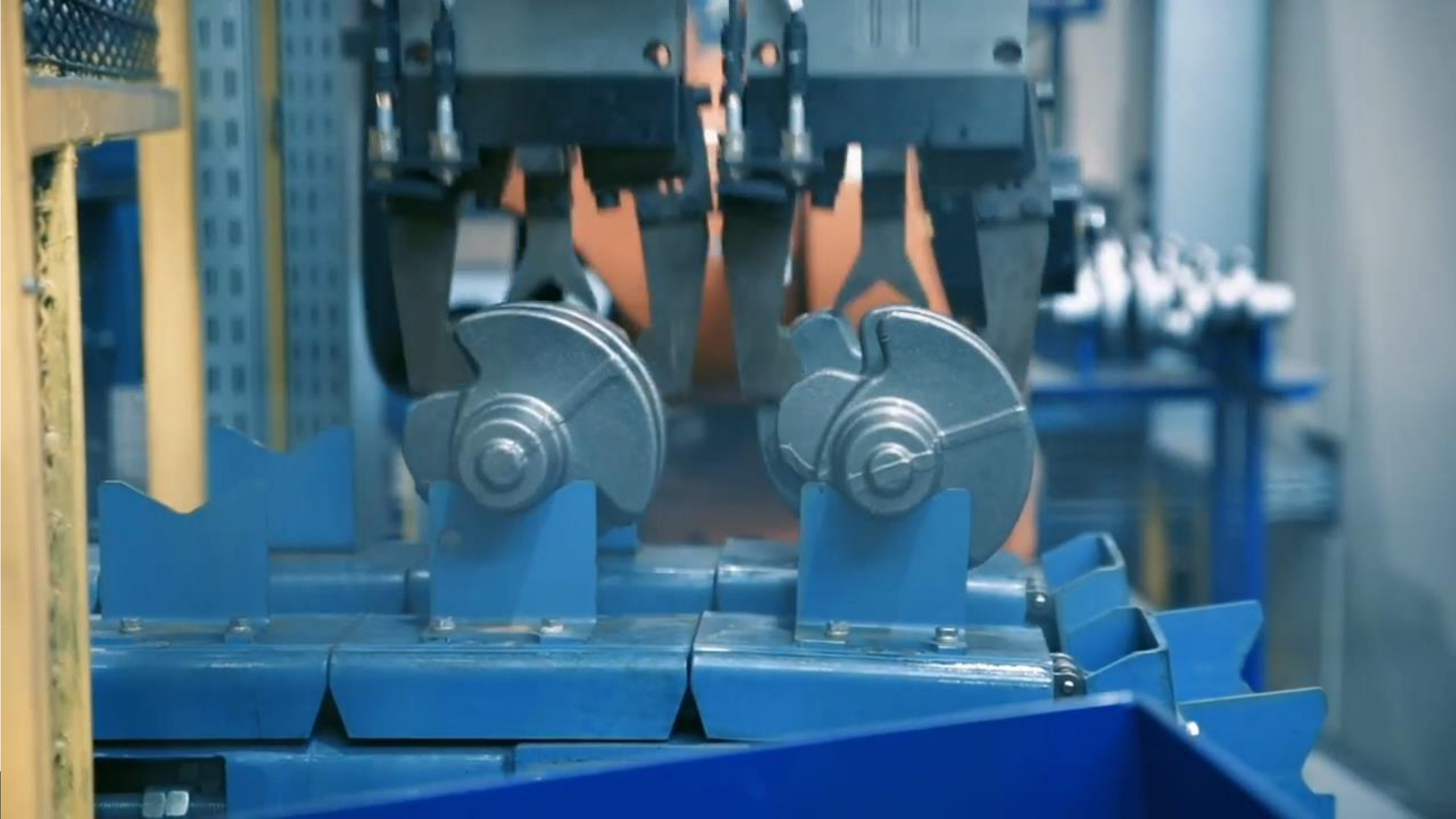
KALYANI



Global manufacturing leader of forged
and machine components for automotive
and industrial sectors

- End-to-end solution provider from product conceptualization to designing, manufacturing, testing and validation
- Global footprint of over 10,000 employees and 10 manufacturing locations spread across India, Germany, Sweden, France, and North America
- Operates over 29 press lines with an aggregate forging capacity of 600,000 tons per year







BHARAT FORGE



KALYANI

“Vuforia Chalk will transform the critical support process on the shop-floor. Now, key experts are available without constraints of space and time. We are impressed by our first quick wins.”

**– YOGESH ZOPE, GROUP CIO
BHARAT FORGE**

varian

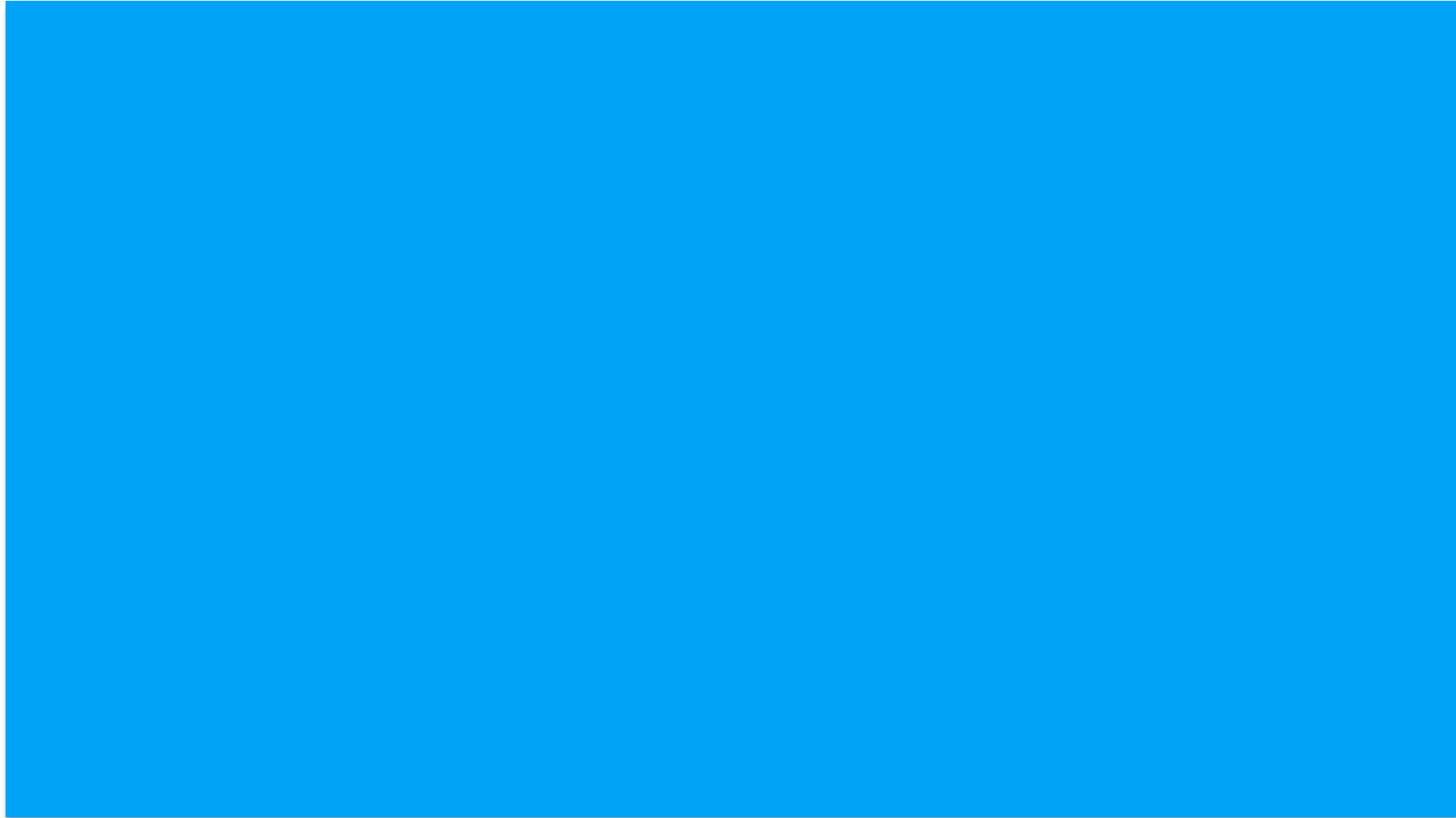


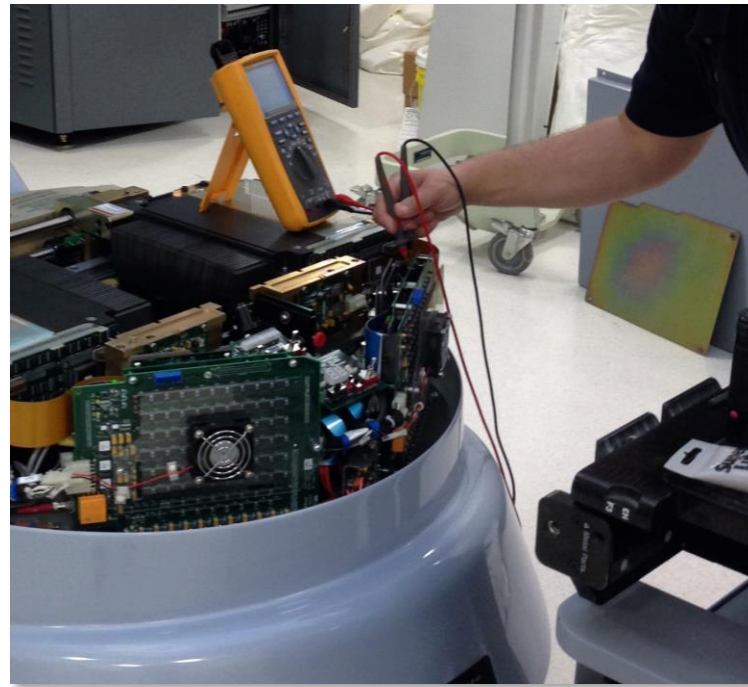
Global leader in integrated cancer therapy systems

- Holds approximately 55% of the \$5 billion global radiation oncology market
- Linear accelerator install base of over 7,800 machines globally, more than double the installed base of closest competitors
- Service organization employs more than 2,000 people, generating over \$1 billion in annual revenue









varian

“Traditionally our technicians are working through thousands of pages of manuals for onsite troubleshooting and support. Vuforia Chalk and AR enables us deliver anytime, anywhere interactive guidance—providing a new level of collaboration and transparency between our technicians and product specialists around the globe.”

– Sven Ehmes
Product Support Engineer

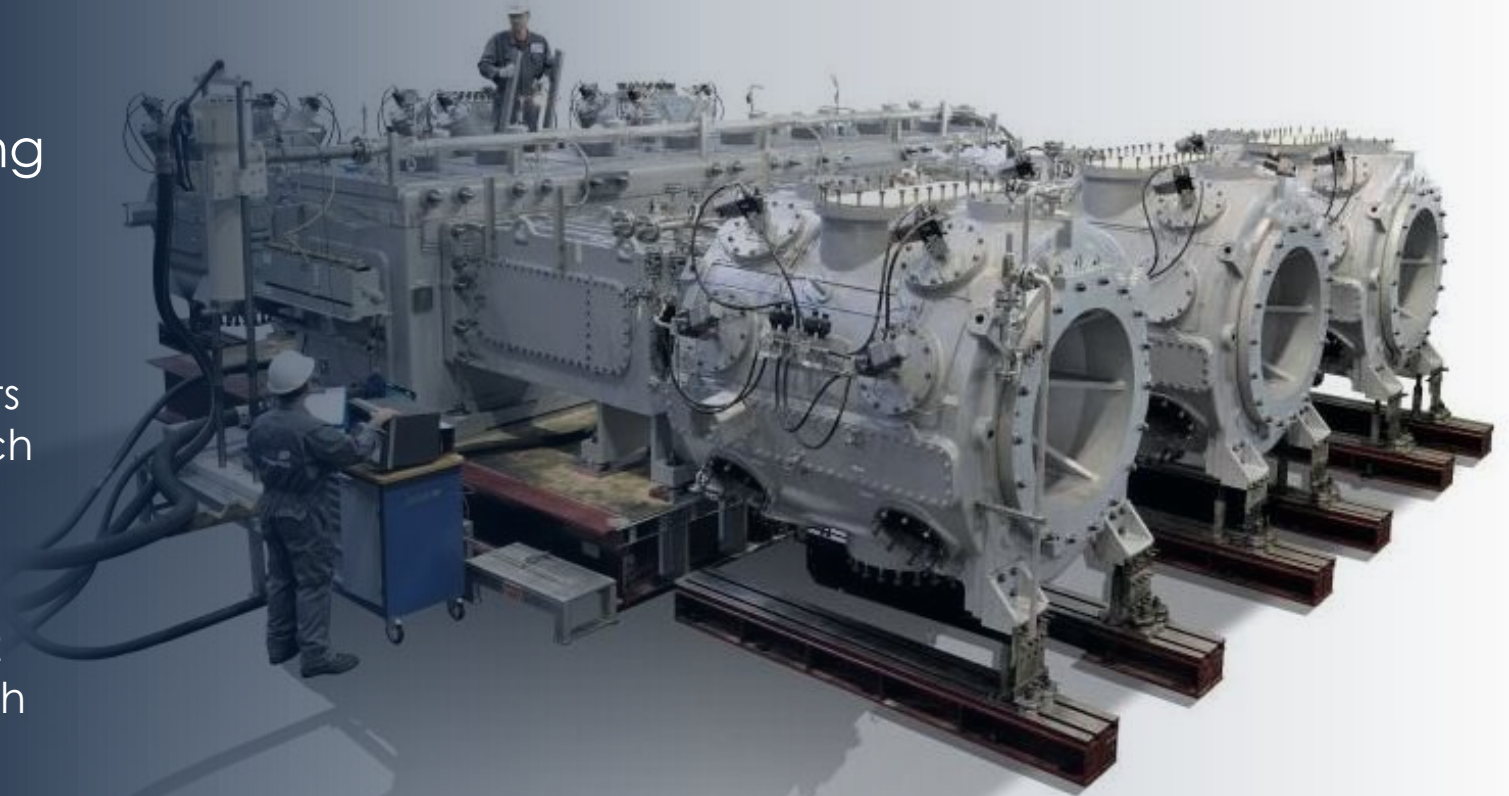


Howden



Global leader in air and gas handling equipment and solutions

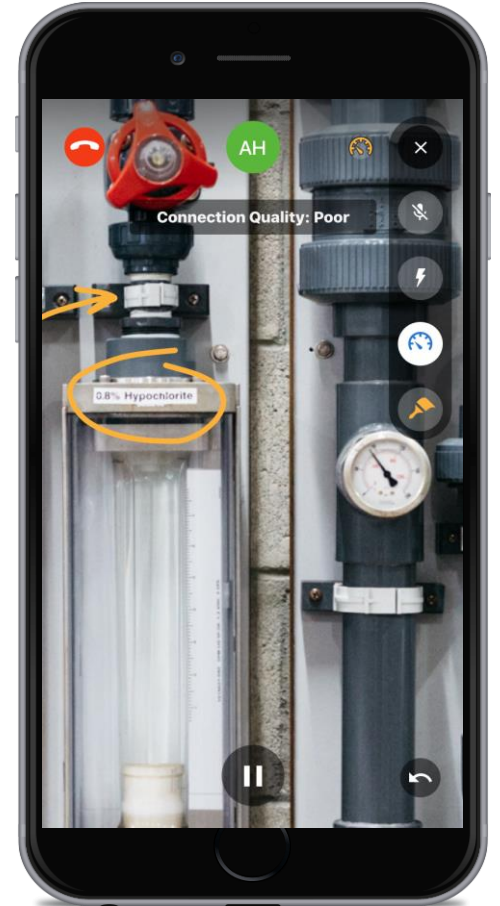
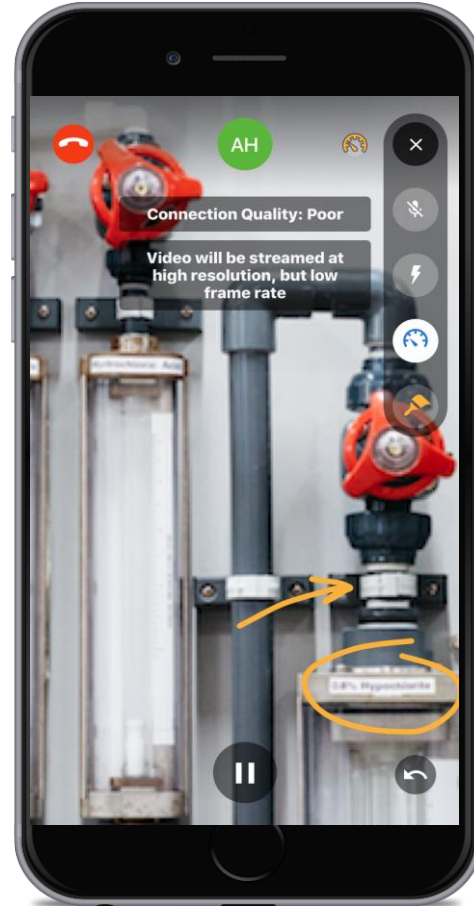
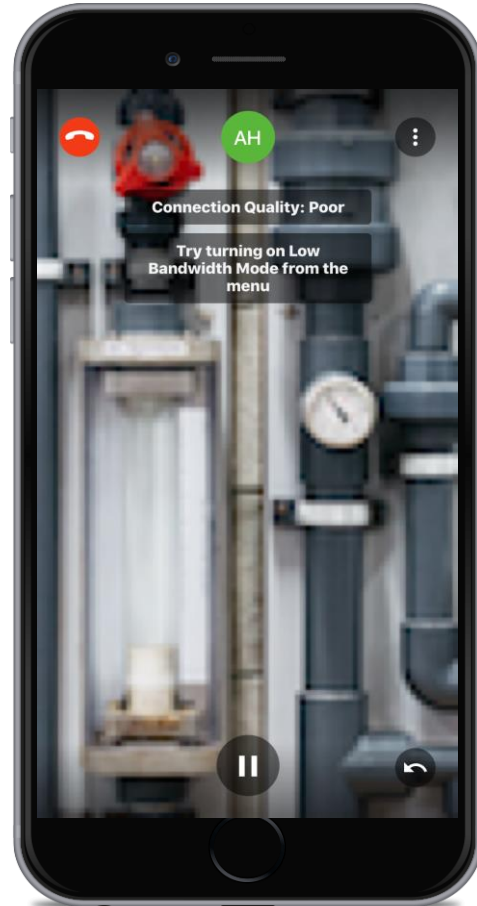
- Designs, manufactures, installs, and maintains air and gas handling products for a wide range of industrial markets such as power generation, oil and gas, petrochemical, mining and steel.
- Subsidiary of Colfax Corporation, a \$4.2 billion diversified industrial company with over 18,000 employees







Customer Screenshot



Low Bandwidth Solution



“Chalk is moving towards becoming an essential part of our customer offering to minimize downtime by providing immediate expert knowledge to the field at any time in any location”

**– Graeme Russell,
Product Manager – Data Driven Advantage**

2018

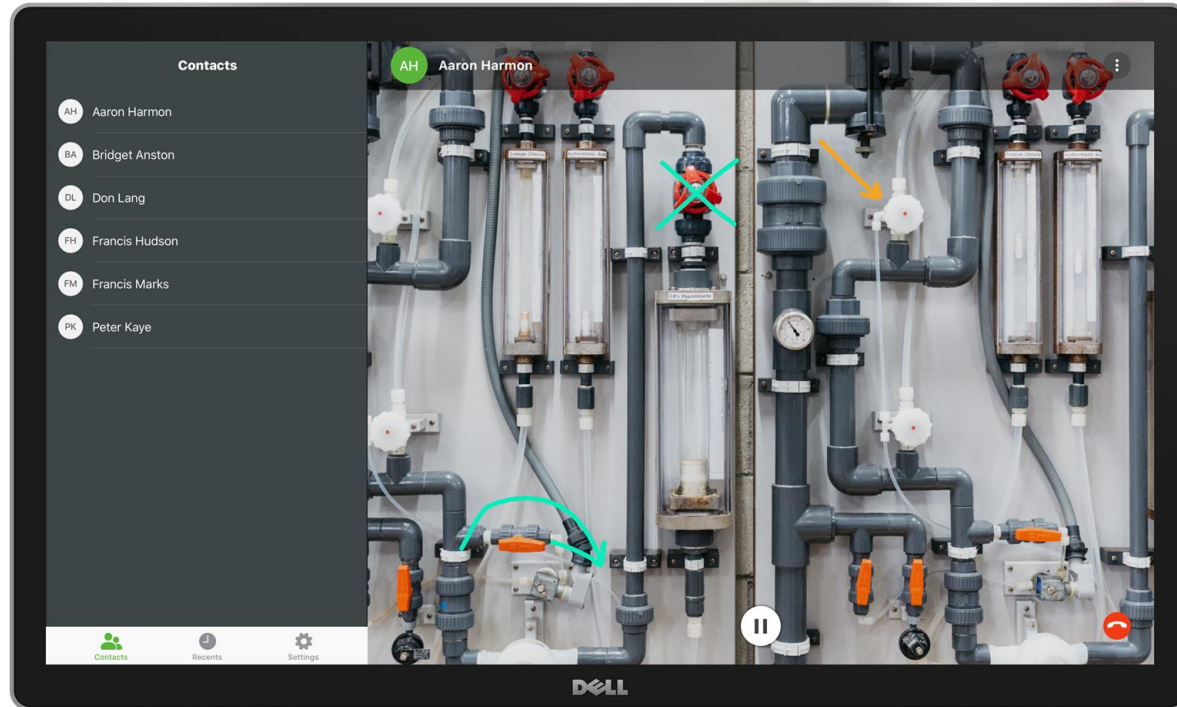
- App deep-linking (app-to-app integration)
- Low bandwidth mode
- Session Summary
- External Calling
- Expanded Android device support
- New annotation types

2019

- Desktop client for Remote Experts
- Improved Studio & View integration
- Content Sharing (3D Models)
- Recorded sessions
- Multi-party sessions
- “Teleport” (virtual navigation)
- Chalk for Digital Eyewear



- Chalk can automatically store and display the “points of interest” at the end of a session.
- “Points of interest” are auto-captured based on annotations made by the session participants.
- These images can be used to:
 - Attach to work orders as evidence of service work
 - Improve QC processes (verify thoroughness and correctness of fix)
 - Share knowledge to scale service and training of field technicians (especially for new products)
 - Share feedback to identify design flaws, design improvements or support improvements.





Technician: Request help from View



Expert: Provide help from Chalk



What if the **Remote Expert** could go back on their own to an area the **Field Technician** showed earlier in their session?

Teleport is a future Chalk feature that enables a Remote Expert to freely navigate the Field Technician's physical environment on their own.

Similar to **Google Maps' Street View** where we can virtually experience and explore the physical street at our own pace.

VUFORIA CHALK 30-DAY EVALUATION

- 30-day free access to Vuforia Chalk
- Chalk Admin Center usage
- Add & manage up to 50 users
- Full-suite of commercially available features
- No migration from Evaluation to Paid





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June 10 – 13, 2019

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FOR ONLY \$500!

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Product Demos



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