



**Rockwell
Automation**

Solving market pressures with remote assistance

vuforia[®] chalk[™]



Bring your technicians and experts together to solve problems effectively

Real-time, remote assistance and collaboration tool



Worker Skill Gap

Novice talent can quickly connect and collaborate with skilled, expert technicians to provide guidance



Complex Products & Workspaces

Technicians can service complex products effectively and efficiently even when they encounter new, unknown issues



Increased Customer Demands

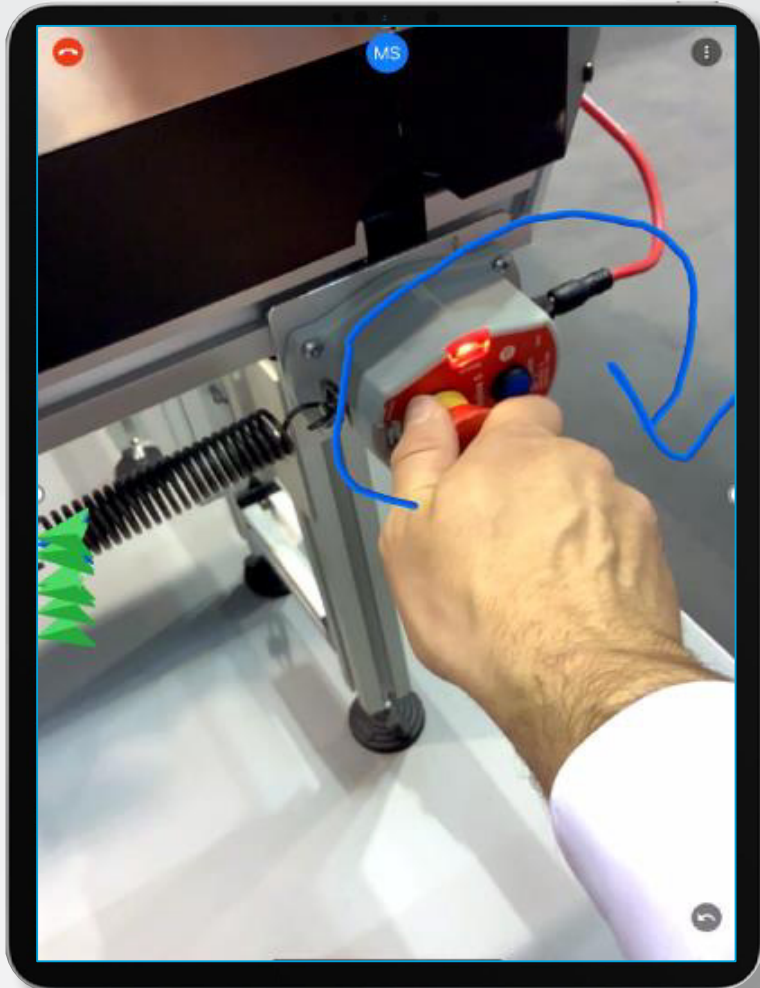
Service providers can meet and beat customer expectations with faster, more effective service capabilities



vuforia® chalk™

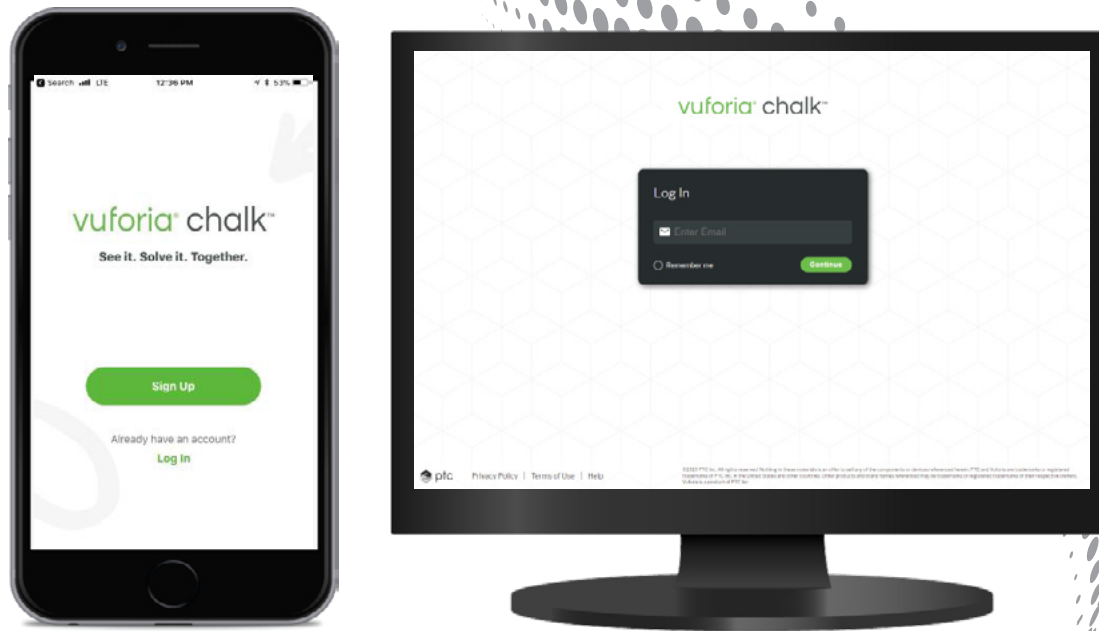
- **Accelerate** problem resolution
- **Empower** workforce to solve unexpected issues
- **Reduce** cost of technician and expert visits on-site
- **Improve** uptime and operational efficiency

Easy-to-use collaboration tool



- Live, “over-the-shoulder” collaboration on mobile, tablet and desktop devices
- Combines live video, audio and annotations of a shared view
- Mark-up the real-world with precise, anchored annotations
- Use way-finding arrows to guide on-site technician
- Document resolutions with session summaries

Out-of-the-box solution



- Simple, intuitive user experience
- Minimal training and set-up
- Backed by best-in-class augmented reality (AR) technology
- Advanced 3D annotation anchoring
- Precise visual mark-up on real-world equipment

DEVICE AGNOSTIC

Best in class technology



- Industry leading AR technology from PTC
- 3D environment mapping allows annotations to “stick” to objects in the physical world
- Increases accuracy and precision of assistance
- Enables improved communication efficiency

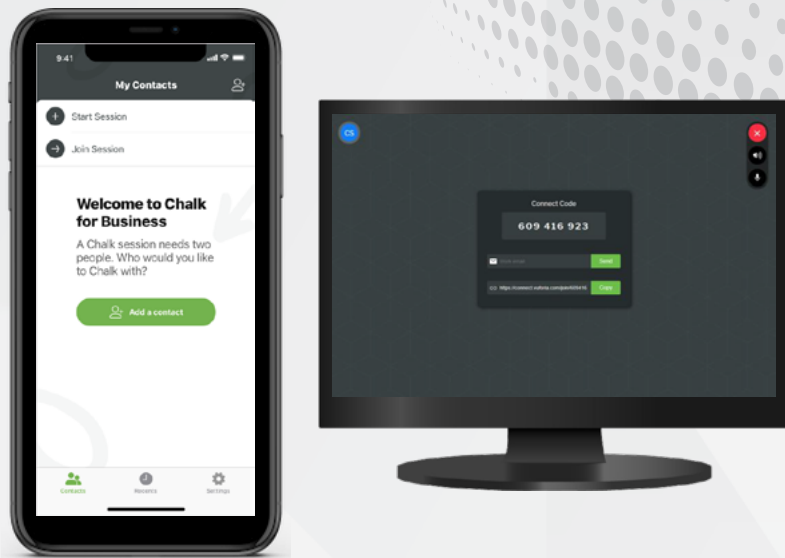


Features and capabilities

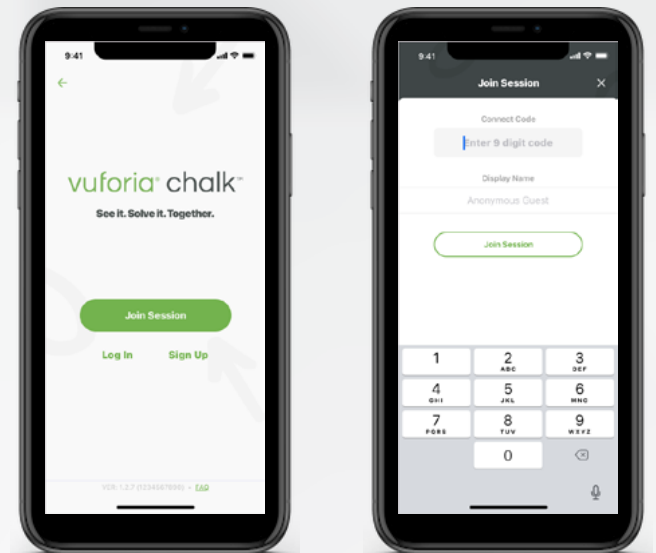
- Host users and connect codes
- Chalk for desktop
- Low bandwidth mode
- Points of interest
- Enterprise management

Connect with **vuforia**® chalk™

Hosts can initiate code-based sessions, reducing the need for the end viewer to register or sign-in.

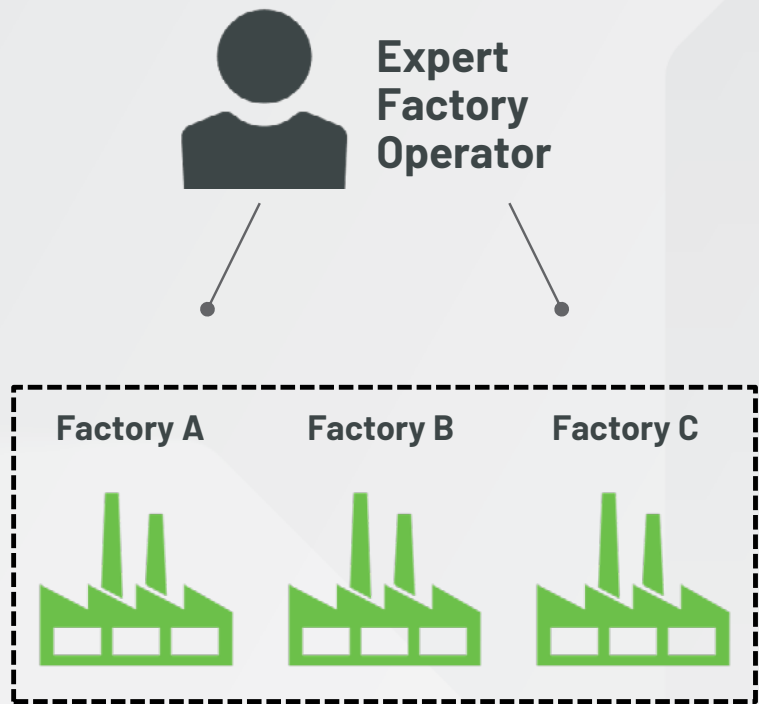


Expert issues a Connect Code to authorize help and access to their time and expertise

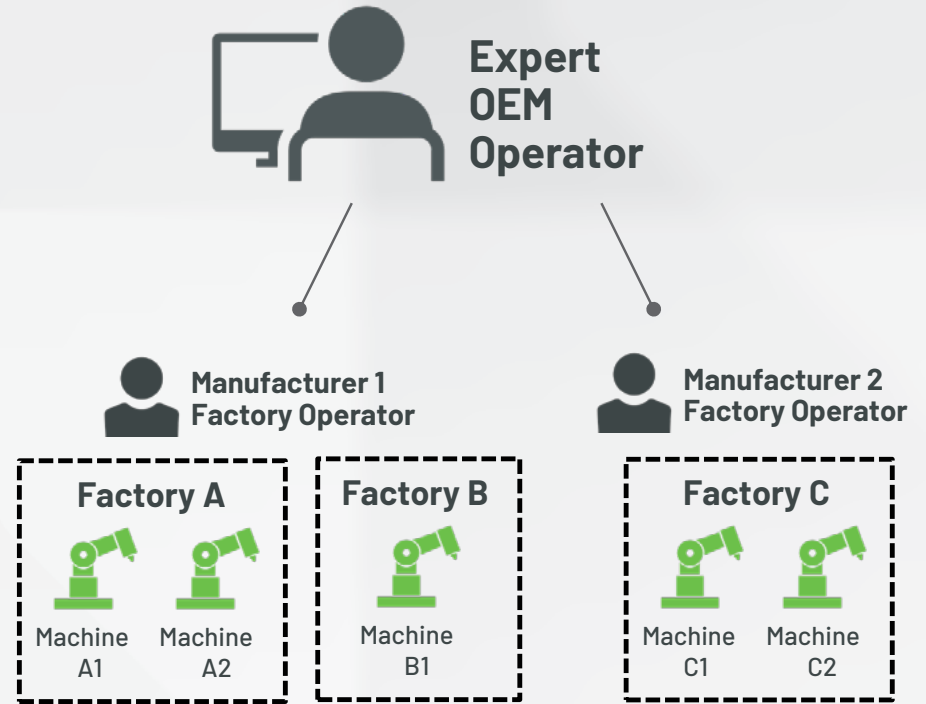


Field Technician joins the expert's live session with the Connect Code, no login or registration needed

Resolve issues across multiple factories



Factory experts can remotely connect to internal factory operators within the same company to resolve issues across multiple factories



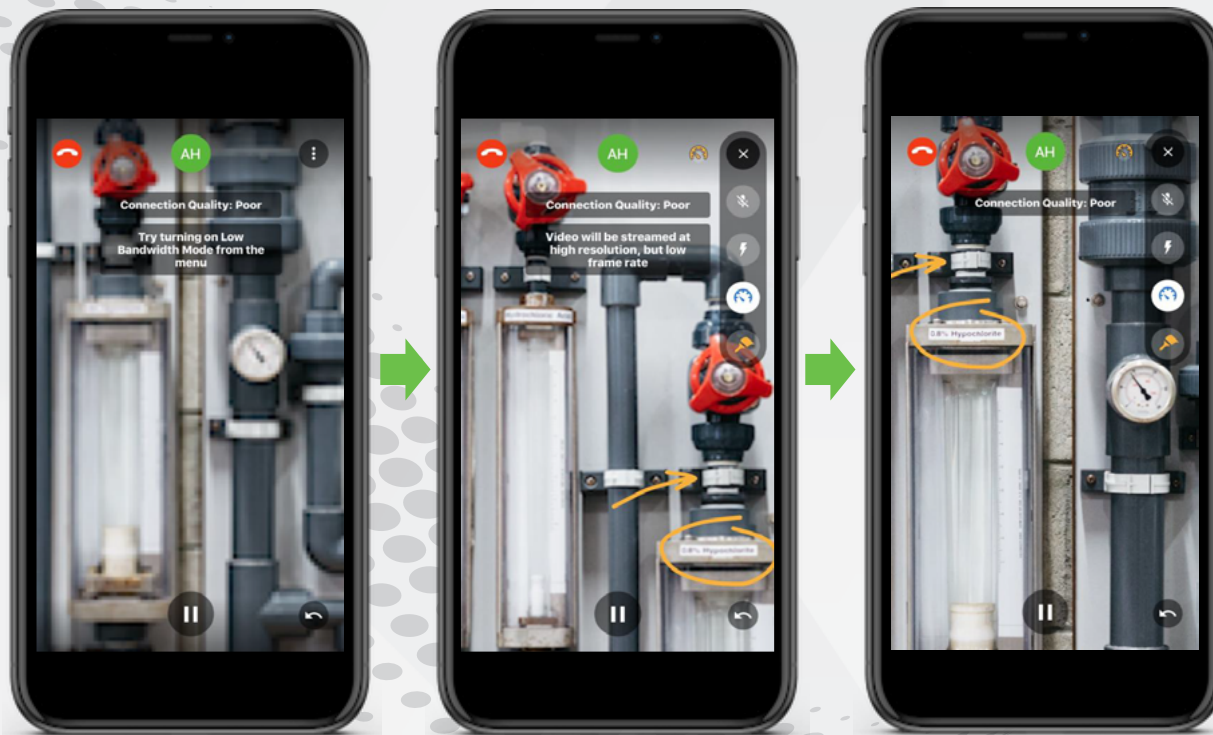
OEM experts can remotely and anonymously connect to internal/external technicians or customers to resolve issues without requiring the end viewer to have a Vuforia Chalk User account



Vuforia Chalk for desktop

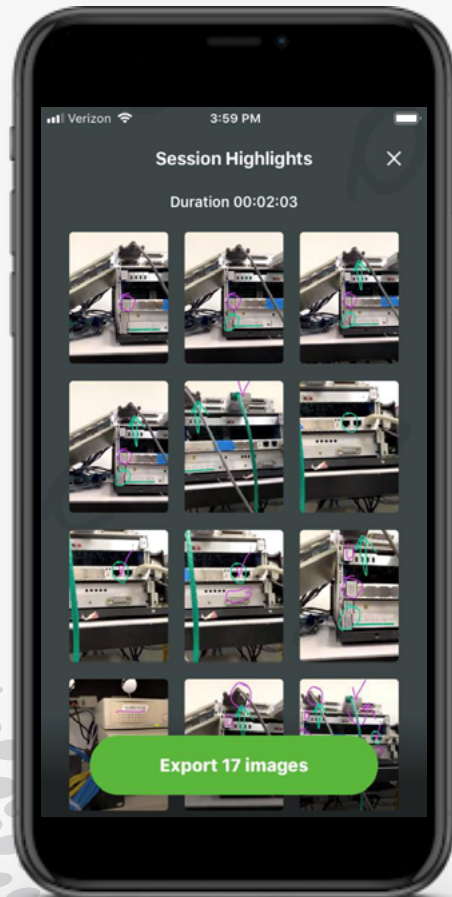
- Vuforia Chalk for desktop connects your frontline workers on-location or in the field with remote experts that may work from a desk
- Web-based application
- No download or installation necessary
- Same live, 3D annotations as mobile
- Initial release limited to Hosts
- Compatible browsers: Google Chrome, Microsoft Edge, Mozilla Firefox, Apple Safari

Low bandwidth mode



Low bandwidth mode allows video to be streamed at a high resolution, low frame rate so calls can still be effective in low connection areas

Points of interest

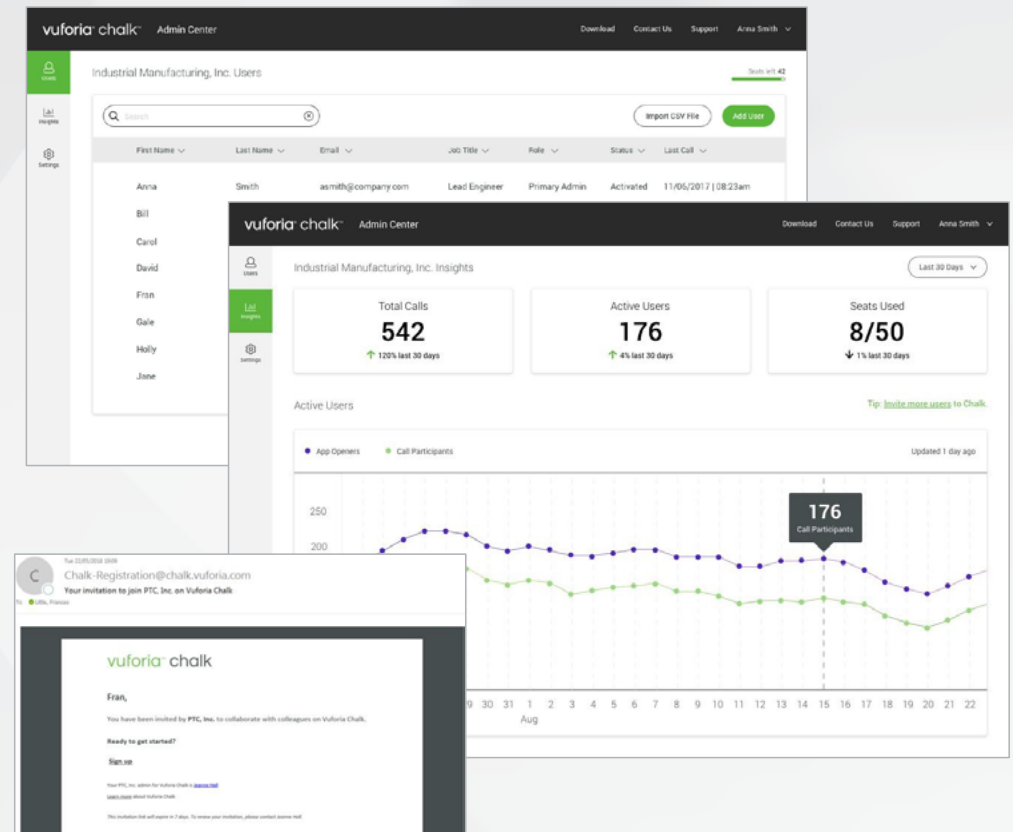


- Chalk can automatically store and display the “points of interest” at the end of a session
- “Points of interest” are auto-captured based on annotations made by the session participants
- These images can be used to:
 - Attach to work orders as evidence of service work
 - Improve QC processes by verifying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

Enterprise management

Vuforia® Chalk™ Admin Center enables account management of enterprise Users

- 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



Simple tool, powerful business outcomes



REDUCE OPERATIONAL COSTS

- Lower expert technician travel costs through remote guidance
- Reduce safety related incidents and costs
- Decrease machine downtime



ACCELERATE TRAINING & SCALABILITY

- Provide remote mentoring for new technicians
- Capture resolutions for future referencing



IMPROVE WORKFORCE EFFICIENCY

- Drive workforce utilization through “over-the-shoulder” support
- Increase first time fix rate and decrease mean time to repair



INCREASE CUSTOMER SATISFACTION

- Boost satisfaction by minimizing downtime
- Enable self-service with remote expert guidance

Connect with us.

rockwellautomation.com — expanding **human possibility**®

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