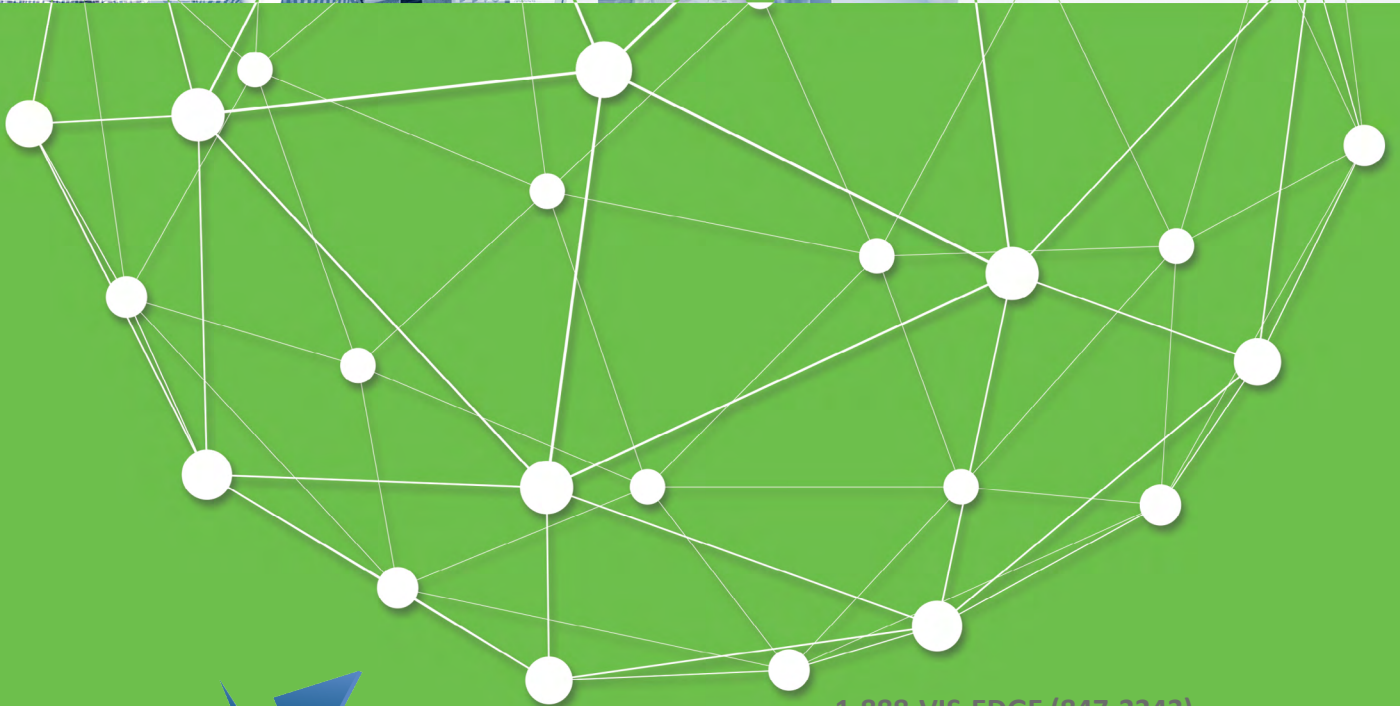




AUGMENTED REALITY A WINNING STRATEGY FOR SERVICE



Visible Edge

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AR

for service
improves
business
results

Transform the way
you create, operate
and service products

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AR

is a catalyst
for change
in the service
industry



74%

of manufacturing
executives identified
service as a significant
driver of future
revenues*

Augmented Reality (AR) will play a pivotal role in the evolution of the industrial enterprise.

Organizations are already leveraging AR technology to gain strategic advantage, enable their field technicians and improve customer satisfaction with turnkey technology—all while utilizing existing data.

In addition to enhancing field service, AR can help facilitate knowledge transfer and development across your service organization. Today, with a large percentage of the workforce nearing retirement age, knowledge transfer is a major concern. Remote assisted guidance applications can deliver veteran technicians down to the shop floor virtually—without the cost and time of physically travelling on-site.

AR also provides a compelling alternative to traditionally printed service documents. Manuals are often outdated, cumbersome to use and expensive to maintain. But with interactive AR guidance and training, your new hires will be more engaged, enjoy a shorter learning curve, and can easily reference step-by-step instructions if they have a question in the field.

By 2020,

25%

of the workforce
will be nearing
retirement



for service business advantages



#1 INCREASE PRODUCTIVITY AND IMPROVE QUALITY

Service organizations are measured on getting work done on time, on budget and correctly the first time. When service technicians can view and interact with digital information in a real-world environment (instead of having to search through paper manuals) they can save valuable time and boost efficiency. In fact, the immersive step-by-step instructions, powered by AR technology are so easy to consume and understand that they can reduce errors and improve first-time fix rates.

#2 IMPROVE KNOWLEDGE TRANSFER

As a large percentage of the workforce rapidly approaches retirement, it's critical for service organizations to transfer expertise to newer employees, while finding ways to help veteran experts work more effectively. With AR, you can build interactive experiences that facilitate knowledge transfer between subject-matter experts to new employees with highly visual, compelling tools. New hires can quickly master highly complex tasks via guided instructions—helping them become field-proficient technicians much more quickly. Experts can use AR collaboration tools to virtually assist coworkers and customers, without the time, cost and stress of traveling on-site.

#3 REDUCE SERVICE COSTS AND IMPROVE PROCESSES

With Augmented Reality, service organizations no longer need to create, print and maintain expensive manuals. With 3D, interactive service instructions available from any smart device (phone, tablet, or eyewear), your technicians will always have access to the latest, most up-to-date 3D, step-by-step service instructions. With AR service instructions, you can be confident your technicians will effectively and accurately service machines the first time, thereby avoiding costly errors, reducing travel costs for repeat visits, and improving your profit margins.

#4 INCREASE SERVICE REVENUE

Every service organization knows that faster, better service means happier customers and a higher likelihood of a contract renewal. Augmented Reality helps service technicians improve customer satisfaction by performing service operations more quickly and accurately – the first time.

Happy customers naturally lead to more upsell opportunities and contract renewals which translate into greater service revenue. Plus, technicians save time by reducing repeat visits, enabling them to schedule more appointments and service other customers more quickly. All of these benefits lead to increased satisfaction, competitive advantage and higher service revenue.

What makes
vuforia® studio™
so special?

Vuforia Studio is the first
AR development tool that
allows you to quickly and
cost-effectively author
and publish scalable
AR experiences without
the requirement of any
programming or previous
AR expertise.

vuforia® studio™ differentiators

EFFICIENT

**Speed of content creation
over other solutions:**

create and publish AR
experiences faster and stay
ahead of the competition

USER FRIENDLY

Ease of use at reduced costs:

an intuitive, drag-and-drop
interface enables you to create
AR experiences without any
programming

COST-EFFECTIVE

**Reuse existing 3D content
and animated sequences:**

leverage and extend
your CAD investment

ACCESSIBLE

**Solve problems collaboratively
from almost anywhere**

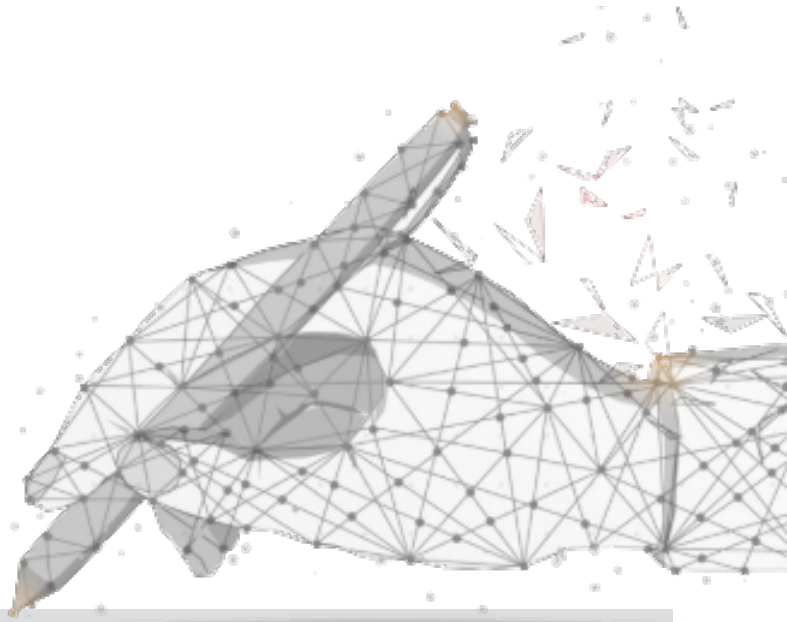
more efficient real-time,
“see what I see”
remote assistance

REVOLUTIONARY

**Scale your efforts through a
single app viewer:**

access and view all of your AR
experiences at any time, from
anywhere on any smart device

Create AR experiences in minutes with vuforia® studio™



Instantly achieve results
that used to require large time
and resource commitments

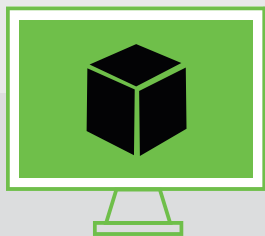
HOW IT WORKS

Create, publish and view AR experiences following these four easy steps:



CREATE ➡

- > Code-free design Interface
- > Import 3D CAD
- > Integrate IoT and biz systems data



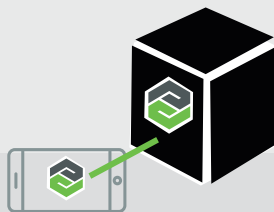
PUBLISH ➡

- > Save & manage all experiences
- > Cloud or on-prem services
- > Access control



SCAN ➡

- > Marker and markerless tracking
- > Scalable
- > Connects 'Thing' to Experience



EXPERIENCE

- > Window to the experience
- > One app = All experiences
- > Free to Download



vuforia® studio™ in action

Discover how Sysmex
maximized instrument uptime
and service efficiency with
ThingWorx Studio.



Optimize Valuable Time
and Resources with
Augmented Reality

THE GOAL

Sysmex's focus is to help their customers meet the challenges of increasing demands and decreasing resources in the clinical diagnostic field. As a supplier of high quality and reliable laboratory testing equipment to laboratories in the healthcare market, Sysmex generates 10% of their revenue through service offerings.

Sysmex's goal was to find a solution that would allow them to provide a higher level of customer service and more effectively utilize key resources. by leveraging AR technologies to allow their field service group repair equipment faster and solve problems correctly the first time.

THE SOLUTION

Sysmex partnered with PTC to utilize augmented reality to train and guide service technicians in the field. They implemented Vuforia Studio, a single platform that enabled them to leverage the 3D models from existing CAD packages that they already had to create compelling AR experiences.

Sysmex uses Vuforia to create step-by-step guided work instructions with augmented reality experiences. Unlike paper manuals, with AR experiences built in Vuforia Studio, technicians have access to the most up-to-date information at their fingertips—in real time.

THE RESULTS

Vuforia Studio visual drag-and-drop authoring environment made it easy for Sysmex to reuse its existing CAD data to create highly immersive AR experiences—without the need to write code.

Using the AR experiences they created with Vuforia Studio, Sysmex improved equipment uptime and utilization of valuable resources.

AR improved users' understanding of complex medical equipment and enabled them to fix problems faster, reducing their mean time to repair (MTTR) and increasing their first-time fix rate.

Reinvent service with vuforia® chalk™

Vuforia Chalk's AR collaboration combines video chat with annotation-sharing tools. With Chalk, you and a partner can virtually mark-up objects and environments in 3D and real time. Easy to deploy and intuitive to use, Chalk is reinventing remote service and collaboration.

vuforia® chalk™ differentiators

PRECISION

Eliminate costly communication gaps.

When pairs of Chalk partners accurately annotate a shared virtual environment, it's easier to highlight details and guide multi-step solutions. Chalk erases the margin of error—and potentially costly mistakes.

SPEED

Get it done right. Now.

Boost employee and customer satisfaction, by empowering your people with “over the shoulder” field support to complete work faster and better.

GROWTH

Scale up your expertise.

Chalk reduces the travel burden on your in-house experts—and gives frontline workers access to experienced service gurus in a fresh, new way.

INTUITIVE

No training required.

When you need troubleshooting or expert guidance for situations not covered in training or service manuals, Chalk is literally as easy as drawing on a chalkboard.

Deliver AR-enhanced service with vuforia® chalk™



Meet and solve problems

anytime, anywhere—in an augmented,
shared-screen experience

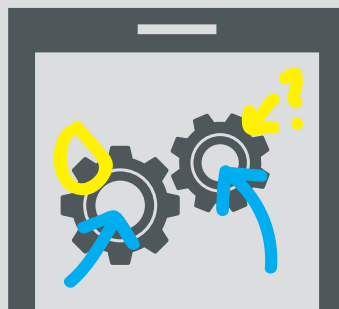
HOW IT WORKS

Two users on a shared Chalk network can collaborate via their touchscreen devices:



Capture

Pairs of Chalk users capture and transmit real-time video of their environment via their smart devices.



Annotate

Draw virtual **chalk marks** that intelligently anchor to objects in 3D. Chalk marks remain tethered as you move through your environment, or pause the app.



Share

Users enjoy a shared view and an engaging new way to deliver expert service, share feedback, and collaboratively solve problems.



PASSIONATE ABOUT SERVICE INNOVATION IS IN OUR DNA

Augmented reality is transforming service and driving unprecedented value. From improving efficiency and knowledge transfer to hitting revenue targets & increasing profit margins- AR will change the way you do business.

Don't get left behind.

Discover for yourself how Augmented Reality can transform your business.



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Contact an expert
at PTC to learn more
about the power of
AR for Service

Register for a free trial
of Vuforia Studio and
start creating AR
experiences for your
organization!

Sign up for a Vuforia
Chalk evaluation and
provision out Chalk to
up to 50 service
professionals today.

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