

VISUAL DECISION MAKING (PRODUCT REVIEW APP PREVIEW)

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November 15th, 2016



PTC Forum Europe
Stuttgart, Germany

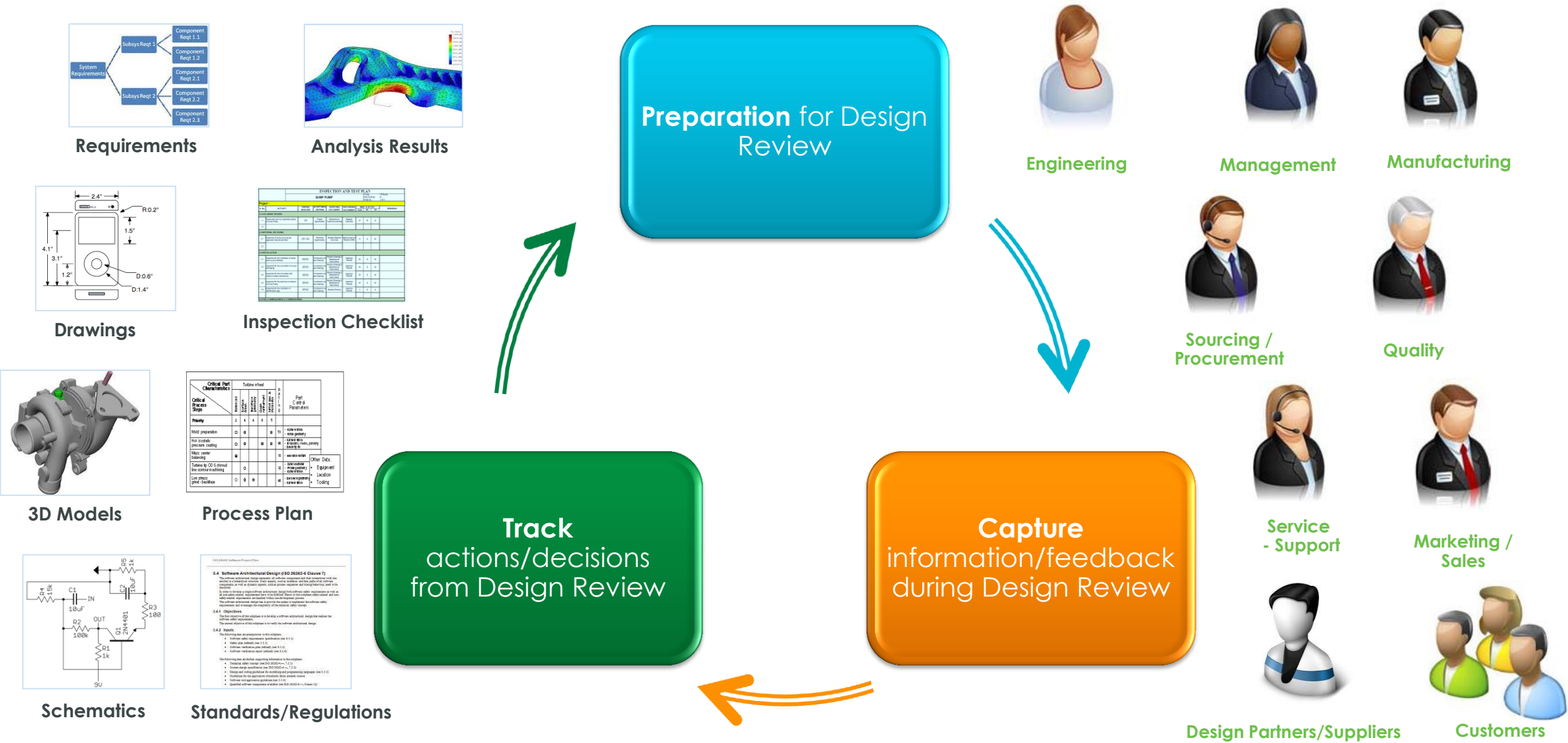
AGENDA

1. Design Review Challenges
2. Leveraging AR/VR in Design Reviews
3. Product Review App Overview & Demo

1

DESIGN REVIEW CHALLENGES

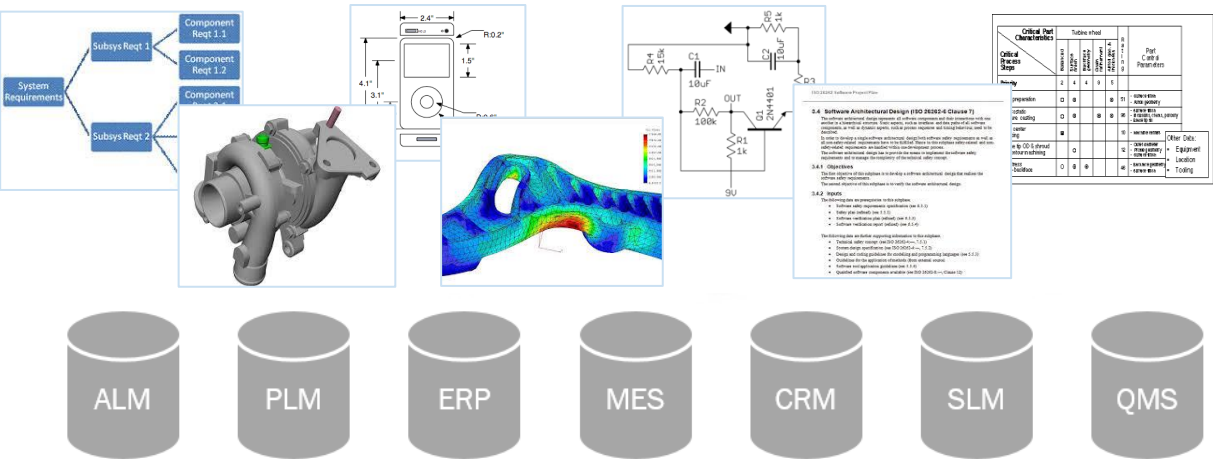
TYPICAL ENGINEERING DESIGN REVIEW PROCESS...



CHALLENGES WITH TRADITIONAL DESIGN REVIEWS



TIME CONSUMING PREPARATION



GLOBALY DISTRIBUTED PARTICIPANTS



LACK OF TRACEABILITY



SIGNIFICANT COSTS



2

LEVERAGING AR/VR IN DESIGN REVIEWS



Augmented Reality (AR)



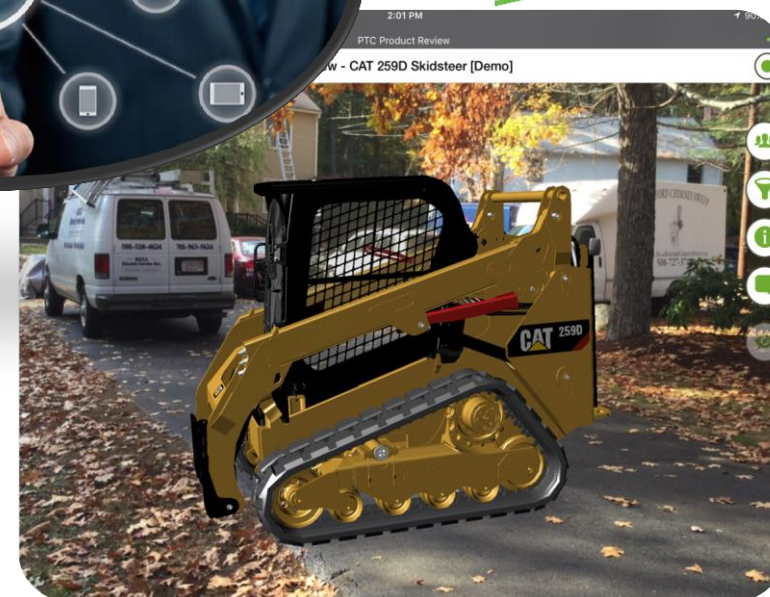
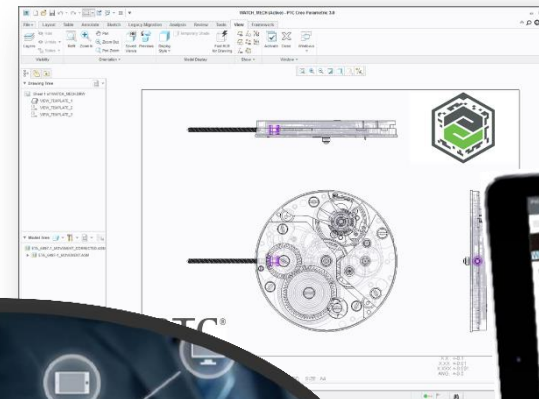
Virtual Reality (VR)



LEVERAGING AR/VR IN DESIGN REVIEWS

Benefits

- ✓ Accelerated Digital Prototyping
- ✓ Clear Communication of design intent
- ✓ Interaction with product in “physical world”
- ✓ Multi-User Collaboration
- ✓ Data / IP Security



AR/VR AND THE DIGITAL ENGINEERING JOURNEY

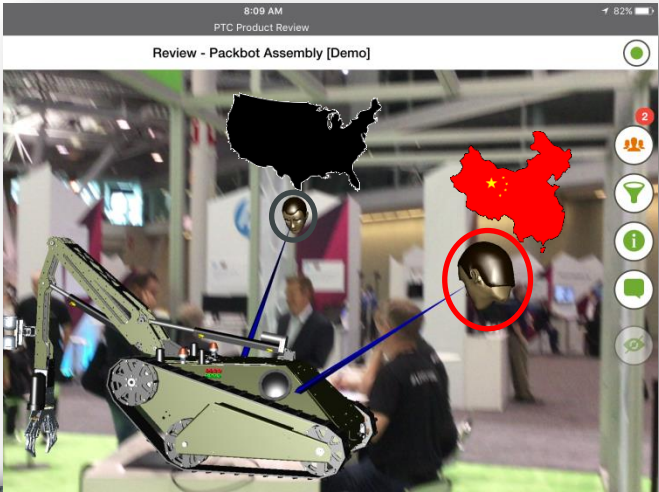
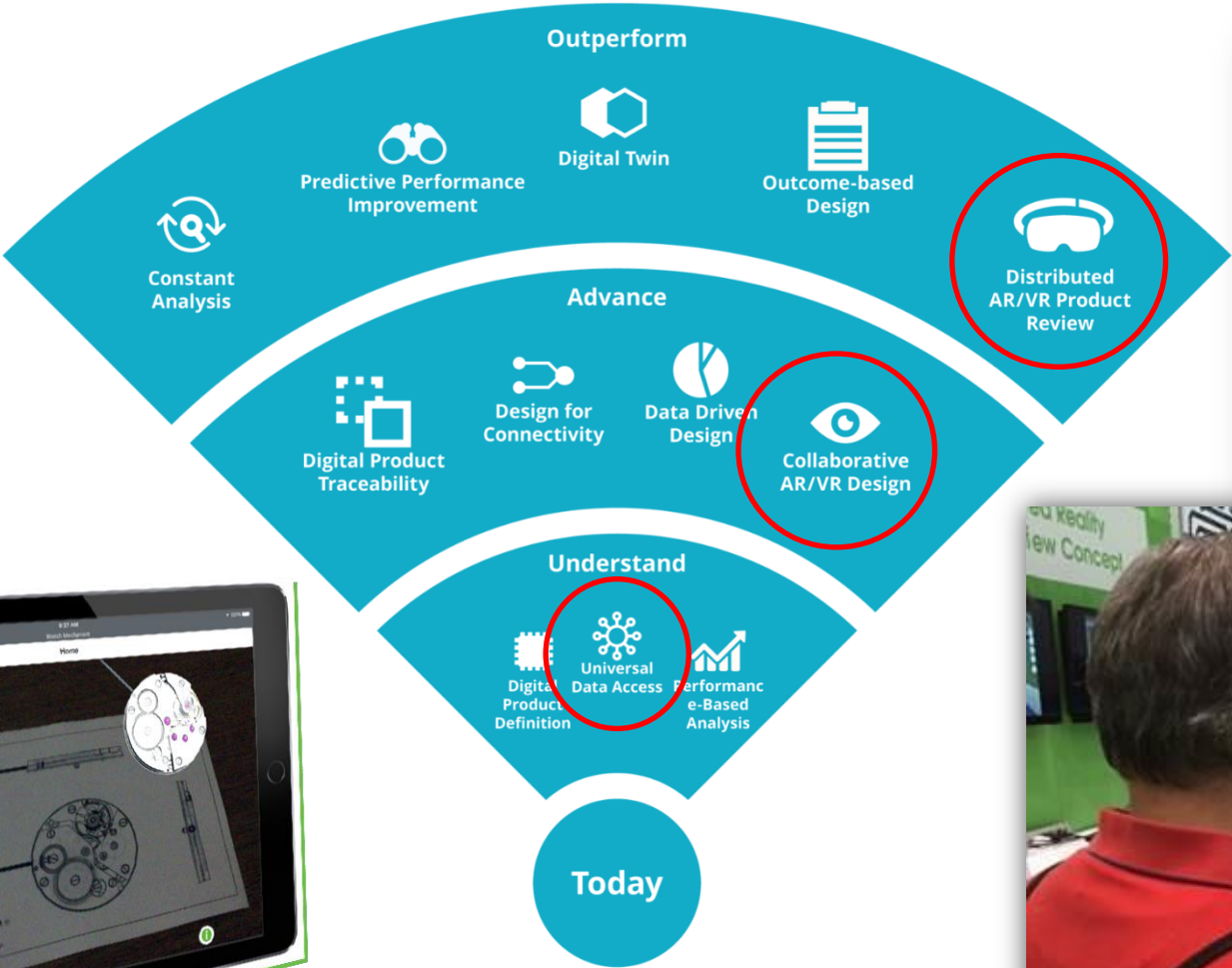
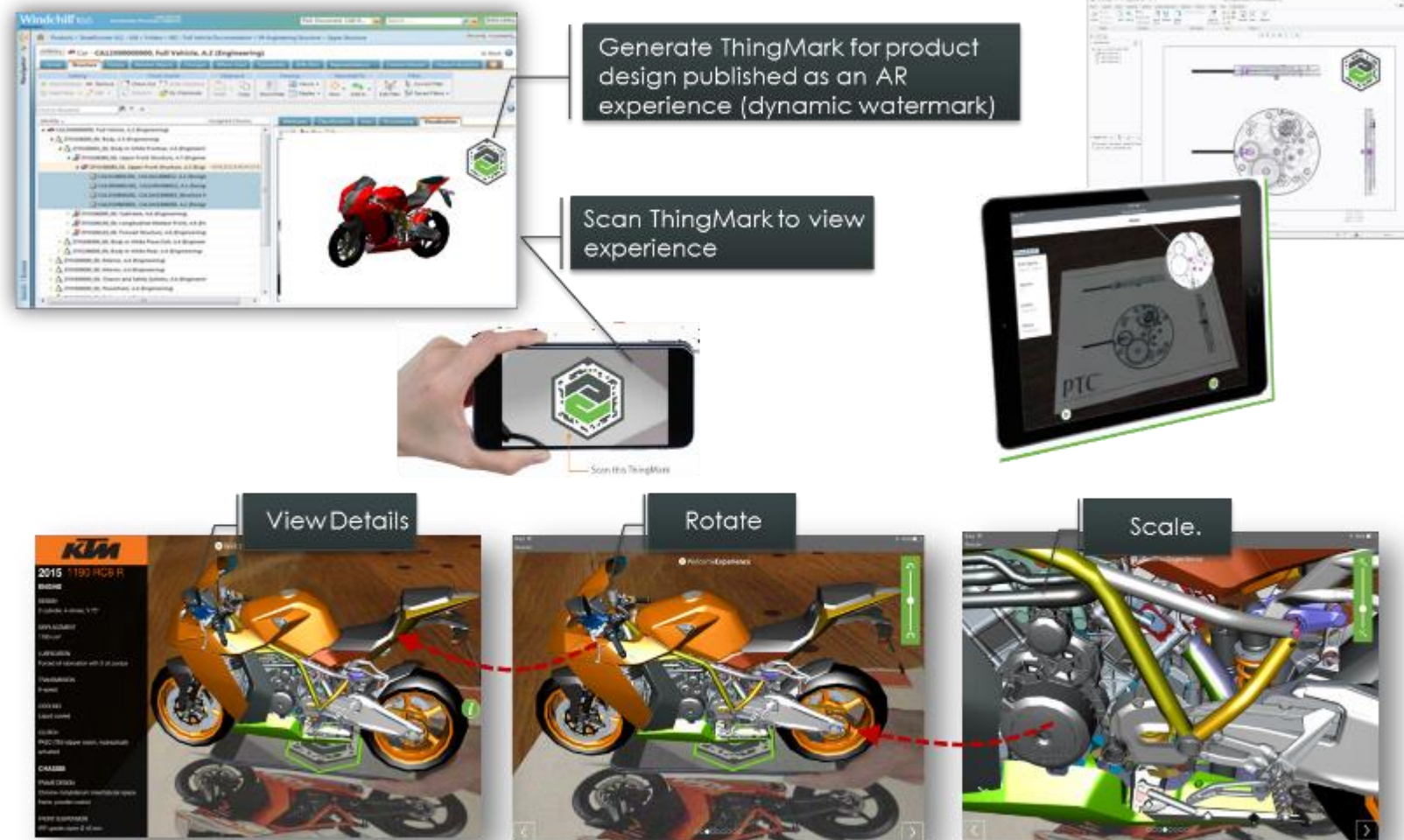


TABLE TOP/DESKTOP AR REVIEW



CAPABILITIES

- Publish CAD designs instantly to AR experiences directly from CAD and/or PLM
- Generate 'ThingMark' on demand
- Basic Interaction with AR Experiences
 - Scale
 - Rotate
 - View details (Name, Number, Life cycle, Version, ...)



BENEFITS

Better visualize designs by bringing them to life in AR

Communicate WIP product designs to solicit early and frequent feedback

Collaborate on product designs securely without sharing any IP

Review virtual prototypes frequently during the design process

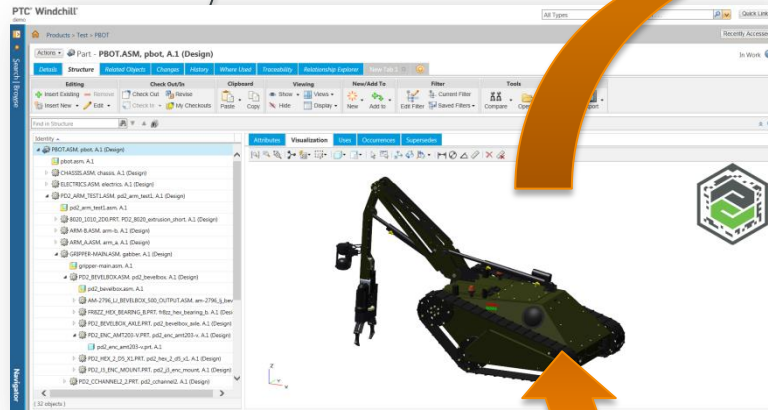
COLLABORATIVE AR/VR DESIGN



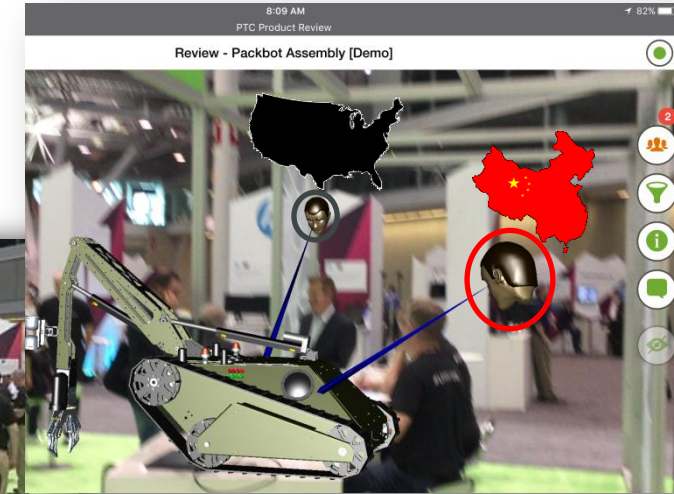
CAPABILITIES

- Leveraging data from multiple sources with 3D/AR/VR modes
- Single user or collaborative team review experiences
- Perform life sized or scaled product reviews on any device and/or platform
- Capture feedback using text, video and audio
- Integrate with issue tracking and resolution for closed loop change management

Prepare product review 3D/AR/VR experiences leveraging data from different sources – CAD, PLM, etc.



Capture feedback with text, audio or video annotations and link to actions, tasks, etc. that can be tracked and executed on.



Perform product reviews with AR/VR experiences either individually or with geographically distributed design teams, partners and/or customers



BENEFITS

Real time, immersive visual decision making

Foster innovation in a virtual team collaborative environment

Shorten time to market with reduced virtual prototypes

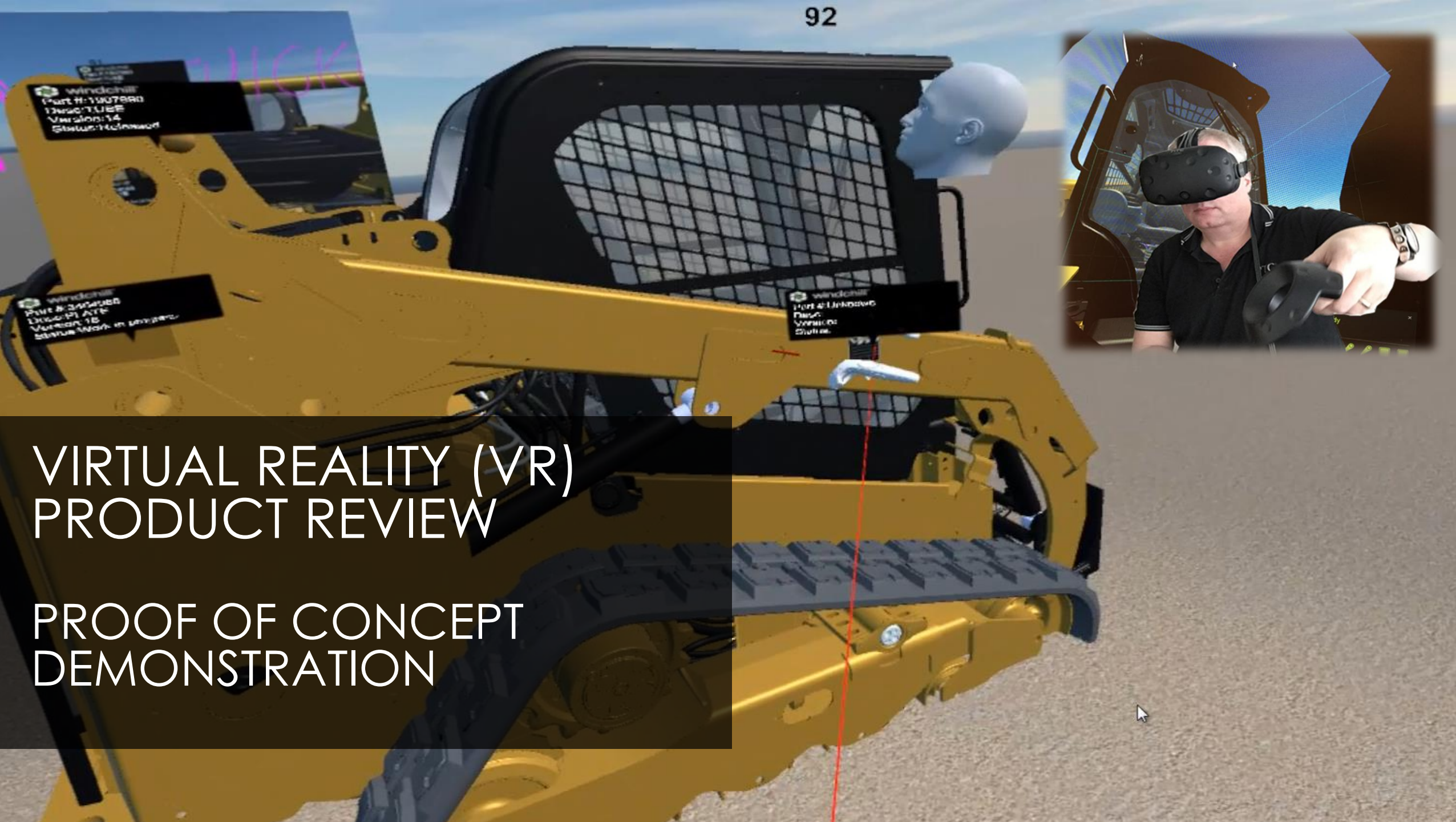
Revenue streams with AR/VR previews of new /updated products

COLLABORATIVE AUGMENTED REALITY (AR) DESIGN REVIEW

PROOF OF CONCEPT DEMONSTRATION

Part 0000002069, 259D Skidsteer, C.8
(Design)
Created By: mlobo
Reduce the height of the seat.





VIRTUAL REALITY (VR)
PRODUCT REVIEW

PROOF OF CONCEPT
DEMONSTRATION

WOULD YOU LIKE TO GET ENGAGED?

CALL TO ACTION

- Would this technology be valuable to your company/team?
- What challenges in your organization could this technology help address?
- Are there additional capabilities or data not seen in this demo that you view as critical to a design review?
- Would you be interested in collaborating with PTC as we develop this solution?

CONTACT US

Send an email to **Mark Lobo** (mlobo@ptc.com) with your contact information.

PTC IS UNIQUELY POSITIONED TO HELP YOU SUCCEED



30 year heritage in the
DIGITAL definition,
software, and lifecycle
management of things



\$700M technology
investment connects to
the **PHYSICAL** world and
enables new experiences



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