



AUGMENTED REALITY AN INDUSTRY PERSPECTIVE

Patrick J. Ryan

Index AR Solutions, Manager, AR Engineering

June 8, 2016

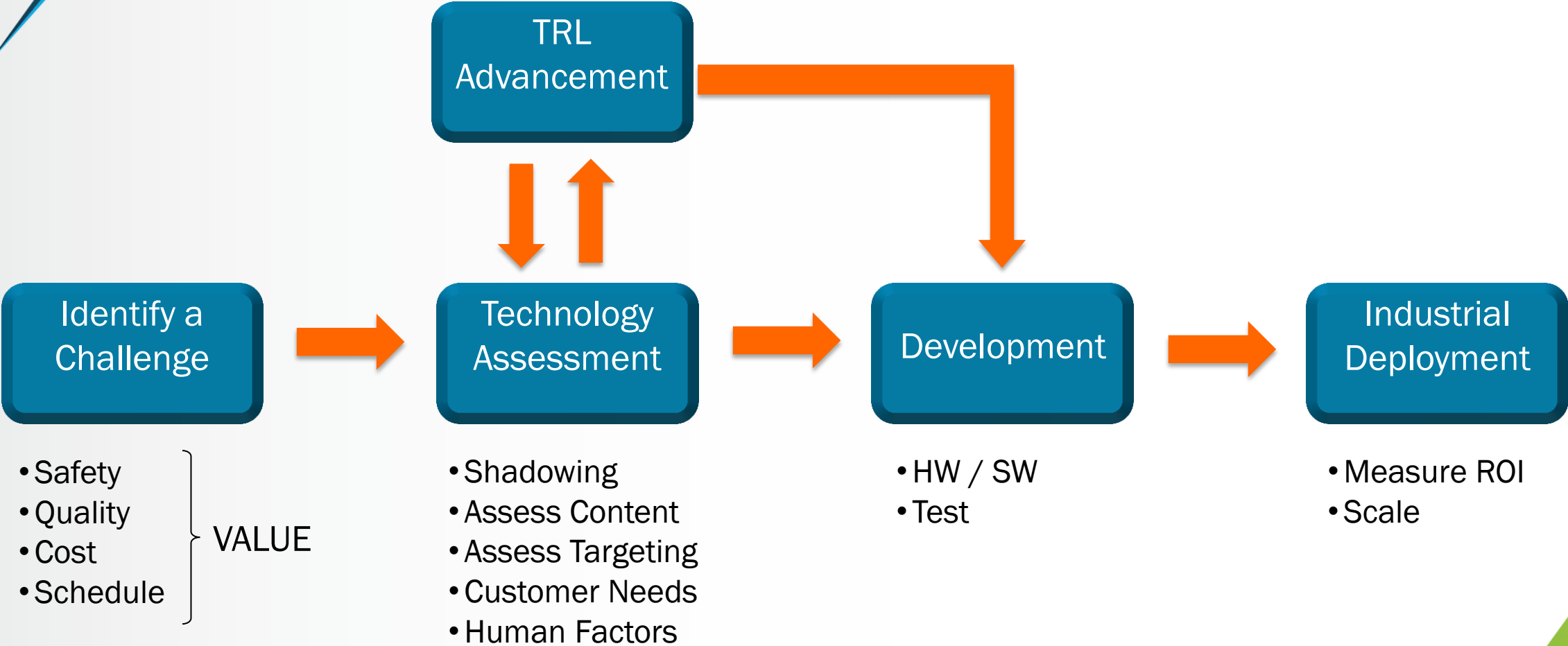
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 @index_ar

 @patrick_ryan98



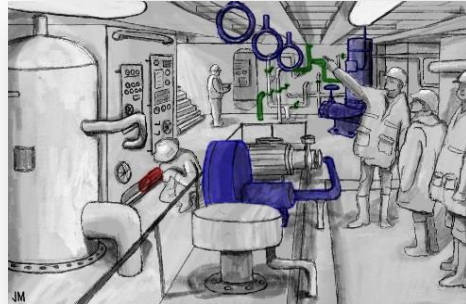
Genesis of an AR Use Case



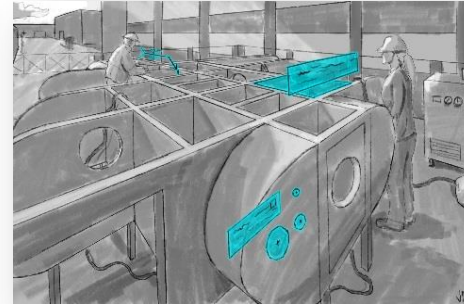
Use Case Classification Scheme

Technical Readiness ↑

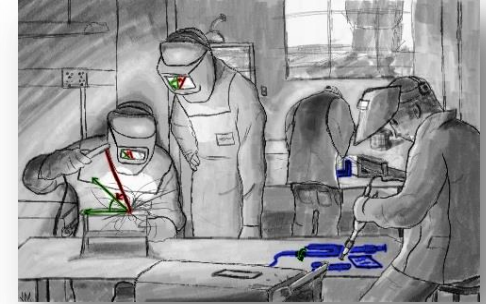
Inspection / QA



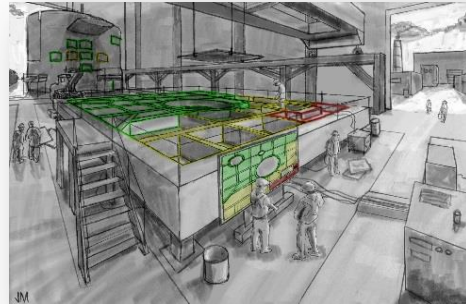
Work Instruction (Micro)



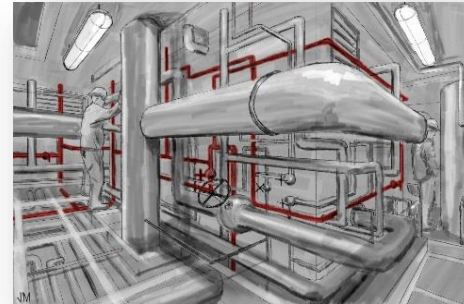
Training



Workflow Management (Macro)



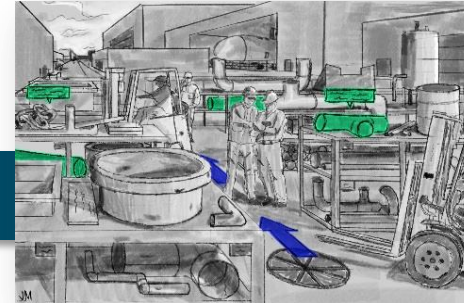
Operation (SA)



Safety



Logistics



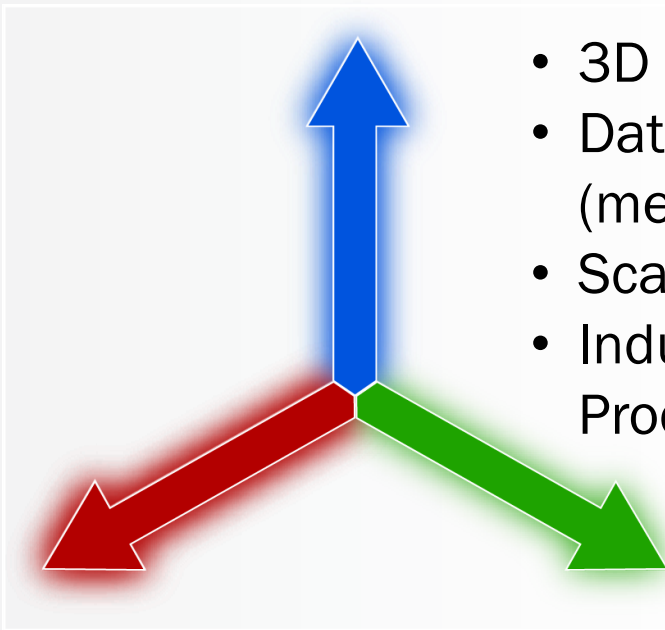
Value in Many Situations; Solves Many Problems

3 Axes...

▶ **Product Line**

▶ **Product Life Cycle**

▶ **Trade Skill**

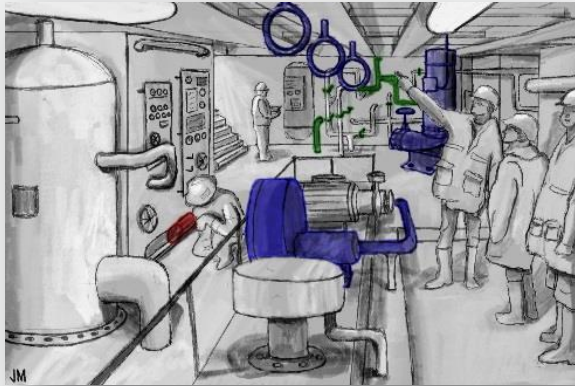


- 3D CAD
- Data Collation (meta data)
- Scanning
- Industrial Processes

- New Construction
- Operation
- Maintenance
- Overhaul
- Inactivation

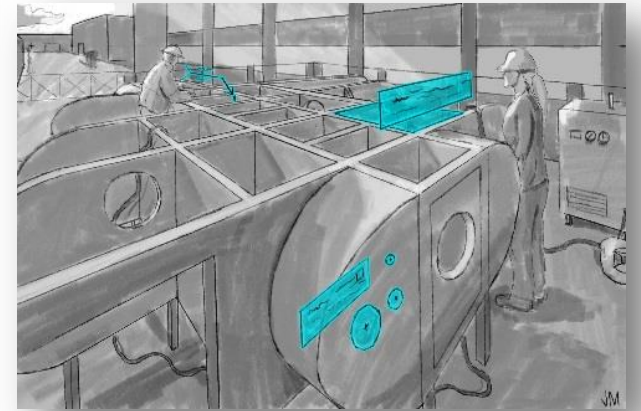
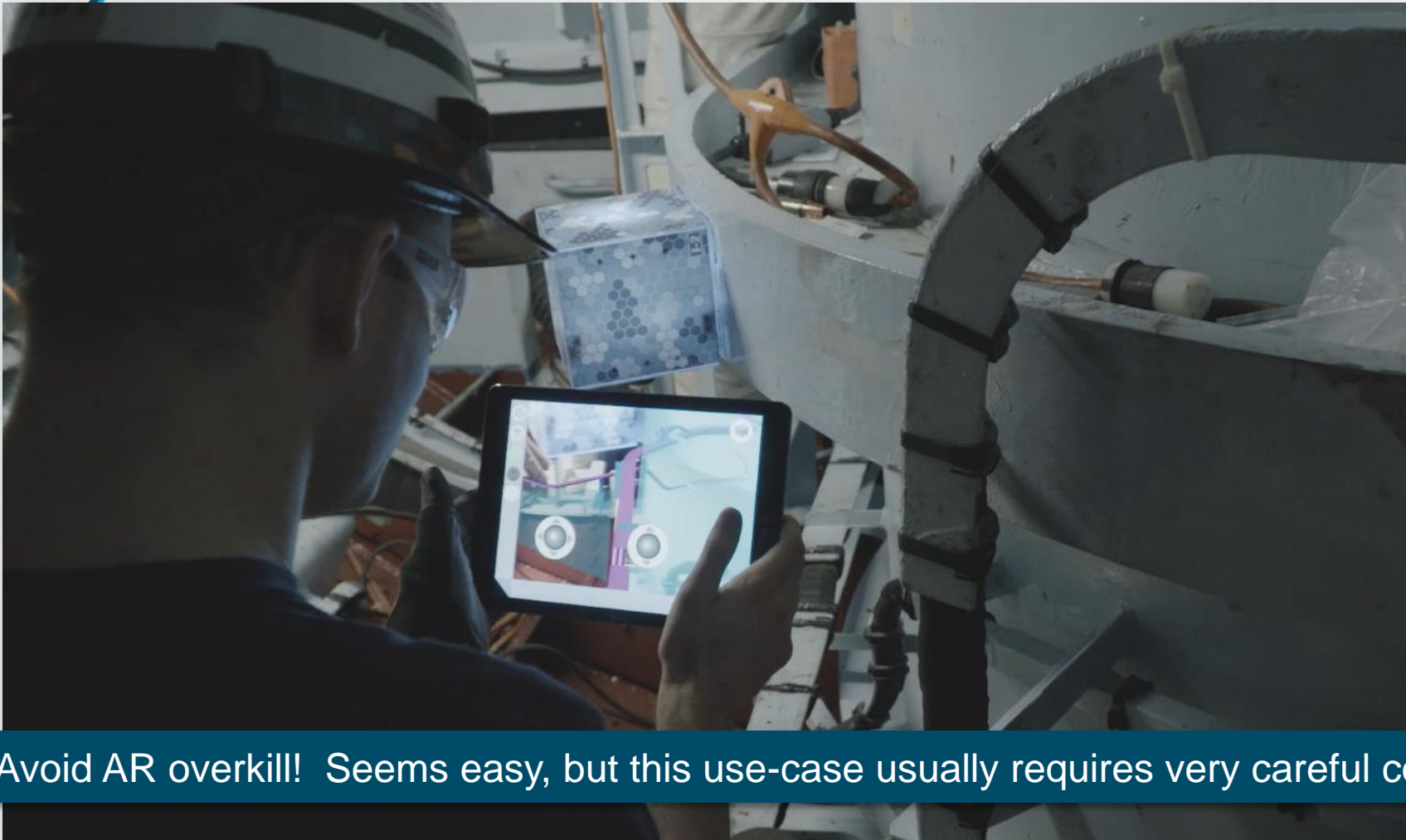
- Electrician
- Pipe Fitter
- Machinist
- Welder
- Painter
- Ship Fitter
- Inspector
- Rigging
- Etc...

Inspection



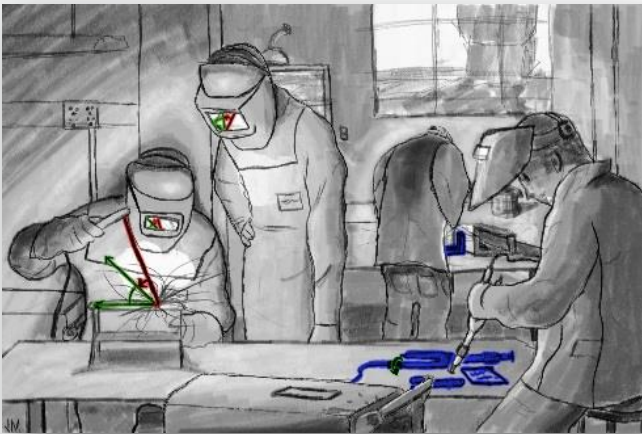
Spatial evaluations are well-suited to successful AR deployments

Work Instructions



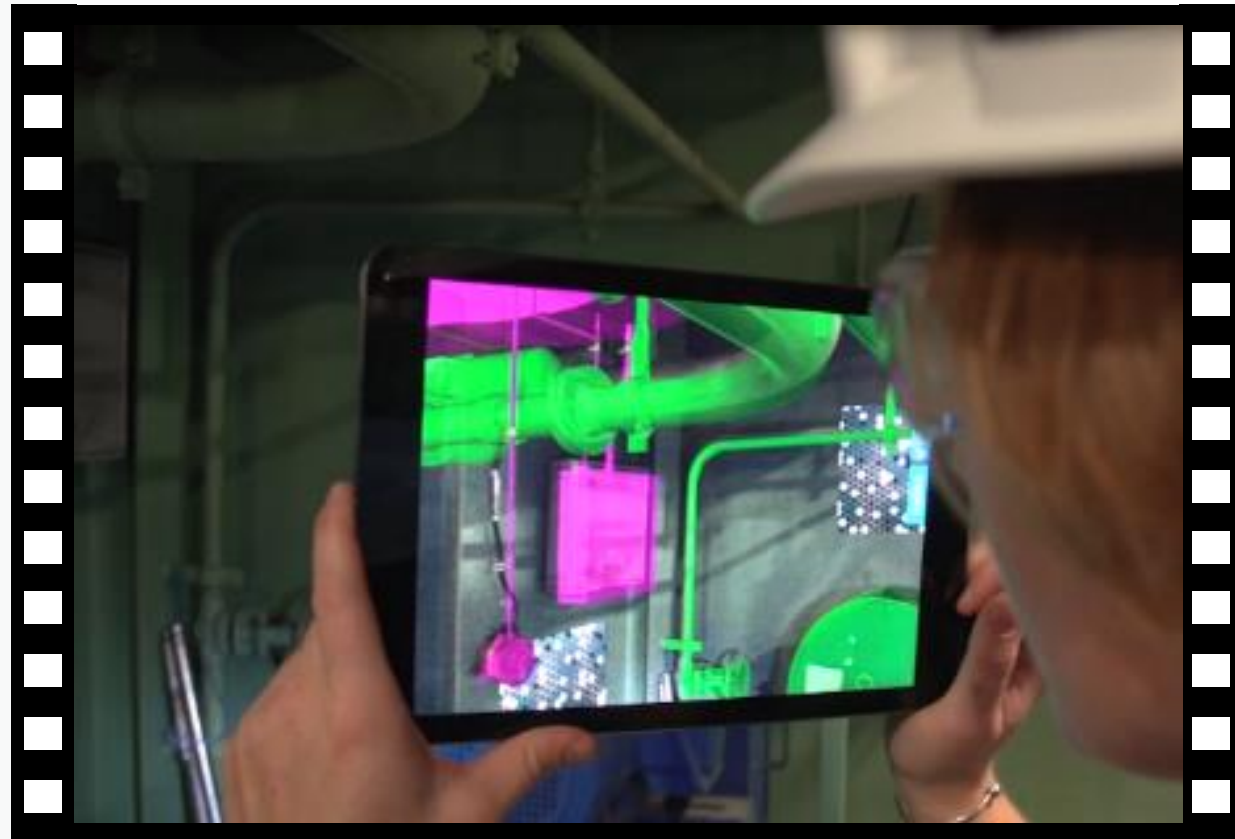
Avoid AR overkill! Seems easy, but this use-case usually requires very careful consideration.

Training

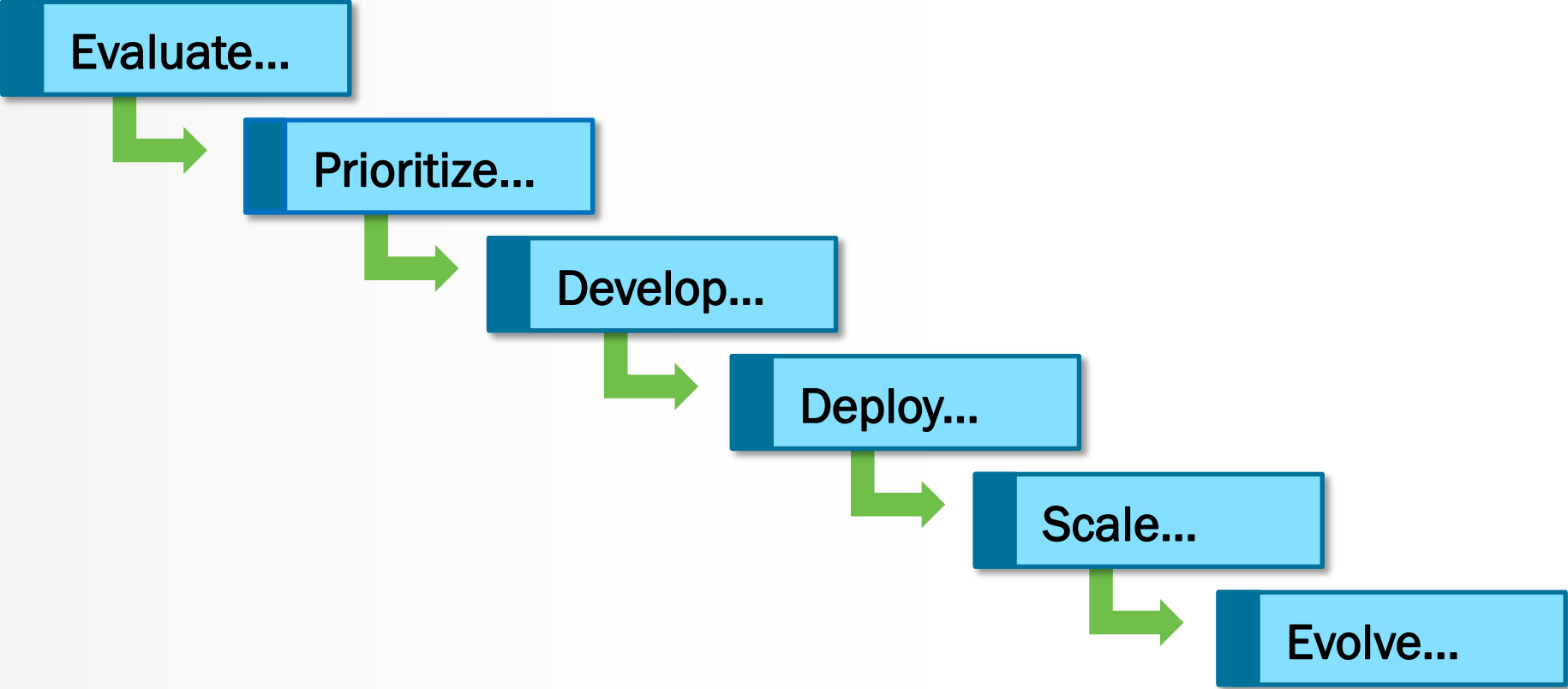


Practicals. OJT. Refreshers. Don't compete AR against VR; there are times for each.

Video



Recap...





AUGMENTED REALITY AN INDUSTRY PERSPECTIVE

Dan Arczynski

Index AR Solutions, President and CEO

June 8, 2016

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Index AR Solutions Vision





High Impact Applications

	Top Line			Bottom Line				
Industry Sectors	Marketing, Sales & Comms	Customer Value Proposition	Safety	Manufacturing & Construction	Inspection	Logistics	Training	Operations & Maintenance
Basic Materials	X	X	X	X	X	X	X	X
Conglomerates	X	X	X	X	X	X	X	X
Consumer Goods	X	X	X			X	X	X
Financial	X							
Healthcare	X	X	X			X	X	X
Industrial Goods	X	X	X	X	X	X	X	X
Services	X	X	X			X	X	X
Technology	X	X				X	X	X
Utilities	X	X	X	X	X	X	X	X



Company Enablers and Obstacles

Enablers

- AR is “Ready Now”
- AR is “Easy to Use”
- Company Data “In Place”
- “Ubiquitous” Smart Mobile Devices
- Emergence of AR Industry
”Trailblazers”

Obstacles

- AR is “Not Well Understood”
- AR is “Not Easy to Create”
- ”Short Term” View
- “Wait and See” Attitude for
the right hardware
- Trailblazers are “reluctant to
share” results



The Six P's

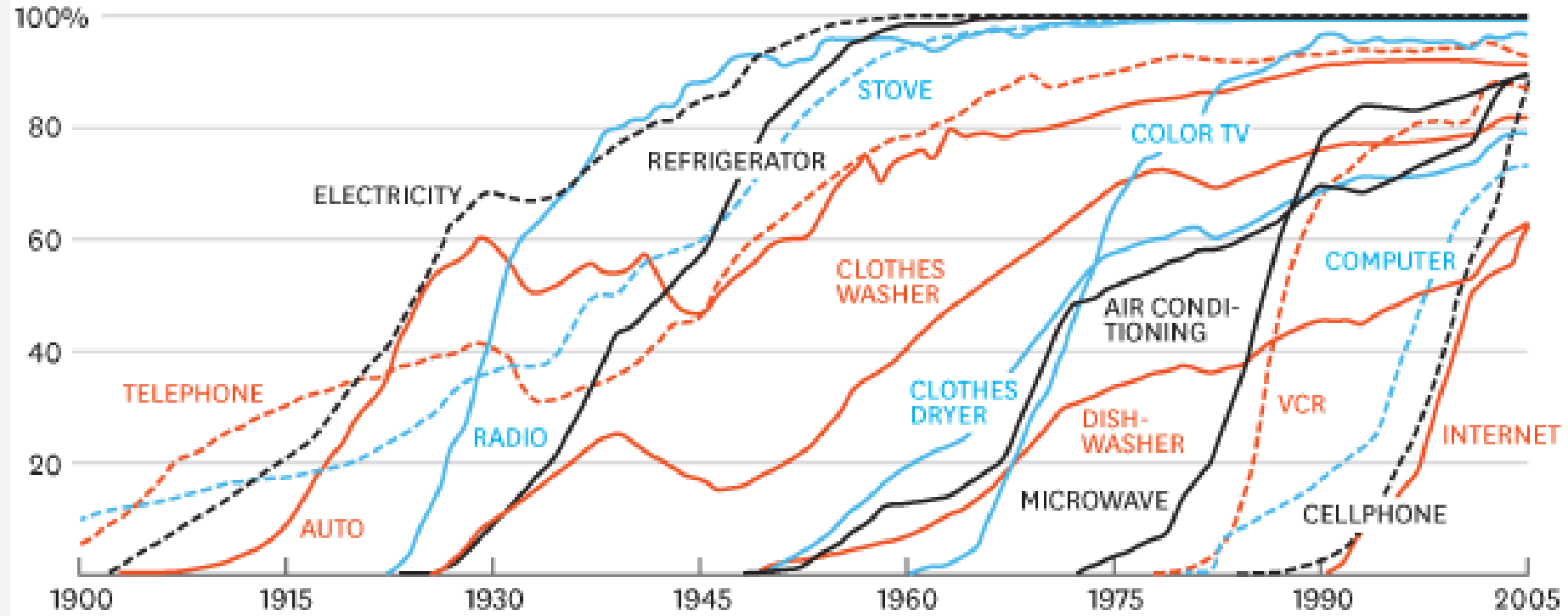
	Description
Prototype	An AR sample that uses current client data and product. Timeframe is 4-6 weeks.
Proof of Concept	Compare a current client process to a new AR-based process and demonstrate its feasibility and value. Timeframe is 6-8 weeks.
Pilot	A small-scale effort and study to determine and evaluate key client performance factors and metrics. Timeframe is 1-2 months.
Project	A collaborative effort creating a targeted AR solution for client processes or products with explicit success criteria, such as showcasing AR, ROI, etc. Timeframe is 2-5 months.
Program	A rollout of AR solutions across a broad range of processes or products. Meaningful impact on revenue, cost, schedule, quality and safety. Timeframe is 1-2 years.
Production	A full-scale rollout across the company. Significant impact on the top line, bottom line, balance sheet and shareholder value. Timeframe is 2-4 years.



Historical Adoption “S” Curves

CONSUMPTION SPREADS FASTER TODAY

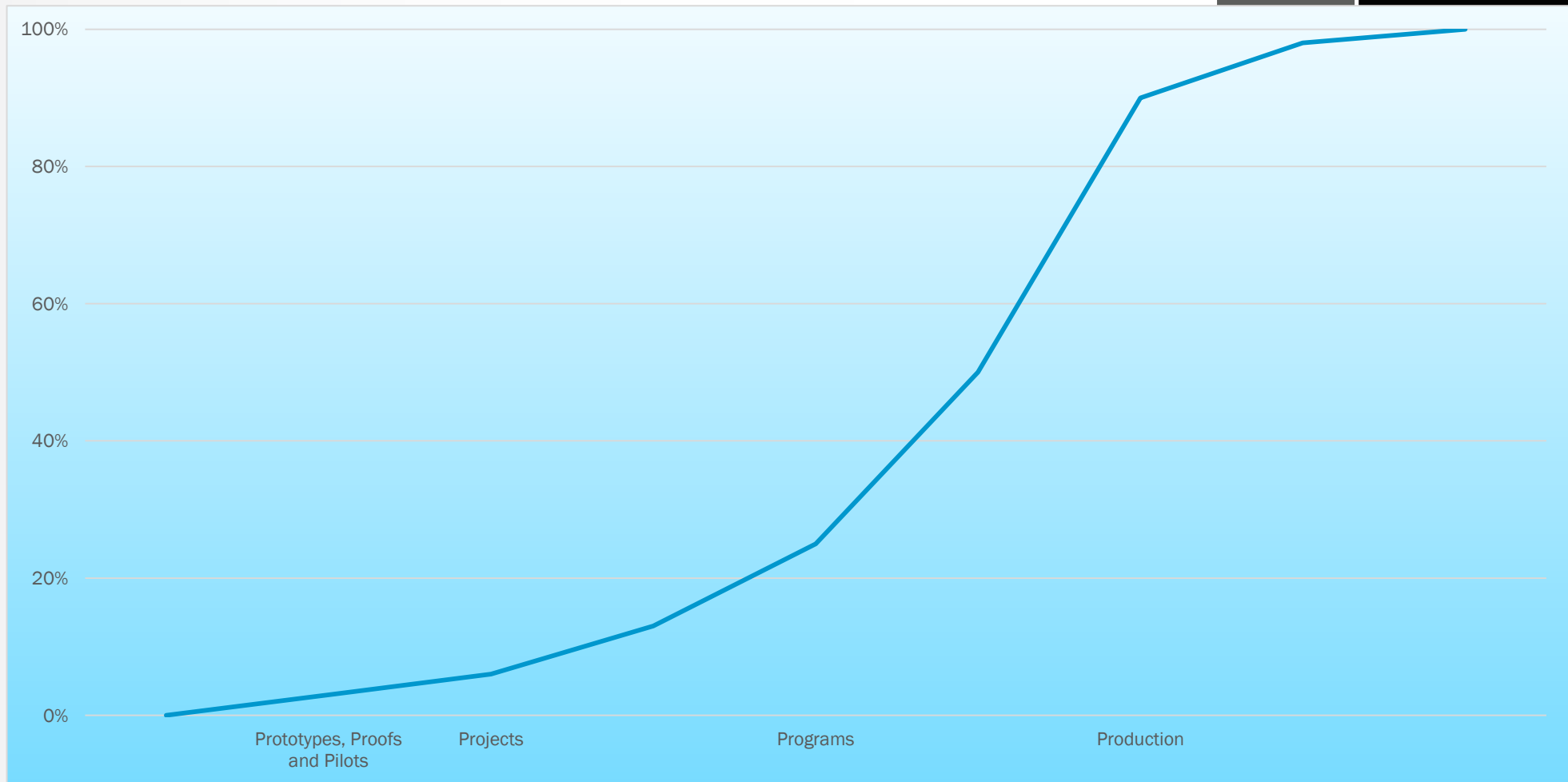
PERCENT OF U.S. HOUSEHOLDS



SOURCE MICHAEL FELTON, THE NEW YORK TIMES

HBR.ORG

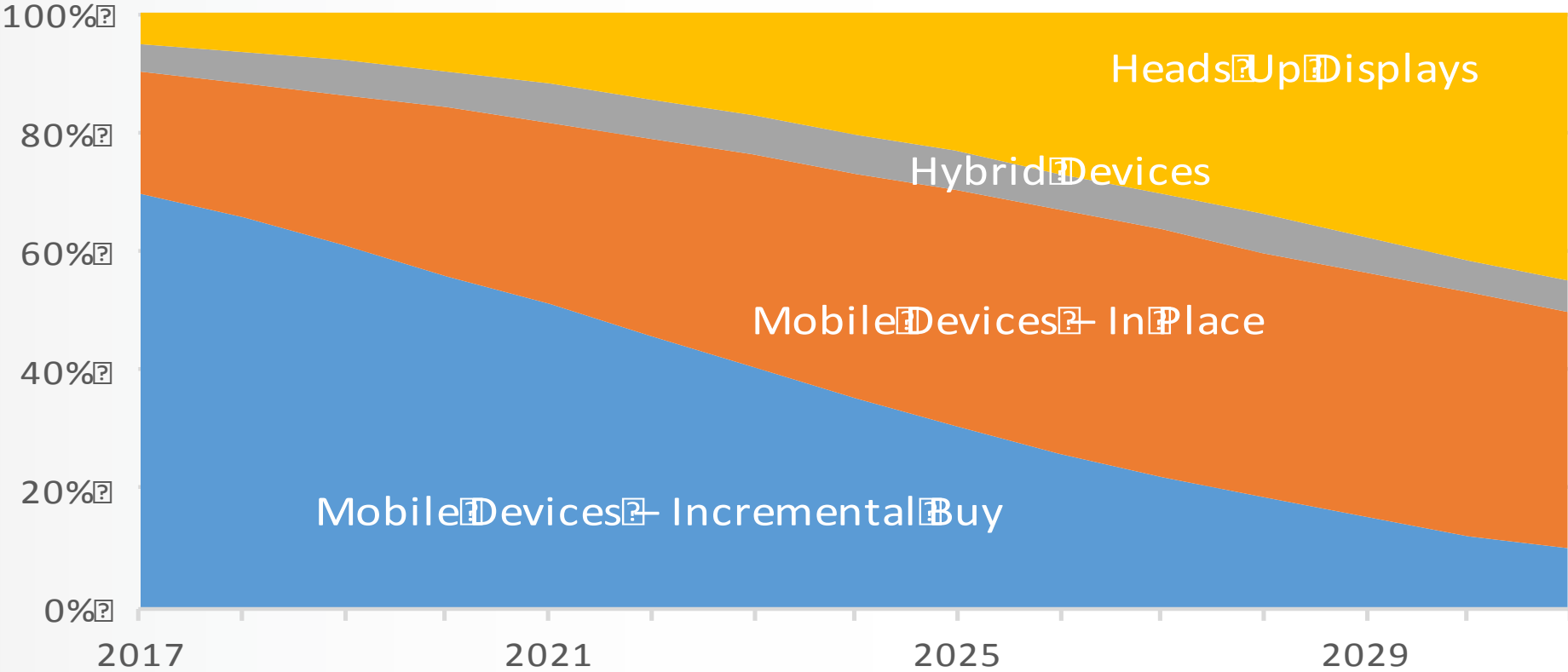
Expected AR Adoption “S” Curve





Mix of AR Hardware

Change in Hardware Mix, % of Total AR Devices





Take Always

AR is “Ready Now” and “Easy to Use”

Every Industry Segment Will See an Impact

First Movers Will Gain a Competitive Advantage

Waiting for Hardware is a Mistake



Who Has the First Question?



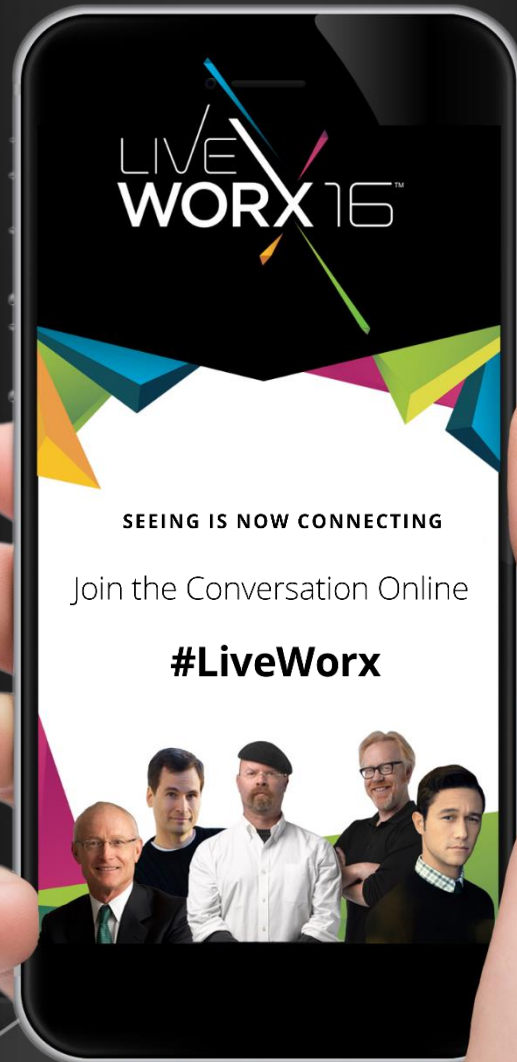
The image features several colorful geometric shapes, primarily triangles and lines, scattered across the white background. A large, multi-colored triangular shape is prominent on the right side, composed of various shades of blue, green, yellow, orange, pink, and purple. Several thin, colored lines (blue, pink, green, orange) radiate from the center towards the edges. The text 'LIVE WORX 16' is centered, with 'LIVE' in a thin, outlined font and 'WORX 16' in a bold, solid black font. A small 'TM' trademark symbol is positioned to the upper right of the '6'.

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TAKE A FRESH LOOK AT THINGS

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