

# Aircraft Maintenance Training For The Next Generation

Modern Training Concepts



# Agenda

Current state of play

Opportunities & limitations

Industry examples

Takeaways



# Recruiting, qualification and retention is more crucial than ever for the aviation aftermarket

- Aging workforce, dynamic operations, employee fluctuation
- Predicted shortfall of > 40.000 skilled aircraft mechanics by the end of this decade in North-America\*
- Valuable skills and experience need to be replaced
- Millennials and moreover Generation Z will be the focus to close the gap



\* Oliver Wyman: "Not Enough Mechanics" ; Risk Journal Volume 7



Do we need **a new approach**  
for a highly skilled and versatile  
**future generation** of aircraft  
technicians?



# Generation Z expect technology to play a vital role during their learning and qualification path

**> 2 billion**

Gen Z  
globally

**30 %**

of US workforce  
will be Gen Z by 2023

**1<sup>st</sup>  
True Digital  
Natives**

**45%**

of Gen Z teenagers are online  
“almost constantly”

**87 %**

play video  
games weekly

**43%**

expect  
self-directed learning

Generation Z: generally defined as the people born between 1995 and 2010

Source: [financesonline.com/generation-z-statistics](https://www.financesonline.com/generation-z-statistics); US Bureau of Labour Statistics; Pew Research Center 2019; Forbes.com

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# Organizations are urged to develop training concepts that take into account new learning behavior...



## Enable Mobile Accessibility

- Learning Management System
- Online Course Material
- Tools



## Provide Video Solutions

- Video Tutorials
- Learning Nuggets
- Micro-Teaching



## Invest in Simulations

- Maintenance Simulators
- VR / AR Solutions
- Enable Experience



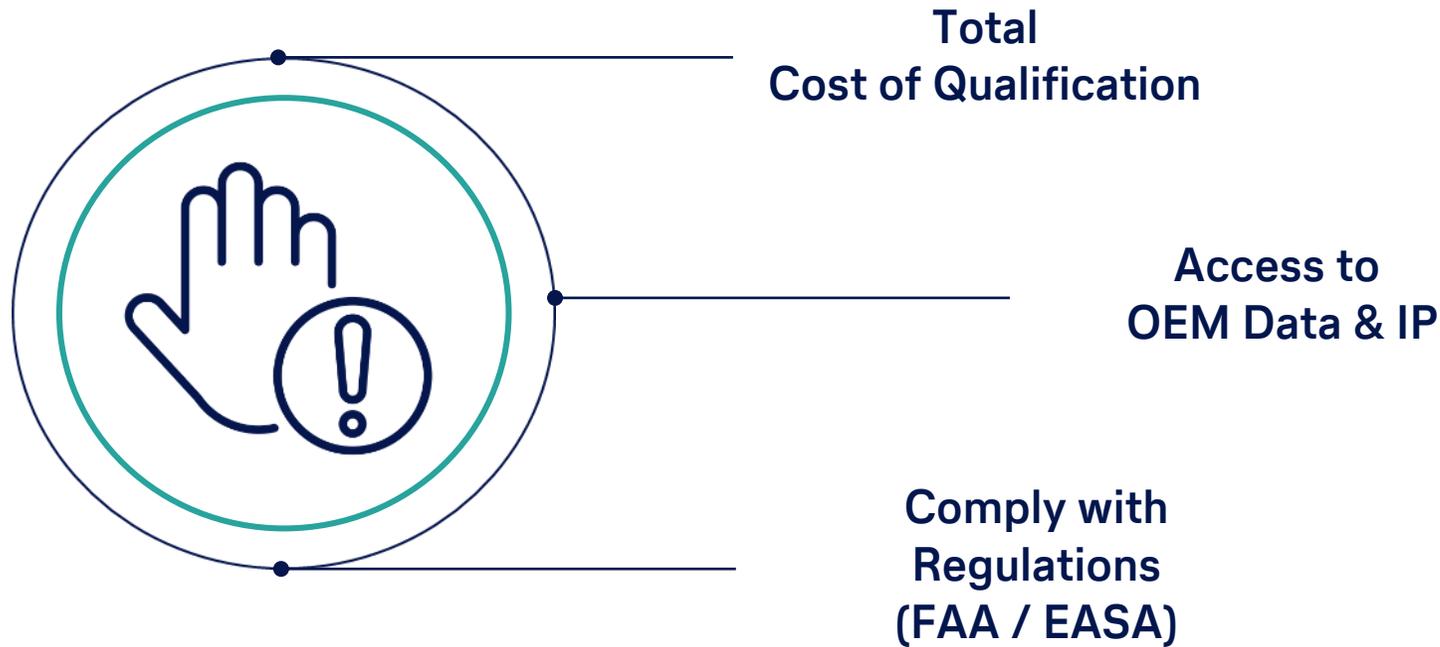
## Collaborative Learning

- Online Distance Learning
- Tutorials
- Working Groups

Permanent tutoring is still key to ensure build up of competences and knowledge transfer



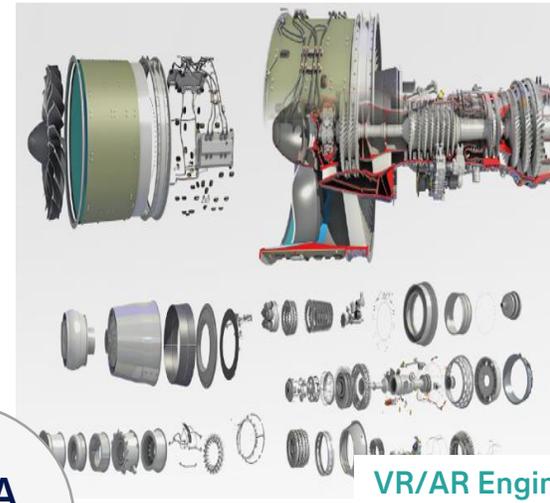
# However, limitations in designing and implementing digital training concepts need to be taken into account



# Maintenance training should be based on a modern media suite focused on fulfilling learning objectives



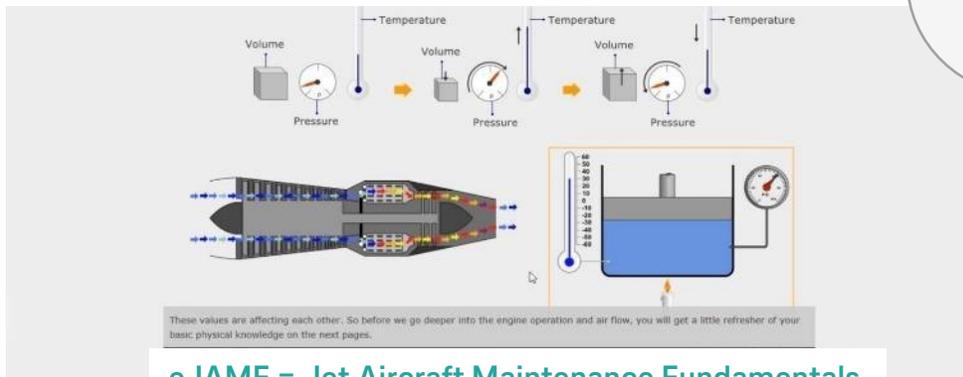
360° Viewers A/C & Engines



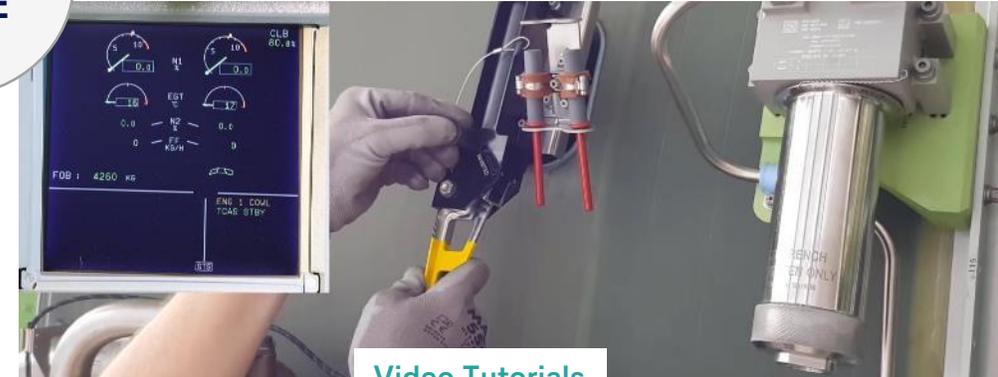
VR/AR Engine Basics



MEDIA SUITE



eJAMF = Jet Aircraft Maintenance Fundamentals



Video Tutorials



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# All applications provide tangible benefits for the trainees and the instructor – delivering high training quality

Example 360° Viewer

- Reasonable cost of production
- Reducing aircraft availability **by more than 5 days**
- Full online and offline application – enabling tutoring and self-paced learning
- Embedded video nuggets for system and process descriptions
- Provides gamification opportunities for trainees
- Officially approved by the regulator



# Qualifying and retaining talents for aircraft maintenance will require that we adopt steadily our training methods

- **YES**, we do need a new approach in training methods
- Keep the learning objectives in the focus
- Invest in simulations at **reasonable total cost of qualification**
- Immersive technology becomes cheaper and better (e.g. haptics) – new opportunities arise
- **Foster digital literacy** within your organization





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