APATS 2018 – Innovative Training for this Generation of Technicians

August 28, 2018 - SIN
My Journey

- Nova Scotia, Canada to Singapore
The Journey Before Innovation

- Joshua Slocum
Maintenance Training Today

- Highly regulated
- Standardized
  - Lecture based
  - CBT
  - On the Job
The Maintenance Paradigm

- Cost center
- Necessary burden
- Check the boxes
- Innovation not a high priority
Adult Learning – Kolb Learning Model

- Do these new methods fit with Adult Learning?

Experience -> Application -> Reflection -> Generalization
Virtual Reality - Beyond Entertainment

• How do we move Maintenance Training to the next level utilizing Virtual and Augmented Reality?

  – Champions
  – Stakeholders
  – Ownership
  – Funding
  – Acceptance
  – Analytics
  – ROI
Virtual Reality - Beyond Entertainment

• Applications
  – New technology
  – Start small
  – Partnerships
  – Build on the library
Virtual Reality Applications

- Maintenance example
Virtual Reality Applications

- **Tasks**
  - Walk arounds
  - Classroom Gen Fam
  - Servicing Procedures
  - Towing
  - Ground runs
  - L3 Practical Training
  - Problem tasks

- **Benefits**
  - Immersion -enhanced experience
  - Mobile
  - Intuitive
  - Practice/review
  - Eliminates risk
  - Reduction of classroom / practical footprint
  - **Analytics**
Virtual Reality Applications

- Ramp Operations Safety Example

![Virtual Training Hub Prototype](image-url)

**SOP (NEW)**
- PUB 70 Chapter 04 Aircraft Handling
  - Sect. 2.03 Towing/Assisting with disabled Aircraft. (AO- May 01, 2016)

**SOP REVIEW**
- PUB 70 Chapter 01
- PUB 70 Chapter 02
- PUB 70 Chapter 03

**VR TRAINING**
- Ramp Safety Virtual Turnaround (A320)
- Ramp Safety Virtual Turnaround (737)
- Ramp Safety Virtual Turnaround (787)
- Ramp Safety Virtual Turnaround (767)
- Over-wing Slide check (767)
- De-icing (Widebody)
Virtual Reality Applications

- Ramp Operations Safety Example - Companion App
Gamification in Maintenance

What is gamification and why?
Gamification in Maintenance

- Gamification example
Gamification Applications

- **Tasks**
  - Logbook entries
  - Daily safety audits
  - Dangerous Goods forms
  - SMS forms
  - Job Cards
  - Engineering forms
  - Fuel Tank Entry forms

- **Benefits**
  - Mundane tasks challenged
  - Provides recall / review
  - Captivates / motivates
  - Uncommon entries
  - Cross functional
  - Ability to raise the bar
  - **Analytics**
CONCLUSION

• Try Virtual Reality, Augmented Reality & Gamification
• Partner with gaming organizations, existing providers
• Start small – gain traction
• Let your teams imagination and creativity move your efficiencies to the next level!
Thank-you

APATS 2018 – Innovative Training for this Generation of Technicians