



APATS 2018 – Innovative Training for this Generation of Technicians

August 28, 2018 - SIN



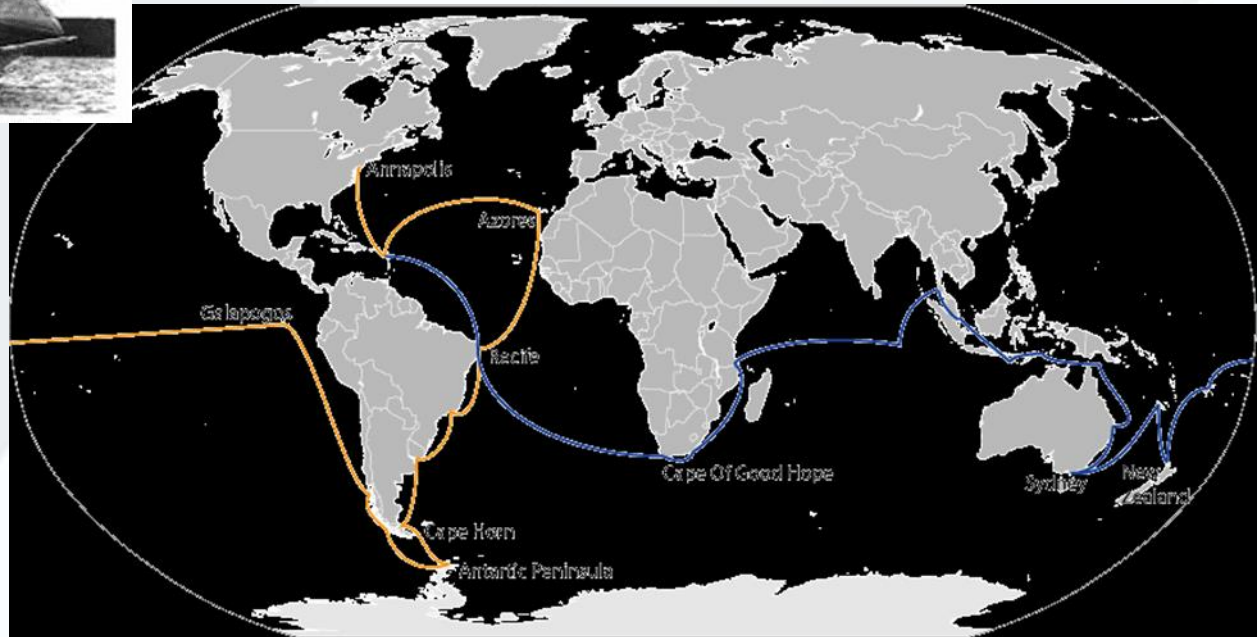
My Journey

- Nova Scotia, Canada to Singapore



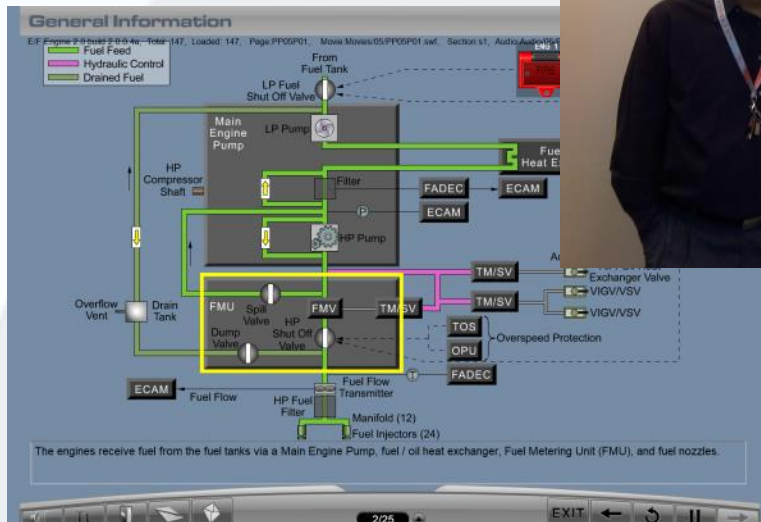
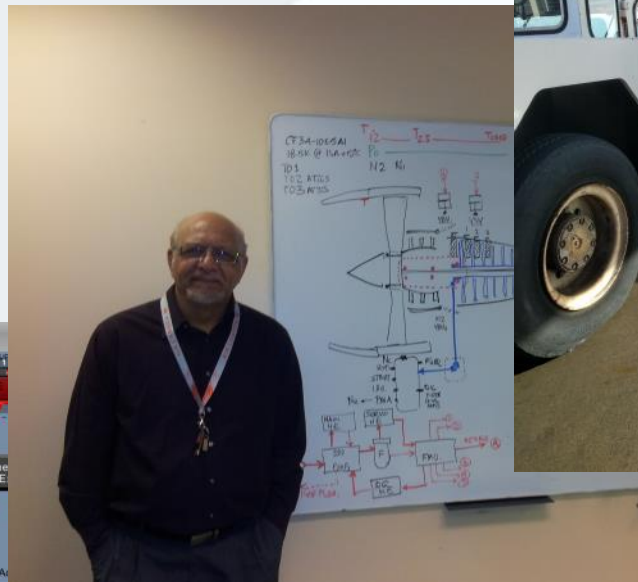
The Journey Before Innovation

- Joshua Slocum



Maintenance Training Today

- Highly regulated
- Standardized
 - Lecture based
 - CBT
 - On the Job



The Maintenance Paradigm

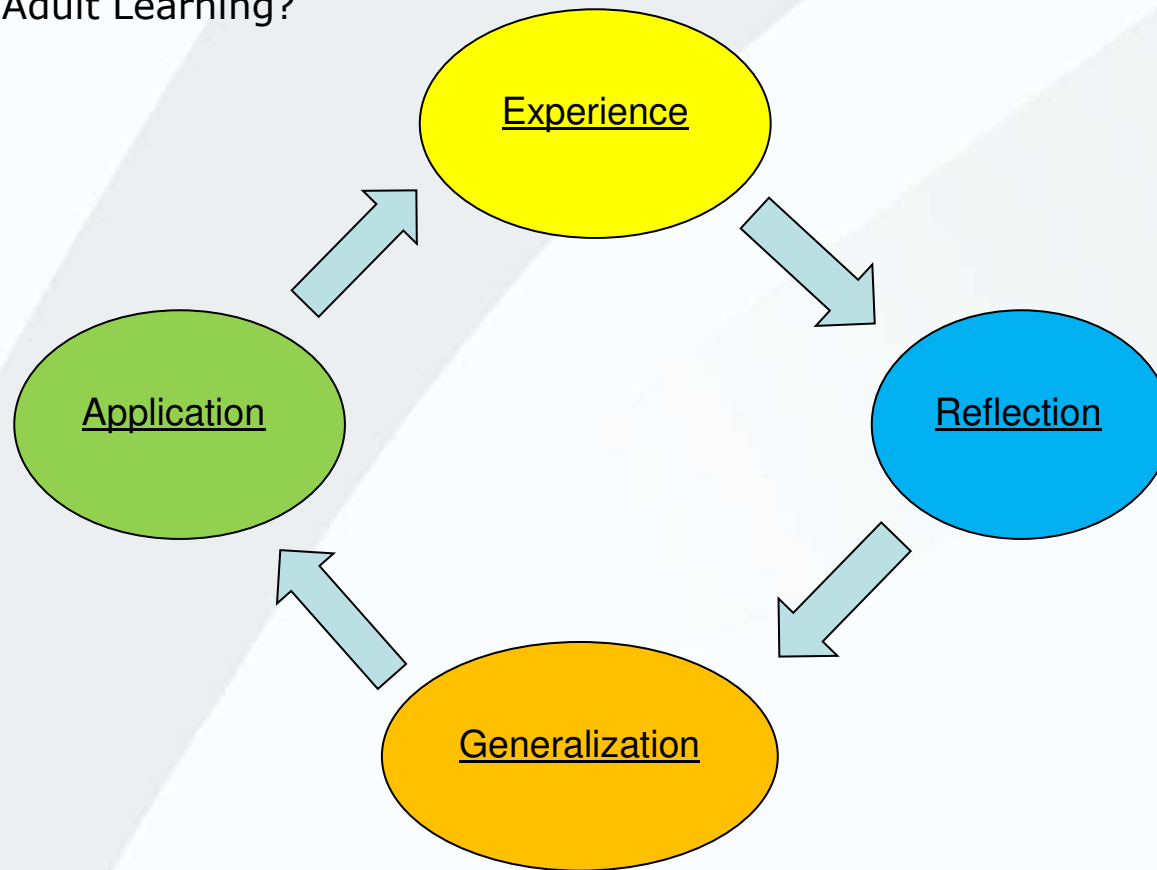
- Cost center
- Necessary burden
- Check the boxes
- Innovation not a high priority



Step	Instruction	Mech	Insp
1.	OUTFLOW VALVE (Between 15 OCT to 15 APR) On the Cabin Pressure Control Module, put the mode selector switch to MAN and close the outflow valve 1/3 of the way, if not already done by the flight crew.		
2.	WINDSHIELD At the first preflight check of the day and only if necessary, clean the windshield AMM 12-16-02. CLEAN		
3.	CREW OXYGEN SYSTEM Perform Crew Oxygen Stowage Box Test (Mask Stowed in Stowage Box). AMM 35-12-00-700-801		
	Pressure of the oxygen crew bottle : _____ PSI Pressure is under 1000PSI, open defect to replace bottle.		
	VESTS Collective vests (P/N TE2-FLY-XI) are available in the flight deck.		
	Locate and record the APU times and cycles. Cyc _____		
	DR The Digital Flight data Recorder -710-801 para. F		
	APU FIRE DETECTION SYSTEM. at the engine and the APU fire detection system. -701-801 and 28-15-00-701-801		
	EQUIPMENT No of Portable oxygen bottles. Check the presence and condition of Ice equipment in the flight deck and the passenger cabins, in obvious sign of wear, damage, leakage. Refer to the Cabin Equipment layout (025600XXX available on Intranet) for locations		

Adult Learning – Kolb Learning Model

- Do these new methods fit with Adult Learning?



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



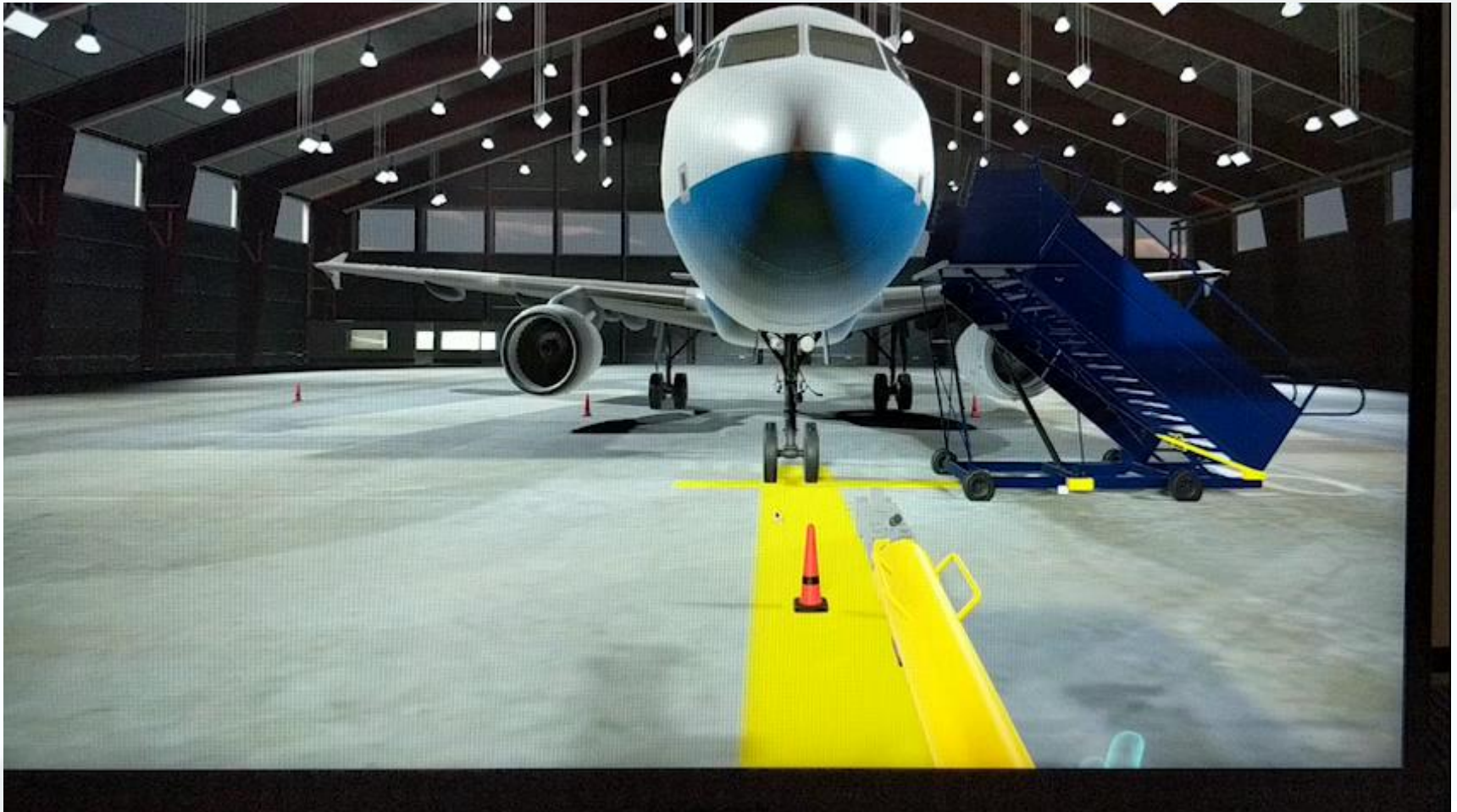
Virtual Reality - Beyond Entertainment

- Applications
 - New technology
 - Start small
 - Partnerships
 - Build on the library



Virtual Reality Applications

- Maintenance example



Virtual Reality Applications

- Tasks

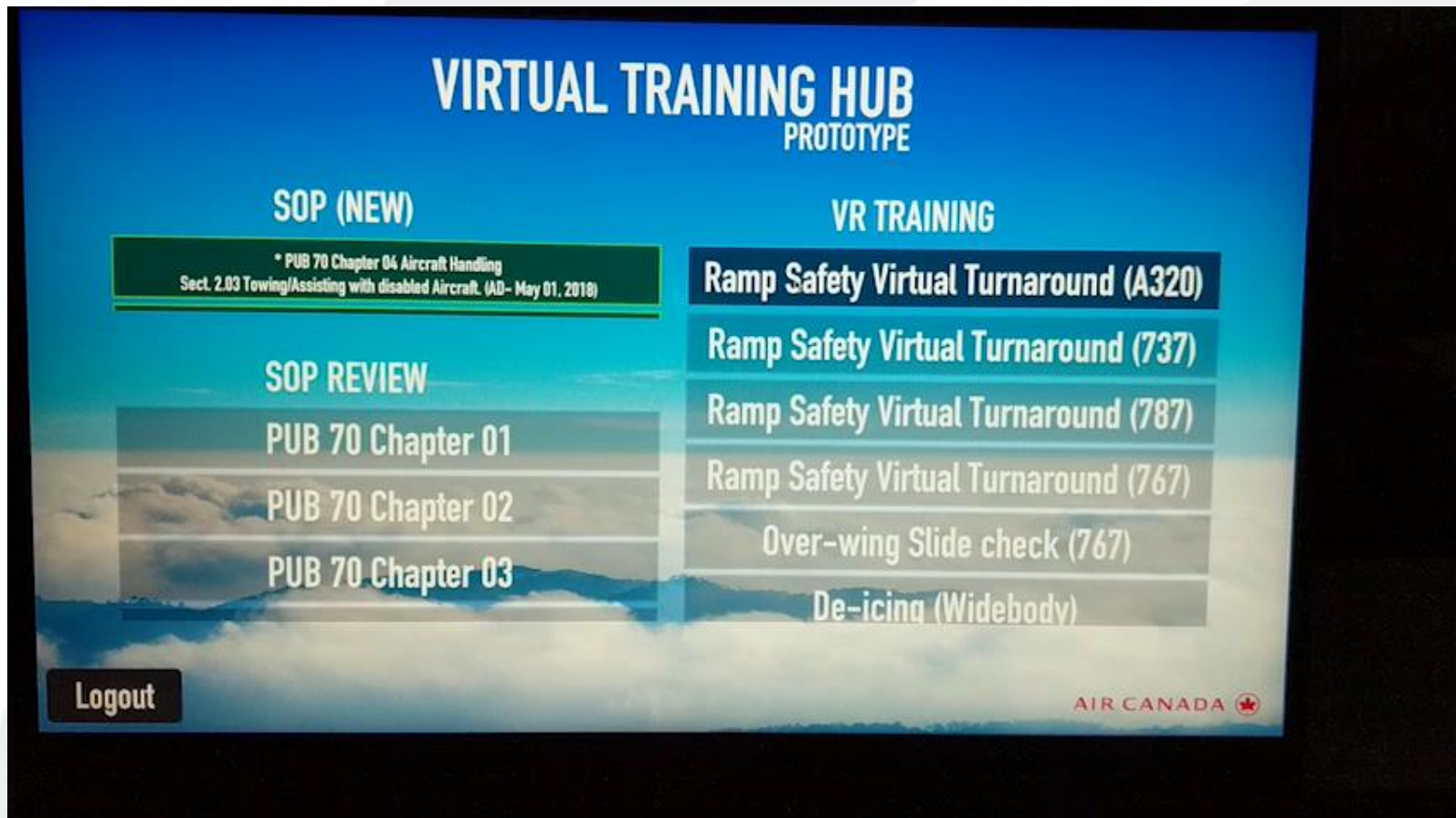
- Walk arounds
- Classroom Gen Fam
- Servicing Procedures
- Towing
- Ground runs
- L3 Practical Training
- Problem tasks

- Benefits

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

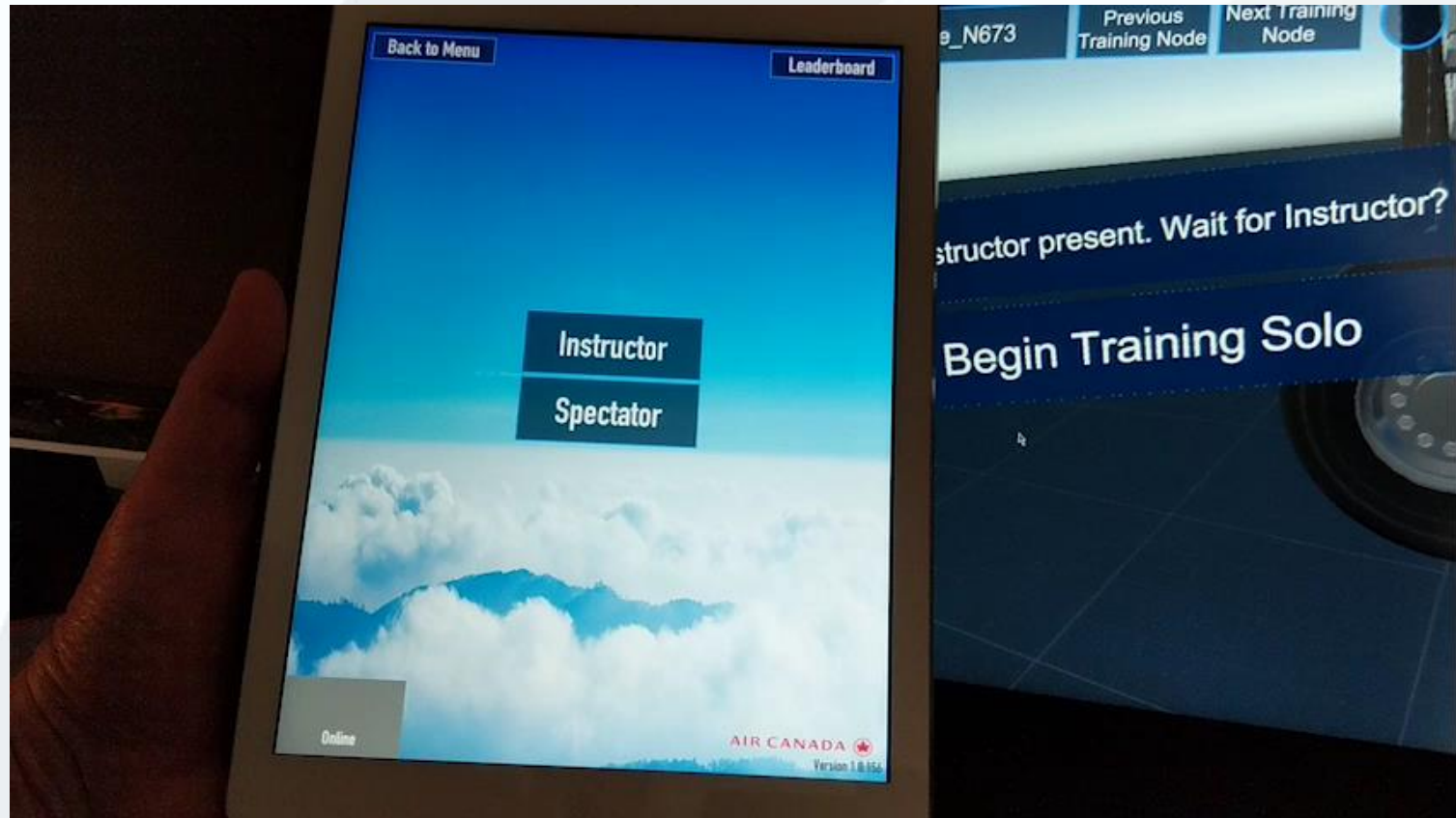
Virtual Reality Applications

- Ramp Operations Safety Example



Virtual Reality Applications

- Ramp Operations Safety Example - Companion App



Gamification in Maintenance



GLOBAL LEADERBOARD

	12:08PM APRIL 24TH 2018	1227 POINTS	
	2:12PM APRIL 30TH 2018	1137 POINTS	
	6:51PM APRIL 23RD 2018	1038 POINTS	
#4	TESTUSER001	9:34PM APRIL 20TH 2018	833 POINTS
#5	TESTUSER001	6:44PM APRIL 20TH 2018	801 POINTS
#6	TESTUSER002	6:43PM APRIL 20TH 2018	786 POINTS
#7	MARK	10:29AM JUNE 4TH 2018	765 POINTS
#8	MARK	7:33PM JUNE 6TH 2018	668 POINTS

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



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