PHMAP23 Organised session Proposal form

Session organiser (Affiliation): Boeing

Session title: Model Based and Big data enabled Predictive Maintenance

Theme and objective:

Airplane health management and predictive maintenance have been in place for many years and has been very successful across the industry on various platforms. With the advent of new developments/innovations in model based engineering, digital twins and the use of artificial intelligence and machine learning, even greater benefits can be achieved in health management and predictive maintenance. Boeing is developing processes and tools to complete the digital thread across the lifecycle. This Boeing session on predictive maintenance will cover:

- Big Data techniques to solve airplane reliability and economic problems.
- Model Based Engineering and predictive maintenance.
- Use of edge computing to greatly speed up the process to diagnose airplane issues and create prognostics.
- The necessity to deliver prognostic alerting from multiple sources for improved situational awareness.
- Industry collaboration
- Deep dive case studies on Boeing aircraft prognostic deployments
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Field: Aerospace Engineering

Tentative list of presenters (4 presenters per block):

Darren Macer

Changzhou Wang

Mark Mazarek

Daniel Newman