Rolls-Royce Equipment Health Management

Propulsion Controls & Diagnostics Industry Panel
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- RR operates in four industries:
  - Aerospace
  - Marine
  - Energy
  - Nuclear
  - Developing systems that can be applied in each

- RR EHM recognizes five stages in the process:
  - Sense → Acquire → Transfer → Analyze → Act
  - Subject Matter Experts contribute in each area

- Multiple customer needs must be considered:
  - Military desires “stand-alone” capability
  - Central data processing acceptable in Civil
EHM technology needs:

- Reliable high temperature wireless sensors and systems
  - Eliminate harness and connector problems
  - Weight and cost reduction
- Proven electrical and mechanical prognostic information
  - Build systems using basic features
- Integration of Controls and Health Management information
  - Optimize system operation using health input
  - Align component end-of-life to reduce replacement $
  - Minimize impact of certification
Increase value of EHM:

- Maintain system asset health state to minimize operating cost and reduce disruption
  - Consider life cycle cost including trade between fuel consumption, maintenance logistics and part procurement

- Predict component/system End-of-Life to minimize disruption
  - Plan maintenance and part acquisition to reduce financial impact