

Joint Strike Fighter



F-35 Joint Strike Fighter Autonomic Logistics and Prognostics & Health Management

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F-35 JSF VISION



Be the model acquisition program for joint service
and international cooperation

Develop and produce an **affordable** next generation
strike fighter weapon system and sustain it worldwide



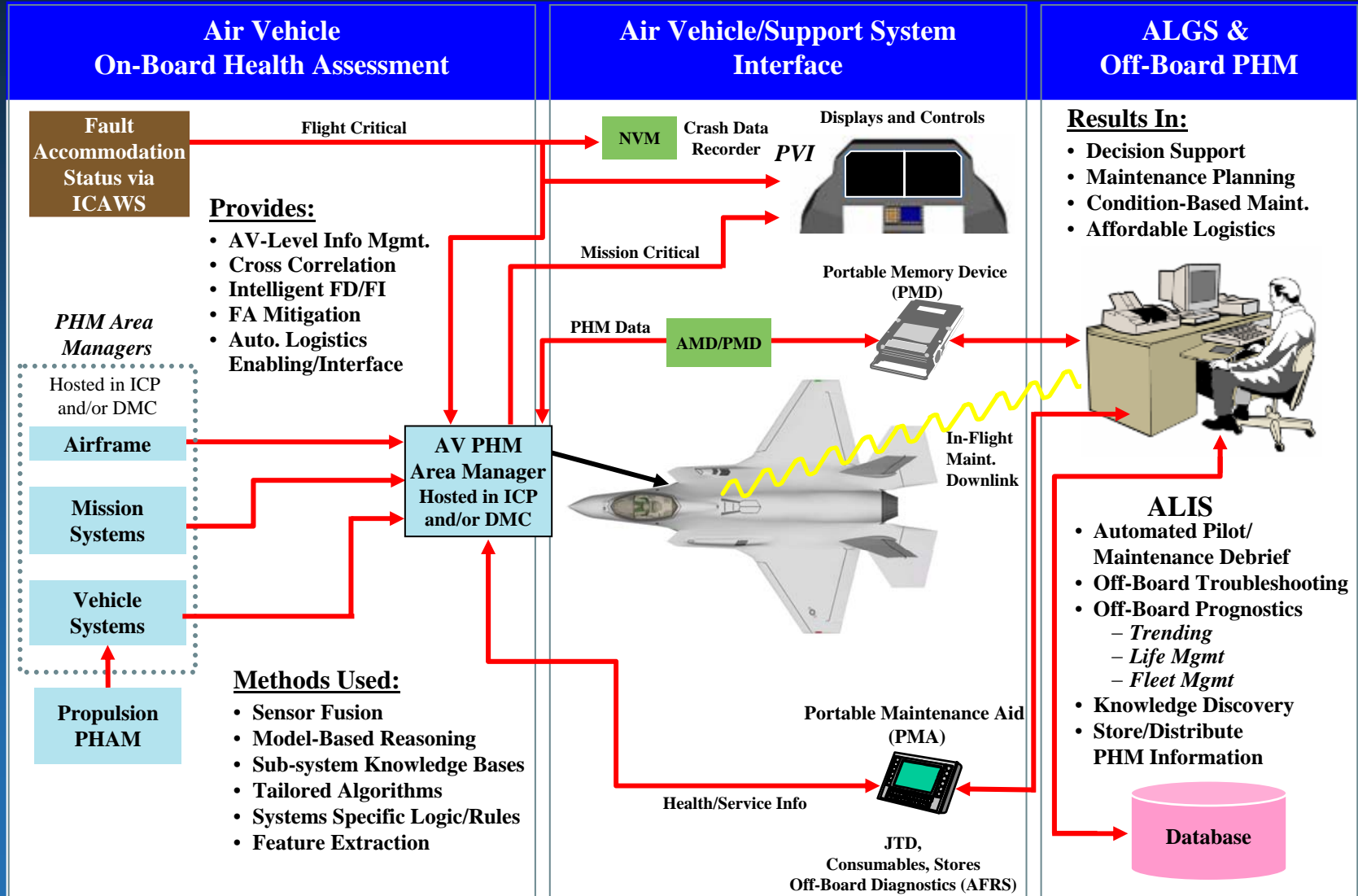
Prognostics and Health Management

What is it?

- **Enhanced Diagnostics** – the process of determining the state of a component to perform its function(s), high degree of fault detection and fault isolation capability with very low false alarm rate
- **Health Management** – the capability to make intelligent, informed, appropriate decisions about maintenance and logistics actions based on diagnostics/prognostics information, available resources and operational demand
- **Prognostics** – actual material condition assessment that includes predicting and determining the **useful life** and **performance life remaining** of components by modeling fault progression



PHM Is Integrated Across the Air System



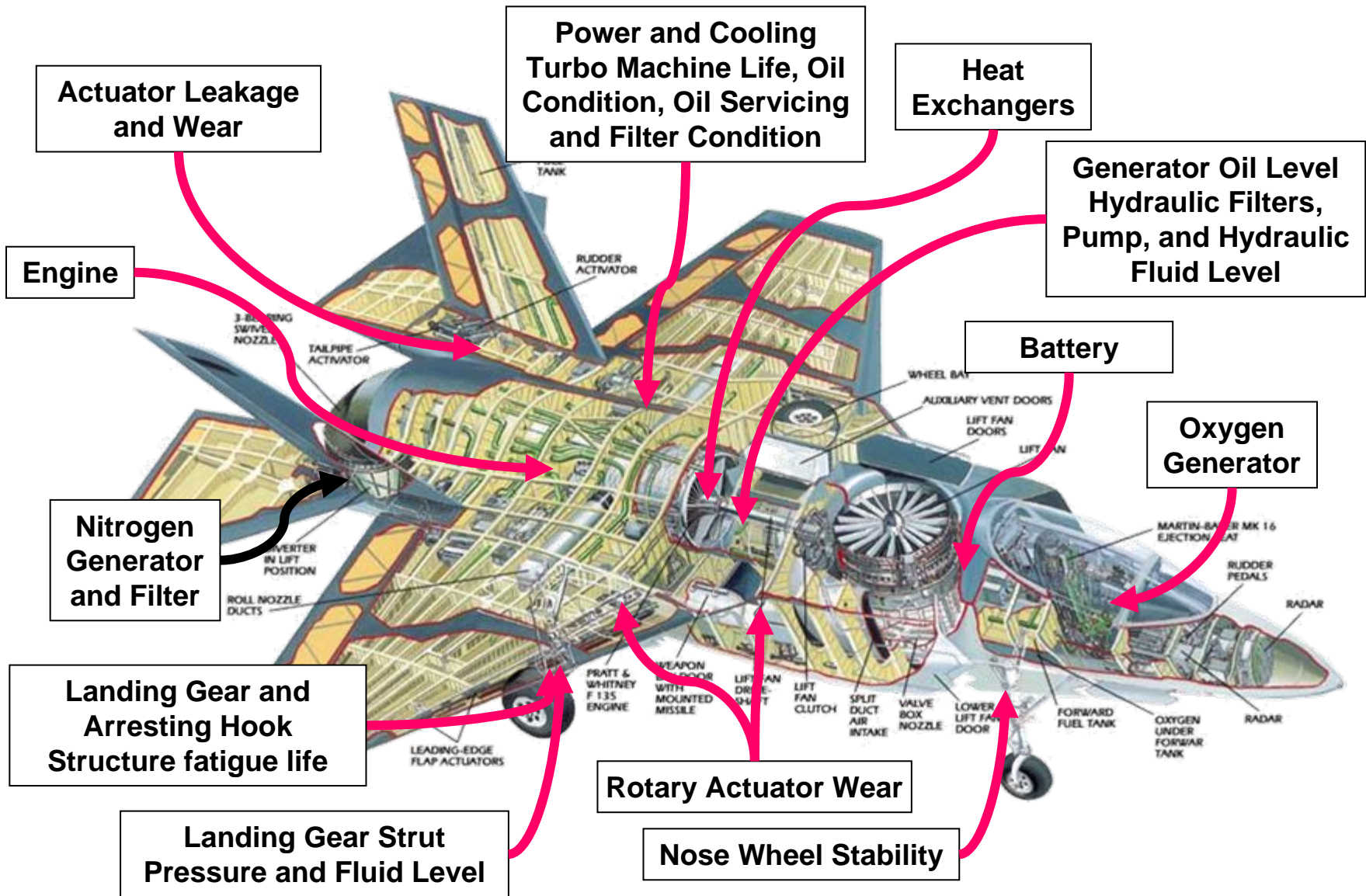


Prognostic Candidate Implementations

- **Several hundred Prognostic Candidates have been identified and have been classified in three categories:**
 - ***Category 1: Well-Defined Understanding of the Physics of Failure with Historical Basis***
 - Implementation
 - ***Category 2: Defined Understanding of Physics of Failure with No Historical Basis***
 - Gather data and refine algorithms over time
 - ***Category 3: Suspected Relationship of Indicators with Physics of Failure with No Historical Basis or Proven Technology***
 - Gather data for future data mining and possible algorithm development



Prognostic Candidates





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Lightning II