

Model Based Systems Engineering Capability



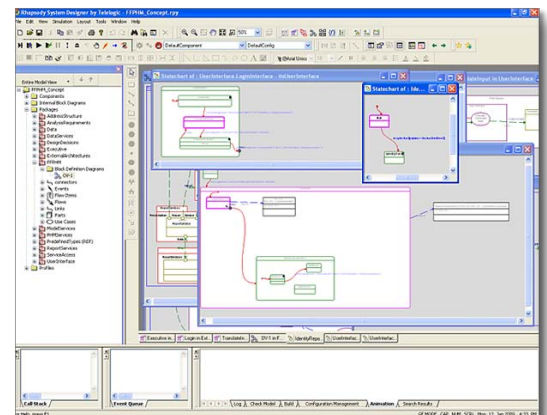
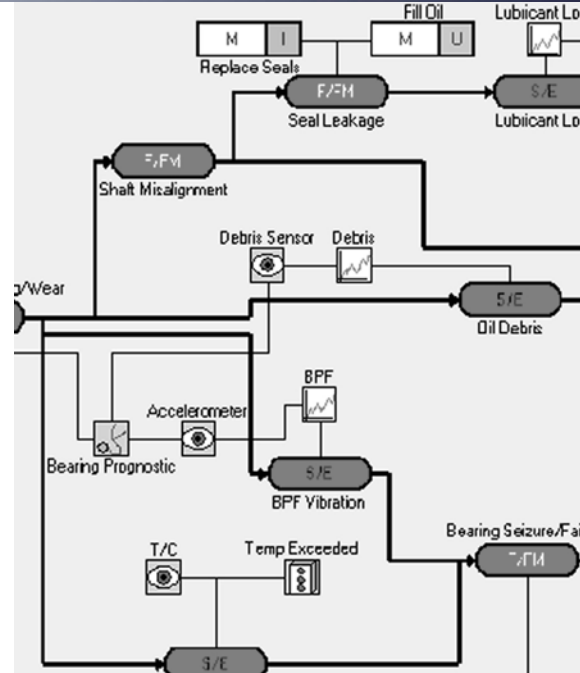
Ensure the efficacy of a given PHM solution for a given problem

As systems grow in complexity it becomes increasingly important to manage the emergent dependencies between system requirements, static structural composition, dynamic behaviors, and parametrical constraints. Recognizing the complexity in the interaction of the implemented PHM architecture with other system architectures, Impact Technologies has developed a Model-Based Systems Engineering capability to ensure the efficacy of a given PHM solution for a given problem. This capability allows interactions to be simulated and examined throughout the development, implementation, and integration activities associated with the deployment of a PHM system.

Building PHM Solutions using Leading Systems Engineering Tools

Impact Technologies' Model Based Systems Engineering capability is built around established tools and processes currently on the forefront of Systems Engineering practice. Models are articulated using an implementation of the Object Management Group's System's Modeling Language standard (OMG SysML™) to facilitate a common basis for communications. The model itself is framed using the Architectural Development Process Model (ADPM) to ensure compliance with the Department of Defense Architectural Framework (DoDAF). By following this best-practice, the model can be easily leveraged for analysis and assessment of system capabilities, operations, and services.

For a given project, requirements and system models are stored in a common repository that may be accessed throughout the PHM System development and support cycle. Through this repository the system's structure, behavior, constraining relationships, and requirements are linked to continually ensure traceability and coverage of system requirements from the initial synthesis of the PHM solution through acceptance and into operations. The articulated model links directly to the most common requirement management tools such as IBM/Telelogics's DOORS™ system.



Fully executable systems model ensures the desired interaction between the PHM system baseline and other enterprise architectures.

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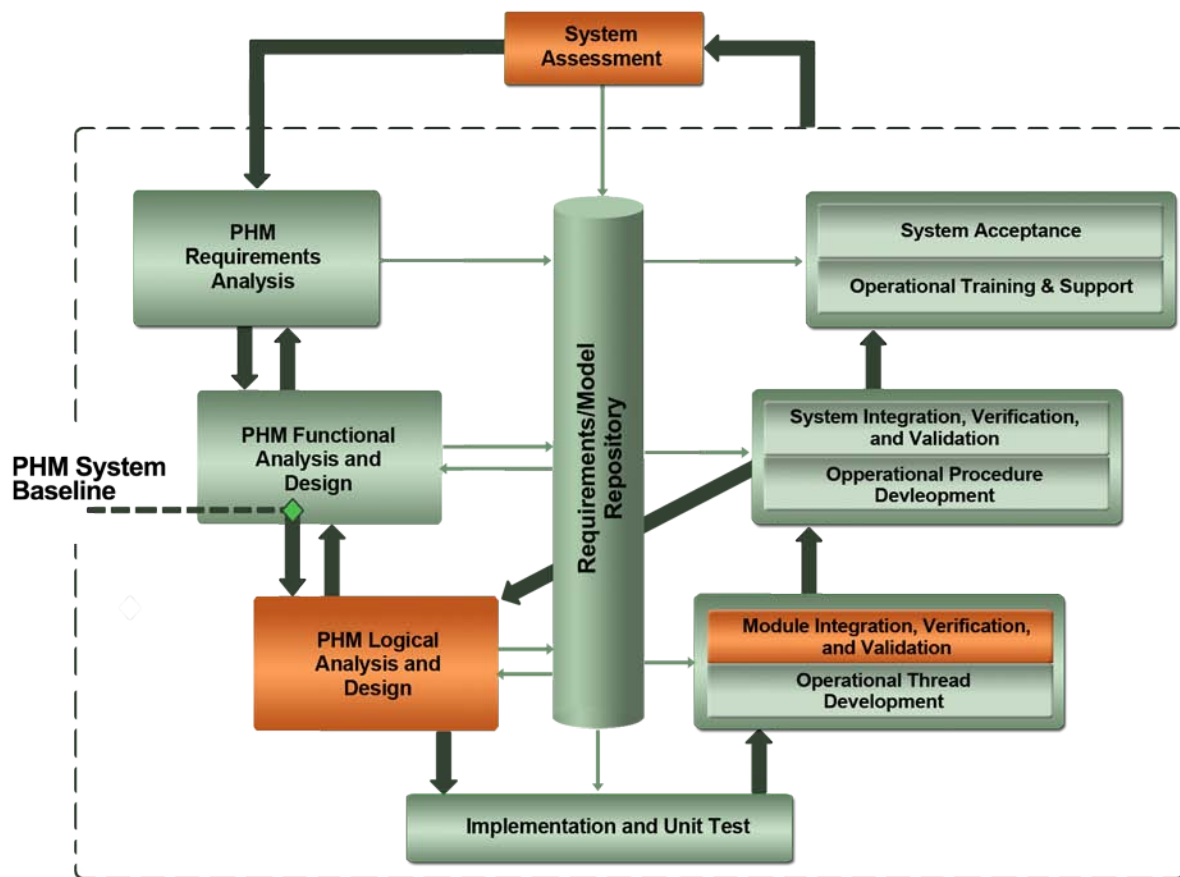
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**Headquarters
New York Office**
200 Canal View Boulevard
Rochester, NY 14623
Phone: 585.424.1990
Fax: 585.424.1177

Pennsylvania Office
270 Walker Drive, Suite 200W
State College, PA 16801
Phone: 814.867.5122
Fax: 814.867.7550

Georgia Office
75 Fifth Street NW, Suite 312
Atlanta, GA 30308
Phone: 404.526.6188
Fax: 404.526.6189

The system model created is fully executable. The Systems Engineering model executable allows system operations to be simulated and fully analyzed prior to cutting a PHM system baseline. If the PHM system is being developed to support a fielded, heritage enterprise the executable assists in determining the phasing for PHM solution deployment to ensure the fastest return-on-investment.



PHM System structure, behavior, constraints, and requirements are linked throughout the development and support cycle through an integrated Systems Engineering repository.