

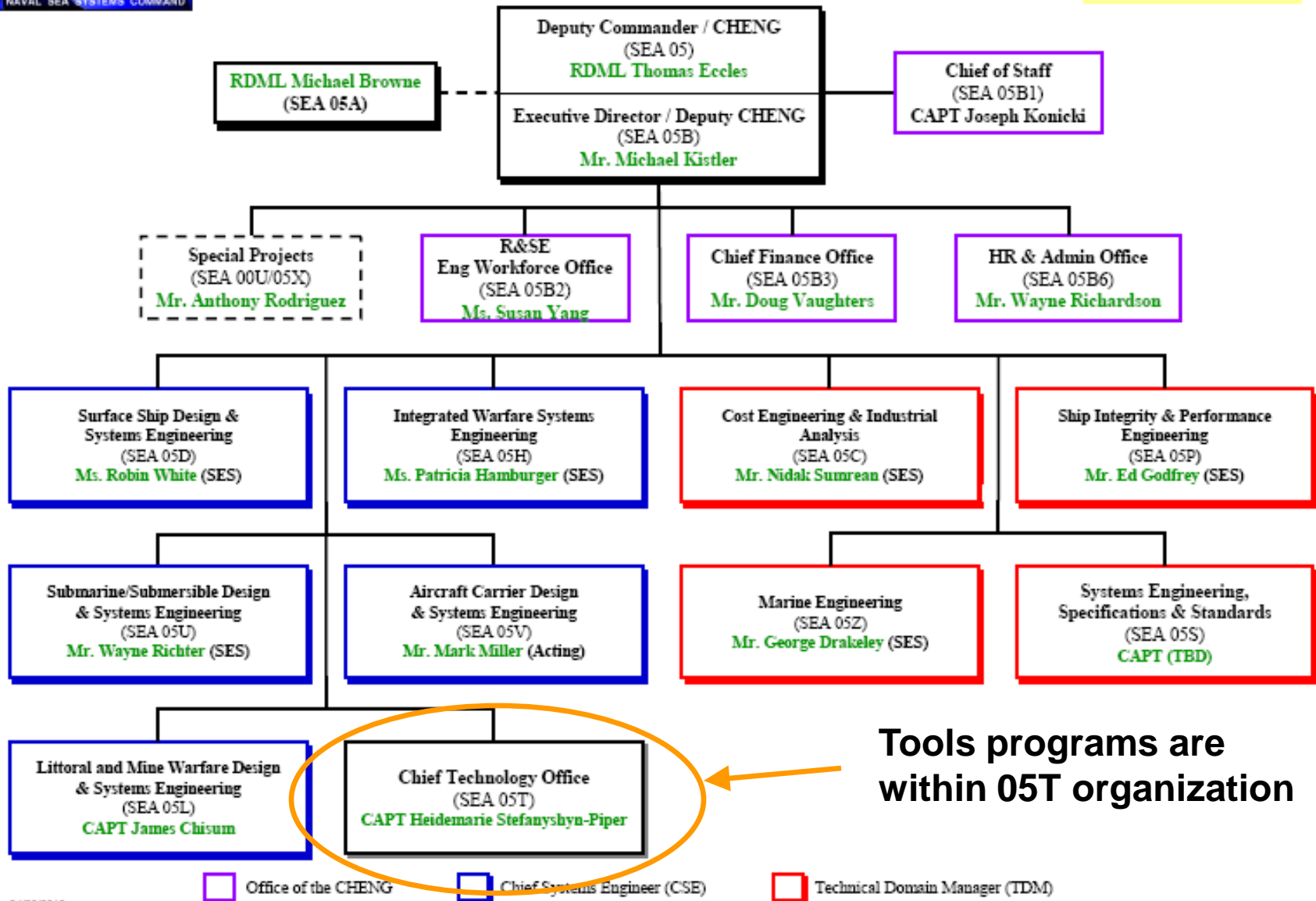
NAVSEA Design Tools

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Leading Edge Architecture for Prototyping Systems



An Overview

Product Model Data

A simple definition

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Product Model data is the combination of 3D geometry and non-graphic attributes to define ship objects such as a piece of equipment, deck, bulkhead, etc. Product Model data can be organized to define interim products and ultimately the entire ship.

Part & System Definition (Caterpillar 3512, Starboard Main Engine, Propulsion System)

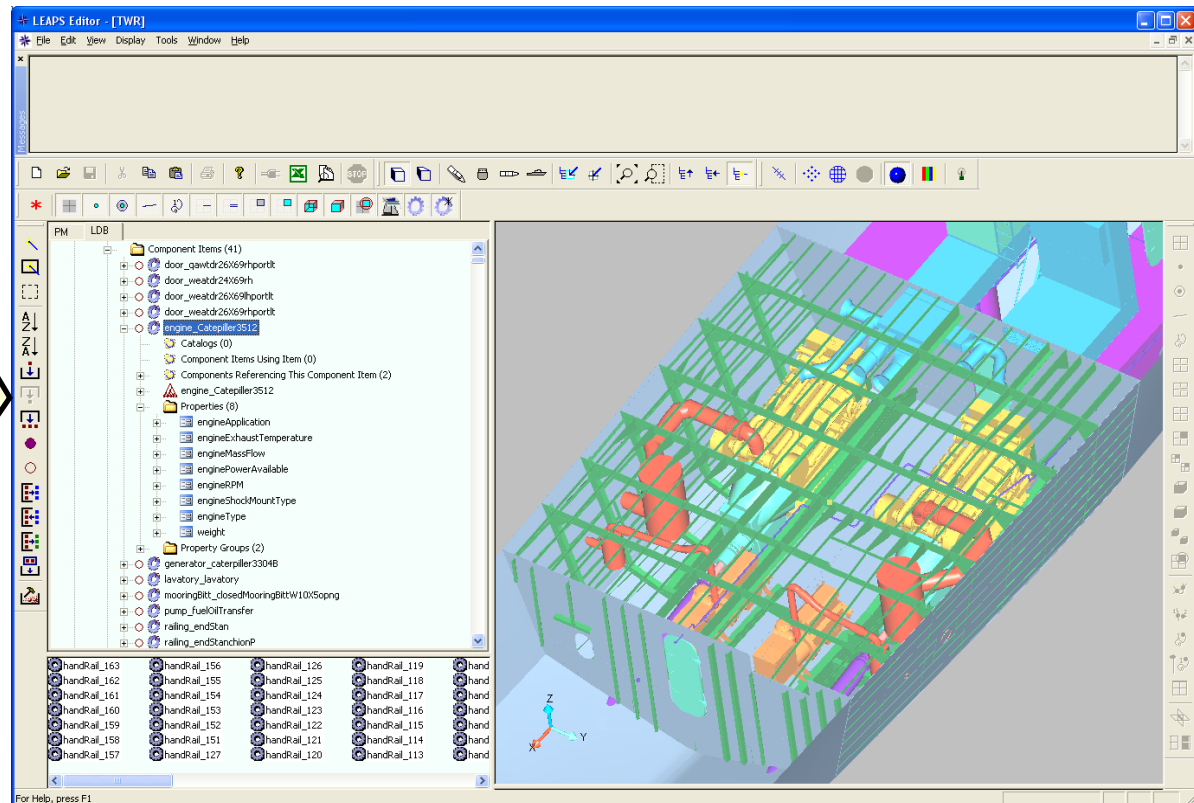
Design Definition (12 cylinder 4 stroke diesel engine)

Physical (Geometry, material connections, etc.)

Engineering Definition (1175 HP, 6464kg, 170mm bore, 190mm stroke)

Process Definition (Starting instructions, shaft alignment)

Logistics Support (FGC, SCLSIS, etc.)



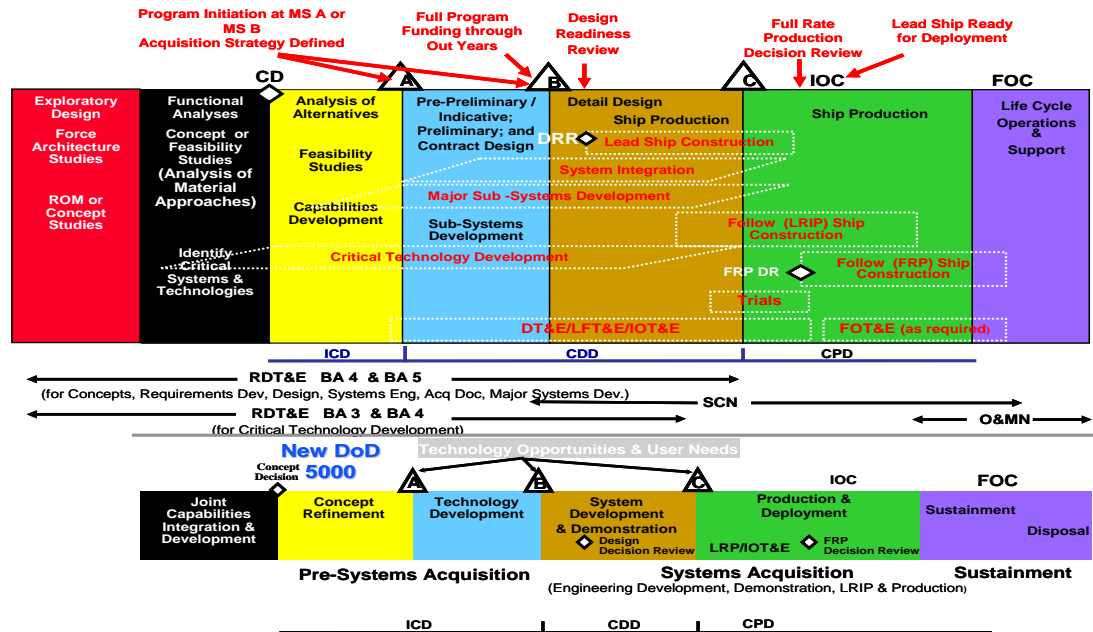
Advocates anticipate substantial economies from Product-Model-based design, construction, and service-life support activities due to better integration and reduction of engineering effort to locate, verify, and transform information.

LEAPS

... its more than just early stage design

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The LEAPS model can support the entire ship's lifecycle.



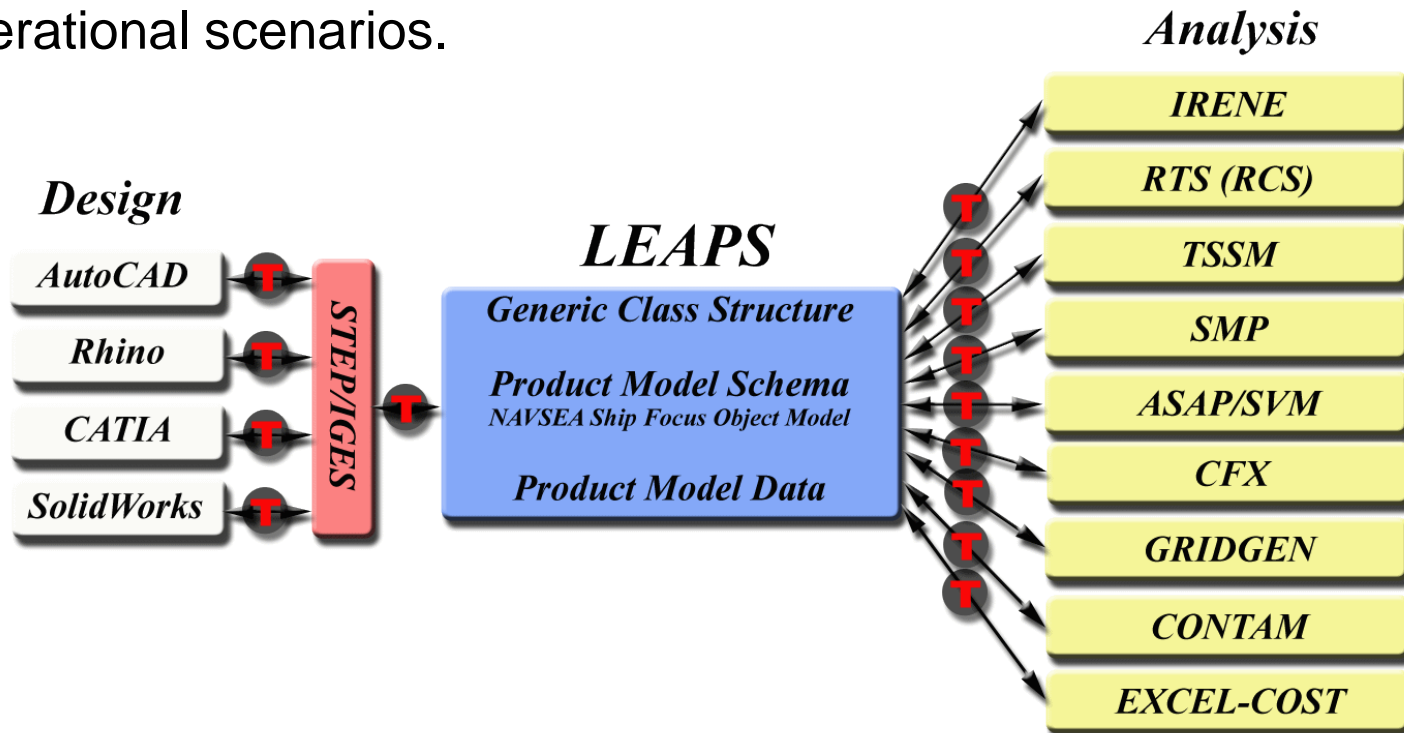
- LEAPS will be the primary source of data for all pre milestone B activities.
- LEAPS will be used by NAVSEA to validate the design during the Detail Design and Ship Production phases.
- LEAPS will be the authoritative source of data in support of the Situation Incident Room upon delivery of the ship.

What is LEAPS?

The NAVSEA Product Modeling Environment

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Leading Edge Architecture for Prototyping Systems, is the product model repository used by the Naval Sea Systems Command. LEAPS is based on an extensible information meta-model. It is designed to provide product model data to support modeling and simulation tools used by Navy Ship Designers. The current focus is concept studies, analysis of alternatives, and operational scenarios.



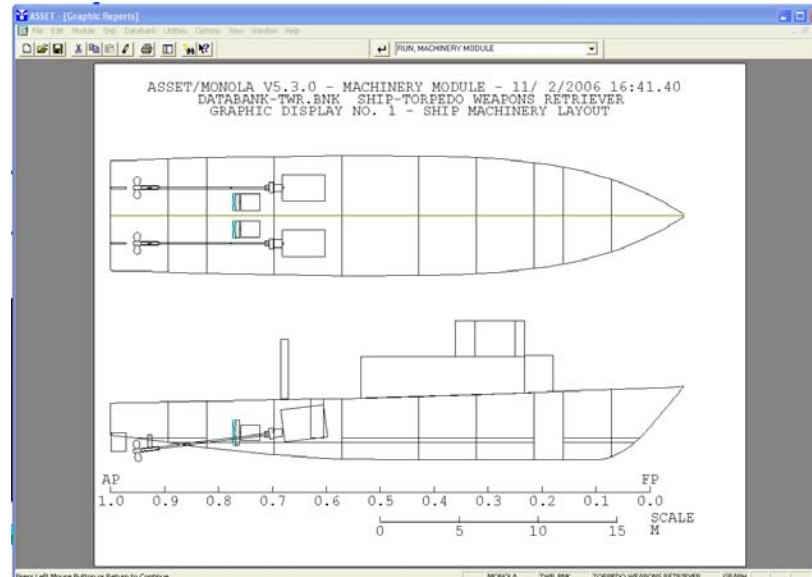
ASSET

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ASSET Version 6 - Module Structure

