

**Ingalls Shipbuilding**

A Division of Huntington Ingalls Industries



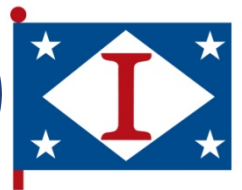
# Dynamic Change Awareness



## NSRP All Panel Meeting

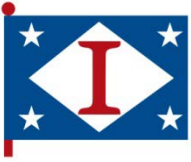
March 12, 2015

# Agenda

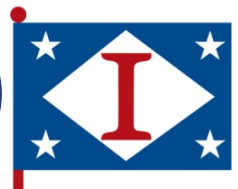


- Introduction
- What is Change?
- Awareness
- Definition of Dynamic Change Awareness
- Project Goals
- Summary





# Ingalls Shipbuilding



- Building four classes of ships simultaneously—  
nine ships now in production
- Seven *Arleigh Burke*-class destroyers in firm business
- Builder of record for LPD and LHA classes of amphibious assault ships
- Builder of largest multi-mission National Security Cutter for the U.S. Coast Guard



USCG National Security Cutter



LPD 17 Class Amphibious Transport

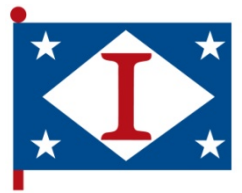


LHA 6 Amphibious Assault Ship



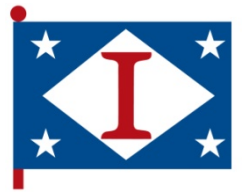
DDG 51 Surface Combatants



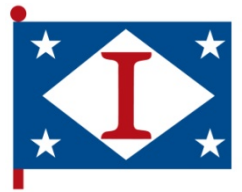


CHANGE

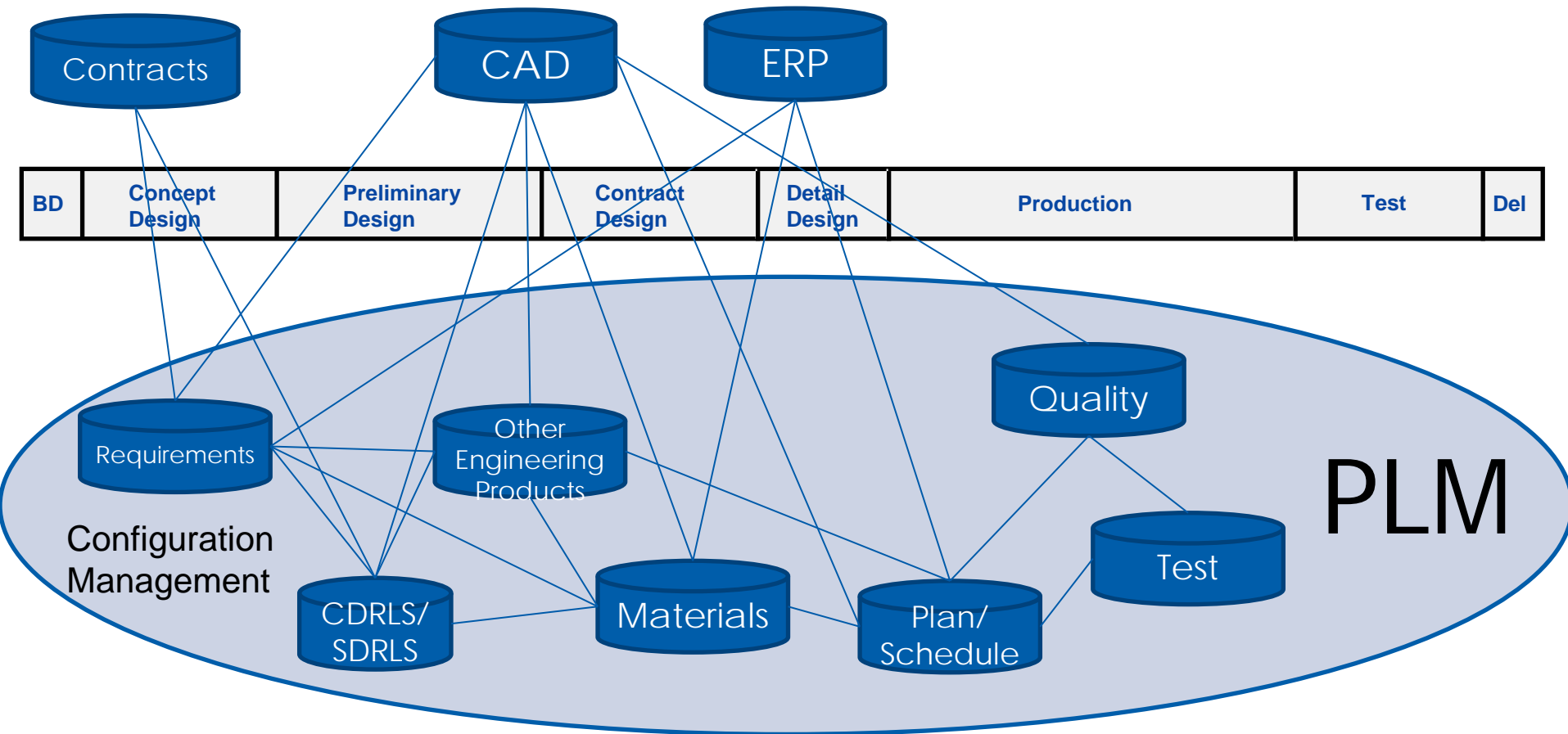


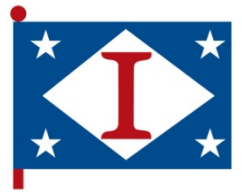


disruptive



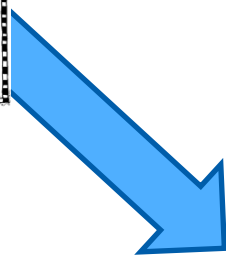
# PROCESS





# AWARENESS

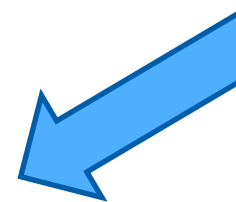
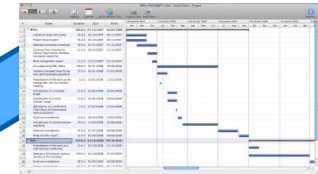
Contracts



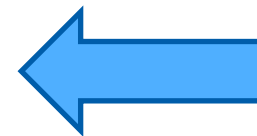
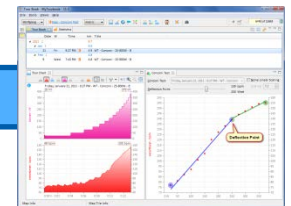
CDRLS/  
SDRLS



Plan/ Schedule



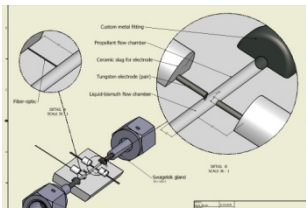
Test



Requirements



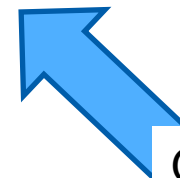
Model/ Drawings

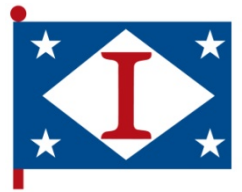


Bill of Materials



Quality



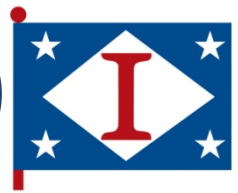


CHANGE  
IS A  
PROCESS,  
NOT AN  
EVENT





# Project Mission Statement

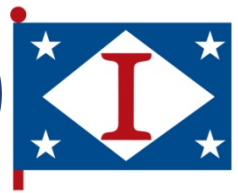


To create a methodology for transitioning larger and smaller shipyards from their current change implementation processes into new streamlined processes in order to reduce cycle time, rework, and waste.

Dynamic Change Awareness Agreement  
No. 2015-405, Scope (page 27)



# Definition of Dynamic Change Awareness

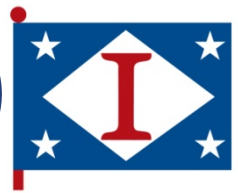


“Dynamic change awareness is the ability for the entire value stream to have real time visibility of the evolving design, planning, material and production baseline changes to enable intelligent management decisions that lowers program costs.”

Kevin Jarvis  
Ingalls Director of Shipyard Integration



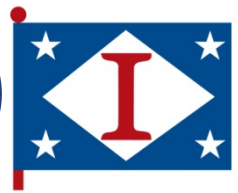
# Problem to be Addressed



- Excessive time from initiation and approval of the change to delivery of the change data to those who will execute the change that impacts implementation and causes rework,
- Methods and processes for delivery and documentation of field changes back to Engineering and Change Management, are inconsistent and unreliable,
- Methods and processes for delivery and documentation of actual production progress are inconsistent which causes errors and rework due to incorrectly assessing the current state in which to apply a change.

Dynamic Change Awareness Agreement  
No. 2015-405, Scope (page 27)

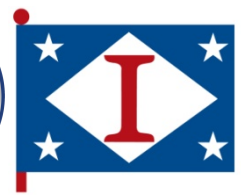




- The problem: legacy methods for processing of changes increase the cost of change
- The project goals are to:
  - Review the current requirements for the process for transmittal of change data and document the “as-is” process for all team member shipyards
  - Develop a “to-be” process for all team member shipyards
  - Create a new process architecture for delivery of data regarding approved changes from Engineering to the workforce and waterfront field changes and production details back to Engineering for incorporation into the As-Delivered design artifacts and 3D model.



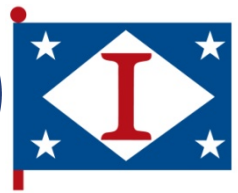
# Team Members



- Ingalls Shipbuilding – Project Lead
  - Greg Carithers, Jamie Breakfield, Brad Goff, Steven Frees, April Martin, Virgel Smith, John Walks
- Bollinger
  - Dennis Fanguy
- Austal
  - Terry Bruhl, Barbara Turrens, Emily Skewes, John Lawrence
- SSI
  - Patrick Roberts, Patrick David
- SCRA
  - Frances Pearce, Project Manager
- Newport News
  - Mark Debbink, Program Technical Representative



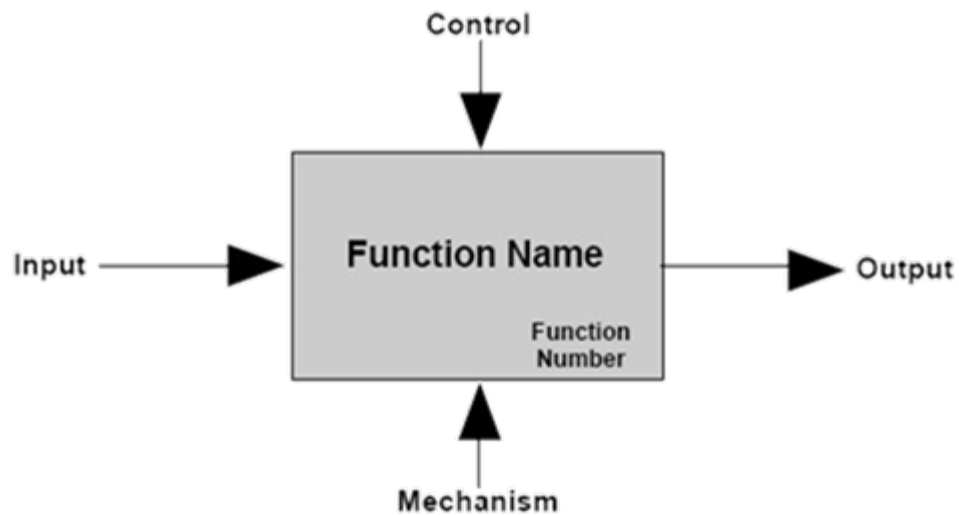
# Project Work Breakdown Structure (WBS)



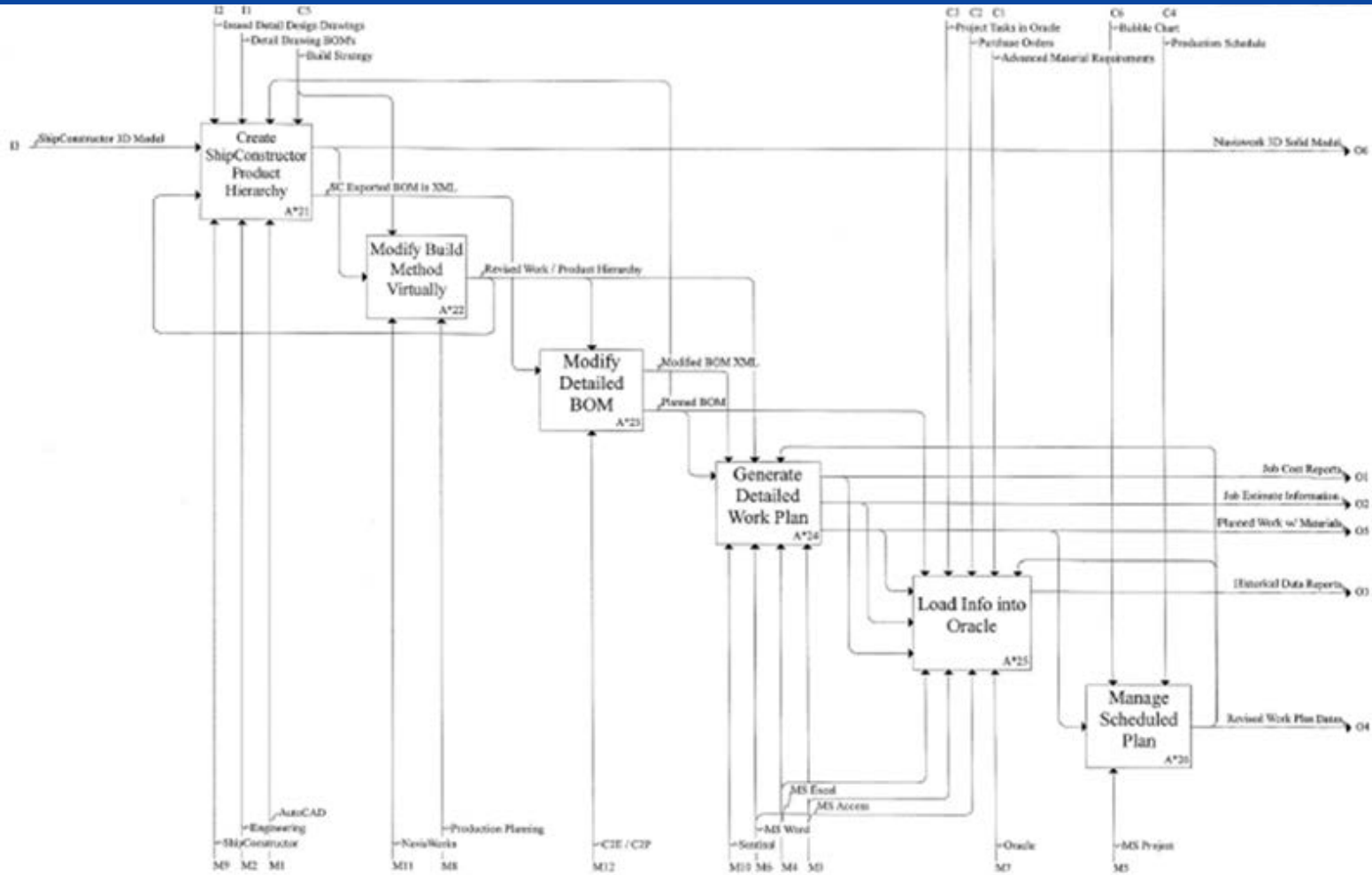
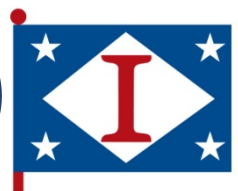
- The project will consist of seven major tasks over twenty-four months:
  - Task 1: Project Initiation
  - Task 2: Requirements Development
  - Task 3: As-is Process Development
  - Task 4: To-be Process Development
  - Task 5: Develop System Architecture
  - Task 6: Final Report and Final Project Workshop
  - Task 7: Project Management
- Tasks 1-3 will be completed in the first phase



## IDEF Process Modeling

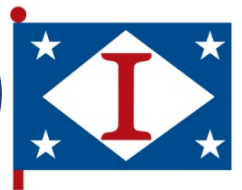


# As-is Process Development





# Summary



- Discussed what is Change
- Awareness of Change
- Definition of Dynamic Change Awareness
- Project Goals



