



Project Planning and Execution at Austal USA



Austal's Global Presence



Commercial Ship Builder to DoD Sub-contractor to DoD Prime Contractor



- **Facility**
 - Built a state-of-the-art shipbuilding manufacturing facility
- **People**
 - Increased overall company manning by 3400 people in under 6 years
 - Many of these were trained on-site
- **Process**
 - Created and documented both the Production Processes as well as the Management Processes
- **Tools**
 - Identified, created and embedded meta data enabling management to easily use the Program Management Toolset to analyze Project performance in the same manner as the work is executed
 - The Planning Tool
 - The Scheduling Tool
 - The Performance Analysis Toolset

Plan, Schedule and Cost the work in the same manner as you Execute.

The Beginning

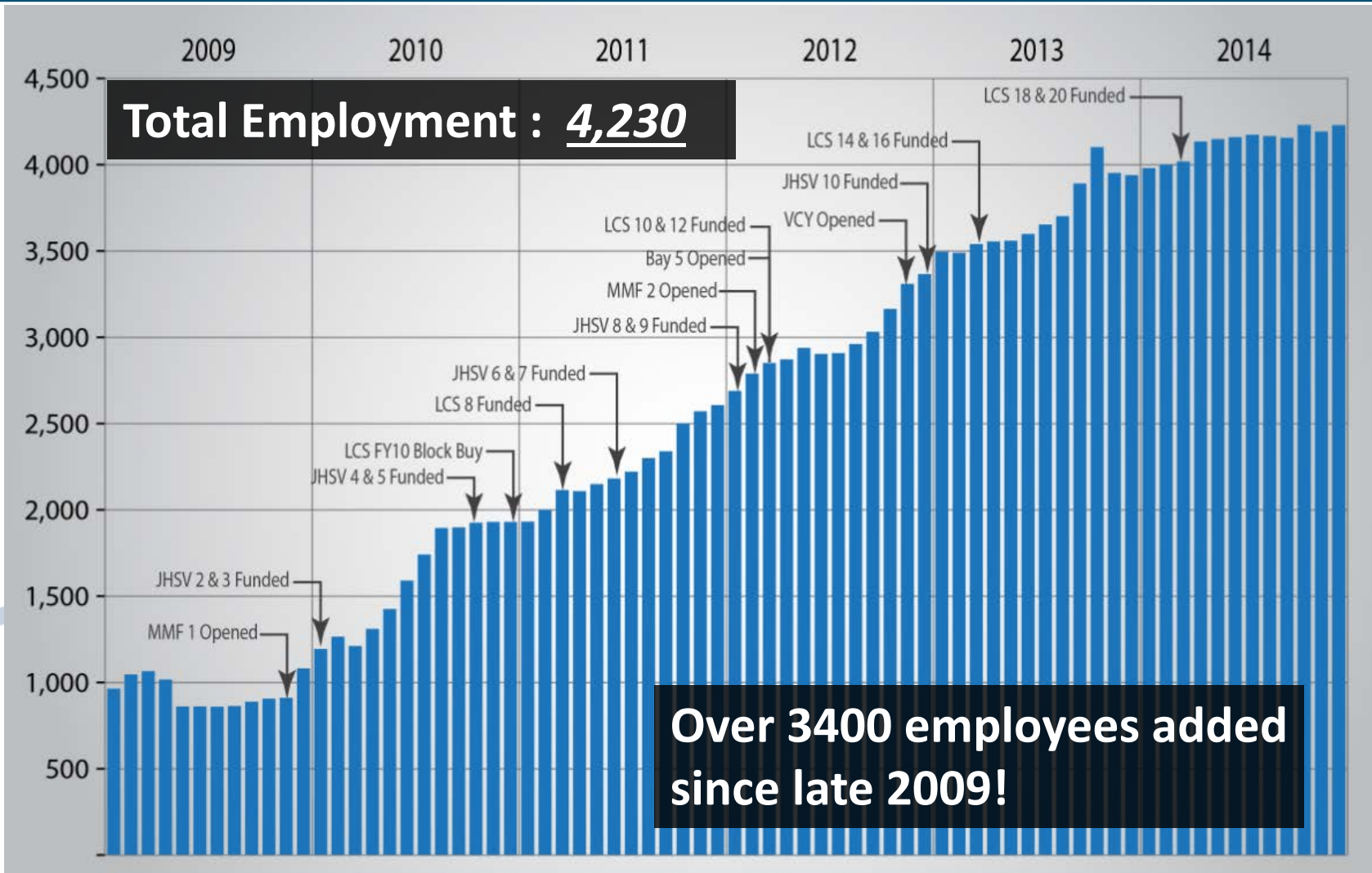


Austal USA Today



- ① Assembly Bay 6 (Feb-01)
- ② Assembly Bay 3 & 4 (Nov-05)
- ③ Administration Building (Mar-07)
- ④ Module Manufacturing Facility Phase 1 (Nov-09)
- ⑤ MMF Warehouse (Nov-09)
- ⑥ AIDT Maritime Training Center (Nov-10)
- ⑦ Module Manufacturing Facility Phase 2 (Feb-12)
- ⑧ Assembly Bay 5 (Mar-12)
- ⑨ Office Complex (Jul-12)
- ⑩ Navy Admin. Bldg. (Oct-12)
- ⑪ Vessel Completion Yard (Nov-12)
- ⑫ Future Expansion (TBD)

Employment Growth



Austal USA Vessel Deliveries



"Anapaula" & "Veronica"
2 x 45 meter Crew/Supply Boat
Delivered - 2002



"Zephyr"
44 meter Passenger Catamaran
Delivered - 2003



"Patriot"
26 meter Passenger catamaran
Delivered - 2003

"Lake Express"
58 meter Vehicle-Passenger Catamaran
Delivered - 2004



Austal USA Vessel Deliveries



2007

2008

2009

2010

2011

2012

2013

2014

**107 meter "Alakai"
Vehicle-Passenger
Catamaran
Delivered - 2007**



**113 meter "Huakai"
Vehicle-Passenger
Catamaran
Delivered - 2009**

**127 m Littoral Combat Ship
"USS Independence"
Delivered - 2009**



**"USS Coronado"
Delivered - 2013**

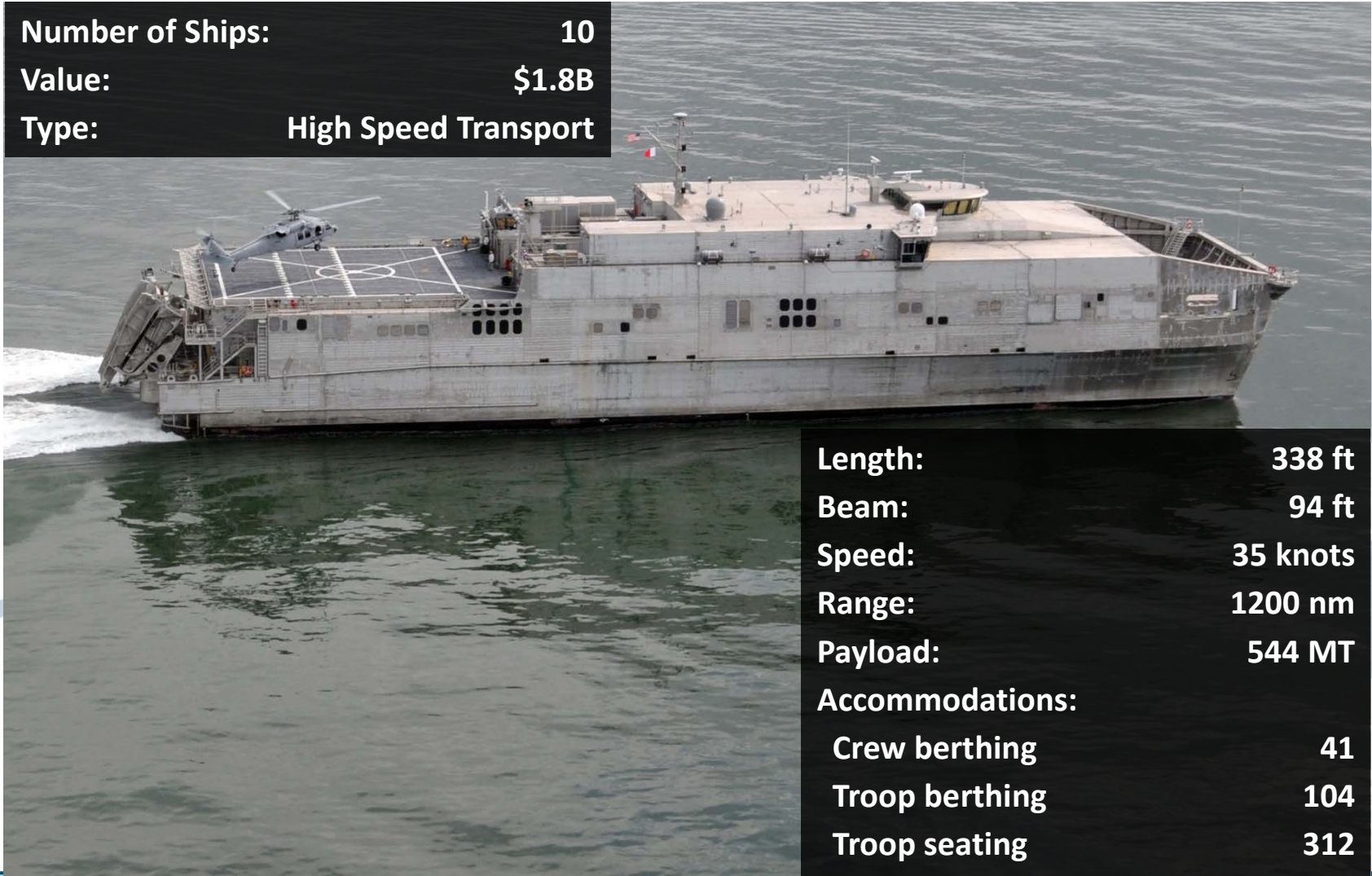
**"USNS Spearhead"
103 meter Joint High Speed Vessel
Delivered- 2012
"USNS Choctaw County"
Delivered- 2013**



**"USNS Millinocket"
Delivered- 2014
"USNS Fall River"
Delivered- 2014**

Existing Programs

Number of Ships: 10
Value: \$1.8B
Type: High Speed Transport



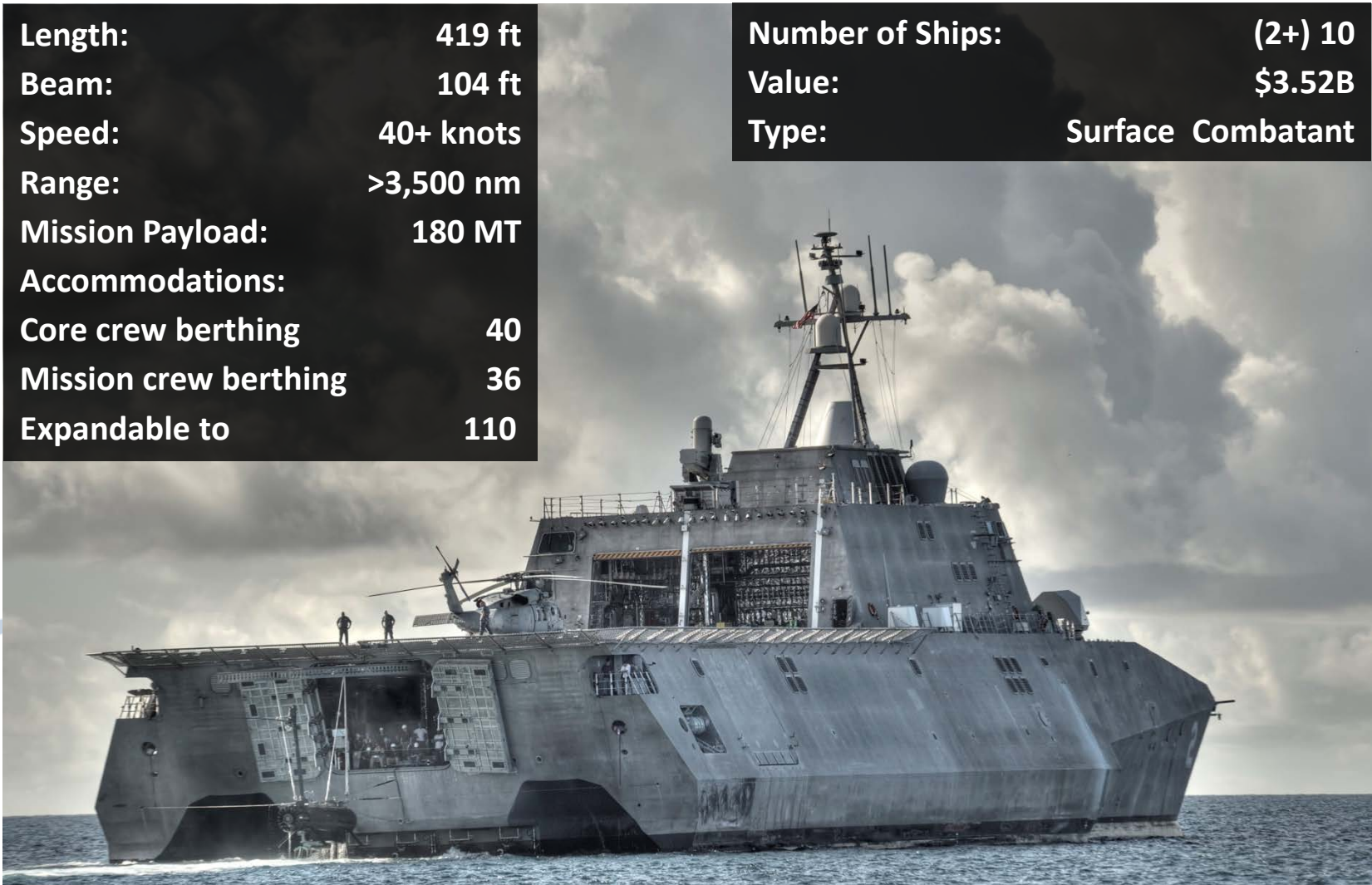
Length: 338 ft
Beam: 94 ft
Speed: 35 knots
Range: 1200 nm
Payload: 544 MT
Accommodations:
Crew berthing 41
Troop berthing 104
Troop seating 312

Joint High Speed Vessel (JHSV)

Existing Programs

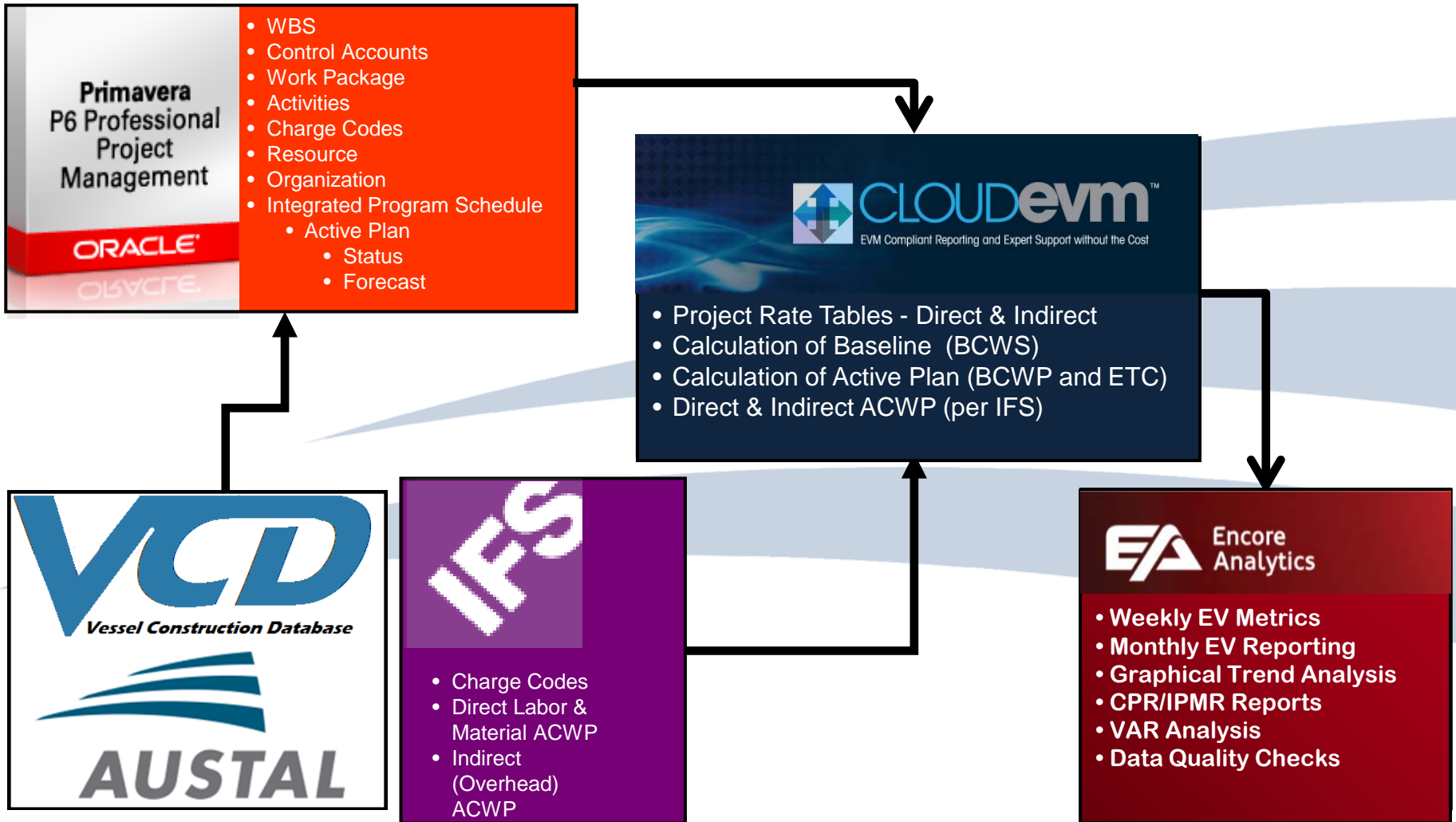
Length:	419 ft
Beam:	104 ft
Speed:	40+ knots
Range:	>3,500 nm
Mission Payload:	180 MT
Accommodations:	
Core crew berthing	40
Mission crew berthing	36
Expandable to	110

Number of Ships:	(2+) 10
Value:	\$3.52B
Type:	Surface Combatant



Littoral Combat Ship (LCS)

Program Management Toolset



- **Contains the detail Work Scope**
- **Organizes the Work Scope into “Work Packages” such that it:**
 - **Represents the methodology of the Build Strategy**
 - Defines Products
 - Defines Processes and Work Stations
 - Defines Resource Assignments
 - Identifies Major Milestones the work packages are related to
- **The Shipyard work management tool**

Scheduling Tool

- *The Scope, Methodology, and Budget Logic Framework for execution of the Project*
- *Holds the total Program Office Released Budget for the Project*
- *Schedules all Activities*
- *Time phases the Work Scope over the life of the Project*
- *Holds the Activity Percent Complete*
- *Forecasts dates for all remaining work*
- **Projects Resource (labor, dollars and facility space) demand for the execution of the Project**
- **Provides the means to identify and analyze Project Critical Path and Schedule Variance**
- **Contains all of the Code Structure meta data required to perform any of the required analysis in this or another tool**

- **Comprised of two tools:**

- *CloudEVM - EV Engine and Cost Analysis.*
- *Empower - EV Analysis and Reporting tool.*

- **CloudEVM – Provides the Integration and Cost/Performance Computations**

- *Integrates Scheduling data from P6*
- *Integrates Actual Cost from IFS*
- *Performs complex cost and performance calculations*
- *Provides detailed cost analysis of planned vs. earned vs. actual cost*
- *Exports Computed EV data to Empower*

- **Empower - Provides the Execution Metrics of the project in terms of Dollars and Hours**
 - *The reporting toolset out to the customer*
 - *Same toolset used for weekly internal/shipyard management*
 - *Provides historical and trend data/graphs*
 - *Provides projection of Remaining and Total Project costs*
 - *Staffing*
- **Uses the embedded code structure to enable analysis of product, work process and resource performance**

- **Work scope management and solid schedules are the foundation of a good work management system**
- **Usable Earned Value metrics are natural output of a good work management system**
- **Strategic identification of attributes/meta data is critical to support the various stakeholders**
- **It is essential to have an internal system to organically train/mentor project management and production management staff**
- **Austal's culture lent to the rapid adaptation of Earned Value Management**

What's Next?



- **Continue the Rollout of VCD and updated Performance Analysis Tools**
- **Integrate the Performance Analysis Tools with the detail of the VCD**
- **Develop the roles of the people who use/analyze the data**
- **Continue to develop the means to analyze and understand our information**
- **Continue working with our customer on the reporting and data analysis**



**Proudly
Built in
Alabama**