

John Krueger's – Day 1 Keynote Presentation Outline

State of the World

The Four P's and The Seven P's

Fincantieri Marinette Marine Overview

Digital Shipbuilding Innovation Vision

Closing Remarks (Change / Adapt)





SSIWSC 2024

Design. Build. Maintain. Connect.

SSIWSC 2024 – Keynote Presentation (Day 1 AM)

John Krueger – Fincantieri Marinette Marine



A vertical photograph on the left side of the slide showing the complex steel structure of a ship's hull under construction. It features multiple levels of decks, ladders, and structural beams, with a yellow support structure visible at the bottom.

State of the World

What is going on in the world and the impact shipbuilders make

State of the World – News Headlines

- [The state of the U.S. Navy as China builds up its naval force and threatens Taiwan](#)
- [All the Houthi-US Navy incidents in the Middle East \(that we know of\)](#)
- [Navy Gave Combat Action Ribbon to 7 Ships as More Details of Red Sea Combat Emerge](#)
- [Navy faces most intense running sea battle since WWII with Houthis](#)
- [Navy counters Houthi Red Sea attacks in its first major battle at sea of the 21st century](#)



State of the World – News Headlines

**YOU ARE A SILENT
PARTNER IN WHAT
WE DO EVERYDAY**



A photograph of a ship's hull under construction, showing multiple levels of steel decks and a complex network of stairs and railings. The structure is dark grey and set against a light background.

Shipbuilding Problems

- Starting Production without Stable Design
- Skilled Labor Force / Education
- Material post COVID



The Four P's

Importance of understanding the impacts of the P's

The Four P's

PPAPER

STABLE DESIGN
PROPER DRAWINGS

PPEOPLE

SKILLS
LEADERS

PPARTS

PROPER MATERIALS
ON TIME MATERIALS

PPROCESS

BUILD STRATEGY
SEQUENCE OF WORK



The Four P's turn into The Seven P's

PRIOR

PLANNING

PISS

POOOR

PROPER

PREVENTS

PERFORMANCE



Fincantieri Marinette Marine

History of the company



Marinette Marine over the years

1940-50s
Fishing Vessels,
Freight Ships,
Barges, and Tugs

1940s

Early Planning of a Shipyard



1953

Fishing Vessel July 1946



Ice Covered Menominee River



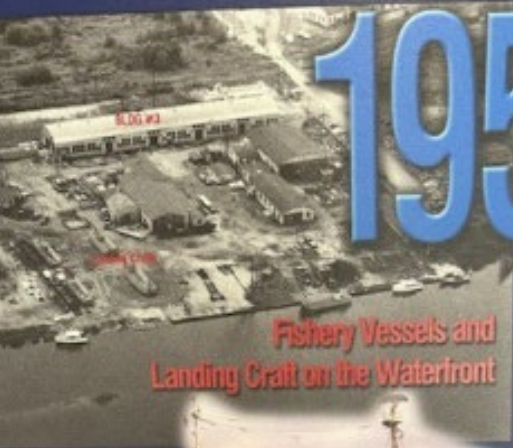
Fishery Vessels on the Waterfront

FINCANTIERI MARINETTE MARINE

1958


1950-60s
Landing Crafts
(LCMs), Tugs,
YTBs, GORs,
Barges, and
Gunboats

**Fishery Vessels and
Landing Craft on the Waterfront**



1964

**Yard Expanded with
Buildings #2 & #4**




Dockside are AGORs and YTBs

FINCANTIERI MARINETTE MARINE


1960s
AGORs, YTBs,
Workboats, Tugs,
Survey Boats,
Landing Crafts,
(LCM and LCUs),
Gunboats, and
Berthing Barges
(YRBM)

**Yard Expanded to
include Buildings #22**




1966

1968



Dockside YTBs and Landing Craft



FINCANTIERI MARINETTE MARINE

Marinette Marine over the years

1970s
GOERs, YTBs,
T-ATFs, LCUs,
LCMs, YRBMs,
Workboats,
and Tugs

1973

1976

Yard includes the
GOER Testing Track

Building of #26
Warehouse

Dockside are T-AFTs and Tug

FINCANTIERI
MARINETTE MARINE

Dockside are YRBMs Barges and Tugs

1982

1984

Wooden Hulls

1980s
Minesweepers (MCMs),
YPs, YRBMs, Tugs, Torpedo
Weapon Retrievers (TWRs),
Research Vessels, and Workboats

Building of Tech Center and Bldg #10

FINCANTIERI
MARINETTE MARINE

1995

1999

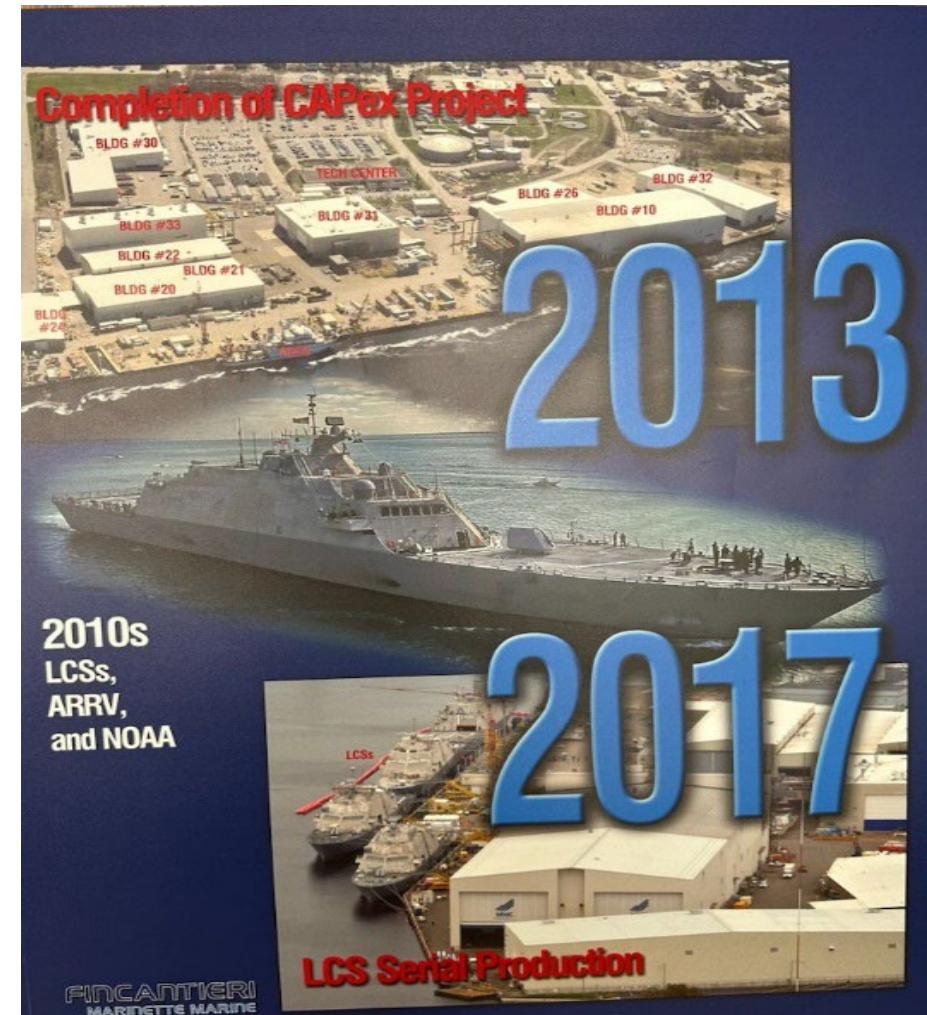
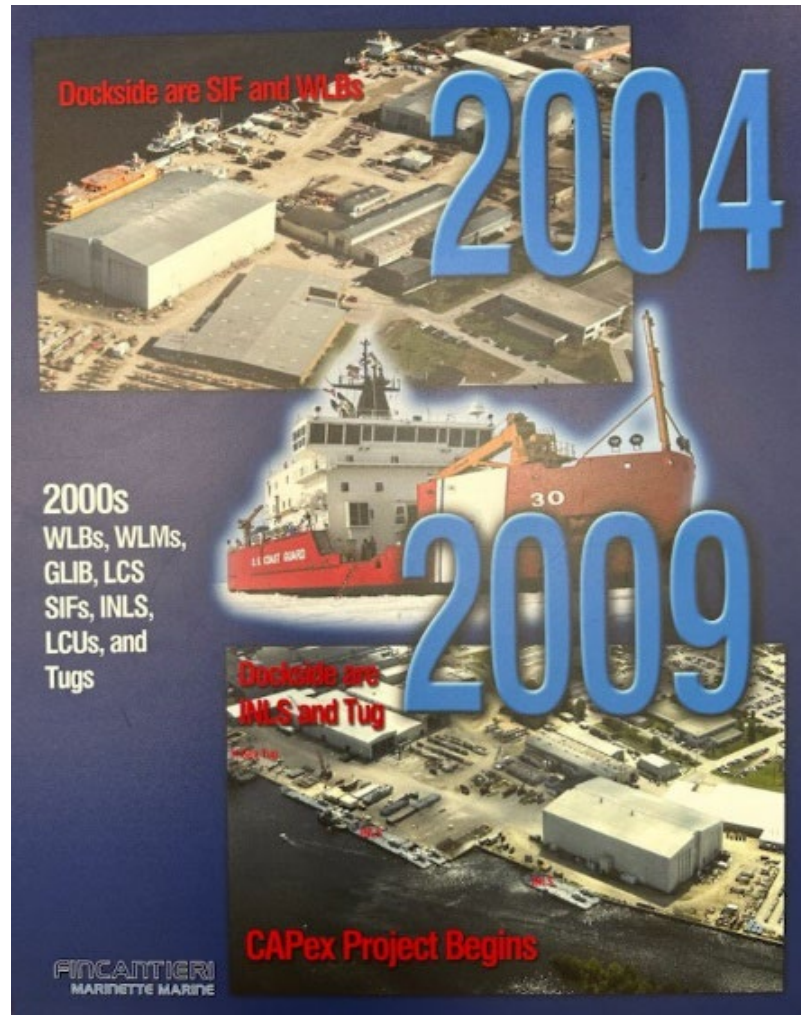
1990s
WLBs, WLMs,
ATONS, MCMs,
Passenger Ferry,
Barracks Barges (APLs),
and Pontoons

Building of WLBs and WLMs

Dockside are WLMs

FINCANTIERI
MARINETTE MARINE

Marinette Marine over the years



TODAY



Fincantieri at a Glance – Global Network

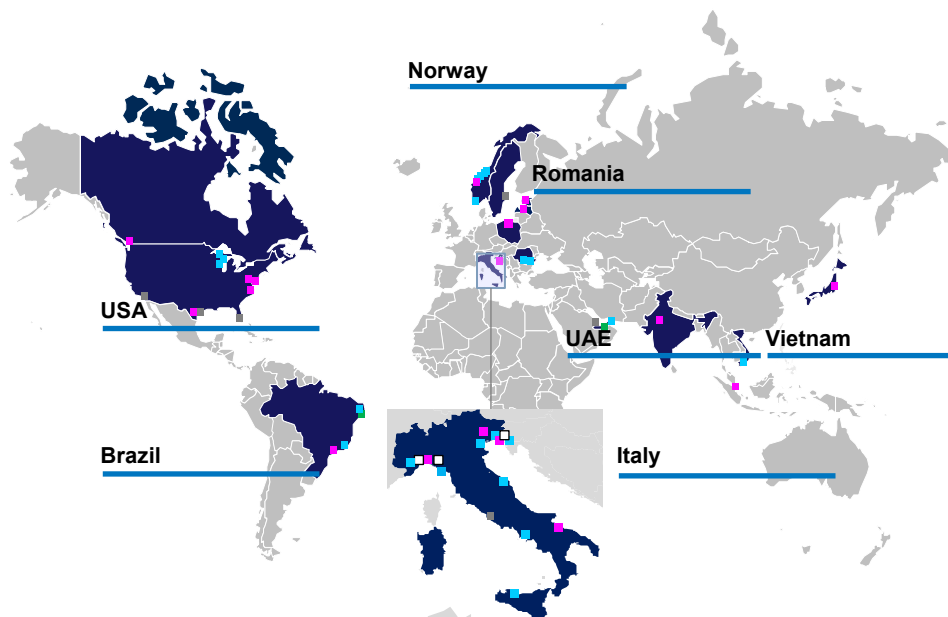
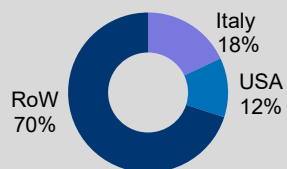
#1 Western Designer & Shipbuilder
230+ years of history, more than 7,000 ships built

~ 106 ships currently in backlog and soft backlog

18 shipyards

Over € 144M in research development and innovation

Revenues by geography

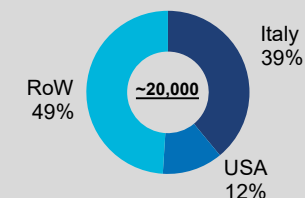


4 continents

~ 8,000 employees in Italy
~ 20,000 employees Total

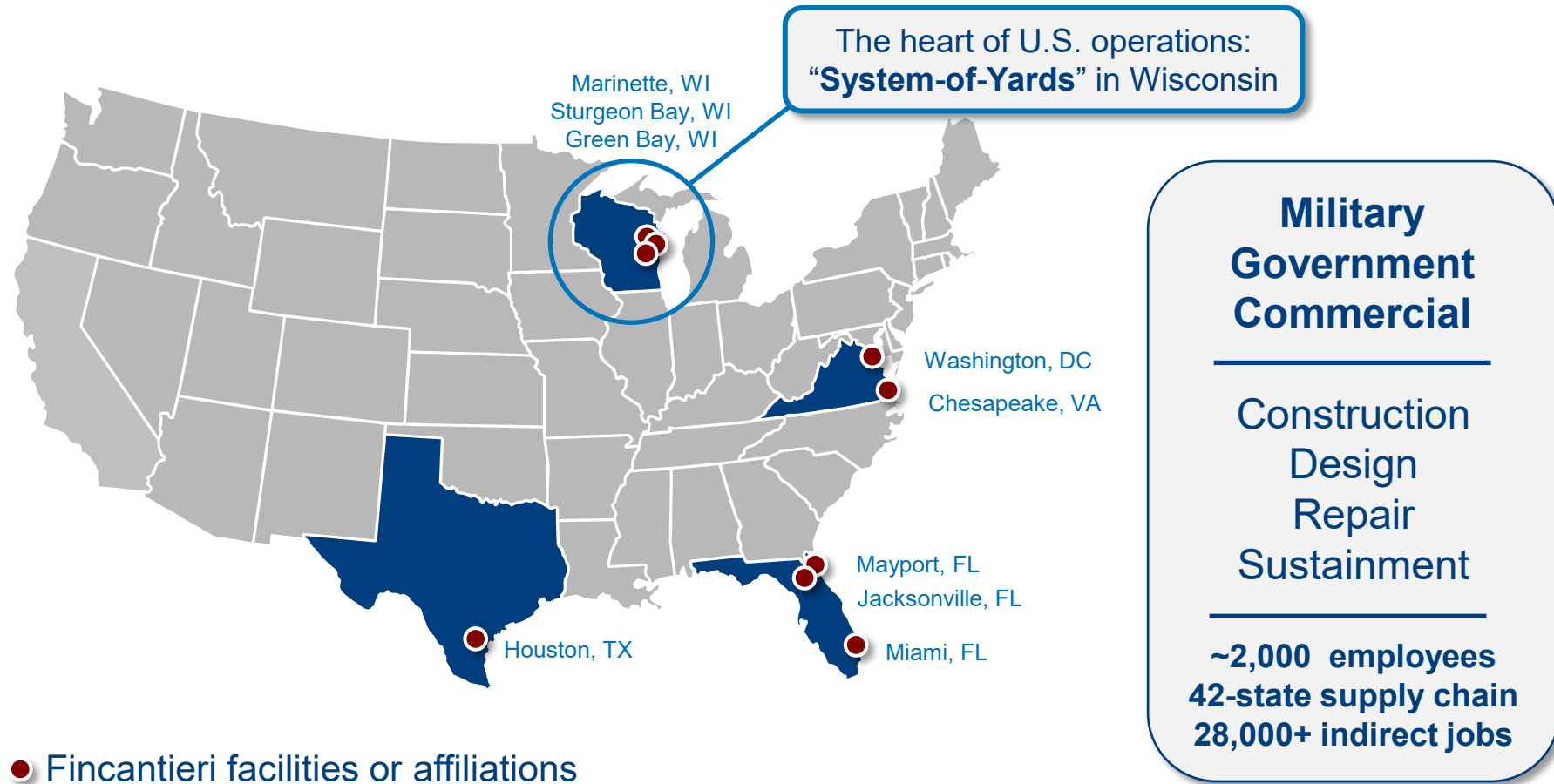
~ 80,000 subcontractors

Employees by location



Fincantieri Marine Group (FMG) Overview

Fincantieri invested \$.5B+ since acquiring Wisconsin Shipyards in 2009



FMG Leverages Distributed Production

Fincantieri Marinette Marine • Marinette, Wisconsin



Designated as Federal Marine Highway Project by DOT Secretary Buttigieg in August 2021.

Project was Sponsored by City of Sturgeon Bay

Fincantieri's unique **System of Yards** concept allows for complete integration of manpower resources, best practices, and streamlined manufacturing processes adopted from Fincantieri shipyards around the globe



Fincantieri ACE Marine • Green Bay, Wisconsin

- 5,429,000 sq ft of shipyard space
- 1,000,000 sq ft climate-controlled manufacturing facilities
- U.S. Navy certified floating drydock for small surface combatants
- 3 sites

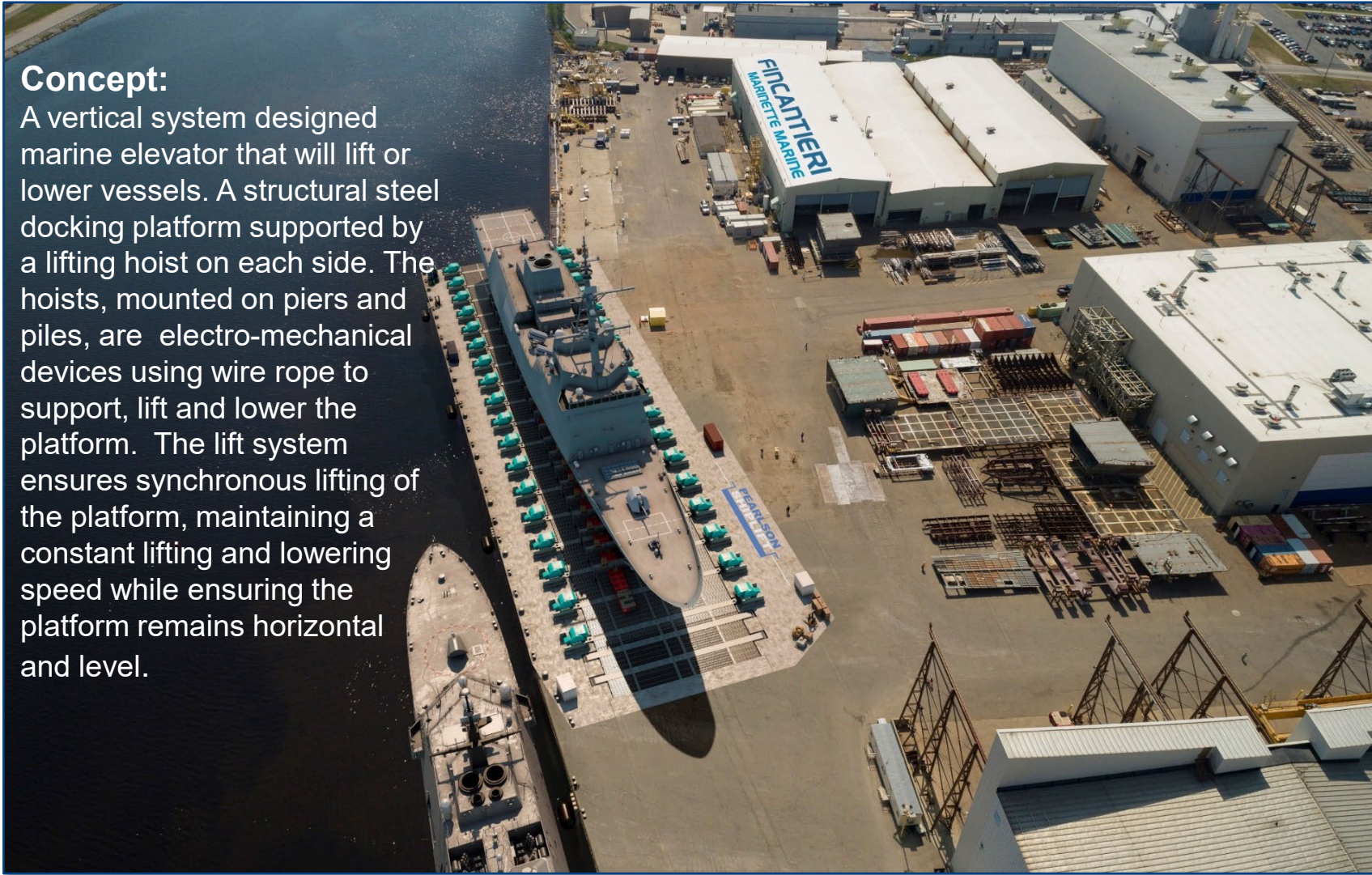
\$0.5 Billion Improvements



Synchrolift (Largest in the United States)

Concept:

A vertical system designed marine elevator that will lift or lower vessels. A structural steel docking platform supported by a lifting hoist on each side. The hoists, mounted on piers and piles, are electro-mechanical devices using wire rope to support, lift and lower the platform. The lift system ensures synchronous lifting of the platform, maintaining a constant lifting and lowering speed while ensuring the platform remains horizontal and level.



FMM Program Portfolio

SURFACE COMBATANTS

Littoral Combat Ship (Freedom-Class) LCS

- Completed 15 of 16
- One remaining Builders Trials in December



Multi-Mission Surface Combatant (MMSC)

- Four ships for Navy
- Foreign Military Sales to Saudi Arabia
- Construction of all MMSC's are underway



Constellation-Class Frigate (FFG)

- FFG-62 started construction in 2022
- 6 ships awarded
- Option for four additional ships



The FFG

496 ft. long (151 m long)

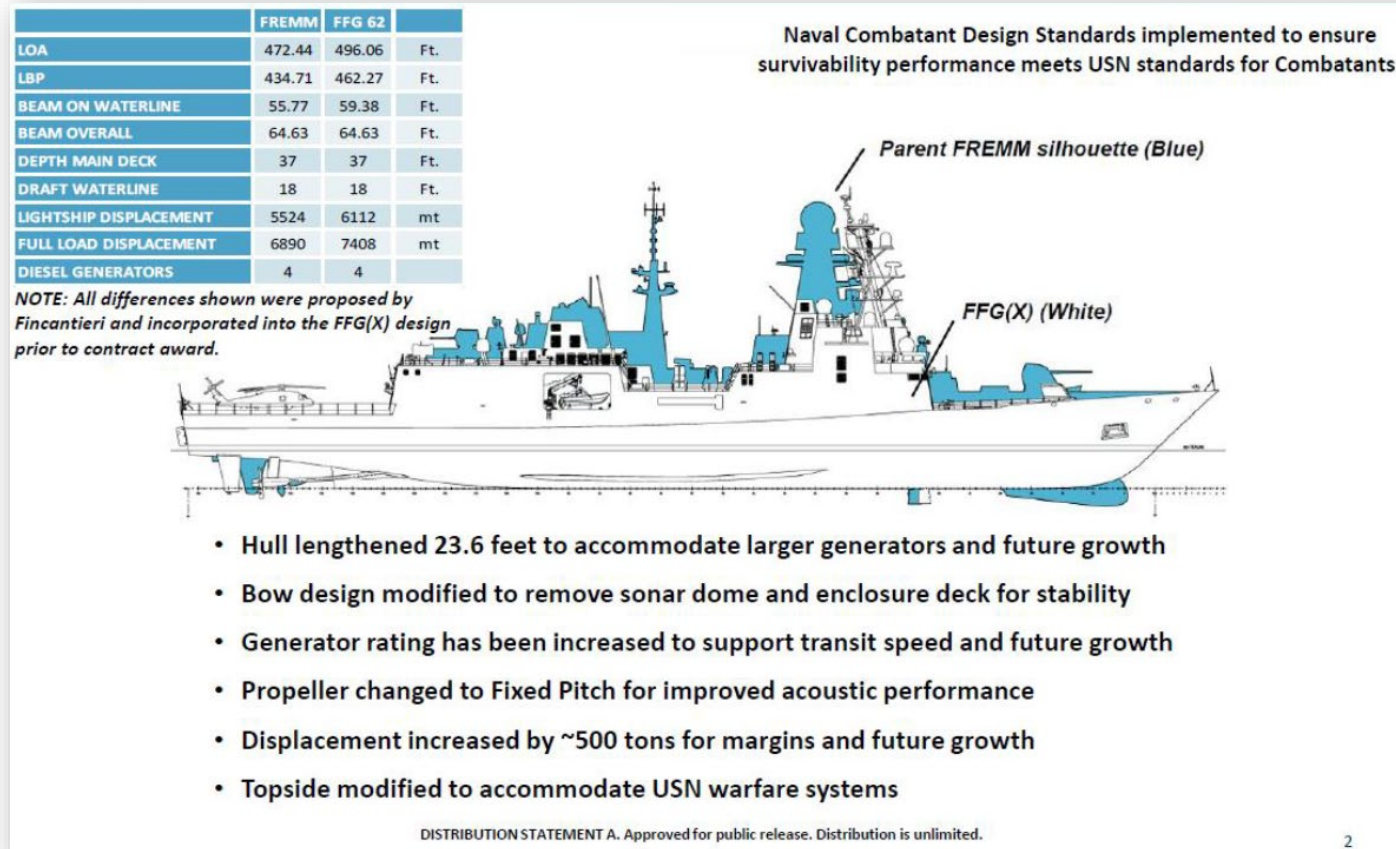
More than 7,000 tons

Up to 30 mph speed (26kn)

32 Mark 41 VLS (missile canister launching system)

1 Gas Turbine, 2 Electric Propulsion Motors, 4 Ship Service Diesel Generators + 1 Auxiliary Propulsion Unit (CODLAG)

200 crew members



2



Digital Shipbuilding Innovation Vision

What technologies should shipyards consider in the future?

Digital Shipbuilding Innovation Vision

Future Technologies to consider in Shipbuilding & Ship Repair

Workforce Development & Retention

Data Governance, Management & Reuse

Collaborative Mobile Technologies



Digital Shipbuilding Innovation Vision

Future Technologies to consider in Shipbuilding & Ship Repair

Artificial Intelligence



AR/VR/XR Visualization



Wearable Technologies



Digital Shipbuilding Innovation Vision

Future Technologies to consider in Shipbuilding & Ship Repair

Robotics



Cobots



Additive Manufacturing



Digital Shipbuilding Innovation Vision

Future Technologies to consider in Shipbuilding & Ship Repair

Machine Learning



Cloud Computing



Cybersecurity



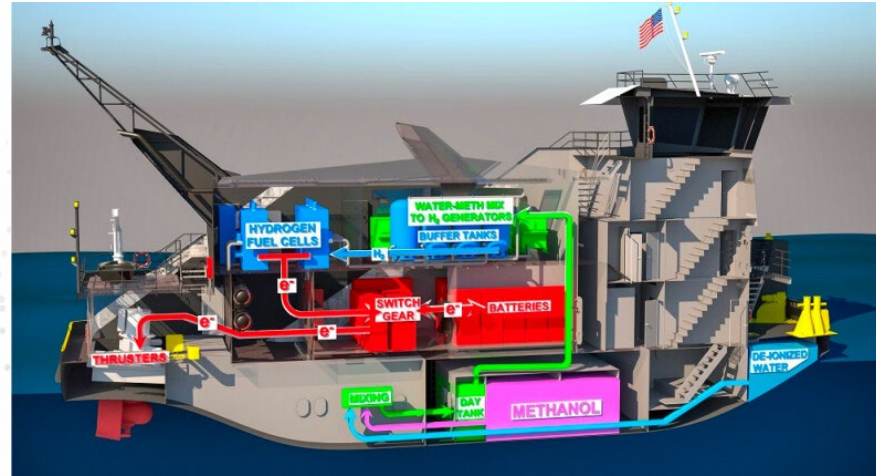
Digital Shipbuilding Innovation Vision

Future Technologies to consider in Shipbuilding & Ship Repair

Autonomous Ships



Hybrid Ships (Alternative Fuels)



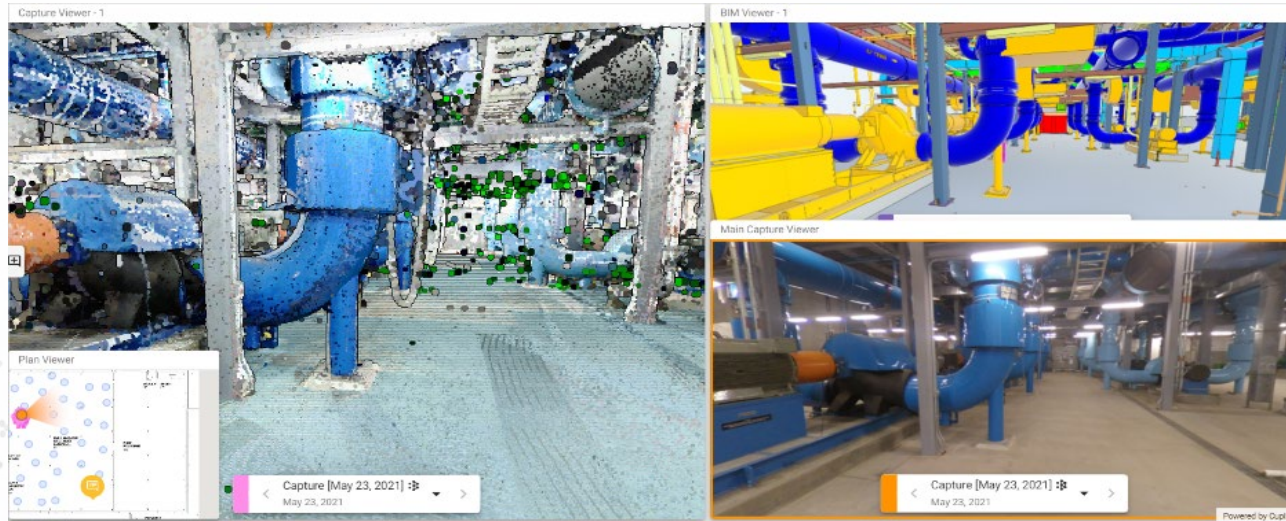
Electric Ships



Digital Shipbuilding Innovation Vision

Future Technologies to consider in Shipbuilding & Ship Repair

Digital 3D Capture – Survey, QA, Visual Status



Digital 3D Capture – Fleet Sustainment (MRO)



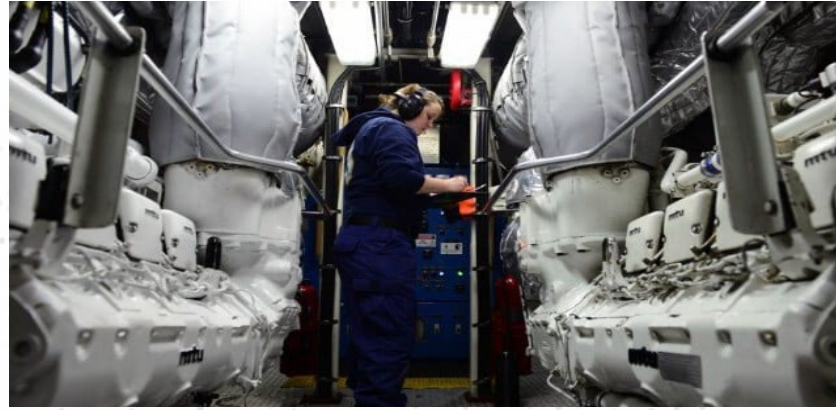
Digital Shipbuilding Innovation Vision

Future Technologies to consider in Shipbuilding & Ship Repair

Condition Based Monitoring



Condition Based Maintenance



Fleet Sustainment MRO





Closing Remarks

Key take-away

Key Take-aways

- The World is constantly changing
- Technology is constantly changing
- Strong Partnerships are important in adapting to change
- The Shipbuilding and Repair Industry will need to learn how to adapt to survive





Questions?

Thank You for your attention!