

# Short Sea Shipping Proposed Panel Project

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# Project Overview

## **Continued NSRP engagement with S3**

- An ECB initiative
- Serve as a bridge to a broader effort

## **Focus on reducing the costs of constructing S3 vessels**

- Concentration on Ro-Ro vessels of varying size and configuration

## **Facilitate forming consortia of owners, operators, U.S. yards, partnered foreign yards, suppliers and support technical companies**

## **Follows recommendations of S3 Workshop participants**

- Application of “Virtual Shipyard” concept
- Leverage partnerships between U.S. and foreign shipyards
- Leverage examples of success in overseas construction methods and supply chain business practices applicable to S3
- Leverage examples of success in overseas designs applicable to S3

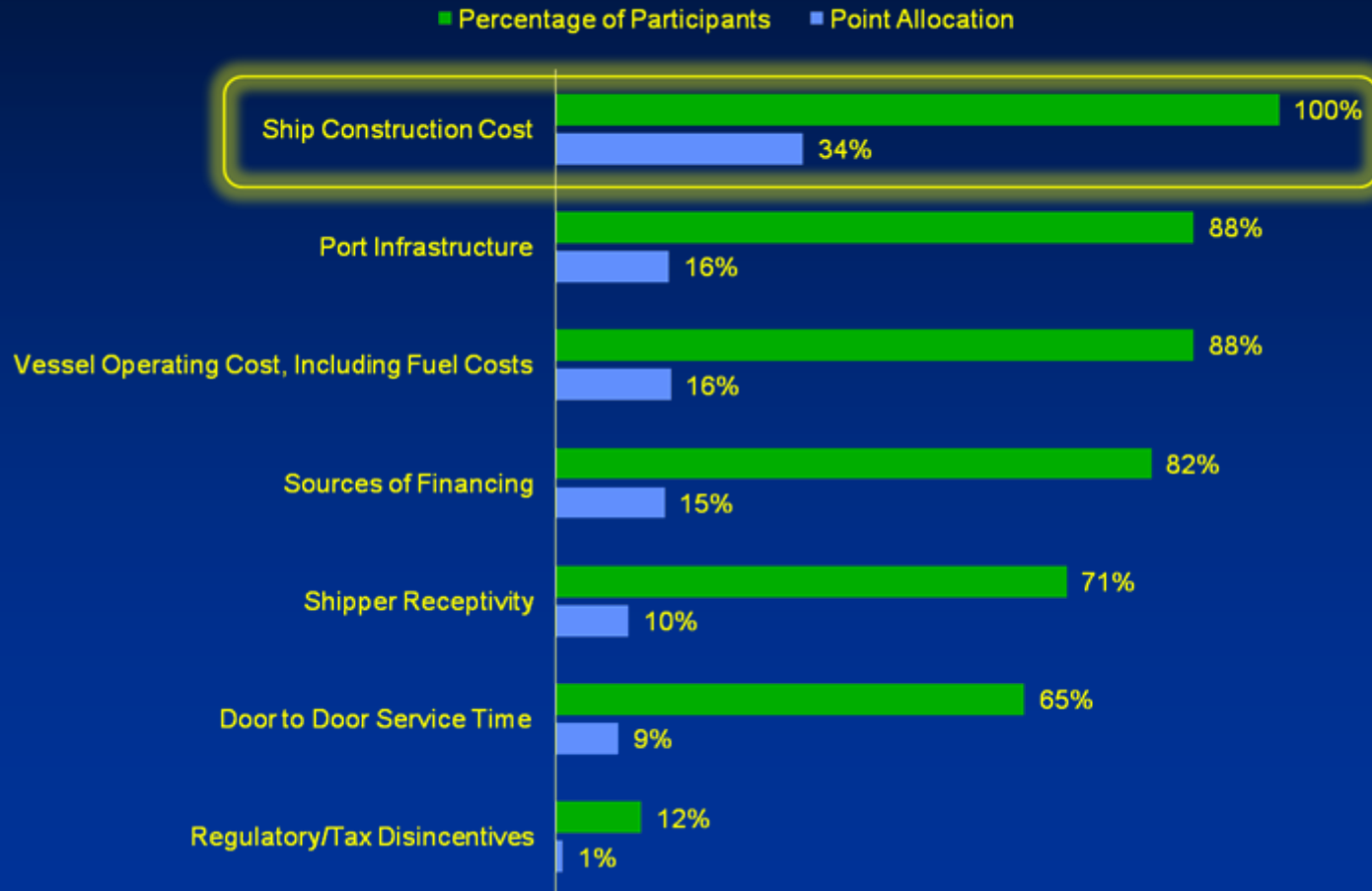
## **Project crosses multiple NSRP panels**

- Product Design and Material Technologies
- Business Process Technologies
- Shipyard Production Process Technologies

## **Focus areas applicable to Naval ship design and construction**

# S3 Survey Results - Challenges

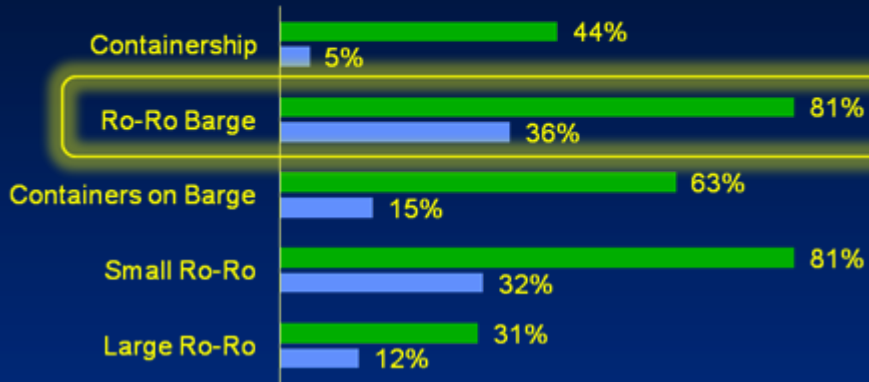
## Challenges



# S3 Survey Results - Vessel Types

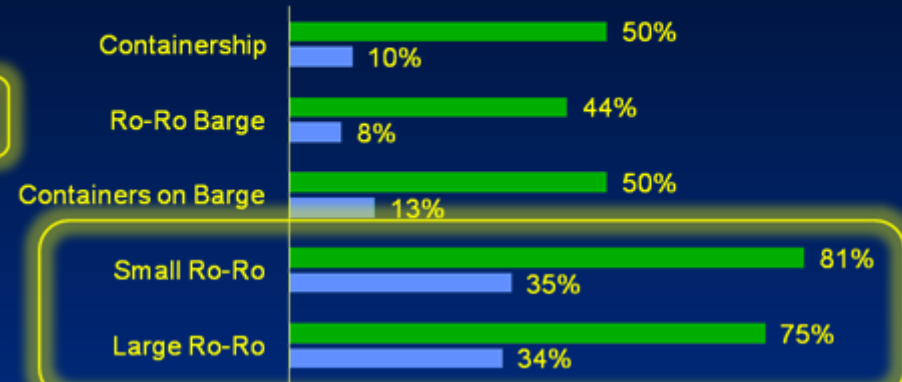
## Vessel Types - Short Route

■ Percentage of Participants ■ Point Allocation



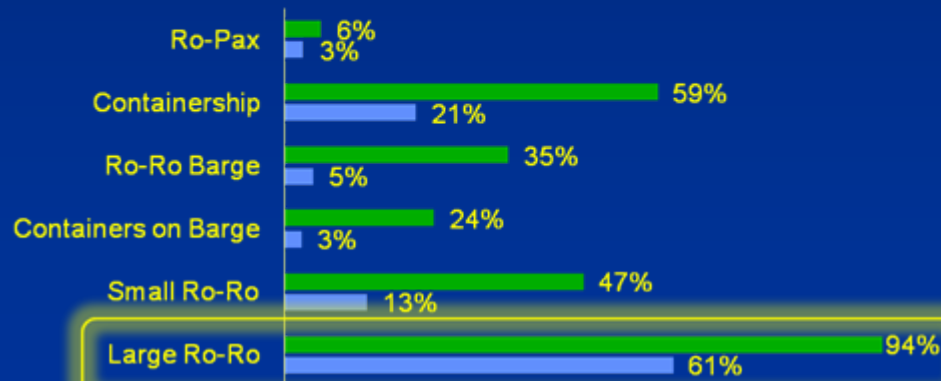
## Vessel Types - Moderate Route

■ Percentage of Participants ■ Point Allocation



## Vessel Types - Long Route

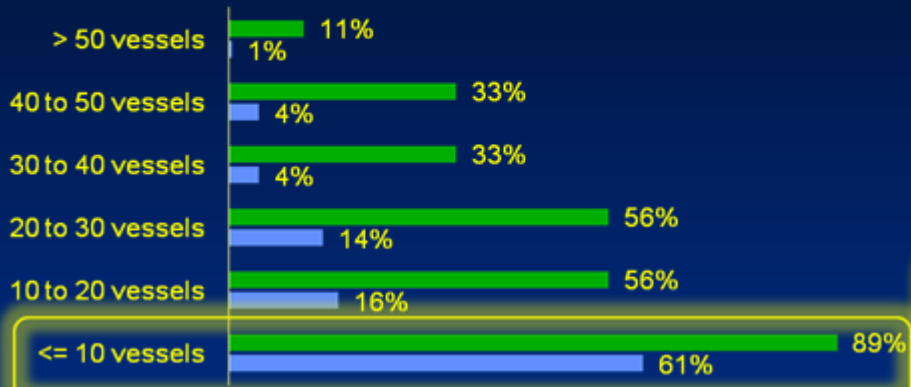
■ Percentage of Participants ■ Point Allocation



# S3 Survey Results - Series Construction

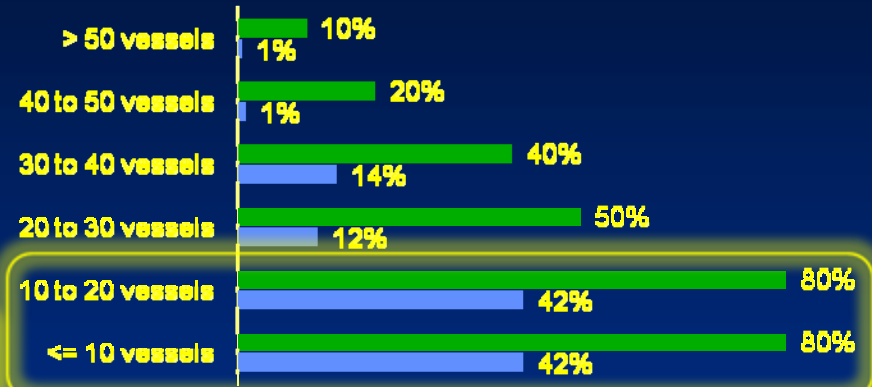
## Vessel Series - Short Route

■ Percentage of Participants ■ Point Allocation



## Vessel Series - Moderate Route

■ Percentage of Participants ■ Point Allocation



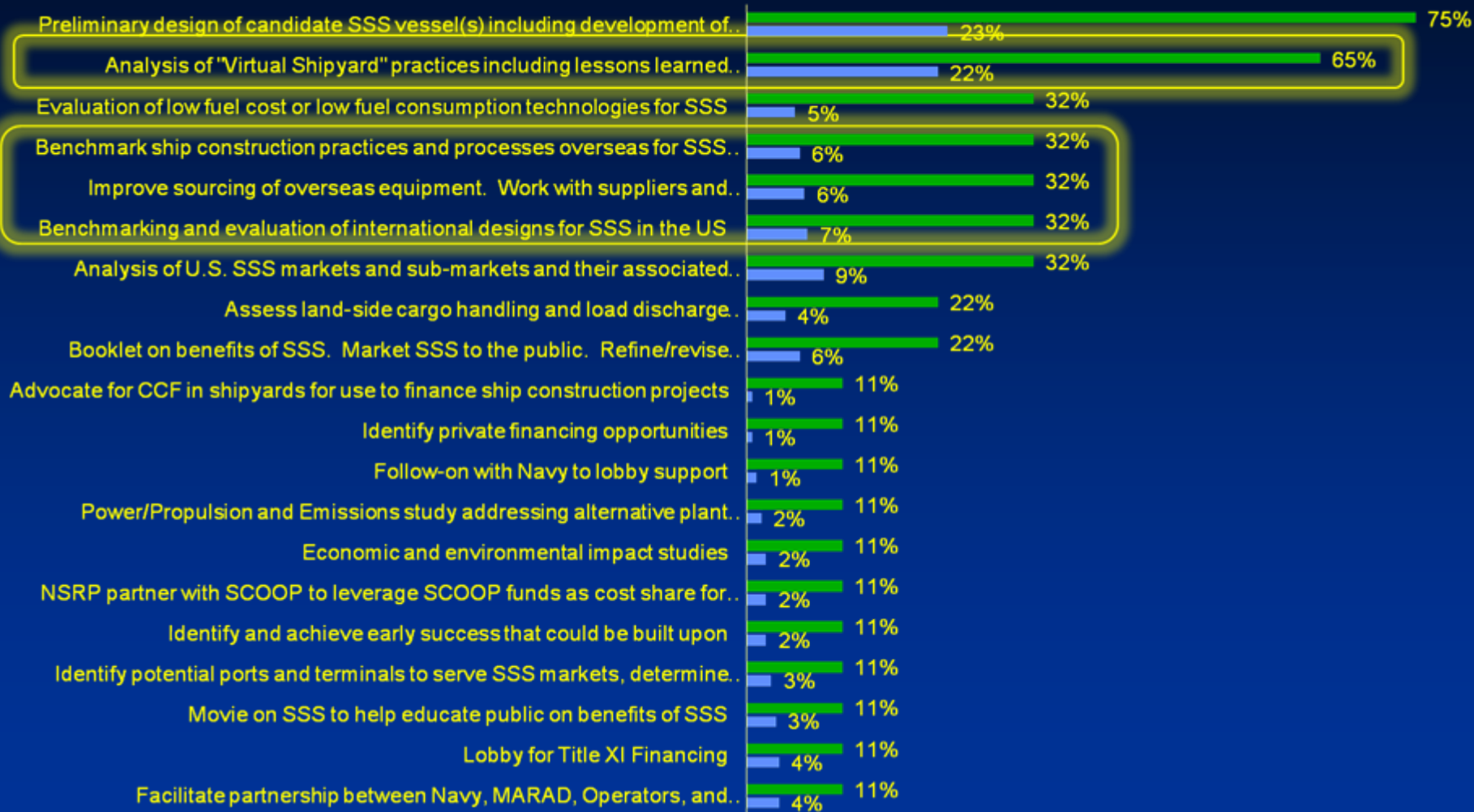
## Vessel Series - Long Route

■ Percentage of Participants ■ Point Allocation



# Recommendations

■ Percentage of Participants ■ Point Allocation



\* Does not include additional general recommendations such as follow-on RA project and follow-on workshop

\*\* Not all recommendations are within NSRP scope

# Proposed Project Scope

- | **Multi-day event, three to four days**
  - Workshop format
  - Facilitate partnerships
- | **Focus on reducing ship construction costs through:**
  - “Virtual Shipyard” collaborative approach to ship construction and project management
  - Lessons learned overseas in applicable designs, construction methods, and project management
  - Lessons learned overseas in supply chain management
  - Opportunities and approaches for partnership between U.S. and foreign shipyards
- | **Experts brought in to participate in workshop**
  - Representatives of foreign shipyards
  - U.S. shipyard representatives with experience partnering with foreign yards
  - U.S. shipyard representatives with experience in collaborative construction

# Anticipated Project Participants

## | **U.S. Shipyards**

- Participants from previous S3 workshop including Bender, NASSCO, Atlantic, NGSS, Aker Yards, and Marinette/Manitowoc
- Invitations to additional U.S. shipyards that did not participate in previous S3 workshop

## | **Potential Foreign Shipyards**

- Fincantieri, Aker, Daewoo, Hyundai, Damen

## | **S3 Stakeholders and Beneficiaries**

- Potential owners and operators
- Design agents engaged with potential owners and operators
- U.S. Navy representatives involved in Ro-Ro/Auxiliary ship design and construction programs

# Project Outcomes

## Identification of best in class practices for S3 vessel design and production:

- Designs
- Construction methods including virtual shipyard approach
- Project management
- Design for Production challenges
  - » Collaborative multi-yard environment
  - » Foreign designs
- Supplier Management

## Facilitation of partnerships between U.S. and foreign shipyards for the purpose of reducing U.S. ship construction costs

## Facilitation of partnerships between U.S. shipyards and potential owners

## Development of general design, business practice, and build strategies for S3 resulting in reduced U.S. ship construction costs

## Improved understanding of U.S. shipbuilding costs and cost drivers for vessels applicable to S3

# What is a Virtual Shipyard?

- **A combination of two or more ship construction facilities and personnel with a capable overall management and technical group to organize the planning, scheduling, budgeting, design and engineering, procurement, production control, testing and overall program management for the construction of ships**
- **The overall contractual responsibility can rest with:**
  - A capable lead yard
  - An experienced Engineering and Construction firm
  - A shipowner/shipyard group J/V company
  - Other type of organization
- **A key element is the use of significant outsourcing of major ship systems and physical portions of the ship.**

# What is Meant by Collaboration With Foreign Shipyards?

- | **Partner with major international shipyard**
  - License proven ship design
    - » Reduces cost and technical risk
  - Single source for material and equipment
    - » Economies of scale eliminate any “Jones Act premium”
  - Technology transfer
    - » Potential to improve productivity with construction, facility, and process input from International partner
- | **Model currently being executed at Aker Philadelphia and GD NASSCO for Jones Act product tankers**

