



Software, services, and  
expertise for the  
Business of Shipbuilding.

# Digital Shipbuilding Innovation

## SSI Vision

David Males, Director of Business Development



# Digital Shipbuilding Innovation – SSI Vision

## Introduction

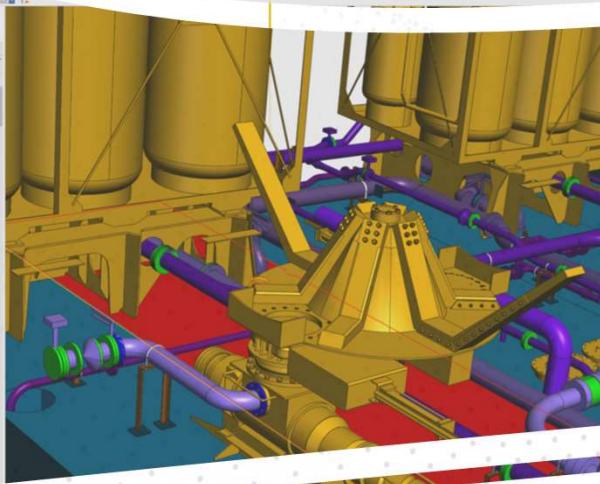
- ❑ SSI at a Glance
- ❑ SSI's Vision for Digital Shipbuilding Innovation
- ❑ Impact on the Shipbuilding Industry
- ❑ Future Vision
- ❑ Collaboration with the NSRP
- ❑ A Call to Action

# SSI at a Glance

Software  
Solutions

Technology  
Expertise

Shipbuilding  
Expertise



# SSI and the Business of Shipbuilding

more than

30

Years



more than

600

Shipbuilders



more than

7000

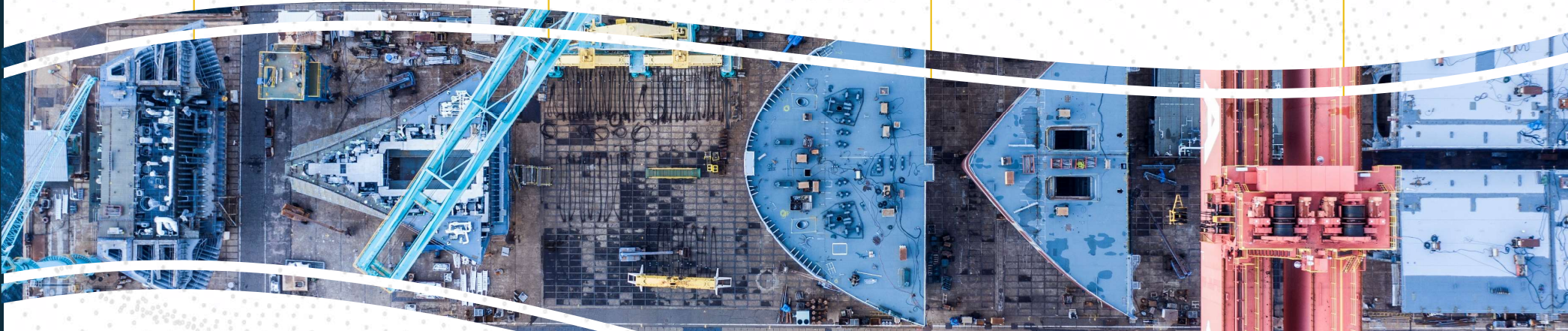
Licenses



more than

30

Universities



# Digital Shipbuilding Innovation – SSI Vision

## Industry Challenges

- ✓ Overcoming Inefficiencies
- ✓ Improving Collaboration
- ✓ Integrating New Technologies

# Digital Shipbuilding Innovation – SSI Vision

## The Dangers of Getting Caught Up in an Illusion

*When digital transformation is done right, it's like a caterpillar turning into a butterfly, but when done wrong, all you have is a really fast caterpillar. .*

*- George Westerman*

# Digital Shipbuilding Innovation – SSI Vision

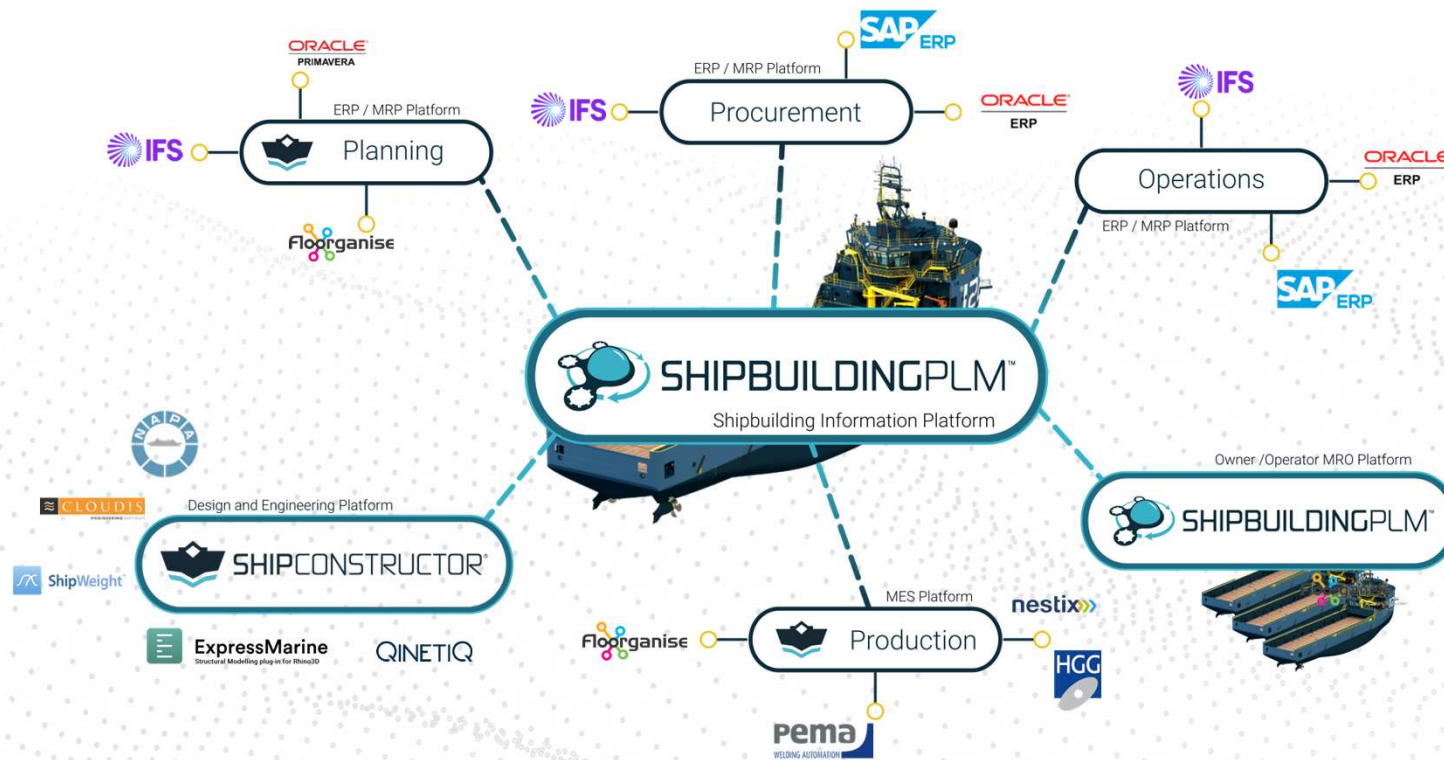
## SSI's Vision for the Future

*Everyone is going through a Business Transformation alongside their Digital Transformation. Whether they know it or not.*

*Denis Morais, SSI CEO*

# Digital Shipbuilding Innovation – SSI Vision

## SSI's Vision for the Future





# Digital Shipbuilding Innovation – SSI Vision

## Vision for the Future

- ✓ Tackling the massive scale of shipbuilding projects.
- ✓ Focusing on today and minimizing risk.
- ✓ Leveraging the global and distributed nature of shipbuilding.
- ✓ Working with lifecycles measured in decades.
- ✓ Managing the unique aspects of the shipbuilding industry

# Digital Shipbuilding Innovation – SSI Vision

## SSI and NSRP Collaboration

SSI has invested heavily in many different NSRP projects since 2004, partnering with shipyards and vendors to crystallize innovation.

The benefits are two-way since the program enables shipbuilders and participating partners to direct their investment towards the U.S. shipbuilder's most pressing challenges.

# SSI NSRP Projects Participated / Lead (2003 – 2024)

21 Years of Participating in NSRP Projects

**36 total**

NSRP Research Announcement Projects

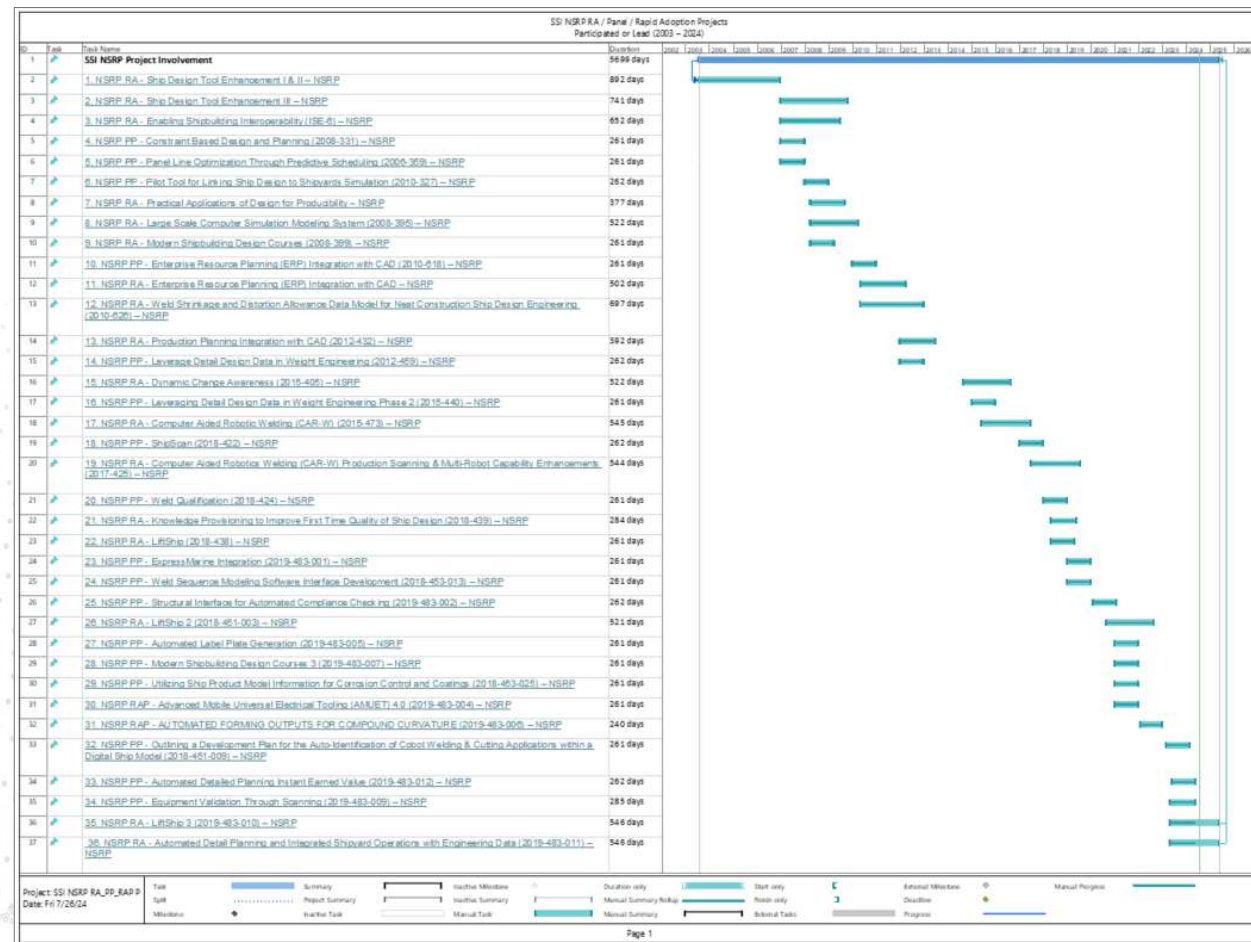
**17 total**

NSRP Panel Projects

**17 total**

NSRP Rapid Adoption Projects

**2 total**



# Digital Shipbuilding Innovation – SSI Vision

## SSI and NSRP Collaboration – Key Projects and Contributions

- **Computer-Aided Robotic Welding:** SSI together with Bollinger Shipyard and Wolf Robotics, introduced robotic welding driven by 3D model data, improving productivity and allowing human workers to focus on higher-value tasks.
- **Automated Steel Plate Forming:** SSI together with Austal Shipyard collaborated on a project to automate the steel plate forming process using 3D model data and advanced press technology.

# Digital Shipbuilding Innovation – SSI Vision

## SSI and NSRP Collaboration – Key Projects and Contributions

- **3D Scanning and Component Verification:** SSI solutions along with DotProduct's 3D scanning tools were used to ensure accuracy in component production and installation, reducing errors and streamlining the construction process.
- **LiftShip Project:** SSI has worked on the LiftShip project since 2016, which uses 3D modeling for weight studies and lifting simulations to enhance structural integrity during ship construction.

# Digital Shipbuilding Innovation – SSI Vision

## SSI and NSRP Collaboration – Key Projects and Contributions

- **Steel Plate Forming Automation:** Austal Shipyard with support from SSI and the NSRP, automated the forming of steel plates using a Nieland press.
- **Detail Planning Process Automation:** Floorganise, Ingalls Shipbuilding, Austal USA, General Dynamics BIW, Fincantieri Marinette Marine, and other shipyards, with the support of SSI, are working within an NSRP project to automate the detail planning process and coordinate the project plan through a direct integration with the product model.

# Digital Shipbuilding Innovation – SSI Vision

## SSI and NSRP Collaboration – Impact on Shipbuilding Innovation

### ➤ **Shared Knowledge and Industry Benefits**

- Contribute to the broader shipbuilding community by sharing outcomes and innovations across the industry, aligning with NSRP's mission.

### ➤ **Efficiency and Cost Reduction**

- Led to increased efficiency, reduced costs, and improved project timelines, benefiting both the Navy and commercial shipbuilders.

# SSI's Involvement in NSRP - "Value"

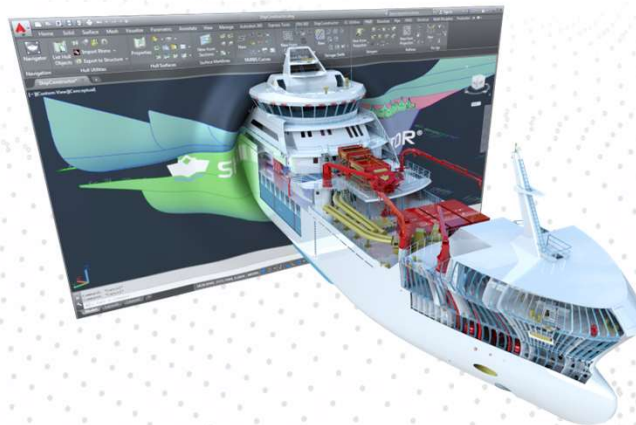


Collaborate with Shipbuilders



**Value** in understanding the process, data, knowledge, and desired results shared by shipbuilders

Build Targeted Software Solutions for Shipbuilding



**Value** by increasing the capacity to develop targeted solutions through funding for industry technology partners and the shipbuilders

Improve the Business of Shipbuilding



**Value** by solving real shipyard problems through improving processes, products, and capabilities for shipbuilders



# Digital Shipbuilding Innovation – SSI Vision

## SSI and NSRP – Future Vision and Ongoing Collaboration

### ➤ **Ongoing Projects**

- SSI is committed to continuing its collaboration with the NSRP, focusing on emerging technologies and further integrating digital tools into shipbuilding processes.

### ➤ **Strategic Goals**

- Connect SSI's future vision with the NSRP's goals to continuously improve U.S. shipbuilding capabilities through digital innovation.

# Digital Shipbuilding Innovation – SSI Vision

In summary





# Questions?

Thank you!

# Learn more...



SSI Website

<https://www.ssi-corporate.com>



Lighthouse Blog

</blog/lighthouse/>



Waveform Blog

</blog/waveform/>



Crow's Nest Blog

</blog/crowsnest/>



SSI Nexus



SSI Learning

