The NSPS Shipbuilding Value Chains

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Recent Clients
Project Scope

Value chains of:

- Arctic/Offshore Patrol Ships (AOPS)
- Polar Icebreaker & Science Vessels (OOSV/OSFV)
- Joint Support Ships (JSS)
Research Objectives

- Discover the *value chain position* of Nova Scotia’s companies;
- Identify *innovation and technology trends* in the shipbuilding value chains;
- Make *recommendations* to industry and government about:
  - Regional value chain development activities
  - Supporting Nova Scotia companies
  - Moving into higher value-added activities
Ship Systems & Subsystems

Propulsion system
- Engine
- Generator
- Control unit
- Electric motor
- Thrust block
- Propeller shaft
- Propeller

Electric plant
- Electric power generation and distribution
- Lighting systems

Auxiliary systems
- Ship steering system
- Climate control, fire extinguishing & water systems
- Anchor handling & stowage systems
- Replenishment-at-sea
- Berthing, mooring & towing systems
- Fluid, fuels handling & storage
- Auxiliary boats & stowage system
- Aircraft handling, servicing & stowage
- Environmental pollution control systems

Hull
- Steel plates ("skin")
- Keel
- Girders
- Frames
- Beams

Command & surveillance systems
- Command system
- Integrated Platform Management System (IPMS)
- Navigation system
- Communication systems
- Electromagnetic environmental effects (E3) & radiation control
- Meteorological & oceanographic system
- Surveillance systems

Outfit & furnishings
- Ship fittings
- Deck machinery
- Living spaces
- Hull compartments
- Preservatives & coverings

Armament systems (if relevant)
- Weapon systems
- Small arms & ammunition stowage/handling
- Helo capable – normally light helo/ Cyclone if reqd
- Boats – mix of arrangements to support RCMP ERT, SOF, SAR.
- Landing craft (Coast Guard type barge)
- Space for deck cargo and up to 6 containers – flexible arrangement for boats or cargo or containers as required

Source: RCN
# Platform Systems - Hull Components

<table>
<thead>
<tr>
<th>Steel</th>
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<tbody>
<tr>
<td>Essar Steel Algoma (ON, Canada)</td>
<td>Steel</td>
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<tr>
<td>Gerdau Amersteel Corporation (ON, Canada)</td>
<td>Steel</td>
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<tr>
<td>Industeel (Belgium)</td>
<td>High Strength/High Tensile Steel (EH 50 or higher)</td>
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<tr>
<td>JFE Steel Corporation (Japan)</td>
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<tr>
<td>Kobe Steel Co (Japan)</td>
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<tr>
<td>Nippon Steel Co (Japan)</td>
<td>High Strength/High Tensile Steel (EH 50 or higher)</td>
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<tr>
<td>SSAB EMEA AB (Sweden)</td>
<td>High Strength/High Tensile Steel (EH 50 or higher)</td>
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<tr>
<th>Coating</th>
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<tbody>
<tr>
<td>AkzoNobel/International Paint (U.K.; Canada)</td>
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<tr>
<td>Chugoku Marine Paints Ltd. (Japan)</td>
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<td>Jotun Paints Ltd. (U.K)</td>
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<td>PPG Coatings SPRL/BVBA (Belgium)</td>
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<td>Sigma Samsung Coatings (Korea)</td>
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<td>Subsea Industries NV (Belgium)</td>
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<th>Propulsion System</th>
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<tr>
<td>ABB (Switzerland, U.S.A.)</td>
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<td>G.E. (U.S.A.)</td>
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<td>MAN Diesel and Turbo (Germany)</td>
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<tr>
<td>Rolls Royce (U.K., U.S.A.)</td>
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<td>Wartsila (Finland)</td>
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Opportunities for Nova Scotia

• *Direct sales*
• *Access the multinational firms’ supply chains*
• *Upgrading skills and technology*
• *Develop niche areas in the shipbuilding value chain*
Recommendations

1. Supporting NS Companies
   - Connect with key players in the value chain
   - Help SMEs overcome barriers to entry in the shipbuilding value chain
   - Inform value chain actors about the effect of public & private regulations on the value chain
   - Communication about NSPS and relevant policies to companies and citizens

2. Moving into higher value activities
   - Evaluate entrepreneurial potential,
   - Focus sector development strategies
   - Grow and nurture a pool of technology-based entrepreneurs

3. Regional Value Chain development activities
   - Connect with key players in the non-combat value chains
   - Plan for the future
Thank you for your attention!

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