Industry perspective on MASS

International Chamber of Shipping
Shaping the Future of Shipping

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The International Chamber of Shipping (ICS)

Who are we?

Principal International Trade Association for the Shipping Industry
Over 80% of world’s merchant tonnage represented
Founded in 1921, London, United Kingdom
Offices in Hong Kong & Shanghai
(ICS) members on autonomous ships

Thoughts of shipowners

“How likely are you to incorporate Autonomous Ships (MASS) into your fleet within the next 5–10-year period?”

- **YES** – 22%
- **MAYBE** – 34%
- **NO** – 44%
An industry perspective
What do we mean by ‘Autonomous’

➢ **IMO MASS code**

- **Degree one:**
- **Degree two:**
- **Degree three:** Remotely controlled ship without seafarers on board: The ship is controlled and operated from another location.
- **Degree four:** Fully autonomous ship: The operating system of the ship is able to make decisions and determine actions by itself.
Current state of play – ‘Short Sea Shipping’

➢ Current applications

➢ Short sea ferry services
➢ Harbour support vessels
➢ Scientific research
➢ National feeder services
Long Term Goals

➢ Mandatory MASS code deadline 2028
➢ Regulation fit for purpose
➢ Business case for shipowners
Opportunities

➢ Safety – reduced risk
➢ Environmental protection
➢ Reduction in road and rail traffic
➢ Increased cargo carrying capacity
➢ Integrated supply chain integration
➢ Seafarer skill transition
Seafarer Workforce

➢ 5 yearly industry study into numbers of STCW qualified seafarers
➢ Supply & demand of seafarers
➢ Next 5-year growth of fleet & seafarers

*Estimated five largest seafarer supply countries 2021*

<table>
<thead>
<tr>
<th>All Seafarers</th>
<th>Officers</th>
<th>Ratings</th>
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<tbody>
<tr>
<td>1: Philippines</td>
<td>Philippines</td>
<td>Philippines</td>
</tr>
<tr>
<td>2: Russian Federation</td>
<td>Russian Federation</td>
<td>Russian Federation</td>
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<tr>
<td>3: Indonesia</td>
<td>China</td>
<td>Indonesia</td>
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<tr>
<td>4: China</td>
<td>India</td>
<td>China</td>
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<tr>
<td>5: India</td>
<td>Indonesia</td>
<td>India</td>
</tr>
</tbody>
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Barriers

➢ Legal implications
➢ Start-up costs
➢ Technology – connectivity
➢ Technology – life saving and fire fighting appliances
➢ Security
➢ Regulation
Seafarers

➢ Seafarers need to be at the heart of everything we do in the industry.
➢ ‘Just transition’ to support jobs and digitalisation.
➢ Training needs to be revaluated with STCW review.
➢ Onshore operators skillsets to be determined
➢ ‘Crewing’ of MASS operation centres
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