ABOUT RIGHTSHIP...

Working to improve the safety and environmental sustainability of the world’s maritime fleet.
We bring together the best of

• data

• technology

• human expertise

         . . . . . . for managing maritime

         & environmental risk
If we do not change course by 2020, we risk missing the point where we can avoid runaway climate change, with disastrous consequences for people and all the natural systems that sustain us.

Dear friends of planet Earth,
Thank you for coming to the UN Headquarters today. I have asked you here to sound the alarm. Climate change is the defining issue of our time – and we are at a defining moment. We face a direct existential threat.


I commit myself, and the entire United Nations, to this effort. We will support all leaders who rise to the challenge I have outlined today.
Partnering for Safety & Sustainability

NOAA’s Experimental Long Range River Flood Risk Assessment

Greater than 50% chance of exceeding river flood levels during Mar-Apr-May

Figure 2: Greater than 50% chance of exceeding minor, moderate, and major river flood levels during March - April - May
Partnering for Safety & Sustainability

Rio Tinto warns climate inaction poses 'greatest long-term threat'

. . . Rio Tinto Chairman Simon Thompson said society – particularly millennials – were demanding higher standards for the companies they worked for and invested their money in. He signaled a renewed emphasis from Rio Tinto’s board on environmental, social and governance issues, and . . . . transition to a “low carbon economy”.

“Perhaps the greatest long-term threat to Rio Tinto is if business, investors, consumers and especially governments, collectively fail to take action on climate change,” he said.
Seven charts that explain the plastic pollution problem

10 December 2017

Marine life is facing "irreparable damage" from the millions of tons of plastic waste which ends up in the oceans each year, the United Nations has warned.
"Youthquake" was crowned as Oxford Dictionaries' word of the year 2017.

YOUTHQUAKE - a significant cultural, political, or social change arising from the actions or influence of young people.

2018!!!
Operational Risk - 2018

- 1,392 vessel casualties
- 1,279 incidents (51 pollution based)
- 2,442 detentions – resulting in 212,640 detained hrs
- > 2,000 global class withdrawal records
- 1744 Vessels removed from Customer Supply chain

- More than 1 billion tonnes of CO₂ emitted
- Sanctions / Piracy / Human Rights violations
OPERATING BEYOND COMPLIANCE
CORPORATE SOCIAL RESPONSIBILITY

What are you doing about...

- Safety?
- Environmental Sustainability?
- Stakeholder Welfare?
How do we know it works?

Rightship.com/insights
How do we know it works?
Rightship.com/insights

2018 vessels incident ratio by risk rating

Incidents on All Vessels (global fleet)

Incidents on All Vessels (vetted fleet only)
How do we know it works?
Rightship.com/insights

**RIGHTSHIP**
2018 vessels incident ratio by risk rating

**Incidents on Bulk Carriers (global fleet)**

- 32.0% (risk rating 1)
- 3.8% (risk rating 2)
- 2.3% (risk rating 3)
- 2.3% (risk rating 4)
- 1.9% (risk rating 5)

- x16

**Incidents on Bulk Carriers (vetted fleet only)**

- 21.9% (risk rating 1)
- 2.4% (risk rating 2)
- 1.5% (risk rating 3)
- 2.1% (risk rating 4)
- 1.8% (risk rating 5)

- x12
Reducing Shipping’s GHG Emissions Requires a Collaborative Approach
Industry leading the sustainability charge

1 in 5 vessels chartered using the GHG Rating

115 Organizations
59 Charterers factor in energy efficiency

- 2.54 billion tons of cargo
- 32,000 vessel movements per year
- 20% of global shipments

5 financial / insurance

- Banks only financing A, B & C rated vessels

41 shipowners / managers / industry bodies
10 Ports / Terminals

BAERE MARITIME, BHP BILLITON, CANPOTEX, CARGILL, DUBAI SUPPLY AUTHORITY, GREENERGY, HESS, HUDSON SHIPPING LINES, HUNTSMAN, INCITEC PIVOT LIMITED, IXOM, NIDERA, NOBLE CHARTERING, OLAM, OLIN - BLUE CUBE, PAR PACIFIC - HIE, PTTEP, REFIDOMSA, RIO TINTO, SAUDI ARAMCO PRODUCTS TRADING COMPANY, SCORPIO GROUP, TARGA RESOURCES, THE MOSAIC COMPANY, UNIPEC UK, Z ENERGY
Charterers using GHG rating
Case study – Tyndall research

DECISION
SUBSTITUTE F RATED VESSEL FOR C RATED VESSEL

FUEL SAVINGS
$ IN FUEL SAVED
189,095

CO₂ SAVINGS
TONNES OF CO₂ SAVED
919

VOYAGE
Customer
Cargill
Vessel
Bulk carrier
Journey
Chile > US > India > Brazil > Netherlands
Dates
5 March – 17 August 2013

F
2,641

C
2,346
Supply Chain Analysis
Carbon Accounting

**Vessel Specifications**
- **IMO:** 9604968
- **Name:** PACIFIC TREASURE
- **GHG Emissions Rating:** D
- **DWT:** 181458
- **Total Cargo Capacity (t):** 181458
- **Cargo Loaded (t):** 179,003.00
- **Voyage Load Factor:** 98.65%
- **Voyage Fuel Type:** HFO
- **EEDI/EVSI:** 2.3528
- **Fuel Conversion Factor:** 3.1144

**GHG Emissions - Part Cargo**
- **Well to Tank (WTT):** CO₂e (kg) 159,173.35, CO₂e (t) 159.17, Fuel Production
- **Tank to Wheels (TTW):** CO₂e (kg) 1,928,446.38, CO₂e (t) 1,928.45, Voyage
- **Well to Wheels (WTW):** CO₂e (kg) 2,087,619.73, CO₂e (t) 2,087.62, Full Lifecycle

**SCOPE 3 Emissions:** 2,088
Partnering with AUSMEPA

- Transparent approach
- Satellite tracking
- Big data
- Benchmark ship emissions
- GHG emissions
- Criteria air pollutants
- Local monitoring stations (future state)
<table>
<thead>
<tr>
<th>Ship Type</th>
<th>Calls</th>
<th>NOx</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>VOC</th>
<th>SO$_2$</th>
<th>CO$_2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Carrier</td>
<td>169</td>
<td>106.98</td>
<td>1.761</td>
<td>1.620</td>
<td>6.10</td>
<td>3.89</td>
<td>6,318</td>
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<tr>
<td>Bulk Carrier</td>
<td>269</td>
<td>202.73</td>
<td>3.567</td>
<td>3.282</td>
<td>9.41</td>
<td>8.79</td>
<td>14,290</td>
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<tr>
<td>Container</td>
<td>1,601</td>
<td>3,086.16</td>
<td>58.571</td>
<td>53.885</td>
<td>212.20</td>
<td>130.92</td>
<td>212,398</td>
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<tr>
<td>General Cargo</td>
<td>87</td>
<td>116.03</td>
<td>1.884</td>
<td>1.733</td>
<td>4.63</td>
<td>4.67</td>
<td>7,587</td>
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<tr>
<td>Reefer</td>
<td>13</td>
<td>13.48</td>
<td>0.204</td>
<td>0.188</td>
<td>0.59</td>
<td>0.48</td>
<td>781</td>
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<tr>
<td>RoRo</td>
<td>11</td>
<td>5.42</td>
<td>0.081</td>
<td>0.074</td>
<td>0.22</td>
<td>0.19</td>
<td>317</td>
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<tr>
<td>Tanker</td>
<td>673</td>
<td>1,231.63</td>
<td>32.132</td>
<td>29.561</td>
<td>58.91</td>
<td>90.85</td>
<td>147,691</td>
</tr>
<tr>
<td>Grand Total</td>
<td>2,823</td>
<td>4,762.44</td>
<td>98.200</td>
<td>90.344</td>
<td>292.07</td>
<td>239.80</td>
<td>389,379</td>
</tr>
</tbody>
</table>
Incident ratio by GHG Rating
2018 - ALL vessels
Incident ratio by GHG Rating
2018 - Vetted vessels
Port Incentive Program
How does the program work?

Port determines incentive program to reward energy efficient vessels

1. Vessel Verifies data & agent applies for discount
2. Port verifies eligibility
3. Port issues incentive
Act Local – Think Global!

Key benefits for ports

✓ Reduced emissions in port & the voyage
✓ Increase cargo volumes – reduce GHG emissions
✓ Monitor and track emissions per call
✓ Public image / stakeholder relations
✓ Health benefits – all stakeholders

Cost $0!
Port Benefits

Measure to Manage
- Remove uncertainty
- Market leadership & strategic objectives
- Manage climate change risks
- Competitive advantage e.g. carbon offsetting

Reporting
- Strategic Objectives
- Sustainability reporting
- CDP (Carbon Disclosure Project)
HEMISPHERIC CONFERENCE ON COMPETITIVENESS, INNOVATION AND LOGISTICS:
TECHNOLOGY AT THE SERVICE OF THE VALUE CHAIN

Latin American Meeting of the International Association of Ports and Harbors

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@RightShip_
Thank you