Cradle to Cradle Passport
- towards a new industry standard in ship building

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Agenda:
1. Introduction to Maersk Line’s environmental priorities
2. Our new building programme and the Triple-E vessels
3. Cradle to Cradle in ship building
4. The Cradle to Cradle Passport - towards a new standard in ship building?
Maersk Line’s sustainability vision

We will be known as the **industry leader** based on our efforts to drive **superior sustainability performance in global supply chains**, to the benefit of customers, employees and society at large.
Key environmental **targets**

- **25% reduction in relative CO2 emissions** from owned and chartered vessels from 2007-2020

- **Drive own and industry SOx emissions towards zero** through voluntary action, innovation and regulatory work

- **Drive negative impacts on the marine environment towards zero** – and use vessels to gather data on the state of the oceans
Key environmental initiatives

- **New** vessels to set new standards on **energy efficiency** and **Cradle to Cradle** design

- Existing fleet **will be retrofitted** with new technologies to **improve energy efficiency** and environmental performance

- **Test of biofuel** and engage in partnerships to **encourage innovation**

- Voluntary **fuel switches** to cleaner fuels in selected ports

- **Rating of ports** to ensure safe disposal ashore of the waste from vessels
Maersk Line’s current new building programme:

- 22 WAFMAX vessels (4,500 TEU) – Hyundai, Korea
- 16 SAMMAX vessels (7,450 TEU) – DSME, Korea
- 20 Triple-E vessels (18,000 TEU) – DSME, Korea
- 190 Mill. USD each - 30 Mill. USD for environmental improvements
The **Triple-E** vessels

- **Economy of scale**: 18,000 TEU capacity, 26% lower slot cost than other large, new built vessels.

- **Energy efficiency**: Designed for slow steaming, two super long-stroke engines, waste heat recovery.

- **Environmentally improved**: 50% less CO2 per container moved.
Shipping and other heavy industries depend heavily on steel. In a business as usual scenario, we have enough steel for 60 years. To sustain our business long term, recycling and reuse of steel is key.
- Responsible **recycling** today = loss of **high-value materials**
- How to **design** ships for **better recycling**?
The Cradle to Cradle concept

- The Cradle to Cradle is a concept for reducing **resource use** and **pollution**
- Cradle to Cradle is a concept for **eliminating waste**
- Materials should either go back to nature or be "**food**" for new **products**.
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Cradle to Cradle Passport: A first step towards **full vessel recycling**
The objective

- A document that describes all **materials used** to build the *Triple-E* ships and how to **disassemble** and **recycle** them – en “extended green passport”.

The task

- Develop a **database** that can capture **information** on materials used, and their **location (3D)**
- Engagement with **suppliers** to DSME so that they feed **information to a database** about material composition of products.
- Have the **Cradle to Cradle Passport verified** by class society.

**Cradle to Cradle Passport** – our partnership with **DSME**
Benefits for all... if we work together

The expected benefits

- Reduced **lifecycle environmental impact**
- Higher **resource availability** in the long term
- Higher **recycle price** for vessels (estimated 10% higher)
- Easier to **ensure compliance** with regulation (IHM)
- An incentive to ensure **responsible recycling**

Towards an industry standard...

- Improved management of the steel and other resources used to build ships is a **shared challenge**.
- We believe that the Cradle to Cradle Passport should be developed into a common **industry standard**.
- **Interested?** Let’s **discuss**, **share** and **develop**!
Thank you for your time!
Any questions or comments?