

# Enabling sustainable logistics through efficient autonomous shipping

By Pia Meling @ Breaking Waves 2019, Helsinki

#### Massterly is Kongsberg and Wilhelmsen's joint effort to develop the autonomous maritime market



#### TECHNOLOGY

- Leading in development of autonomy
- Frontrunner in digital development
- In front on cyber security

#### **OPERATION**

- In front on vessel operation
- Major logistics operator at sea and on land
- One of the largest maritime network globally



## What shall we deliver?

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Environmentally friendly logistics enabling the shift from road to sea









30% of all cargo that is transported by truck over 300 km to be transported by waterways & rail within 2030 and 50% by 2050

European Commission, 2011



#### Creating a new market for ocean transportation



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#### The first generation autonomous vessels are battery driven



#### 75-96 % of marine accidents can be attributed to human error



### Autonomy is the means, not the target

- Lower investment?
- Lower operational cost
- Zero / low emission vessels
- Improved safety and efficiency



### Clearing the road towards autonomy by joint efforts



#### **Different autonomy levels**

- 1. Decision support
- 2. Automatic
- 3. Periodically unmanned
- 4. Unmanned
- 5. Fully autonomous



#### **Items under discussion**

- Captain's role
- Manning & competence in Shore Control Centre
- Compliance with SOLAS, ISM Code and ISPS Code
- Flag state regulations, local rules and permits
- Legal aspects and division of responsibilities
- Insurance

Guiding principle: Autonomous functions to have a level of safety equivalent or better compared to conventional operations



# Many different activities and data sources must be integrated to create real value in the logistics chain





#### **ASKO project;**

#### - Zero emissions transport with autonomous fjord crossing





### **ASKO project:**

- Two fully electric autonomous RoRo feeders for 16 trailers



- Sailing between two ports in Norway
- Replacing 150 trucks daily
- CO2 emissions reduced by 5,000 tons / year
- Length:
- Width:
- Service speed:
- Battery capacity:
- Target delivery:
- Fully autonomous:

- 66 m
- 15 m
  - 8 knots
  - 1,7 MWh
  - 2021/22
- 2024



# Why is Norway leading in environmentally friendly technology for the maritime industry?



# Collaboration is Key



