# Ports in Logistics Chain of Wind Energy

## A New Segment for the Port Business

SIEMENS


**Baltic Ports Conference 2009**
**Port of Aarhus**

Mr. Army Pedersen
Director, Head of Global Transport & Logistics
Siemens Wind Power A/S

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Agenda

- The SWP Introduction
- The Wind Market
- The Port Story
- The Infrastructure
- The Baltic Outlook

# Ports in Logistics Chain of Wind Energy

## The SWP Introduction

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- Siemens AG
  - 430.000 Employees
  - € 77,3 Billion Turnover
- Sector Energy
  - 70.000 Employees
  - Business Unit Renewable
- Wind Power HQ in Brande, DK
  - 6.000 Employees
  - Production Facilities in EU, US & APAC
- Main Wind Components;
  - Nacelle
  - Tower
  - Blades

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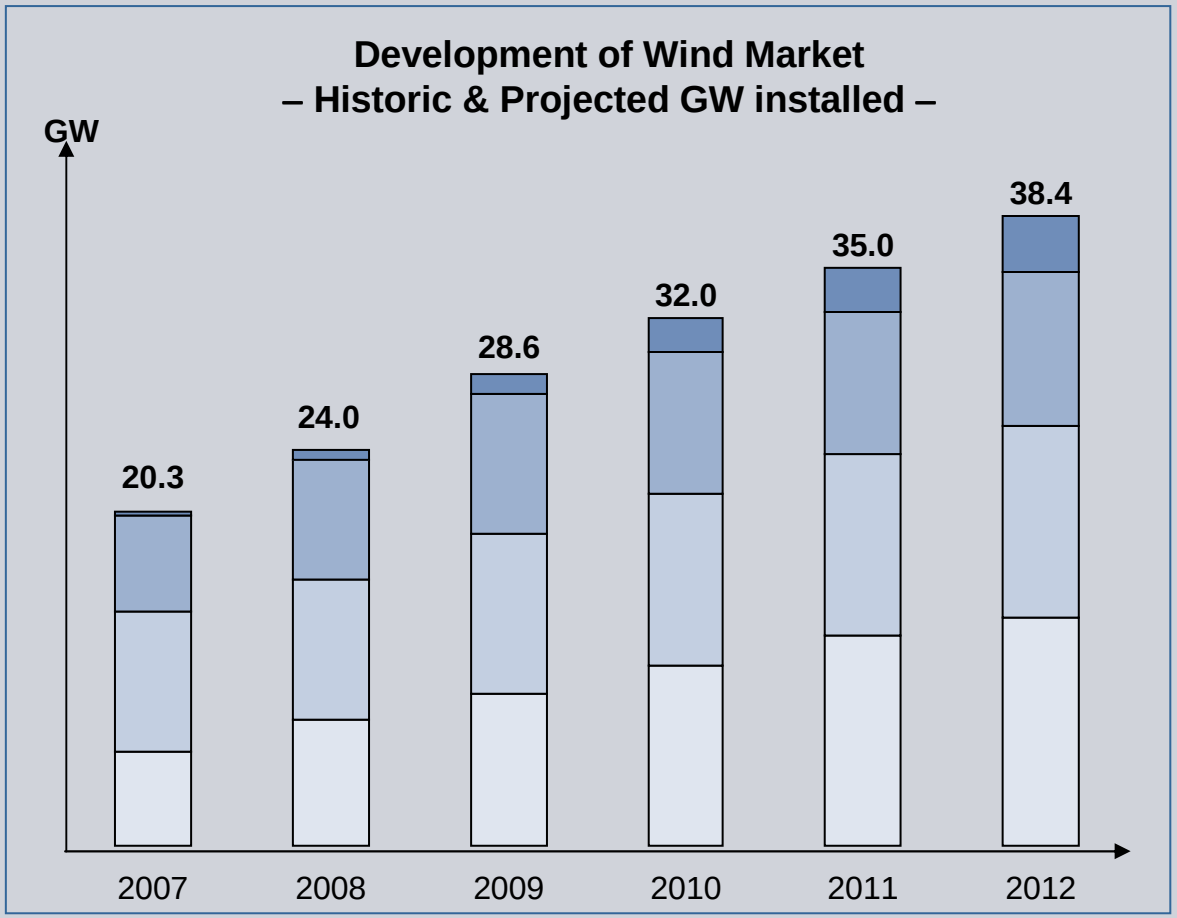
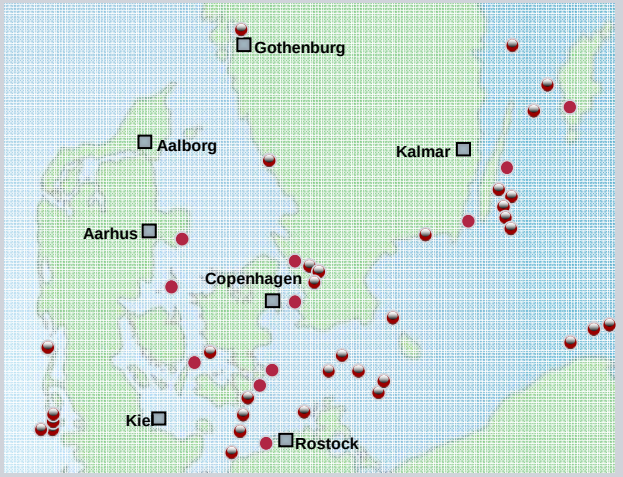
## The Wind Market




- Continued global growth
- 2012 maritime impact:
  - over 3,000 port calls to handle
  - over 150,000 main components to handle
- Baltic growth potential



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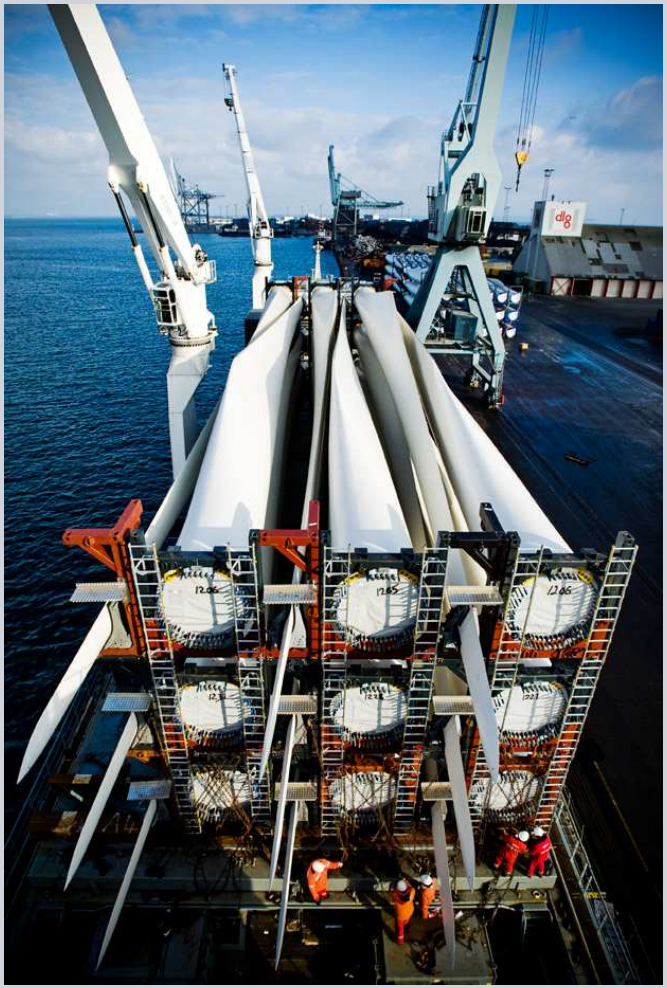
## The Port Story

ÅRHUS HAVN
PORT OF AARHUS

- SWP Growth — 2006-2008
  - Vessels Loaded: + 67%
  - Components Handled: + 207%
- Central Location to DK Production
- Well Developed Port Infrastructure
- Sufficient Heavy-lift Equipment



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# Ports in Logistics Chain of Wind Energy

## The Infrastructure

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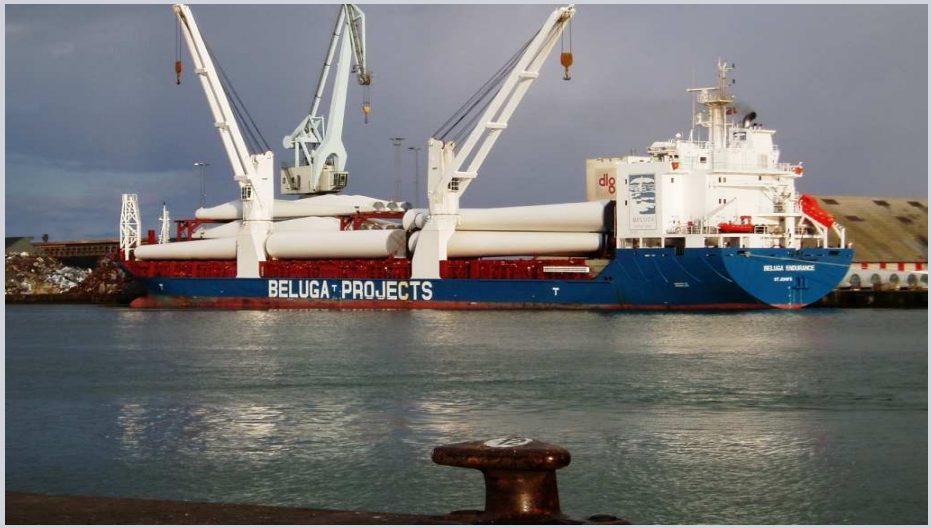
## Port Requirements & Challenges

- The Onshore Market
  - Port Infrastructure
    - Storage areas
    - Key & yard strength
    - Heavy-lift equipment
  - Port-Site Infrastructure
    - Heavy-lift corridors (height & weight)
    - Rail connections (reduce CO2 emissions)
  - Cargo Volume
    - Large quantities at a time




# Ports in Logistics Chain of Wind Energy

## The Infrastructure

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## Port Requirements & Challenges

- The Offshore Market
  - Port Infrastructure
    - Storage areas
    - Key & yard strength
    - Heavy-lift equipment
    - Pre-assembly facilities
    - Access & berth draft
  - Port Support
    - HSE & AEO demands
    - Office facilities
    - Communication facilities
    - Accommodation facilities

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## The Baltic Outlook

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## Port Opportunities & Pre-requisites

- The Onshore Market
  - Nearby Projects
  - Local Component Production
  - Port-Site Infrastructure
- The Offshore Market
  - Nearby Projects
  - Local Component Production
  - Assembly & Supply Services
- The General Wind Market
  - The Support Community
    - Hotel vessels
    - Crew transfers
    - Supply vessels
  - The Ro-Ro Segment
    - Standard infrastructure
    - Standard equipment

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**Thank you for your attention !**