Maritime Cluster Funen

Professional cooperation and sharing of knowledge between companies and educational institutions against new business and product development in the maritime business.

BRONZE
Cluster Management Excellence
STRIVING FOR CLUSTER EXCELLENCE

MARITIME CLUSTER FUNEN

History:

- The cluster was started February 2012
- On initiative of business leaders in the city of Svendborg and SIMAC.
- “Developing Funen” became facilitator under the project ”Innovirk”
- March 2013 support from EU for development of the cluster.
- This project is running till the end of 2014.

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Status May2014

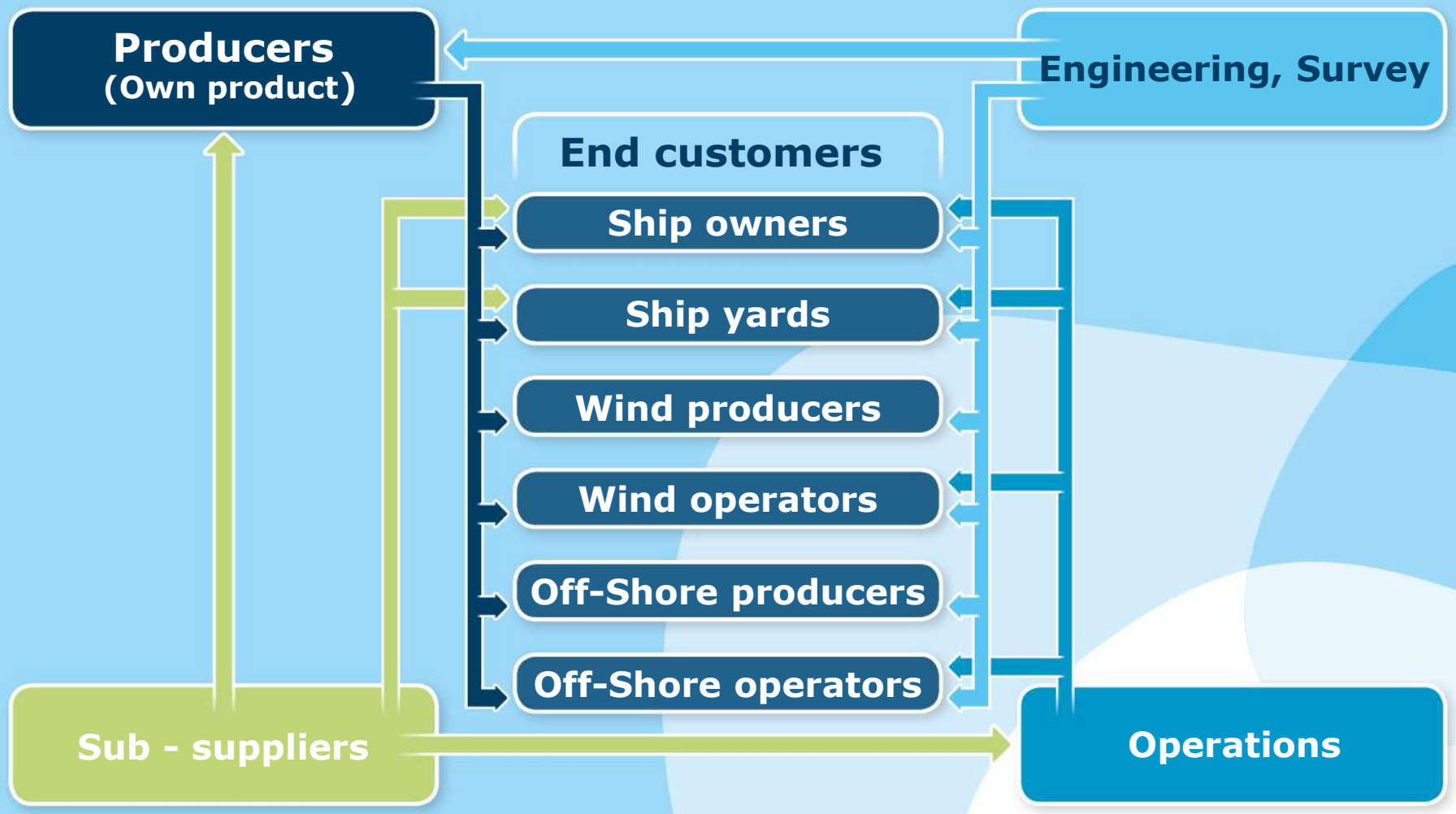
- 81 active companies
- 3 education institutions
- 2 business facilitators

SEKRETARY
Udvikling Fyn (Developing Funen)
Europas Maritime Udviklingscenter (Maritime Development Center of Europe)
SIMAC (Svendborg International Maritime Academy)
Syddansk Universitet (University of Southern Denmark)
Ryslinge Højskole (Ryslinge folk high scool)

Main purposes of the cluster

- **Business network:**
- B2B between companies in the cluster and common customers outside the cluster.
- **Technology development– Triple Helix projects:** cooperation between companies and educational institutions about technological development and projects.
- **Technology and knowledge:**
- Network on regional, national and international base for sharing of knowledge and technological development.
- **Common profile:**
- Common profile and marketing against organizations, political interests and international PR

Overview of the cluster members



Race the Baltic

FYNS MARITIME KLYNGE

Producers

SH Group
CC Jensen
Lykkegaard
SSP Technologies
Fyns Kran Udstyr
Aquatex
WENCON
DAMPA
Tuco Marine
Walsteds Bådværft
VID Fire-Kill
DASPOS
Inrotech
Scankab Cables

665 Employees
Net- income
473 mio. DKK

Sub - suppliers

Fayard
KAMI
Assens Skibsværft
Automation Lab
Billum Industrilakering
Specialcontainer
SEACAT-Schmeding
Scanpocon
Up-time IT
MN Entrepriser
Trumf Bunker

Blue Ocean Robotics
Rasmus Holbeck
Fyns Coating
Masava Kemi
PHE Nordic
Hanstholm Elektronik
Kjær Data
P. N. Erichsen
SeaMall
VETEC

276 Employees
Net- income 92 mio. DKK

Operations

CT Offshore
DanPilot
Svendborg Bugser
JMB Bjerrum & Jensen
ADP
Assens Havn
Odense Havn
Svendborg Havn

249 Employees
Net- income
146 mio. DKK

Engineering/Survey

SEA CONSULT
Marine Surveyors
Nordic Offshore
Principia North
Valling Ship Survey
Porthos Independent Maritime
Odense Maritime Technology
Rådg. Ing. Jens Kristensen
Blue Maritime Leasing
Focus Advokater
Knud E. Hansen
Wind and Water Maritime Consultants
Danish Marine Group
Møldrup Consult

Port Environment
Ing. Jakob Jakobsen
Maritime Consulting
Baltec Thor
Marstal Navigationsskole
FORCE Technology
Mærsk Training
Sensor Survey
Stensbo Engineering
Dansk Ingeniør Teknik A/S
Nordic Marine Consult
Gefion Nordic
Spectec
Medskyldig
SL Consult
Maritimt Center Svendborg

165 Employees
Net- income 65 mio. DKK

COOPERATIONS IN THE CLUSTER

Business to business	Business to University
29 concrete project cooperation's either about processes, deliveries or product development	15 concrete cooperation's between members and universities
Some 60% of the members have been, or is still active in various cooperation s, either B2B, or with our educational institutions	
Assistance to funding from the government to developing of a new type of crew boat for off-shore wind farms, build in composite	

SPIN-OFF OF THE COOPERATION

PR for the partners in the cluster

- 13 articles in local and national newspapers about the cluster
- 3 TV-news programs mentioned the cluster (TV2 Fyn)
- 9 articles, in maritime news magazines about the cluster.
- Visit of two ministers with presentation of the cluster and the Triwind project with a new type of crew boat for off-shore wind farms.

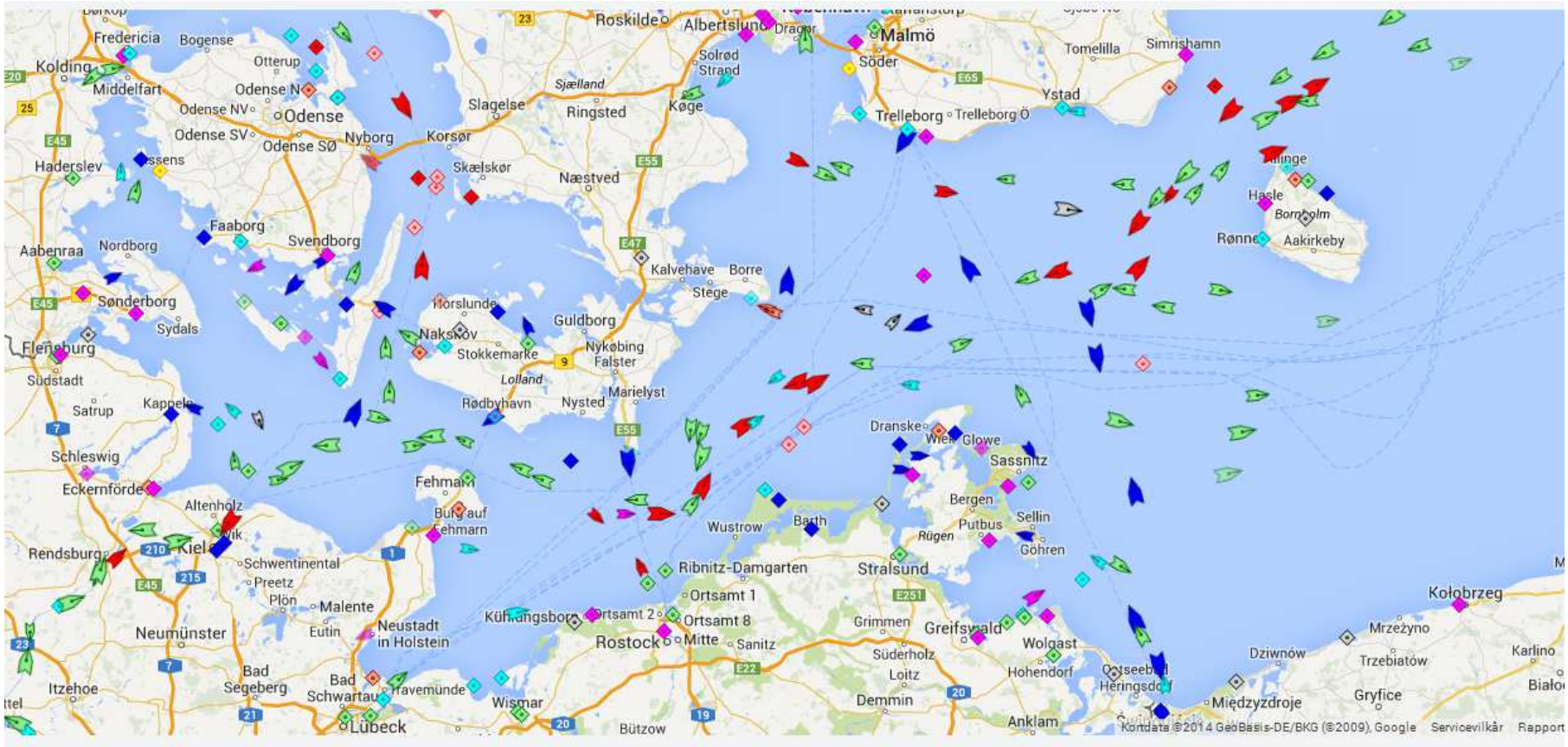
Importance?

- Profiling of maritime industry companies at Funen as maritime innovative and development oriented companies (blue ocean of the cluster)
- Gives PR power, which the companies in the cluster not are able to create themselves.

Seed Money Project SMILE

FYNS MARITIME KLYNGE

Traffic in the region



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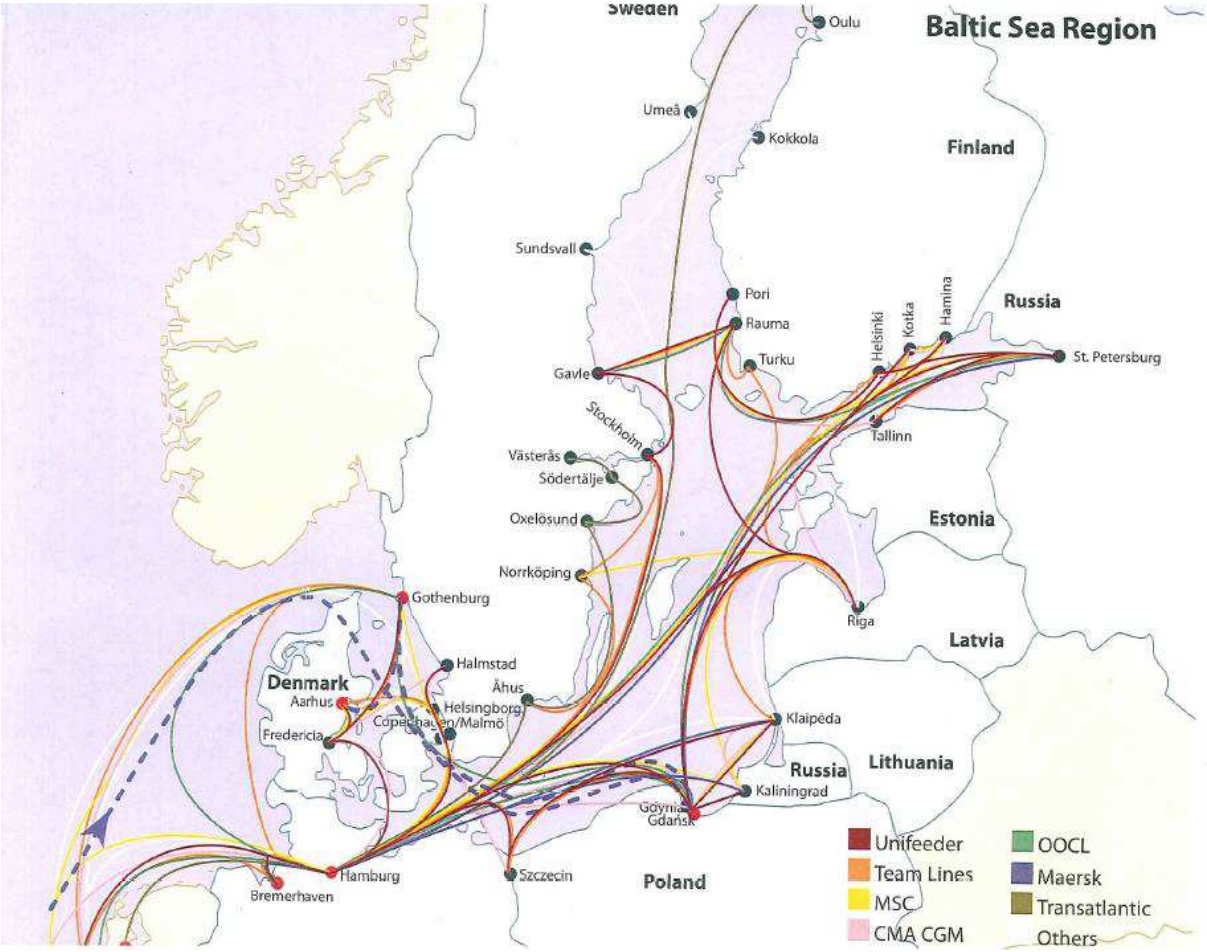
Container routes in the region



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Traffic in the region

The Baltic Sea is one of the busiest places in the world in terms of shipping.

During the last decade shipping in the Baltic Sea increased, with both increasing number of ships and size of ships and the amount of maritime traffic continues to grow by around 5% per year.

There are about 2.000 ships in the Baltic marine area at any given moment, and each month around 3.500–5.000 ships navigate the Baltic Sea, currently representing handling of up to 15% of the world's cargo traffic, that is, about one billion tons of cargos per year.

More than 40% of the ships in the Baltic Sea are general cargo ships that for the most part stay inside the Baltic Sea or in Northern Europe.

Interestingly, although passenger and RoPax vessels only accounted for approximately 5% of the ships operating in the Baltic Sea in 2007, they were accountable for approximately 27% of the air emissions.

Traffic in the region

Ships generate emissions of sulphur oxides (SOx), nitrogen oxides (NOx), particulate matter (PM) and carbon dioxide (CO2) as a result of the fuel used to power them, and are the largest single emission source for NOx, PM and SOx emissions in the transport sector.

Annual emissions from ships in the Baltic Sea region in 2011 were the following:

- SOx: 79.000 tonnes
- NOx: 373.000 tonnes
- CO2: 19 million tonnes

These emissions correspond to all land based NOx emissions and twice the SOx emissions from Denmark and Sweden combined.

Emission in the region from ships

Baltic - 2012	NO_x [t]	SO_x [t]	$PM_{2.5}$ [t]	CO [t]	CO_2 [t]	Transport work [10^6 ton*km]	Ships
All	369 623	83 703	23 159	33 867	19 012 801	899 997	16 797
IMO registered	301 931	75 429	19 824	24 443	14 921 517	899 997	8 231
Vessels without IMO	67 692	8 273	3 335	9 423	4 091 285	0	8 566
Passenger ships	81 370	26 018	6 468	6 957	4 562 292	36 002	462
Cargo ships	86 565	21 178	5 591	6 794	4 267 080	325 079	3 862
Container ships	51 556	11 552	3 106	4 205	2 355 978	145 666	957
Tankers	64 394	14 564	3 771	4 748	2 697 836	393 249	1 779
Other	18 047	2 118	889	1 738	1 038 330	0	1 171

Emission in the region from ships

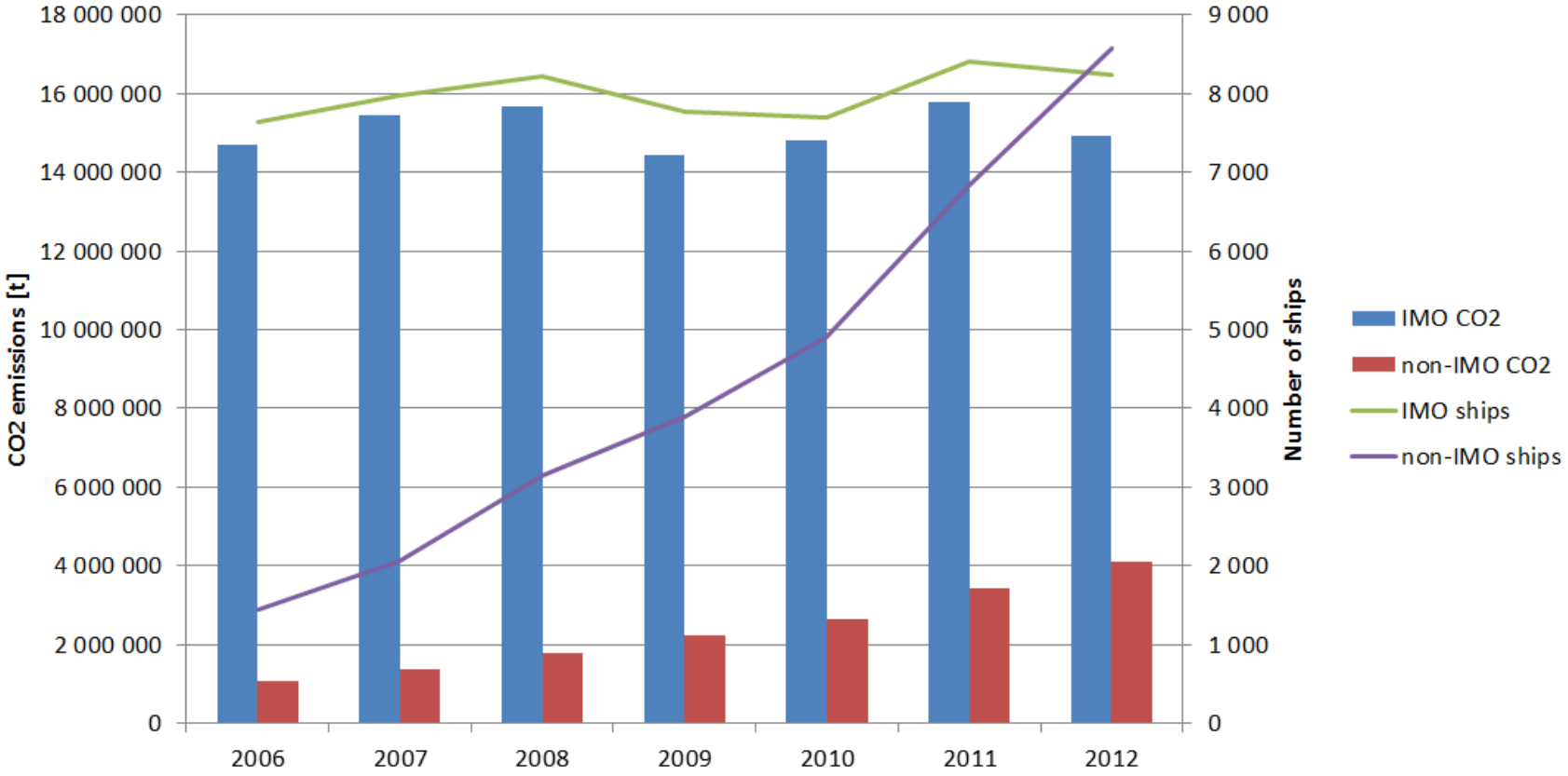

Figure 3. Contribution of small and large vessels to CO_2 emissions and to total number of ships during 2006-2012.

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Emission in the region from ships

	Ships	NOx [t]	SOx [t]	$PM_{2.5}$ [t]	CO [t]	CO_2 [t]	Transport work (10^6 ton*km)
2012	16 797	369 600	83 700	23 100	33 800	19 012 800	899 900
2011	15 247	377 000	86 500	23 700	33 200	19 239 700	869 800
2010	12 596	346 500	92 600	23 500	28 700	17 458 700	813 000
2009	11 661	336 000	122 300	27 500	27 000	16 684 600	773 300
2008	11 359	357 600	129 900	29 100	27 500	17 462 500	802 100
2007	10 041	350 800	126 700	28 300	25 700	16 850 900	807 500
2006	9 077	327 000	136 800	29 100	23 500	15 779 400	757 800

Table 1. Summary of key results from Baltic Sea shipping in 2012

Facts SMILE Project

- **Partners:**
  - Lead Partner: Udvikling Fyn — Denmark
  - Partner 1: Estonian Maritime Academy — Estonia
  - Partner 2: WFB Bremen — Germany
- **Project time:**
  - January 2014 till April 2015
- **Support from EU**
  - 50.000 EU
  - 1.000 hours, mainly desk research.
- **Main project**
  - Establish service teams to optimize operation and management of ships sailing in the Baltic Region

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Facts SMILE Project

- Optimizing the maritime industry in the Baltic Sea area through development of new service packages focusing on cleaner and more efficient shipping is a fast way to implement new practice based on the needs for meeting SECA and NECA regulations.
- The reduction of ship emission (NOx and SOx) , cleaning of flue gas and handling of ballast water are anticipated to be focus areas. During the seed money period, important players for the development and use of new service packages will be identified.

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Facts SMILE Project

- **Idea:**
- Find possible partners for setting up teams to join the ships during their stay in The Baltic region:
- Make an energy check on board the ship and to deliver a list of recommendations to optimize operation of the ship, leading to:
  - Reduce fuel consumption.
  - Reduce emission of SOx, NOx and CO2
- Find other possible service packages to be carried out during the stay in the region.