



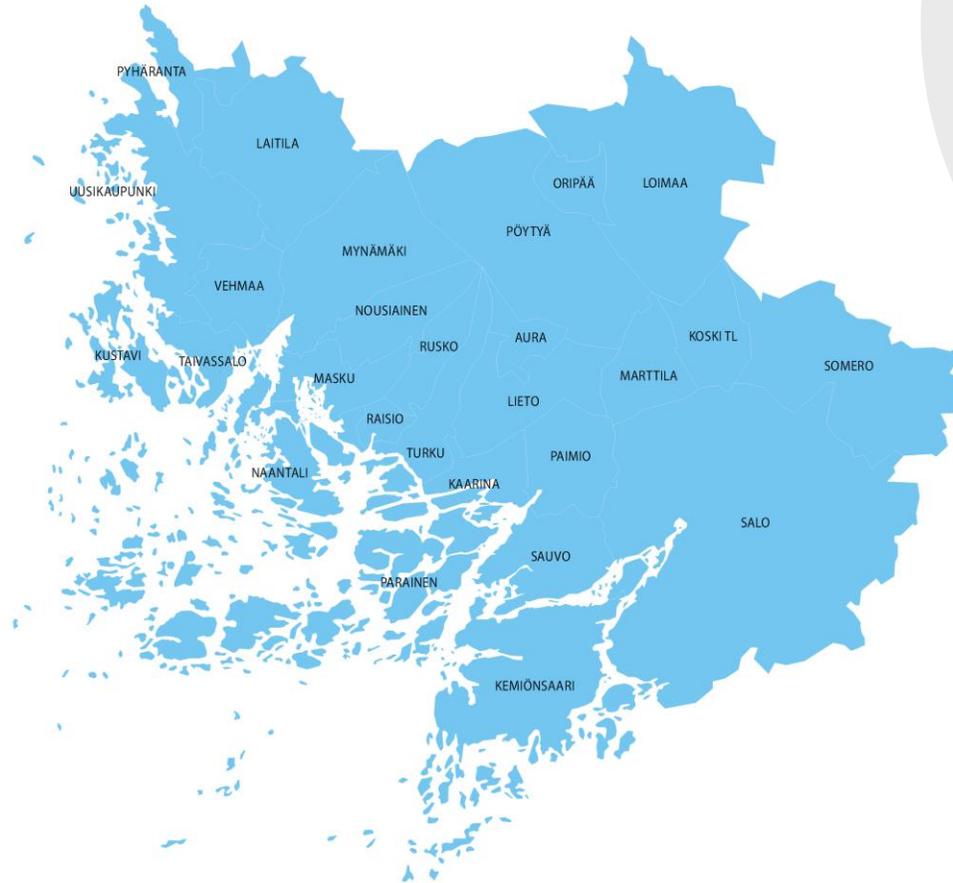
# Southwest Finland and LeaderShip Strategy

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ERRIN Blue Growth WG 30 April 2019

**Turku-Southwest Finland  
European Office**





## City of Turku

- > 190 000 inhabitants
- 6 universities + 47 000 students

## Southwest Finland

- 27 municipalities
- > 478 000 inhabitants



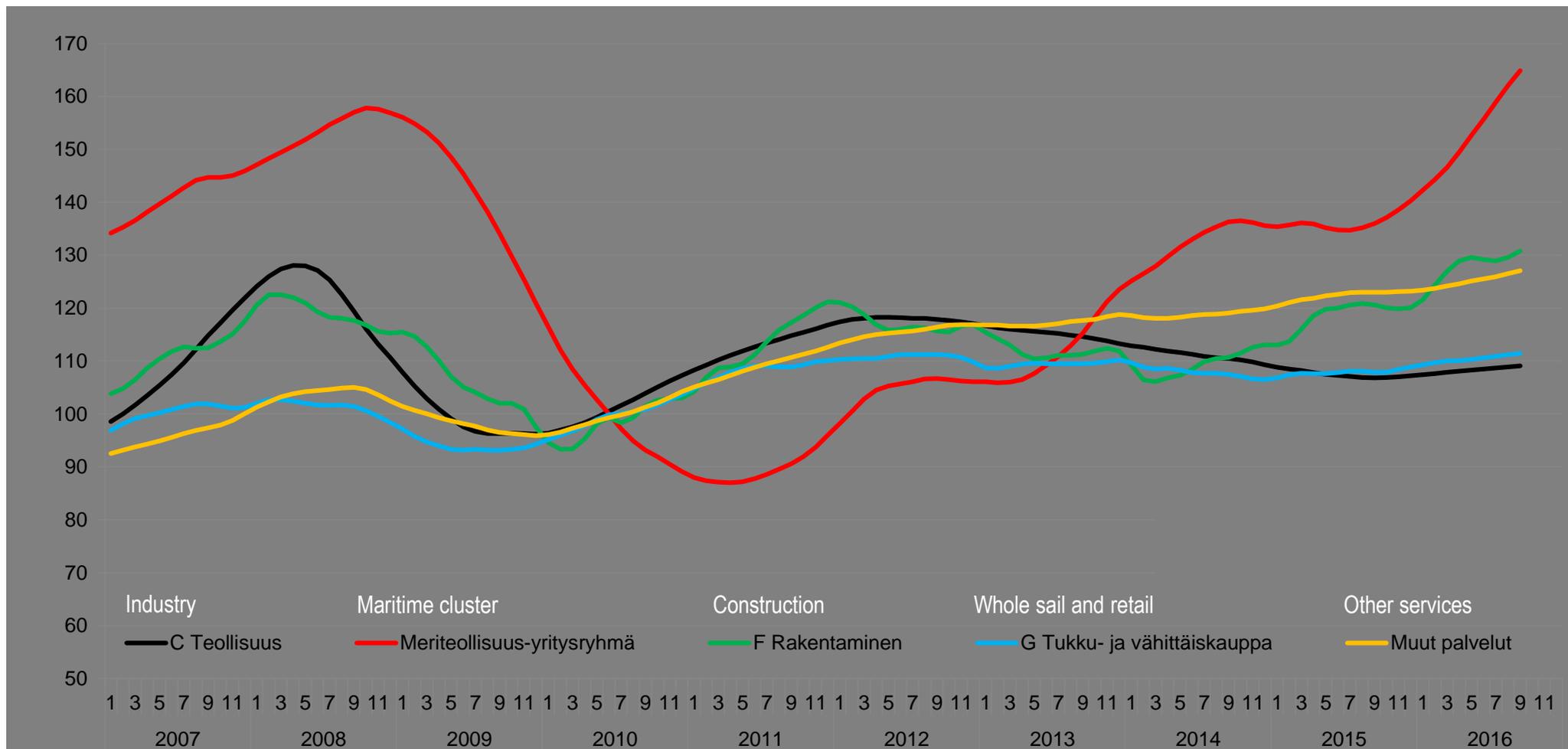
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## Maritime Turku Region: Key figures

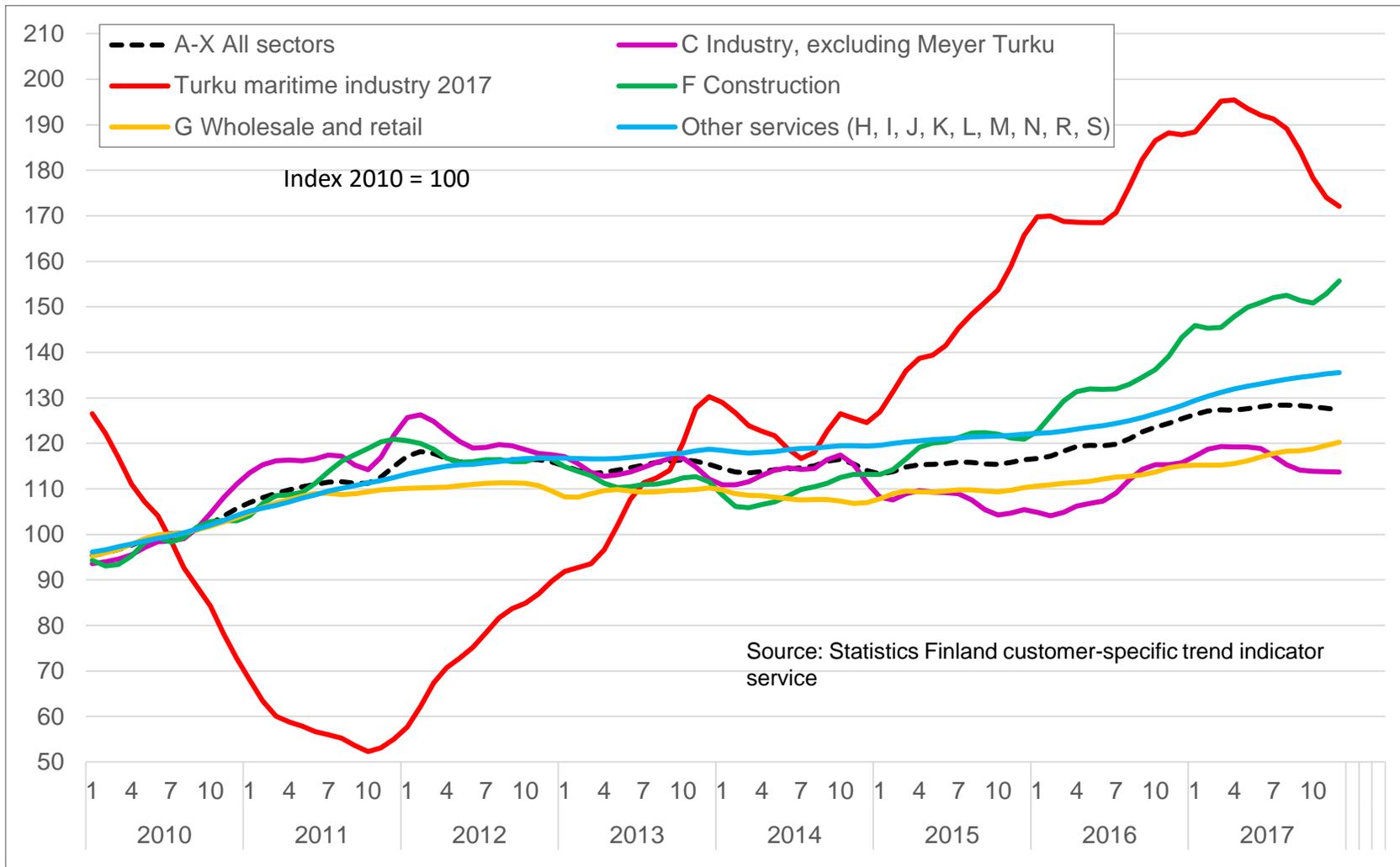
- €2.9B revenue
- 7000 employees
- 250 companies in the network
  - 5 shipyards
  - 20 engineering offices
- 40% of Finnish maritime industry employees work at Turku Region
- 12 learning institutions for maritime education

# Importance of maritime cluster in Turku Region

Development of turnover by line of business 1/2007 – 9/2016



# Turnover trends by industry in Turku Region 2010–2017



# Turku shipyard

- Shipyard founded in 1737, nowadays one of the leading European shipbuilding companies specialised in cruise ships, car-passenger ferries and special vessels.
- Since 2014 owned by Meyer family.
- “State-of-the-art technology solutions, advanced construction processes and cutting edge innovations”
  - World’s first LNG powered passenger vessel, **Viking Line M/S Grace** was built in Turku (delivered in 2013).
  - **Oasis of the Seas** and **Allure of the Seas** were the largest passenger ships when delivered in 2008 + 2010.

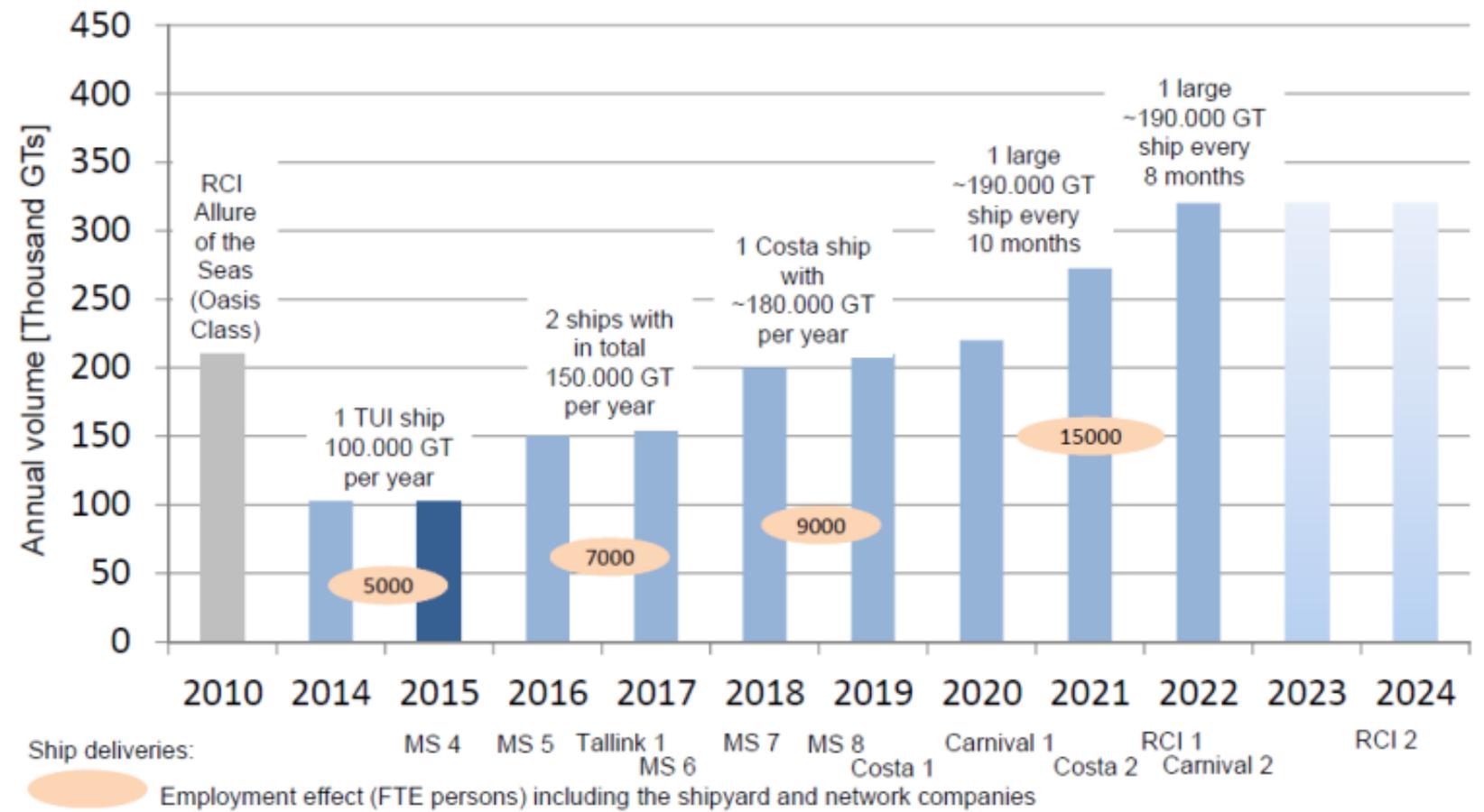




# Meyer Turku's order book and its employment effect

MEYER TURKU

Order book with Carnival and RCI MoU's



# Example of suppliers for one cruise ship

## ALUMINIUM AND STAINLESS MOBILE MODULES

Mobimar

## CABINS, BATHROOMS AND RELATED EQUIPMENT

Antti-Teollisuus  
Parmarine  
Piikkio Works

## CATERING EQUIPMENT

Kavika  
Metos  
SeaKing

## COMPONENTS AND MATERIALS

Hentec  
Joptek Composites  
Kemppi  
Lautex  
Mesekon  
nora flooring systems  
Paroc  
Planson United  
SBA Interior  
SSAB Europe  
Tebul

## ENGINEERING AND TECHNICAL CONSULTING

Allstars Engineering  
Comatec  
Deltamarin  
Elomatic  
Foreship  
SDS Aura

## ELECTRICAL SYSTEMS AND COMPONENTS

Atexor  
Caverion Finland  
Helkama Bica  
Hella Lighting Finland  
LST Group  
Promeco Group  
Protacon  
Takoma  
Trafotek

## ELEVATORS

Kone

## ENERGY AND ENVIRONMENT

Alfa Laval Aalborg  
Blu Ocean Solutions  
Evac  
GS-Hydro  
Oilon  
Onninen  
Valmet  
Wärtsilä

## FIRE PROTECTION

Marioff Corporation  
Saajos

## HVAC SOLUTIONS AND COMPONENTS

Halton  
Koja

## NAVIGATION SYSTEMS

Furuno Finland

## PROPULSION SYSTEMS

ABB  
EIE-Maskin  
Rolls Royce  
Steerprop  
TEVO  
We Tech Solutions

## SOFTWARE, SAFETY AND ENERGY

NAPA

## SHIPYARDS

Arctech Helsinki Shipyard  
Meyer Turku  
Rauma Marine Constructions

## SURFACE TREATMENT

FSP Finnish Steel Painting

## TURNKEY PROJECTS

ALMACO Group  
APX-Metalli  
E.U. -Adhoc Project  
Joptek Composites  
Kaefer  
Merima  
Huuhka  
NIT Naval Interior Team  
Orsap  
RR Site Service  
R&M Ship Technologies Finland  
S A Svendsen  
Shipbuilding Completion

## OTHER MEMBERS OF THE FINNISH MARINE INDUSTRY

Admares  
Aker Arctic  
Ixonos  
Kvaerner Finland  
Lamor  
MacGregor Finland  
Machine Technology Center  
Turku  
Pemamek  
Priztech  
Stellio  
Technip Offshore Finland  
Uki Workboat



Source: Meriteollisuus ry

## MEIN SCHIFF 6 TECHNICAL SPECIFICATIONS

Length over all: 295,25  
Breadth, moulded: 35,80  
Speed: 21,4 knots  
Gross tonnage: 99 800

Passenger capacity: 2794  
Cabins: 1267  
Crew: 1061  
Decks: 16

# Actors – companies in Turku Region

## Engineering

- Deltamarin Oy
- Elomatic Oy
- ILS Ship Design & Engineering
- Allstars Engineering Oy
- R&M Engineering Oy
- Sance Ltd
- Etteplan Design Center Oy

## Shipping Companies

- Royal Caribbean International
- Finferries
- Aalto Shipping Company Oy
- Ab Ronja Marin Ltd
- Oy Alfons Håkans Ab
- Oy Langh Ship Ab
- Rederi Ab Nathalie
- Rederi Helmer Lundström Ab
- VG-Shipping Oy

## Shipyards

- Meyer Turku Oy
- Turku Repair Yard Oy
- Uudenkaupungin Työvene
- Rauma Marine Construction
- Oy Western Shipyard Ltd

## Suppliers

- Wärtsilä
- Rolls Royce
- MacGregor
- Pemamek Oy
- Mesekon Oy
- NIT Naval Interior Team
- Paramet konepaja Oy

# Autonomous ships R&D

- **Rolls-Royce's R&D Centre for Autonomous Ships** opened in January 2018
- Carries out projects focused on autonomous navigation, the development of land-based control centres, and the use of AI in future remote and autonomous shipping operations.
- In December 2018, Rolls-Royce and Finferries **operated a ferry completely autonomously in the archipelago of Turku**. Falco ferry navigated with the help of Rolls-Royce's Ship Intelligence technology and systems.
- Digitalisation – some networks :
  - One Sea, autonomous maritime ecosystem
  - RAAS, Research alliance for autonomous systems
  - AIF, Allied ICT Finland
  - MDSS, Maritime Digital Supply Space
  - Jaakonmeri Test area



## Blue Industry Park (BIP)

- Located near the Turku shipyard, **Blue Industry Park aims at becoming a leading production and innovation cluster of the maritime and manufacturing industries.** The area serves companies of all sizes and strengthens the industrial clusters in the Turku region on the whole.
- The competitive advantage of BIP is the synergy created by the co-operation of enterprises and other actors in the area. BIP combines a critical mass of resources and expertise and a competitive setting with production, product development, and research.
- The logistic connections link the BIP companies directly to the global markets by road, rail and air.
- Goal: 100 companies and 10.000 employees



# R&D and education actors in Turku Region

Turku University  
of Applied  
Sciences

University of  
Turku

Åbo Akademi  
University

Novia University  
of Applied  
Sciences

Trafi  
Finnish  
Transport Safety  
Agency

Finnish  
Transport  
Agency

The Finnish  
Border Guard

The Finnish  
Defence Forces,  
Navy

# Strong research base

- All universities have strong profiles in maritime research and development
  - University of Turku: Sea and Maritime Studies (<http://sea-maritime.utu.fi>)
  - Åbo Akademi: The Sea ([www.abo.fi/en/the-sea/](http://www.abo.fi/en/the-sea/))
  - Turku UAS: R&D + study programmes in Engineering: Marine Technology
  - Novia UAS: R&D + study programmes in Engineering: Maritime Management and Autonomous Maritime Operations
- Good example of a EU funded research project led by University of Turku:  
**ECOPRODIGI** - digital solutions enhancing eco-efficiency throughout the vessel lifecycle
  - addresses both the environmental and economic challenges by increasing eco-efficiency at all stages of the vessel lifecycle (from design and building to the use, maintenance, stowage as well as conversion processes)
  - provides and pilots digital solutions in close cooperation between industry end-users and research organisations
  - supports Baltic Sea region in becoming a front-runner in maritime industry digitalisation and clean shipping.



EUROPEAN  
REGIONAL  
DEVELOPMENT  
FUND



**Turku-Southwest Finland  
European Office**

# Strong links between research and industry

- **Maritime technology sector's importance as promoter of innovation!**
- Examples of close cooperation between research and industry:
  - Turku Future Technologies
  - Maritime Accelerator



# TFT - Turku Future Technologies links universities and companies together

- **R&D&I network** that serves the various needs of technology companies by giving access to the expertise of Finnish universities
- **5 cities, 8 universities:**
  - Turku, Rauma, Salo, Uusikaupunki and Forssa
  - Aalto University, Lappeenranta University of Technology, University of Oulu, Tampere University of Technology, Turku University of Applied Sciences, University of Turku, Novia University of Applied Sciences and Åbo Akademi University
- How it works? **TFT team formulates the needs arising in SMEs into research questions and finds the right experts from the university network.** Company can then develop its competitiveness by buying product, production, business and expertise development.
- TFT serves companies e.g. with
  - R&D projects
  - training needs
  - project work
  - theses and practical training
  - information search and analyses
  - search for experts
- TFT's services have been **used by nearly 120 companies** in Southwest Finland.



**MARITIME**  
ACCELERATOR

- Innovation platform bringing together innovative maritime corporations and startups
- 3-month accelerator programme for startups
- Goal is to create an innovation ecosystem that generates new business, speeds up heavy industry development and strengthens the maritime hub.
  
- What's in for partners:
  - access to the maritime ecosystem with the key partners
  - concrete business ventures & pilots
  - hand picked startup partners and concrete venture pilots
- What's in it for startups:
  - access and visibility within the maritime ecosystem
  - opportunity to co-create with the corporate for 3 months to get new venture clients
  - access to the global customer base of the accelerator partners.

# Skills: education and training

- Southwest Finland's challenge:
  - No university of technology in Turku region
  - Need for skilled employees exceeds the availability
  - How to increase the attractiveness of maritime sector?

and some solutions where EU funding could be of help...



**Turku-Southwest Finland  
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# Technology Campus Turku

- Agreement between City of Turku, University of Turku, Åbo Akademi University, Turku University of Applied Sciences, Novia University of Applied Sciences, and Turku Science Park Ltd.
- The aim of the collaboration is that the HEIs in Turku produce more Bachelors and Masters of Science in Technology, engineers, polytechnic Master's degree engineers, and experts in maritime industry.
- A central requirement for achieving the goal is that the HEIs have rights to carry out degree education in technology that are extensive enough.
- <http://www.utu.fi/en/news/news/Pages/Cluster-of-Expertise-in-Technology-Established-in-South-West-Finland.aspx>
- Tech Campus partly funded by EMFF project “Competence Factory”



# Short Vocational Training Programs

- Wide variety of short maritime training projects funded by
  - Ministry of Employment and the Economy
  - Maritime industry
  - TE Services, Employment Agency of Southwest Finland
- Training organisations/VET Providers: Meyer Turku Shipbuilding School, Adult Education Centre Turku, Turku vocational Institute, maritime industry.
- Examples:
  - Project Management: 10-day programme for maritime industry employees (initiated and conducted by Association of Finnish Marine Industries)
  - Vocational competencies (production technologies; welding, fitting, plumbing, electrician, pipefitters, electrician, scaffolding, ...)
  - Engineering and design activities in ship assembly...

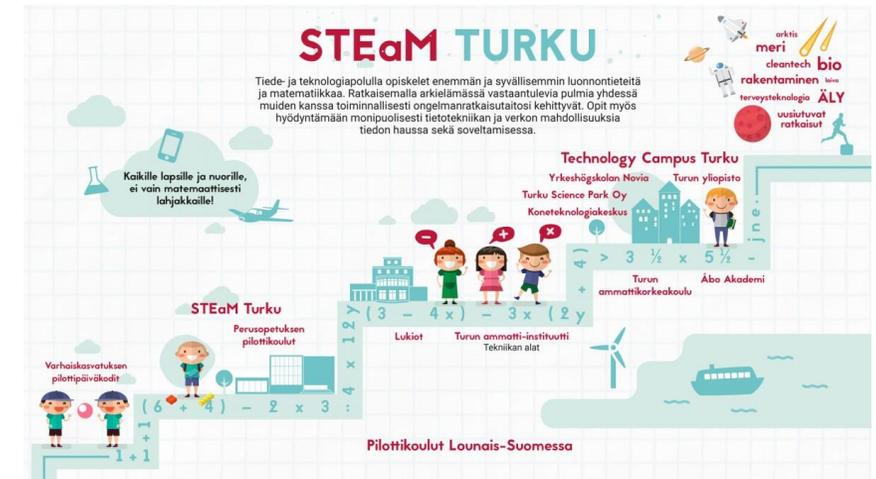


# City of Turku

16 different technology **industry development projects** aiming increasing the attractiveness of natural sciences and engineering.

Examples:

- **Turku Upper Secondary School (TSYK), Maritime programme**
  - Study programme oriented towards maritime studies founded in 2008, the only one of its kind in Finland.
  - Intake: 30 students/year
  - The courses offered focus on mathematics, science, maritime environment and research, Baltic Sea, seafaring and entrepreneurship
- **Lecturer for Technology Industry**
  - Develops interaction and cooperation between school and working life, but above all, inspires pupils and students in basic education and upper secondary education to study technology, mathematics and natural sciences.
- **STeAM Turku**
  - Offers a science and technology pathway that combines basic and secondary education, enabling children and young people to have a chance to learn about science and technology, to specialize in postgraduate studies in technology.
  - The new operating model strengthens the competence of mathematics and natural sciences and motivates them to work and postgraduate studies.





# LeaderSHIP 2030 - Towards a new European Strategy for Maritime Industries

*Approved by the CPMR Political Bureau, 7 March 2019, Brest (Brittany, FR)*

## BACKGROUND

This Policy Position calls on the European Commission to launch a European Industrial Strategy "LeaderSHIP 2030" for maritime industries. Maritime industries are defined here as in the LeaderSHIP 2020 report, and therefore include shipbuilding, maritime engineering and manufacturing.

This position follows on from exchanges between the CPMR Member Regions led by the Region of SouthWest Finland, as well as with Sea Europe.

It is also based on:

- The report of the European Economic and Social Committee (EESC) "[The LeaderSHIP 2020 strategy as a vision for the maritime technology industry: towards an innovative, sustainable and competitive maritime industry in 2020](#)" of June 2017, to which the CPMR contributed;
- The study of the [EC Study on trends in globalisation in shipbuilding and marine supplies - Consequences for European Industrial and Trade Policy](#) published in 2017;
- On-going exchanges with the Committee of the Regions, which is preparing a report on "A New European Agenda on Maritime Industries" to be adopted by its Committee for Natural Resources on 27 March 2019.

### **Maintaining an industrial capacity in Europe is fundamental**

Maintaining jobs and maritime industrial know-how in Europe is fundamental, not only because of the importance of current maritime industrial employment in Europe's territories, but also for the development of emerging industrial sectors.

Traditional shipbuilding industries are indeed sources of skills and infrastructures that are essential for the development of marine energies. Engineers and workers able to design and build ships have skills that are also useful to the manufacturing of industrial elements for marine energies. Space and machinery available to shipyards are also used for the development of industrial activities related to marine energy.

### **Train and attract workers, and avoid social dumping**

Strengthening workers' skills and increasing the attractiveness of maritime industrial jobs, notably to women, is essential. The maritime industrial sector demands wide-ranging and high-level skills.

Strong contributions to these objectives are expected from the Erasmus programme, the Blue Careers programme, and the on-going blueprint exercise on skills in the area of maritime industries. This blueprint exercise should result in proposals for innovative initiatives that should inspire further developments of the EU Skills agenda.

In parallel, it is necessary for EU rules regarding the terms and conditions of employment to be applied to posted workers to be enforced, with the aim to guarantee that these rights and working conditions are protected throughout the EU, and to ensure a level playing field and avoid "social dumping" where foreign service providers can undercut local service providers because their labour standards are lower. The revision, adopted in June 2018, of the 2016 European Directive on posted workers must provide an important contribution to this.

### **Innovate for more sustainability and competitiveness**

Constant support for innovation is key to enable European industries to face new challenges, and to keep or acquire leadership at global level.

In this perspective, European industries need to tackle important challenges in terms of sustainability. Reduction of carbon emissions, of waste, as well as greater involvement in circular economy models, are among these challenges.

European industries will also need to adapt to digitalisation, which will affect and redefine the maritime industry sector and will cause major implications for European shipping companies, maritime technology companies and system providers, as well as information technology companies.

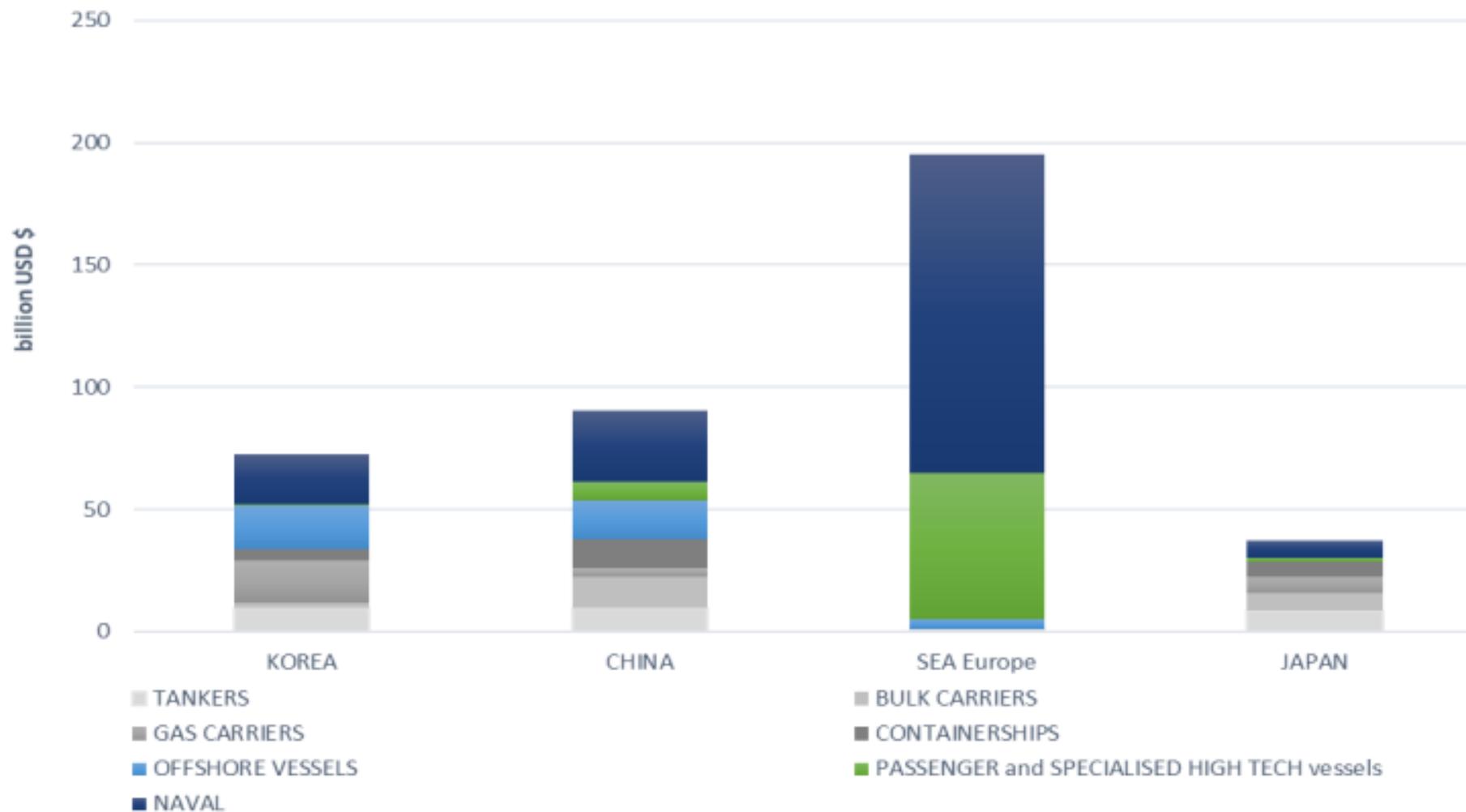
Autonomous shipping is another example of future development that challenges the traditional maritime industry sector.

# Why new LeaderShip strategy is needed? Viewpoints from Southwest Finland

- Fear of loss of important economic sector: revenue + employment + skills + innovation potential
- Key points in the new LeaderShip strategy:
  1. Promote **European interests in global context**
  2. European support for **education and training**
  3. Support for **innovation** at the European level
    - focus on sustainability and digitalisation
    - maritime specific priorities for Horizon Europe



## Orderbook Value by main Shipbuilding Areas in bn \$ (End of 2017)



# Thank you!

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