Meriturvallisuuden ja -liikenteen tutkimuskeskus
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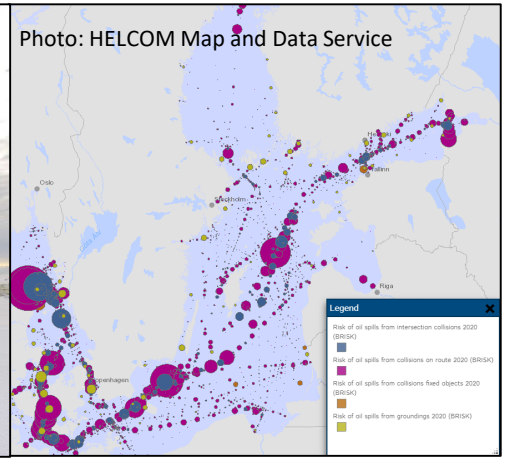

Photo: HELCOM Map and Data Service

Maritime safety & clean shipping projects in Merikotka: the past, present and (potential) future

D.Sc. Maria Hänninen
Research Director, Kotka Maritime Research Centre

7.5.2019

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MERI KOTKA

University of Turku

MARITIME LOGISTICS

MERENKULKUALAN KOULUTUS- JA TUTKIMUSKESKUS

Aalto University

MARITIME SAFETY

A?

University of Helsinki

MARINE ENVIRONMENT & SOCIETY

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

XAMK

LOGISTICS & SEAFARING

XAMK
Kaakkois-Suomen ammattikorkeakoulu

Merikotka association

COORDINATION & RESEARCH

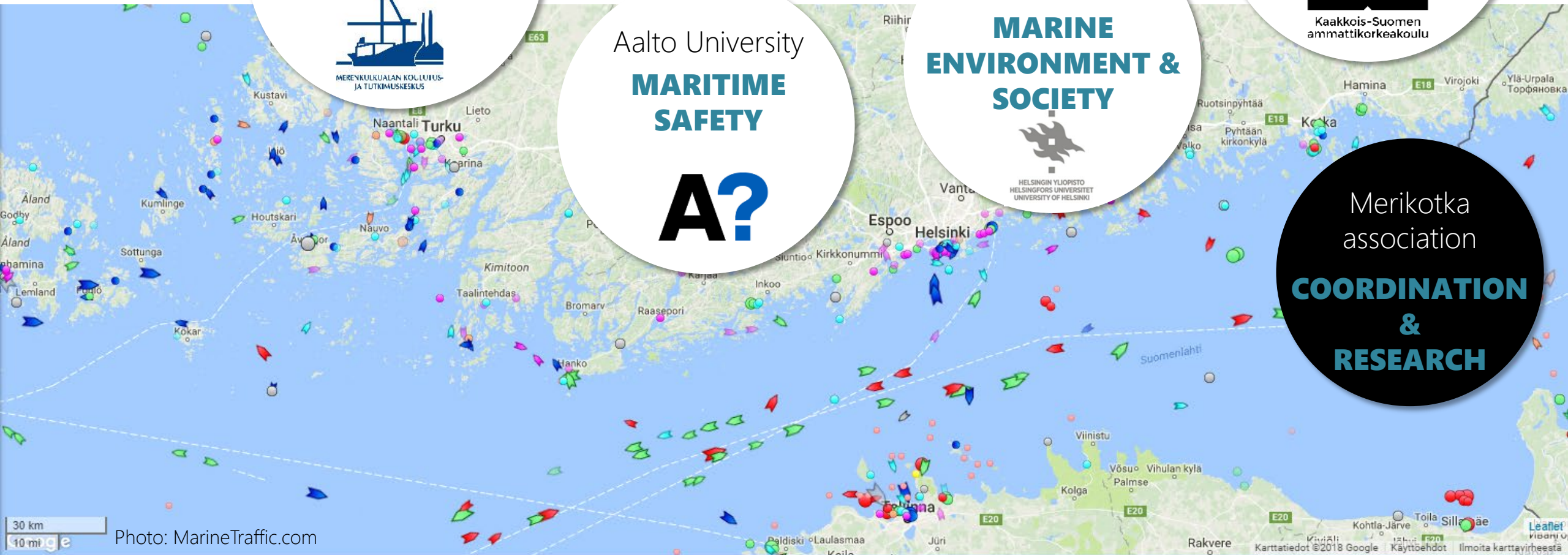

Photo: MarineTraffic.com

Merikotka studies maritime safety as a part of sustainable maritime transport

- Maritime safety research currently mainly conducted by the Aalto University MaRiSa group
  - Proactive approach to promote safety in autonomous shipping
  - Arctic maritime safety
- The strengths of Merikotka in maritime safety development
  - Science-based development
  - Systemic approach to maritime transport problems, for example linking safety to environmental risks
  - Focus also on the societal impact

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Fields of science
- Environmental sciences
- Economics
- Social sciences
- Engineering
- Safety science
- Logistics
- Statistics
- Data science

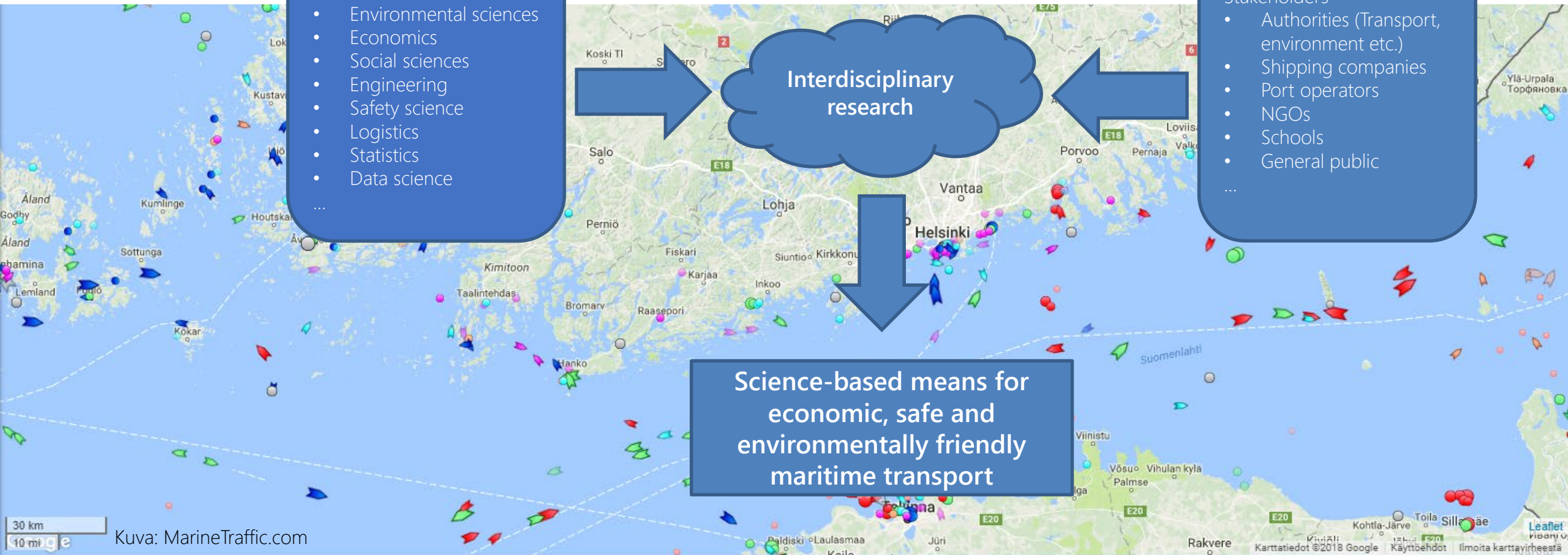
…

Interdisciplinary research

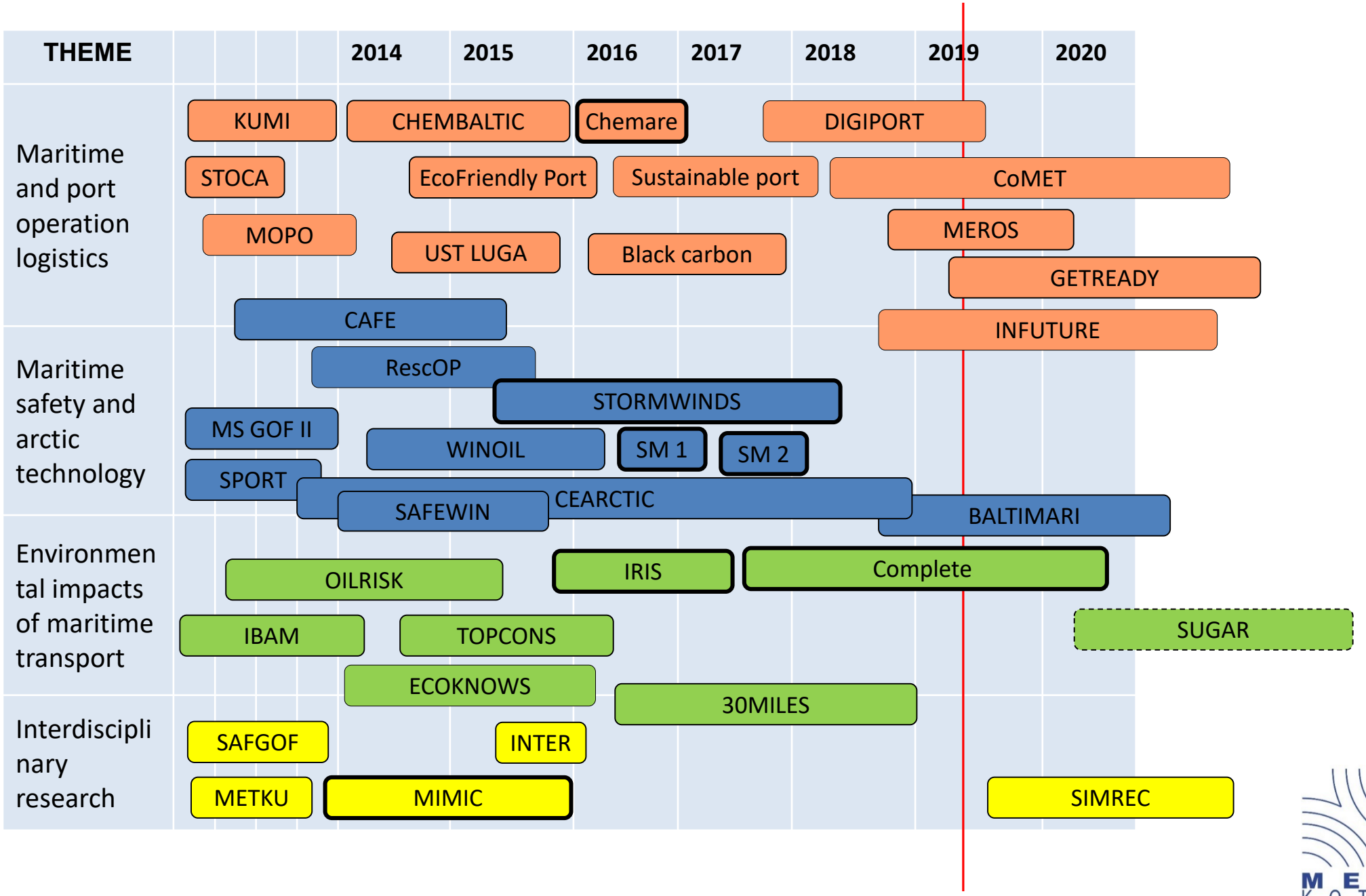
Stakeholders
- Authorities (Transport, environment etc.)
- Shipping companies
- Port operators
- NGOs
- Schools
- General public

…

Science-based means for economic, safe and environmentally friendly maritime transport



Kuva: MarineTraffic.com


THEME
2014
2015
2016
2017
2018
2019
2020
Maritime and port operation logistics
KUMI
CHEMBALTIC
Chemare
DIGIPORT
STOCA
EcoFriendly Port
Sustainable port
CoMET
MOPO
UST LUGA
Black carbon
MEROS
GETREADY
INFUTURE
Maritime safety and arctic technology
CAFE
RescOP
STORMWINDS
MS GOF II
WINOIL
SM 1
SM 2
SPORT
CEARCTIC
SAFEWIN
BALTIMARI
Environmental impacts of maritime transport
OILRISK
IRIS
Complete
IBAM
TOPCONS
SUGAR
ECOKNOWS
30MILES
Interdisciplinary research
SAFGOF
INTER
METKU
MIMIC
SIMREC

Merikotka in EUBSR Flagship projects

- Merikotka association as the lead partner
  - PA SAFE: MIMIC – Oil transportation risks (2011-2013)
  - **PA SHIP: COMPLETE** – Alien invasive species due to shipping (2017-2020)
- Centre's research group as the lead partner
  - PA SAFE: BONUS STORMWINDS (Aalto) – Risk management for winter navigation (2015-2018)
- Seed money projects
  - PA SAFE: CHEMARE – Chemical transportation
  - PA SHIP: IRIS (UH+KMRA) – Invasive species
  - PA SAFE: MARSEILLE (Aalto) – Safety and environmental indicators
  - PA SAFE: ICEULTIMATE (Aalto) - safety of ice-strengthened ship hulls

Comments on the flagship status

- Enhanced visibility
- Better possibility to have an impact
- Receiving feedback
- Cooperation and networking

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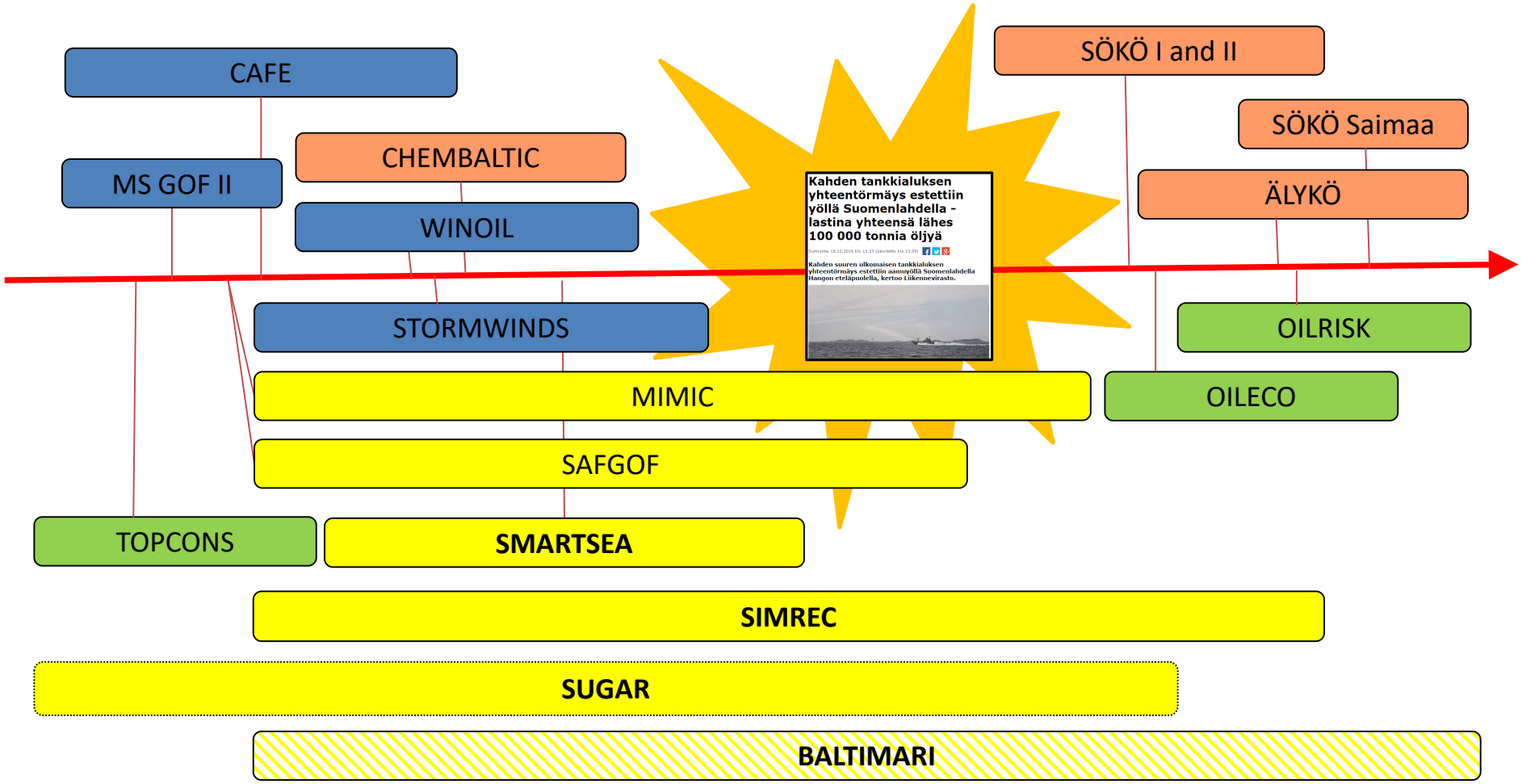
Merikotka maritime safety & risk research scope



BONUS BALTIMARI

- Continues – or synthesizes - the work of various Baltic Sea maritime projects
- 2018-2020
- Funded by BONUS EEIG
- Coordinated by Aalto MaRiSa group
- Reviews the current state of the art in risk analysis and decision support, focusing on the Baltic Sea area
  a) Maritime transportation systems
  b) Offshore energy production systems
- The studied key factors:
  - utility: cost-effectiveness and technology readiness level
  - quality of the underlying evidence
  - firmness of the method's scientific basis
  - existing knowledge gaps
  - intended end users

- First scientific paper / report to be submitted in July
- BALTIMARI mid-term results will be presented at The Baltic Seas International Maritime Conference in Turku on 24.-25.9.2019

SIMREC - Simulators for improving Cross-Border Oil Spill Response in Extreme Conditions

- Funding granted by South-East Finland-Russia ENI CBC
- Partners: Merikotka (LP), Univ. Of Helsinki, Aalto University, S-E Finland Univ. Of Applied Sciences, Finnish Environment Institute, Admiral Makarov State Univ. Of Maritime and Inland Shipping, State Marine Technical Univ. Of St. Petersburg
- Will begin later this year
- Focus area the Gulf of Finland
- Aims at decreasing the environmental risk of accidental oil spills
- Strengthens the cooperation between researchers and authorities
- Develops a new simulator environment for oil accident exercises
- Uses the simulator exercises to study decision-making and communication in oil accident response situations

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Thank you!

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