CHALMERS



Maritime Informatics a contributor for a high performing and sustainable maritime industry

Department of MECHANICS AND

MIKAEL LIND CHALMERS UNIVERSITY OF TECHNOLOGY RESEARCH INSTITUTES OF SWEDEN (RISE)



Presentation held at Singapore Maritime Institute Forum 2022, 2022-10-11

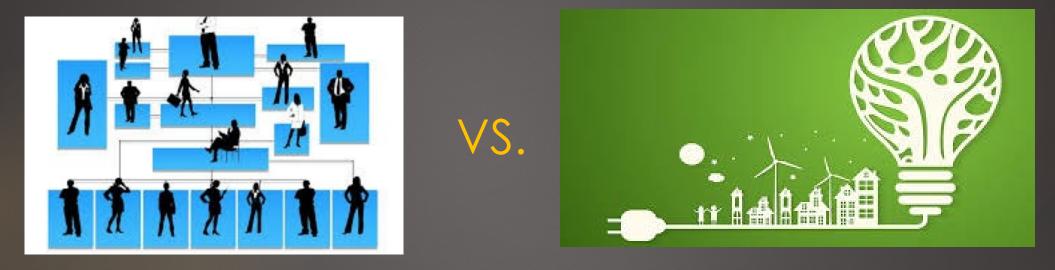
The maritime ecosystem is unique



Oldest and largest sharing economy Global Flat **Self-organized** Federated and democratic governance Asset intensive with high demands on optimized resource utilization Not allowing for one owner **Episodic interactions**

An emerging paradigm: Collaboration and Digitalization as enablers

Balancing capital productivity and environmental sustainability



Simultaneously managing supply chain performance and global commons through leveraging the power of Collaboration (C) and Digitalization (D) to achieve positive Economic (E) and Societal (S) impact.*¹

Maritime informatics ...

- Focused on Collaboration and Digitalization
- Balancing capital productivity and energy efficiency
- Responds to organisational, global, and humanitarian concerns

Three focus areas:

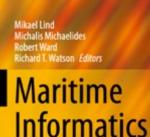
- Digital Collaboration
- Digital Data Sharing and Decision-Making
- Data Analytics

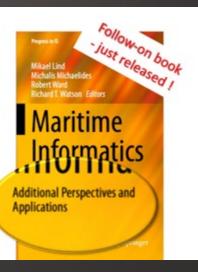




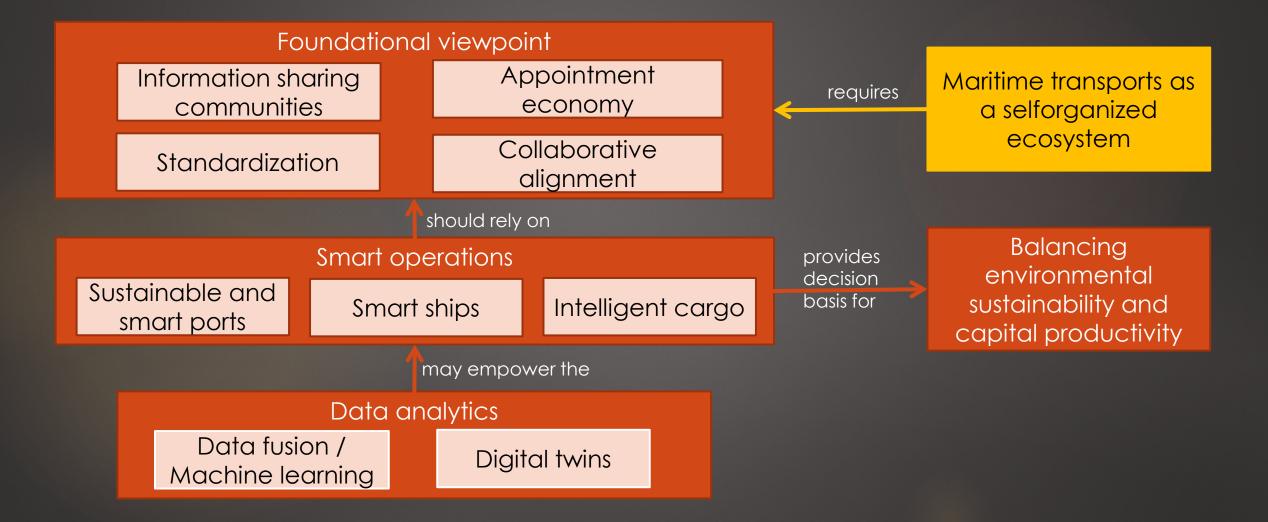
Written by Mikael Lind, Richard Watson, Jan Hoffmann, Robert Ward, and Michalis Michaelides Article No. 59 [UNCTAD Transport and Trade Facilitation Newsletter N*87 - Third er 2020

The application of information systems to increase the efficiency, safety, ecological sustainability, and resilience of the world's shipping industry

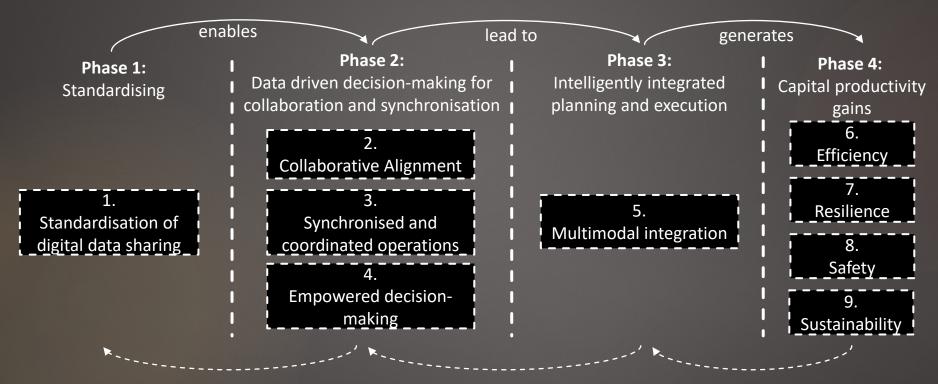




Applicational areas of maritime informatics



What is at focus and desired – Maritime Informatics enablers and effects



A four phase plan for a high performing maritime industry



Achievement of an efficient, resilient, safe, and sustainable maritime acception is a multi-yape, multi-stage project that requires a sequence of interfacting actions. Attainment of the ultimate posh of any maps you requires a series of intermediate stage where accomplications of one step existing the foundations for achievement of stoppanet steps.

Two global challenges

Challenge 1 – opening up the black box of global supply chains - Virtual Watch Towers



Challenge 2 – responding to the needs of maritime decarbonisation



Concluding remarks (1)

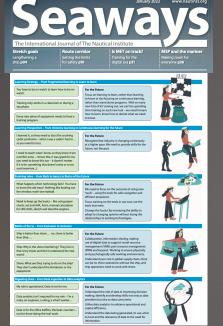
MARITIME INFORMATICS

- An applied science for the maritime industry
- Engages both practitioners and researchers for a common goal
- Promotes standardized digital data sharing throughout the cargo chain
- Supports enhanced efficiency, safety, security, resilience, and sustainability in maritime transport
- Enables understanding, predicting, advising and improving maritime activity
- Enables seamless integration to the larger transport system

Maritime Informatics is the key to the future of maritime transport

Concluding remarks (2)

- Maritime Informatics:
 - A Science for change
 - Requires Engaged Scholarship AND reflective practitioners
 - Don't pave the cow paths
 - A driver for MET of the future



The Maritime Ecosystem Needs Innovation to Avoid "Paving the Cow"



by Mikael Lind, RISE (Research institutes of Sweden), Hanane Becha, UN/CEFACT, André Simha, MSC (Mediterranean Shipping Company SA), Steen Erik Larsen, A.P. Moller – Maersk, Eyal Ben-Amram, ZIM, and David Marchand, Traxens



How Professionals Think in Action

Donald A. Schon

ENGAGED SCHOLARSHIP A GUIDE FOR ORGANIZATIONAL AND SOCIAL RESEARCH ANDREW H. VAN DE VEN

FOCUS AREAS OF MARITIME INFORMATICS

Digital Collaboration

Digital Data Sharing and Decision-Making

Data Analytics

Thank you!



Department of MECHANICS AND MARITIME SCIENCES

Mikael Lind Research Institutes of Sweden (RISE) Chalmers University of Technology

(Mikael.Lind@ri.se)







www.maritimeinformatics.org