



Rijkswaterstaat
Ministry of Infrastructure
and Water Management

Smarter • Safer • Sustainable

SMASH!



Smart Shipping in the Netherlands

From the perspective of
Rijkswaterstaat

Kick-off Pianc WC210

Michael Schreuder

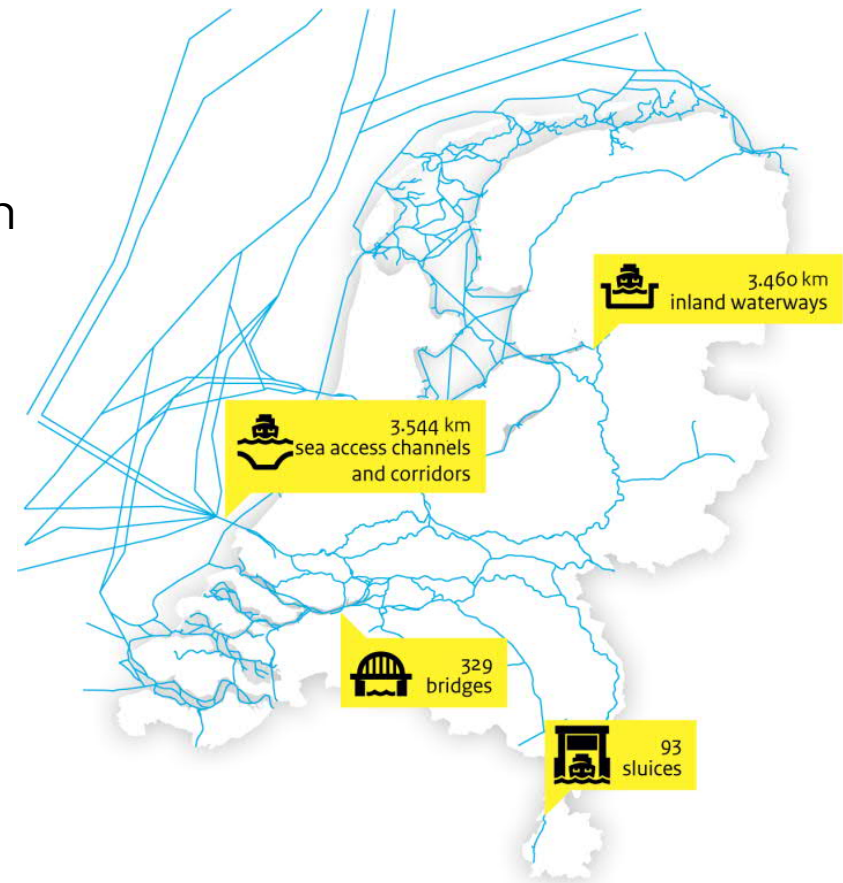
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Management Area of Main Waterways Network

Annual transport by inland shipping

- 365 million tonnes of cargo
- 35 percent of the total transportation of goods in the Netherlands
- 80 percent of bulk shipping
- 3.2 million containers





1. Legitimacy & Ambition

30 november 2017 (minister Van Nieuwenhuizen):
“The Netherlands is an innovative country. This is why I will widen the legal scope to allow for experimenting and testing on our inland waterways and the 12 mile zone at sea. We will assess under what conditions experimenting can be done together with our executive agency and transport inspectorate. I will also put this on the agenda in our international bodies.”



increase competitiveness, safety and sustainability
7.3% of GDP | 224,000 jobs | added value €21 billion
Port of Rotterdam | inland fleet biggest EU market share



Definition of Smart Shipping

From the perspective of the Ministry of Infrastructure and Water Management

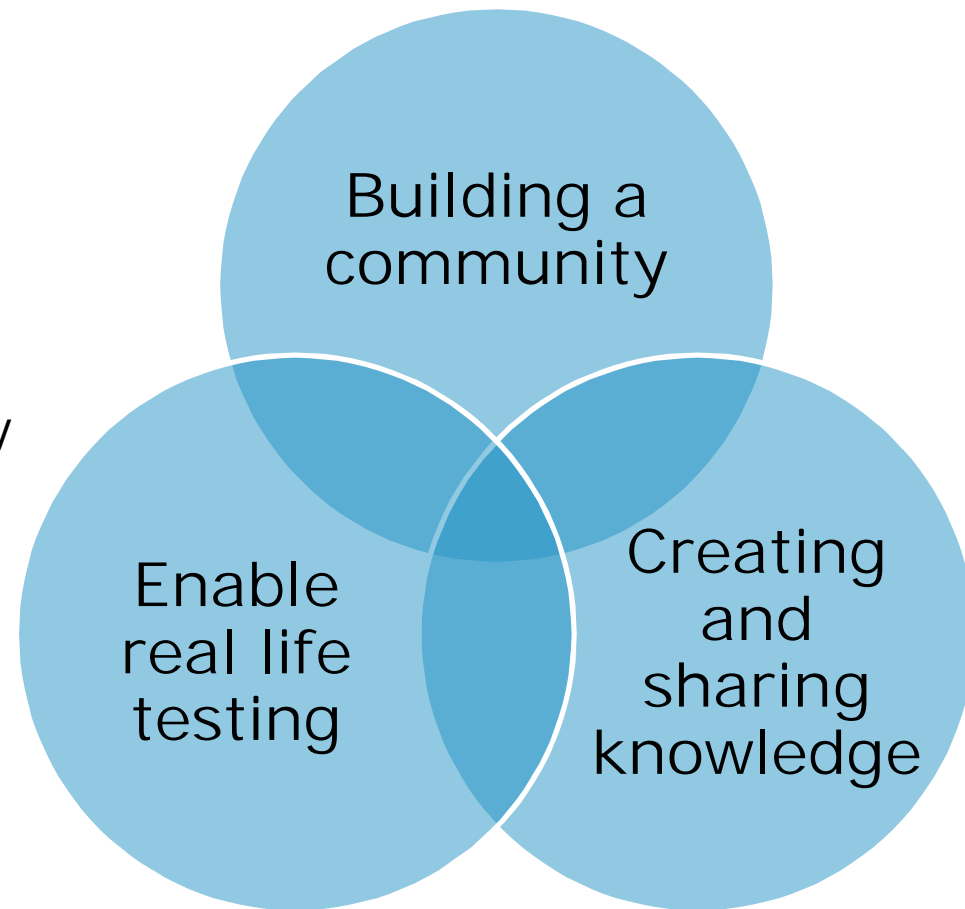
"Smart Shipping is highly automated sailing at sea and on inland waterways and accommodating them, which contributes to the competitiveness, safety and sustainability of the sector"





Approach in The Netherlands

- Joint approach with the ministry of infrastructure and water management
- Very active approach
- Working close with the private sector, knowledge institutes and other waterway managers





Building a community

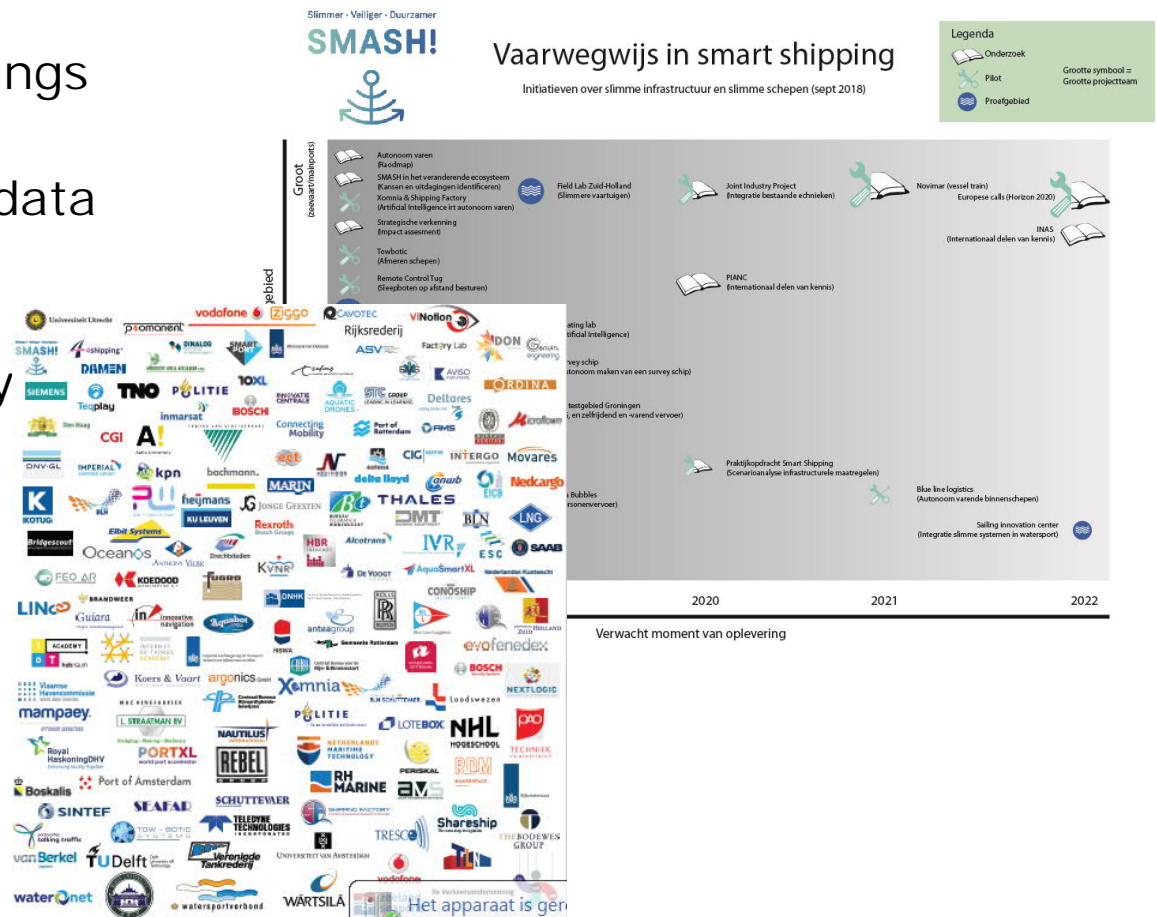
Smart Shipping Challenge (2017)





Building a community (2018)

- Organized themed meetings around specific subjects
 - Policy development, data sharing, inside in developments
- Newsletter to community
- Widening community – shared responsibility

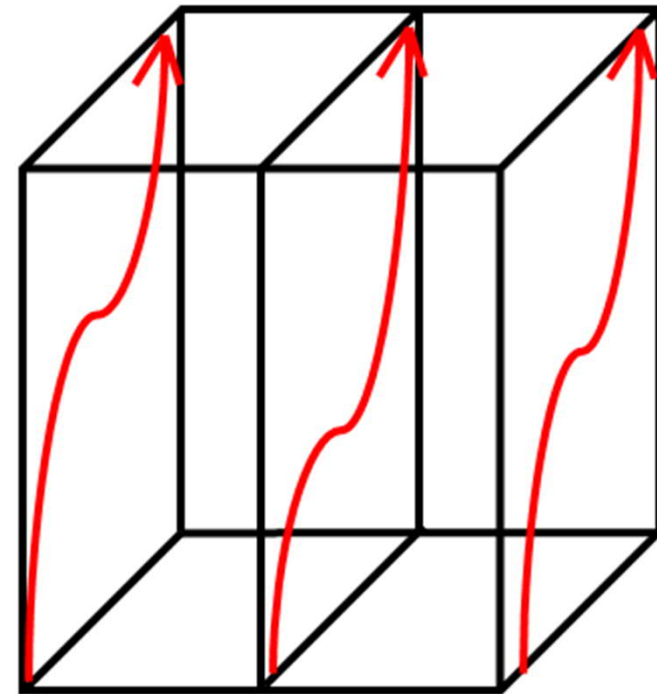




Building a community (2019)

National forum works on a roadmap with triple helix

- 30 January 2019: creating national Forum
- Aim: stimulate Smart Shipping in the Netherlands
- Participants: public and private parties (authorities, commercial organizations and research institutes)
- Result: a roadmap and research agenda towards Smart Shipping on three pillars
 - The ship
 - The infrastructure
 - The logistic chain

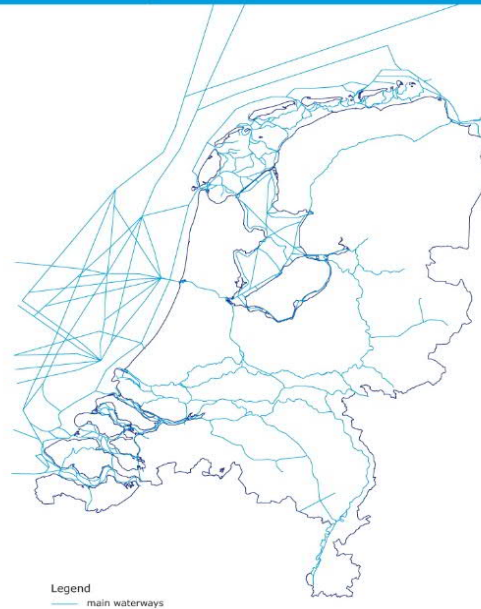


slimme schepen slimme infra slimme ketens



Enable real life testing Experiments in The Netherlands

Main waterway network



- 2,137 km of canals and rivers
- 5,472 km of waterways in open water
- 84 locks
- 278 bridges

- Every inland waterway, in principle
- Application at single contact point (loket.smartshipping@rws.nl)
- Project plan and risk assessment
- Tailor-made permission:
 - Assessment by interdisciplinary team
 - If necessary: extra conditions from waterway manager
 - Temporary
- In return: evaluation of experiment
 - Policy development
 - Ensure safety in follow-up

Policy regulations - effective from 1 October 2018



Enable real life testing

International cooperation

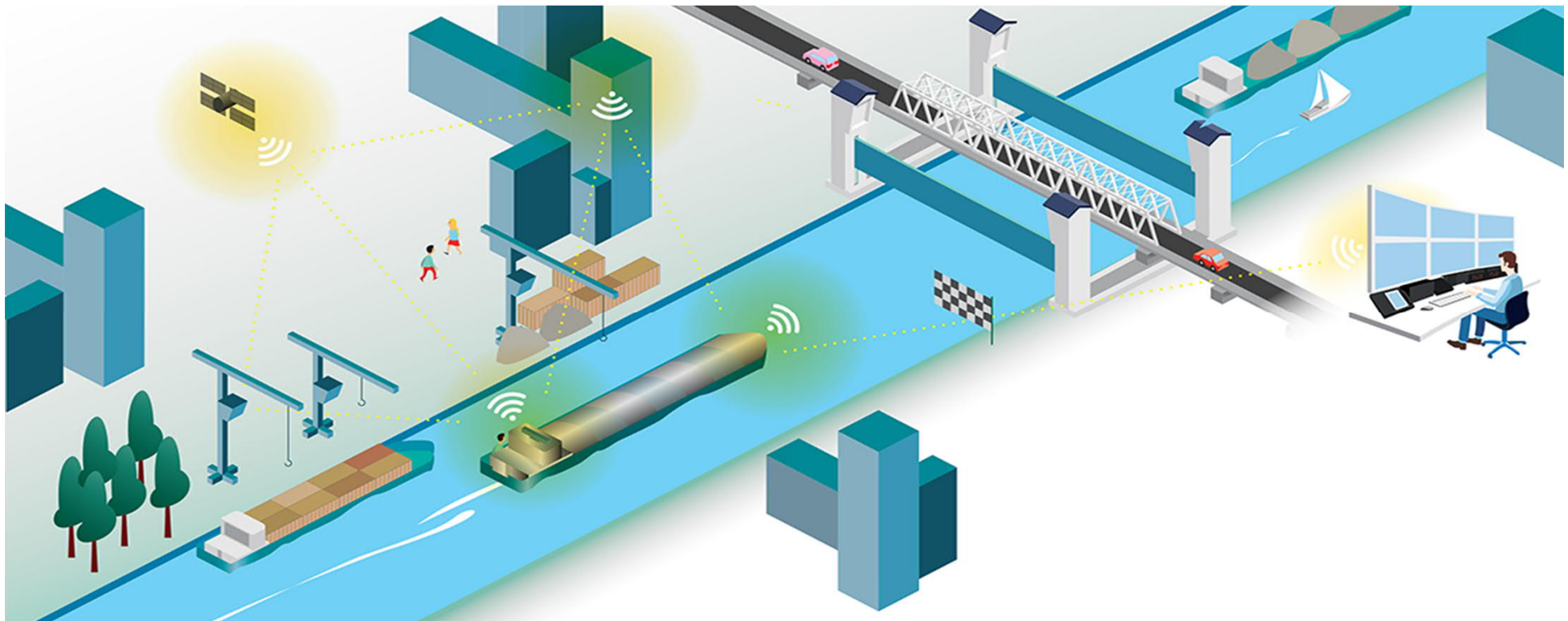
- Working together with Flanders (level playing field for testing), UK (Smart North Sea)
- Participating in CCNR, IMO and IALA





Creating and sharing knowledge

Strategic impact analysis | participating in (inter)national research proposals | sharing research results





Introduction participants



Thank you for your attention

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Overig



Enable real life testing

Smart North Sea

Confirmed members: UK and NL

Looking for: BE, DE, DK, NO
(operational and legal representatives)

Ambition:

- Facilitate smart shipping (on sea)
- Learn from tests and commercial Smart Shipping

Operational goals:

- Enable tests with ships with different levels of autonomy on the North Sea (including unmanned and autonomous)
- Allow for commercial smart shipping
- Set up a framework for tests and commercial smart shipping



Enable real life testing

International cooperation: workin with Flanders

- Flemish government:
responsible for inland waterways in Flanders
- Federal government:
responsible for the territorial sea of Belgium
- To make experiments on waterways from The Netherlands and Flanders and vice versa more easy:
 - Level playing field
 - Similar application requirements to conduct experiments
 - Similar assessment of applications
 - Actual cooperation
 - Similar conditions when allowing experiments
 - Location, date, time, etc.

