Regulating experiments with Smart Shipping in The Netherlands

Melanie Kalis
Legal advisor Maritime Affairs
melanie[dot]kalis[at]minienm[dot]nl

Bart van Gent
Policy officer Smart Shipping

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Smart Shipping

“Smart Shipping is (accommodating) **highly automated sailing** at sea and on inland waterways, which contributes to the **competitiveness, safety** and **sustainability** of the maritime sector.”
Legitimacy & Ambition

30 November (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
Approach

From 0 to 750+ members within 6 months
Smart shipping is not unique …

- Other transport modalities have similar questions:
  - Drones
  - Selfdriving cars
  - Automated trains

- These questions are diverse:
  - Safety and certification
  - Technique and regulation
  - Liability and responsibility
  - Privacy
  - (Cyber)security
  - Social security
  - Experimenting and test areas
Experiments: legal framework

- Every inland waterway
- Application at single contact point (loket.smartshipping@rws.nl)
- Project plan and risk assessment
- Tailor-made permission of minister for events that may endanger safety
  - Assessment by interdisciplinary team
  - If necessary: extra conditions from waterway manager
- Request for evaluation of experiment
... but different in some ways

• Different vessels: inland and sea, passengers, cargo, pleasure
• Different purposes: safety, transport, traffic, security, fishing

• Difference between flag state, port state and coastal state
• Different international conventions, EU-rules and national rules

• Legislation is detailed on many different matters and contains diverse obligations

• Life span of a ship is long
Levels of Autonomy: from support to taking over

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Legend:
- AIS
- Radar (not digital) difficult
- Inland EC/IS
- Automatic pilot
- Echoloc.
- Process monitoring (water etc.)
- Network technology
- Support
- Dredging ships
- Motor vessels
- Miscellaneous
Challenges

- What can we offer a private sector which is ready for more than experimenting?
  - ‘Proven technology’
  - High risk investment with uncertainty regarding future policy and legislation

- How can we safeguard public values by regulating Smart Shipping innovations?
  - Reliable traffic management and smooth sailing
  - Public safety
  - Sustainability

- How should we deal with national laws drafted without eye for ‘sci-fi’ future?
  - Autonomous
  - Unmanned
  - Drone ships

- How should we deal with traditional international law in relation to national law?
  - Inland navigation (EU/CCR competence)
  - Seagoing (IMO)
International cooperation: 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
International cooperation: PIANC Working Group

World Association for Waterborne Transport Infrastructure

Working group (BE/NL proposal)
- Establish a common understanding of Smart Shipping
- Collect, analyse and consolidate current research
- Identify possible future scenarios
- Identify knowledge gaps

Interested?

Chair: Lea Kuiters lea[dot]kuiters[at]rws[dot]nl
Vice-chair: Ann-Sofie Pauwelyn ann-sofie.pauwelyn[at]vlaamsewaterweg[dot]be