

Testing & Operation of Autonomous Ships in Inland Waterways

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# 1. De Vlaamse Waterweg nv



### De Vlaamse Waterweg nv.

Flanders situated in the TEN-T network





### De Vlaamse Waterweg nv

De Vlaamse Waterweg nv in numbers







## 2. Framework



## **Smart Shipping**

#### What is Smart Shipping – Components

#### **Smart Shipping includes the following:**



**Smart ships** 

Smart ships are vessels that are highly automated and are therefore equipped with automated systems using external data to optimize the key functions of the vessel (navigation, real-time planning, fuel consumption management, etc.).





Infrastructure is operated via remote control from a traffic center. Operation is organised from corridor perspective. In this way, more proactive traffic management can be done. External data from ships, infrastructure and third parties are taken into account.



Smart communication

Enabling smooth and efficient voyages of one particular ship by means of route planning, lock and bridge planning, hydrographic information,...

Smart communication also takes into account real-time external data coming from ships, infrastructure and third parties.



### Smart regulation and facilitation

The regulation is adapted in such a way that there are no restrictions hindering the technological evolution of smart shipping, however still prioritizing the safety of the users of the inland waterways and society.



# **Smart Shipping**

#### Building blocks De Vlaamse Waterweg nv





### De Vlaamse Waterweg nv

#### **Division Automation and Traffic Management**





# 3. Our approach



### **Our Approach - Regulation**

After identifying the benefits, the path towards operating an autonomous vessel on the inland waterways of Flanders has been defined.

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## 2. Law and regulation - Gaps

It has been identified that the current law and regulations are not adjusted to make autonomous vessel operations possible

## 4. Adjustment law and regulation

After the test cases the best practices and missing gaps in the law and regulation will be filled

#### **1. Identified Benefits**

The benefits identified for the people, the organizations and the planet illustrate that the step towards autonomous vessels is something that the authorities should work on.

#### 3. Test areas

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Test areas in which autonomous vessels can operate have been approved. It is however still up to the authorities to decide whether it is allowed to test or not.

## 5. Autonomous vessels in legal framework

The autonomous vessels will be able to operate on the Flemish inland waterways within a well defined regulatory framework





## **Our approach**

Timeline – next steps to be taken



