

# The educational institutions approach on the challenges of digitalization in IWT

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## Challenges in western European IWT crewing

Currently there is a growing shortage of personnel in western European IWT

Crews are getting older and there is a insufficient influx of new, trained and skilled personnel

Wages in western European IWT are comparable, if not higher than in the maritime world right now

The contemporary fleet is digitalized and interconnected and demands an augmented set of skills from it crews



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Specialized semi-autonomous vessels, such as remotely controlled fireboats, may enter limited service in a relatively shorter time, but one always needs to remember what ultimately drives automation: money. As long as humans can do a given job for less money than a machine, automation remains in the realm of science fiction.



The new EU directive  
2017/2397/EU

The new directive replaces the old 97/50/EU (only boatmasters)

Aim: Implementation of a mutually recognised Regime for IWT crews on the European interconnected waterways (...and beyond)

Streamlining the legal framework in professional Qualifications in order to ensure workers mobility and a high level of safety in navigation

Defining the professional qualifications and competences in inland navigation according to defined Competence tables

Standards for competencies and qualifications on ML and OL incl. required experience and method of demonstration – **practical examination!**

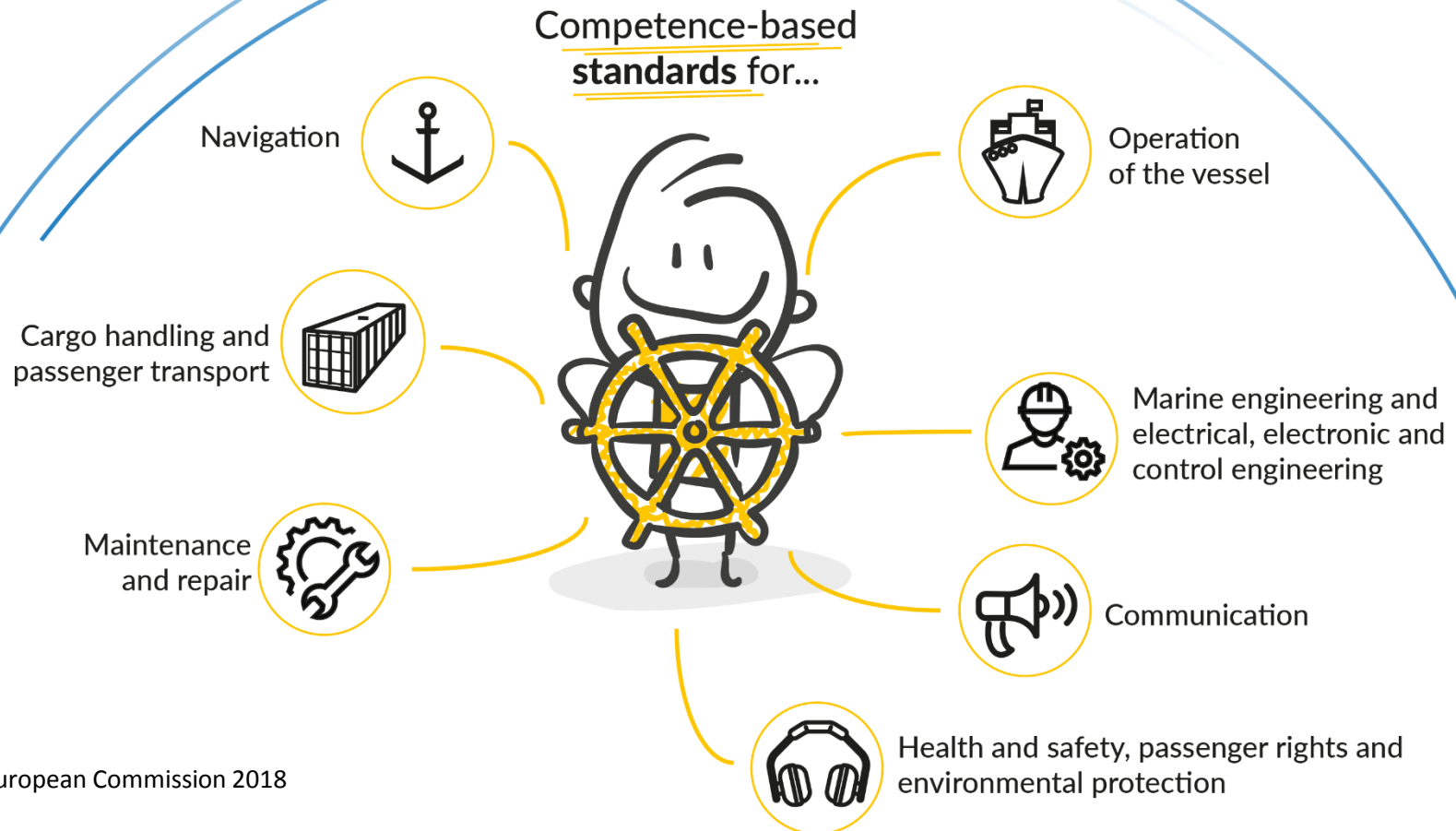


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# Recognition of professional qualification in inland navigation

Harmonised rules on professional qualifications will foster labour mobility in European inland navigation





# Future steps for the implementation of the new Directive

Recognition of professional qualifications on all inland waterways  
in the European Union by 2022



## 2018

## 2020

## 2022

CESNI will define and adopt competence standards as required by the directive

**Member States** should transpose the laws and provisions necessary to comply with the new rules

Four-year period for transposition

16.01

Entry into force

17.01

CESNI standards have to be adopted under delegated or implementing acts

17.01

Deadline for transposition into national law

## The use of contemporary training tools

New legislative frameworks and a digitalized fleet demand a change in education and training culture

In order to achieve a high training standard, the MAH choose to implement contemporary training tools

These tools (blended learning, training vessels, autonomous navigation, simulators and robotica) ensure a safe, efficient, reliable and repeatable training environment



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← TERUG NAAR OVERZICHT

We vertrekken

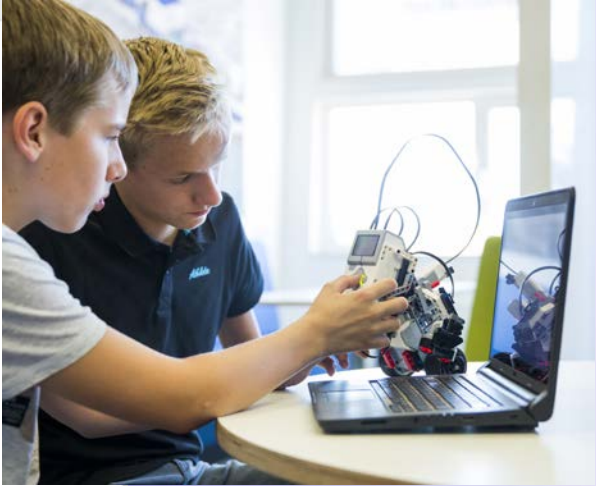
☰ INHOUDSOPGAVE

### Van Gent naar Mannheim

Je staat op het punt om je laatste reis te starten. Deze reis vaar je op een gekoppeld samenstel.  
Het beginpunt is Gent.

Ondertussen komen we nog langs Terneuzen, waar we gaan laden. Daarna de Oostsluis door en....  
De rest van de route ga je in de opdrachten onderzoeken.

Uiteindelijk komen we bij onze eindbestemming, Mannheim.



Students use digital learning tools from day one on the school

🔍 MEER INFORMATIE

☰ MENU INKLAPPEN

- 1 2 3 4 5 6 7 8 9 10 11 ... 18

VOLGENDE



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IWT Training Vessels



MV Prinses Maxima is equipped with a semi- autonomous “Bahnleitungssystem” since 2008



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## IWT Full Mission Simulator centers



<https://www.youtube.com/watch?v=E-weGUebQDs>



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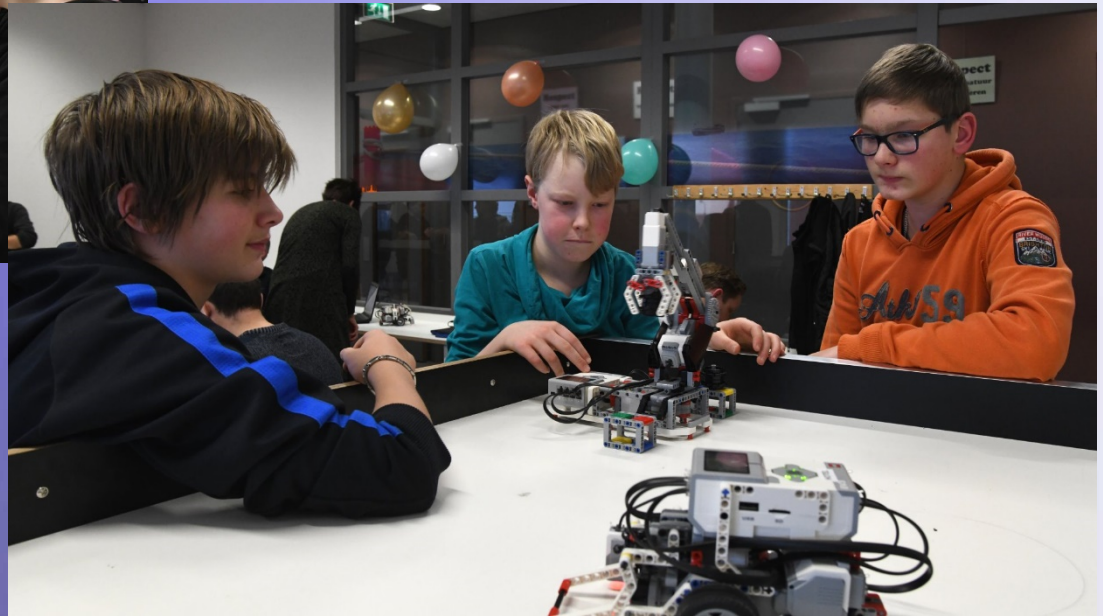








Robotica facilities



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Thank you very much!



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