

*CCNR study and roadmap towards zero
emission inland navigation*

Benjamin Boyer & Raphaël Wisselmann

Shipbuilding, Technical Requirements &
Chief Engineer
CCNR



28th June 2021

IWT Platform Webinar

CCNR study and roadmap towards zero emission inland navigation

Raphaël Wisselmann
Benjamin Boyer





In the Mannheim declaration (2018)
Ministers in charge of transport of the
CCNR Member States:



- tasked CCNR to develop a roadmap in order to
 - reduce greenhouse gas emissions by 35% compared with 2015 by 2035,
 - reduce pollutant emissions by at least 35% compared with 2015 by 2035,
 - **largely eliminate greenhouse gases and other pollutants by 2050.**

(CCNR and EU share the same long-term vision with “a zero greenhouse gas emissions inland navigation sector by 2050”)

- underlined the **need for new financial instruments** to achieve these environmental objectives and entrusted CCNR to lead this development.



2019: CCNR launches a study project on **financing the energy transition towards a zero-emission IWT** aiming to:

- **assess the financing needs** for the energy transition of the IWT sector,
- **secure support and acceptance** of such results with close cooperation with the relevant stakeholders,
- formulate recommendations for the development of **a European financing and subsidy scheme** to support this transition,
- provide inputs to the **discussions at the Rhine, European and international levels**, and
- pave the way for a **political decision**.

Several consultants involved
(DST, EICB, Panteia, Pro Danube, Rebel, Ecorys)

Regular consultations with the Stakeholders

Final results published beginning of July 2021





The financial challenge: a considerable financial gap to realise the energy transition (several billions - 10 bn€ max price scenario) !



- Energy transition accompanied by technological uncertainties, **no “one size fits all” solution**
- **Sector cannot finance the energy transition by own means** (high costs and lack of capital)
- **Current framework conditions = no incentive for vessel owners to invest in “greening”** (no business case)
- **Significant grants needed** to create a business case
- **No business case = no financing/access to loans** (even if low interest rates, guarantees...)

=> a European funding and financing instrument, combining public and private means, could play an important role to support the inland navigation sector’s energy transition, however

- **economic, technical, legal and practical feasibility questions** remain to be addressed by competent organisations
- such an instrument should however be **accessible to vessel owners** from **all CCNR Member States** on the same terms.



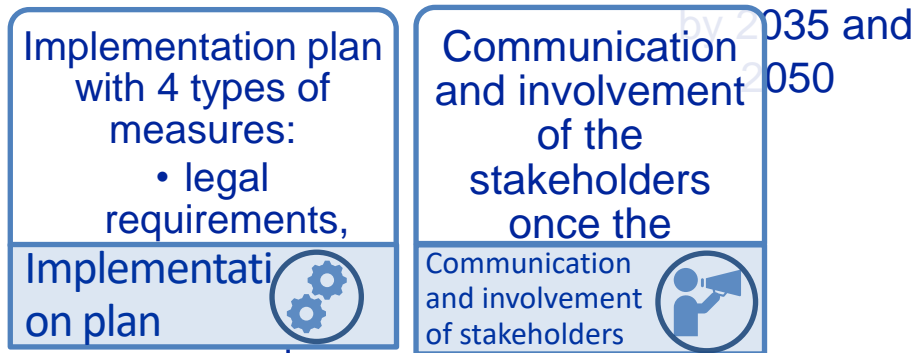
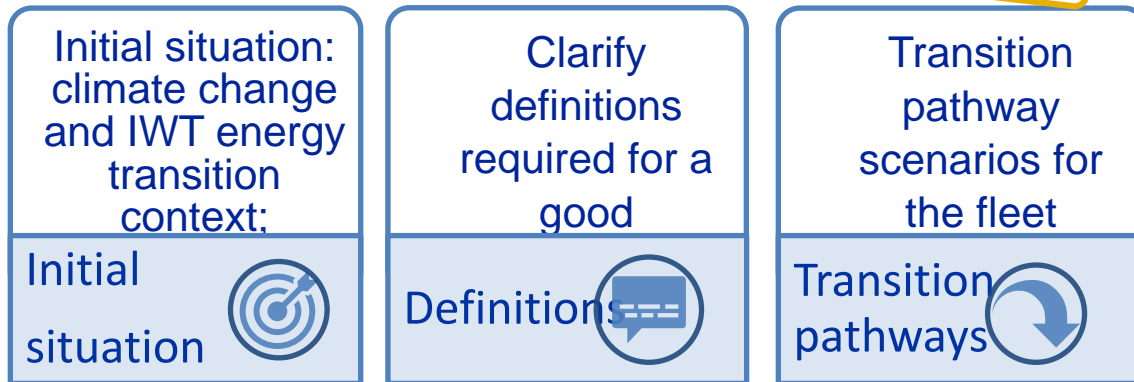
- Main CCNR **public policy instrument** to deliver on the mandate conferred by the Mannheim Declaration and to help to address the existential challenge of the energy transition for Rhine and European inland navigation.
- Develop a **shared vision of the energy transition and associated challenges within the inland navigation sector**, while also generating support and acceptance for related policy measures.
- Could serve to **coordinate / stimulate decisions at the political level** by the different competent authorities, namely decisions of the EU, River Commissions, Member States, local communities...
- 2nd Draft Roadmap **currently under discussion and second consultation of stakeholders until 5th July**. Contributions via CCNR member states, observer states and approved organisations.
- Adoption planned during the CCNR Plenary session in December 2021.



MAIN CHAPTERS OF DRAFT ROADMAP

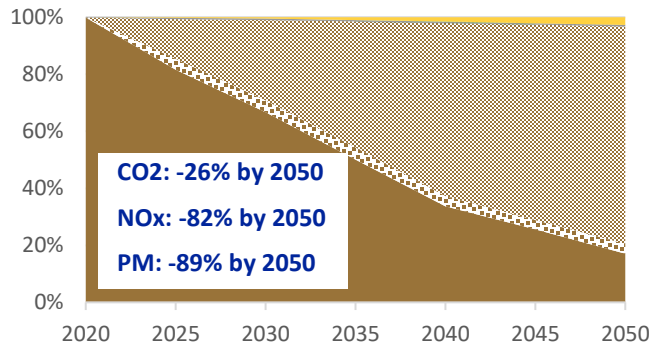


+

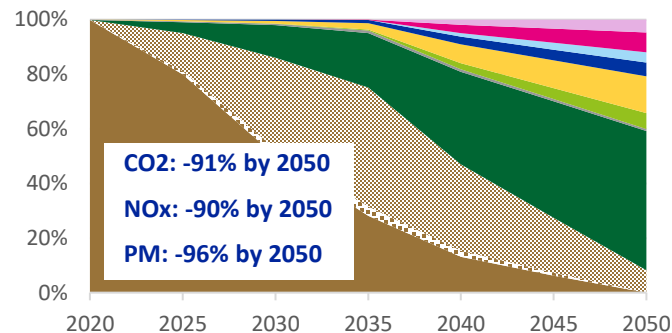




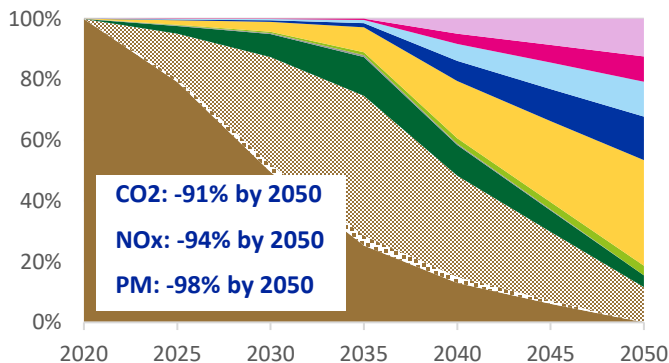
Development of fuel share towards 2050
in the “Business-as-usual” scenario



Development of fuel share towards 2050
in the “conservative” pathway



Development of fuel share towards 2050
in the “innovative” pathway



- “Business-as-usual scenario”: evolution of technologies without any intervention & current legislative framework
- “conservative” pathway: fuels & techniques easy to implement, cost efficient in short-term, quite mature & already available on the market.
- “innovative” pathway: fuels & techniques still in their infancy stage, more expensive, more promising in terms of emission reduction potential, business case may become more attractive on the long run.

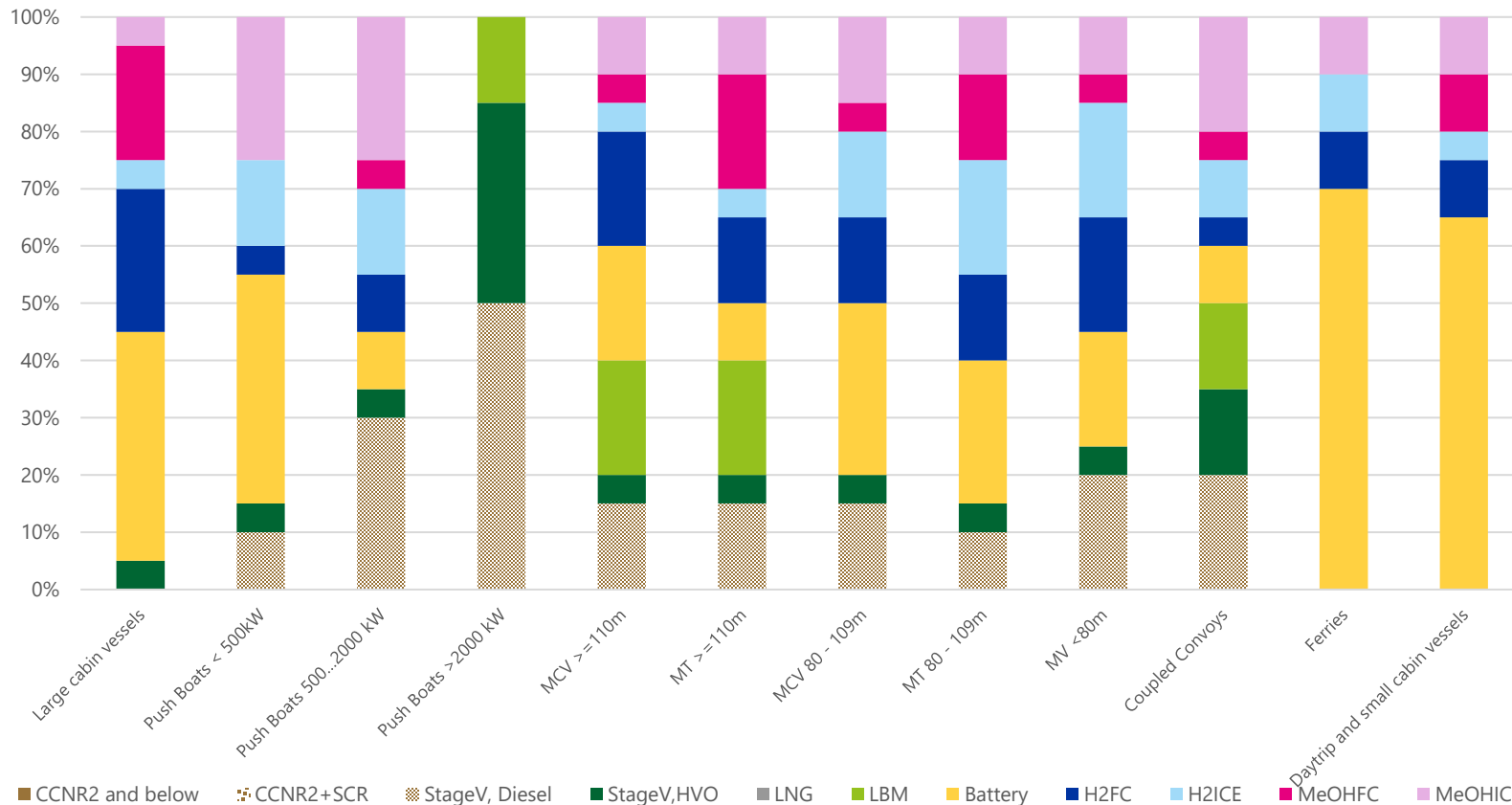
→ In practice: reality in the middle

■ CCNR2 and below ■ CCNR2+SCR ■ StageV, Diesel ■ StageV,HVO ■ LNG ■ LBM ■ Battery ■ H2FC ■ H2ICE ■ MeOHFC ■ MeOHICE

*HVO = Hydrotreated Vegetable Oil; *LNG = Liquefied Natural Gas; *LBM = Liquefied Bio Methanol; *H2 or MeOH FC+ICE = Hydrogen or Methanol in fuel cell or combustion engine



EXAMPLE: Innovative pathway: technology share for each fleet family in 2050





- Wish of **close cooperation with the shipping industry** => shared vision of the energy transition and associated challenges,
- CCNR study on financing the energy transition towards a zero-emission IWT
 - final results published in July (<https://ccr-zkr.org/12080000-en.html>)
 - recommendations to **pave the way for the development of a European financing and subsidy scheme**
- Draft CCNR roadmap as **public policy instrument** to reduce Rhine and inland navigation emissions by:
 - setting **transition pathways for the fleet** (new and existing vessels),
 - suggesting, planning, and implementing **measures** directly adopted or not by the CCNR
- **Second consultation of stakeholders until 5th July: your feedbacks via CCNR member states, observer states and approved organisations are highly welcome!**



THANK YOU FOR YOUR ATTENTION

Raphaël Wisselmann and Benjamin Boyer

r.wisselmann@ccr-zkr.org

b.boyer@ccr-zkr.org