

# Vanguard Initiative in the European framework for hydrogen transition

TransH2 | Maritime Technology Cluster FVG | Roberta Padovan

Workshop:

**“Challenges and Opportunities from Hydrogen  
for Cross-Border Maritime Mobility”**

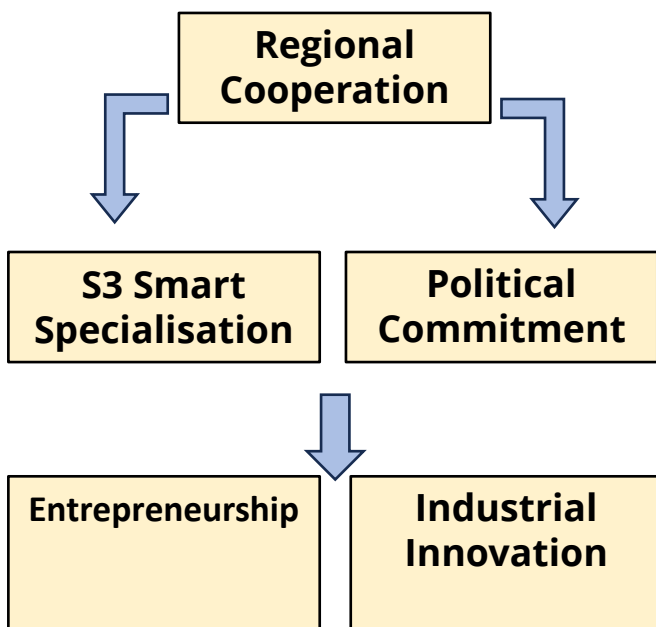
Monfalcone, Via Garibaldi 64c

20 June 2024

<https://www.italy-croatia.eu/web/transh2>

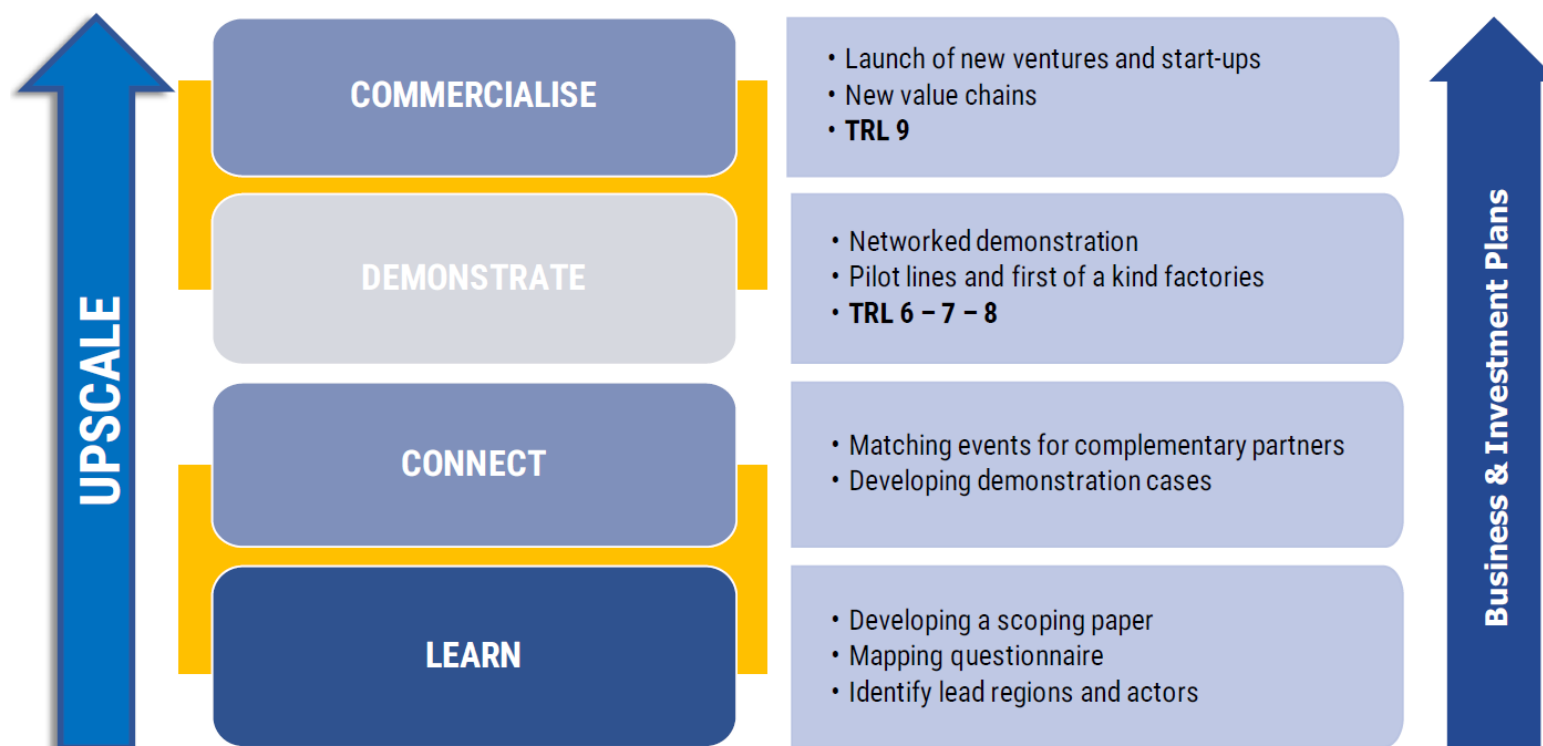


Vanguard Initiative objective: boosting the interregional cooperation in strategic industrial sectors





## Vanguard Initiative methodology

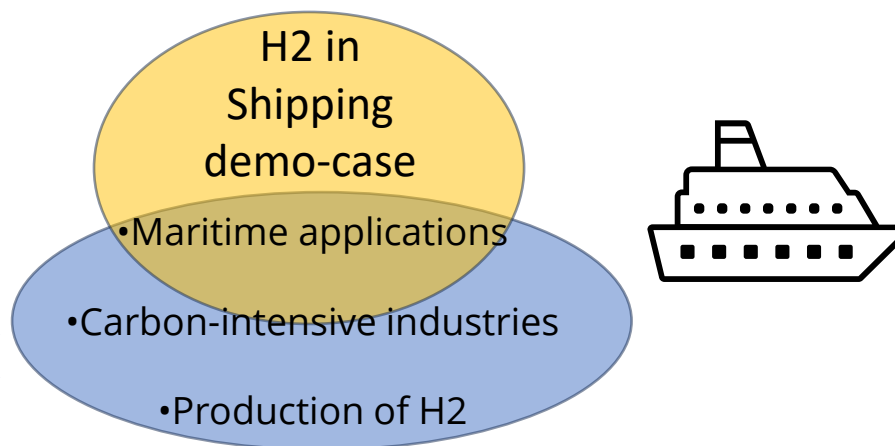


## Vanguard Initiative structure: 8 Pilots & 25 Demo-Cases

- 3D-printing
- Bioeconomy
- Artificial Intelligence
- Smart Health
- Nano-enabled Technologies
- Sustainable Manufacturing
- **Hydrogen**
- **ADMA Energy**

### ***H2 in Shipping demo-case:***

- launched in October 2023; led by FVG region
- promotion of partnerships in the maritime value-chain aimed at innovation projects including green H2



## *H2 in shipping: topic & objectives*



Decarbonization of the maritime sector using hydrogen-based technologies



North Adriatic Hydrogen Valley (NAVH) project  
2029 ➡ 5.000 t/year of green H2



Fostering a community to effectively launch projects in the maritime sector



Development of an H2 infrastructure facility near the first green H2 production plant



## *H2 in shipping: objective*

Mapping the need and priorities of stakeholders related to H2

- on-board production
- bunkering
- storage
- on-board distribution

**Take part in our demo-case!**



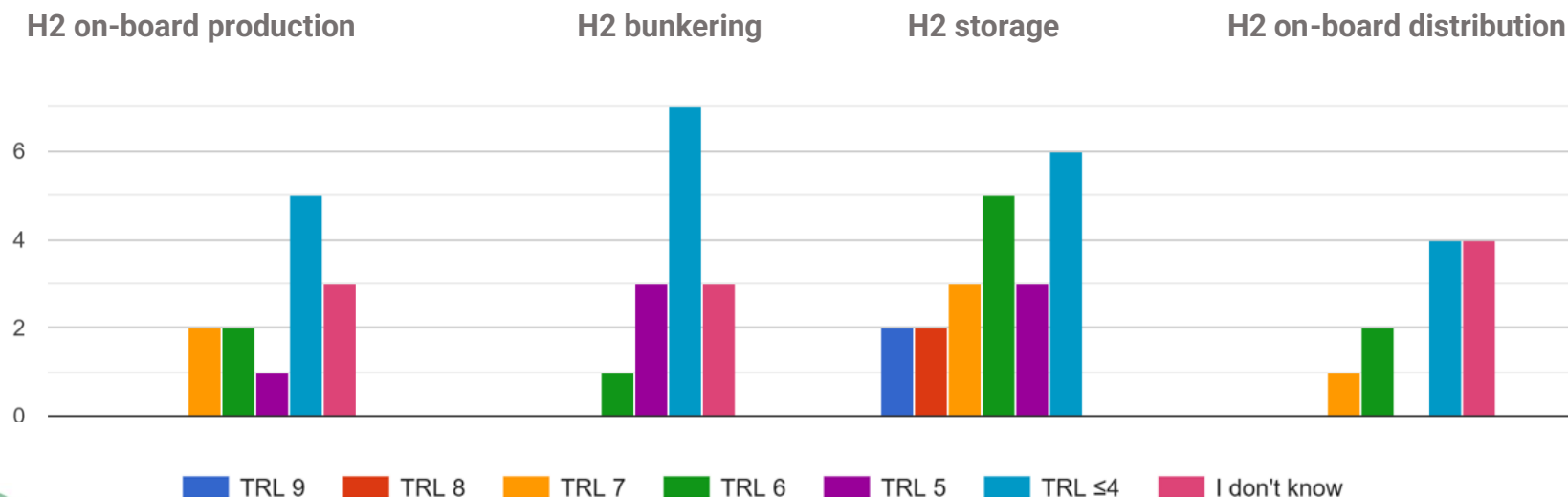
- Feedback
- Volunteer survey
- Reporting framework
- Date of next meeting



## *H2 in shipping survey*

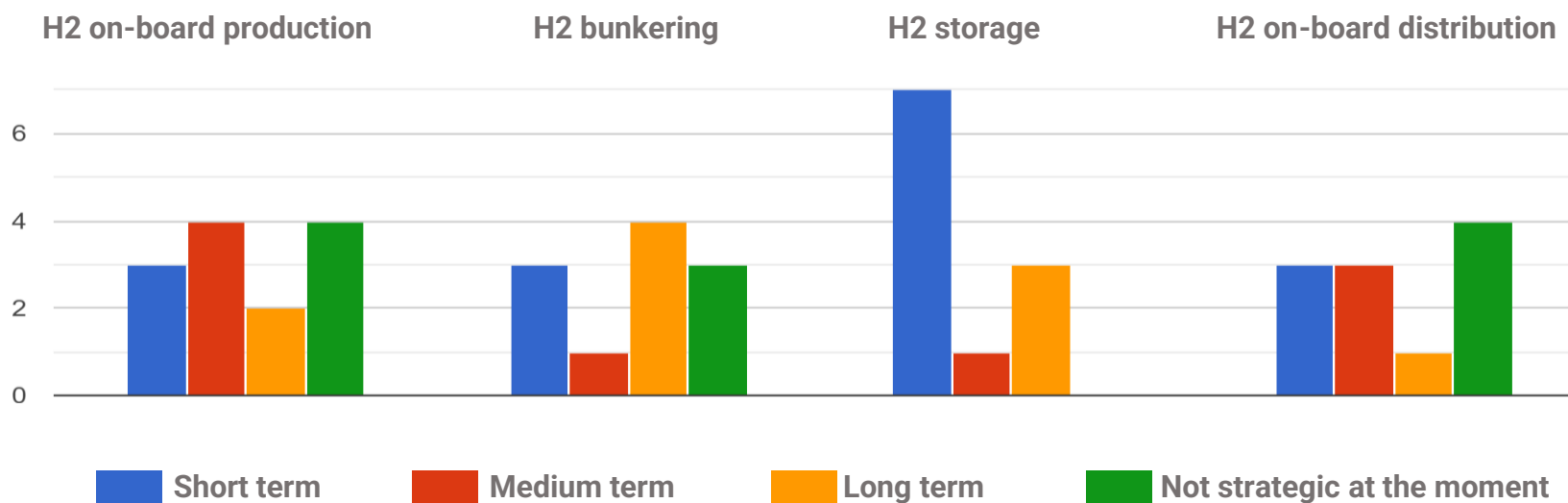
Development of efficient and safe H2-related technologies for the maritime and inland waters sector

State of the art for different technologies:



## *H2 in shipping survey*

Strategic relevance of the following technologies vs timeframe

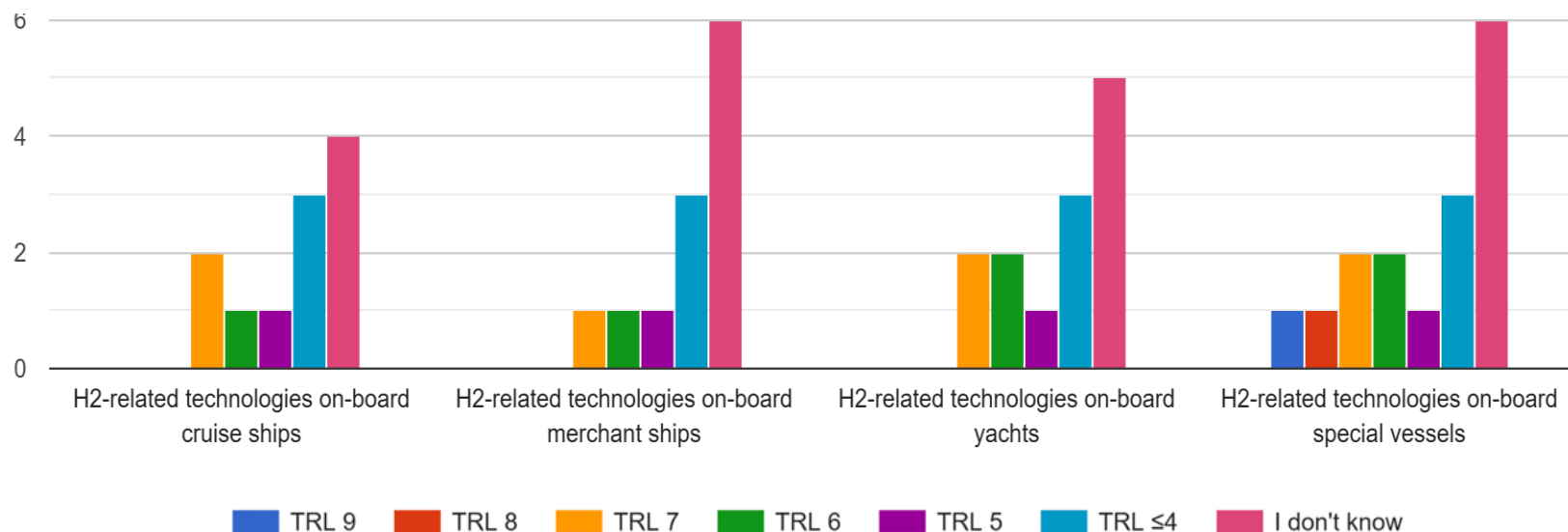




## H2 in shipping survey

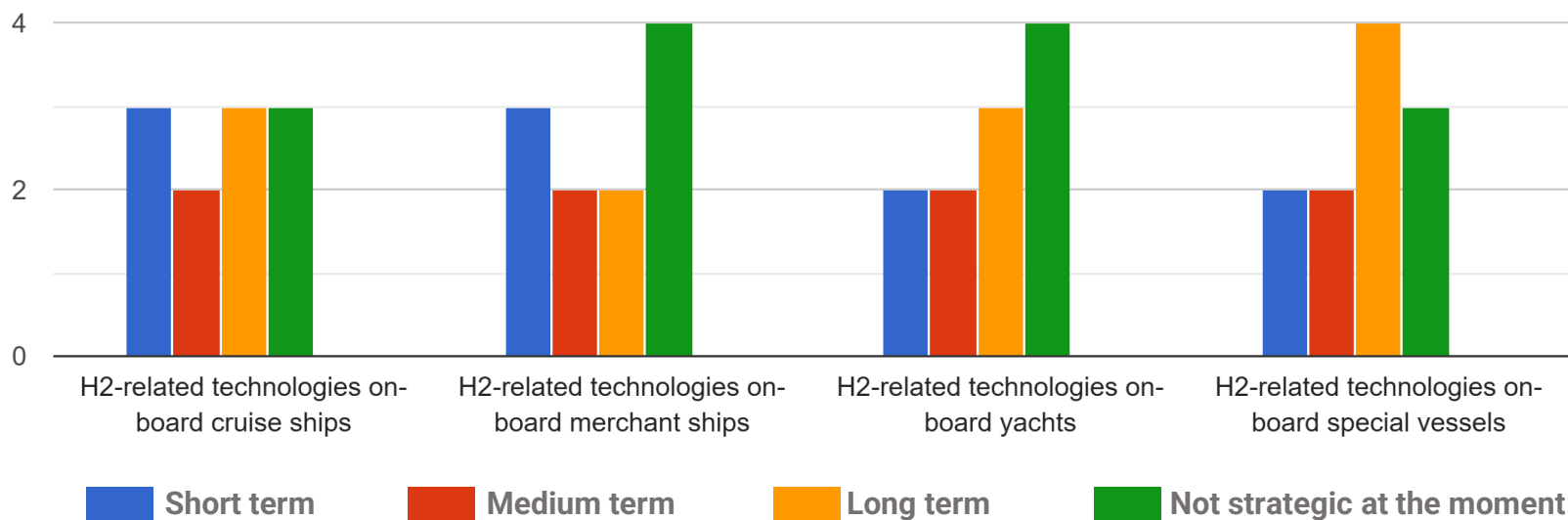
Implementation of H2-related technologies on-board large ships (>24 meters)

State of the art of the technologies in different types of ship



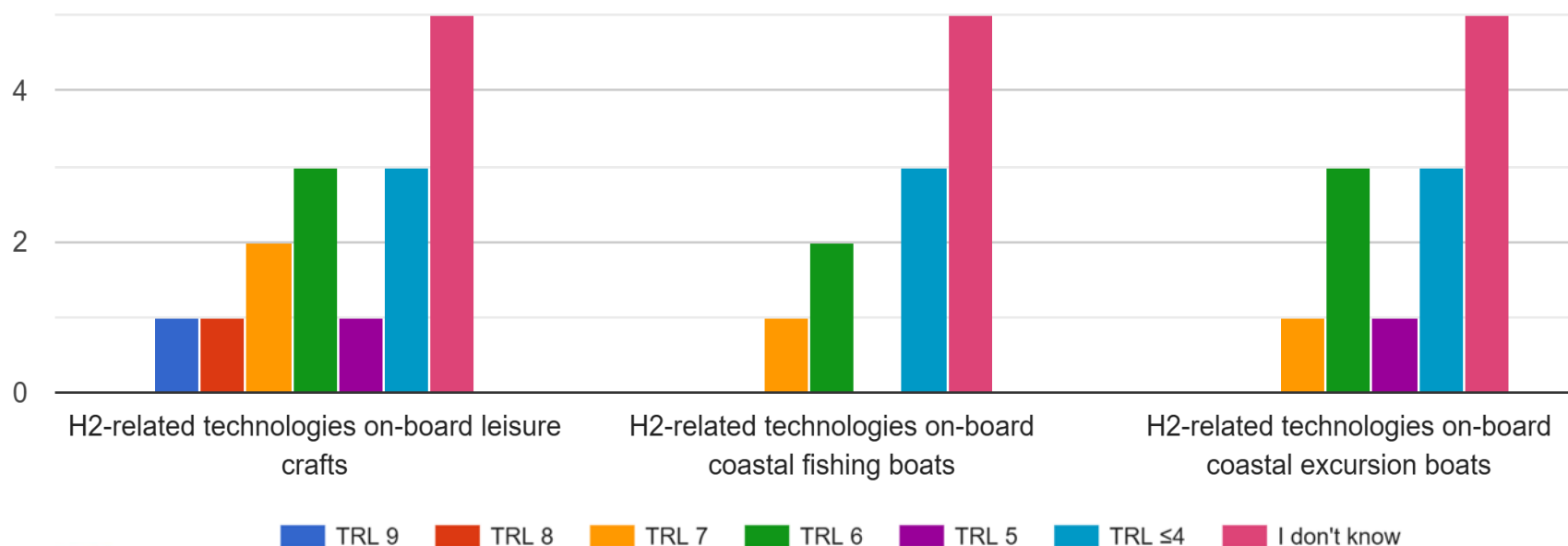
## *H2 in shipping survey*

Strategic relevance of the following technologies in different types of ship vs. timeframe



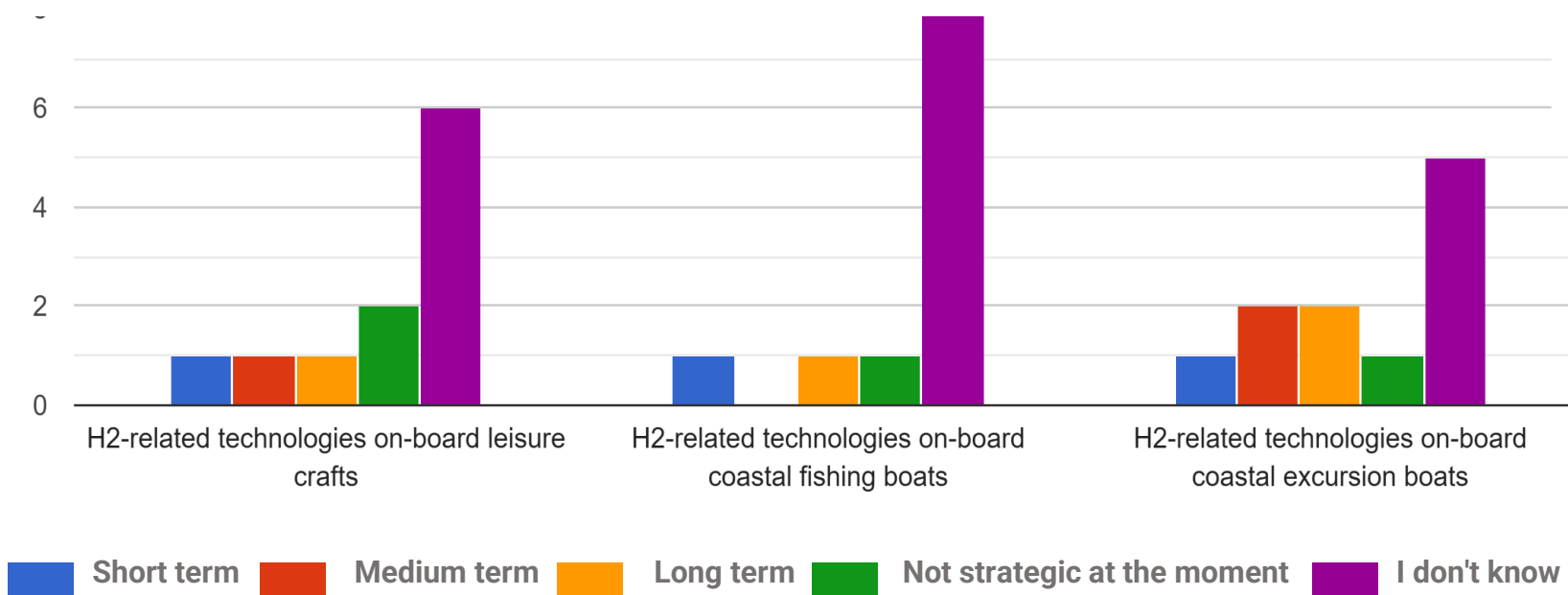
## *H2 in shipping survey*

Implementation of H2-related technologies on-board small ships (<24 meters)  
State of the art of the technologies in the different type of ships



## *H2 in shipping survey*

Strategic relevance of the following technologies in the different type of ships vs. timeframe



## *H2 in shipping* mapping activity remarks

- Technologies related to bunkering and on-board H2 distribution are the least studied but strategically important.
- Businesses and clusters show a lack of knowledge about regulations for hydrogen technologies in shipping
- Many companies have developed prototypes and show concrete interest in market applications.
- Temporal discrepancy between companies (short-term) and research institutions (long-term).
- Intent to involve classification registers to address the lack of knowledge of industry regulations.



## Where we are & next steps

- Involvement of 3 SMEs + 1 big company from FVG region in the first of a series of events (cross-piloting) aimed at creating partnerships at the European level
- Partnerships focus: development of R&I project proposals and scouting of funding opportunities
- Project proposals support and follow-up
- *H2 in Shipping* demo-case open to interested companies



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## **Veneto Region**

Area for Economic Policies, Human Capital  
and Programming of European Funds  
Directorate for Joint Programming



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