Bu proje Avrupa Birliği ve Türkiye Cumhuriyeti tarafından finanse edilmektedir
This project is co-funded by the European Union and the Republic of Türkiye

International Brokerage Event on Clean Hydrogen Partnership 2024 Call

Online

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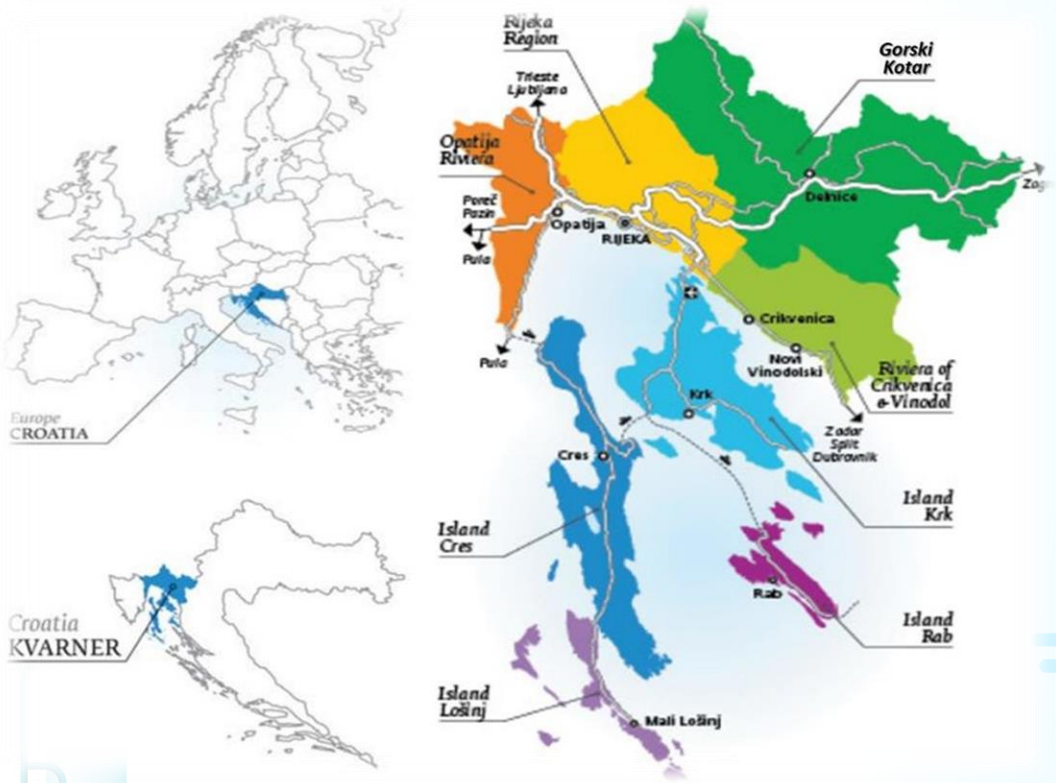
Gitone Kvarner

- Project management company
- Large portfolio of collaborative and co-owned companies
  - Tourism
  - Waste management
  - Maritime sector
  - Renewable energy sources

- Collaborative companies:
  - Maritime Centre of Excellence (MCOE)
  - Maritime Innovation Cluster (MARINN)
  - Lurssen Design Centre Kvarner
  - University of Rijeka (UNIRI)
  - Ermafa Environmental Technologies
  - Etc.

- Expertise: project management, communication and dissemination activities



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Challenges

- Transport responsible for ≈25% of GHG emissions in EU
- Need for reduction of fossil fuels in transport
  - Climate neutrality by 2050
- Potential for transfer to alternative fuels (electricity, hydrogen)
- Alignment with Alternative Fuel Infrastructure Regulation (AFIR) needed (Rijeka as an Urban Node)

- Local/regional challenges:
  - Lack of public transport and taxis in Kvarner + poor connectivity with Rijeka
  - Rijeka region is a significant touristic destination (Opatija, Cres, Lošinj, Krk, Rab)
  - Geospatial area potentially not suitable for electrification in mobility
  - No public marine transport

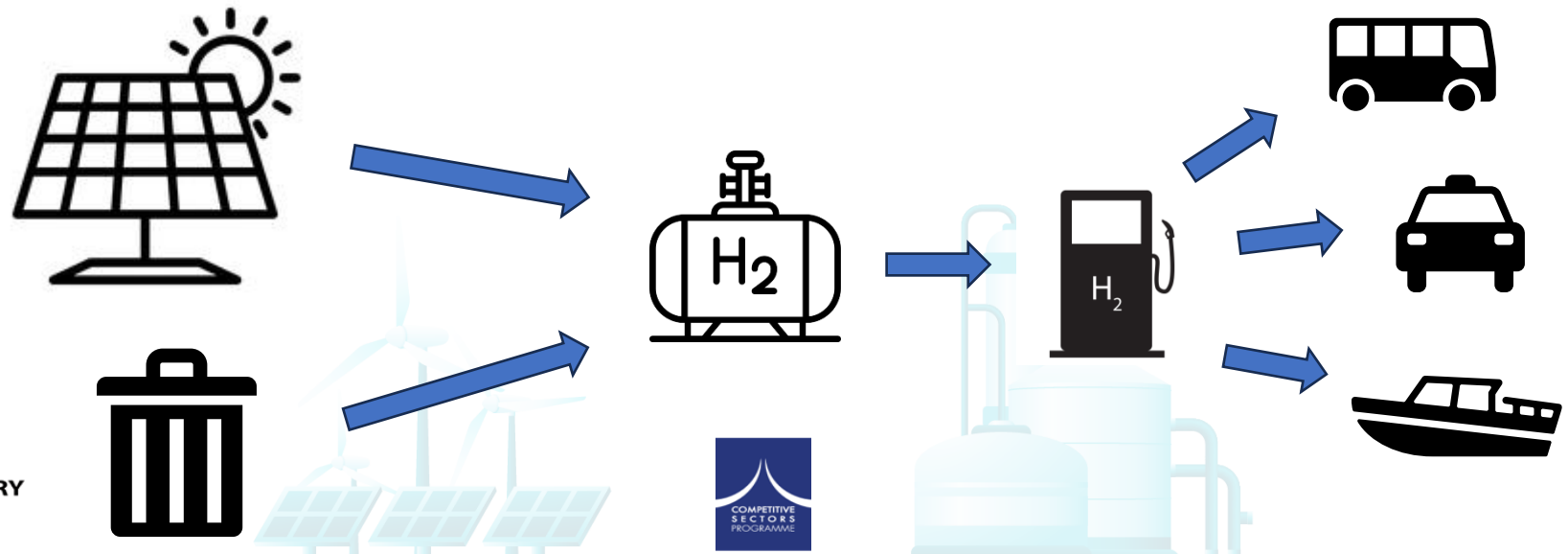
Hydrogen mobility ecosystem

Production

- From RES
  - Electrolysers
  - Significant solar potential in the region
- Waste-to-Hydrogen

End-use

- Mobility: buses, boats, cars
- Potential for deployment in public transport sector and taxis
- Hydrogen refuelling stations (HRS) deployment – publicly available



Hydrogen production

Electrolysis

- INA Rijeka refinery – eletrolyser project (10 MW, H_2 production through RRF project)
- Connection to local solar plants
- Development of new solar plants on public building roofs (Rijeka) or on hotels (Opatija)

Waste-to-Hydrogen (WtH)

- Sustainable waste management in Opatija-Rijeka area (mixed municipal solid waste + sewage sludge)
- Reduction of emissions
- Reducing waste sent towards Marišćina (loca waste management centre)
  - Potential management of produced RDF
- Hydrogen production used in mobility

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Hydrogen end-use: multi-modal HRS

- Alignment with AFIR goals (Rijeka as urban node + Opatija, with distance of 10km)
- Island independency
- Development of a publicly available multi-modal stations
  - H_2 availability for boats and cars/buses
  - On-site hydrogen production? Or delivery from off-site production?
- Multi-fuel stations (with existing gas stations)
- Rail, road, maritime

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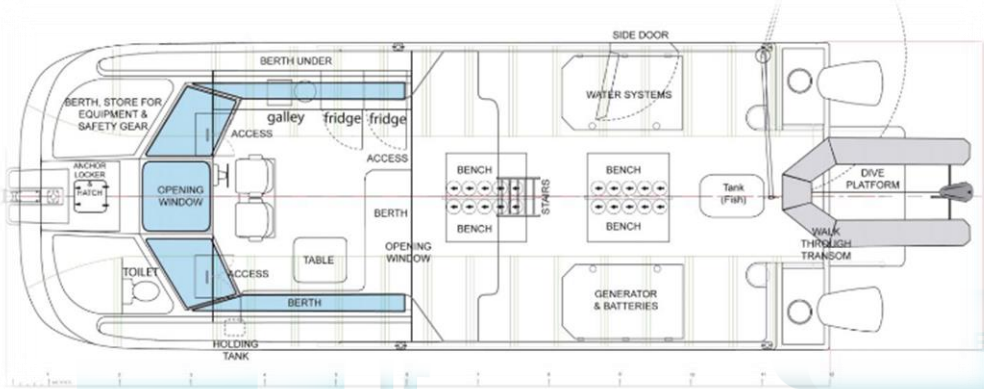
Hydrogen end-use: H_2 Taxi boat

- Development and deployment of a hydrogen-powered taxi boat
- Development of an AI tool for boat design – process automatization
- Digitalisation – route optimization tool (incl. energy and fuel efficiency calculations and optimizations)

- Connecting Opatija and Rijeka via sea
  - Potential inclusion of islands (Krk, Cres, Lošinj)?
- Connection with tourism sector („Hydrogen Tours”)



Hydrogen end-use: H_2 buses

- Deployment of hydrogen-powered buses
- Digitalisation – route management tool (incl. energy and fuel efficiency calculations and optimizations)

- Public transport management in Rijeka and potential connection with Opatija
  - Establishment of public transport on islands
- Connection with tourism sector („Hydrogen Tours”)

Hydrogen end-use: H_2 taxis

- Deployment of hydrogen-powered taxi service in Kvarner
- Digital connection with buses and taxi boat
- Analysis of emissions reduction by using alternative-fuelled vehicles

- Connection with tourism sector („Hydrogen Tours”)

H_2 regulatory analysis and development

- Analysis of existing regulatory framework and gaps related to hydrogen deployment and implementation
- Assistance in developing new regulations and acts
- Analysis of emissions reduction generated by implementation of new regulation
- Analysis of sectors where hydrogen can be implemented (beyond mobility)

TURKEY in HORIZON 2020
COOPERATION. INNOVATION. COMPETITIVENESS

Clean Hydrogen Partnership

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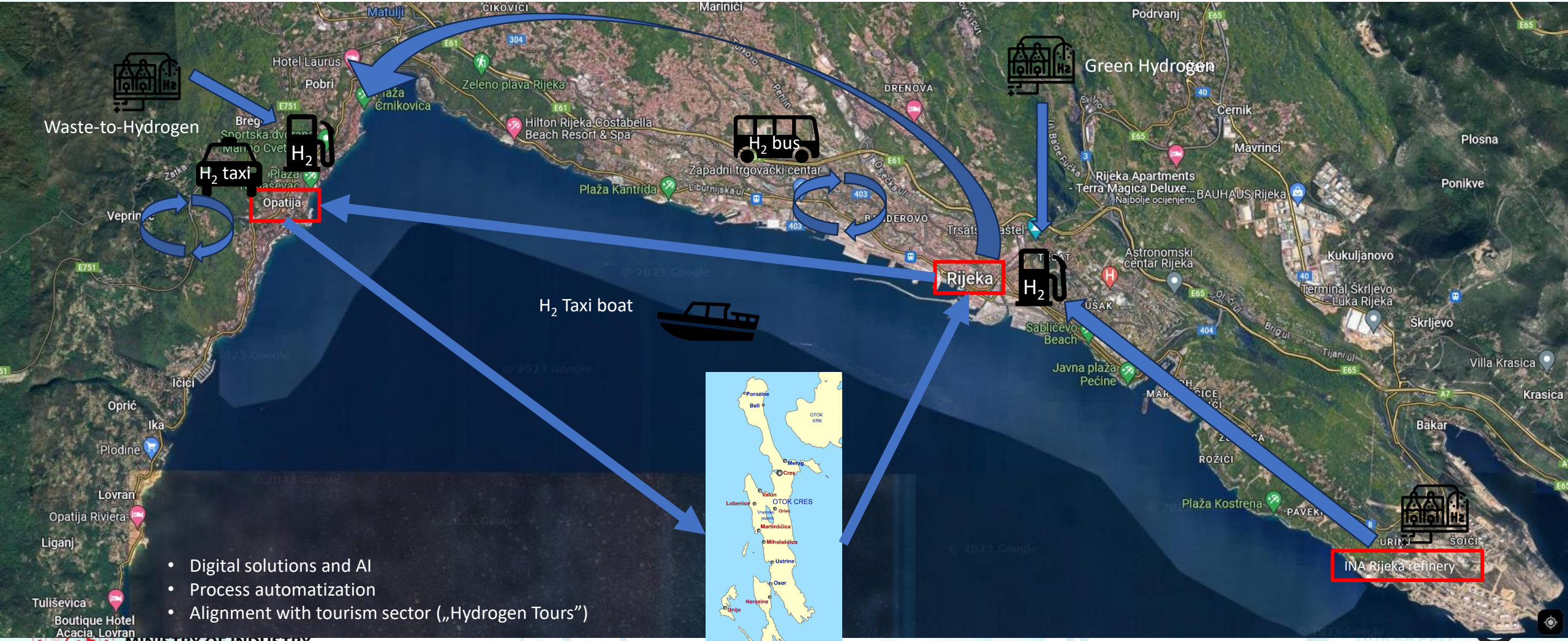

- Digital solutions and AI
- Process automatization
- Alignment with tourism sector („Hydrogen Tours”)

MINISTRY OF INDUSTRY AND TECHNOLOGY

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