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# **Expertise and Innovation Centre inland Barging**



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## Expertise and Innovation Centre inland Barging (EICB)

- The goal:
  - **a four-year** innovation program with the goal to stimulate innovations in the inland navigation sector.
  - Contribute to developing educational and knowledge transfer projects.



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## Expertise and Innovation Centre inland Barging (EICB)

- The Dutch inland shipping sector has access to its own innovation agency, which can support enterprises with research and development: EICB
- The EICB was founded as an outcome of a Memorandum of Understanding between the Dutch government and barge associations:
  - **CBRB** (Centraal Bureau voor de Rijn- en Binnenvaart)
  - **KSV** (Koninklijke Schuttevaer)
  - **BU** (Kantoor Binnenvaart & Vereniging Rijn en IJssel)
- A grant of € 10 mln.





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- **Temporary aid for innovation in inland waterway transport Subsidieregeling Innovatie Binnenvaart (SIB) :**
  - **Total budget:** € 5,500,000 EU
  - **Actions able to be supported:**

Industrial research and experimental development projects (including feasibility projects) which will contribute to innovations in inland navigation in the following areas:

    - Logistics and new markets
    - Transshipment
    - Reduction of air emissions and fuel consumption
    - Ship technology
    - Information and communications technology
    - Education
    - Security
  - **Rate of co-financing and conditions:**
    - Max. 50% of eligible costs for industrial research projects; \
    - Max. 65% for feasibility projects.
    - Max. 40% of eligible costs for experimental development projects;





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# Demotanker “ARGONON”



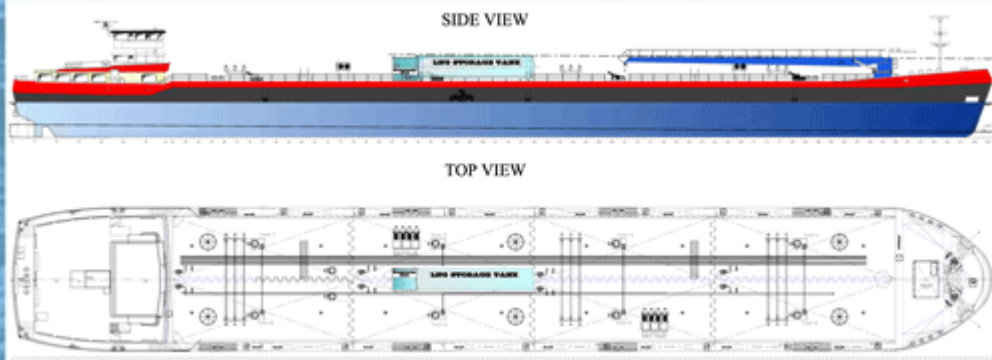


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# Expertise and Innovation Centre inland Barging (EICB)

- SIB Projects:
  - Dual Fuel: First inland vessel to navigate on a fuel mix of LNG en Diesel (80% - 20%)





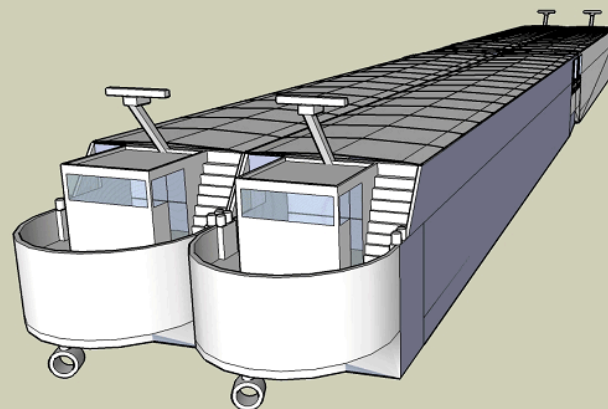
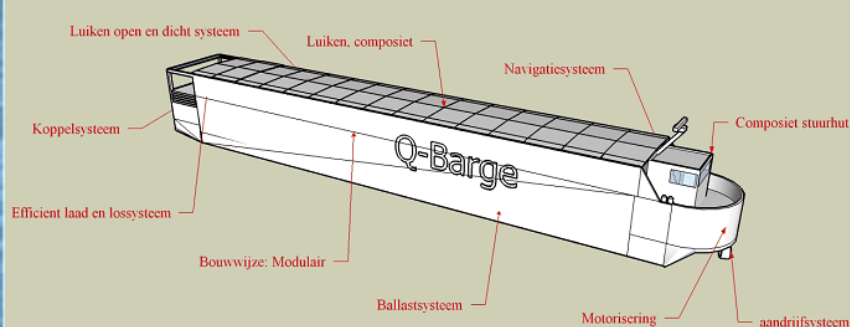


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- SIB Projects:
  - Q-Barge: New concept vessel for small waterways
    - Weight optimization: composite materials, no living facilities,
    - Multipurpose: easily fit to transport a variety of freight.
    - Combinations: 2 X 2 vessels, 1 X 1 vessels





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# Expertise and Innovation Centre inland Barging (EICB)

- SIB Projects:
  - EcoTanker: “AMULET “an inland vessel with 4 automotive engines and after treatment technology developed for the energy plants.
  - CO2 reduction (up to 40%)
  - Emission reduction (Nox and PM compatible with EUR 5 requirement)





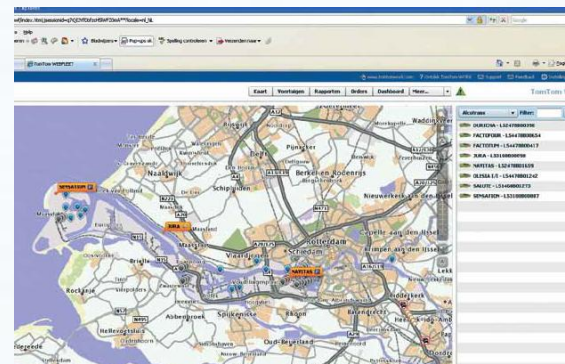


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- SIB Projects:
  - Juice Barge: New Market (model shift project)
  - Vracht door de gracht: Urban distribution by inland vessel in Amsterdam
  - Self-Loading-Unloading vessel: inland vessel with a crane
  - Mis Cobiva: A RIS applications for Container transport





# Expertise and Innovation Centre inland Barging (EICB)

– Port of Rotterdam/EICB fund:

- In 2010, the Port of Rotterdam Authority decided to start a temporary fund stimulating clean inland shipping and sustainable logistics in Rotterdam (Schone binnenvaart en duurzame logistiek in Rotterdam).
- The fund provides financial contributions to the inland shipping sector to reduce fuel consumption and emissions in the Rotterdam region.
- On behalf of the Port of Rotterdam Authority, the EICB will administer the fund.
- The port of Rotterdam has contributed for the years 2010 and 2011
- From 1 January 2012 the contribution will be paid from a new levy charged on all inland vessels, with the exception of vessels without propulsion and those with a propulsion engine that complies with CCR phase II emission requirements.

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## Expertise and Innovation Centre inland Barging (EICB)

- MPC's (milieu prestatie contract- Environmental Performance Contract) in cooperation with agentschapNL: competition to reduce Nox for inland vessels.
- Innovation-Lab (innovatieschuur): creating an environment to develop innovation dedicated for inland vessels in cooperation with:
  - Ports Rotterdam
  - Inland sector
  - Manufactures (engines, after treatment, fuel, ..)
  - Knowledge Centers (TNO, Marin, Technical Universities,...)





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## Expertise and Innovation Centre inland Barging (EICB)

- PMI (EFRO) project: partner
  - Proeftuinen Marime Innovatie (PMI)
  - Linking the industry, the knowledge centers and the inland sector.
- VVB – Smart Steaming:
  - CO2 reduction by smart and efficient steaming
  - Training
  - Competition



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# Expertise and Innovation Centre inland Barging (EICB)

- **EU Projects:**

- **Move-it (FP7)** project: partner
  - Retrofit for sustainable inland shipping
- **Watertruck** (interreg iv-b) project: partner
  - Push barge concepts for small waterways
- **Casmare (FP7)** action program: partner
  - Update of the strategic research agenda of the waterborne transport
- **Ewita (MarcoPolo)** project: partner
  - European Web Platforms and Training Concepts for Intermodal Inland Waterway Transport
- **Creating (FP5)** project: Lead partner
  - Finding feasible cargo flows for inland waterways
  - Innovative Logistic Concepts, efficiency, economics
  - Innovative Vessel Concepts



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## Expertise and Innovation Centre inland Barging (EICB)

- International Projects:
  - Rivers of the World: Partner with NEA, Marin and AgentschapNL
    - Goal: make use of the extensive knowledge of the many specialized bureaus, universities, organizations and enterprises etc. in and around the Inland waterway and shipping sector.
  - Mast Classes: in cooperation with NEA
    - Russia, China, India, Brazil, ...





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## Other Innovations



**Magnetic Docking system**



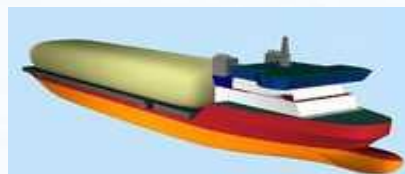
**Self Unloading Bulk System**



**Bier Boot**



**Fuel Cell Boat**



**Create3s**



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## Nominated for ship award 2011

- Organization Dutch shipbuilding industry
- Price date: 03.11.2011
- Three nominations >>>>
- Two of EICB projects!!
  - >>>>>>> Fuel cell boat “NEMO H2”
  - >>>>>>> Ecotanker “AMULET”
- (Offshore crane vessel “OLEG STRASNOV” )





## Lovers boat “NEMO H2” Fuel cell

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# Ecotanker “AMULET”





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# **EICB can assist with full speed ahead!**

