An horizontal IoT environment for unmanned barge digitalisation

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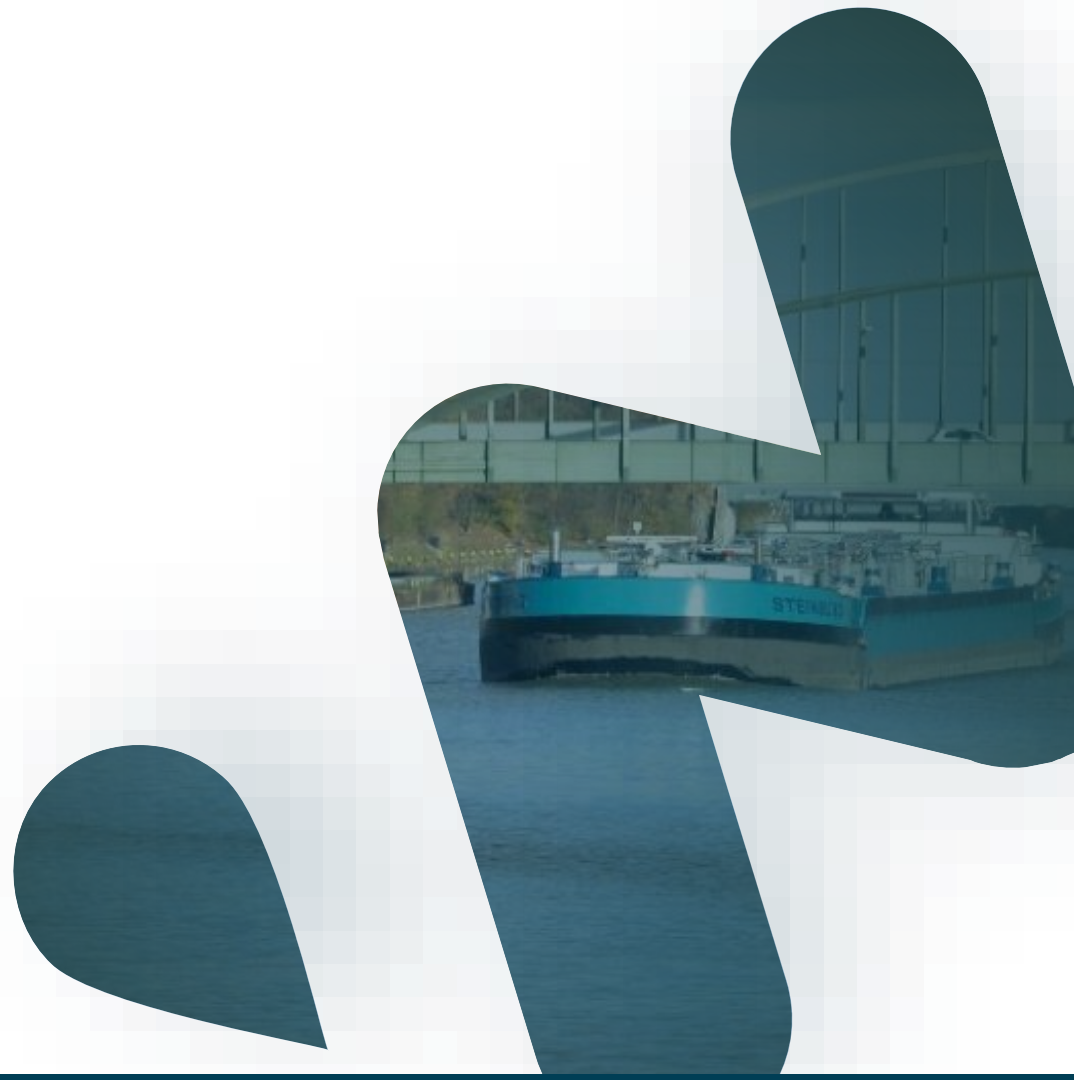
Objective

- Instantiate a horizontal and agnostic IoT environment to serve various services:
  - Logistics Tracking, Tracing and Monitoring (discussed in AS1)
  - Assets (reusable assets, e.g., pallets, boxes, etc.) and/or fleet management (barges
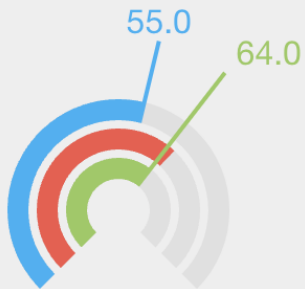 - Barge monitoring (unmanned)
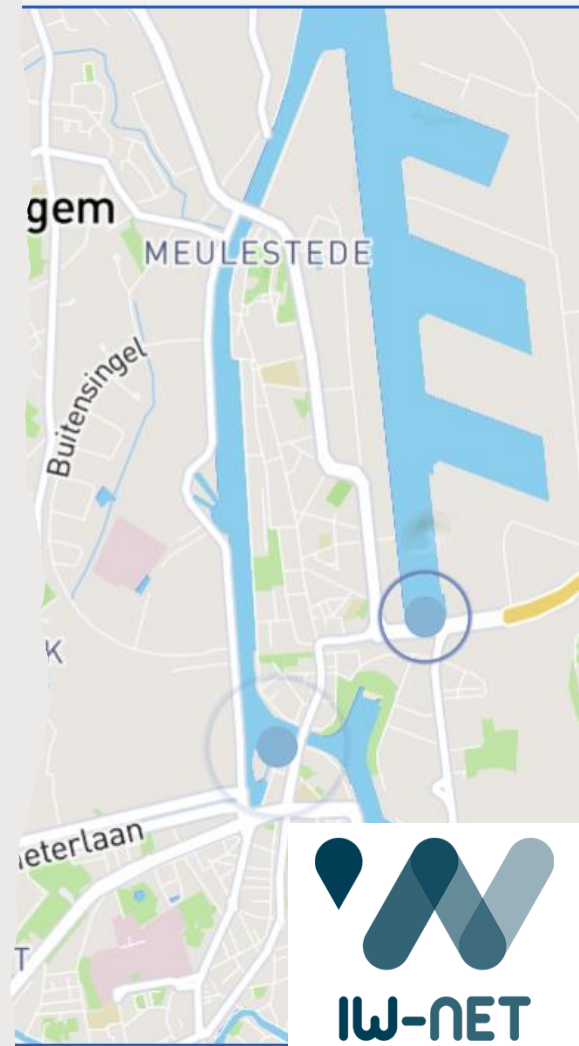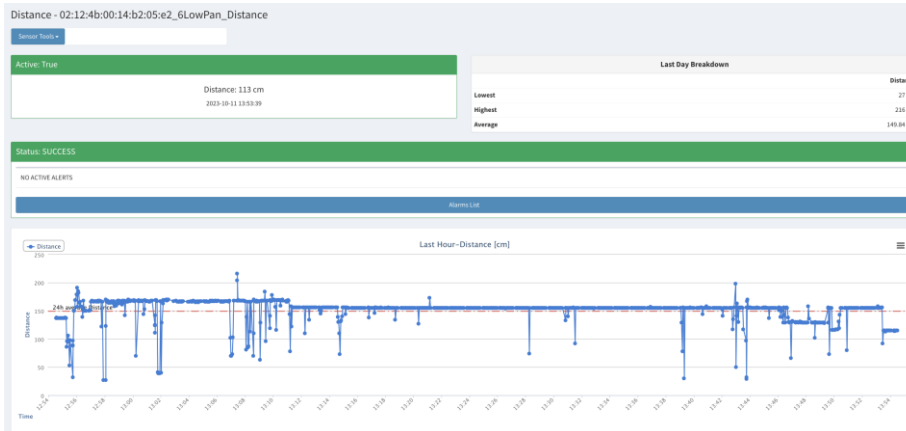 - Environmental monitoring

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Gateway approach
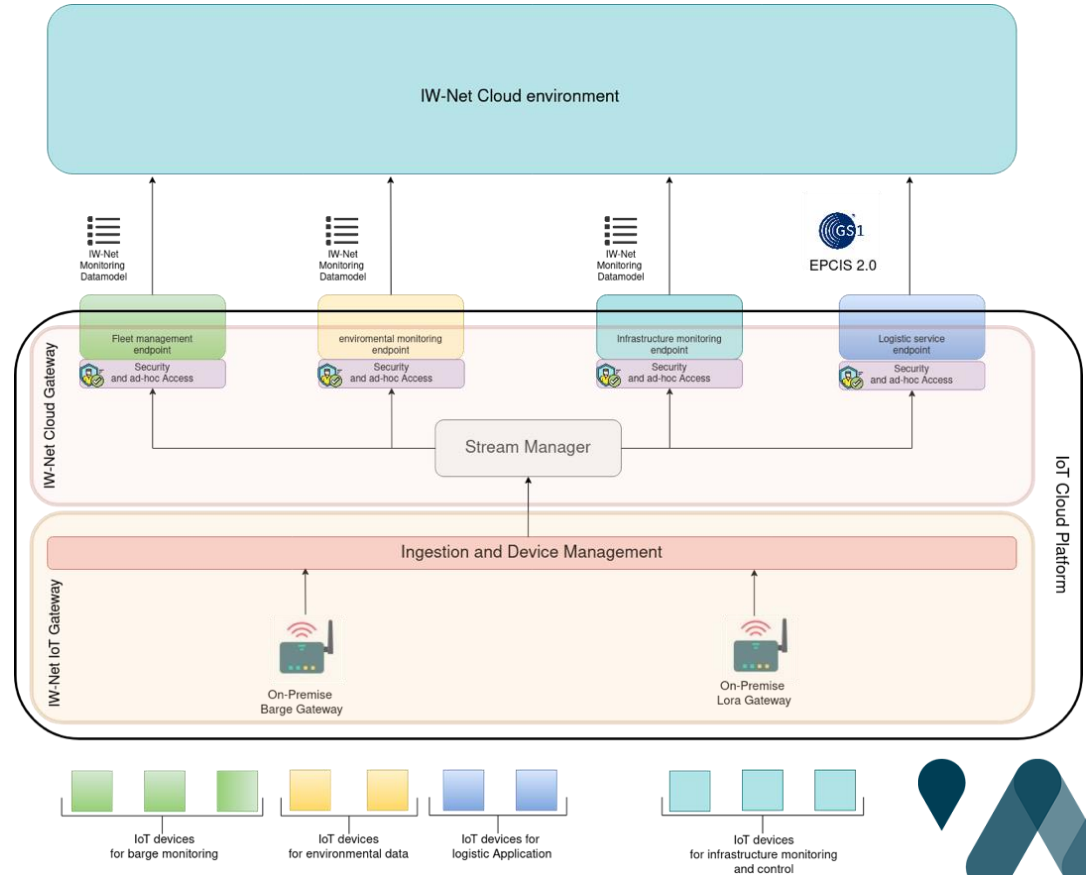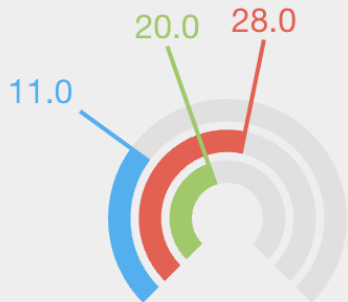
Fleet management

- Position of barges and of assets
- Overview of the monitored parameters
- Overview of the status of the devices (e.g., battery)
- APIs (based on GS1 EPCIS 2.0)
- GUI

TEMPERATURE

20.0 28.0

11.0

HUMIDITY

55.0 64.0

MEULESTEDE

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Monitoring on the barges

Different sensors for different purposes

- Barge monitoring
  - Vibration
  - Water level
  - Engine temperature
- Environmental monitoring
  - Water temperature
  - Environmental gas monitoring

APIs and GUI

And the story continues…

- OHB and NGS are developing joint projects: Decarbomile (GA 101069806)

- Objectives:
  - Automitise the barge functions (monitoring)
  - Improve the logistics services (smart boxes)
  - Implement new automatic services: load balancing and optimised loading

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