Digital twin
for
commissioning and process optimisation

MSA-Service - Machiel ‘t Hoen en Ralf Stam

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control & automation

MSA-Service

- Automation
- Maritime
- 30 colleagues
- Hardinxveld

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Digital twin…?

Operational data stored over time (datalogging)

human input

measurements

controller

actuators - output

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Why a digital twin in the production process?

Basis of design → Engineering (electrical / mechanical / software) → Production → Installation → Commisioning → Lifecycle support

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Why a digital twin in the production process?

Trouble shooting

Fast data (milliseconds)

Live data

Accessible for everyone

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Why a digital twin on board?

Trouble shooting

-> first time right

Why a digital twin on board?

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Develop?

Dataloggers

(IIoT) cloud platforms

Multiped

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Development challenges

Scalability, dynamics

Reliability, 24/7

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Case: commissioning of parallel operating winches

18x

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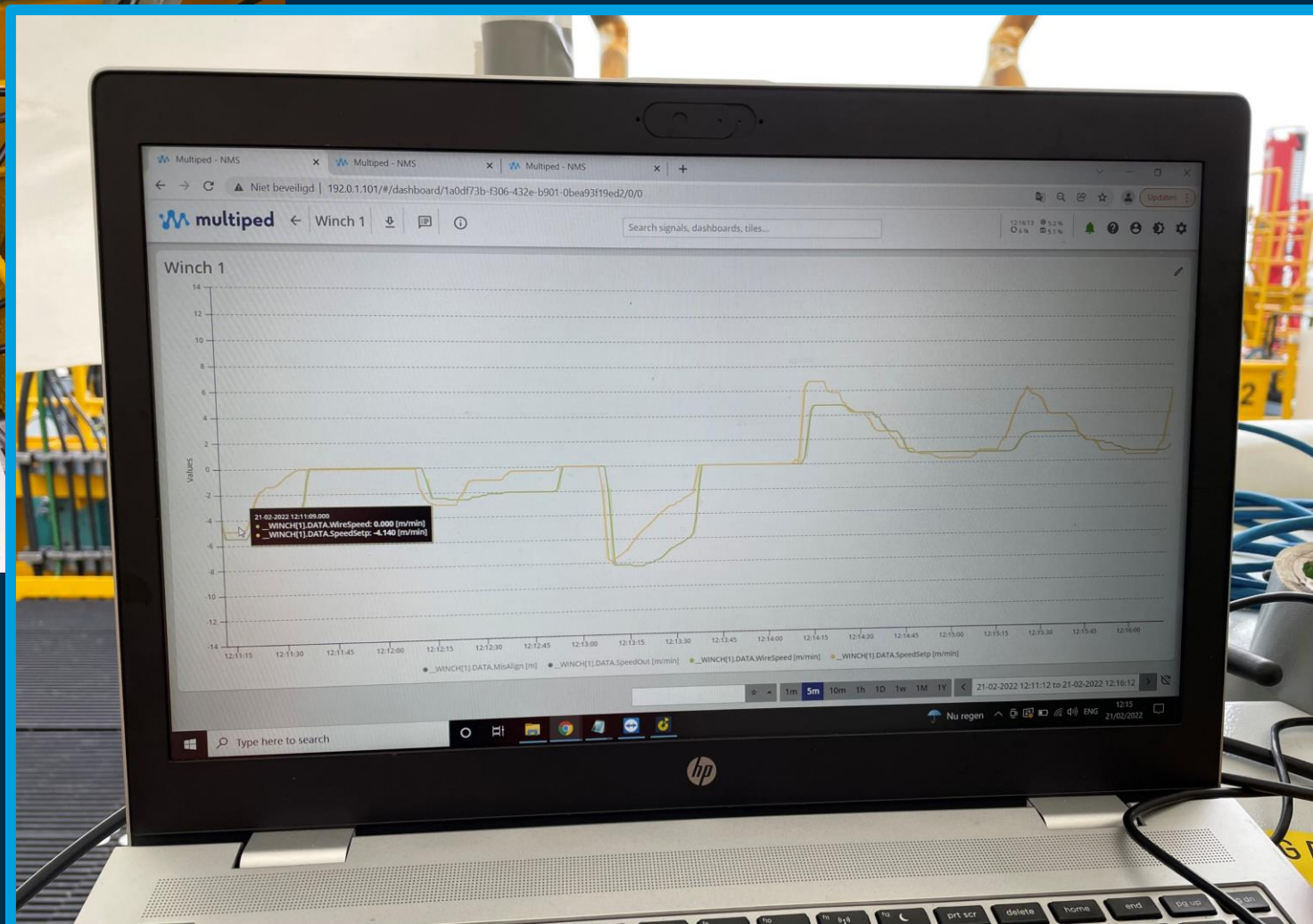

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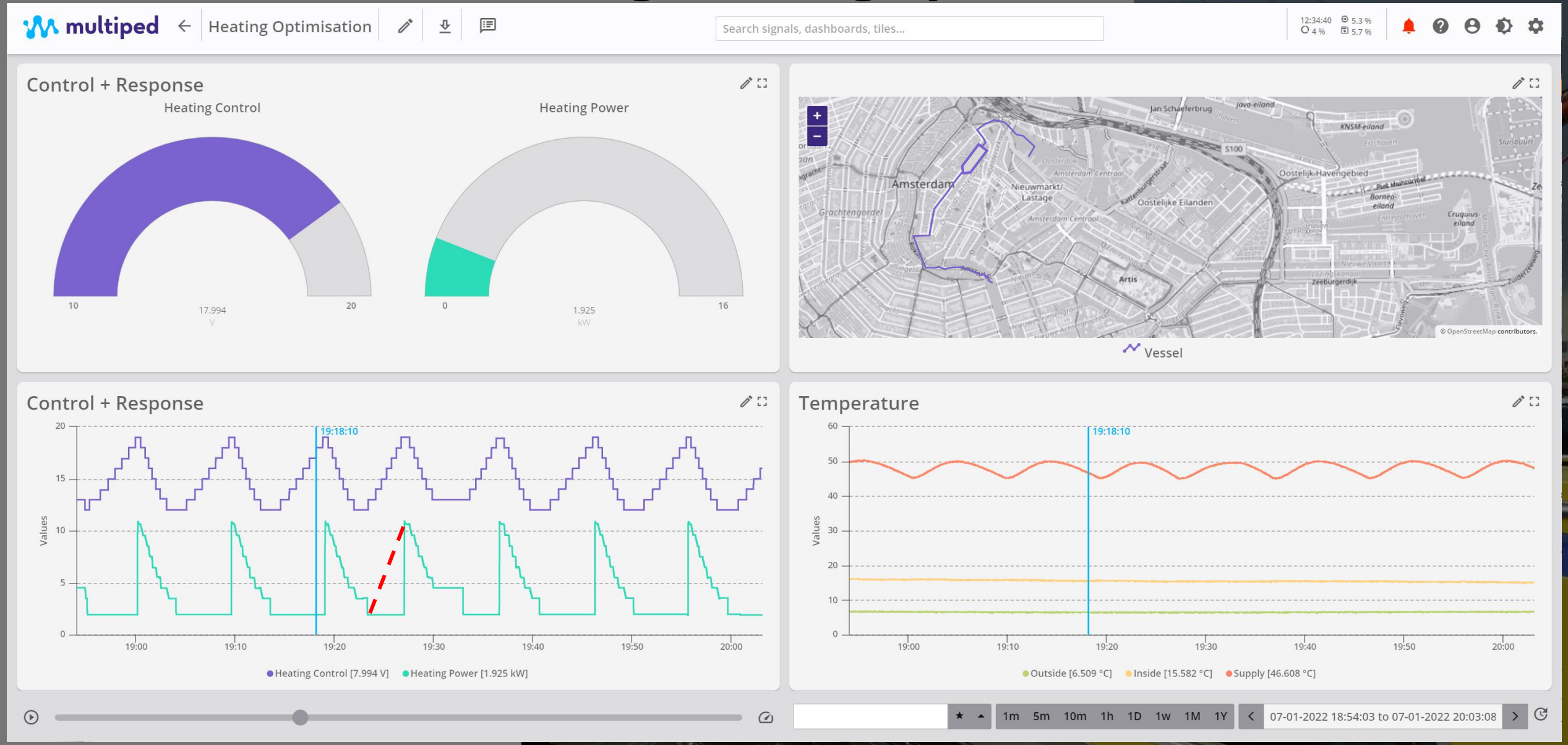
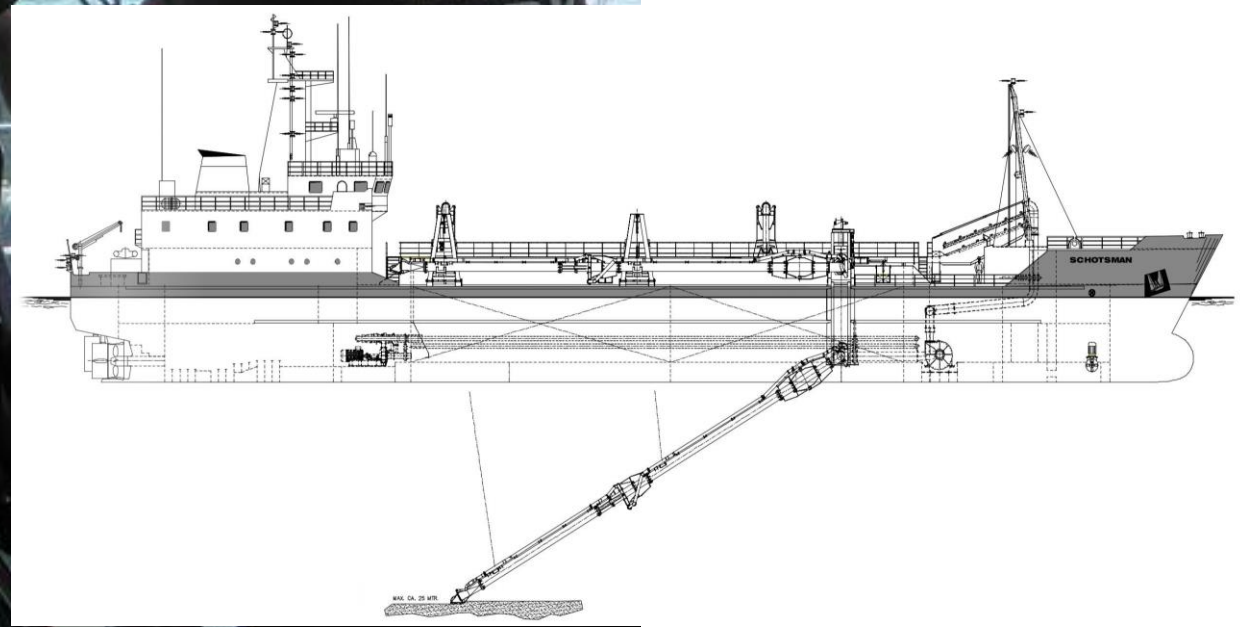
Case: troubleshooting heating system



Case: reporting dredging activities for authority

Flexible on demand reporting



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Lessons learned

User centered development

Store everything?

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Future

Trip / operations reporting

Further extensions

Partners and integrations

Standardized maritime data

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