EURO

SINTEF

sigma2

NORCE

National Competence Center (NCC)

- NORCE, Sigma2 and SINTEF partners in the Norwegian national competence center.
- Funded by EU and KDD.
- Focus on applications requiring heavy utilization of ICT resources.
- A hub for competence, offer or federate.
- Mainly resource for industry and public sector.

National Competence Center (NCC)

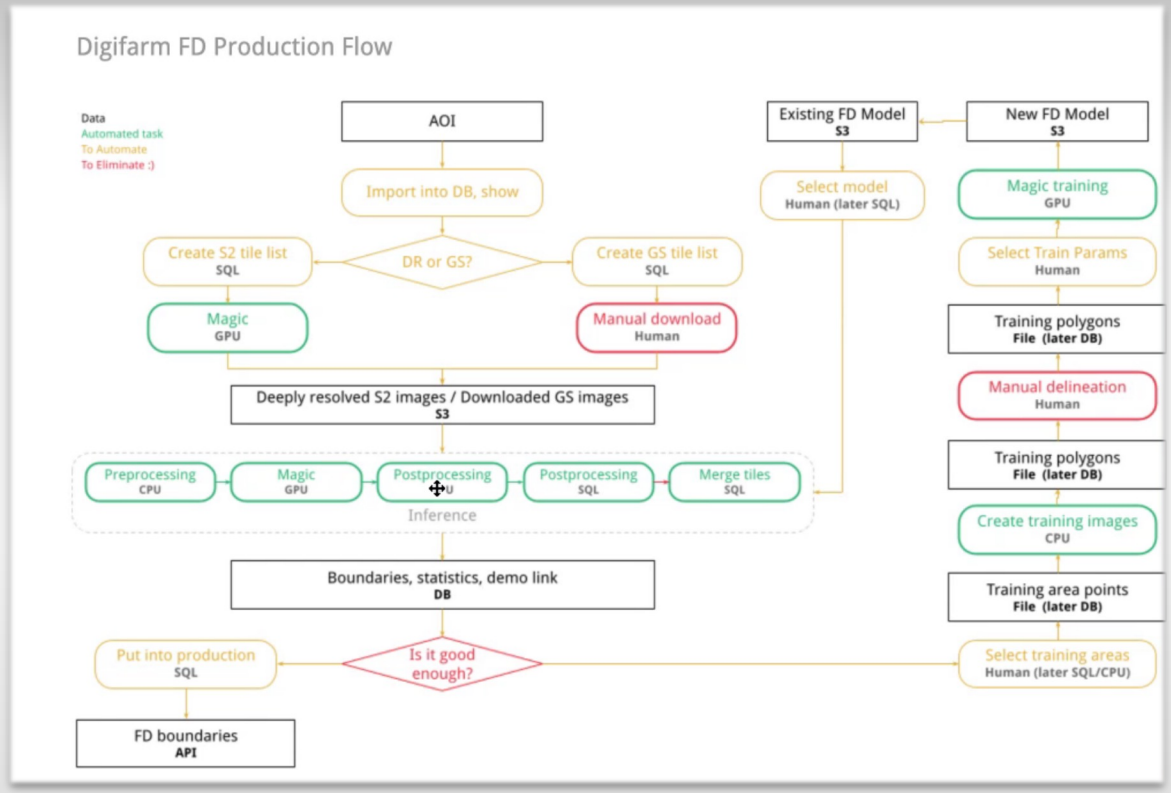
- Supplementary competence through NORCE, SINTEF and other collaborators.
- Complementary support offered due to EU and KDD support.
- Can also provide test-before-invest access to hard resources.
- One-to-one dialogue and understanding.
- Use-case work, provides added-value quickly.

Digifarm

- Automatic Detection of Field Boundaries and Seeded Acres
- Change of property
- Optimization of crop distribution
- Satellite resolution too low

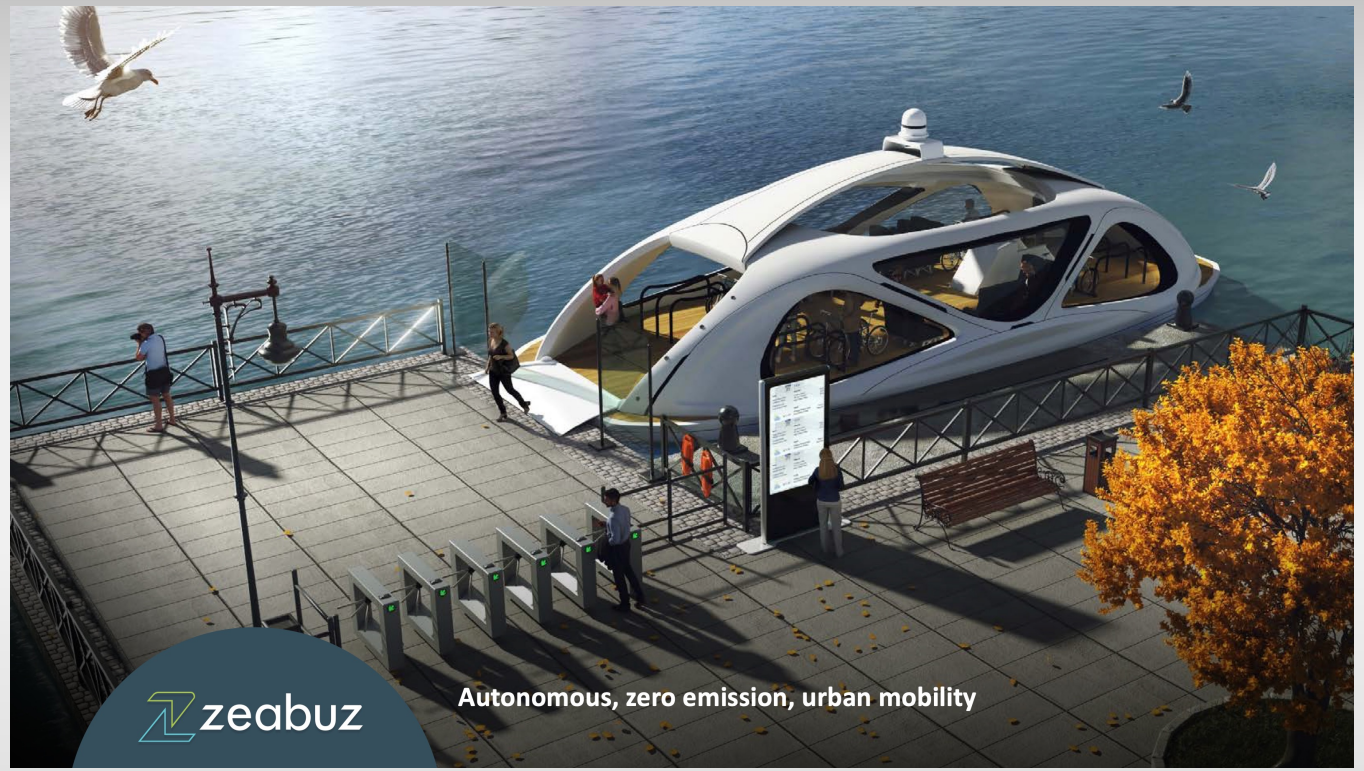
Digifarm

- Proprietary algorithm to improve resolution from 10m to 1m per pixel.
- Optimization of workflow
- Optimize computing resources usage
- Scaling to reduce wall times



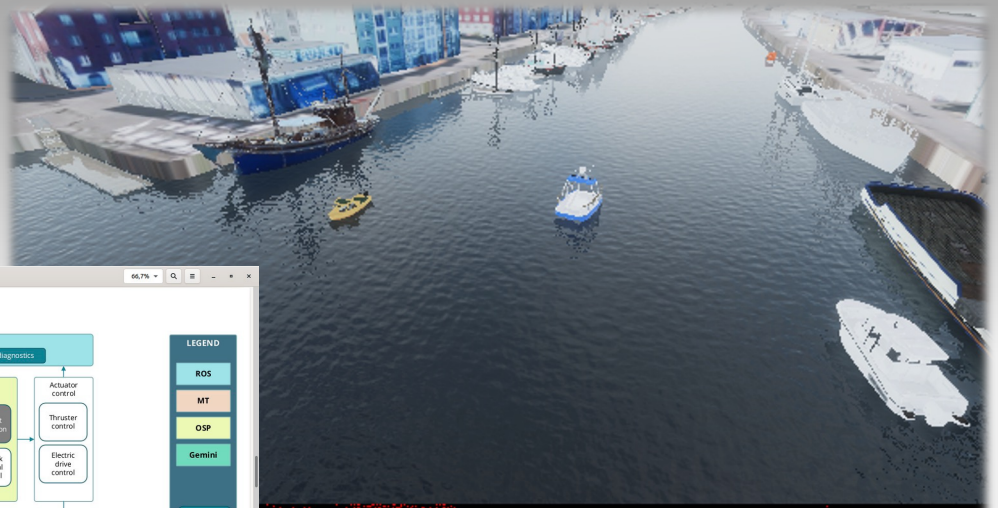
Zeabuz

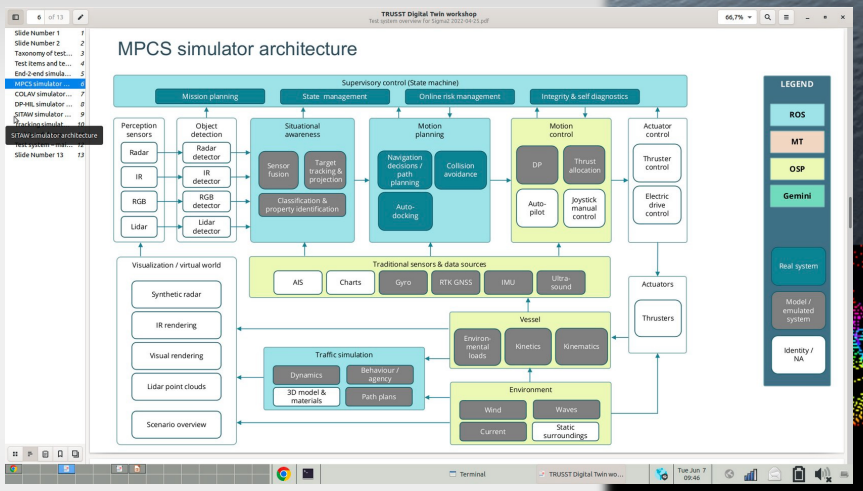
- Autonomous commuting
- Unused city waterways
- Increased reliability and availability
- Reduced cost
- Need to react properly

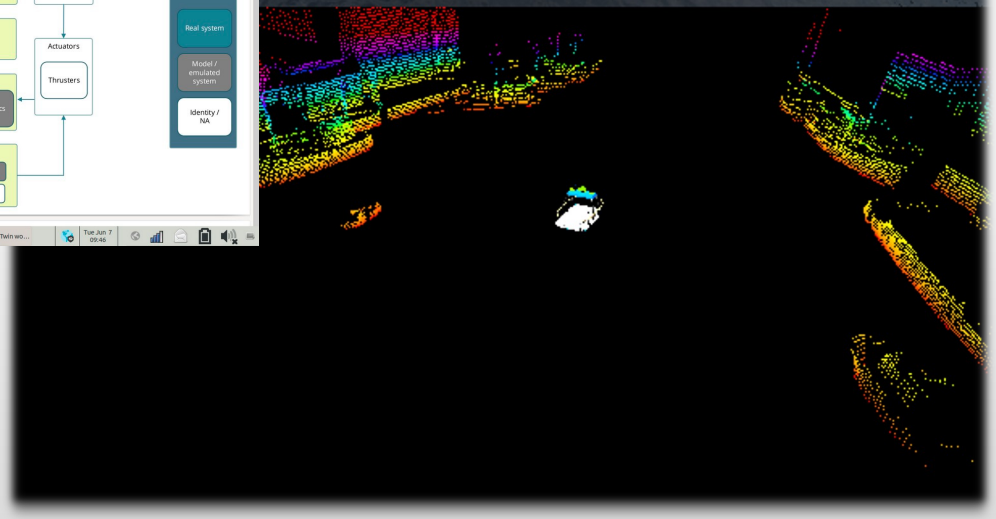


Zeabuz

- Optimization of workflow
- Mapping of scenario portfolio
- Scenario simulations to train how system react to incidents
- Test if reactions to incidents gives intended behaviour



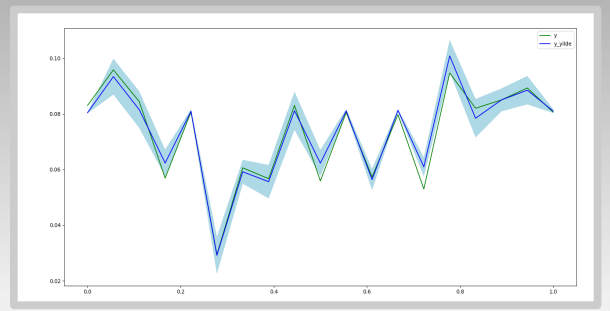


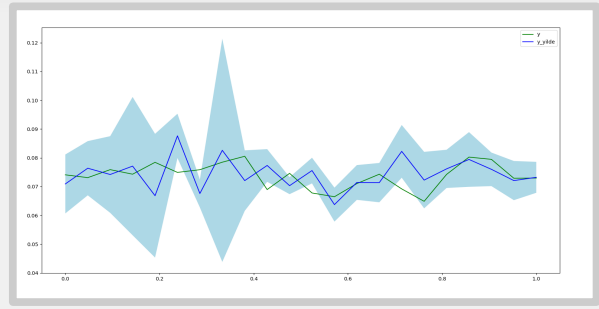


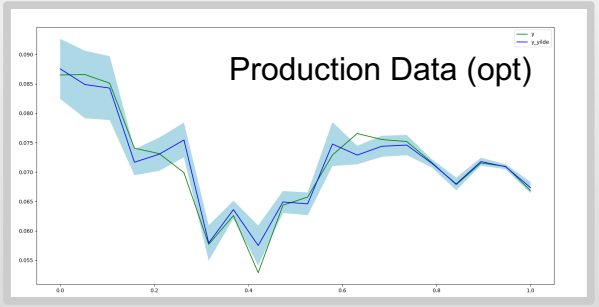
3B - Fibreglass

- Improve quality and consistency of fibreglass product
- Using available data to tune process
- Obtain state of current production
- Limited knowledge on using data to detect and determine patterns

3B - Fibreglass

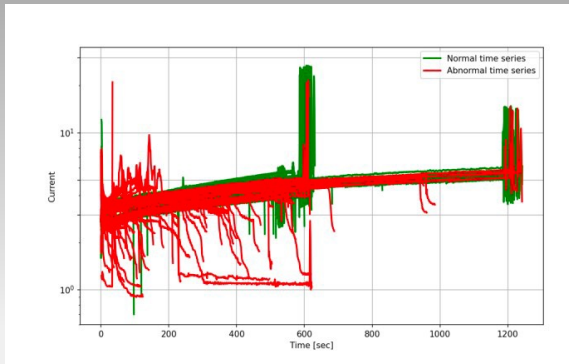


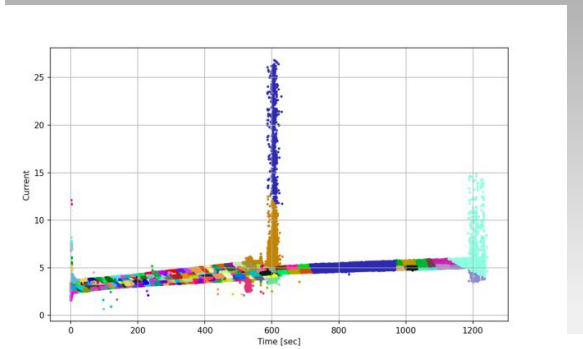




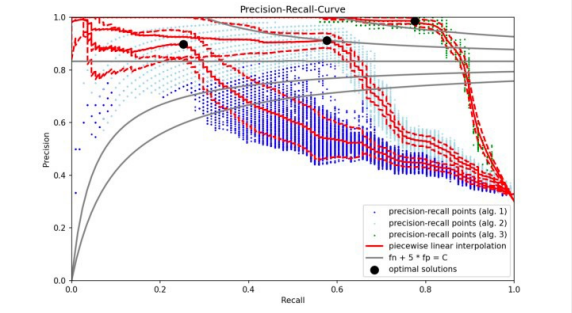
- Formation moisture as quality measure
- 20 inputs, 40 locations, 14 materials, over 1+ years
- Cleaning input data
- Fitting model to production data to estimate the status of the production

3B - Fibreglass

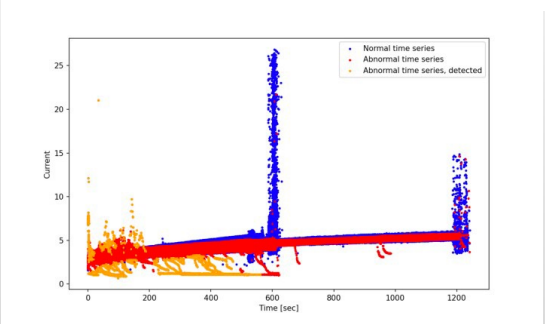




- Detecting breaks in glass-fibre on wind turbine blades
- Using detection of anomalies in electrical current
- The electrical currents of the wind turbine motors are modelled by semi-supervised learning

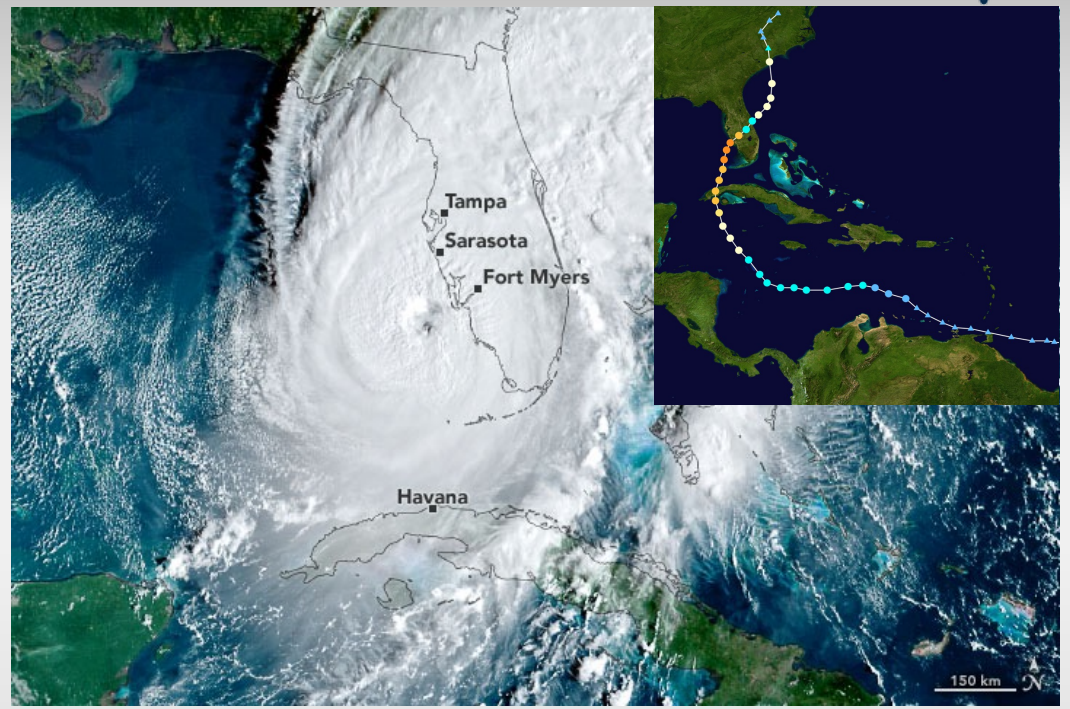


	Algorithm 1	Algorithm 2	Algorithm 3
precision	89.7%	91.3%	98.5%
recall	25.2%	57.7%	77.6%



oceanTHERM

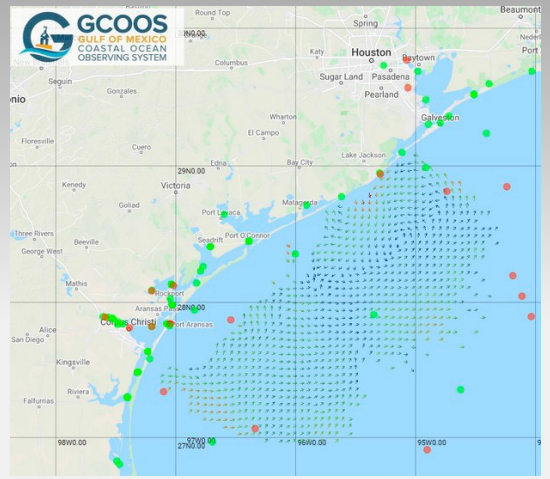
- Hurricanes are extremely invasive
- Reduce ocean surface temperature to reduce energy supply to storm systems
- Less severe storms with lower societal and environmental impact. Save human life and costs
- Large scale, need to predict trajectories and document impact of mitigating measures

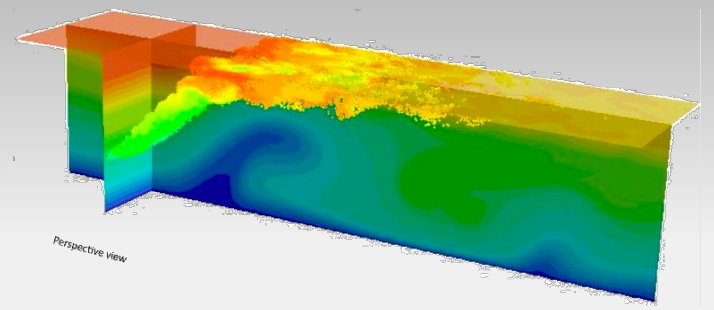


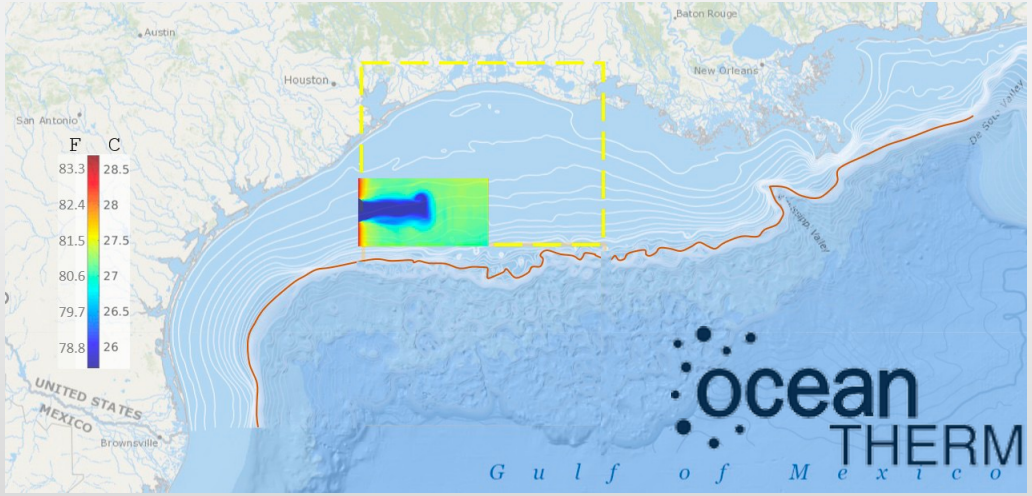
Hurrican Ian, 26th September 2022 photo: https://earthobservatory.nasa.gov/

- 250 km winds, landfall Cayo Costa west of Fort Myers.
- Cuba: Damages >200 MUSD – 11 fatalities
- USA: Damages > 50000 MUSD – 147 fatalities (28% of the Norwegian Governments planned expenditure for 2023)

oceanTHERM







- Raise cold water from the lower depths to the surface
- Using bubble curtains and existing infrastructure/knowledge from sub-sea industry
- Use ocean currents to naturally cover large areas from a limited number of installations
- Calculate where bubble curtain should be placed and estimate impact before use.

EURO

The Research Council of Norway

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