

# Global Data Services

Dare to share global data



International Delft-FEWS userdays 2019

 #DelftFEWS

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The background of the slide is a dark, abstract image featuring a central, glowing globe of the Earth. The globe is surrounded by a dense, swirling pattern of binary code (0s and 1s) and data streams, creating a sense of digital connectivity and global data flow. The overall aesthetic is futuristic and technological.

# Global Data Services

Making global data available  
on a digital platform for everyone



# Global Data Services

## Why?



# Global Data Services

Purpose of today





# Global Data Services Thematic

# Offshore





# Flooding







# Coastal Management



# What can I do with it?

## Some examples

# Offshore

As a windfarm operator, I want to assess metocean conditions at my windfarm, to assess workability conditions.

Topics

Workability conditions

Design conditions

Maintenance

Foundation

Data

Water level statistics

Operational currents

Wind & wave climates

Extreme waves

Regular bathymetries

Future sea level rise

Future waves & wind



# Flooding

Inland & Coastal

As a crisis response manager, I want to assess the flood risk due to the typhoon approaching the Philippines, to warn the people in time.

## Topics

Data

## Flood hazards

Water level statistics

Operational currents

Operational Discharge

Operational water levels (tide & surge)

Operational waves

## Flood impact

Wind & wave climates

Extreme waves

Regular bathymetries

?

## Future floods

Future sea level rise

Future waves & wind



# Coastal management

As a coastal manager, I want to assess the state of my coast every year & after storms, to decide for mitigating measures.

## Topics

## Shoreline positions

## Trends in shoreline change

## Storm Impact

### Data

Water level statistics

Operational water levels (tide & surge)

Wind & wave climates

Regular bathymetries

Historic shorelines

Future sea level rise

Operational currents

Operational waves

Extreme waves

Frequent bathymetries

On-the-fly shorelines changes

Future waves & wind

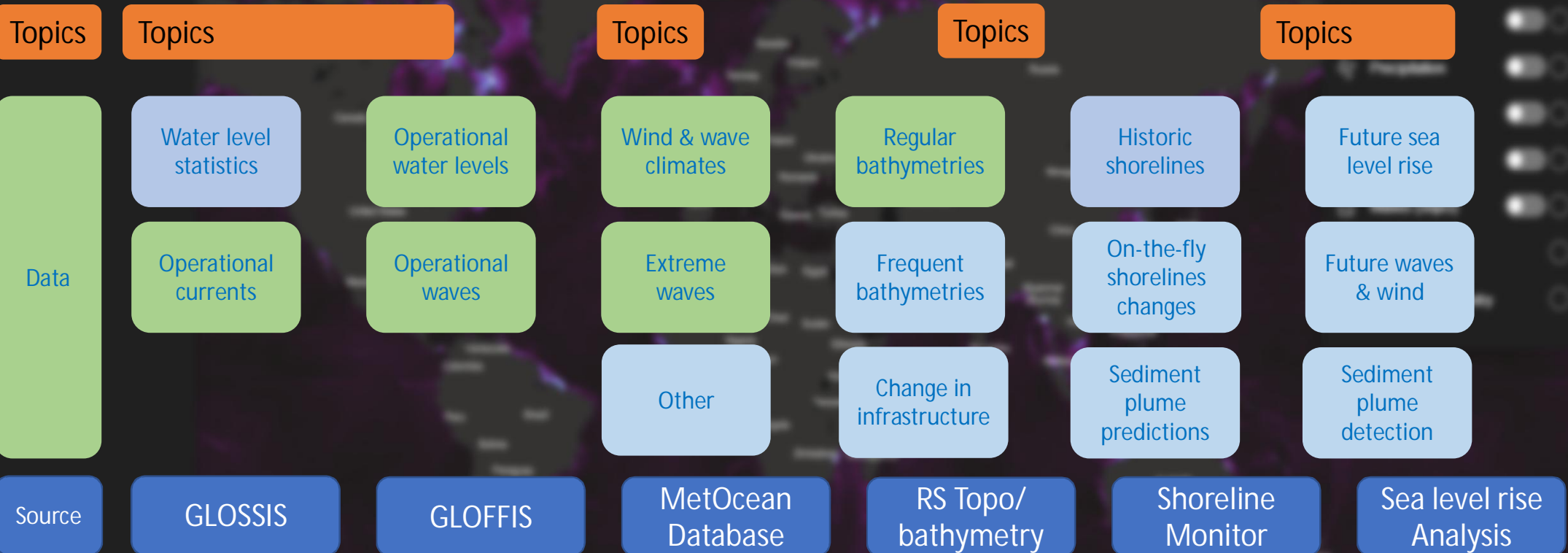
Operational Discharge



# Overview

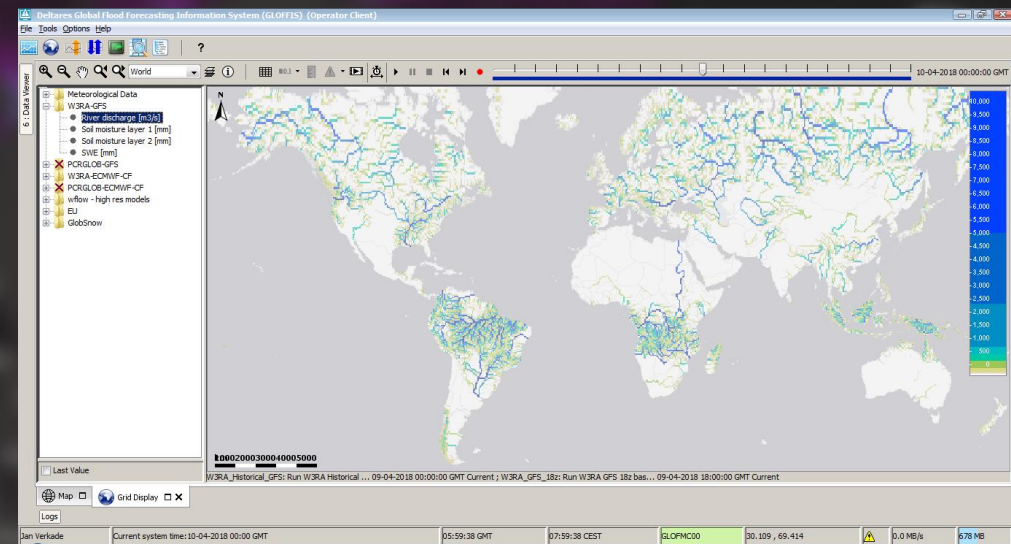
- Offshore
- Flooding (Inland & Coastal)
- Coastal management

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# GLOFFIS: real-time hydrological forecasts at world-wide scale

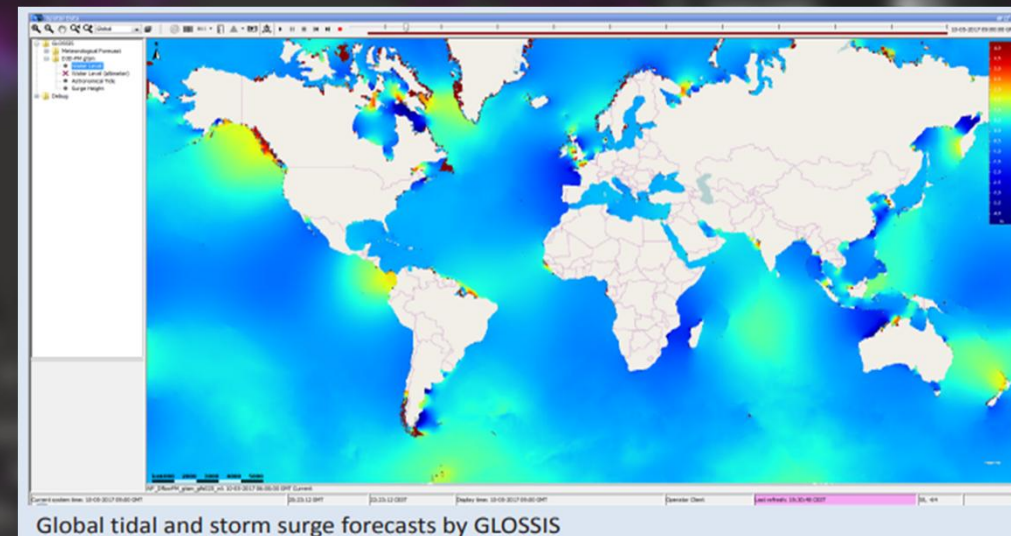
- Medium-term and seasonal fluvial flow forecasts
- Historical timeseries
- anywhere
- Ingredients:
  - Deltares expertise (hydrology, WRM, forecasting)
  - Computational engine: wFlow, Dflow-1D based models
  - Forecasting engine: Delft-FEWS
  - Storage: Deltares OpenArchive





# GLOSSIS: real-time water level and storm-surge forecasts at world-wide scale

- Real-time, medium-term forecasts
- Historical timeseries
- anywhere
- Ingredients:
  - Deltares expertise (hydrodynamics, storm surge, wave, bathymetry)
  - Computational engine: Delft3D based GTSM model
  - Forecasting engine: Delft-FEWS
  - Storage: Deltares OpenArchive



# Why we invest in GLOFFIS & GLOSSIS



Towards services



'Global' sets an ambition



Market for global forecasts



# Where are we now and where are we heading?

- Still under development
  - Time slider
  - Additional information per parameter
  - Values when hovering
  - Export/download format
  - Bug fixing
  - New data sources (climate data)
- Available on the Deltares network (now)
- Available for beta-testers Q1 2020 (sign up)
- Official release end of Q1 2020

# Do it yourself

## Instructions and demo

- Exercise



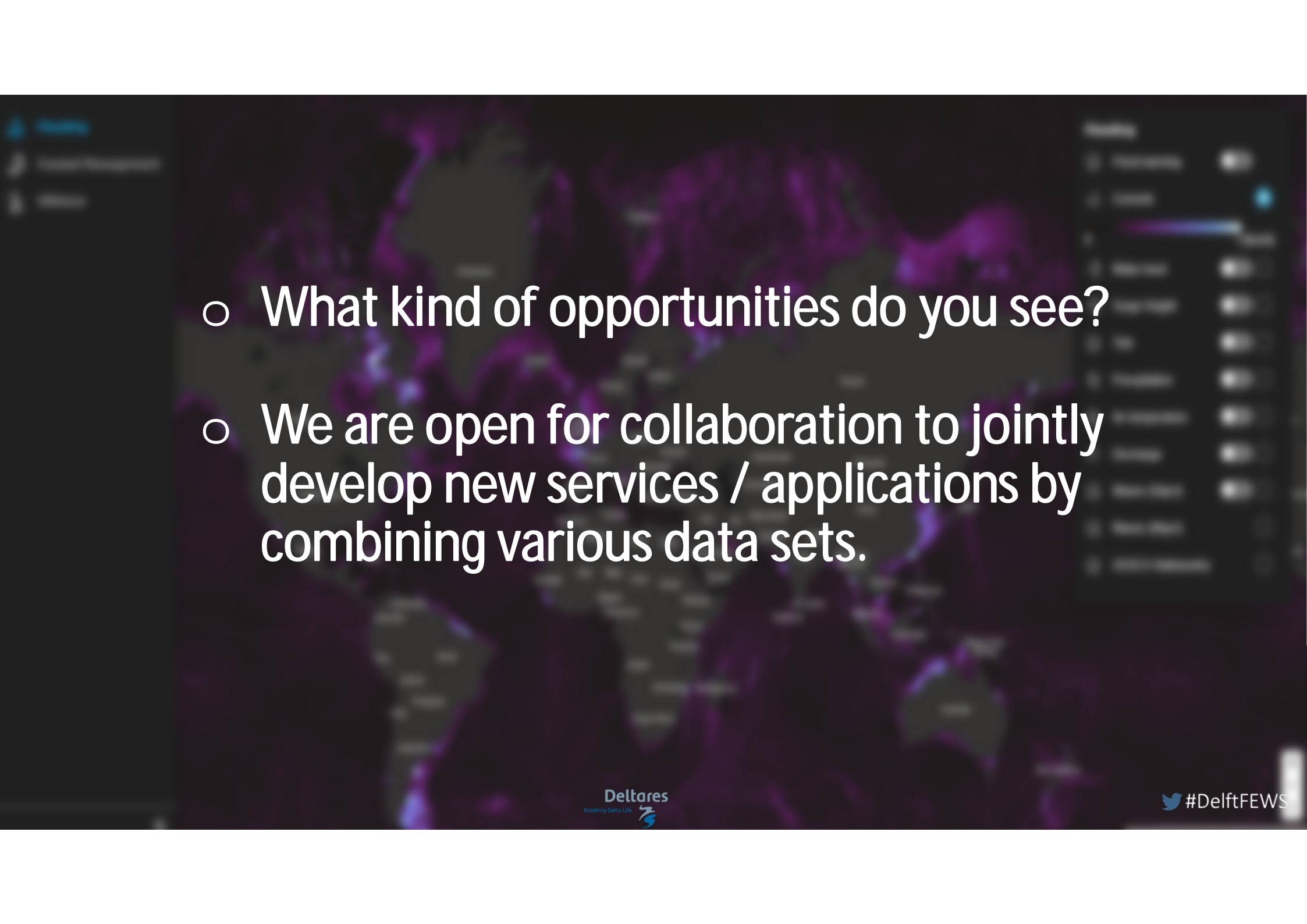
# Your opinion



- General look and feel
- Which additional features would be useful



- Are the available data sources useful
- What should be changed to make it (more) useful

- 
- What kind of opportunities do you see?
  - We are open for collaboration to jointly develop new services / applications by combining various data sets.



# Thank you for your attention

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