



**OFFSHORE NORGE**



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# COLLABORATION STRATEGY ON THE NCS WITH SPECIAL EMPHASIS ON PRODUCTION DATA COLLABORATION

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**Offshore Norge coordinates several collaboration projects and services for the industry.**

## **Facts about Offshore Norge:**

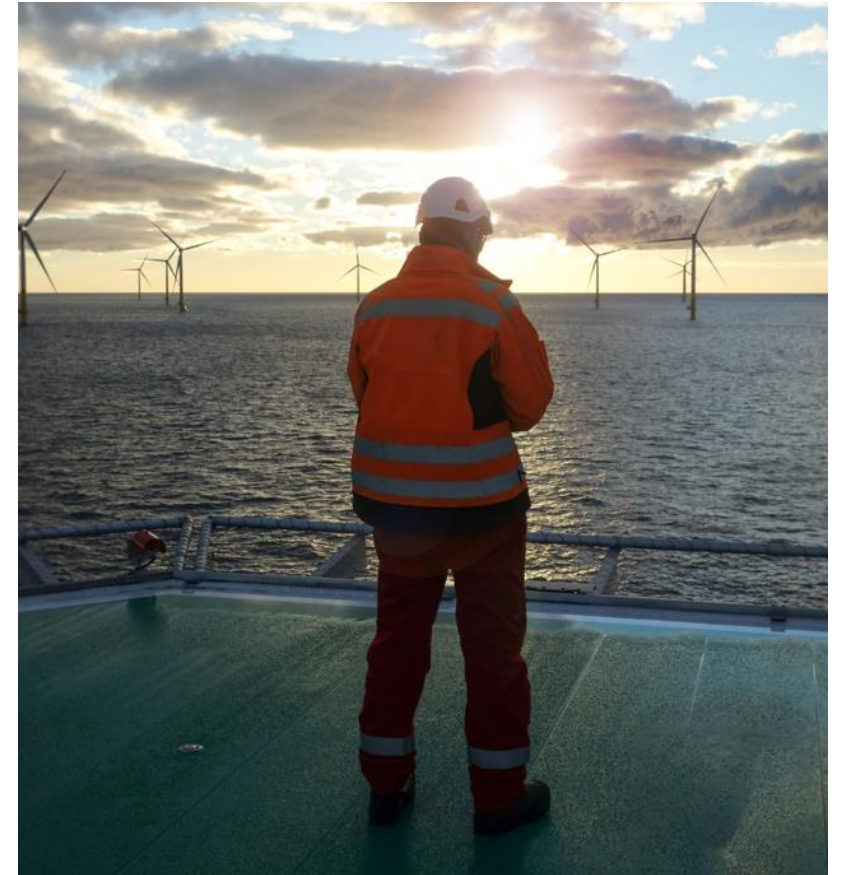
Offshore Norge is a professional body and employer's association for oil and supplier companies.

We cover several functions:

- employers' association
- interest organisation towards government and society
- **collaboration projects in the industry**

We represent more than 100 member companies with a total of 35 000 employees

Offshore Norge is a part of NHO

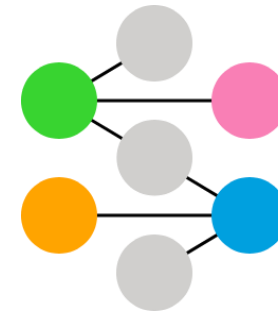


# PORTFOLIO OF COLLABORATION SERVICES AND INITIATIVES



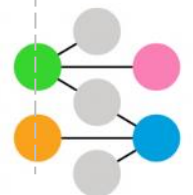
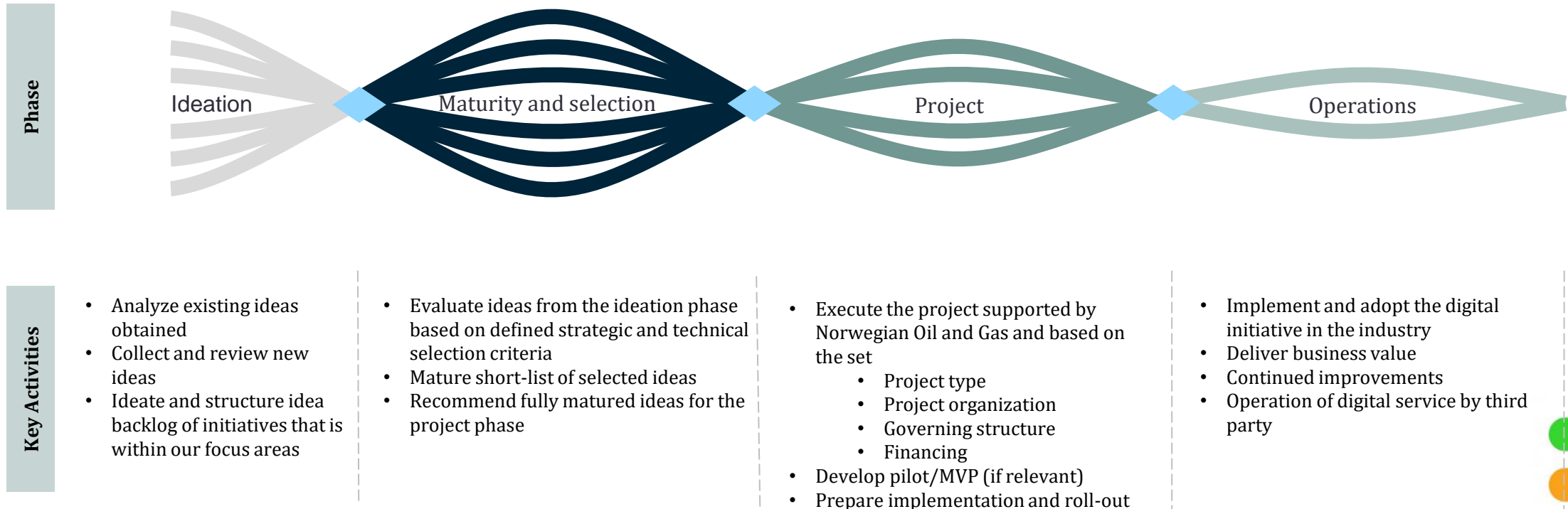
Over 20 services and collaboration projects managed and administrated by Offshore Norge

- critical
- loop
- virtual inventory
- subsurface
- L2S
- magnetjqs
- hello
- eqhub
- eraacute
- ilap
- subquip
- footprint



# Collabor8

# CREATING VALUE THROUGH COLLABORATION





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# LARGE SCALE COLLABORATION PROJECTS ON THE NCS

# DIGITALIZATION OF RNB (REVISED NATIONAL BUDGET REPORTING)



- RNB reporting is a governmental reporting requirement each year
  - Dataset contains (For existing fields, exploration licenses, transport system, discoveries)
    - Historical and future production
    - Planned future investments (CAPEX/OPEX)
    - Expected sale volumes
    - Tariffs
    - Environmental data ++

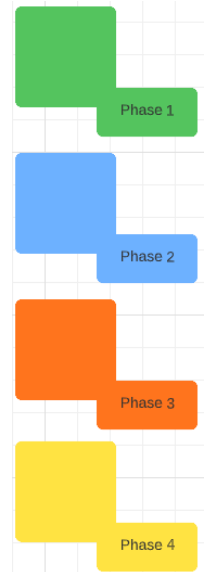
# DIGITALIZATION OF RNB (REVISED NATIONAL BUDGET REPORTING)



- Started project with the NPD, Offshore Norge and associated member companies
- Fully automate and digitalize RNB process and data
- Ensure full nomenclature of all data required to report on



# DIGITALIZATION OF RNB (REVISED NATIONAL BUDGET REPORTING) DRAFT ROADMAP





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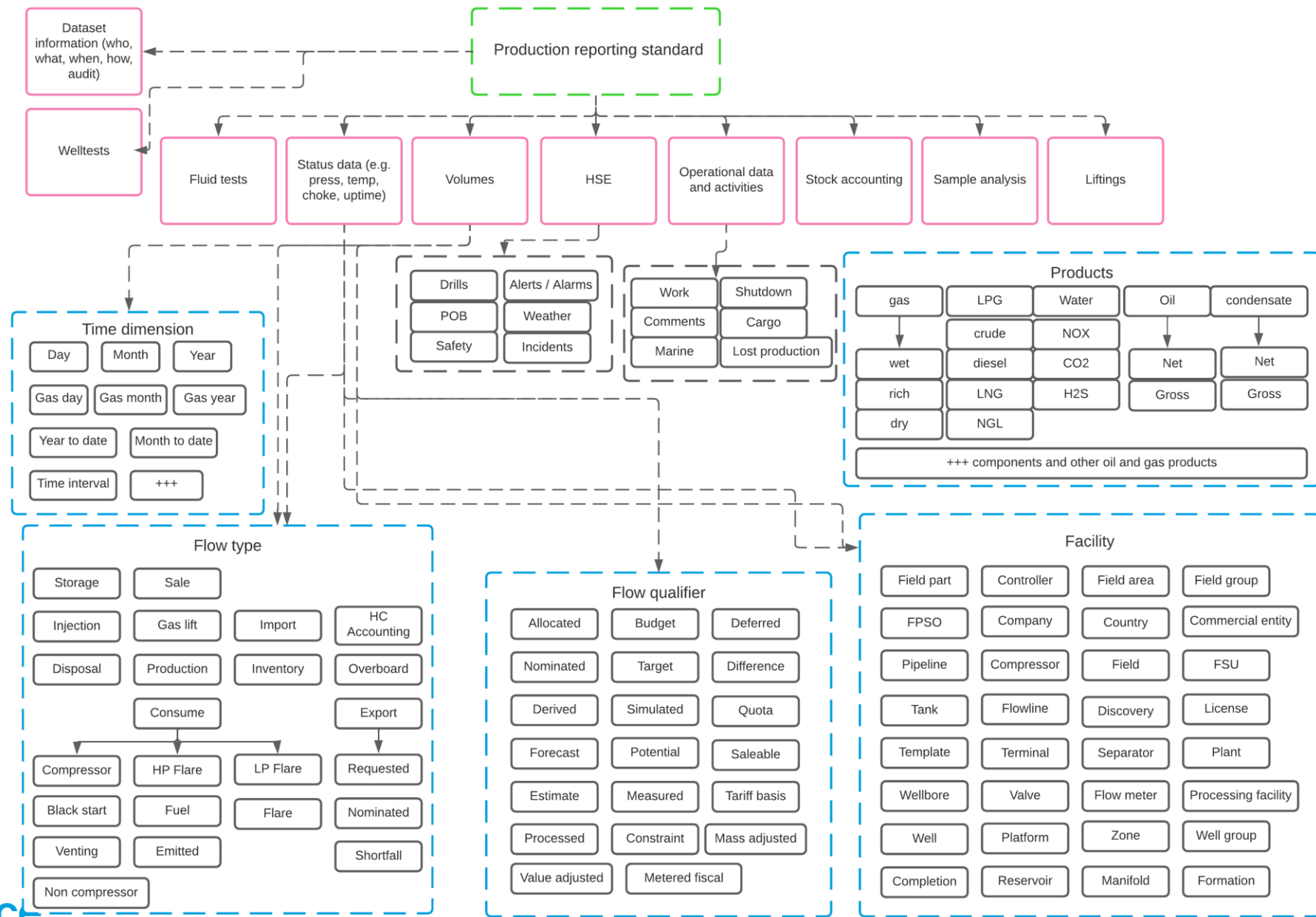
# PRODUCTION DATA SHARING ON THE NCS

# STANDARD DATASETS



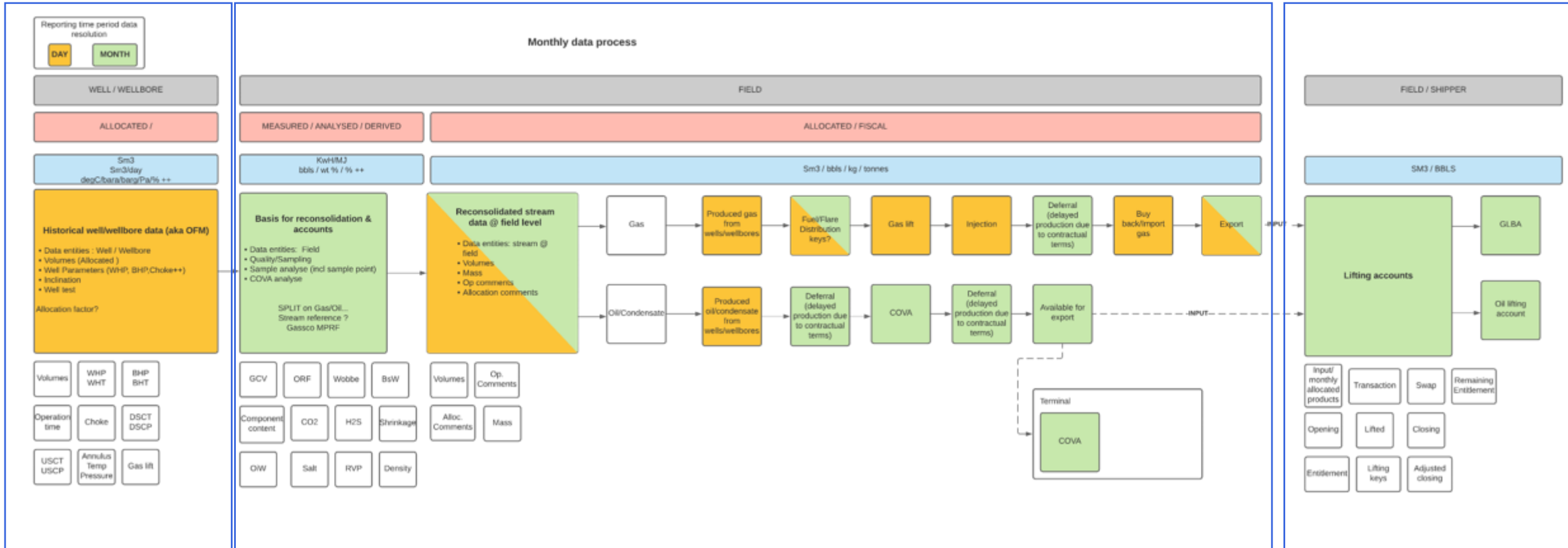
- Standard data exchange formats for drilling and production
  - supports most use cases even on the global arena
  - standards also part of global initiatives such previously driven by Energistics and now OSDU
  - Standards includes definitions on e.g. products, ways of producing ++
- Minimum viable data approach
  - Many data types follows this pattern
  - Data divided into categories: required, recommended, optional
- New data types added through business cases
  - Describes business wins, barriers, stakeholders++

# STANDARD DATASETS - EXAMPLE PRODUCTION



# MINIMUM VIABLE RECONSOLIDATED PRODUCTION DATA SHARING

SHARING OF RECONSOLIDATED PRODUCTION DATA OPERATOR TO PARTNERSHIP



Scope 1

Scope 2

Scope 3

# NEW DATA TYPES- EMISSIONS



Home

Production

- Publish data
- Explore data
- Explore data (beta)
- Dashboards
- Emission data

Drilling

- Publish data
- Explore data
- Explore data (beta)
- Slot life cycle
- Dashboards

Administration

- Event log
- Settings company users
- System configuration

Reports

- Uploaded reports

Favourites

- ALL DATA 2020
- ALL DATA 2020 - EMISSIONS
- EDVARD GRIEG
- EKOFISK NOVEMBER 2021
- GUDRUN
- GULLFAKS HAR MÅNED
- GULLFAKST TRENGER MÅNED
- IPSWITCH - MED GAS
- MARIA
- MELKØYA
- OSEBERG MONTH
- YME
- ÅSGARD 1 DAG
- ÅSGARD 2016
- ÅSGARD JAN 2016
- ÅSGARD WITH CHEMICAL

Entities

Licenses

Fields / Discoveries

- GULLFAKS

Platforms

Wells

Wellbores

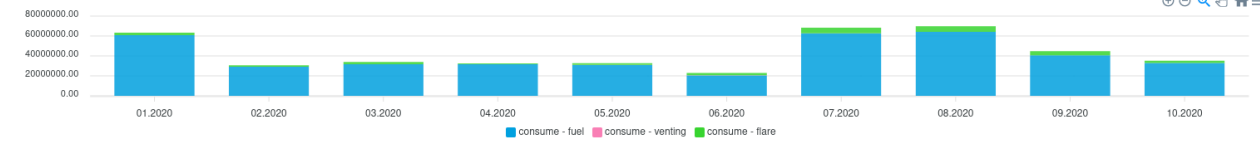
Dates

From: 01.01.2020 To: 01.10.2020

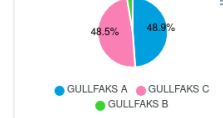
Date type:  period  created  modified

## EMISSION DATA   GRAPHS AND TRENDS

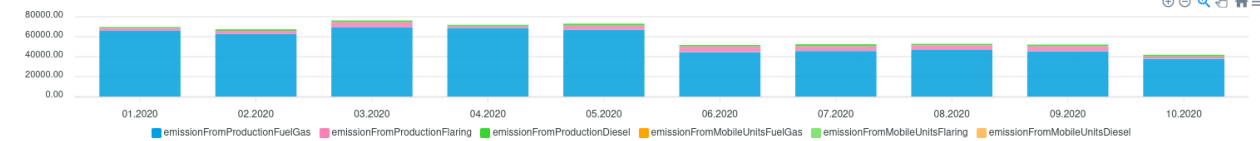
### Consumption



### Consumption by entity



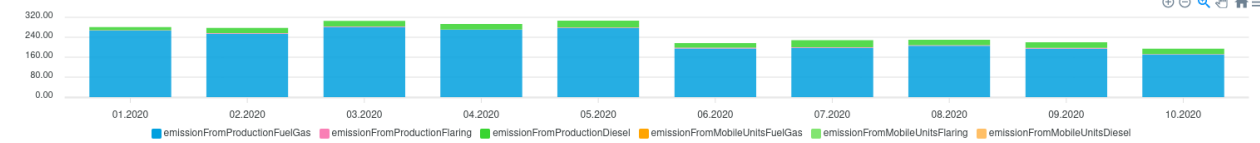
### CO2 - sources: GULLFAKS



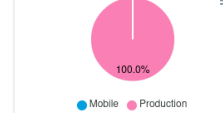
### Mobile units / Production facilities



### NOX - sources: GULLFAKS



### Mobile units / Production facilities



### CH4

No data

### Mobile units / Production facilities

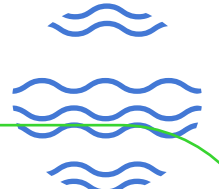
No data



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# SUPPORTING DATA SHARING PLATFORMS

Collabor8 Subsurface



## KEY FACTS

- Approx. 98% of all daily production reports goes through the system each day (missing ones are under decommissioning or on the way in)
- Approx. 100% of all monthly production reports to the government goes through the system
- Approx. 98% of all drilling operations goes through the system
- All operators, partners and the government on the NCS use the solution on a daily basis
- Connections to L2S, DISKOS and SMIL
- Approx. a daily average on 100000 requests for data through the cloud based API services
- Utilises the NPD fact pages for metadata

## KEY DRIVER

Work, visualize, extract & analyse data in "one unified data model" – work with the data and not physical files

The screenshot displays the subsurface software interface with the following components:

- Navigation Menu:** Home, Production, Drilling, Administration, Reports, and Uploaded reports.
- Production Panel:** Includes 'Publish data', 'Explore data', and 'Dashboards' options.
- Administration Panel:** Includes 'Event log', 'Settings company users', and 'System configuration' options.
- Entity Details:** A sidebar showing details for 'JOHAN SVERDRUP' under 'License', 'Field', 'Well', and 'Wellbore' categories.
- Table:** A table with columns for Report period start, Report period end, Production day start, Production day end, Reporting facility, Owning facility, Facility, Facility type, and Reporting period. It lists multiple entries for 'JOHAN SVERDRUP'.
- Charts:** A line chart showing 'Time depth per period status' and a bar chart showing 'Depth and activity'.
- Activity Panel:** A section for 'Activity' with a pie chart and a 'Success' bar chart.
- Field Production Chart:** A large line chart at the bottom right showing production metrics over time, with a legend for 'Oil To Stock (Ow)', 'Water Prod Ultra 1 (F07) (Ow)', 'Water Prod Ultra 2 (F08) (Ow)', and 'Water Production Total (Ow)'.

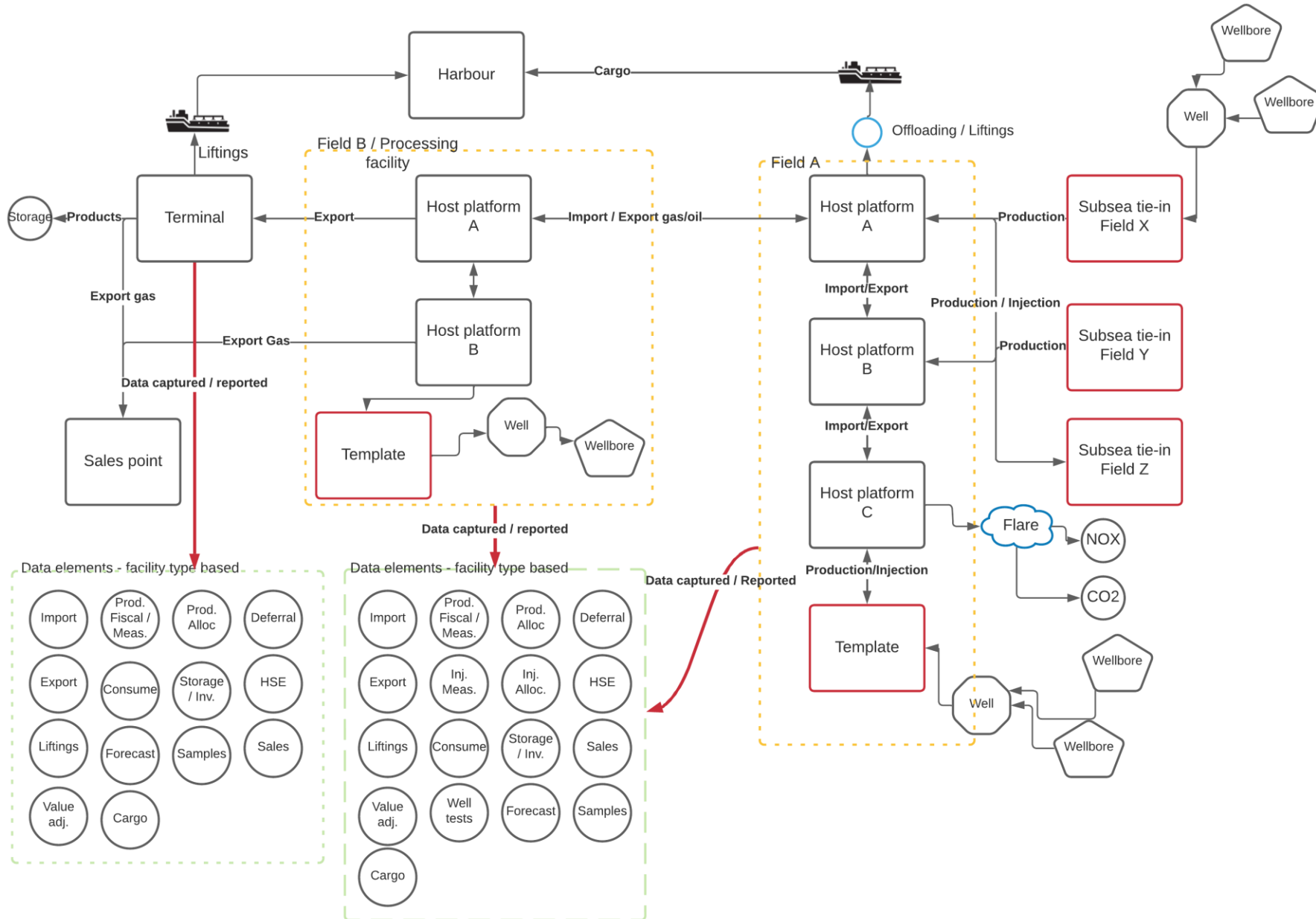




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# COMMON CHALLENGES WE SEE IN MANY OF OUR PROJECTS

# COMMON CHALLENGES



# COMMON CHALLENGES



- Definitions, what do you mean when you talk about oil? Where in the value chain are you?
- Standardization vs special business needs, often hard to combine..
- Increased usage of digital technologies -> when something goes wrong we are all in the same boat and have bought the ticket for the ride..
- Many of today's internal systems are not tailored at sharing information outside of an asset aspect and e.g. allocation routines and not catering for scale
- Changing historical practice & processes is hard – going from paper to digital
- Comingled host based allocation -> introduces challenges related to control of digital security especially in tie-in situations with different ownership constallations