

Norsk olje&gass

# Common collaboration efforts on the NCS

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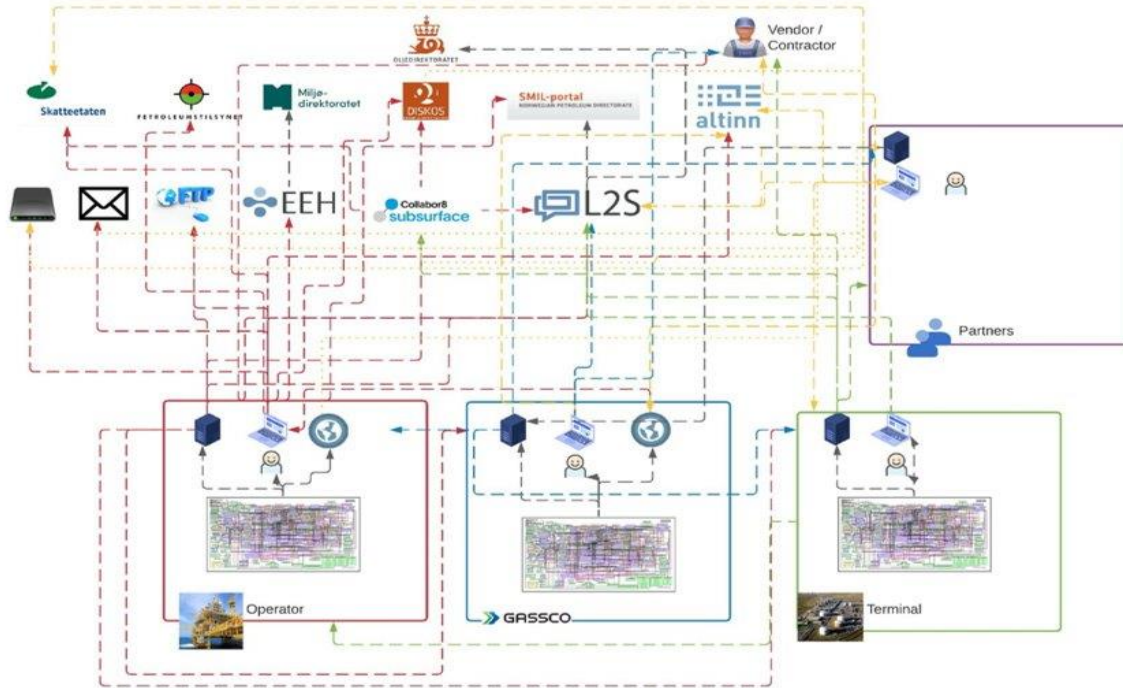
Domain manager E&P Subsurface/ Fagsjef Boring & Brønn

- In license data sharing
- Ongoing initiatives production
- Supporting data platform for the NCS

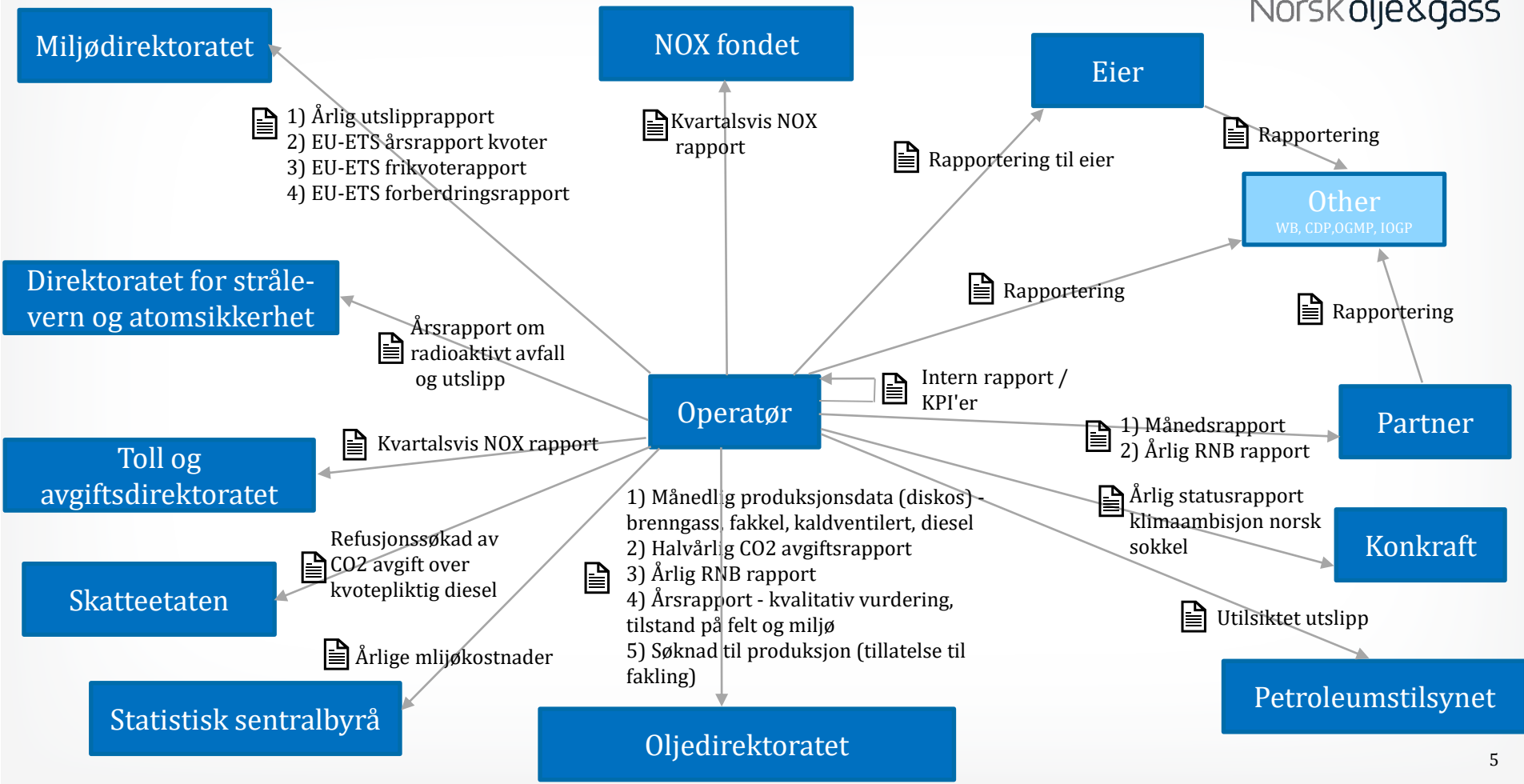
# Common collaboration efforts on the NCS Challenges

- Not standardized what is shared
- In many instances highly manual work and high usage of document based formats
- Many players and stakeholders getting the same information in many different channels & formats
- Meaning & definitions tightly coupled with where we are with respect to
  - In the value chain
  - Which process and at which time
- Multiple versions of the truth
- Commercial vs physical allocation -> especially within the production domain
- Extremely costly to maintain and raises continuous questions..

# Current data architecture is complex



# Current data architecture is complex – example emissions



## Vision of In License Data Sharing:



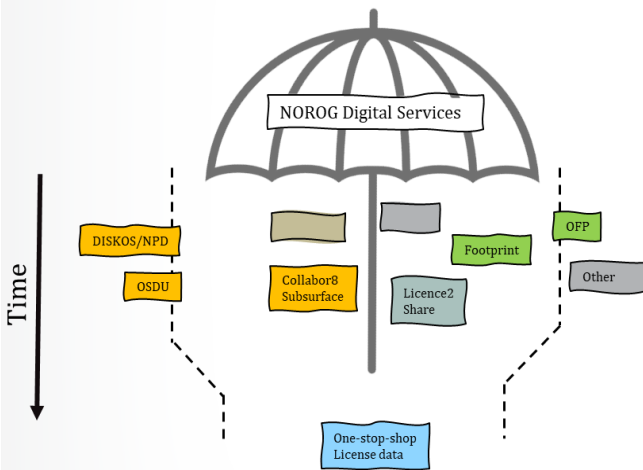
*One-stop-shop with seamless access  
to license data when needed*



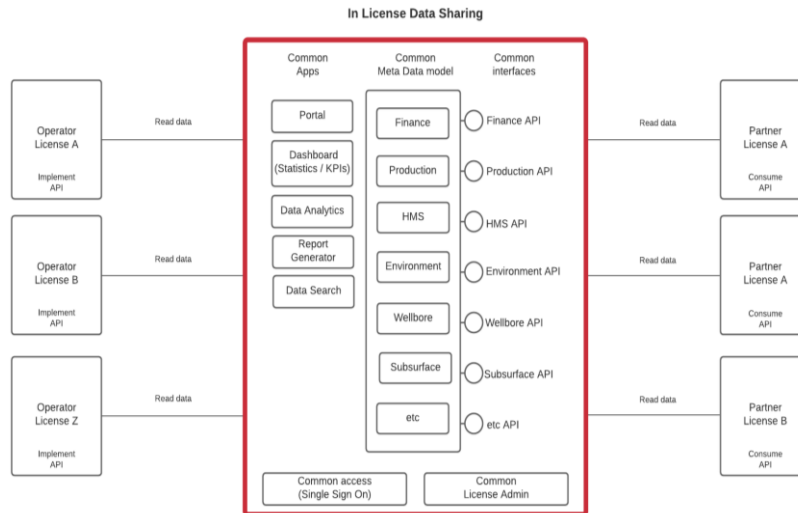
# In License Data Sharing: True and False

- True
  - Industry initiative
    - Developed by operators and partners
    - Supported and facilitated by NOROG
    - Endorsed through NOROG Operations Committee
  - **Standardization and data access initiative**; software development when needed
  - Holistic view
- False
  - A new database
  - Another large IT Project

# In License Data Sharing: Three main principles



**Common program management:**  
Coordination with other data sharing solutions



**Data sharing through common interfaces and models:**  
ILDS connects data sources and makes them available through API's



**Using agile methodology:**  
Stepwise approach; one data domain at a time

## In License Data Sharing: First case - "Emission data"

### Established work group to

- Agree on minimum viable dataset to share on a monthly basis with respect to emission data
- Agreed on minimum viable data set and standard to transfer information on in digital form
- Currently in Proof of concept development as part of the Collabor8 Subsurface solution, added as a new data type that can be combined with e.g. other types such as production

## In License Data Sharing – emission data

### Example for CO2...

- CO2 emission total
  - Month (Tonnes per month)
- CO2 emission by activity / source
  - CO2 emission from Production (Tonnes per month)
    - Fuel gas (includes any commercial components applied, standard today)
    - Flaring (gas)
    - Diesel
  - CO2 emissions from Mobile units (drilling, Light Well Intervention) (Tonne per month)
    - Fuel gas
    - Flaring (gas, oil)
    - Diesel
- CO2 intensity
  - Month (Number, kg/sm<sup>3</sup> or kg/boe)
  - YTD (Number, kg/sm<sup>3</sup> or kg/boe)

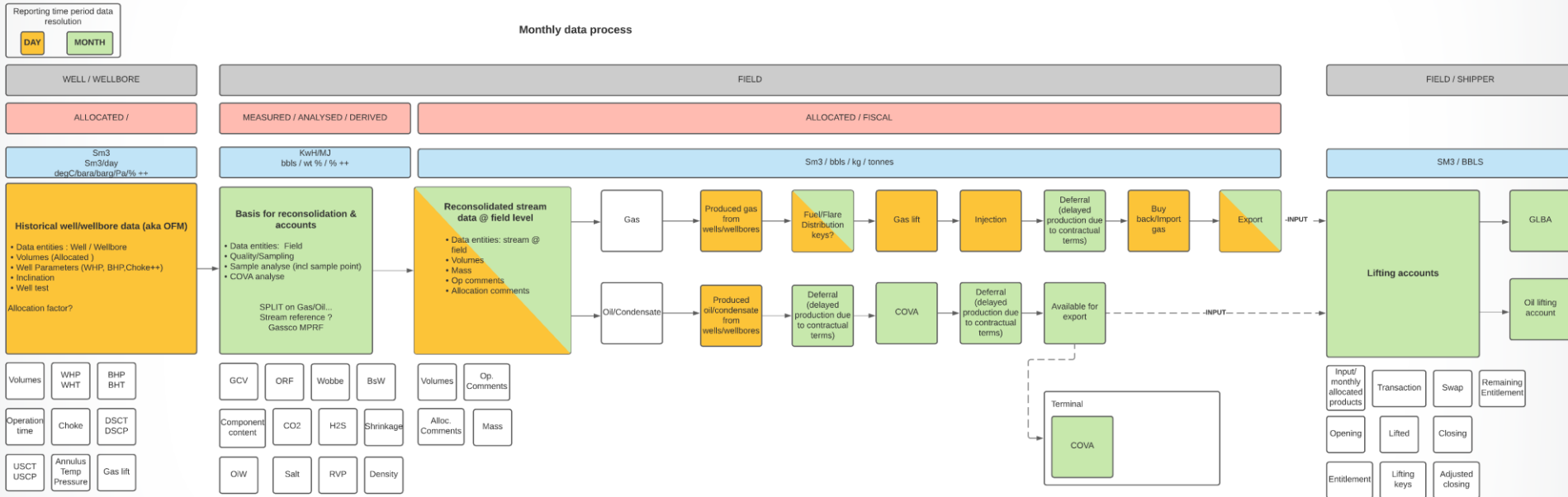
# Ongoing initiatives production

# Ongoing initiatives production - background

Have worked several business cases in parallel

- Reconsolidated production on monthly level
- Forecasts
- Liftings
- Deferments
- Value Adjustments

# Status ongoing initiatives production



# Ongoing initiatives production

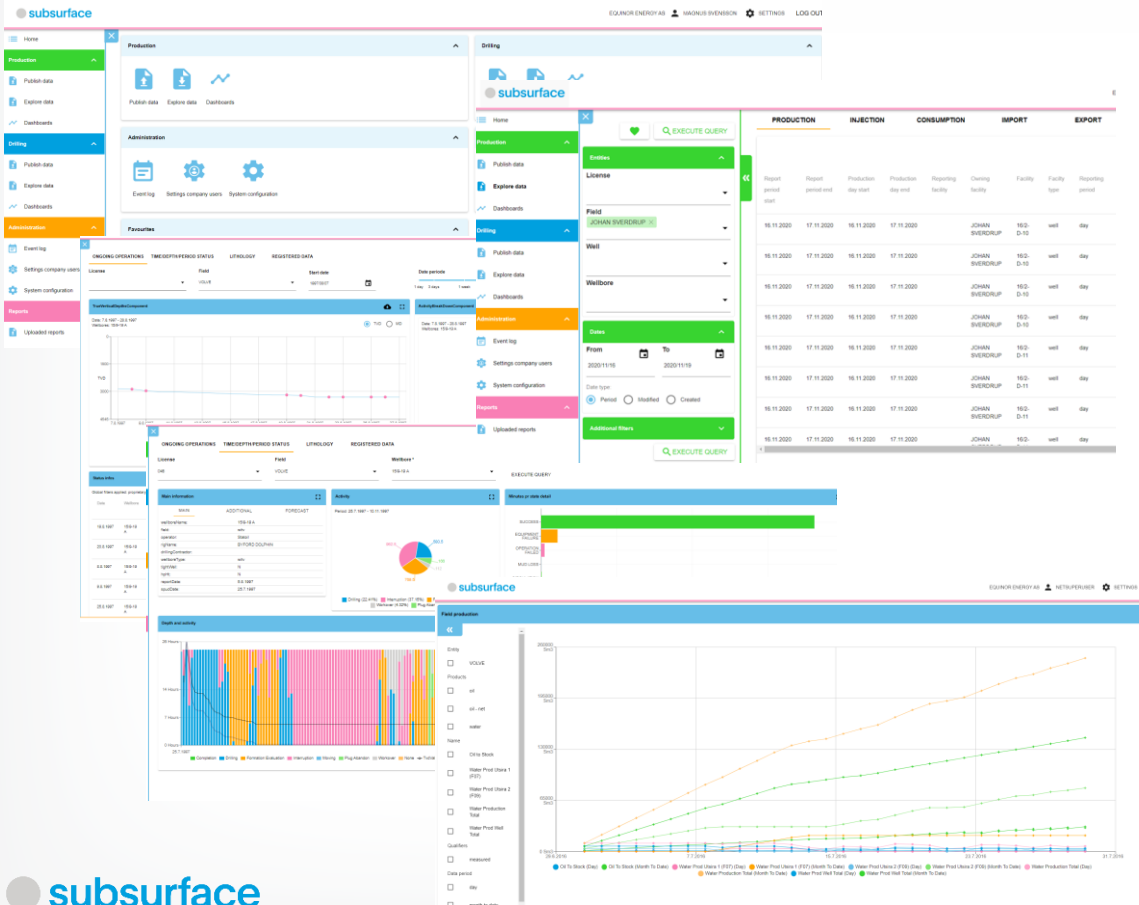
Reconsolidated well data and well test

- Focus on sharing of reconsolidated well/welltest data as first phase
- Established workgroup with members from operators and partners
- Define
  - Minimum best practice dataset to share (similar to what we did for daily production report)
  - Sample minimum viable report
  - Document describing "Playing rules and context for data"
  - Document with definitions
- Set-up now almost ready for review round to be sent out for comments

## RNB reporting

- Started workgroup and project together with the NPD
  - Define as-is situation
  - Define wanted optimal situation
  - Defined digital standard and process
- Goal to exchange data digitally and make data available digitally
- Target is for reporting in 2023

# Supporting data platform for the NCS



## KEY FACTS

- Approx. 95% 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 on the NCS use the solution
- Connections to L2S, DISKOS and SMIL
- Approx. a daily average on 70000 requests for data through the cloud based 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

Questions?