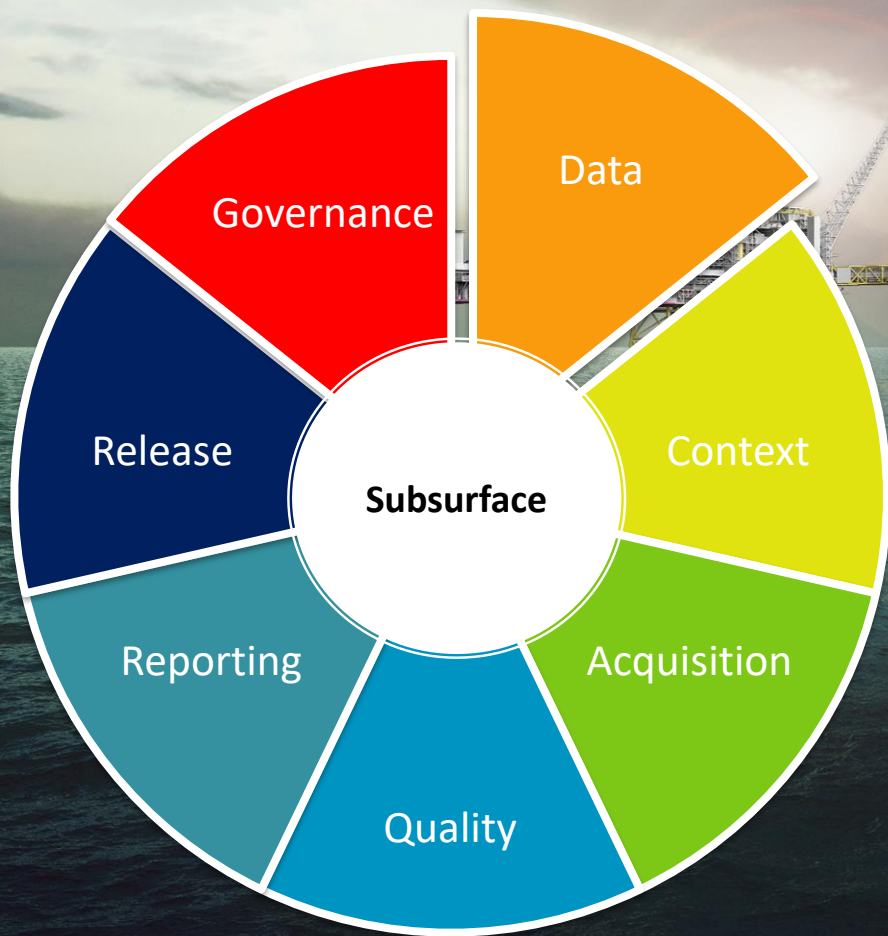




NORWEGIAN PETROLEUM  
DIRECTORATE



## Management of subsurface data in NPD

Maria Juul and Synnøve Veia

# Norwegian Petroleum Directorate

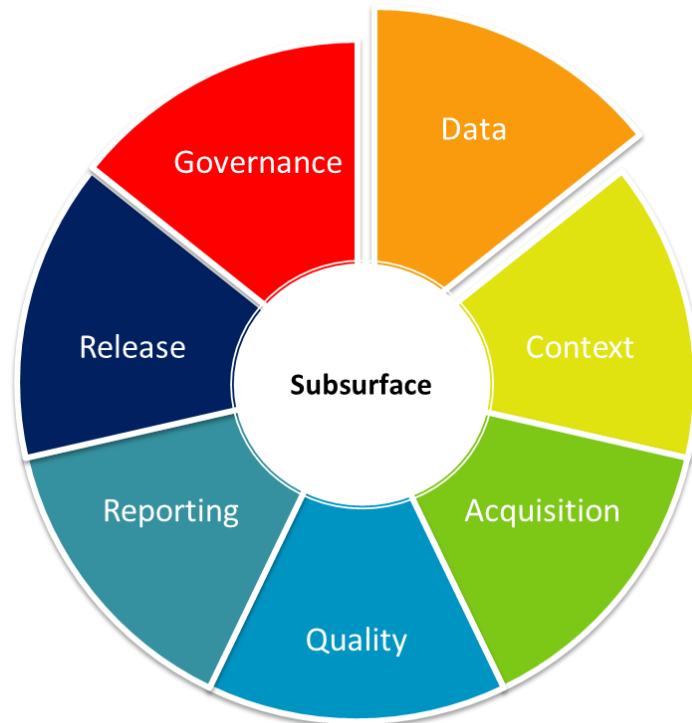


- ☐ Established 1972 in Stavanger
- ☐ Subordinate to the Ministry of Petroleum and Energy (MPE)
- ☐ 220 employees
- ☐ Creating the greatest possible value for society from oil and gas activities

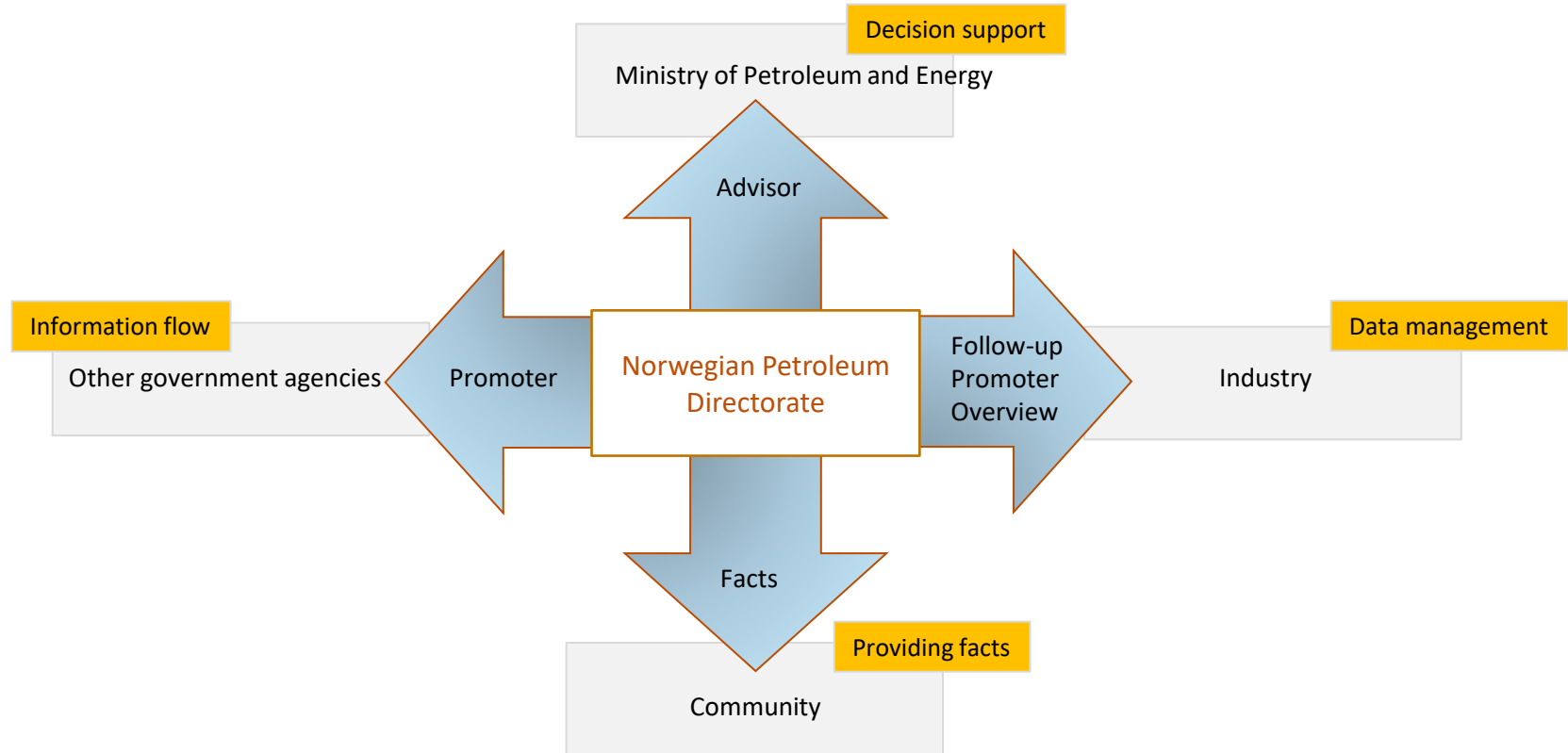
**Value creation - Long-term perspective - Cooperation**

# Agenda

1. Data management in NPD
2. The Norwegian NDR – Diskos
3. Subsurface data types
  - Well data
  - Production data
  - Seismic data
4. The value of data management



# NPDs four main roles involves data

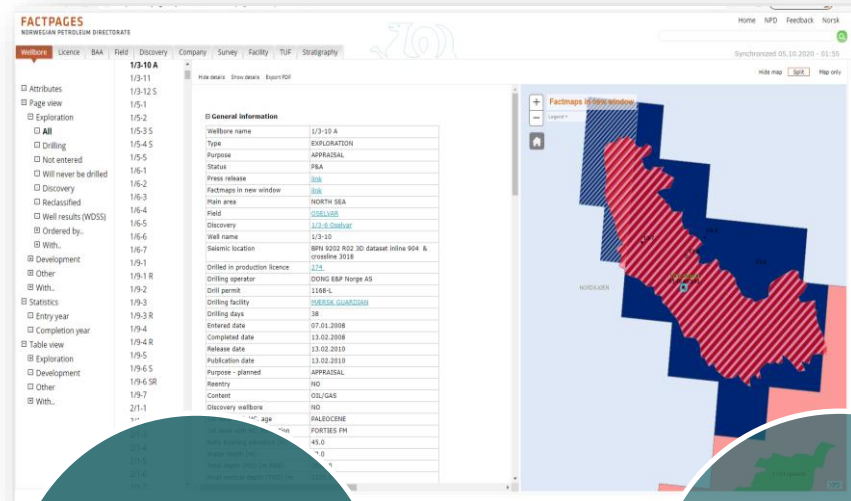


# The national shelf library

## NPD factpages:

- Index of the shelf library
- List of reference data
- NPD interpretations of released data

**Visualized in the fact map**



Diskos  
NDR



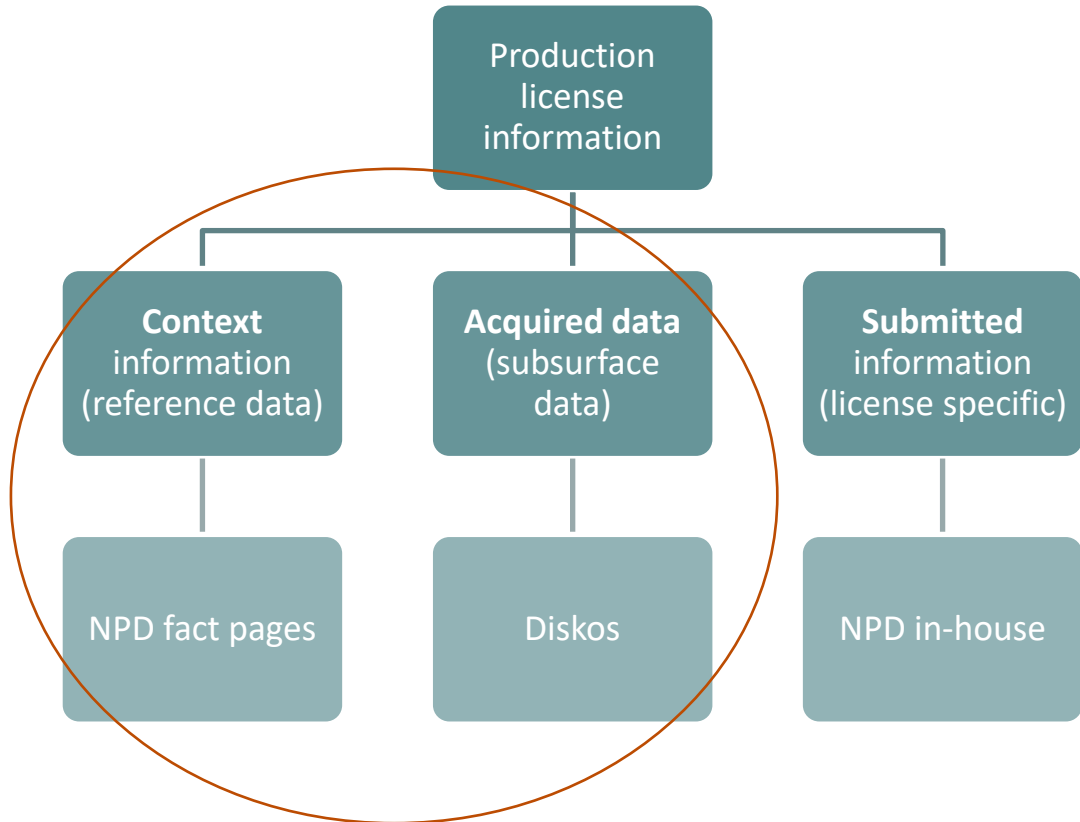
NPD  
databases



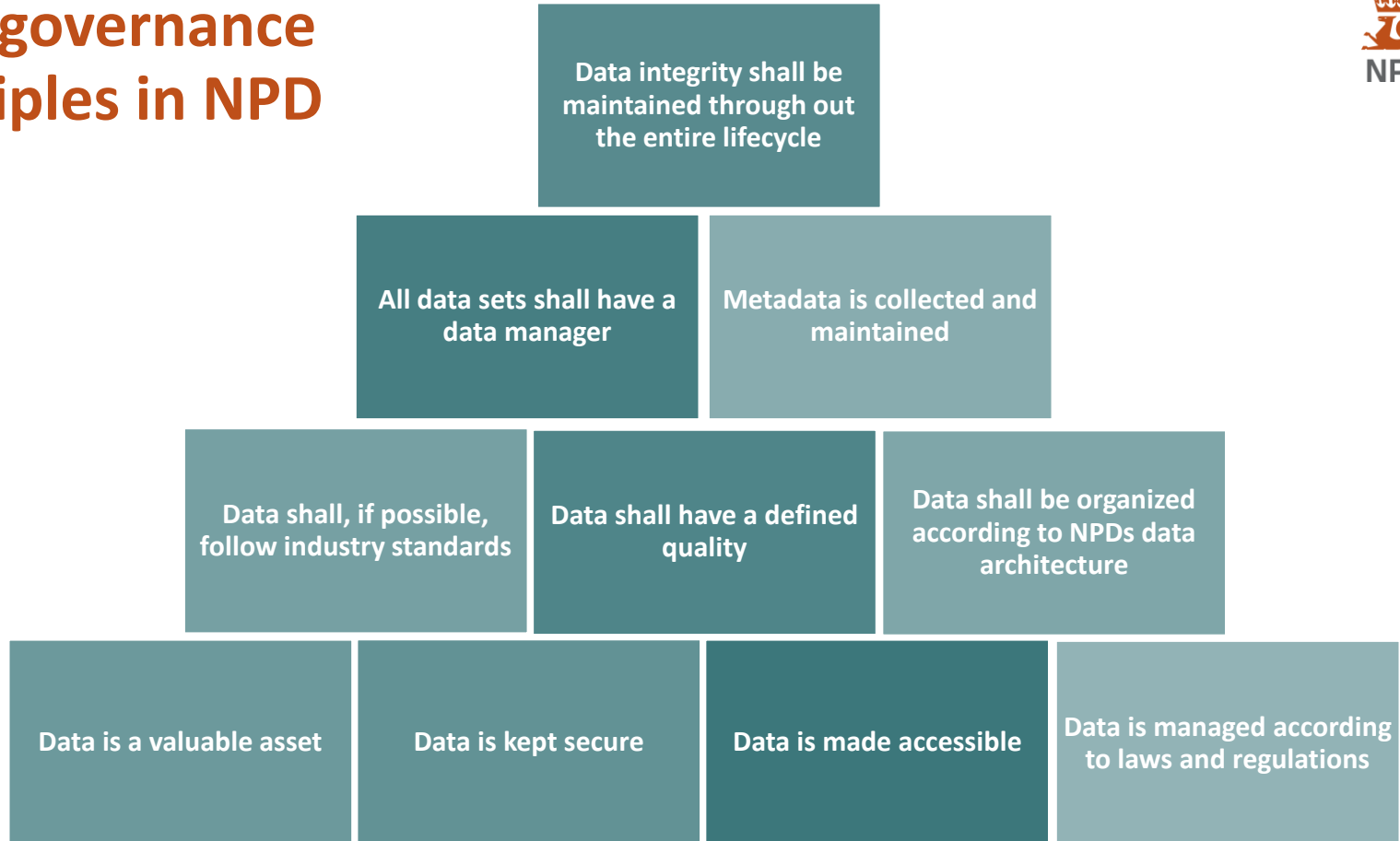
NPD  
Fact  
pages/map

# Managing the national dataset

- Structure data
- Maintain data quality
- Provide long-term storage
- Release according to legalization



# Data governance principles in NPD



# Release of subsurface data

- Licence owned data - 2 years
- Data not owned by a licence group - 5 years
- Market available data - 10 years.
- Interpreted data - 20 years
- Non-interpreted data from a licence area which is relinquished is no longer confidential.





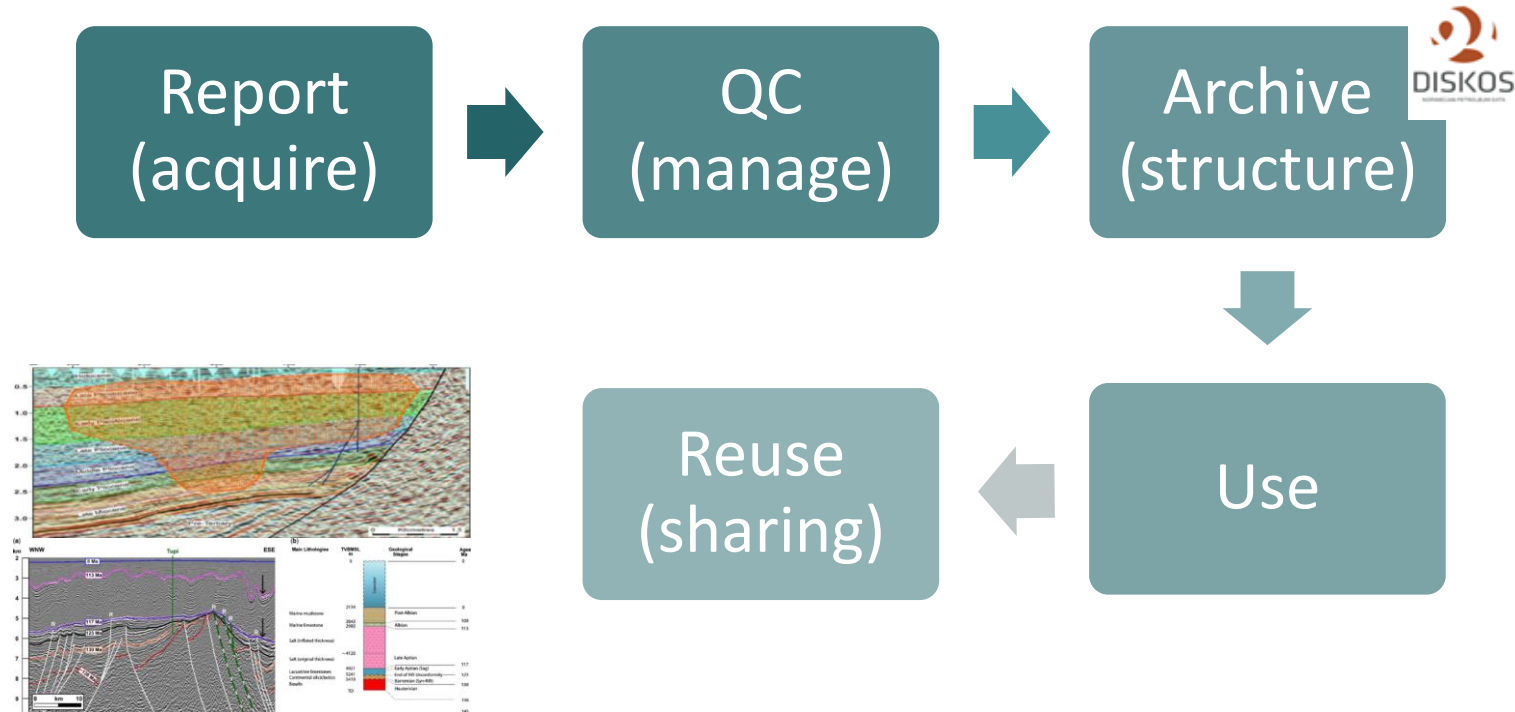
# Life-cycle management of subsurface data

- Long term storage
  - Efficient retrieval systems
  - Accessible over time
- Data quality
  - Use of standards
  - Reporting guidelines
- “Fit for purpose”
  - Update datasets to new formats
  - Maintain data context



*Reporting guidelines for subsurface data*

# Value-chain of subsurface data



# Diskos – The Norwegian NDR

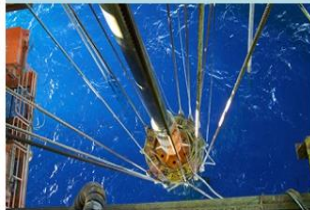


[About Diskos](#) [Members Log In](#) [New member?](#) [Contact us](#)

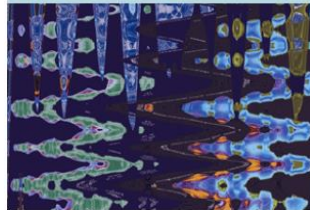
Search 



Well Data



Seismic Data



Production Data



Data Trade



PUBLIC PORTAL




Public web access  
for non-members



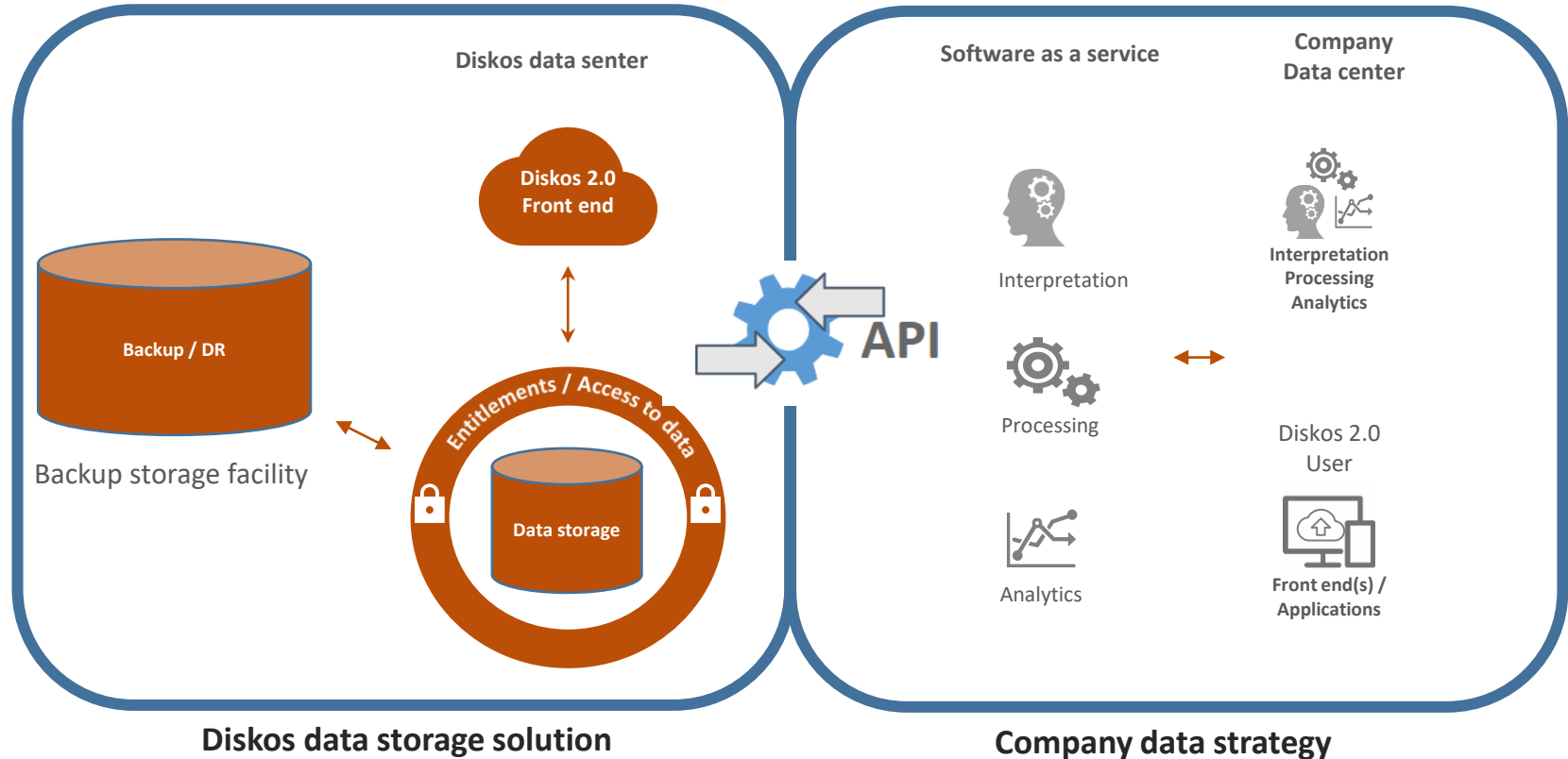
# Diskos membership

- Oil and gas companies
  - Non-oil companies
  - Academia
- } Associated members

NPD has an administrative responsible and is functioning as the Diskos management team.

Diskos handbook	
Version 2.0	
 DISKOS <small>NORWEGIAN PETROLEUM DATA</small>	
TERM	EXPLAINED
<b>Members</b>	The collective term for Original Members and New Members. Members are described in section 2.
<b>Associated Member</b>	Any company defined by the Diskos Management Committee as a non-oil company that offers services and/or products to the market, either to Diskos members or non-members, and has signed the agreement for Associated Membership in Diskos. Associated members are described on page 10.
	
 NPD	

# Diskos 2.0 – next generation of the NDR



# Well data management in NPD



# Dataflow of well data

## Permission

- Well\_ID
- Well name



## Drilling

- Well status
- Completion date
- Data acquisition

## Reporting

- Digital data
- Physical data
- Final well report



## QC of data

- Completeness
- Metadata check



## Publish

- NPD fact pages
- Public release
- Core viewing





# NPD Geobank – physical data management



## Cores and wet/dry samples:

- Near 160 000 meter of cores from 1790 wells
- 760 000 bags with cuttings from 2200 wells
- 1100 bottles of oil samples





# Access to physical samples



- Cuttings
- Conventional cores  
(no sidewall cores)
- Oil from discoveries and fields



# NPD's Handling of production data



# Dataflow of production volumes

## Reporting

- **Measured**
  - Daily - File registering
  - Monthly -M2M
- **Sold**
  - Monthly



## QC of data

- Daily accumulated vs Monthly
- Sales volume vs bill of lading



## Government

- Public statistics
- National budget
- Oil tax office
- Public release



Statistisk sentralbyrå  
Statistics Norway



The Norwegian  
Tax Administration



Government.no



# Seismic Data



Copyright PGS

# Dataflow of seismic data

## Permission

- Registration
- Approval
- Surveyname
- NPD\_ID



## Acquisition

- Co-existence at the sea
- Data processing

## Reporting

- Raw data
- Processed data
- Interpreted data



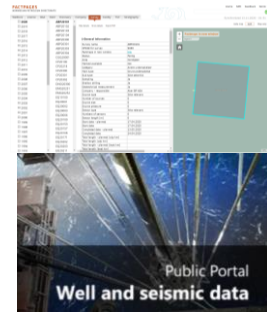
## QC of data

- Validation
- Contextualized
- «Fit for purpose»



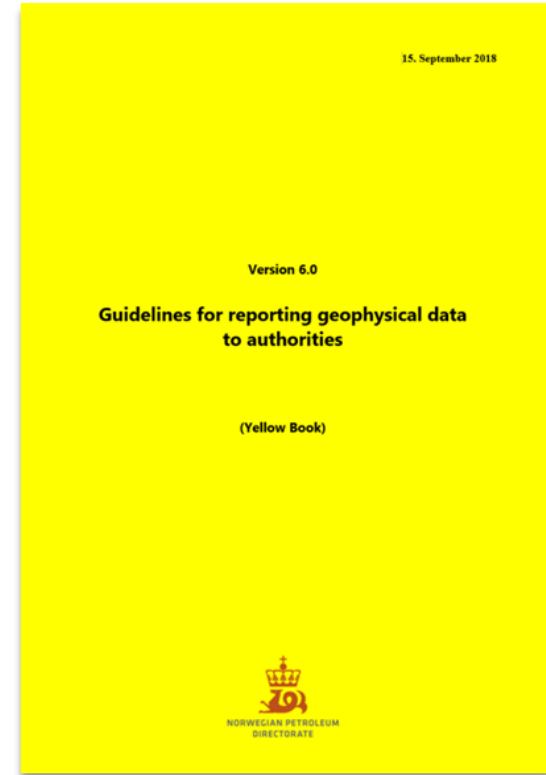
## Publish

- NPD fact pages
- Public release



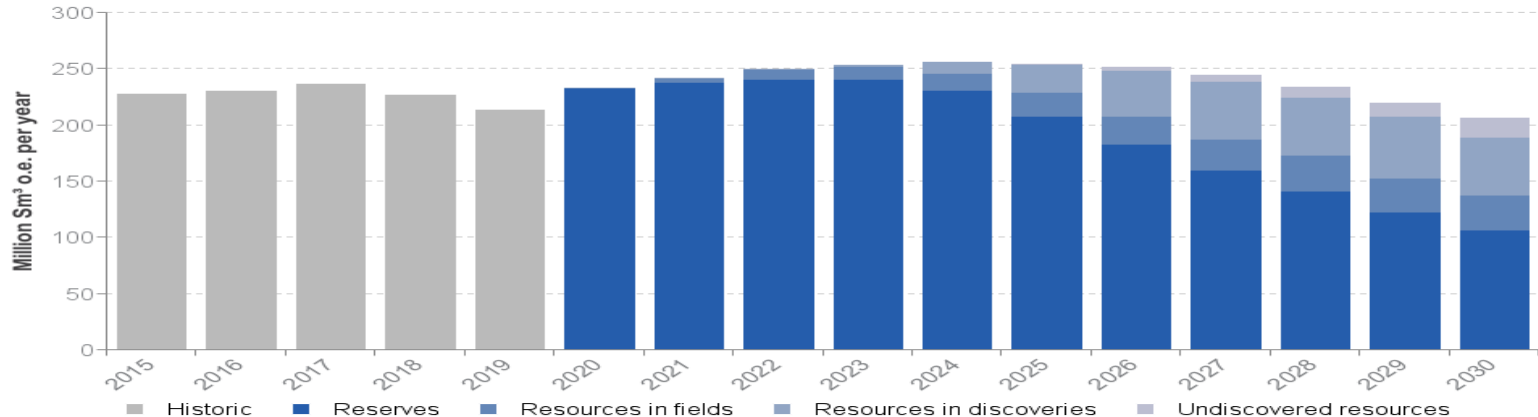
## Seismic Data reporting: Yellow book

- Processed post-stack seismic data (SEG-Y) all “significant” versions are to be reported
- Field data (SEG-D)
- Pre-stack Nav-Seis merge volumes
- Velocity Data
- Navigation data
  - In accordance with “Specifications and Information for Reporting Navigation Data”
- Interpretations
- All associated documentation
  - Acquisition, navigation, processing reports
  - Observers logs etc.

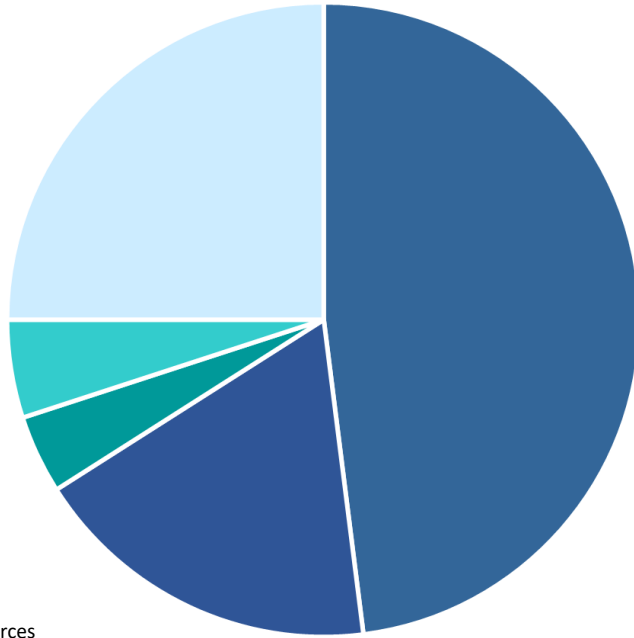


# Good data support the Government in decisions

- Perform long-term strategic planning
- Attract international oil companies
- Challenge the oil companies to manage the petroleum resource safety and sustainable
- Add to the "government take" by assisting oil companies to operate more efficiently



# Data management, a cornerstone in petroleum management



Undiscovered resources  
Contingent resources in discoveries  
Contingent resources in fields  
Reserves  
Sold and delivered

- Legislation
- National data repository
- Data governance
- Easy access to data





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# Questions?

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