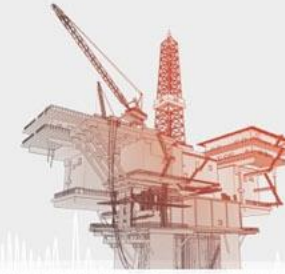




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DIRECTORATE



NPD – Library of the NCS 2026

A view into the digitalization program of the NPD

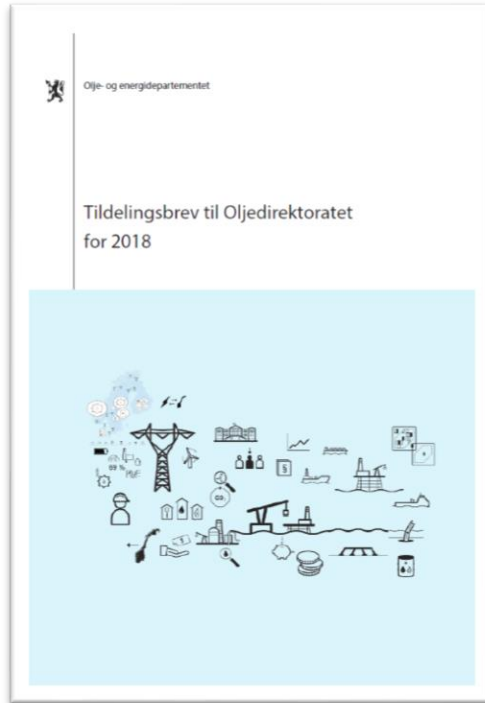
Alf Veland – EPUG Oct 2018



Background and framework



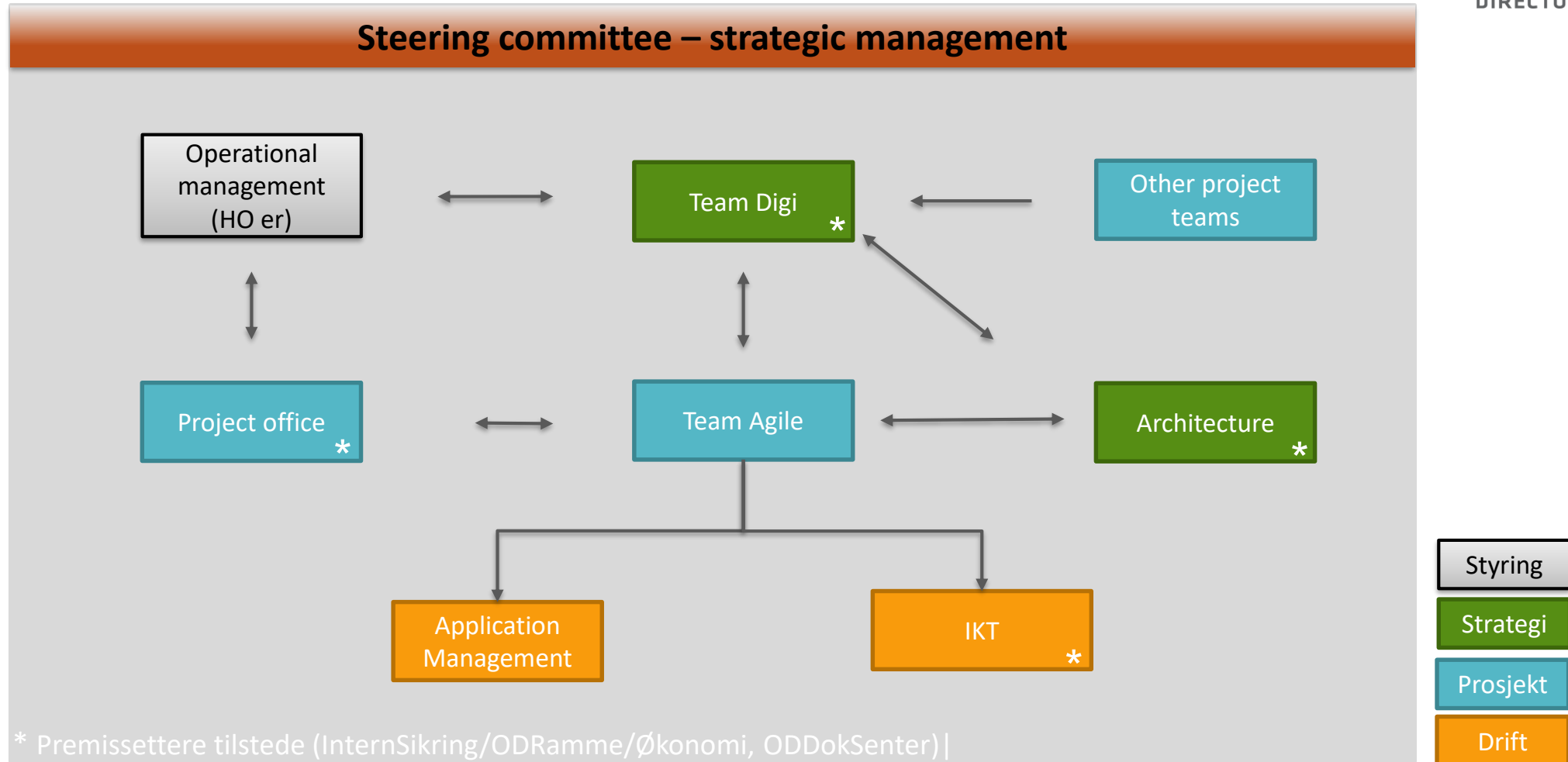
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Organizational preparation



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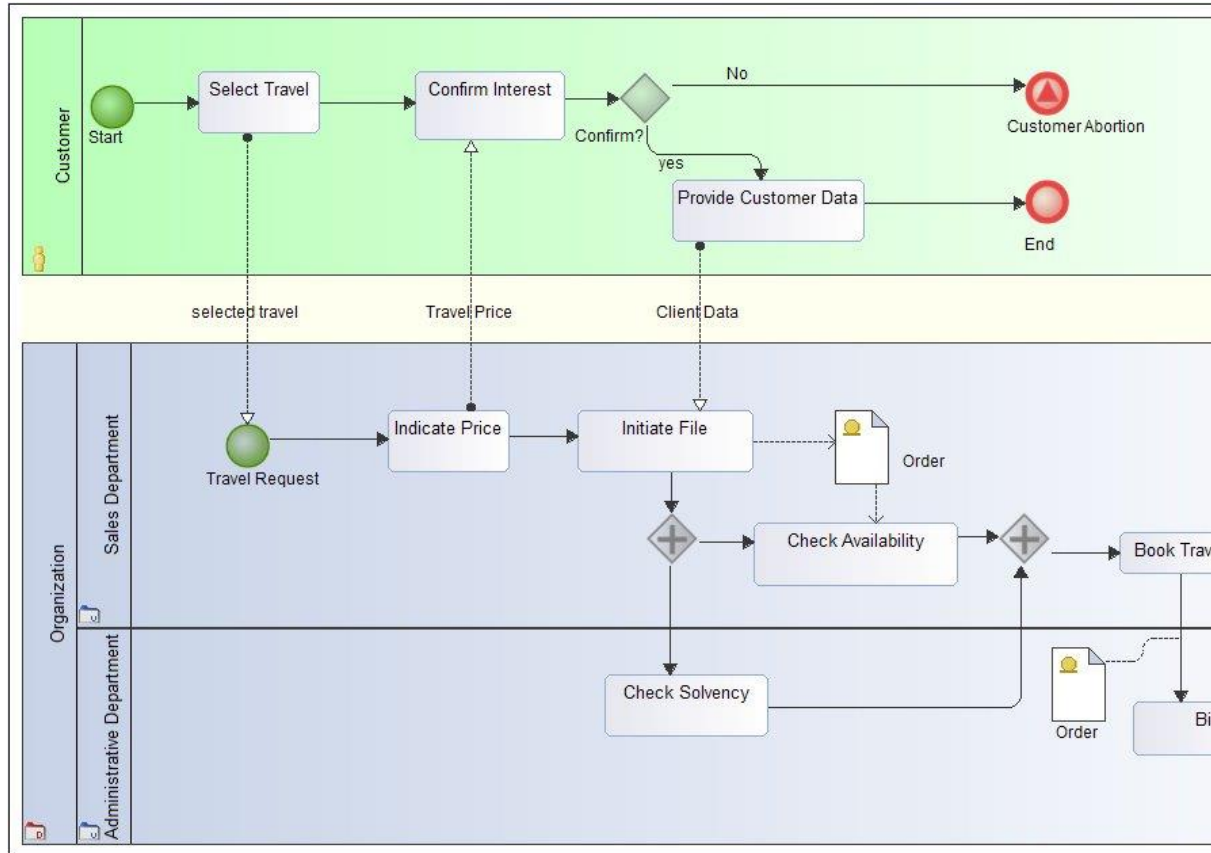


Mapping existing processes

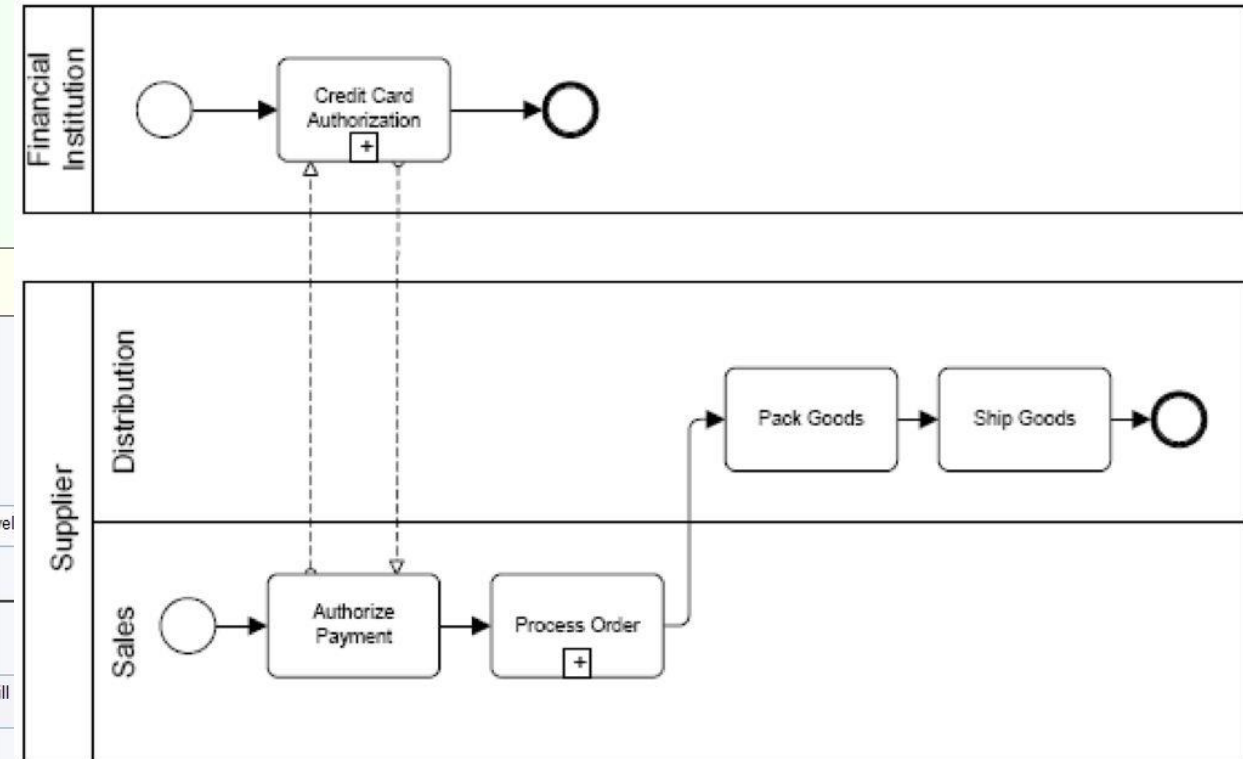
- Get the overview of processes NPD is part in and what we do
- Business Process Mapping Notation (BPMN 2.0)



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Lanes and Pools Sample



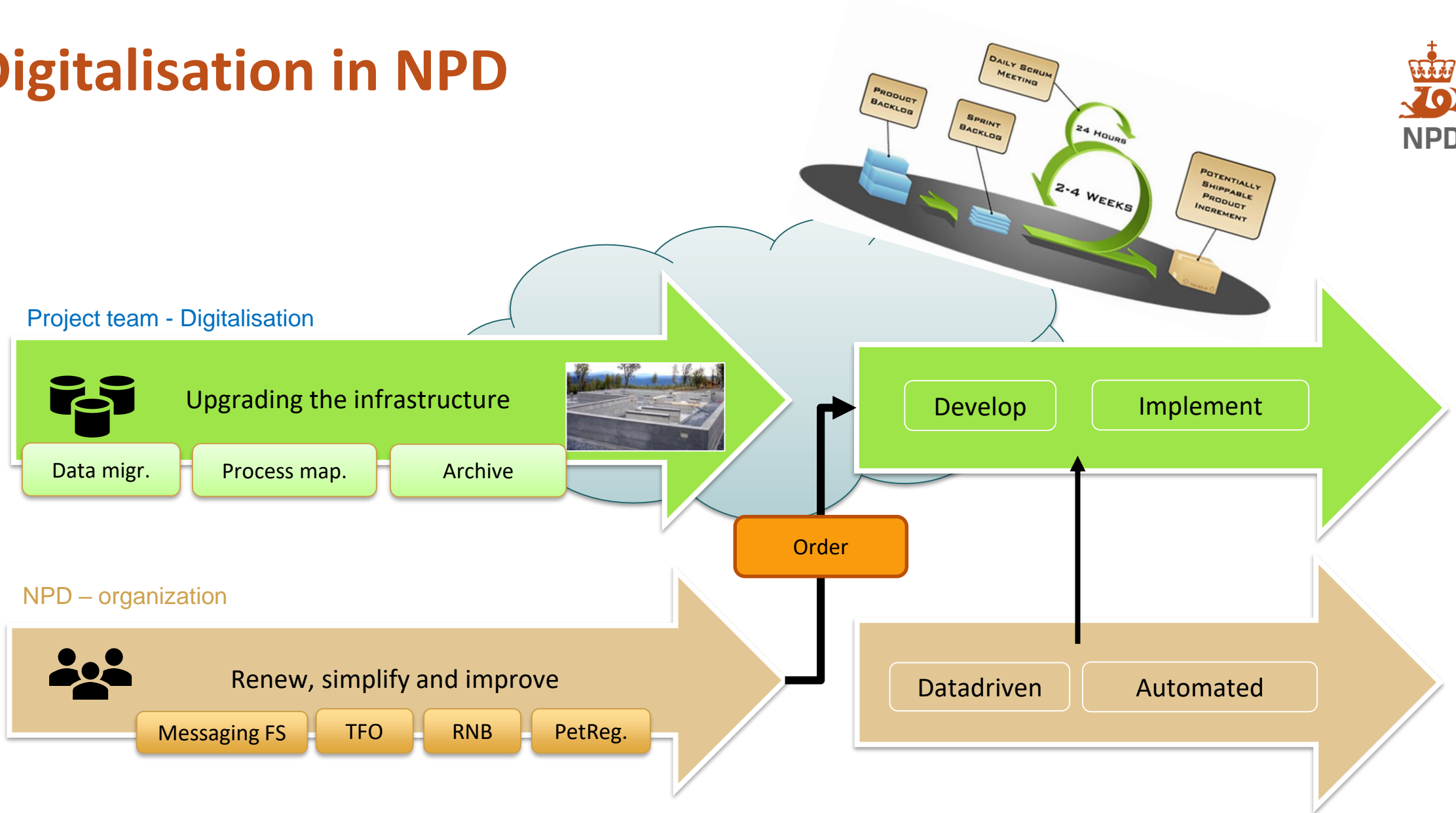
Initiatives

- Re architecting the basis
- Revision of existing assessment systems
- Reporting system for Fish and seismic
- Petroleum register
- BioStratigraphy. Establish electronic paly-slide archive
- Licencing rounds
- RNB reporting process (resource reporting)



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Digitalisation in NPD



We are re-architecting the basis

Our main goals are:

- secure
- geography
- minimal maintenance
- flexible → development and changes
- significant better than current solutions
- engaging, simple and intuitive → satisfied customers
- updated data available at any time
- pioneers of data management
- transparent
- scaleable
- effective



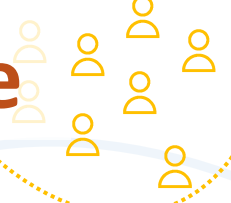
**Empowering wise heads
to create value**
NPDs digitalization vision

Files

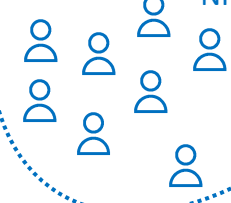
To be - architecture



O&G companies users

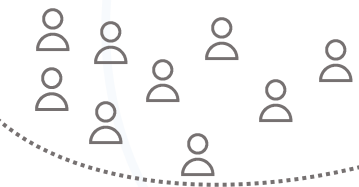


NPD users



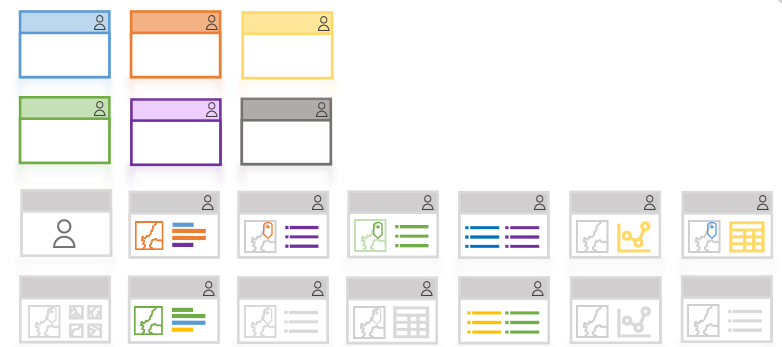
Other involved/ affected users

- OED, Fiskeridirktoratet, Miljødirektoratet
- Others involved in NPD processes



amazon

- ID – porten (authentication)
- Altinn (authorization)
- Altinn (messaging)
- Lovdata (regulations)

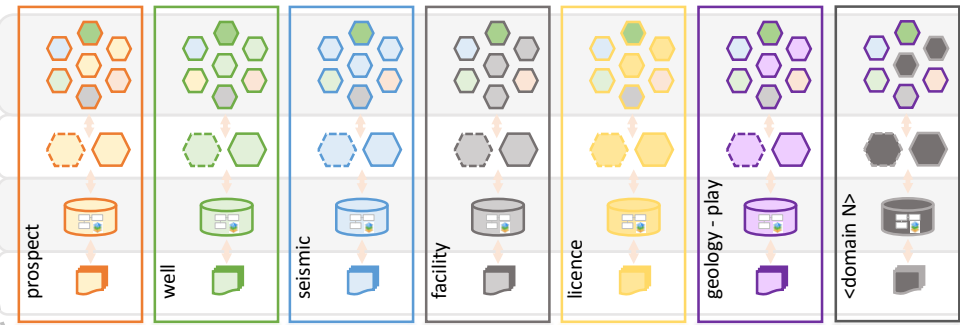


User interaction nodes/ pages/ clients

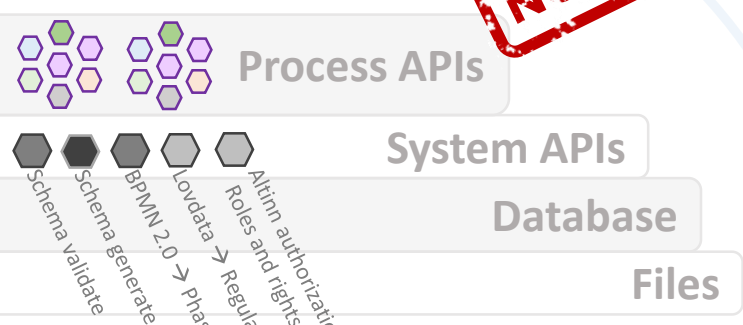
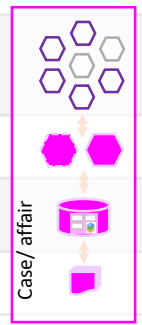
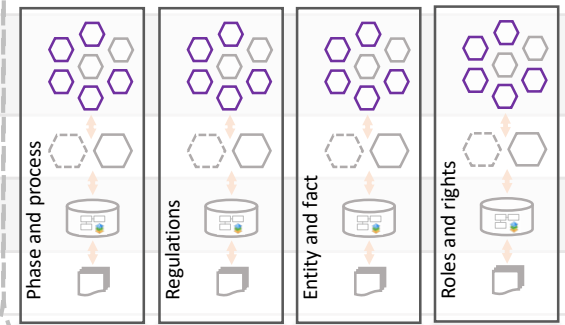


Management software

domain data



orchestration data



- Schema validate
- Schema generate
- BPMN 2.0 → Phase and process
- Lovdata → Regulations
- Roles and rights
- Altinn authorization →

It is a System of engagement



O&G companies users

NPD users

Other involved/ affected users

- OED, Fiskeridirektoratet, Miljødirektoratet
- Others involved in NPD processes

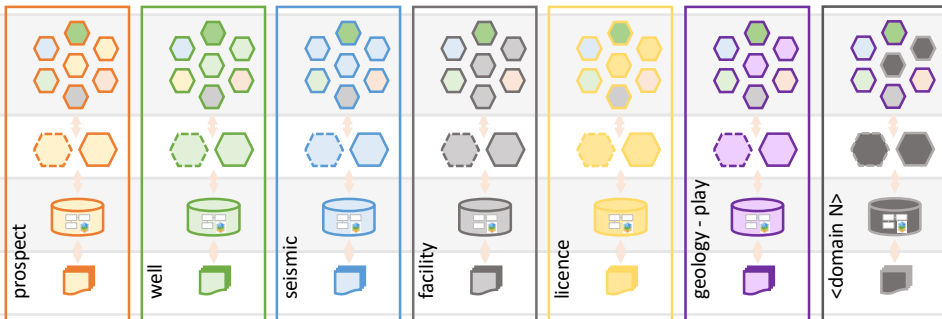


User interaction nodes/ pages/ clients

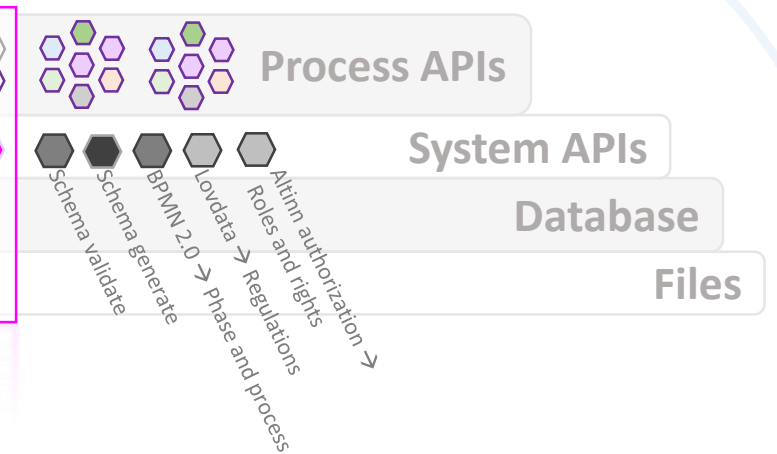
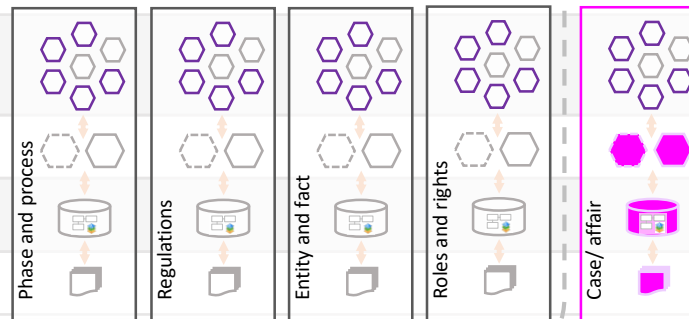


- ID – porten (authentication)
- Altinn (authorization)
- Altinn (messaging)
- Lovdata (regulations)

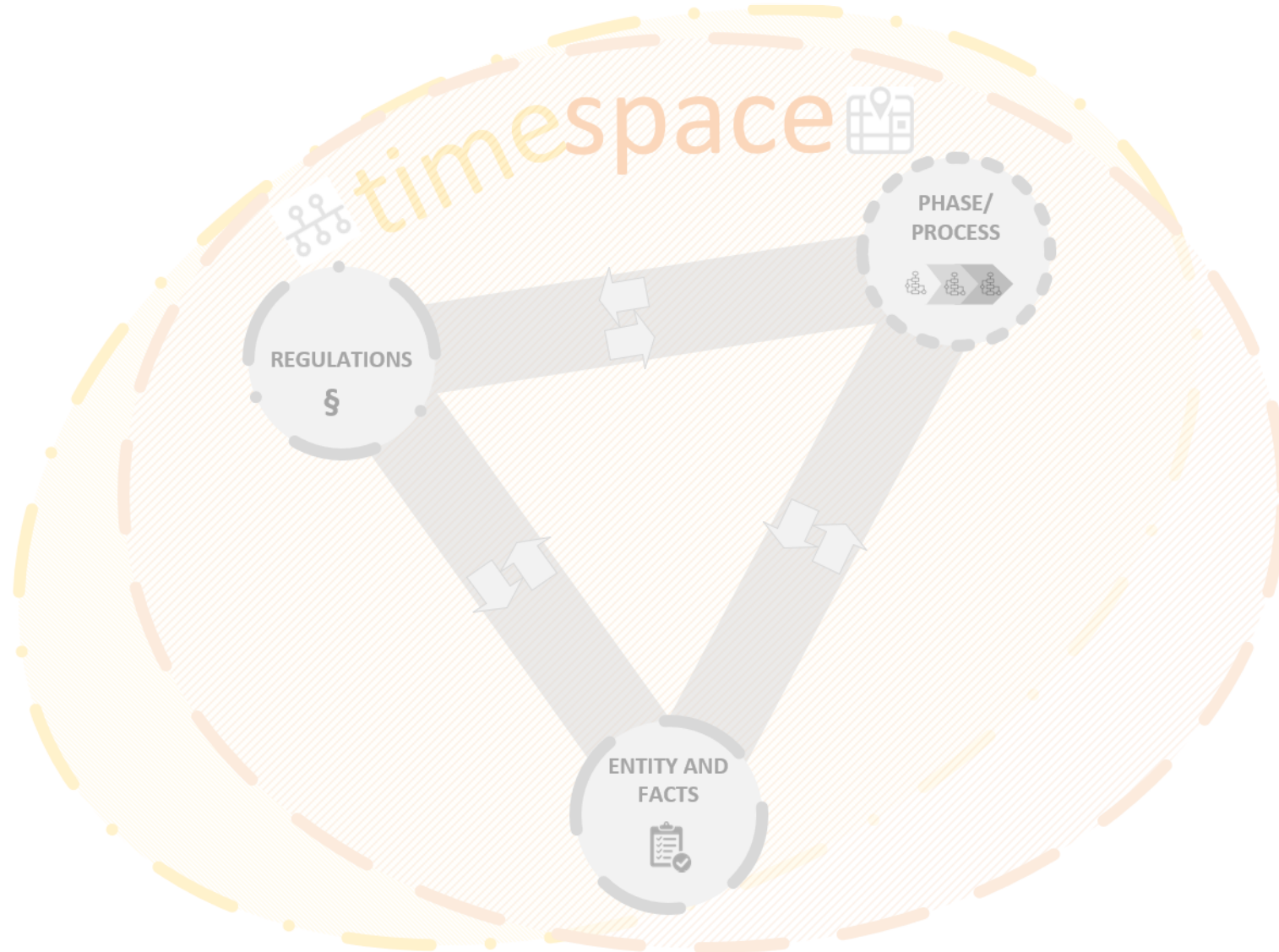
domain data



orchestration data



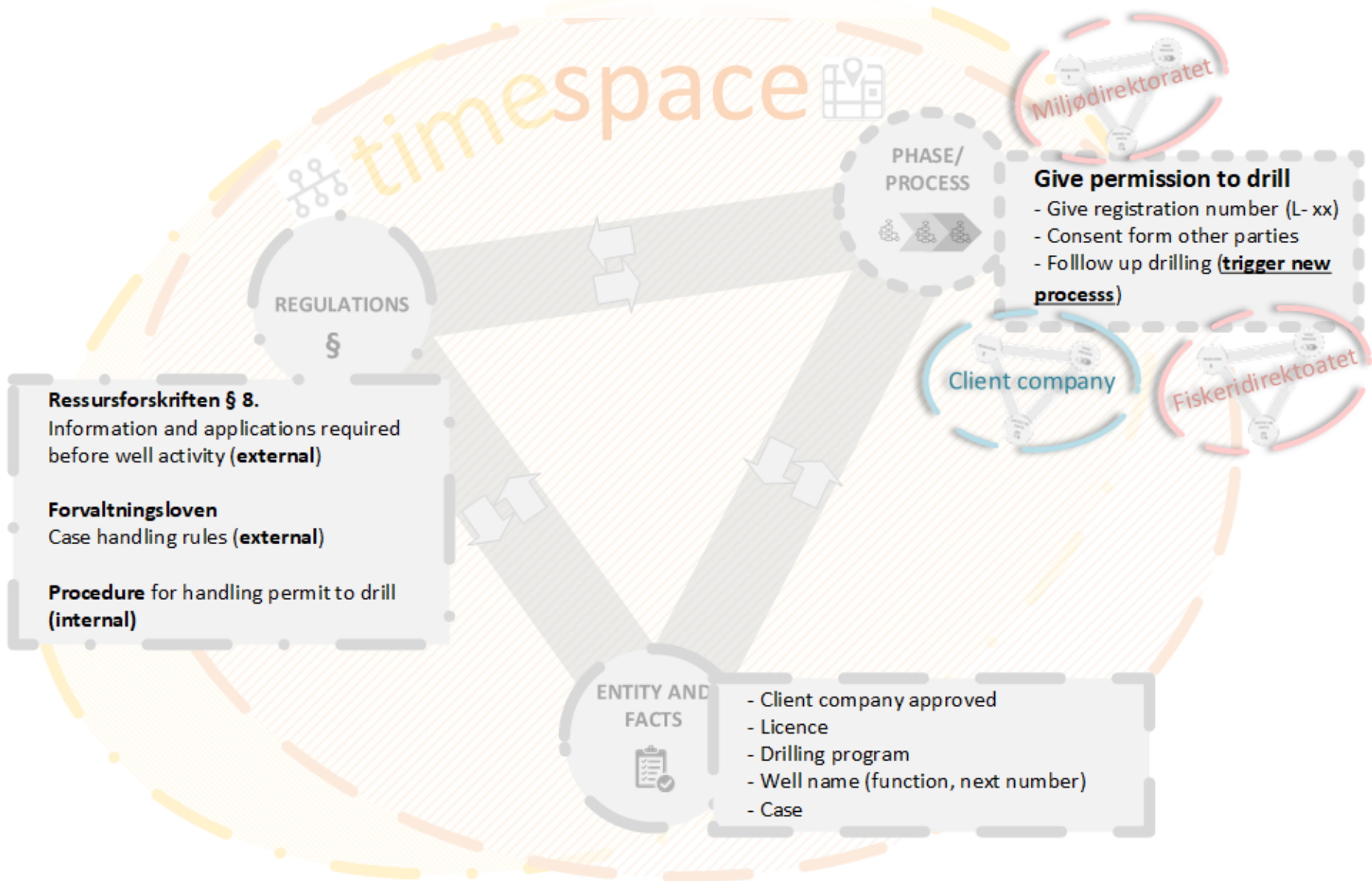
To be – information architecture



“SPACE AND TIME ARE THE FRAMEWORK WITHIN WHICH THE MIND IS CONSTRAINED TO CONSTRUCT ITS EXPERIENCE OF REALITY.”

- KANT

To be – information architecture



“SPACE AND TIME ARE THE FRAMEWORK WITHIN WHICH THE MIND IS CONSTRAINED TO CONSTRUCT ITS EXPERIENCE OF REAL

Orchestration data

O&G companies users

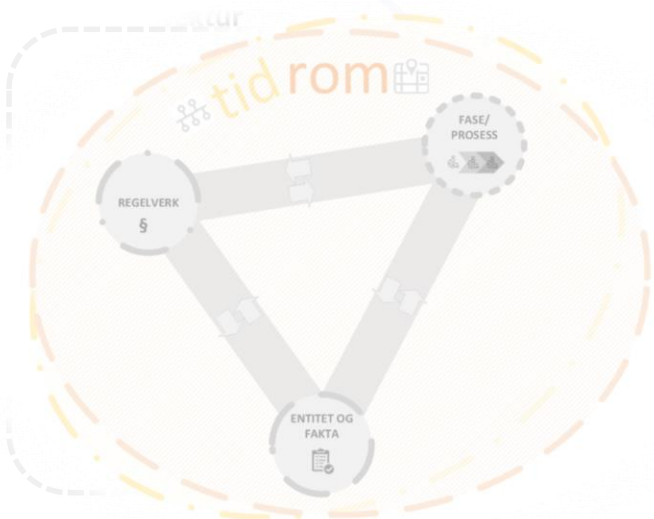
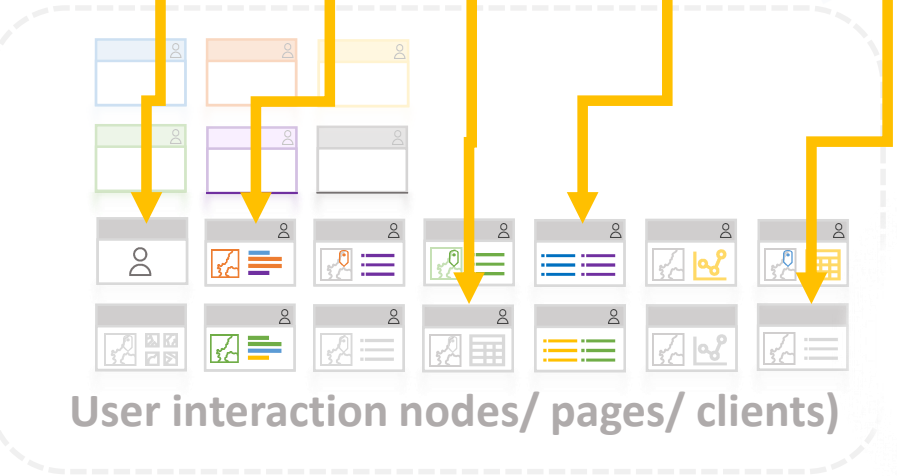
NPD users

Other involved/ affected users

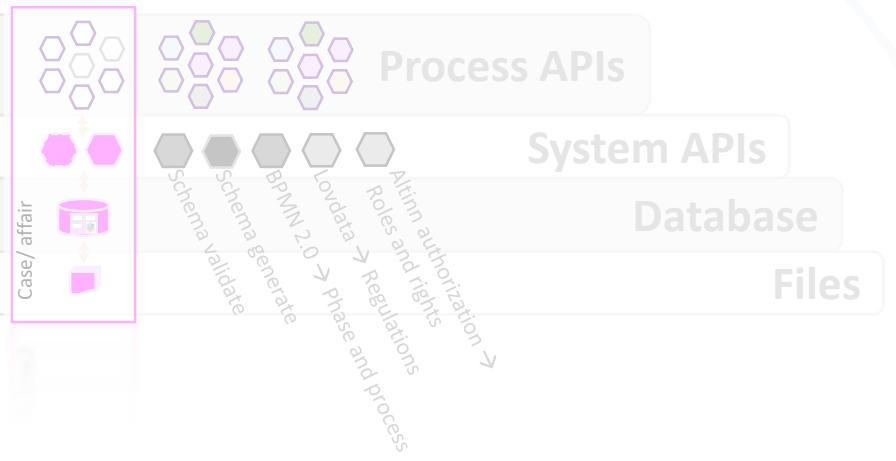
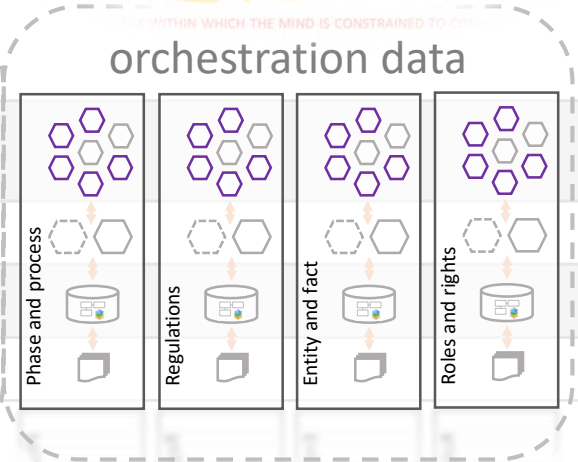
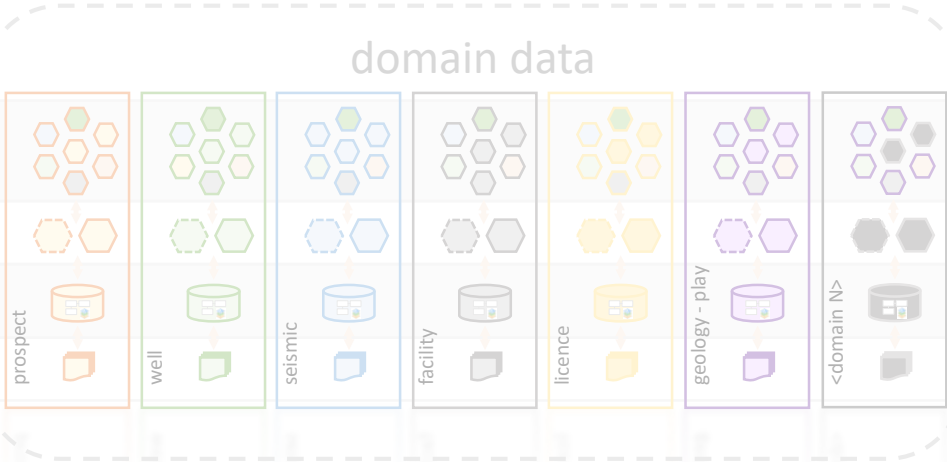
- OED, Fiskeridirektoratet, Miljødirektoratet
- Others involved in NPD processes



process – <n>



- ID – porten (authentication)
- Altinn (authorization)
- Altinn (messaging)
- Lovdata (regulations)



process – wellbore drill permit

O&G companies users

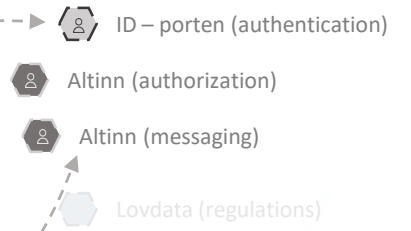
NPD users

Other involved/ affected users
- OED, Fiskeridirektoratet, Miljødirektoratet

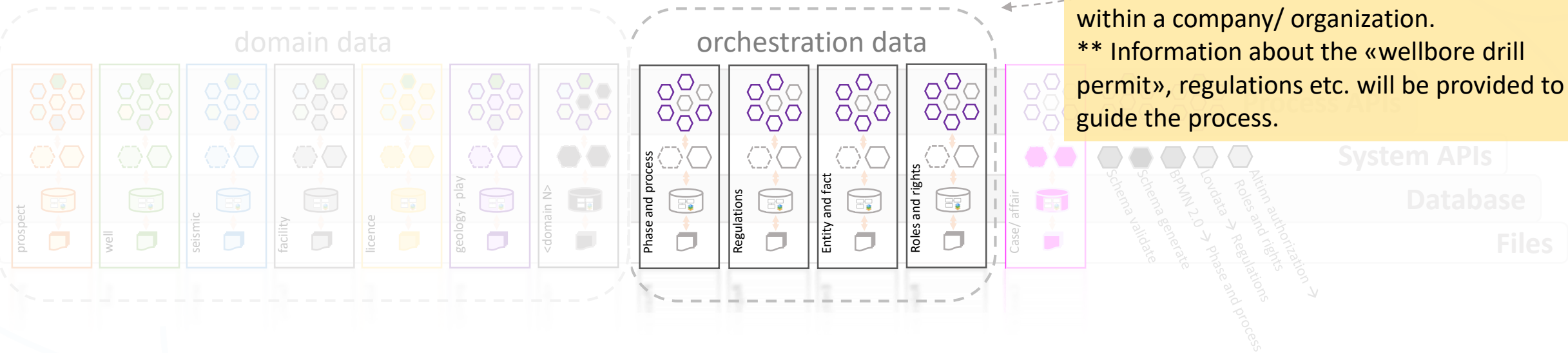


Step 1:

- Authenticate (Is the user who he claims to be?)
- Authorize* (Does the user have credentials to start a «wellbore drill permit» process?)
- Select «wellbore drill permit» from list of available processes (that you are permitted to take part in)**



*Altinn handles delegation of authorization within a company/ organization.
** Information about the «wellbore drill permit», regulations etc. will be provided to guide the process.



process – wellbore drill permit

O&G companies users

NPD users

Other involved/ affected users
- OED, Fiskeridirektoratet, Miljødirektoratet



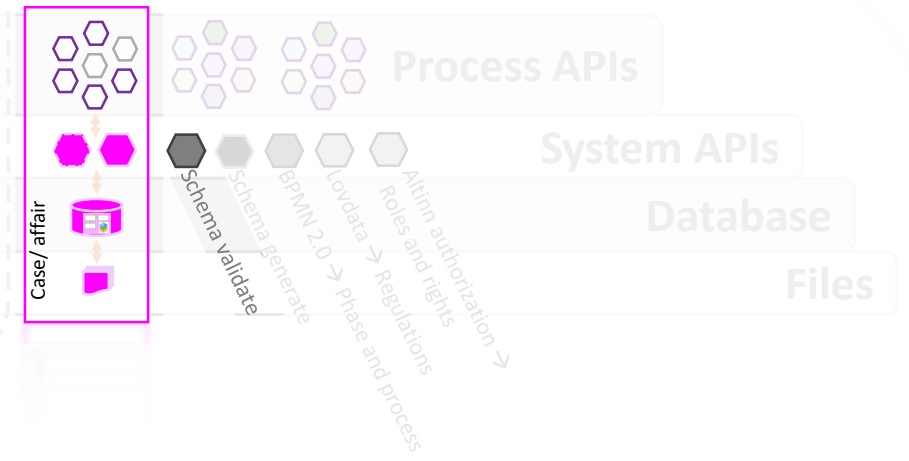
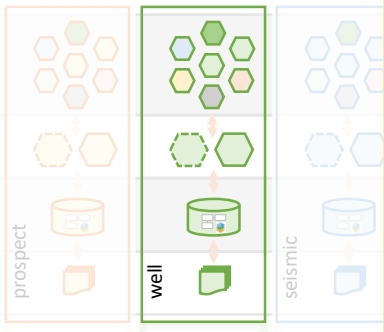
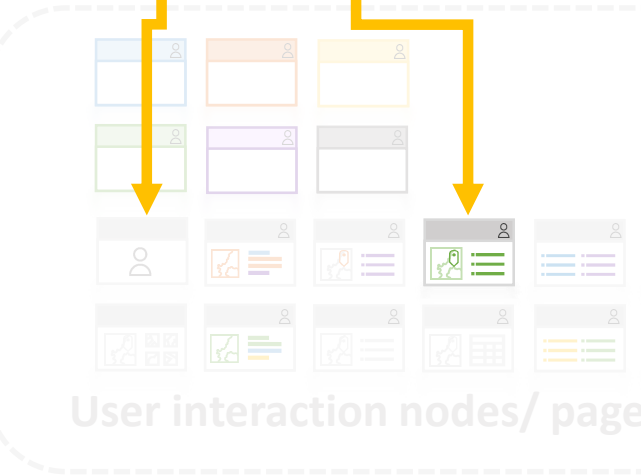
Step 2:

- Fill in the mandatory information needed
 - Select licence (from valid list)
 - Wellbore position (coordinates visualized and QCd in map)
 - Planned spud date
 - Planned completion date

- ID – porten (authentication)
- Altinn (authorization)
- Altinn (messaging)
- Lovdata (regulations)

When user submits the information:

- Submitted information validated
- Case registered
- Wellbore name provided
- Submitted domain data saved
- Affected parties informed and asked for approval
 - Oljedirektoratet (case owner)
 - Fiskeridirektoratet
 - Miljødirektoratet
- Well drill program checked



process – wellbore drill permit

Other involved/ affected users
- OED, Fiskeridirektoratet, Miljødirektoratet



Step 3 – Approval (Fiskeridierktoratet):

- View relevant information
- Register any oppositions
- Approve or reject

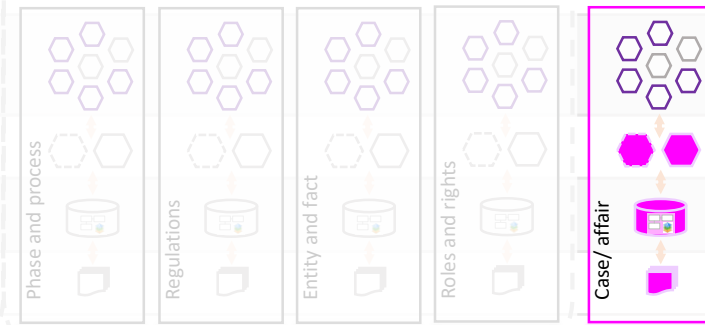
- ID – porten (authentication)
- Altinn (authorization)
- Altinn (messaging)
- Lovdata (regulations)

User interaction nodes/ pages/ clients

Management software

orchestration data

- When user submits the information:
 - Information validated
 - Provided oppositions saved to the case
 - Approved or rejected; saved to case.
 - Affected parties informed.



process – wellbore drill permit

Other involved/ affected users
- OED, Fiskeridirektoratet, Miljødirektoratet



Step 3 – Approval (Miljødirektoratet):

- View relevant information
- Register any oppositions
- Approve or reject

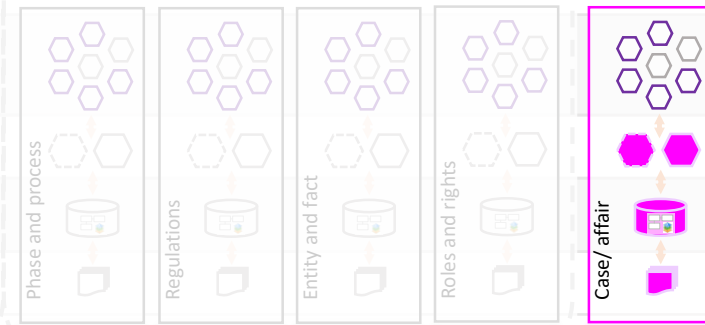
- ID – porten (authentication)
- Altinn (authorization)
- Altinn (messaging)
- Lovdata (regulations)

User interaction nodes/ pages/ clients

Management software

orchestration data

- When user submits the information:
 - Information validated
 - Provided oppositions saved to the case
 - Approved or rejected; saved to case.
 - Affected parties informed.



process – wellbore drill permit

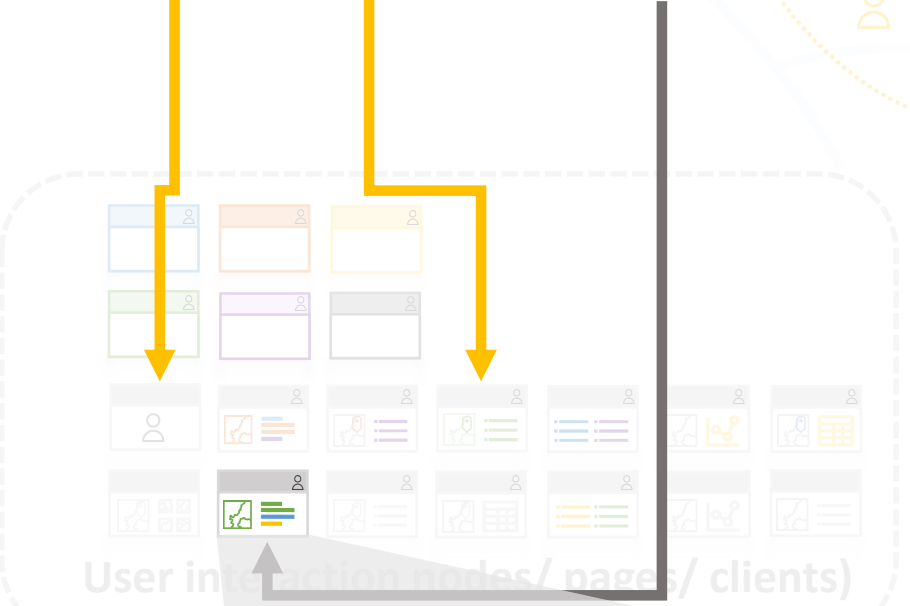


Step 3 – Approval (Oljedirektoratet):

- View relevant information
- Register any oppositions
- Approve or reject

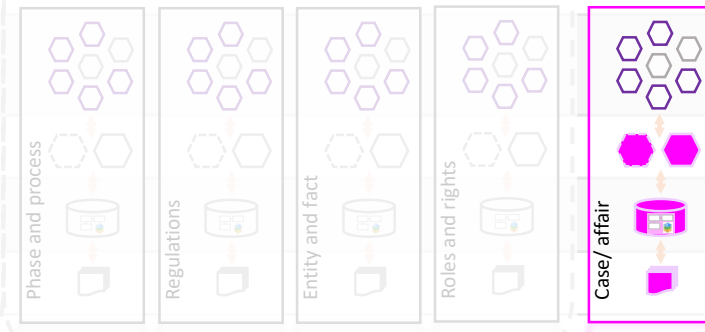
- ID – porten (authentication)
- Altinn (authorization)
- Altinn (messaging)
- Lovdata (regulations)

- When user submits the information:
 - Information validated
 - Provided oppositions saved to the case
 - Approved or rejected; saved to case.
 - Affected parties informed.
 - If approved → Initiate new “follow-up well” case.



Management software

orchestration data



O&G companies users

NPD users

Other involved/ affected users

- OED, Fiskeridirektoratet, Miljødirektoratet
- Others involved in NPD processes



**Target pictures:
Some examples of what it will look like...**



User interaction nodes/ pages/ clients

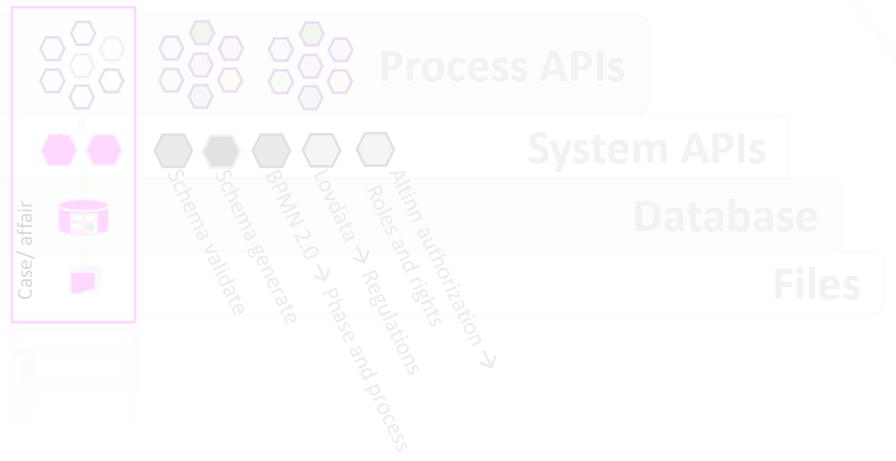
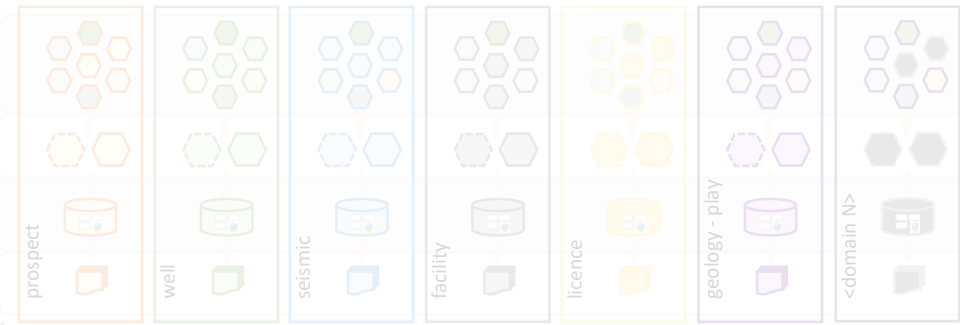


Management software



domain data

orchestration data





Exploration The 2018 Resource Report

The 2018 Resource Report for Exploration shows that large remaining resources on the Norwegian continental shelf continue to offer great opportunities on the Norwegian shelf, both in mature and less explored areas.



09.05.2018

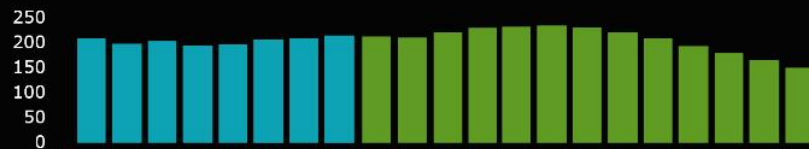
Awards in predefined areas 2018 announcement

The Ministry of Petroleum and Energy has 9 May 2018 announced the APA 2018, comprising the predefined areas with blocks in the North Sea, the Norwegian Sea and the Barents Sea.

[News archive](#)

Petroleum production

Mill. Sm³ o.e. per year



Historical 2010 and forecast to 2030

5

Five fields are under development. Estimated total production (according to PUD) xxx SM³ o.e.

User inte

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base

Files



PETROLEUM

Fields and discoveries

Production

Resources

Investments

Geologi

Environment

Seabed minerals

Storage of CO2

User int

prospect

well

entiation)

ons)

APIs

Database

Files

5



Homepage / FACTS / Petroleum / Fields and discoveries

82 producing fields on the shelf

SEARCH

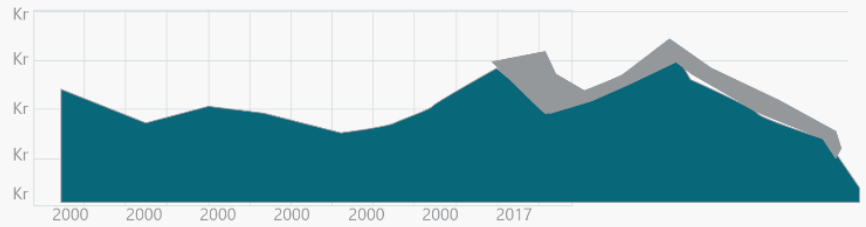
Search for information about fields, discovery, exploitation licenses (licenses), pipelines, wells and companies in our open data:

LAST UPDATED FIELD INFORMATION

- 28.09.2017 TROLL BRENT B
- 08.09.2017 GINA KROG
- 30.08.2017 JETTE

INVESTMENTS LAST 10 YEARS

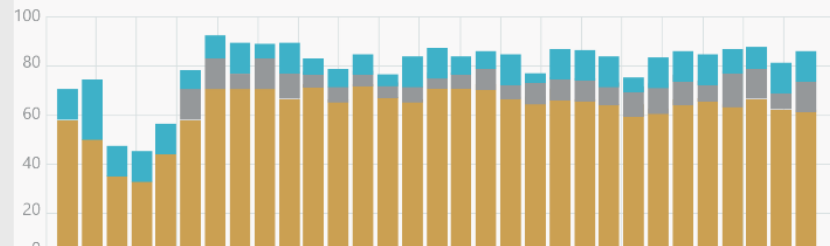
Historisk Planlagte



Download widget Download data

NUMBER OF PRODUCING FIELDS

Produserende Stengt Godkjent

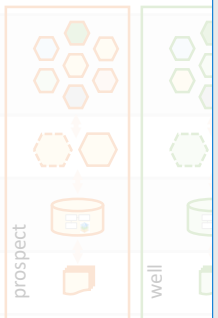


FIELDS ON THE SHELF

Produserende Stengt Godkjent



User in



(authentication)

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m APIs

Database

Files

Homepage / FACTS / Petroleum / Fields and discoveries / 007-Pluto



PL007

Pluto

Operator: [Sumba Oil](#)

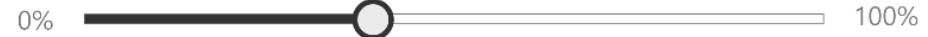
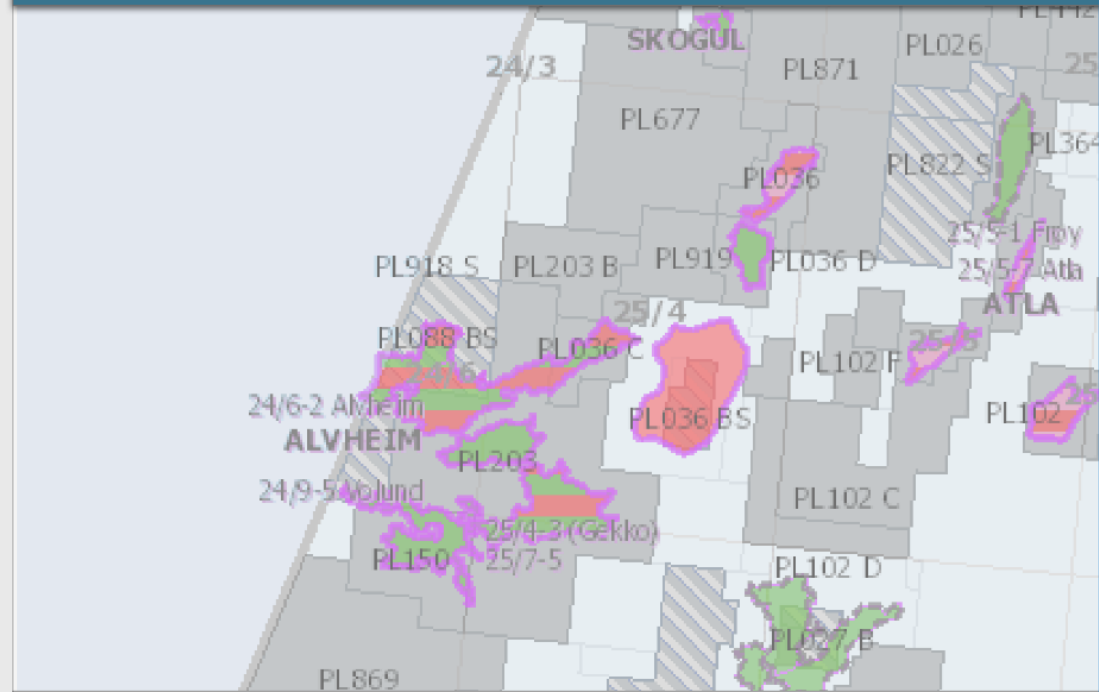
Current activity status: Producing

Discovery wellbore: 00/25/-1

Discovery year: 1995

Orig. recoverable oil eq. mill Sm3 o.e: 85.44

North sea



Timeline

Table view

Export data

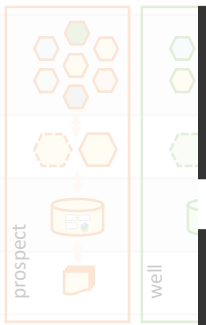
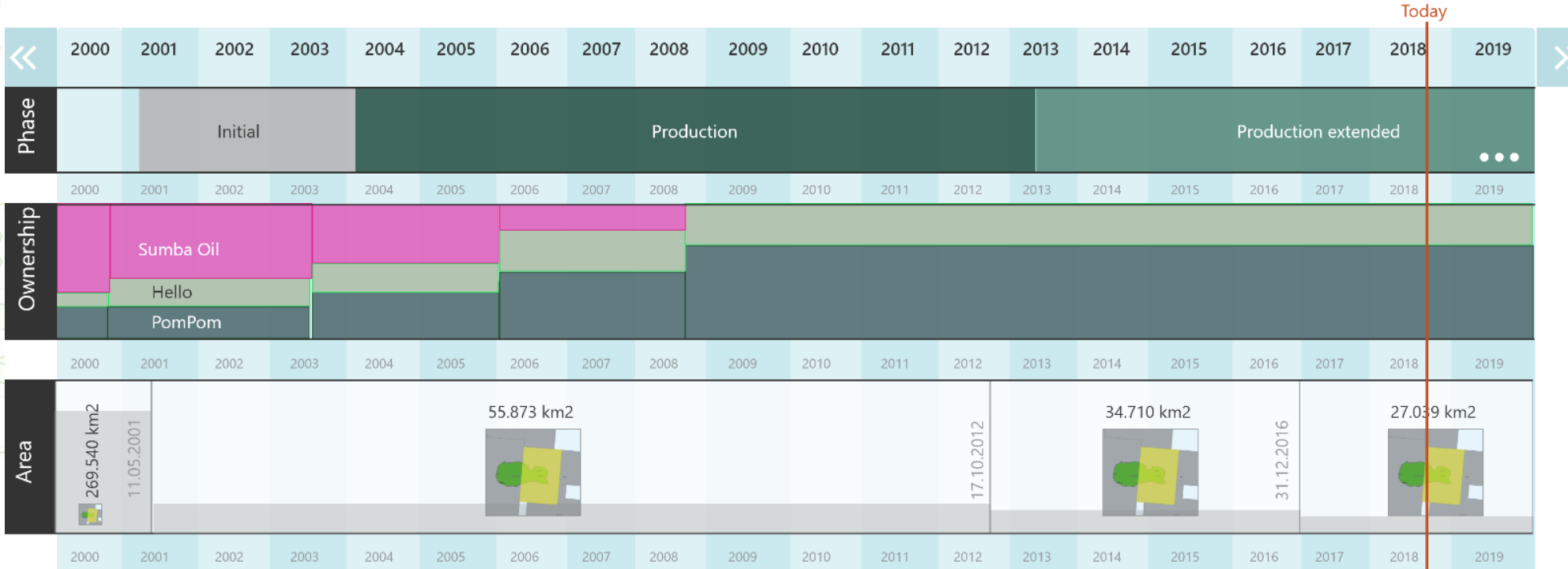
Timeline

Table view

 Export data



User interface



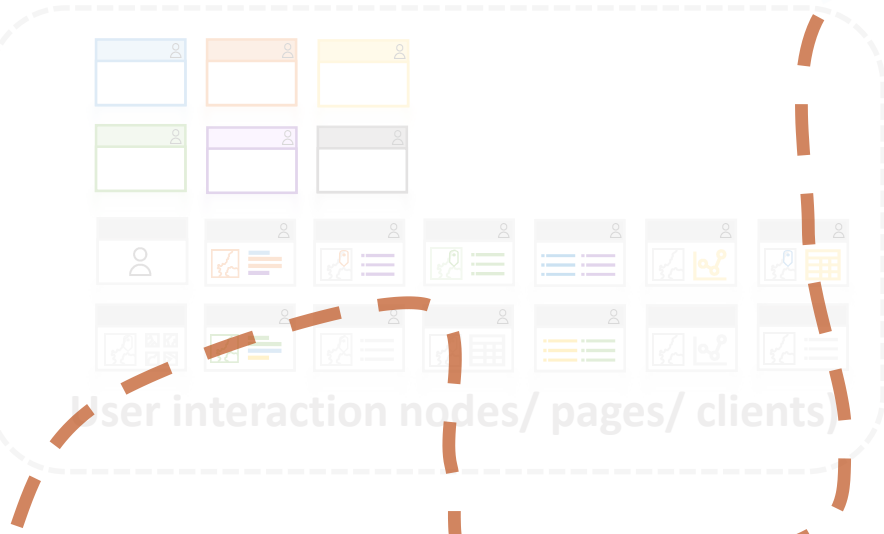
APIs
Database
Files

a long and winding road...

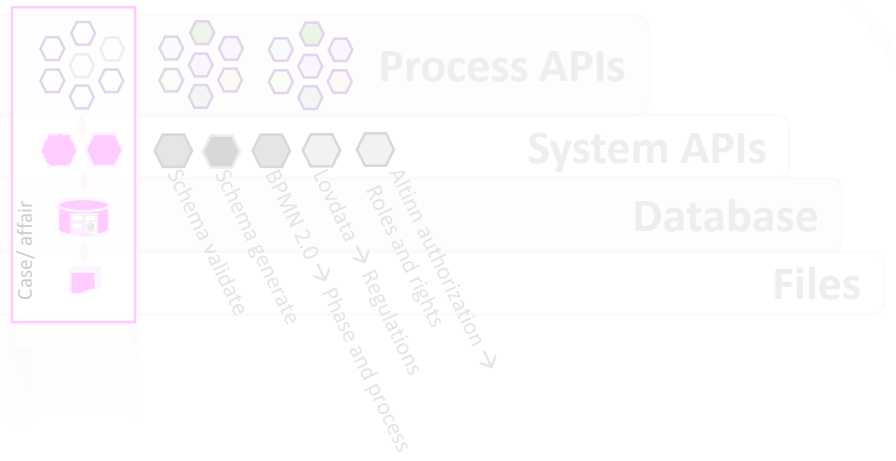
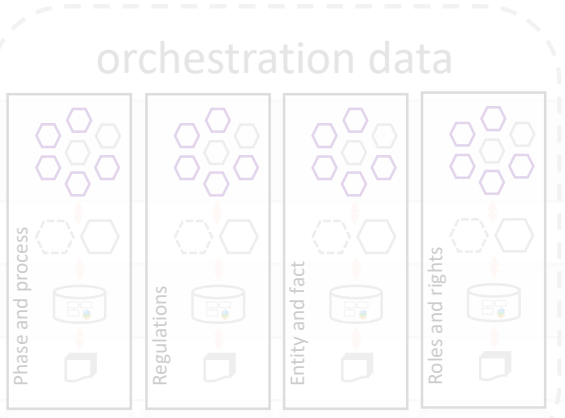
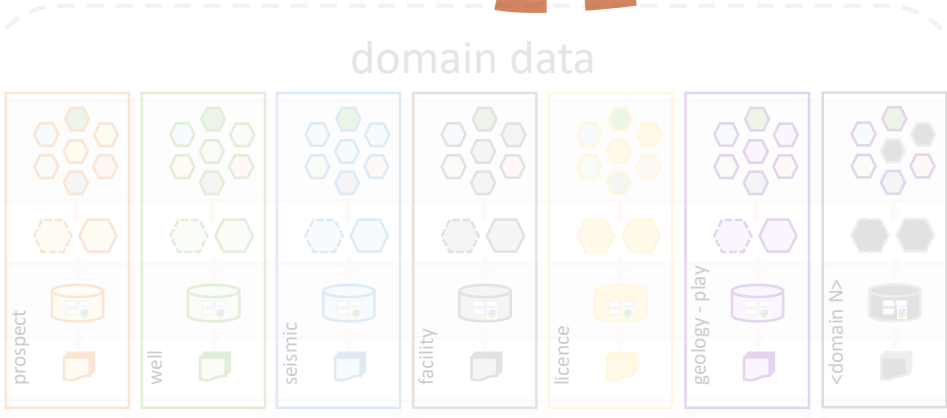
O&G companies users

NPD users

- Other involved/ affected users
- OED, Fiskeridirktoratet, Miljødirektoratet
 - Others involved in NPD processes



**Empowering wise heads
to create value**
NPDs digitalization vision



O&G companies users



NPD users



Other involved/ affected users

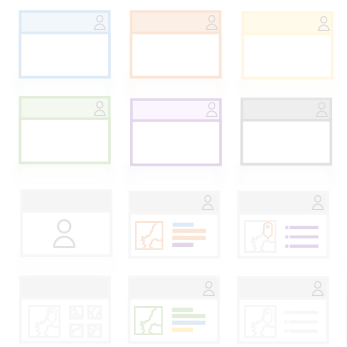
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- Others involved in NPD processes



Thank you!



Management software

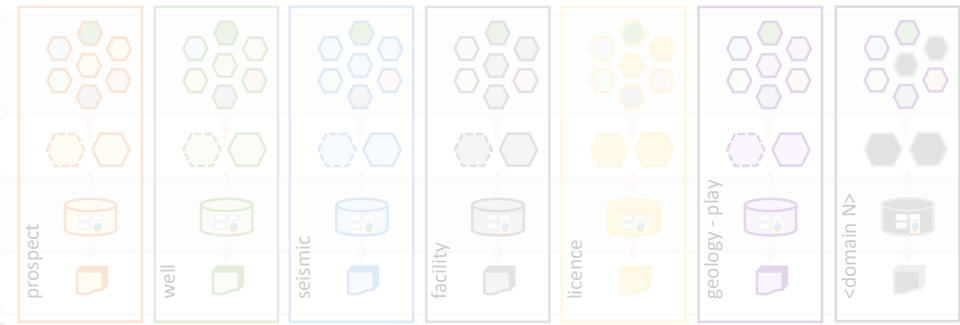


User interaction nodes/ pages/ clients)

**Empowering wise heads
to create value**

NPDs digitalization vision

domain data



orchestration data

