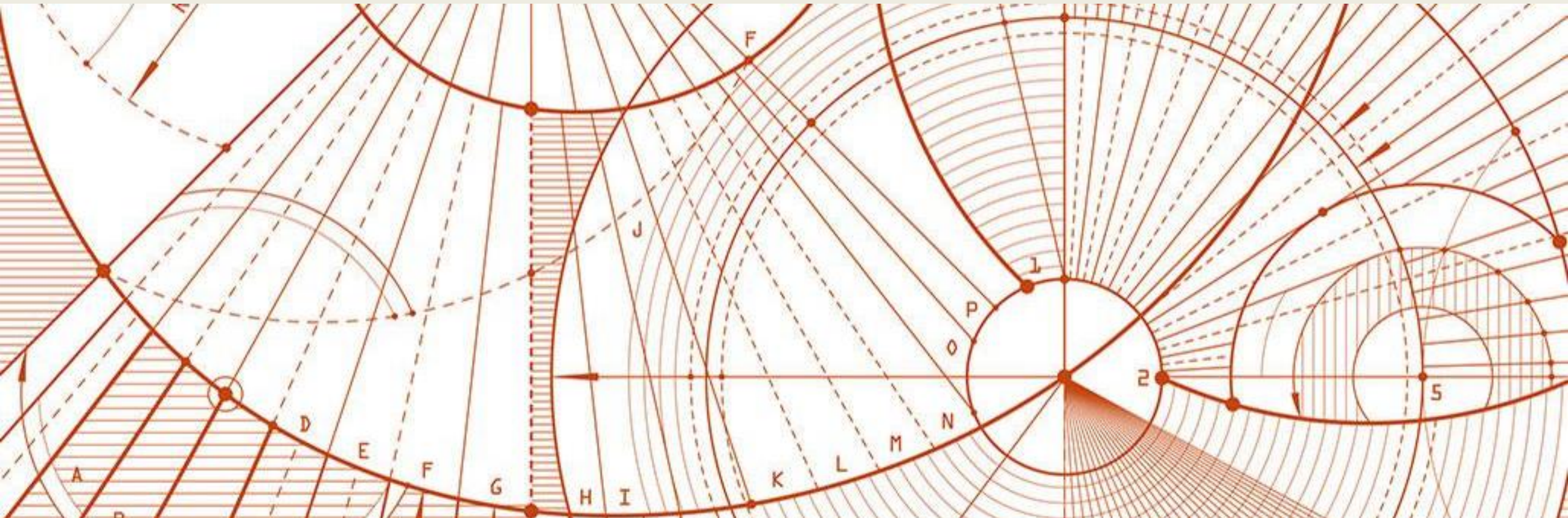


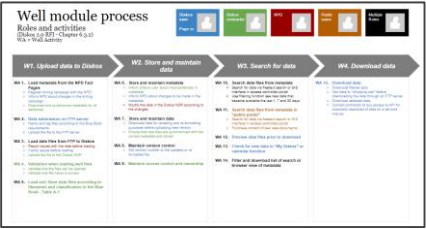
# Attachment 1 to Diskos 2.0 RFP

Personas and user journeys for the **current** Diskos solution  
(Seismic, Well and Production modules)

Request for Proposal (RFP) Diskos 2.0 // 30.12.19



# Personas and user journeys - introduction

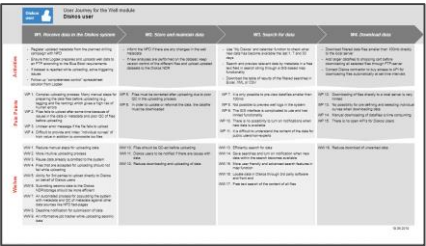


**Anne**  
Data Manager  
45 years old

**Description**

**Emotions & Pain Points**

**How I use Diskos**



## Roles and activities

This page provides a high-level overview of roles and activities from the module-specific AS-IS process descriptions in chapter 5 of this document. The user journeys will be user-specific and include the users' pain points with the current Diskos solution and wishes for Diskos 2.0. Some headings are marked with “multiple roles” where sub activities are conducted by specific users. The roles are colour coded.

The Diskos Member role includes roles such as Data Manager for both License Operators and License Partners.

## Persona

Personas are fictional characters representing the different user types that use Diskos for various reasons. For the purpose of this document, they are designed to be “super users” who conduct all activities within a given module. Normally these activities are spread across several roles within the Diskos Member's organization. Creating personas will help understanding the users' needs, experiences, behaviours and goals.

The persona examples in the different modules do not include the Contractor or the public users.

## User journey

The user journey gives an overview of one specific user's process steps for one specific module. It includes pain points and wishes. The purpose of the user journeys is to provide insight and knowledge to designers to better be able to identify improvement areas.

## Document structure

The information related to the process steps and Diskos modules comes from the process descriptions in chapter 5 of this document and numerous workshops with Diskos Members, the NPD and NOROG GT.

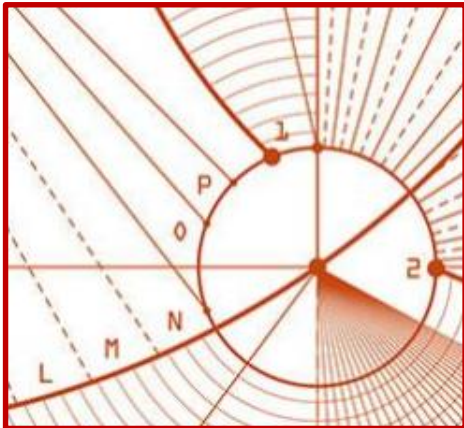
## References

As a basis for the user journeys, the main activities and roles are presented in a high level overview. The headings reflect the main process steps. The pain points and wishes will be reflected in the requirements and requirement descriptions in SSA-T Appendix 1A and 1B.

In “Roles and activities” the process steps are marked with SA (Seismic Activity) + an activity number (e.g. SA1). The pain points and wishes are referenced with SP (Seismic Pain Point) and SW (Seismic Wishes).

## Additional information

The user journeys for Diskos 2.0 (to-be) will be described by the Contractor (see requirement CR1 in SSA-T Appendix 1B).



# 1. Diskos Management





**Carl**  
**Norwegian Petroleum**  
**Directorate**  
**54 years old**

## Description

### Demographic data & location:

Carl, 54 years old, Stavanger

### Professional environment:

Worked for the NPD for 18 years. Has a deep understanding of the oil industry and has worked for various oil companies in the past.

### Role:

Diskos Manager

## Emotions & Pain Points

### Carl likes?

The holistic idea of Diskos being a contributor to the value created on the NCS, continuous improvements and efficient processes as well as new technology adding value to the Diskos.

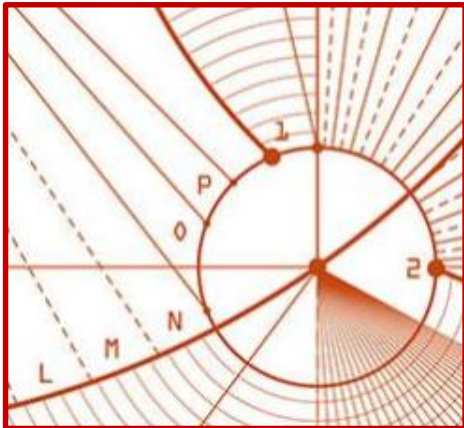
### Carl dislikes?

Inflexible and static system solutions, demanding effort and time to incorporate changes. Receiving issues from Diskos Members via email, instead of issues being reported via the system and directly to the Contractor.

## How Carl uses Diskos

Carl is not a direct end-user of Diskos. He is responsible for managing the Diskos environment of Diskos Members and Contractors. As Diskos Manager he is part of the Management Committee where Contractors and the Diskos management provide a status update on the operations for each respective quarter.

The Diskos Management administers the Diskos joint venture on behalf of the Diskos Members, as well as ensuring that MC/SG decisions and priorities are realized. Carl is the link between the Diskos Members and the Contractor.



## 2. Seismic module

# Seismic module process

## Roles and activities

SA = Seismic Activity

Diskos  
Member  
(Including  
NPD)



Contractor



NPD  
(Govern-  
ment role)



Public  
users



Multiple  
Roles



### S1. Upload data to Diskos

1. Add metadata to the DMDF to ensure that data is placed and tagged correctly
1. Upload data to media or an FTP server
2. Verify navigation data and file headers prior to loading seismic files
  - Automatic QC of file format, headers and navigation data
  - Manual QC of seismic data headers and traces
3. Upload data to Diskos from media/FTP and link to metadata from DMDF
4. Establish and manage access control and ownership through communication with data owner (in accordance with DMDF)
5. Georeference files
6. Conduct optional completeness control

### S2. Store and maintain data

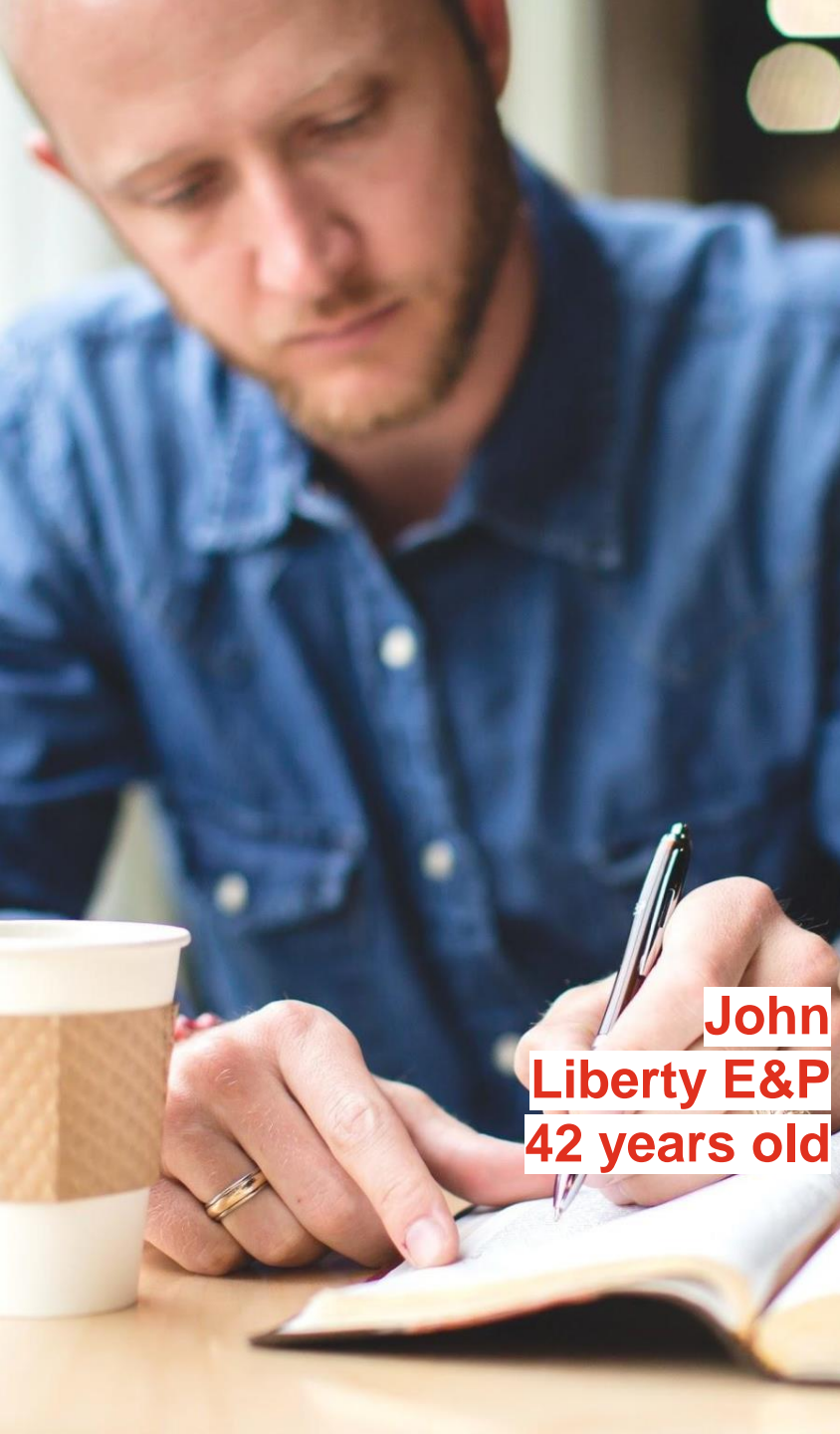
8. Store and maintain metadata
9. Store and maintain data
10. Maintain and manage changes in access control and ownership
  - Submit shapefile for releasing datasets
  - Receive shapefile from NPD and clip data
  - Receive shapefile from NOROG GT and clip data to set trade entitlements

### S3. Search for data

11. Search data files from metadata in an access controlled portal
  - Search for data via free text search or GIS interface in access controlled portal
  - Upload a shapefile with a polygon to select a designated area in the GIS interface
12. Search data files from metadata in “public portal”
  - Search for data via free text search or GIS interface in access controlled portal
  - Purchase access to seismic data documents
13. Preview data prior to download
14. Check for new data in “My Diskos” or calendar function
  - Use filters to see which data has become publicly available

### S4. Download data

15. Add data to “shopping cart” before downloading
15. Clip datasets based on individual seismic traces/dataset sections
  - Upload shapefile with a polygon to clip dataset
  - Delimit dataset vertically if necessary
  - Decimate data horizontally if necessary
15. If navigation data is lacking in the header - add navigation data before downloading to FTP
16. Download data to an FTP server or instruct the Contractor to download to a physical media (USB, tape etc.)
17. Download data from an FTP or receive physical media



**John**  
**Liberty E&P**  
**42 years old**

## Description

### Demographic Data & location:

John, 42 years old, Stavanger

### Professional environment:

Worked as a data analyst and data manager for 17 years.

### Role:

Company Data Manager, responsible for reporting Seismic data to the Diskos NDR and downloading data from Diskos for internal use in Liberty E&P.

## Emotions & Pain Points

### John likes?

Automated processes and routines for uploading and QC of data, previewing files before downloading, interactive GIS functionality, user-friendly search functionality.

### John dislikes?

Non user-friendly front ends, manual submission of metadata, waiting for data to download, having to manually name files and folders individually when uploading datasets, only being able to preview the beginning of pre-stack files, having to download files to see if they contain new data.

## How John uses Diskos

John is responsible for overseeing the reporting of seismic data to the authorities for licenses operated by Liberty E&P. He receives seismic datasets from contractors of Liberty E&P-owned seismic datasets and spends a lot of time preparing the data for reporting.

John's main tasks related to Diskos include:

### Uploading seismic data to Diskos

John fills the DMDF form with metadata and ensures that data is placed and tagged correctly. He uses the optional completeness control function to ensure that all relevant data is submitted.

### Searching for data

John searches for data in Diskos through an access-controlled portal. He can check if there are new data available through "My Diskos", but he must download the files to see if they actually contain new data. Sometimes John struggles to be able to display complex selection of data in the map view. The advanced search functionality is only marginally more effective than the normal search functionality. To check who has access to his data, John must add the data to his shopping cart.

### Download data

After discovering data of interest, John adds the datasets to the shopping cart before downloading the files. He does this to process and interpret data in suitable applications. He is not able to work with files without downloading them first.



	S1. Upload data to Diskos	S2. Store and maintain data	S3. Search for data	S4. Download data
Activities	<ul style="list-style-type: none"><li>1. Add metadata to the DMDF according to the “Yellow Book” to ensure the data is placed and tagged correctly</li><li>2. Submit the DMDF form with information about the data to be uploaded and access rights</li><li>3. Upload data to media (e.g. tape cartridges or USB disks) or FTP. Larger files (field/pre-stack) are not uploaded via an FTP</li><li>4. Conduct optional completeness control. Diskos members can cross check that data uploaded to the Diskos Seismic Module is complete according to the “Yellow Book”</li></ul>		<ul style="list-style-type: none"><li>11. Search data files from metadata, free text search or GIS interface in an access controlled portal</li><li>12. Upload a shapefile with a polygon to select a designated area in the GIS interface</li><li>13. Preview data files of up to 100 MB prior to download</li><li>14. Check for new data in “My Diskos” (download datasets to check access rights)</li><li>14. Use filters to see which data have become publicly available the last 1, 7 and 30 days</li><li>15. Use calendar function to see when data will be publicly available</li></ul>	<ul style="list-style-type: none"><li>15. Add data to “shopping cart” before downloading</li><li>16. Clip datasets based on individual seismic traces / dataset sections</li><li>16. Upload Shapefile with a polygon to clip dataset</li><li>17. Delimit dataset vertically if necessary</li><li>18. Decimate data horizontally if necessary</li><li>18. Download data to an FTP server or download to physical media (USB, tape etc.)</li><li>19. Download data from FTP or receive through physical media</li></ul>
Pain Points	<ul style="list-style-type: none"><li>1. Manual and non-intuitive way to submit data, causing non-compliance with “Yellow book” requirements</li><li>2. Front end for submitting metadata and setting entitlements is not good enough</li><li>3. It can take up to a week before the system registers the trace outline of the data</li><li>4. Completeness control not working as envisaged</li></ul>		<ul style="list-style-type: none"><li>5. No notifications when new data is available</li><li>6. No visible file headers for some file types before downloading</li><li>7. Search functionality is limited to metadata</li><li>8. When searching for data - the user must open the dataset to check if they have access rights</li><li>9. Preview of files before downloading limited to &lt;100 MB</li><li>10. Unable to save/modify previous searches</li></ul>	<ul style="list-style-type: none"><li>11. Downloading data takes too much time and can choke the Diskos data infrastructure</li><li>12. Challenging to download large volumes of pre-stack data</li></ul>
Wishes	<ul style="list-style-type: none"><li>1. An automated process for populating the system with metadata and QC of metadata against other data sources (e.g. NPD FactPages)</li><li>2. Enhanced, automated QC of data prior to upload</li><li>3. Improved job tracker</li><li>4. Deadline notification for submission of data</li><li>5. Third-party reporters to have access to completeness control</li></ul>		<ul style="list-style-type: none"><li>6. Flexible search through front end/APIs through own software</li><li>7. A user-friendly map functionality with interaction between map and table view</li><li>8. Sort and select datasets in map view according to access rights</li><li>9. Possibility to check if a user has access to new data without downloading the datasets</li><li>10. Enable preview of all relevant file formats</li></ul>	<ul style="list-style-type: none"><li>11. Download data online to a local server</li><li>12. Work with the data “closer to where the data is located”</li></ul>





**Jan**  
**NPD**  
**38 years old**

## Description

### Demographic Data & location:

Jan, 38 years old, Stavanger

### Professional environment:

Worked for the NPD for 8 years

### Role:

Seismic Data Manager

Responsible for advising the Contractor on confidentiality periods

## Emotions & Pain Points

### Jan likes?

Value-adding tasks related to using the seismic data to fulfil the NPD's and the Diskos User's objectives.

### Jan dislikes?

Spending time on tasks with automation potential.  
Preparing shapefiles while this could be done by the Contractor.

## How Jan uses Diskos

Jan uses the Diskos Seismic Module to conduct similar tasks as other Diskos users. He also does seismic acquisition and make use of data stored in Diskos.

As a NPD representative he has the responsibility to advise the Contractor when datasets from seismic surveys (or parts of it) is to be set public. He also notifies the Contractor if seismic data contains errors or has to be updated.

NPD  
(Government role)



User Journey for the Seismic module

NPD

SA = Seismic Activity  
SP = Seismic Pain point  
SW = Seismic Wishes



Activities

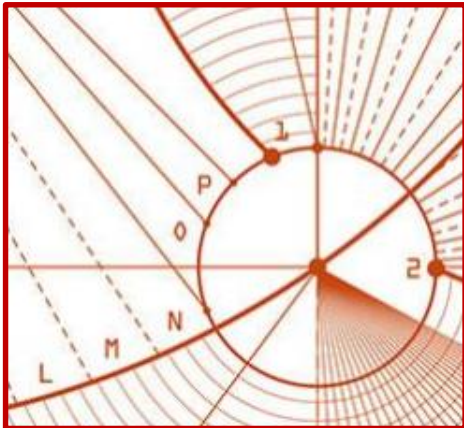
	<div>8. Instruct the Contractor to set datasets to public. Change from restricted to open access.</div> <div>9. Submit shapefile for publishing datasets. Create polygon based on information from metadata on production license area changes</div>		
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Pain Points

	<div>12.Extensive workload for the NPD to create shapefiles. Time consuming and manual task</div>		
--	---	--	--

Wishes

	<div>13.Based on changes in license areas the Contractor already has sufficient information to generate clip polygon for dataset due for clipping based on expiring of confidentiality period. Which datasets to be set public, must be approved by the NPD.</div>		
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### 3. Well module

# Well module process

## Roles and activities

WA = Well Activity

Diskos  
Member



Contractor



NPD



Public  
users



Multiple  
Roles



### W1. Upload data to Diskos

- 1. Load metadata from the NPD FactPages**
  - Register well with the NPD
  - Inform the NPD about any changes in the well reference data
  - Download and synchronize metadata for all wellbores
- 2. Data submission on FTP-server**
  - Upload data to FTP (typically reported by third party on behalf of Diskos member)
  - Give entitlement instructions to the Contractor
- 3. Load data files from FTP to Diskos**
  - Resolve any issues with the data before loading
  - Upload the file to Diskos NDR
  - Add information about technical side-tracks
- 4. Validation when loading well files**
  - Validate that the files can be opened and that the file name is correct
- 5. Load and store data files according to filenames and classification in the Blue Book - Table A-1**
- 6. Conduct optional completeness control**

### W2. Store and maintain data

- 7. Store and maintain metadata**
  - Inform the NPD about mistakes or changes to be made in the metadata
  - Inform the Contractor about inconsistencies in the metadata
  - Modify the metadata not handled by the NPD in the Diskos NDR according to the changes
  - Synchronize metadata for all wellbores with the NPD Fact Pages (daily)
- 8. Store and maintain data**
  - Store and maintain files in the uploaded format
  - Download data for updating and re-formatting purposes before uploading new version (including information file)
- 9. Maintain version control**
  - Set version number to the updated file
  - Mark old versions as old by checking that file size corresponds to new file
- 10. Maintain access control and ownership**
  - Maintain access control and ownership of well data
  - If necessary, set well data to public in case of e.g. licence relinquishment

### W3. Search for data

- 11. Search data files from metadata**
  - Search for data via free text search or GIS interface in access controlled portal
- 12. Search data files from metadata in “public portal”**
  - Search for data via free text search or GIS interface in access controlled portal
  - Purchase content of well data documents
- 13. Preview data files prior to download**
- 14. Check for new data in “My Diskos” or the calendar function**
- 15. Filter and download list of search or browser view of metadata**

### W5. Download data

- 16. Download data**
  - Add data to “shopping cart”
  - Download selected data through an FTP server (files smaller than 100 MB can be downloaded directly to a local server)
  - Contact the Contractor to buy access to API for automatic download of data on a set time interval





**Kjell**  
**RockGold E&P**  
**35 years old**

## Description

### Demographic data & location:

Kjell, 35 years old, Oslo

### Professional environment:

Worked in the Oil and Gas industry for 10 years

### Role:

Data manager. Kjell is responsible for reporting well data for RockGold E&P.

## Emotions & Pain Points

### Kjell likes?

Efficient and automated work processes, any solutions that makes Kjell's job easier and helps to secure integrity of the well data, flexible search functionalities, simple solutions to complex problems, fit-for-purpose APIs.

### Kjell dislikes?

Manual and repetitive task, not being able to preview and directly download files larger than 100 MB.

## How Kjell uses Diskos

When RockGold E&P is the operator, Kjell is responsible for reporting well data to Diskos on behalf of the company. Kjell also uses Diskos to search for data of interest that has become available for RockGold E&P due to trading or data becoming publicly available. Kjell may download this data from Diskos or through the Diskos API for use in local software/processing tools.

Kjell's main tasks related to Diskos include:

### Upload well data:

Kjell reports well data for RockGold E&P as described in the "Blue book". Typically, a third-party company is subcontracted to handle and report the data to the Diskos NDR on behalf of RockGold E&P. Kjell is responsible for following up that the subcontractors fulfils the NPD reporting requirements. This is done through the subcontractor's own completeness control spreadsheet solution.

### Download well data:

Kjell searches Diskos for new well data available to RockGold E&P to discover new data of interest in Diskos. He typically searches for data related to specific wells. Kjell may download new data locally for use in e.g. RockGold E&P's processing tools.

**W1. Upload data to Diskos****W2. Store and maintain data****W3. Search for data****W5. Download data****Activities**

1. Register metadata from the planned well with NPD
2. Inform NPD about any changes in the well reference data
3. Name and tag files according to the Blue Book requirements
2. Upload well data to FTP server

7. Inform the NPD about changes to be made in the metadata
8. Inform the Contractor about inconsistencies in the metadata
9. Download data for updating and re-formatting purposes before uploading new version
10. Set version number to the updated file

11. Search and preview relevant data by metadata in a free text field in searches through a GIS-based map functionality
13. Preview data files prior to download
14. Check for new data in "My Diskos" or calendar function
15. Filter and download list of search or browser view of metadata

16. Download filtered data files smaller than 100 MB directly to the local server
17. Add larger datafiles to shopping cart before downloading all selected files through FTP server
18. Contact the Contractor to buy access to API for downloading files automatically at set time intervals

**Pain Points**

1. Complex uploading process: Many manual steps for preparing the data files before uploading (e.g. tagging and file naming) which increases the risk of human errors
2. Difficult to provide and index individual curves in addition to composite log files
3. Poor QC of files before uploading to FTP server results in manual interaction to do simple QC steps

4. In order to update or reformat the data into various interpretation ready formats, the data must first be downloaded

5. Preview of files before downloading limited to <100 MB
6. The GIS interface is complicated to use and has limited functionality
7. There are no notifications when new data is made available
8. It is difficult to understand the content of the data for public users/non-experts

9. Unable to download of files larger than 100 MB directly to local server
10. Manual download of data files is time consuming
11. The Diskos API has limited functionality

**Wishes**

1. Reporting process to be more automated and intuitive
2. Third parties to upload data directly to Diskos on behalf of Diskos members
3. Metadata, which is embedded in data files, should be automatically validated and synchronized with the NPD FactPages. If a conflict between the two systems is detected, Diskos should notify the License Operator which suggest a solution
4. Technical side-track data to be linked as a part of the wellbore data
5. Diskos 2.0 should enable users to view, select and download multiple data types (e.g. core data, geochemical, check-shot, image, log data).
6. Automated naming of files and folders based on Dataset ID and NPD-ID
7. Reduce the manual interaction by expanding and improving the QC process before uploading

8. Files should be automatically QCed before uploading
9. Diskos members should be notified directly if there are issues with data

10. Flexible search through front end/APIs
11. Save searches
12. Map view of company's data
13. Locate data in Diskos through third-party software and front end
14. Free text search (with spell check and suggestions) of the file contents
15. Use GIS functionality to draw outlines on the map or use a predefined polygon to find data
16. Enable preview of all relevant file formats and sizes
17. Enable checking the access to new data without downloading the dataset

18. Flexibility when downloading data - e.g. ability to download single log curves and parts of files
19. Not having to download data to FTP



## Description

### Demographic data & location:

Kari, 41 years old, Stavanger

### Professional environment:

Worked for the NPD for 15 years

### Role:

Data Manager for well data

## Emotions & Pain Points

### Kari likes?

Correctly tagged and structured data reports, effective detection of errors and proposed solutions to issues in datasets, efficient and flexible search functions.

### Kari dislikes?

Uncertainty in reported data and manual configuration of metadata, fetching data manually from several data sources to develop new datasets.

## How Kari uses Diskos

Kari manages well metadata on the NPD FactPages and ensures that it is up-to-date. Diskos synchronizes with the NPD FactPages daily, and Diskos Members use the metadata when reporting well data.

Kari can assist the Contractor and Diskos Members with correct reporting of well data. On behalf of the NPD she checks that reported data is compliant with authority requirements described in the “Blue Book”.

In addition, Kari may use the system as a typical Diskos member (e.g. search for and download data).

Kari’s main tasks related to Diskos are:

### Assisting with reporting

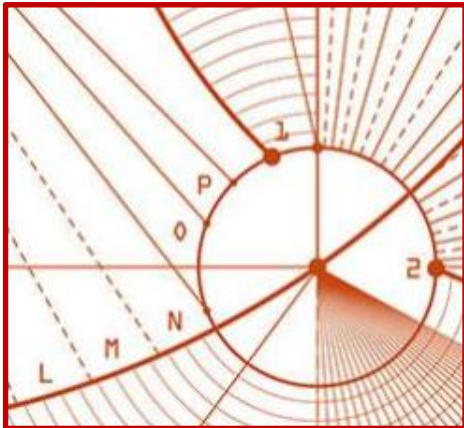
Kari can assist companies with how to choose e.g. correct Dataset ID, which wells to assign reports to and answers other questions that may arise during the reporting process. Kari has access to all data in Diskos, and can use the same front end as other Diskos Users to find data.

### Ensuring that metadata for well data is consistent

When Diskos Members wish to make changes to reported metadata, Kari can verify and modify the data in the NPD FactPages if the data is incorrect.

	W1. Upload data to Diskos	W2. Store and maintain data	W3. Search for data	W5. Download data
Activities	<div> <div>1. Register metadata from the planned well on NPD FactPages</div> <div>2. Diskos Members inform the NPD of any issues or mismatch with the metadata connected to a well. The NPD verifies and modifies NPD FactPages if metadata is incorrect.</div> </div>	<div> <div>6. Diskos members inform the NPD of any issues or mismatch with the metadata connected to a well. The NPD verifies and modifies the NPD FactPages if metadata is incorrect.</div> <div>10.If necessary, set well data to public in case e.g. licence relinquishment</div> </div>		
Pain Points		<div> <div>12.Issues with metadata is flagged manually by Diskos Members and communicated via email to the NPD and the Contractor</div> </div>		
Wishes	<div> <div>20.Improved and more automated completeness control to support a compliant reporting process</div> </div>	<div> <div>21.Data Owners (Diskos Member) should be notified directly if there are issues with data</div> <div>22.Updates of metadata and files should be logged</div> <div>23.Scan files for comparison and flag any inconsistencies (e.g. between new and older versions)</div> </div>		





## 4. Production module

# Production module process

## Roles and activities

PA = Production Activity

Diskos  
Member



Contractor



NPD



Public  
users



Multiple  
Roles



### P1. Report monthly production data

1. **Agree on the content and outline of the MPRML-file to be used for reporting**
  - Create Schematron verification file
2. **Create an overview of which files that are expected to be submitted during the next months\***
3. **Send out reporting reminders\***
4. **Receive Production data from ReportingHub or directly from oil companies**
  - Report production data to ReportingHub or;
  - Send data manually to the NPD or;
  - Report data directly to Diskos
  - Split MPRML-file into different production fields installations and wellbores based on tags. Set different access rights to data within one file if necessary
  - Extract the data required for reporting purposes and synchronize with the correct metadata
5. **Check file in test environment**
  - Before submission to the production module
  - Test MPRML- and Schematron files in the test environment
6. **Validate and QC all new data**
  - Inform the NPD about changes in the business rule validation
  - Modify Schematron verification file
  - Generate explanation if file fails to validate
  - When file is validated, upload to Diskos NDR
7. **Mark files as “preliminary” and “final” as updated production files are reported**

### P2. Store and maintain data

8. **Store data for documentation purposes**
  - Store the reported file and the extracted information in Diskos NDR
9. **Maintain access control and ownership**
10. **Split oil and gas from fields located on multiple continental shelves (Norway/UK)\***
11. **Provide overview of which fields that have been aggregated and where the produced volumes should be reported\***
12. **Aggregate reported production data\***
13. **Convert COPEX-files to MPRML-files\***
14. **Approve and publish this month's reporting figures\***
15. **Provide an overview of the files submitted last month\***

### P3/P4. Search for data and view production history

16. **Search production data**
  - Search production data from metadata in public portal
  - Search production data from metadata in access controlled portal with shared front-end
16. **View production history through an access controlled portal**
17. **Generate reports based on selected data**

### P5. Download data

19. **Download generated reports based on selected data**



**Anne**  
**Keros E&P**  
**46 years old**

## Description

### Demographic data & location:

Anne, 46 years old, Stavanger

### Professional environment:

Worked as a data analyst and data manager for 20 years

### Role:

Production Data Manager, Keros E&P

Responsible for gathering and reporting production data

\*Name of the role will vary between Diskos Members but tasks are similar

## Emotions & Pain Points

### Anne likes?

Automated processes and routines for QC and validating data ensuring high quality and the integrity of the production data, API's for systems to communicate easily.

### Anne dislikes?

Inconsistency in data quality, reporting a poor data foundation for decision making, waiting for data due to manual interaction, and limited system functionality.

## How Anne uses Diskos

Keros E&P is a member of NOROG and uses their ReportingHub to report production data to Diskos. Anne is responsible for overseeing the reporting of all production data from fields where Keros E&P is the License Operator on the NCS. For production licenses where Keros E&P is a License Partner, Anne is responsible for collecting the production data and to follow up if there are any inconsistencies in the data.

Anne's main tasks related to Diskos include:

### Upload production data:

Anne is responsible for overseeing that all production data is reported to ReportingHub and that Keros E&P fulfils the reporting requirements.

### Download production data:

Anne normally uses ReportingHub when she downloads data. Her need for downloading data relates to controlling the actual data input. Data can be changed and modified so it is important to be able to locate the original XML file to keep track of reported data. In some cases she searches and downloads production data from the Diskos public portal in order to perform analysis in local processing tools.

*P1. Report monthly production data**P2. Store and maintain data**P3/P4. Search for data and view  
production history**P5. Download data*

## Activities

1. PA 1. Before production reporting starts for an oil field - agree on the content and outline of the MPRML-file with the NPD
4. PA 4. Report production data to Diskos: through ReportingHub; via email to the NPD; manually through front end or via machine-to-machine interface
5. PA 5. Check file in the test environment before submission to the production module to ensure that the file is according to the reporting requirements and ready for upload
6. PA 6. Inform NPD of any changes to the business rule validation for the MPRML-file

16. Search production data from metadata in either the public or access controlled front end
17. View the company's production history in an access controlled portal
18. Generate reports based on filtered data

19. Download generated reports based on searches and filtered data for further analysis

## Pain Points

1. The validation process requires manual interaction
2. No warning if reported production figures have large variations or negative values

3. Due to lack of entitlements on production data, License Partners must wait until all data are submitted by the oil companies and verified and published by the NPD before official production numbers can be collected from Diskos. The delay is usually 1.5 months after the end of the reporting month.

## Wishes

1. The ability to exchange production data in new and improved formats when these are implemented as a standard
2. The test environment should QC the content of the MPRML file
3. An automated and comprehensive validation process
4. An Overview of the current and historical business rules

5. Access to the production data stored in Diskos at the time of the reporting for both License Operators and License Partners
6. To easily provide feedback on errors in the metadata

7. Search for production data in an outline on a map
8. Save, modify and filter previous searches
9. Connect external applications to the public portal through open API's
10. Enable visualization of data

11. Enable downloading of data retrieved through a map interface
12. Visual preview of the data without downloading (e.g. tables and charts)
13. Access to data via APIs
14. Enable downloading of the exact same files that were uploaded to Diskos for reporting purposes





**Geir**  
**NPD**

**50 years old**

## Description

### Demographic data & location:

Geir, 50 years old, Stavanger

### Professional environment:

Worked as a data analyst and data manager for 25 years.

### Role:

NPD Production Data Administrator,  
Responsible for publishing monthly production figures.

## Emotions & Pain Points

### Geir likes?

Being confident that all numbers reported publicly are correct and systems enabling users to perform their tasks “right first time”.

### Geir dislikes?

Being highly involved in data validation and quality control. He would prefer to be “hands-off” the reporting process and not having doubts related to the data quality when publishing press releases.

## How Geir uses Diskos

Geir is responsible for administering the Production module for the NPD. He publishes monthly press releases of the production figures on the NCS.

Geir’s main tasks related to Diskos are:

### Keeping track of monthly production reporting

Geir registers which files that are expected to be submitted during the next months and keeps an overview of files submitted in the previous month. He also aggregate historical data for unitized fields and allocate reported production to the UK continental shelf for border fields. Geir ensures completeness of the production data and notifies companies when the reporting is overdue. When the reporting is completed, Geir published the monthly figures on npd.no.

### Converting and adding files

Geir adds and modifies Schematron-files to enable reporting of new products on producing fields. He can also view XML-files and convert validated COPEX files to MPRML files.



### P1. Report monthly production data

### P2. Store and maintain data

### P3/P4. Search for data and view production history

### P5. Download data

#### Activities

- Before production reporting starts for an oil field - agree on the content and outline of the MPRML-file with Diskos Members
- Create or modify Schematron verification file for the validation of the production reporting
- Create an overview of which files that are expected to be submitted during the next months
- Send out reporting reminders and follow up when reporting is overdue
- Modify Schematron verification file based on input on production changes from Diskos Members

- Split oil and gas from fields located on multiple continental shelves and allocate Norwegian quantities to be aggregated as a part of the total NCS production
- Provide overview of which fields that have been aggregated and where the produced volumes should be reported
- Aggregate reported production data for the NCS
- Convert COPEX files to MPRML files
- Approve and publish this month's reporting figures
- Provide an overview of the files submitted last month, including the different submitted versions and preliminary/final status.

- Search production data from metadata in access controlled portal with shared front end
- Generate reports based on filtered data

- Download generated reports based on searches and filtered data

#### Pain Points

- Production data is reported in both MPRML and COPEX format (old format)
- It is difficult to get an overview of all the reported data (Production data from the same oil field can be reported from different sources)
- The content of the test environment is difficult to control due to access for all Diskos Users in the same environment
- The validation of files requires manual input from the NPD

- The NPD Production Data Administrator must provide manual input in all processes
- The NPD Production Data Administrator dashboard has a poor user interface

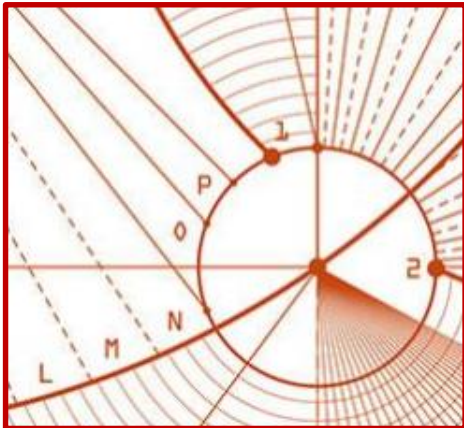
#### Wishes

- A test environment separated from the Diskos Users who reports production data
- Version control of the Schematron-file to ensure that the same file is used both in the production and test environment

- The process of reporting and maintaining production data should be as automated as possible
- A user friendly tool to manage the reported production data

- Search for production data in an outline on a map
- Save, modify and filter previous searches
- Better visualizations of the data directly in the front end or report generator

- Enable downloading of data retrieved through a map interface



## 5. AS-IS process descriptions

# *Please note:*

The following pages intends to describe the current process in Diskos (1.0), and should only be read as support to the user journeys.

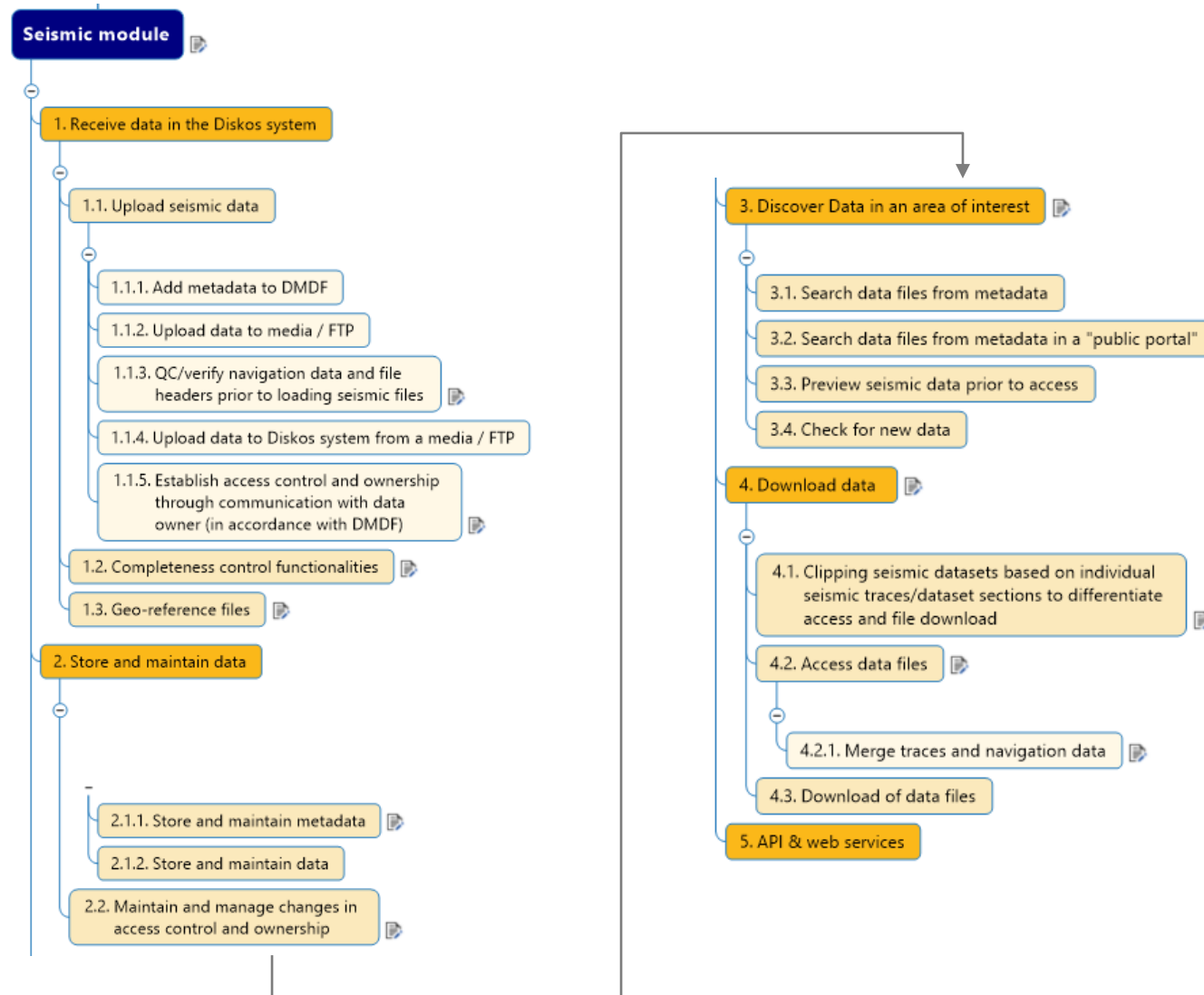
The AS-IS process descriptions were a part of the RFI-document.





# AS-IS Diskos Seismic Module process description

## *Process map for the Seismic Module*



# AS-IS Diskos Seismic module process description

*Before the seismic data is uploaded to the Diskos NDR, the data owner adds metadata to the DMDF to ensure that the data is placed and tagged correctly. The DMDF contains information about the data to be uploaded, and who should have access to the data. The metadata must follow the guidelines for geophysical data reporting to the authorities referred to in Attachment 3A: Yellow book.*

## **S1 - Receive data in the Diskos system**

### **S1.1 - Upload seismic data**

#### **S1.1.1 - Add metadata to DMDF (Diskos Member/multiclient company)**

Before the seismic data is uploaded to the Diskos NDR, the Data Owner adds metadata to the DMDF to ensure that the data is placed and tagged correctly. The DMDF contains information about the data to be uploaded, and who should have access to the data. The metadata must follow the guidelines for seismic data reporting to the authorities ("Yellow Book").

#### **S1.1.2 - Upload data to media / FTP (Diskos Member/multiclient company)**

The seismic data and the accompanying reports etc. are submitted on media (e.g. tape cartridges or USB disks), or on the FTP server. Larger files (typically field and pre-stack data) are not uploaded via the FTP server.

#### **S1.1.3 - QC / verify navigation data and file headers prior to loading seismic files (Contractor)**

Prior to loading seismic datasets, both an automatic and manual QC and verification is conducted to ensure that reporting is done according to the "Yellow Book" requirements. An automatic QC is performed on file format, file headers and some of the data (navigation). A manual QC is performed on seismic data headers and traces (e.g. EBCDIC, IOGP, UKOOA, Binary, trace).

#### **S1.1.4 - Upload data to Diskos system from a media / FTP (Contractor)**

The seismic and navigation data are uploaded to the Diskos NDR and linked to the metadata information from the DMDF.

#### **S1.1.5 - Establish access control and ownership through communication with data owner (in accordance with DMDF) (Contractor)**

The Contractor establishes and manages access control of the submitted data down to individual seismic traces.

# AS-IS Diskos Seismic module process description

## **S1 - Receive data in the Diskos system**

### **S1.2 - Completeness control functionalities (Oil companies)**

Completeness control is an optional function in Diskos. It helps License Operators cross check that data uploaded to the Diskos Seismic module is complete according to the requirements in the Yellow book (Attachment 3A). When planning a seismic survey, the License Operator registers what data will be produced as a result of the survey through the Diskos front end, as well as specifying a list of data that are planned to be acquired. When this has been submitted correctly, the system indicates with a green light if the data has been submitted. If not, an orange or red light is given.

Completeness control is not widely used because it contains several manual steps.

### **S1.3 - Georeference files (Oil companies)**

When the seismic and navigation files are uploaded, the system automatically reads the X and Y coordinates of the file to georeference the dataset in an outline of a map to register where the data is referred to. There are two map layers, a navigation file extent and a live trace outline. The live trace outline also works as a QC layer for the navigation file because the navigation file must incorporate the trace outline.

# AS-IS Diskos Seismic module process description



## S2 – Store and maintain data

### S2.1A – Store and maintain metadata (Contractor)

This functionality enables the storage and maintenance of all metadata.

### S2.1B – Store and maintain data (Contractor)

Data files are stored in the uploaded format. To use the data files in different applications, data must be downloaded and is often re-formatted outside of the Diskos system.

### S2.2 - Maintain and manage changes in access control and ownership (Contractor)

The original entitlements are set when first uploading the files, but the ownership and access to data may change over time due to entitlement changes.

For data trading purposes a shape file is submitted via the Trade module to the Contractor who then clips data in order to set trade entitlements.

When a survey is partially released, according to NPD release rules, a shape file is sent by the NPD to the Contractor to clip data for the purpose of setting data public.

Multiclient companies submit shape files to the Contractor with instructions to set entitlements when a Diskos Member has purchased data.

# AS-IS Diskos Seismic module process description

## **S3 - Discover Data in an area of interest (Diskos Users)**

Data is searchable through all types of metadata in the front end (table view or map view).

### **S3.1 - Search data files from metadata (Diskos Users)**

The Diskos Users connect to an access-controlled portal to search for all data that is accessible. E.g. a Diskos Member will only have access to the data that is owned by the company (owner rights), as well as data they have user rights to (e.g. traded/purchased data) and all public data.

Users can search for data through map-based functionality (GIS) and by free text search in metadata. Search results are visualized on a map of data matching the search criteria or in a table view. When using GIS-functionality for searching, the user may create and upload a shape file with a polygon to select a designated area.

The Seismic module contains a calendar function which automatically displays when seismic data will become publicly available.

### **S3.2 - Search data files from metadata in a “public portal” (Diskos public users)**

The public portal is used by non-members to search for public data and return results in a table view or in a simple map view. Non-members can only access datasets that are publicly available.

### **S3.3 - Preview seismic data prior to access (Diskos Users)**

Data may be previewed before downloading. It is possible to inspect the quality of data, but the preview is limited to files smaller than 100 MB. This effectively reduces the ability to preview seismic data.

### **S3.4 - Check for new data (Diskos Users)**

The Diskos Users manually check “My Diskos” to see all new datasets uploaded to Diskos within the last day, week or month. This includes data that they do not have access to. My Diskos does not specify if there are any new data that the individual user has gained access to, this must be checked manually by trying to download the datasets.



# AS-IS Diskos Seismic module process description

## S4 - Download data

### **S4.1 - Clipping seismic datasets based on individual seismic traces/dataset sections to differentiate access and file downloads (Contractor)**

End users can clip data based on a polygon that is uploaded as a shapefile, they can also delimit data vertically and decimate data horizontally. A clipped data set can then be downloaded by the end user. The system is not able to clip some complex “shapes” such as multi polygons.

### **S4.2 - Access data files (Diskos Users)**

The user locates data in the Seismic Module and add it to their “shopping cart”.

#### **S4.2.1 - Merge traces and navigation data**

When downloading older datasets that were lacking navigation data in the header at the time of uploading, navigation data is added when the datasets are downloaded.

### **S4.3 - Download of data files (Diskos Users)**

The user must choose between downloading to an FTP server and downloading to physical media (USB, tape etc.). Pre-stack data and field data are usually downloaded to media and post-stack data to an FTP server. The Diskos User must contact the Contractor to download the data to a physical media.

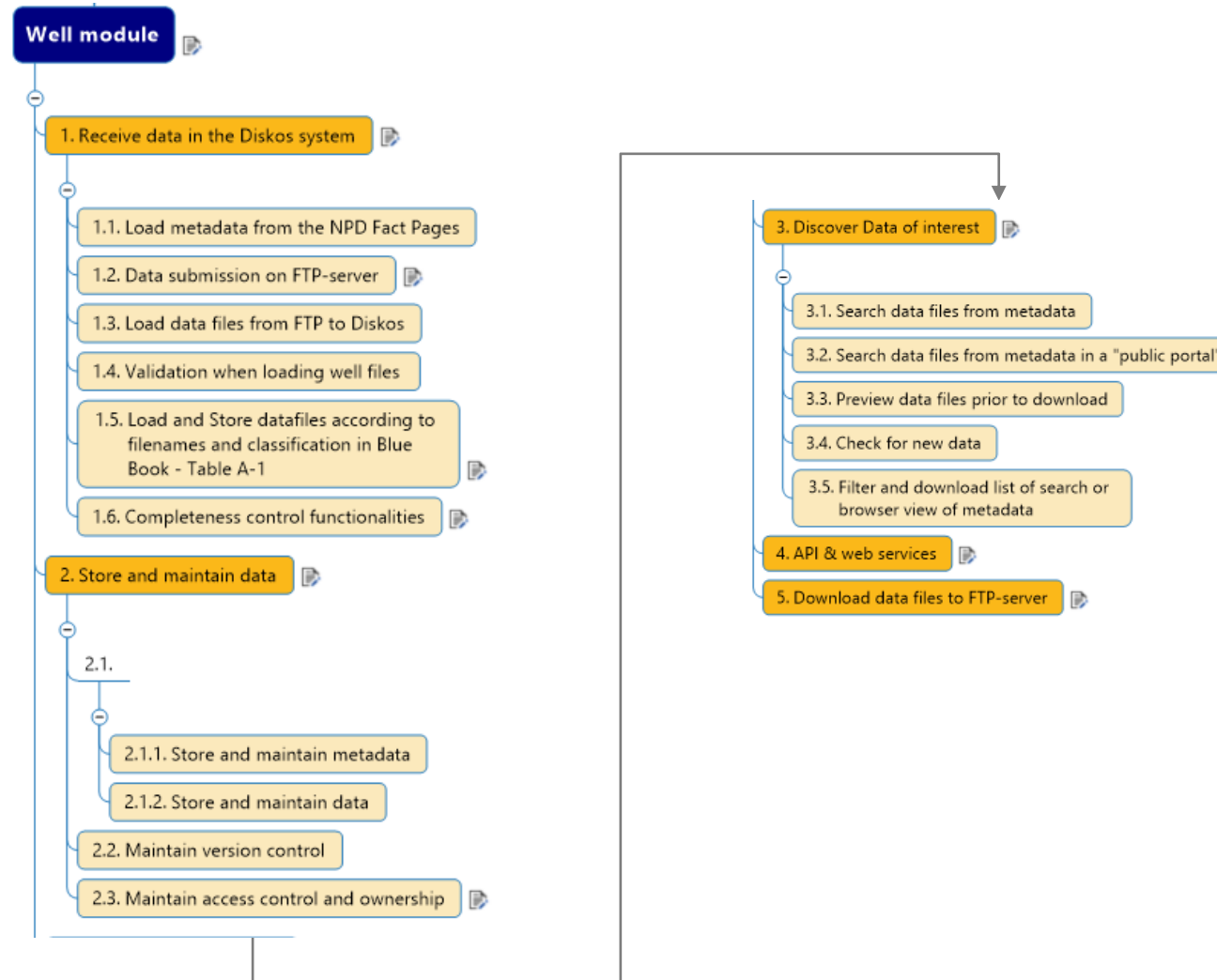
## S5 - API & web services

### **S5 - API & web services (Contractor)**

The functionality offers WMF - WFS services including all metadata/reference data and API to metadata (incl. needs for the Trade Module).

# AS-IS Diskos Well module process description

## *Process map for the Well Module*



# AS-IS Diskos Well module process description

*The Diskos Well module contains digital well data from the NCS. The License Operator is responsible for reporting well data from NCS according to the NPD reporting requirements. Basic requirements are that all items in the Diskos NDR are clearly identified, of known quality, and stored in a secure environment. See Attachment 4A: Blue book for details on reporting requirements. Well data is uploaded to Diskos through an FTP server and synchronized with metadata from the NPD Fact Pages. The Well Module is continuously updated with new metadata and change of entitlements through the confidentiality period of well data. Data is made public at the end of the confidentiality period and can then be accessed through the public portal.*

## **W1 - Receive data in the Diskos system**

### **W1.1 - Load metadata from the NPD FactPages (Contractor)**

Before a new wellbore is drilled, the License Operator must register the drilling with the NPD. Within the next day the NPD's FactPages will be updated with information and the NPD-ID for the wellbore. The License Operator is responsible for informing NPD of any changes to reference data connected to the well. Updated metadata for all wellbores is downloaded from the NPD webpages by the Contractor and synchronized with the Diskos NDR daily.

### **W1.2 - Data submission on FTP-server (License operator)**

The License Operator is responsible for the reporting of well data to Diskos. All well data is uploaded to a FTP server according to Attachment 4B: Blue book Table A1. Most License Operators use subcontractors to group, structure and do a QC of the data according to the NPD Blue book reporting requirements, and then submit the data to the FTP server on behalf of the License Operator.

### **W1.3 - Load data files from FTP to Diskos (Contractor)**

The Contractor uploads data files from the FTP to the Diskos NDR. All files are indirectly georeferenced through their relation to the wellbore top position. All metadata in the Diskos NDR must be searchable.

- If a Diskos Member or third party reports the wrong wellbore name, there is a dialogue between the NPD and the Contractor to correct the name before data can be submitted to the FTP server.
- If any Diskos User later discovers issues with the data, the License Operator is contacted to clarify.

Wellbore technical side-tracks are managed as separate wellbores in Diskos and are currently not included in the NPD Fact Pages. This means that technical side-tracks and all related metadata and data must be added by the Contractor manually to the Diskos NDR.

Data is currently managed in the relational database Trango.

# AS-IS Diskos Well module process description

## W1 - Receive data in the Diskos system

### W1.4 - Validation when loading well files (Contractor)

When a well data file is loaded into the system, the Contractor validates that the file can be opened and that the file name is according to the Blue book Table A-1.

### W1.5 - Load and store data files according to filenames and classification in the Blue book Table A-1 (Contractor)

The Contractor loads the data in accordance with the file and folder names and classification. The data is assigned a dataset ID according to the Blue book Table A-1.

### W1.6 - Completeness control functionalities (License Operator)

Completeness control is an optional function in Diskos. It helps License Operators cross check that data uploaded to the Diskos Well Module is complete according to the requirements in the Blue book. When planning a well, the License Operator registers the sampling and planned analysis of the well through the Diskos front end, as well as specifying a list of data that are planned to be acquired. When this has been submitted correctly, the system indicates with a green light if the data has been submitted. If not, an orange or red light is given.

Completeness control is not widely used because it contains several manual steps. Most companies use an alternative spreadsheet solution offered by subcontractors which is not part of the Diskos solution.

## W2 - Store and maintain data

### W2.1A – Store and maintain metadata (Contractor)

This functionality enables the storage and maintenance of all metadata. The License Operator informs the NPD of necessary changes to be made (if there are errors in a previous version) to the metadata (e.g. the recorded position of the well), and the Diskos NDR will be modified accordingly (as described in section W1.1 and W1.3). For metadata not managed by the NPD, the Contractor must be informed of any inconsistencies so that these can be corrected.

### W2.1B – Store and maintain data (Contractor)

Data files are stored in the uploaded format. To use the data files in different applications, the data must be downloaded and is often re-formatted outside the Diskos system.

### W2.2 - Maintain version control (Contractor)

If a new version of a previously submitted file is submitted, the system checks that the file size corresponds to the original file and adds “old” to the existing filename and includes an info-file to explain what has been done.

### W2.3 - Maintain access control and ownership (Contractor)

The original entitlements are set when first uploading the files, but the ownership and access to data may change over time due to entitlement changes.

# AS-IS Diskos Well Module process description

## **W3 - Discover Data of interest (Diskos Users)**

Data is searchable through all types of metadata in the front end (table view or map-view). A typical search is to find a specific wellbore or a set of wellbores with the same metadata or a desired wellbore report of a certain Dataset ID or report title.

### **W3.1 - Search data files from metadata (Diskos Users)**

The access-controlled portal is used to search for all data that is accessible by the user. E.g. a Diskos Member will have access to all the confidential data that they own or has been granted access to by the data owner, in addition to public data.

Users can search for data through map-based functionality (GIS) and by free text search in metadata. Search results are visualized on a map of data matching the search criteria or in a table view. When using GIS-functionality for searching, the user may create and upload a shapefile with a polygon to select a designated area.

The Well Module contains a calendar function which automatically displays when new data will become publicly available based on the metadata at the NPD's Fact Pages.

### **W3.2 - Search data files from metadata in a "public portal" (Diskos public users)**

The public portal is used by non-Diskos Members to search for public data and return results through a table view or through a simple map interface. The portal set-up is similar to the access-controlled portal but has limited functionality. It is possible to see which documents that are accessible for a wellbore, but not the actual content. If a non-member wants access (i.e. receive a copy of the data), the whole set of data from that wellbore must be ordered. Individual data items cannot be selected and downloaded. Data from the wellbore will be forwarded on a physical media and subject to an administrative fee.

### **W3.3 - Preview data files prior to download (Diskos Users)**

Data in Diskos can be previewed by Diskos Users before downloading. This allows inspection of the data quality. The preview is limited to files smaller than 100MB.

### **W3.4 - Check for new data (Diskos Users)**

The Diskos Users manually check "My Diskos" to see all new datasets uploaded to Diskos within the last day, week or month. "My Diskos" only shows the well data a user has access to, including public data.

### **W3.5 - Filter and download list of search or browser view of metadata (Diskos Users)**

The Diskos Solution enables the user to filter on metadata and download a table of results of the filtered searches in Excel, XML or CSV formats.



# AS-IS Diskos Well Module process description



## W4 - API & web services

### W4 - API & web services (Contractor)

The functionality offers WMF - WFS services including all metadata/reference data and API to metadata (incl. needs for the Trade Module).

## W5 - Download data files to FTP-server

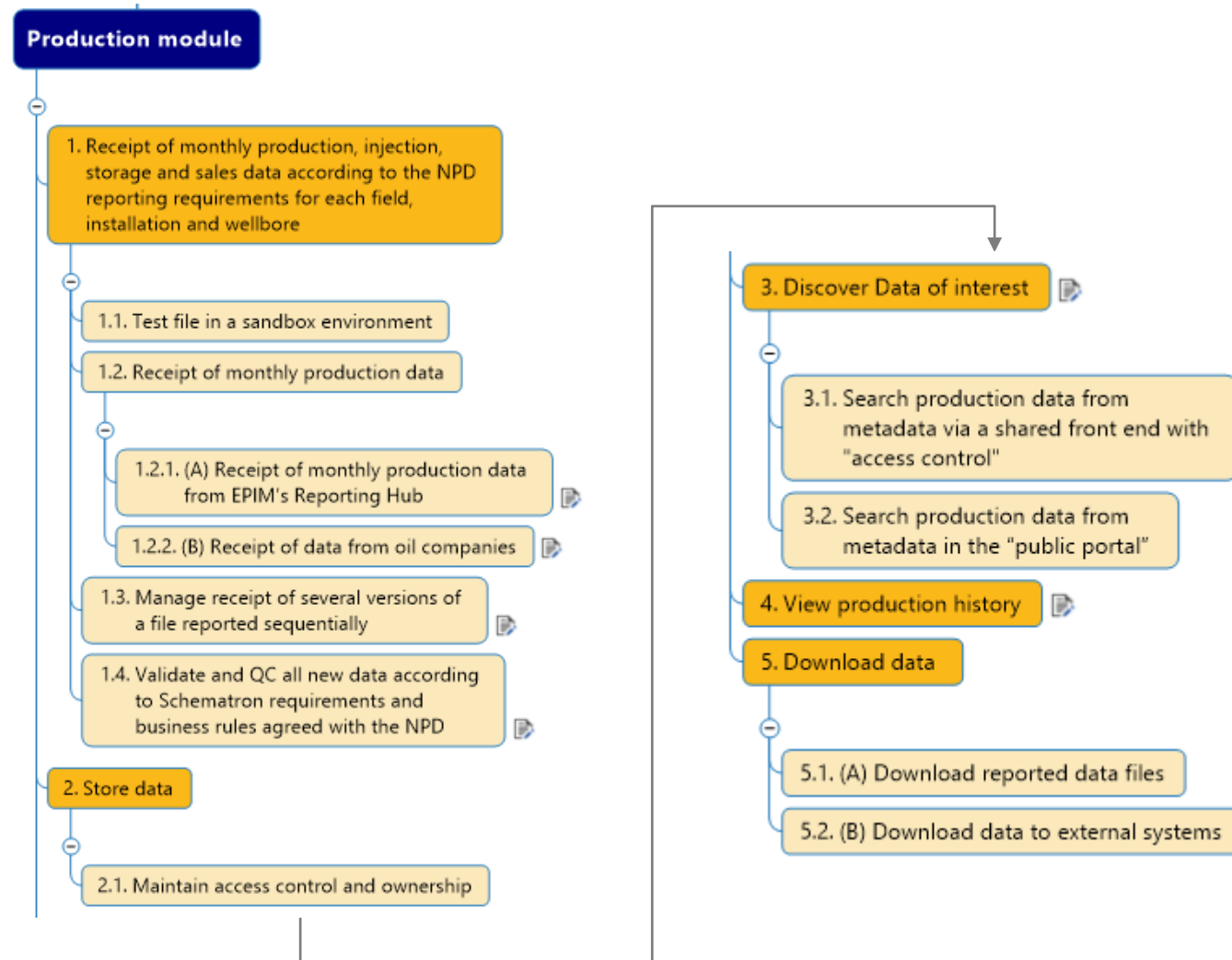
### W5 - Download data files to FTP-server (Diskos Users)

Small data files (up to 100MB) can be downloaded directly from the portal to a local server.

Large data files are first located through the Diskos front end, then added to a “shopping cart” functionality for subsequent download to a local server through an FTP server.

# AS-IS Diskos Production Module process description

## *Process map for the Production Module*



# AS-IS Diskos Production Module process description

*The Production Module contains monthly petroleum production figures from the NCS. The License Operators and the processors of petroleum products are responsible for reporting production data in accordance with the NPD reporting requirements. Requirements for reporting production data can be found in Attachment 5: Green book. Most of the production data is received from ReportingHub through a machine-to-machine interface. Data files are received in MPRML and COPEX format. The reported data is aggregated and quality controlled before it is published.*

## **P1 - Receipt of monthly production, injection, storage and sales data according to the NPD reporting requirements for each field, installation and wellbore**

Two file formats are used for reporting production data, MPRML and COPEX. MPRML is the current reporting standard format, while a few companies still use the COPEX format. Production data is reported at wellbore, installation, field and terminal level.

Before submitting data from a new field, the License Operator and the NPD agrees on the content and outline of the MPRML-file to be used for reporting. This is manually coordinated between the NPD and the License Operator and may require modification of the Schematron verification system.

MPRML is used as a container format where data from several fields are gathered in the same file using different tags to separate the data. Monthly production data from 3rd party wells (e.g. tie-ins) are reported through the production license where the products are processed (e.g. production from the Gyda field (Repsol) is reported through Ekofisk (ConocoPhillips) in the same MPRML-file).

When Diskos receives the MPRML-file, the data is split into different fields, installations, wellbores and terminals based on the tags in the reported file. The data in the MPRML file required for the monthly reporting is mapped and synchronized with the correct metadata before it is stored in Diskos.

NPD reports aggregated data from the NCS to the public. Before publication, all data must be collected and verified. This creates a delay of approximately 1.5 months in the reporting of production data. When all data is reported and verified the NPD issues a press release.

The production data in Diskos is available through two front ends:  
Whereoil Production  
Diskos production public portal

# AS-IS Diskos Production Module process description

## **P1 - Receipt of monthly production, injection, storage and sales data according to the NPD reporting requirements for each field, installation and wellbore**

### **P1.1 - Receipt of monthly production data**

Production data from a single producing field can arrive from several sources (e.g. different processing terminals). Diskos enables storage of all input files to aggregate the total production for each product. Reported MPRML and COPEX-files are stored in the Diskos NDR in addition to the data.

There are multiple ways of reporting production data. Most of the data is reported through ReportingHub using MPRML. The figure describes the different reporting methods.

#### **P1.1A - Receipt of monthly production data from ReportingHub (Contractor)**

Production data is received from ReportingHub through a machine-to-machine interface. Diskos extracts required data from the MPRML-file.

#### **P1.1B - Receipt of data from oil companies (Contractor)**

If License Operators do not report data through ReportingHub, the production data is either reported through a separate machine-to-machine interface, or manually to Diskos. Data can be reported manually through a front end or be sent to the NPD by email. Diskos enables member companies to upload production data covering several months or years in both MPRML and COPEX formats. This function is used when importing old data from an existing database or an Excel spreadsheet. Prior to uploading to Diskos, files are automatically validated against data on the NPD Fact Pages. The file validation status is then stored.

### **P1.2 - Validation of files in a test environment (License operator)**

If the content of a MPRML-file is changed, the file is tested in a test environment prior to submission to the Production module. The test environment verifies if the file is complete according to the reporting requirements, and that the file is ready for upload to Diskos. The test environment enables a preliminary QC of files where products (e.g. oil, gas, NGL) have been changed or added.

### **P1.3 - Manage receipt of several versions of a file reported sequentially (License operator and Contractor)**

In cases where the content of the file contains preliminary production numbers, an initial production data file is uploaded and marked “preliminary”. When final numbers are confirmed the License Operator a new file is submitted and marked as “final”. In some cases the License Operator will only report “final” files. In both preliminary and final files, a version number is set by the License Operator to keep track of the different versions. All reported file versions are stored but only the last version is used for aggregation and reporting purposes.

# AS-IS Diskos Production Module process description

## **P1 - Receipt of monthly production, injection, storage and sales data according to the NPD reporting requirements for each field, installation and wellbore**

### **P1.4 - Validate and QC all new data according to Schematron requirements and business rules agreed with the NPD (License operator)**

When uploading data manually through the front end, the uploader can choose to validate the file without uploading it to the database.

Validation of an MPRML-file is done in three sequential stages:

- Each file is reported as an XML-file which is validated against an XSD-schema to check that the reported files have the right name, tags, correct units etc.
- Wellbores, fields and facilities etc. are validated against the NPD Fact Pages.
- Schematron business rules checks if the files contain the right country, produced products, installations (platforms) etc.

If a file fails to validate, an explanation is generated.

If a new product (e.g. oil, gas, NGL) is added to the production data from a producing field, the License Operator must inform the NPD of change so the business rules can be updated. The production start date for the new product must be manually registered by the NPD in the Schematron-file that is connected to the XML-file title. This ensures that production data reports containing the new product is accepted.

When a file has been validated and uploaded the reporting is complete.

## **P2 - Store data**

### **P2 - Store data**

Data is stored for documentation and reporting purposes. The current solution enables searching, indexing, retrieval of data and works as a feed for report generators (BI) etc.

### **P2.1 - Maintain access control and ownership (Contractor)**

Diskos does not have a system for granting access to confidential production data for License Operators or License Partners. Only the NPD is given access to confidential production data. The production/injection data at wellbore level is kept confidential for 2 years after the production month, before it is made publicly available.



# AS-IS Diskos Production Module process description

## P3 - Discover Data of interest

### P3.1 - Search production data from metadata via a shared front end with “access control” (NPD)

Data is searchable through all types of metadata in the front end (table view or map-view). The front end provided by the current Contractor is used to access data by searching for metadata. It is possible to search for all types of metadata in the database.

The following data is searchable in the production module:

- Production
  - per wellbore, facility and field
  - allocated marketable products per field
  - import/export per facility/plant
  - consumption (flare, fuel, diesel, etc.) per facility/plant
- Injection
  - per wellbore, facility and field
- Stock
  - volumes at the end of the month
- Sales
  - gas per owner and buyer
  - oil, NGL and condensate per vessel

Sales data is kept confidential. Only the NPD has access to the data during the confidentiality period.

### P3.2 - Search production data from metadata in the “Public portal” (Diskos Users)

The public portal is open for all users. All publicly available production data can be viewed in the public portal.

# AS-IS Diskos Production Module process description



## P4 - View production history

### P4 - View production history (Diskos user)

Diskos has a functionality that allows member companies to log in to see all historical production data that the company has access to in a table view. This includes both public data and confidential data from the company's production licenses. Public data becomes available when the NPD publishes the monthly press release.

The user can generate several reports depending on the content the user has access to.

## P5 - Download data

### P5.1 - Download data to external systems (Diskos user)

The Diskos system generates reports based on selected data in known formats and downloads the data in a few seconds.

# AS-IS Diskos Production Module process description

## Recurring functions in the Production Module

### **NPD administrator (NPD)**

Diskos has an administrator functionality that is operated by the NPD. The NPD administrator page is used to:

- Register which files that are expected to be submitted during the next months.
- Provide an overview of the files submitted last month, including version and preliminary/final status.
- Split oil and gas from fields located on multiple continental shelves (Norway/UK).
- Provide an overview of which fields that have been aggregated, and where the produced volumes should be reported.
- Aggregate reported production data from the last month, and to which countries the products were exported to.
- Approve and publish this month's reporting figures.
- Add and modify Schematron-files.
- View XML-files.
- Convert COPEX-files to MPRML-files (COPEX-file must be validated before conversion).
- Notify companies when the reporting is overdue.
- Hide reported files.