



NeLS and StoreBioinfo storage Projects and storage layers

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Overview of data management

FAIR data management from sequencing provider to public repository

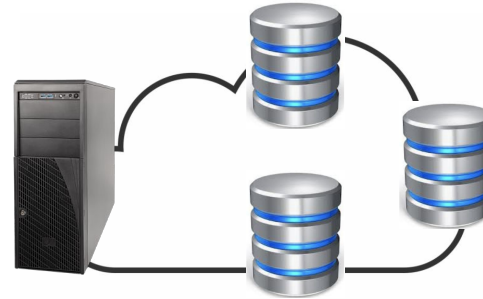
Data production



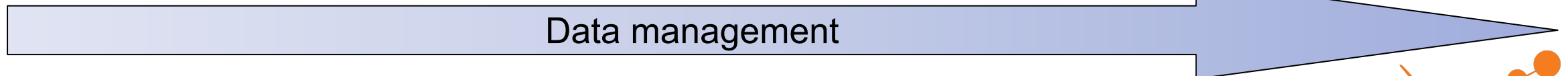
Data storage/sharing



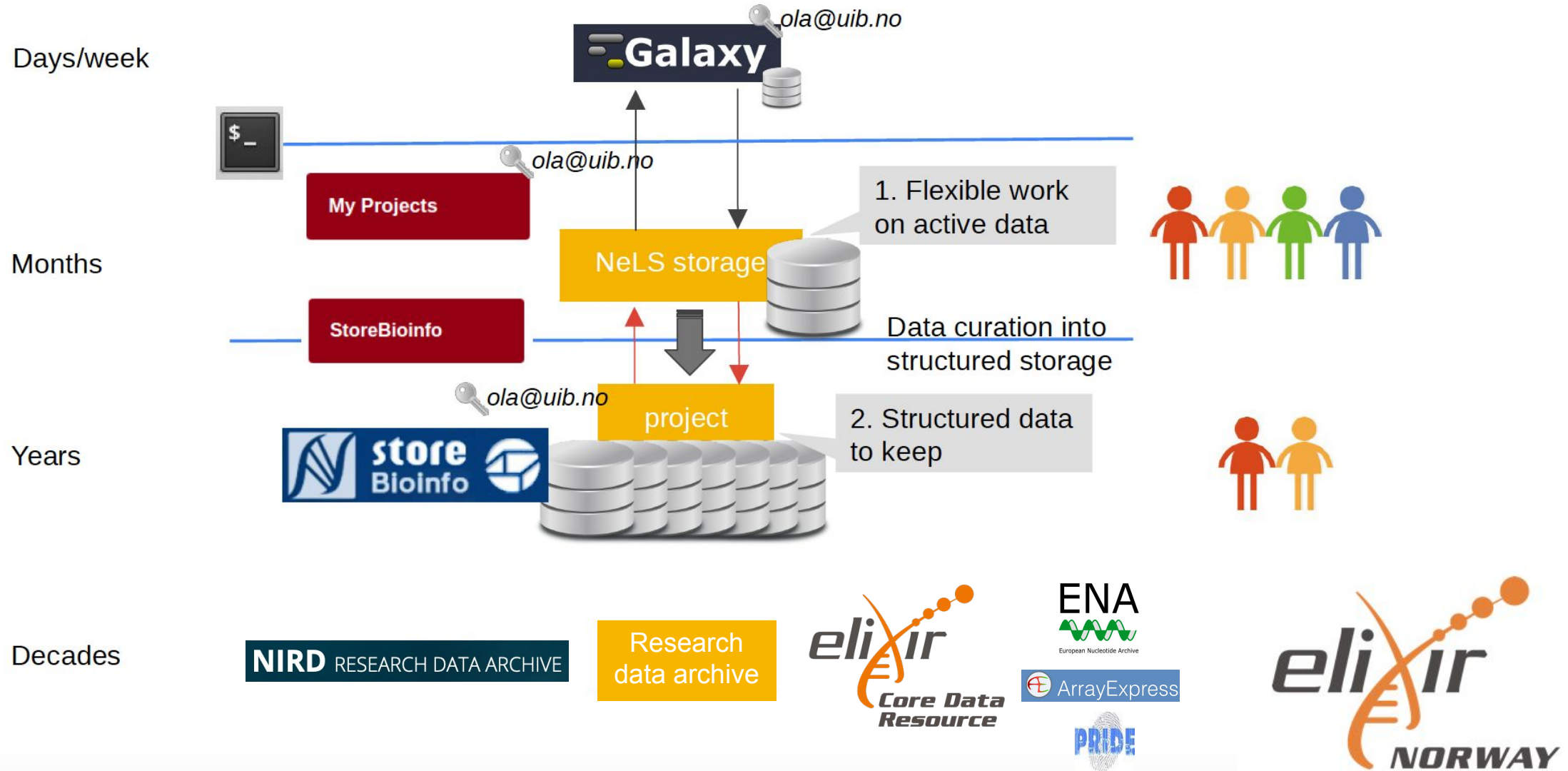
Data compute



Data archiving



NeLS architecture



Data from data providers

Days/week



My Projects

ola@uib.no

NeLS storage

1. Flexible work on active data



StoreBioinfo

Data curation into structured storage

Years



project

2. Structured data to keep



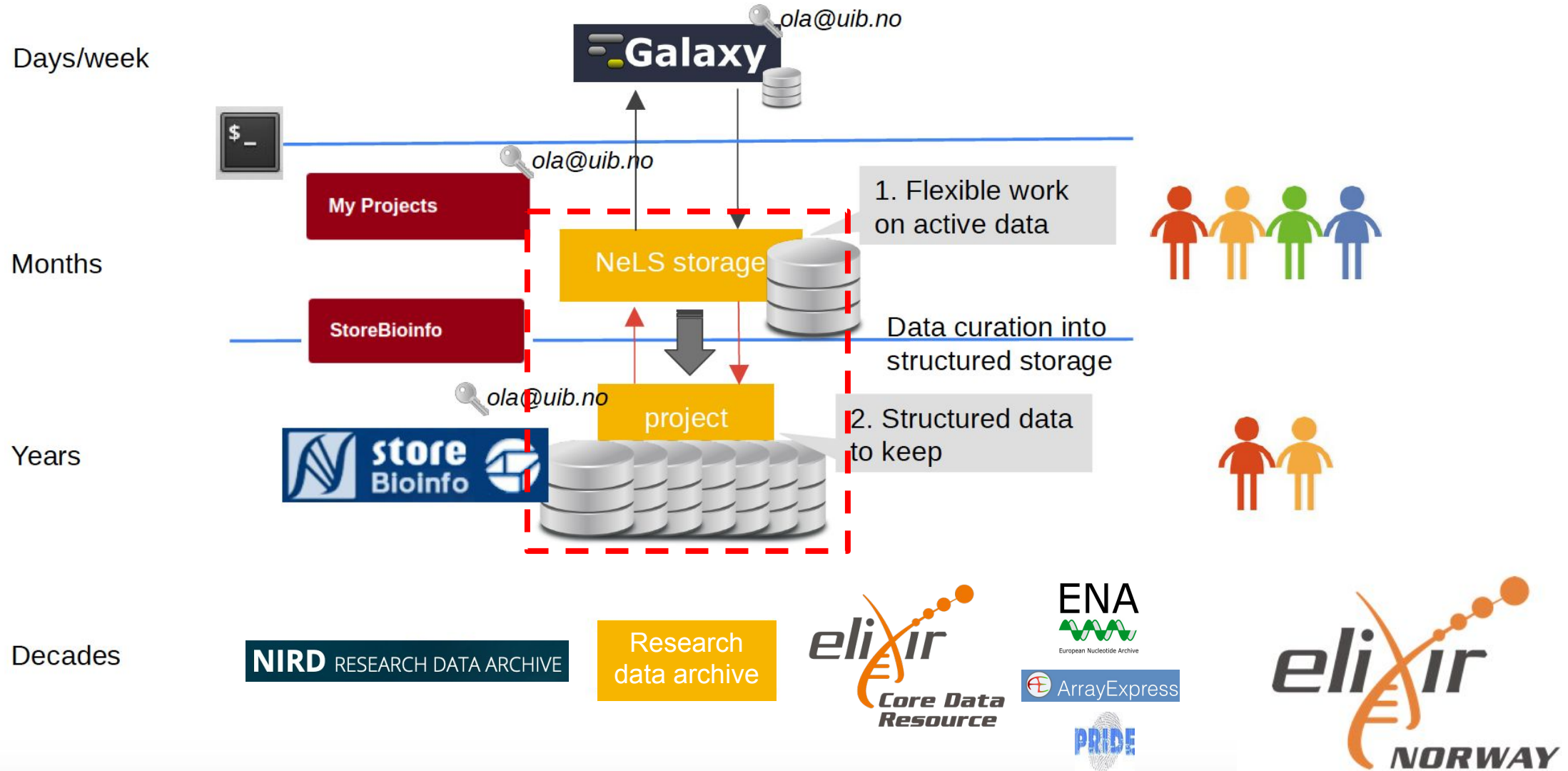
Decades

NIRD RESEARCH DATA ARCHIVE

Research data archive



Data storage in NeLS and StoreBioInfo



Access to storage and sharing of data in NeLS

Temporary storage – typically during the data analysis and manuscript preparation

Users with permissions can access data in a NeLS project (FEIDE or NeLS ID)

The screenshot displays the NeLS portal interface. At the top, a blue header contains the text "NeLS". Below the header, the page is divided into three main sections:

- Welcome !**: A section on the left containing a welcome message, a list of features (Federated login using FEIDE, Sharing of data, Bioinformatics pipelines, API for integration), and a help section with contact information.
- ELIXIR Norway**: A central section providing information about ELIXIR Norway's coordination by various universities and the Research Council of Norway, along with project aims and logos of partner institutions.
- Access NeLS**: A right-hand section titled "Log in with Feide" that prompts the user to log in with their Feide account from the Norwegian University of Life Sciences. It includes input fields for username and password, a "Log in" button, and links for help, forgot password, and privacy information.



Access to storage and sharing of data in NeLS

Access to personal storage and projects

The screenshot displays the NeLS web interface with several overlapping panels. The top navigation bar includes 'NeLS', 'Dashboard', 'Personal', 'Projects', 'StoreBioInfo', and 'Help (Support)'. The user is identified as Erik Hjerde (NeLS ID :34).

NeLS Disk Usage: A line graph showing disk usage from 01-Sep-2016 to 01-May-2018. The y-axis ranges from 0 bytes to 111.8 GB. Usage remains relatively stable around 74.5 GB until late 2017, then increases to approximately 93.1 GB by May 2018.

Account Information:

Full Name	Erik Hjerde
Email	erik.hjerde@uit.no
Affiliation	University of Tromsø

My Data: A list of folders under the 'Personal' view:

- Bio3323
- ELIXIR2-WP4
- Matt
- metagenome
- Test2014

Projects: A table listing various projects with their roles and creation dates.

Project Name	Role in Project	Creation Date
Elixir_NO-Documents A project for sharing Elixir.no related documents	Member Add files & folders, Navigate & Download	November 28, 2014
Uio-Test-Project for demo	Member Add files & folders, Navigate & Download	March 19, 2015
UIO_Halvorsen_RNAseq_Mouse_Spleen_T_cells_2018 RT#13277._____ Aim: To compare transcriptome of spleen T cells from WT mice and a transgenic mouse model.	Power User Manage File system: Add, Rename, Navigate, Download, Delete all Content	February 22, 2018
Elixir_workshops Folder holding materials/data for Elixir workshops	Member Add files & folders, Navigate & Download	April 15, 2016
UIB-Petersen_neuro_ma_regulation_disorder_2017 This is part of a larger consortium project, we are providing neuro samples RNA data (RNA-seq), for 100 cell lines cultivated in our lab at University of Bergen.	Power User Manage File system: Add, Rename, Navigate, Download, Delete all Content	May 11, 2017
maseq-test-data Data, 12 samples, two groups, for testing updated maseq-pipeline	Power User Manage File system: Add, Rename, Navigate, Download, Delete all Content	September 11, 2017
ELIXIR2-WP4 Collection of course data and documents	Power User Manage File system: Add, Rename, Navigate, Download, Delete all	November 8, 2017

Data Operations: A log of recent operations, all completed successfully.

Operation	Status
5859 : NeLS >> StoreBioInfo	Completed successfully
5858 : NeLS >> StoreBioInfo	Completed successfully
5857 : NeLS >> StoreBioInfo	Completed successfully
5856 : NeLS >> StoreBioInfo	Completed successfully
5855 : NeLS >> StoreBioInfo	Completed successfully
5854 : NeLS >> StoreBioInfo	Completed successfully
5853 : NeLS >> StoreBioInfo	Completed successfully

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Data storage in StoreBioInfo

Long term storage – typically for large projects where data is used in several publications

Storage quotas has to be applied for – typically > 1TB data

The screenshot displays the StoreBioInfo web interface. The top navigation bar includes 'NeLS', 'Dashboard', 'Personal', 'Projects', 'StoreBioInfo', and 'Help (Support)'. The user is identified as 'Erik Hjerde (NeLS ID :34)'. The main content area is divided into three sections:

- NeLS:** Shows the user's current location and navigation options for 'Personal' and 'Projects'.
- StoreBioInfo:** Displays a list of projects with columns for 'Name' and 'Creation Date'. The projects listed are:

Name	Creation Date
UiT_bioinformatics_platform_core_storage_facilities_20	October 5, 2018
UNN_Goll_Metagenome_Human_IBS_Faeces_2018	March 19, 2019
UiB- Petersen_neuro_rna_regulation_disorder_2017	May 11, 2017
Elixir-demo	November 24, 2015
- Data Operations:** Shows a list of completed operations with their IDs, status, and completion times. All operations are marked as 'Completed successfully' and 'Completed: 100 %'.

Collaboration through roles in a team

Members of project : NeLS_training_project_1

<input type="checkbox"/>	Full Name ↕	Role in Project ↕
<input type="checkbox"/>	Kjell Petersen Kjell.Petersen@uni.no	PI Manage File system: Add, Rename, Navigate, Download, Delete all Content
<input type="checkbox"/>	Kidane Tekle kidane.tekle@gmail.com	Normal User Add files & folders, Navigate & Download
<input type="checkbox"/>	Kjell Petersen Kjell.Ptrsn@gmail.com	Data Manager Add files & folders, Navigate & Download, Delete all Content

- Collaborator
- Core Facility
- Data Manager
- Helpdesk
- Normal User
- PI
- Power User

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<https://nels.bioinfo.no/pages/projects/projectdetail-view.xhtml?id=84#>

In both NeLS and StoreBioinfo projects your user profile gets permissions to work with data (upload, rename, move, delete, update) based on a **role** in a project.

Top level structure in StoreBioinfo

StoreBioinfo

You are at : » [StoreBioinfo](#)

Projects

Name ▾

- [SBI_training_project](#)
May 8, 2017
- [DLN-Seek-Test](#)
April 17, 2018

StoreBioinfo

You are at : » [StoreBioinfo / SBI_training_project](#)

[+ New Dataset](#)

Datasets

Name ▾

- [SBI_training_dataset](#)
Training dataset for
SBI part of
NeLS/Elixir Norway
training courses.

StoreBioinfo

You are at : » [StoreBioinfo / SBI_training_project / SBI_training_dataset](#)

Sub Types (1)

Type ▾

- [reads](#)
- [analysis](#)

StoreBioinfo

You are at » [StoreBioinfo / SBI_training_project / SBI_training_dataset / reads](#)

<input type="checkbox"/>	Name ▾	Size ▾
<input type="checkbox"/>	FolderWithVeryInterestingData	

[← Transfer To NeLS](#)

Organize data in NeLS before transfer to SBI

NeLS

You are at : » / Projects / NeLS_training_project_1

+ New Folder

<input type="checkbox"/>	Name ↕	Size ↕
<input type="checkbox"/>	Folder Kjell_24-02-2021	

Copy Cut Paste Delete Clear Selection Transfer To SBI

StoreBioinfo

You are at » StoreBioinfo / SBI_training_project / SBI_training_dataset / reads

<input type="checkbox"/>	Name ↕	Size ↕
<input type="checkbox"/>	FolderWithVeryInterestingData	

Transfer To NeLS

Prepare first in NeLS and do bulk transfer operations. Transferring single files is not efficient.