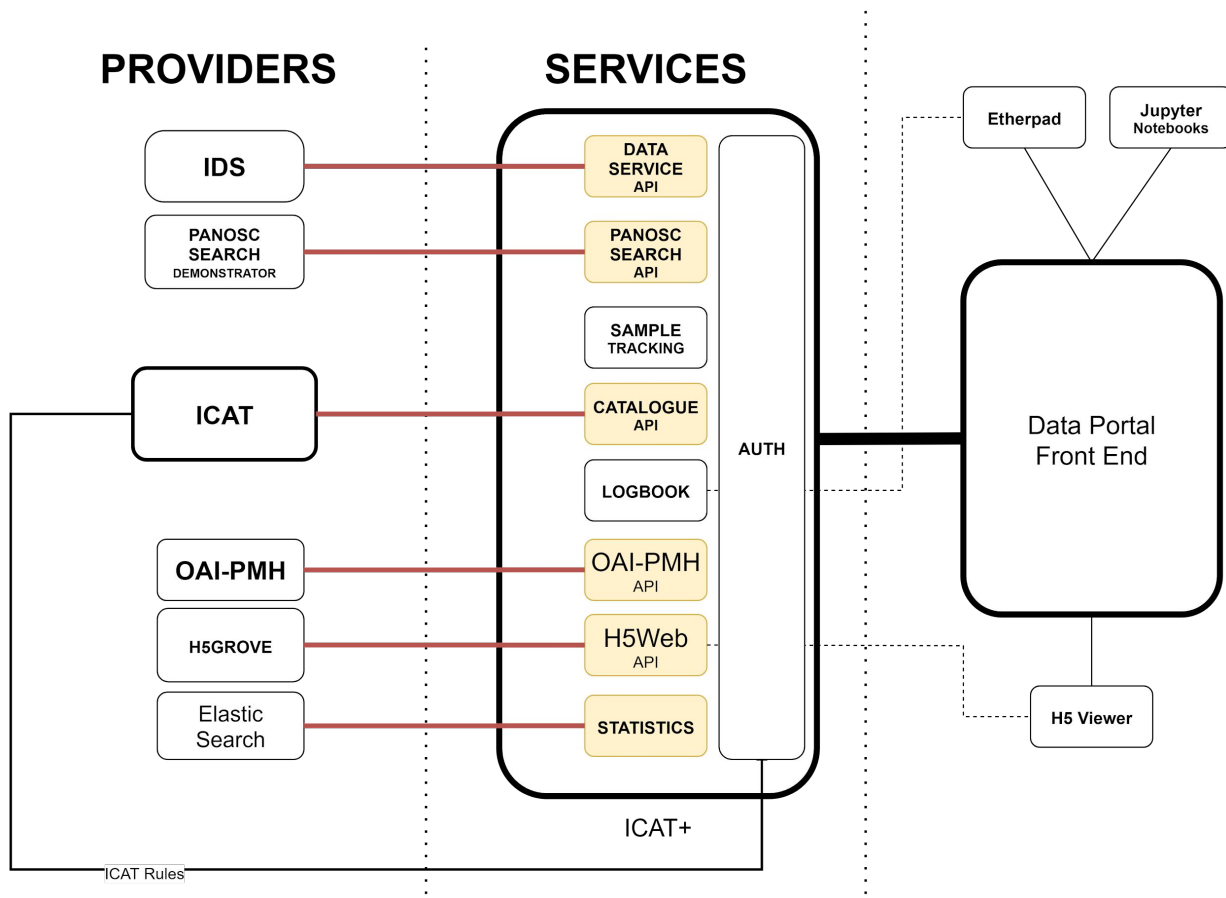


Data Portal

Alex de Maria
Software Engineer
Data Manager@Data Automation Unit
Berlin 03/05/2023



Features: investigation

Data Portal [My Data](#) [Open Data](#) [Closed Data](#) [Shipping](#) [My Beamlines](#) [Manager](#) [Feedback](#) [Log out: Alejandro DE MARIA](#)

[My Data](#)

Filter between dates Filter between dates

Proposal	Beamline	Start	Title	A-Form	Datasets	Files	Release	DOI
ID002020	ID00	14/10/2020	Sample tracking test proposal					
test123	ID19	27/02/2020	Test		1 0 Bytes	0		
id192002	ID19	27/02/2020			27 13.7 GB	26		
id312002	ID31	26/02/2020			1 0 Bytes	0		
test123	ID00	03/02/2020			3 0 Bytes	0		
test1	ID00	01/02/2020						
ID002020	ID00	14/01/2020	Sample tracking test proposal					
SC-4680	ID10	23/10/2019	Lipid Bilayers at Soft Liquid/Liquid interfaces		1 115.7 MB	3	28/11/2020	DOI: 10.1515/ESRF-ES-187132524
id310000	ID31	16/10/2019	BLISS Development Proposal for ID31					
MX-2005	CM01	11/06/2019	Near atomic resolution cryoEM structure of the type 6 secretion system membrane complex		8 4.1 TB	3073	10/12/2020	DOI: 10.1515/ESRF-ES-186674482
PUBJ-2	PUBLISHER	19/03/2019	A catalogue of characteristics from all samples processed on the fully autonomous ESRF beamline MASSIF-1 between 2014 and 2018		1 65.4 MB	1	19/03/2019	
PUBJ-1	PUBLISHER	19/03/2019	ESRF Upgrade Programme		2 64.0 MB	2	18/03/2019	
LS-2832	ID19	07/12/2018	How to make a limb bone: first three-dimensional histological insight.		112 5.2 TB	335737	10/12/2021	DOI: 10.1515/ESRF-ES-163247412
id000001	ID19	15/10/2018						
ID000000	ID00	19/09/2018	Development proposal		96 113.6 MB	139	14/09/2021	DOI: 10.1515/ESRF-ES-121810241
id000002	ID00	06/09/2018			0 0 Bytes	0		
EV-314	ID16A	02/03/2018	How did plant-life survive extinction: a 3D depiction of sporopollenin ultrastructure and nanochannels		77 998.9 GB	132147	06/03/2021	
OPID-1	ID30A-1	16/01/2018			7368 2.6 TB	1581589		
EC-203	ID19	17/02/2008	Palaeohistological implications in the origin of jawed vertebrates and the fish/tetrapod transition revealed by the ESRF Synchrotron.	EC-203	3 59.6 GB	28	19/02/2011	DOI: DOI

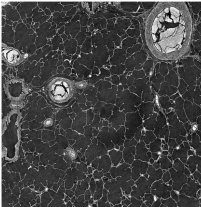
25 - Showing rows 1 to 19 of 19 1

Browse by investigation

Features: dataset view

Data Portal My Data [Open Data](#) [Closed Data](#) [Shipping](#) My Business [Manager](#) [Feedback](#) [Log out](#) Alejandro DE MARIA

Summary [Files](#) [Metadata List](#)



The Human Organ Atlas

DOI

Abstract

Two scans in local tomography at 2.5um size size performed by HIP-CT on the beamline BM05 of the left lung from the body donor LADAF-2020-27 using half- acquisition mode. Performed on same location with small displacement for Fourier Shell Correlation assessment of the resolution. The two volumes have been aligned in 3D before being re-exported with similar bounding boxes.

Title

Two scans at 2.5um in the upper apical lobe of the left lung from the body donor LADAF-2020-27

Users

Paul Tiffereau, Claire Webb, Will L. Wagner, Daniela J. Jafra, Alexandra Keller, Christiane Wurlits, Mark P. Rizhal, Edoile Balles, Simon Walker, Samuel Jan Lukas Robertus, David A. Long, Joseph Jacob, Sebastian Maroni, Emanuele Brown, Natalia Hohenfeld, Denny D. Jorrig, Maximilian Ackermann, Peter O. Liu

[/data/projects/hop/human_organ_atlas/public/LADAF-2020-27/lung_half/2.5um_FSC](#)

[Download](#)

10 - Showing rows 1 to 1 of 1

Data Portal My Data [Open Data](#) [Closed Data](#) [Shipping](#) My Business [Manager](#) [Feedback](#) [Log out](#) Alejandro DE MARIA

[Open Data](#) / [BM05/STRESS/DE MARIA](#)

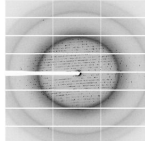

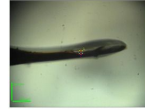
Dataset List (11)

Search

Date	Sample	Dataset	Definition	Files	Size	Processed	Download
19:34 8 Apr 2016	AFAMIN-revi-B5-1	AFAMIN-revi-B5-1_1,1719747		1640	3.8 GB		Download

Summary [Crystallography](#) [Instrument](#) [Files](#) [Metadata List](#)

Name	AFAMIN-revi-B5-1_1,1719747	Resolution	2.22003 Å
Start	7:34:16 PM	Wavelength	0.966 Å
Sample	AFAMIN-revi-B5-1	Exposure Time	0.355 s
Images	1640	Flux start	1.41e+11
Transmission	100%	Flux end	1.39e+11
Prefix	AFAMIN-revi-B5-1_1_####.tif	X Beam	129.191 mm
		Y Beam	146.853 mm

[/data/3001/Inhouse/openData/20160406/RAW_DATA/AFAMIN/AFAMIN-revi-B5-1](#)

[Download](#)

19:33 8 Apr 2016	AFAMIN-revi-B5-1	rev-afamin-revi-B5-1_1,1719746	4	95 MB	Download
19:32 8 Apr 2016	AFAMIN-revi-B5-1	line-afamin-revi-B5-1_4,1719745	60	141.8 MB	Download
19:31 8 Apr 2016	AFAMIN-revi-B5-1	line-afamin-revi-B5-1_3,1719744	40	94.5 MB	Download
19:30 8 Apr 2016	AFAMIN-revi-B5-1	line-afamin-revi-B5-1_2,1719743	40	94.5 MB	Download
19:29 8 Apr 2016	AFAMIN-revi-B5-1	mesh-afamin-revi-B5-1_1,1719739	24	56.7 MB	Download
19:29 8 Apr 2016	AFAMIN-revi-B5-1	mesh-afamin-revi-B5-1_1,1719736	24	56.7 MB	Download
19:28 8 Apr 2016	AFAMIN-revi-B5-1	mesh-afamin-revi-B5-1_1,1719733	24	56.7 MB	Download
19:28 8 Apr 2016	AFAMIN-revi-B5-1	mesh-afamin-revi-B5-1_1,1719731	24	56.7 MB	Download
19:27 8 Apr 2016	AFAMIN-revi-B5-1	mesh-afamin-revi-B5-1_1,1719728	24	56.7 MB	Download
19:27 8 Apr 2016	AFAMIN-revi-B5-1	mesh-afamin-revi-B5-1_1,1719725	24	56.7 MB	Download

10 - Showing rows 1 to 10 of 11

Human organ atlas dataset view with Edit mode

Standard view based in the gallery

Features: dataset view

- Automatic upload of processed data has been implemented in some beamlines

<https://data.esrf.fr/investigation/1034440029/datasets>

Features: technique specific viewers

Datasets Files

File Explorer

Search

	Location		
ACQUISITION	/scan0001/sample_water0000.h5	↓	🔍
ACQUISITION	/water_calib_21Feb23_sc_sample_water.h5	↓	🔍
INTEGRATE	/gallery/sample_water0000_Scattering.png	↓	🔍
INTEGRATE	/gallery/sample_water0000_avg.dat	↓	🔍
INTEGRATE	/sample_water0000-integrate.h5	↓	🔍
SUBTRACT	/gallery/sample_water0000-integrate_Guinier.png	↓	🔍
SUBTRACT	/gallery/sample_water0000-integrate_Kratky.png	↓	🔍
SUBTRACT	/gallery/sample_water0000-integrate_Scattering.png	↓	🔍
SUBTRACT	/gallery/sample_water0000-integrate_subtracted.dat	↓	🔍
SUBTRACT	/sample_water0000-integrate-sub.h5	↓	🔍

20 Showing rows 1 to 10 of 10

1

Viewer

sample_water0000-integrate.h5

Display Inspect Feedback

NX Line

X Linear Y Log

Auto-scale

Errors

Grid

Line

Points

Both

Export

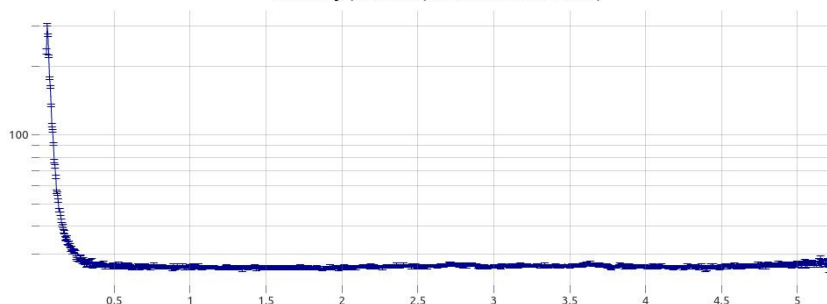
?

1000

X D0

Intensity (absolute, normalized on water)

Intensity (absolute, normalized on water)



Open viewer

Features: Electronic logbook

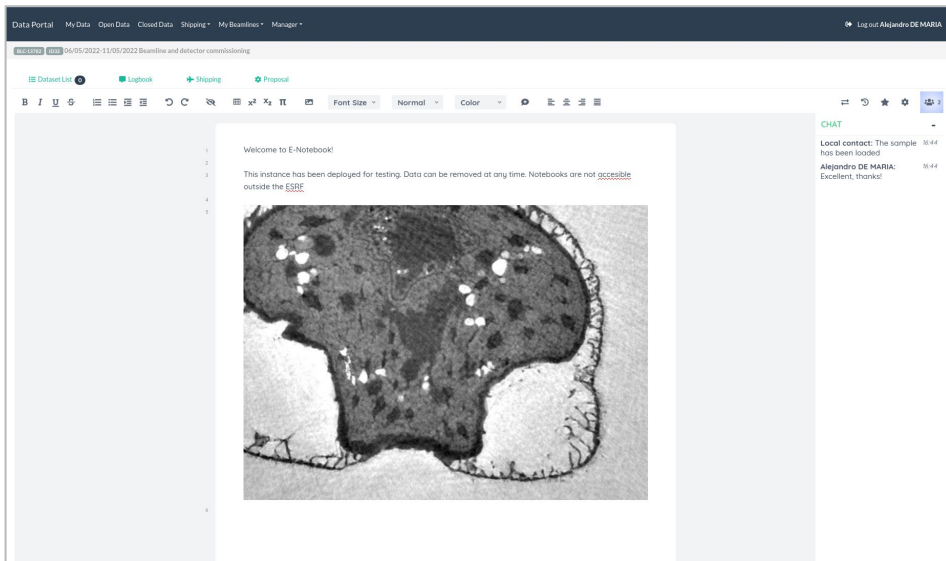
Screenshot of an electronic logbook interface. The top navigation bar includes 'Data Portal', 'My Data', 'Open Data', 'Closed Data', 'Sharing', 'My Bookmarks', and 'Manager'. A search bar is present with '365 found' results. The main content area shows a log entry for 'November 29th 2022' with a timestamp of '14:46:56' and the text 'At 14:46 after the experiment'. Below this is a photograph of a crumpled, reflective silver material. A second entry for 'November 28th 2022' at '06:02:28' is titled 'shock - run 630' and includes detailed experimental parameters: 'Definition: PuM32-Fa202-Burnup20221831', 'Stored in: s3://data-us-east-1-us-east-2/20221122/hv/0430_shock_2022_11_28_06_00_13/hv_0430_shock_2022_11_28_06_00_13.csv', 'Relative detector settings: Pulse (SR) = 6.2s, Probe (sr) = 13.5 mrad (3.0 sr)', 'Dose energy: 18 MeV, 180.0 J, 0.0018000000000000001', and 'Dose rate: 15.4 J/200g of material @ 13.5 mrad and energy: 344.0 J'. This entry contains a line graph showing a peak, and two sets of images labeled 'V1' and 'V2' showing a dark, textured surface.

Screenshot of a beamline logbook interface. The top navigation bar includes 'Data Portal', 'My Data', 'Open Data', 'Closed Data', 'Sharing', 'My Bookmarks', and 'Manager'. A search bar is present with '365 found' results. The main content area shows a log entry for 'March 20th 2023' with a timestamp of '09:53:03' and the text 'Major PU Upgrade Meeting from V1 edge'. Below this is a line graph showing a peak. The entry contains detailed experimental parameters: 'Definition: PuM32-Fa202-Burnup20221831', 'Stored in: s3://data-us-east-1-us-east-2/20221122/hv/0430_shock_2022_11_28_06_00_13/hv_0430_shock_2022_11_28_06_00_13.csv', 'Relative detector settings: Pulse (SR) = 6.2s, Probe (sr) = 13.5 mrad (3.0 sr)', 'Dose energy: 18 MeV, 180.0 J, 0.0018000000000000001', and 'Dose rate: 15.4 J/200g of material @ 13.5 mrad and energy: 344.0 J'. This entry contains a line graph showing a peak, and two sets of images labeled 'V1' and 'V2' showing a dark, textured surface.

- 3 levels of logbook
- Experiment
 - Beamline
 - Facility

Electronic logbook

Features: Notebook

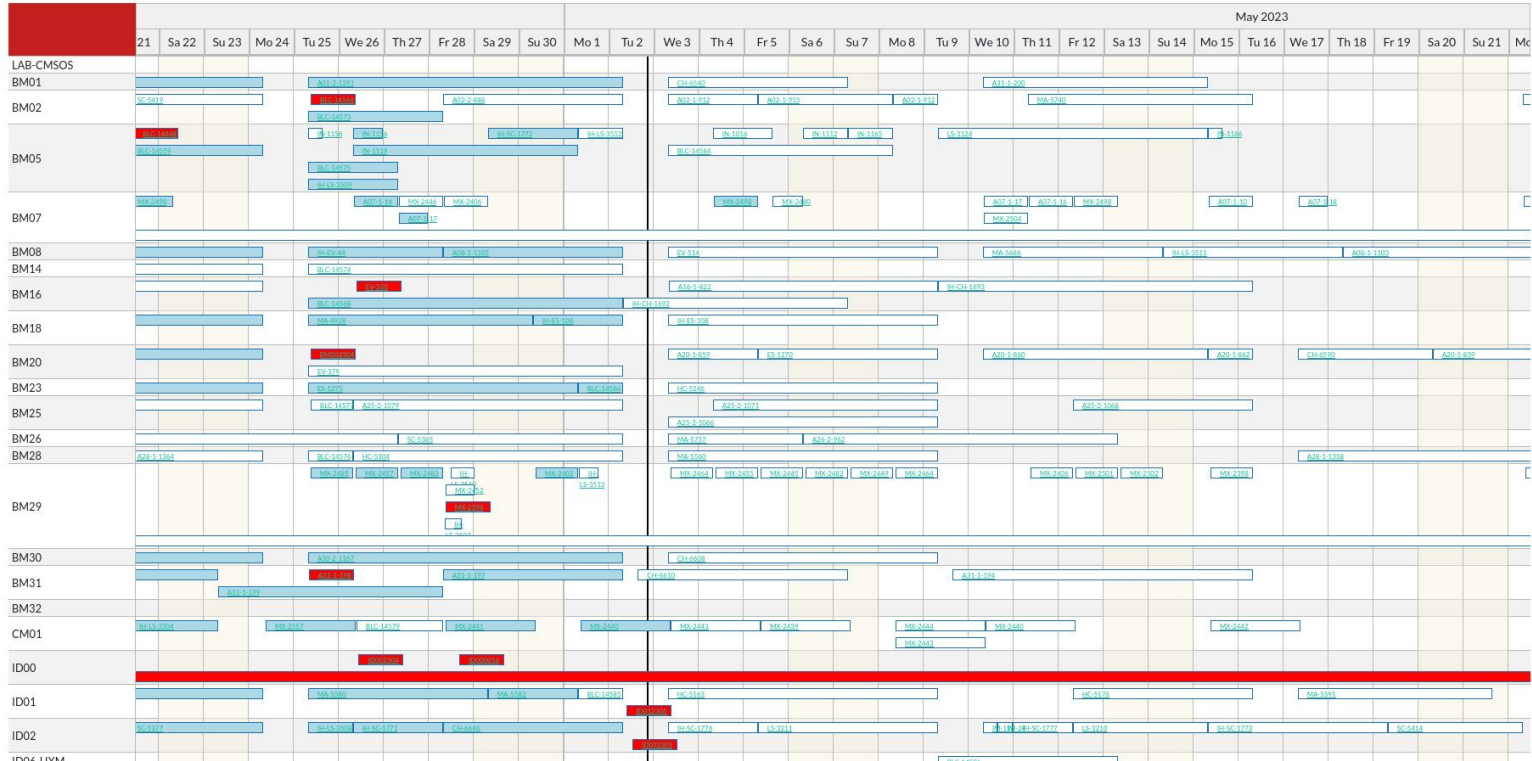


- Currently, deployed and under testing on few beamlines
- Feedback:
 - Some positive
 - Some negative:
 - Corruption of the pads
 - Difficult to work with images
 - Difficult to work with tables
- Is it well maintained?
- Considering alternatives
 - TinyMCE
 - OnlyOffice

Features: Investigation calendar

Calendar

Session not scheduled Session contains data Empty session



Features: Statistics

Data Statistics

Settings

Custom Dates

Start Date:

End Date:

Group by

Technique (definition)

Instrument

Metric

Volume

File Count

Interval

1 day

1 week

1 month

3 months

Plot

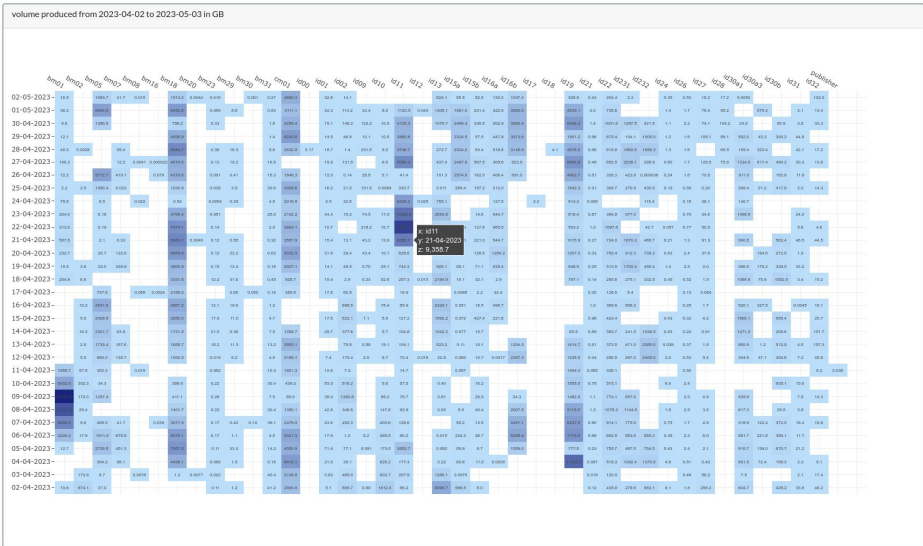
Heatmap

Line

Line (cumulative)

Bar

Overall **Beamlines**



Data Statistics

Settings

Overall **Beamlines**

From 2023-04-02 to 2023-05-03

Summary

Datasets	98489
Beamlines	42
Total Volume	592.3 TB
Total Number of files	33145195

Dataset

Average file count	337
Max files	46800
Average volume	6.2 GB
Max volume	11.1 TB
Average metadata	19.0

Statistics from data produced 2023-04-02 until 2023-05-03. The pie plots represent the volume of data 1) per definition (technique) and 2) per beamline

Since last 7 days

Summary

Datasets	20596
Beamlines	41
Total Volume	187.5 TB
Total Number of files	4369395

Dataset

Average file count	212
Max files	16983
Average volume	9.3 GB
Max volume	3.9 TB
Average metadata	24.9

All

Summary

Datasets	1791663
Beamlines	49
Total Volume	10.5 PB
Total Number of files	60723634

Dataset

Average file count	339
Max files	200002
Average volume	6.1 GB
Max volume	11.1 TB
Average metadata	23.8

Data produced since the beginning of time

Features: Sample Tracking

Data Portal My Data Open Data Closed Data Shipping My Business Manager Feedback Log out Alejandro DE MABIA

Home 14/01/2020 - 14/01/2020 00:00:00

Dataset List Logout Shipping Samples Proposal

Shipping configuration

Default sender's address

- Ente Siller Guayaquil 12345367
- gsawak@frecf
- Equidad Superior Patatechica Via Perimetra 5 2308 San Lorenzo ECUADOR

Default return address

- Ente Siller Guayaquil 12345367
- gsawak@frecf
- Equidad Superior Patatechica Via Perimetra 5 2308 San Lorenzo ECUADOR

Comments

No comments

Parcels

Filter by status Search

Name	A Firm	Barcode	Start date	Number of items	Status	Dangerous goods	After engagement
MPO test parcel 0		1000	14/01/2020	2 samples 1 tool 3 others	SCHEDULED	NO	Ship back
Parcel 24-07-01		1000	14/01/2020	1 sample 1 tool 0 other	SCHEDULED	YES	Ship back
New test Declined		1000	14/01/2020	1 sample 1 tool 0 other	NEEDS MORE INFO	NO	Ship back
Another parcel		1000	14/01/2020	1 sample 0 tool 0 other	SENT	YES	Ship back
Int parcel		1000	14/01/2020	0 sample 0 tool 1 other	SENT BACK TO USER	NO	Ship back
parcel3		1000	14/01/2020	0 sample 0 tool 0 other	APPROVED	YES	Ship back
parcel2		1000	14/01/2020	0 sample 0 tool 0 other	SENT BACK TO USER	YES	Ship back
My test Parcel		1000	14/01/2020	0 sample 1 tool 1 other	SCHEDULED	NO	Ship back

25 Showing rows 1 to 8 of 8

Data Portal My Data Open Data Closed Data Shipping My Business Manager Feedback Log out Alejandro DE MABIA

test steph EUOM2022

Download Labels Print

Status: APPROVED Action: Approve

Parcel info

Description: Test
Storage conditions: At room temperature
Comments: No comments

Address of Sender:

- Seres Girona
- 2080
- caradon@seris
- User Office: 158F 7 Avenue des Martyrs 20000 Grenoble France

Return Address:

- steph@frecf
- 1221
- gsawak@frecf
- steph@frecf 34543 wels wels

Content

Add entries Search

Name	Type	Sample	Description	Comments
user	Tool		at 400cm	
sample1	Sample/best	Sample/best E		

History

Status Updated at Updated by Comments

- APPROVED 2020-03-20 11:05 GMT Alejandro DE MABIA
- READY FOR SAFETY CHECK 2020-03-20 11:05 GMT Alejandro DE MABIA
- SCHEDULED 2020-03-20 11:05 GMT Alejandro DE MABIA Set by admin
- APPROVED 2020-03-20 11:05 GMT Alejandro DE MABIA
- READY FOR SAFETY CHECK 2020-03-20 11:05 GMT Alejandro DE MABIA
- SCHEDULED 2020-03-20 11:05 GMT Alejandro DE MABIA
- APPROVED 2020-03-27 15:34 GMT Alejandro DE MABIA
- READY FOR SAFETY CHECK 2020-03-27 15:34 GMT Alejandro DE MABIA
- SCHEDULED 2020-06-20 14:58 GMT Stephanie MONACO
- CREATED 2020-06-20 14:58 GMT Stephanie MONACO

Admin section

Change the status to: UNAPPROVED

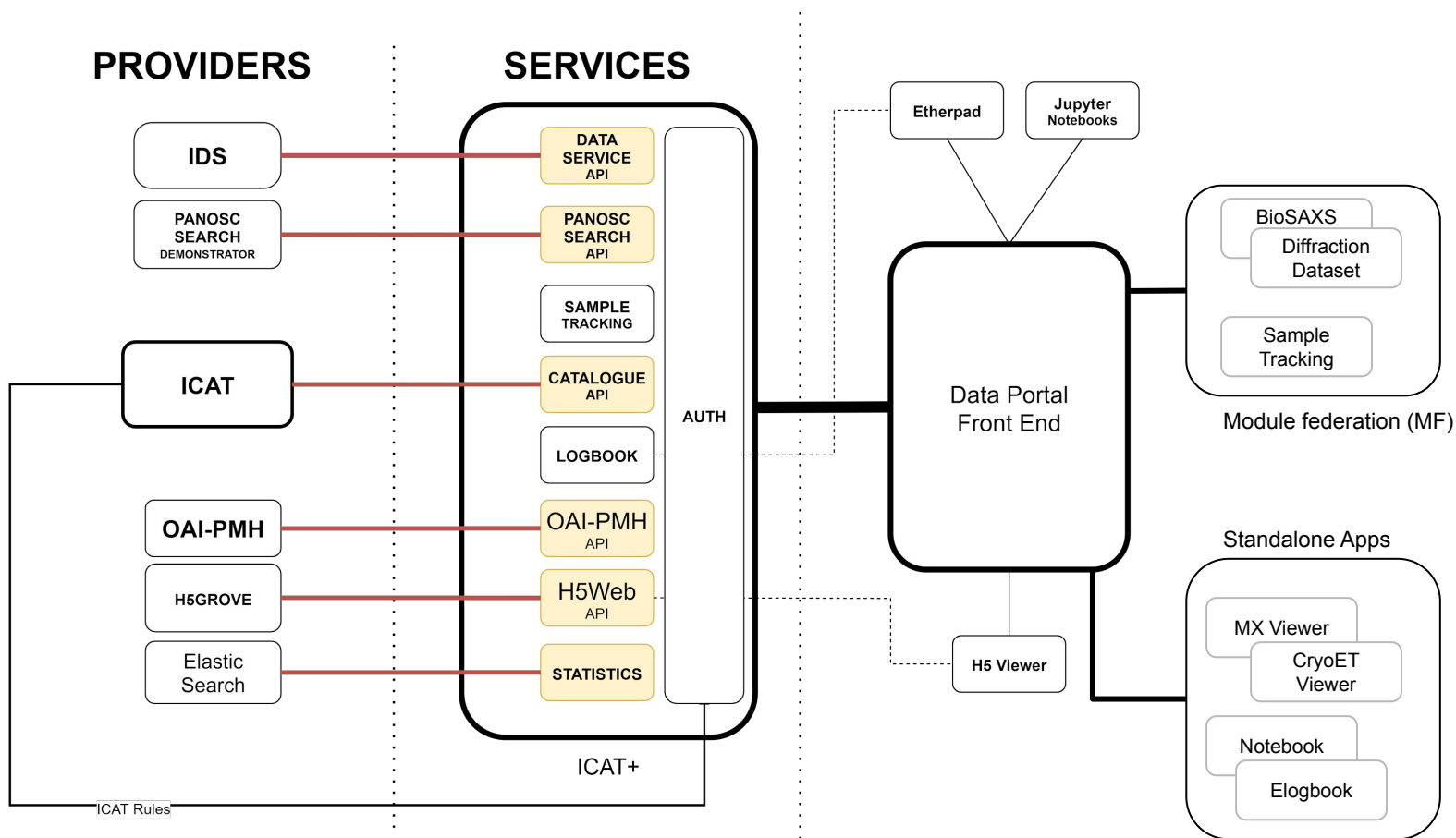
- This will set the parcel back in editable mode but will require safety validation once again.

To be used when the user has made mistakes during the parcel preparation and cannot correct them.

To sum up

- Data portal provides a set of very useful features needed by users
- It has been developed during the last 6 years
- It allows to get be very valuable feedback

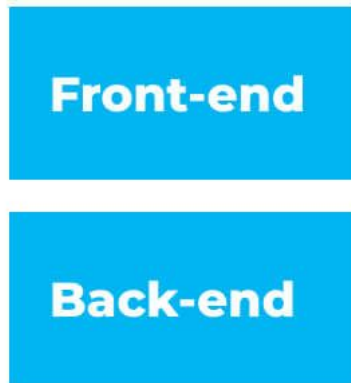
- BUT it needs:
 - To be consolidated and improved
 - Currently working on sample tracking v2.0
 - Flexibility
 - Improve scalability
 - Module federation or standalone applications vs Monolithic



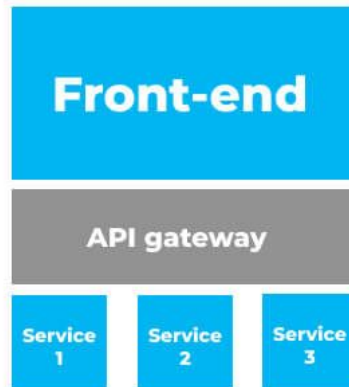
Monolithic architecture



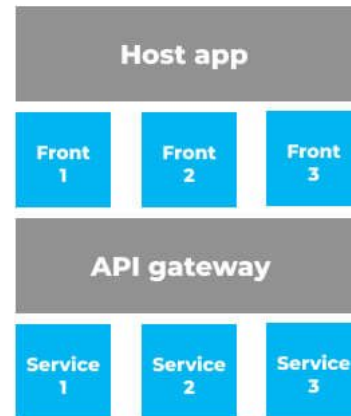
FE/BE architecture



Microservices architecture



Microfrontends architecture



Module federation or micro frontends

- **Vite-plugin-federation**
 - Sharing components at run-time
- Data portal as entry point

The screenshot displays a web application interface. On the left, a navigation sidebar features the logo 'vite-plugin-federation' and menu items: 'Home', 'Store', and 'About'. The main content area is titled 'The Model Store' and features a large image of a blue tractor, 'Tractor Eicher Diesel 215/16', with a price tag of 'buy for 58,00 €'. A green badge indicates 'basket: 4 item(s)'. To the right, a 'Related Products' section shows three smaller model vehicles: a blue and white Volkswagen Beetle, a silver open-wheel race car, and a red cable car.

- **Very very very preliminary work has been done**
 - Mono-repo
 - Module federation
 - Deployed via gitlab CI on docker swarm

The screenshot displays the GitLab web interface for the 'data-portal' project. The left sidebar contains navigation links for Project information, Repository, Issues (3), Merge requests (2), CI/CD, Security and Compliance, Deployments, Packages and registries, Infrastructure, Monitor, Analytics, Wiki, Snippets, and Settings. The main content area shows the project name 'data-portal' with a Project ID of 3846. It indicates 93 Commits, 13 Branches, 14 Tags, 244.8 MB Project Storage, and 57 Environments. A recent commit by Mael Gaonach is highlighted, titled 'Merge branch '11-fix-ss0-authentication-when-jumping-between-apps' into 'main''. Below the commit, there are buttons for 'Find file', 'Web IDE', and 'Clone'. A table lists the project's files and their last commit details.

Name	Last commit	Last update
.gitlab	Building portal	1 week ago
.vscode	Implement logistics	5 days ago
apps	Resolve "Fix SSO authentication when jumping between...	5 days ago
docker	Change docker compose to swarmerize it	1 week ago
packages/core	Resolve "Fix SSO authentication when jumping between...	5 days ago
.eslintignore	fix eslint	1 month ago
.gitignore	Merge branch 'implement-logistics' into 'main'	5 days ago
.gitlab-ci.yml	Merge branch 'implement-logistics' into 'main'	5 days ago
.prettiignore	Resolve "Add gitlab-ci"	1 month ago
.prettierrc	Resolve "Add gitlab-ci"	1 month ago
docker-compose.yml	Change docker compose to swarmerize it	1 week ago

Acknowledgement

- Marjolaine Bodin
- Mael Gaonach
- Andy Goetz
- Wout de Nolf
- Olof Svensson
- Axel Bocciarelli
- Loic Huder
- Data Automation Unit

Evolution

2017

CRA + React 16 + JS + Class Components

2019

CRA2 + React 16 + JS + Functional components

2020

CRA2 + React 16 + JS + Functional components + hooks

2023

VITE + React 18 + TS + Module Federation