

For Users Webpages

Project development showcase

Sylvana Brewer – User Officer, Research Coordination Office

Proposal Management System (UOS)

User Policies and Guidelines

Shipping Samples and Equipment

Beamtime Allocation

Instruments and Techniques

Safety and Training

Visit Registration

Feedback and Publications

User Office Support



Extreme Environment Spectrometer

Status: Offline

User Operations expected by the end of 2027

BIFROST is an extreme environment cold indirect spectrometer, focusing mainly on collective dynamics in single crystals, suited to conventional studies of low energy collective dynamics but dedicated to enabling studies of excitations perturbed by applied pressure, magnetic fields and electrical field. [\[Read more\]](#)

Best suited for

Quantum magnets • Superconductors • Frustrated materials
Weyl systems • Functional magnets • Thermoelectrics

Key characteristics

Bandwidth at sample position	1.74 Å
Overall incident energy range	1.7 - 60 meV
Overall final energy range	2.7 - 5.0 meV
Maximum flux on sample using full 2.86 ms pulse	6 · 10 ⁹ n/s/cm ²
Maximum flux on sample using 0.1 ms PSC opening time	2 · 10 ⁸ n/s/cm ²
Scattering angle range	5 - 135°
Spectrometer tank angular coverage (2 settings)	90°
Scattering angle resolution	0.62° - 0.89°
Single analyser scattering angle coverage	5.2°
Incident beam divergence	± 0.2° to ± 0.75°
Elastic line resolution at max flux	180 ueV
Finest achievable elastic line resolution (final energy 2.7 meV)	20 ueV
Finest achievable energy resolution at 20 meV energy transfer final energy 2.7 meV	50 ueV

Instrument contact

Rasmus Toft-Petersen: Rasmus.toft-petersen@ess.eu
Lukas Beddrich: Lukas.beddrich@ess.eu



Science & InstrumentsTechnologyBuilding ESSPartnershipsCareers

HomeFor UsersFor Users

For Users

The first ESS call for proposals is now open. The call for [Instruments, Dates] is open and must be submitted by [Deadline: UTC].

Beamtime Notice: Upcoming Call Information - Apply now!

Access to ESS

Apply for Beamtime

Proposal Management System

Instrument Selector

Before You Arrive

Plan your experiment, travel, accommodation and access requirements

During Your Experiment

Find on-site support, safety, instrument access and facility information

After Your Experiment

Access your data, publication guidance and follow-up resources

Your Journey at ESS: Download the Full User Checklist

Using ESS for Your Research

The European Spallation Source (ESS) welcomes users from anywhere in the world to submit proposals and carry out experiments. Access to beamtime is granted through a scientific peer review process based on the quality and feasibility of submitted proposals. Read more about the [User Journey at ESS](#).

Beamtime for non-proprietary research is free of charge, provided that results and published openly in the scientific literature in accordance with the ESS publication and data policies. Proprietary access for industrial or confidential research may also be available under separate conditions. Read more about [access for industry users](#).

Quick links

In an emergency

FAQ hub

Latest newsletter

Instrument selector

Case studies

Need help?

Contact our User Office

Why use Neutrons for Your Research?

Science with neutrons

ESS

Science with neutrons

Neutrons are a powerful tool for studying the structure and dynamics of materials at the atomic scale. They can probe matter deep inside samples, distinguish between light elements, and reveal magnetic behaviour that is difficult to access with other techniques.

At ESS, neutron scattering supports research across material science, chemistry, physics, engineering, energy technologies, life sciences, cultural heritage, and more.

Read about Science and Instruments at ESS

Latest News

New sample environment capabilities available for user experiments

Dec 23, 2023

READ MORE

ESS expands data analysis support for users

Dec 14, 2023

READ MORE

Breakthrough in next-generation sustainable battery materials research at ESS

Dec 11, 2023

READ MORE

Agenda

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01 | Introduction

Purpose

The For Users webpages support users throughout the full ESS experimental lifecycle

It will provide users with guidance, resources, checklists and links to essential services

User Workflow Timeline

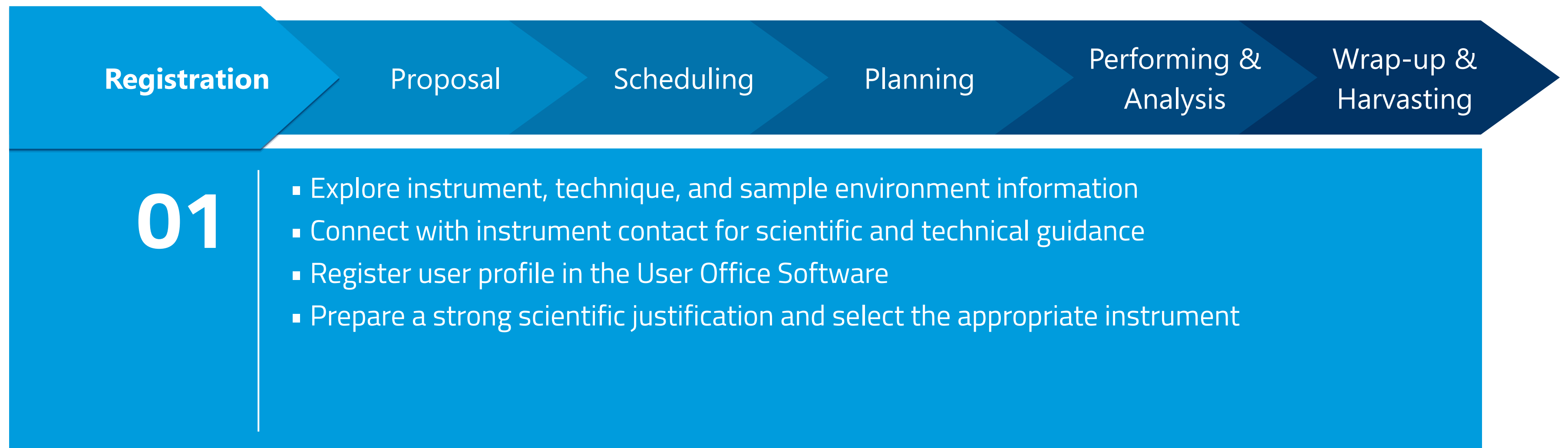


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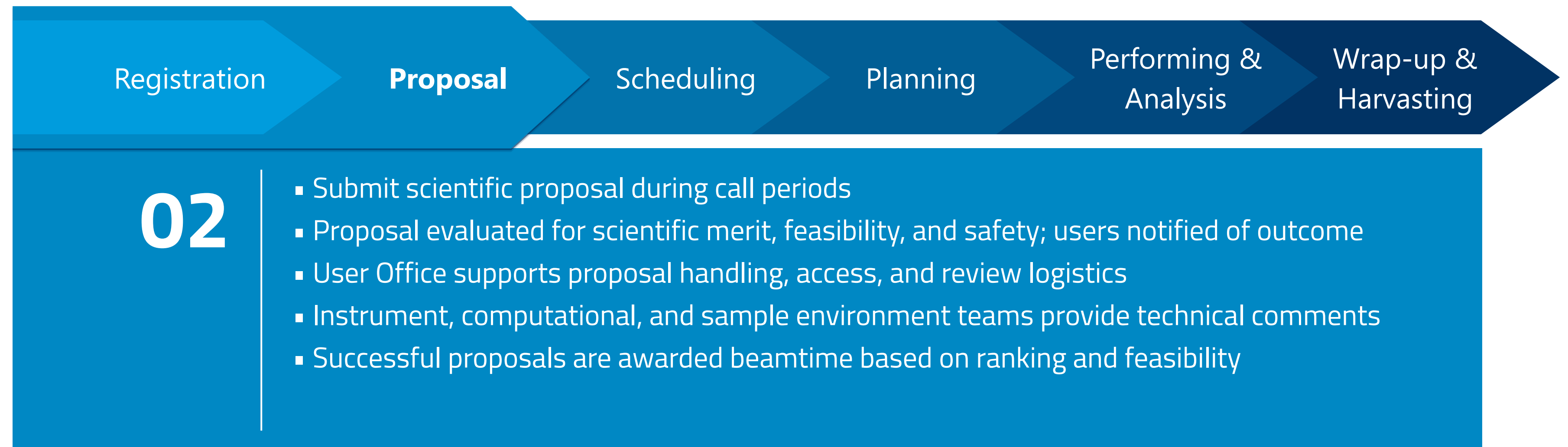


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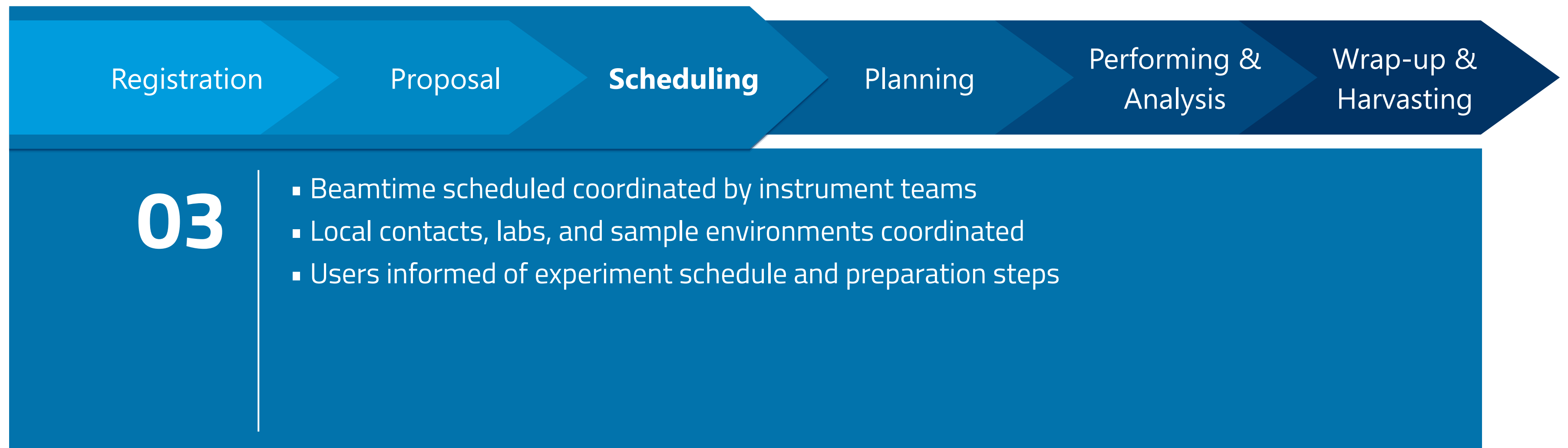


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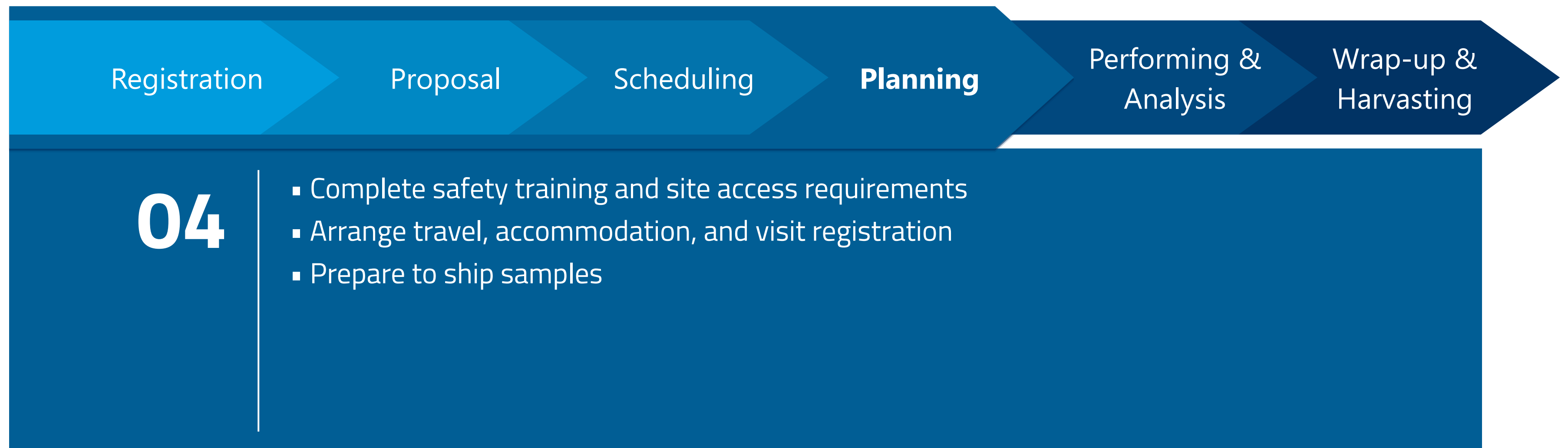


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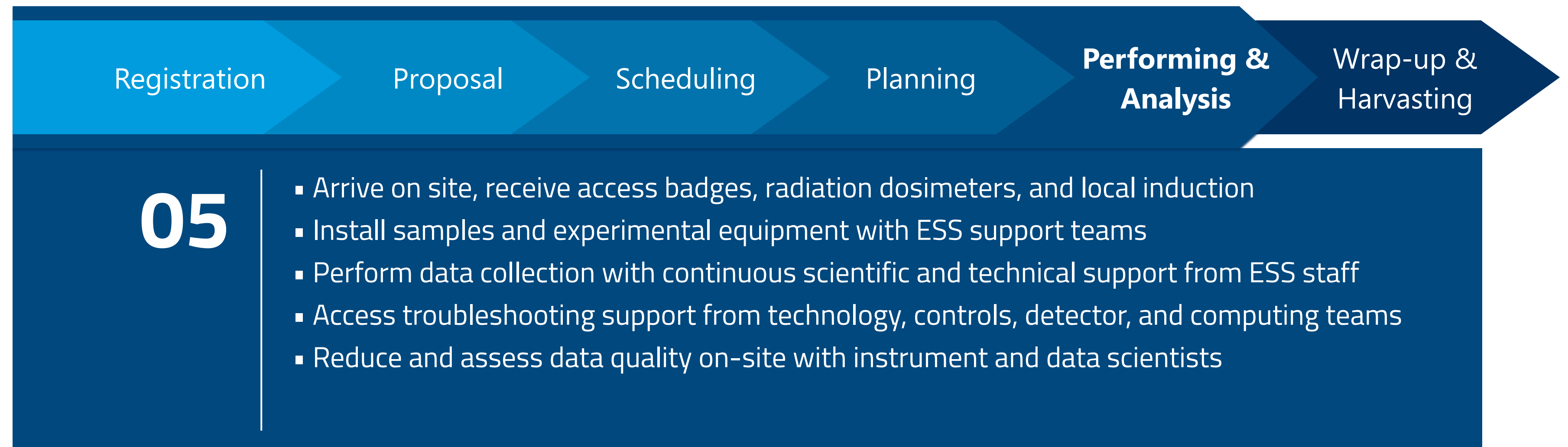


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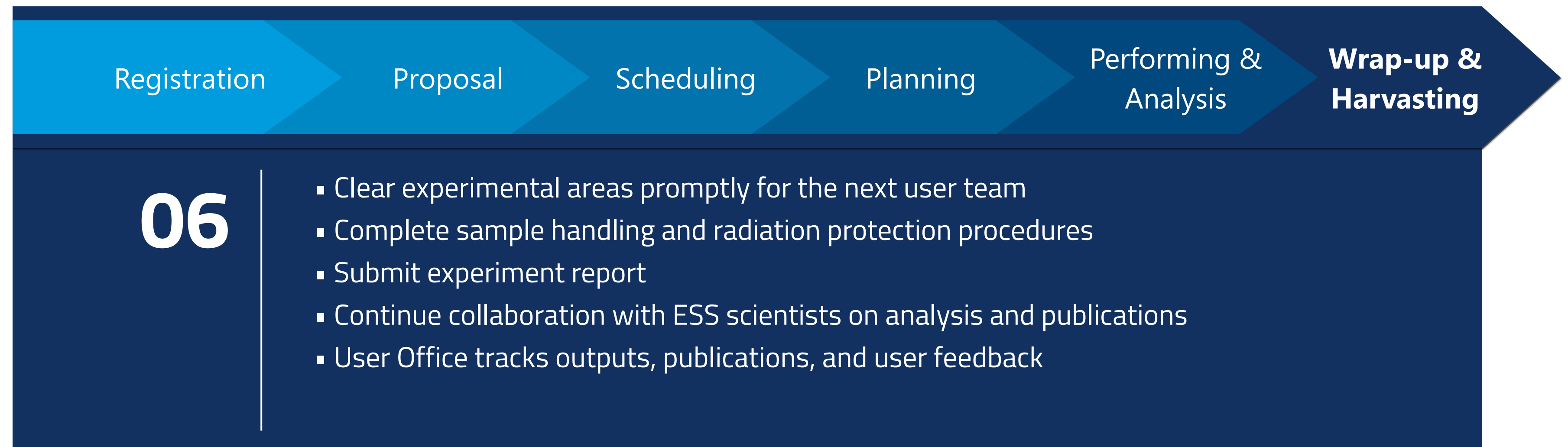


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User Workflow Timeline



ESS Digital User Ecosystem

The website content and purpose differs from the other digital information mainly because it is:

- 1. Easily and publically accessible - not behind authentication**
- 2. Details the full user journey - not personalised based on individual proposals**
- 3. Science-focused; aimed at prospective, current and new users - not only for the general public**

Emails and reminders to users will link to and reference further information on website



The UOS will refer to website information for notices and guidance; e.g., current call information, instrument pages

Digital User Information Network



The For Users pages will guide users to the UOS to submit and manage their proposals

The UOS sends automated emails to users to support them in their next step in the user journey

Access

Upon release, the “For Users” pages website will be easily found on the ESS external website

 ess.eu/forusers

[VIEW PROFILE](#) [PUBLICATIONS PORTAL](#) [CONTACT](#) [PRESS](#) [LOGOUT](#) [↓ BEHIND ESS](#)



EUROPEAN
SPALLATION
SOURCE



[For Users](#)

[Industry](#)

[About ESS](#)

[Science & Instruments](#)

[Technology](#)

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[Partnerships](#)

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Opening up the World of Materials

FIRST SCIENCE FROM 2027

THIS IS THE SANDBOX VERSION OF THE WEBSITE

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WEBSITE

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WEBSITE

Project scope

Scope

This project concerns only the development of the “For Users” webpages. Please direct any queries regarding other content on the external website to the Communications & Engagement team at ESS

Broad external website

- Overviews of ESS developments aimed at the general public & external stakeholders
- Construction & engineering details on instruments
- Future science case studies

For Users pages

- Scientific content for users
- Operational details for instruments
- Current science: Links to publication portal, case studies, feature articles, etc.

02 | Governance

Subject Matter Experts

Each subject matter expert will be given access to their respective page

- Collaboration with subject matter experts for their respective page content is ongoing via Confluence pages which have been set up to mimic the structure of the external website
- Once the test environment structure and the page drafts are complete, we would like to give agency to the subject matter experts to edit and maintain their respective content via Drupal
- The User Office will send reminders for content maintenance and ensure that it is user friendly; uses consistent language, is well-structured, and up to date for our users

More to follow regarding Drupal collaboration later...

Steering Group

Giovanna Fragneto

Science Director

Pascale Deen

Head of Spectroscopy Division

Mikhail Feygenson

Head of Diffraction and Imaging Division

Andrew Jackson

Head of Large Scale Structures Division

Fredrik Bolmsten

Group Leader for Scientific Information Management Systems

Manuel Morgano

Group Leader for Research Coordination Office

03 | Approach

Benchmark Research



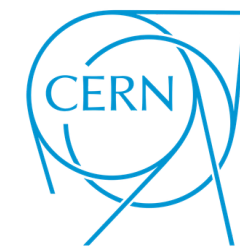
DLS - Diamond Light Source



XFEL - European X-Ray
Free-Electron Laser Facility



MAX IV - MAX IV Laboratory



CERN - European Organization
for Nuclear Research



ESRF - European Synchrotron
Radiation Facility



FRM II
Forschungs-Neutronenquelle
Heinz Maier-Leibnitz

FRM II - Heinz Maier-Leibnitz



ISIS - ISIS Neutron and Muon
Source



SNS - Spallation Neutron Source



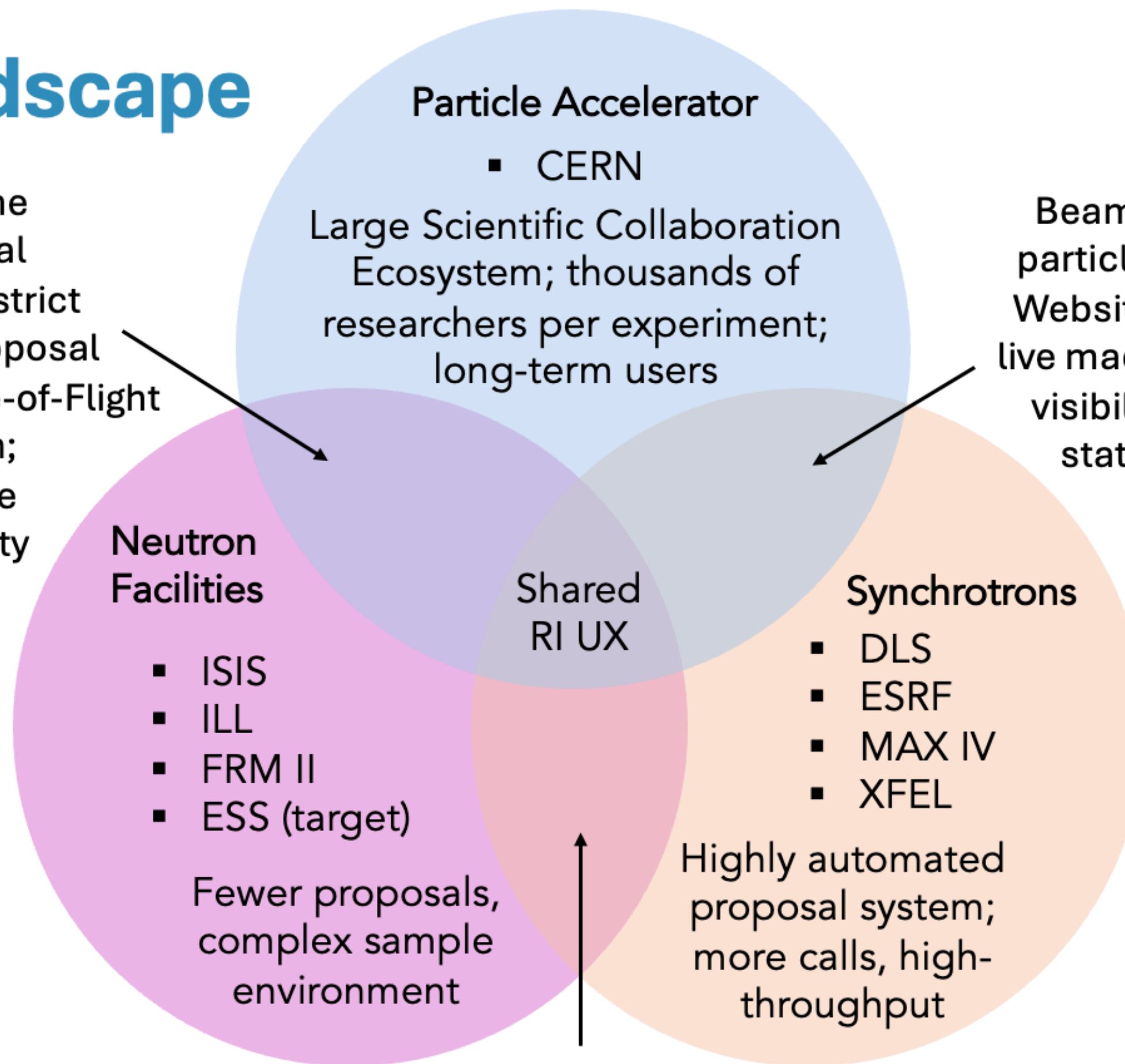
ILL - Institut Laue-Langevin



PSI - Paul Scherrer Institute

UX Landscape

Extensive Beamline Booking & Proposal Systems utilising strict peer-reviewed proposal dashboards; Time-of-Flight Data Visualisation; Extensive resource scheduling & safety documentation



Beamline-centric and particle-physics-driven; Websites often focus on live machine/beam status visibility & accelerator status dashboards

ESS:

Target reference informed by all benchmark groups

Benchmark Research

Most Frequent Top-Level Pages

Page	DLS	MAX IV	ESRF	ILL	ISIS	XFEL	CERN	FRM II
Users / User Guide / Welcoming Users /Using ISIS								
Help Service Desk / Contacts / User Office								
Apply for beamtime / Beamtime								
Your Experiment / On Site / Your Experiment from A to Z								
Health, Safety and Environment / Safety / User Safety								
Liaison Office / Business / Industrial Users								
User Committee (DUC) / User Organisation								
Policies								
Quick Reference / Quick links								
Before Your Experiment / Pre-arrival information								
User Portal / User Club								

Guiding principles of good websites

User friendly - Information is well structured, consistent, and geared toward scientific users (as opposed to merely reflecting internal processes)

Reliable scientific and operational expertise - Well-maintained and accurate information

Future-ready - Content is easily discoverable in search engines & AI overviews

Seamless support - End-to-end support of the user journey

Self-service oriented - Facilitates self-service wherever possible

04 | Showcase



This project is under development

Page content and structure are subject to change prior to publication

For Users Page Structure

- The pages are structured around the user journey



For Users Page Architecture

Access to ESS

Apply for Beamtime

Instruments & Techniques

Science Support

Proposal Writing Guide

Proposal Management
System (UOS)

Beamtime Allocation

User Policies & Guidelines

FAQ - Access to ESS

Resources

All Policies

FAQ Hub

Before You Arrive

Planning Your Visit

Safety and Training

Shipping Samples &
Equipment

Registration

Access Cards

IT Accounts

Data Policy

FAQ - Before You Arrive

Contact & Support

User Office

During Your Experiment

User Office Support

Experimental Areas

After Hours Support

Health, Safety &
Environment

Facilities & Services

Computing & Data Access

FAQ - During Your
Experiment

Industry

Industry Services

After Your Experiment

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Acknowledgements

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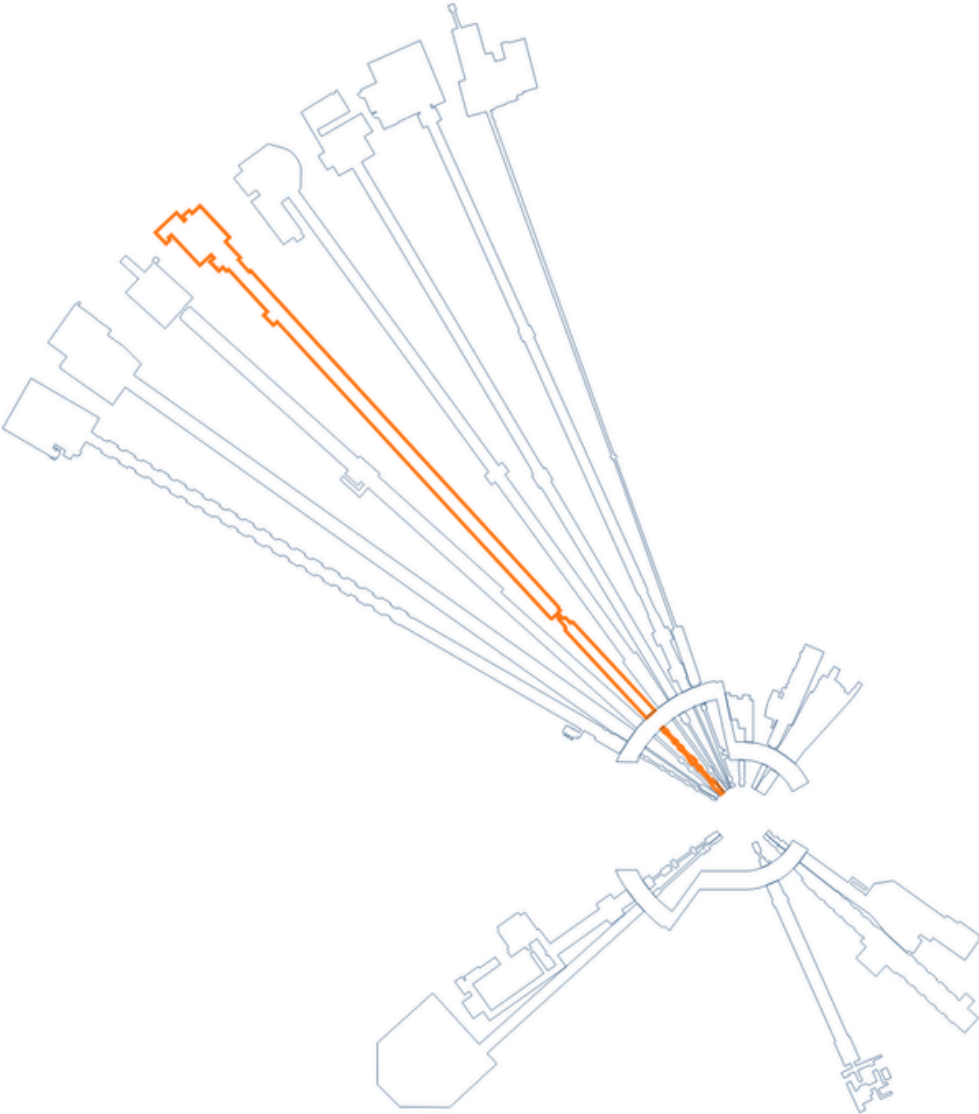
LOKI

SKADI

NMX

Proposal Management System (UOS)

Spectroscopy	Diffraction and Imaging	Large-Scale Structures
BIFROST	DREAM	ESTIA
CSPEC	HEIMDAL	FREIA
MIRACLES	MAGIC	LOKI
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SPECTROSCOPY



BIFROST

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Frustrated materials ▪ Weyl systems ▪ Functional magnets

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Rasmus Toft-Petersen: Rasmus.toft-petersen@ess.eu

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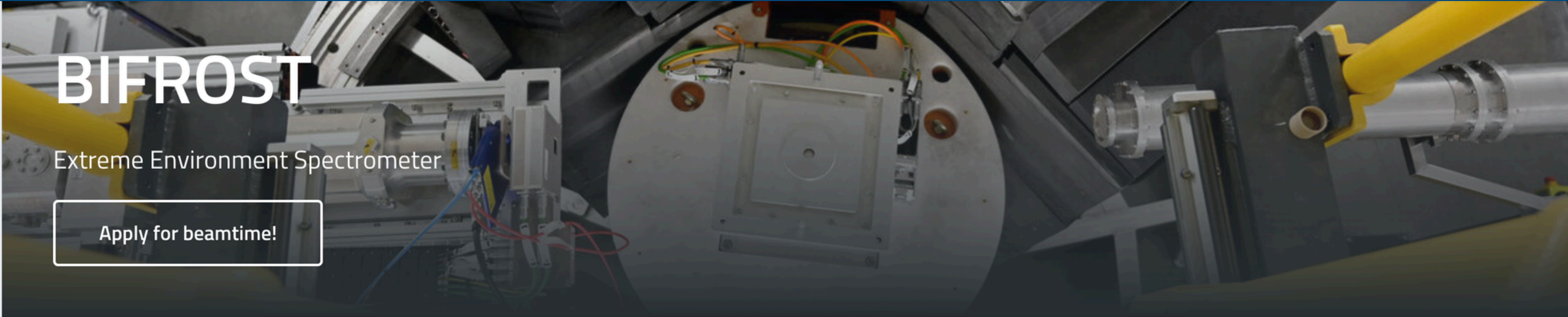
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Proposal Management
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Engineering & geosciences | Chemistry of materials | Magnetism & superconductivity

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The BIFROST spectrometer combines concepts known from traditional time-of-flight spectroscopy with novel triple-axis multiplexing techniques. High incident flux is achieved by using an indirect geometry design extracting a 1.74 Å neutron wavelength band from each 2.86 ms spallation pulse of the ESS. This, in combination with a multiplexing secondary spectrometer system covering more than 45 degrees in scattering angle for five different scattered neutron energies, allows for an efficient coverage of a two-dimensional reciprocal space slice. Finally, the chopper cascade in combination with the use of the prismatic analyser concept enables energy resolution down to $\Delta E \sim 20$ ueV to be obtained while retaining excellent flux conditions.

05 | Collaboration

Review, Editing & Maintenance



How to make updates to your page

- Once it comes time to publish and/or update your page, you will be sent a link to Drupal, the external website content management system
- You can login with your normal SSO
- You will navigate to your (or your team's) page and click  "edit" on the block  Edit *BIFROST*
- An editor mode will pop-up and you will be able to make changes to some fields
- You can preview changes live in the editor
- Once you are satisfied with the changes you have made, you can add a note to the change log for version control, and click "publish" to update the page



ACCESS TO ESS

Apply for Beamtime

Instruments and Techniques

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CSPEC

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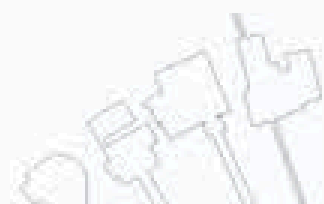
ESTIA

Home > For Users > Access to ESS > Instruments and Techniques

Instruments and Techniques

ESS has fifteen specialised scientific instruments. Hover or click an instrument to highlight it on the layout.

Spectroscopy	Diffraction and Imaging	Large-Scale Structures
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CSPEC	HEIMDAL	FREIA
MIRACLES	MAGIC	LOKI
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DIFFRACTION AND IMAGING

DREAM



ACCESS TO ESS

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DIFFRACTION AND IMAGING

DREAM

Timeline

Aim: First release in time for BoT

Access to ESS page content deadline - 1st December 2026

- Instruments & Techniques landing page
 - Instrument pages
- Science Support
 - Sample Preparation Laboratories
 - Sample Environment
 - Deuteration
 - Crystallisation

Looking Ahead

Testing & Refinement

Internal testing > First external testing (first users) > Continuous External Testing (SSO)

- Emails from users to the User Office will inform the dedicated FAQ pages
- Searchability & content tagging improvement
- AI self-service support for finding web content

06 | Wrap-up

Feedback

Please feel free to get in touch and share your thoughts, comments or feedback



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Acknowledgements

Project Steering Group

Giovanna Fragneto, Pascale Deen, Mikhail Feygenson, Andrew Jackson,
Fredrik Bolmsten, Manuel Morgano

Subject Matter Experts & Content Support

Instrument scientists & division heads, Fredrik Bolmsten, Melissa Sharp, Linda Björk,
Betina Pereira Ferreira, Helena Carnerup, Helen Fröderberg, Ari Benderly, Ulrika Agnvik,
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Digital Communications & Website Support

Kate Hickey, Ana Godinho

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Johan Olander

Developer Support

Yoganandan Pandiyan & Massimiliano Novelli

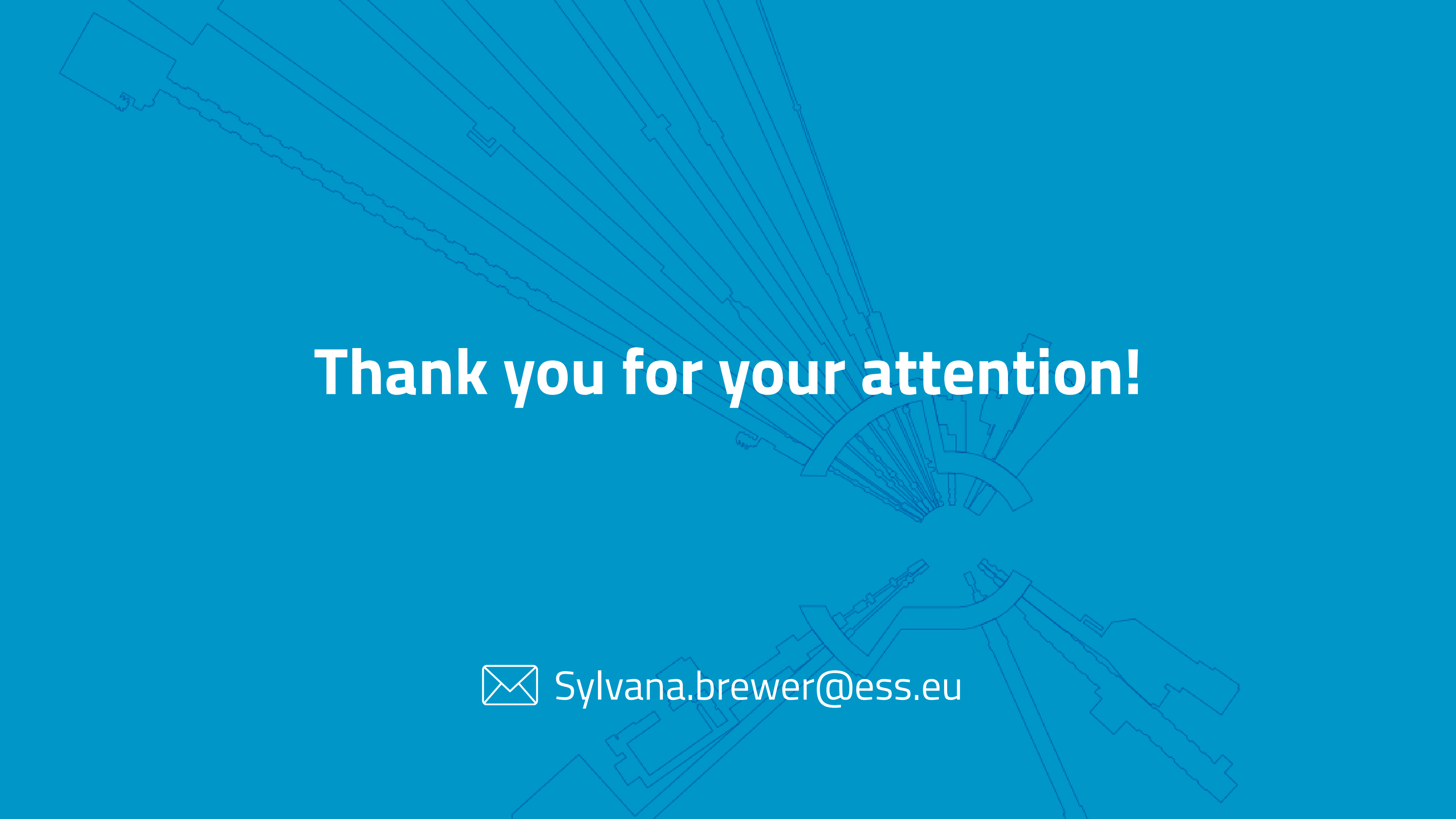
Instrument Page Template Coordination

Frida Bolmqvist & Beate Linnenberg

Instrument Map Support

Carl-Johan Hårdh, Daniel Lundgren, Pontus Jönsson, Samuel Carlsson

... and many more to come!



Thank you for your attention!



Sylvana.brewer@ess.eu



Do you have any questions?



Sylvana.brewer@ess.eu