

A map of Europe with several glowing blue nodes, likely representing data centers or research facilities, overlaid on a yellow and dark blue background.

CRISP PaN-Data Harmonization Meeting

Zürich Radisson Blu Conference Center

What should we do?

- ❑ ***Work together***
 - ✓ Common developments, synergies
 - ✓ Common lobbying

- ❑ ***Clear definition of goals***
 - ✓ Maximum technical quality
 - ✓ User friendliness
 - ✓ Facility friendliness

Goal of the meeting

- ❑ ***Understand each others interests***
 - ✓ Talks from individual facilities
 - ✓ Common lobbying

- ❑ ***First definition of resources***
 - ✓ Human resources at facilities
 - ✓ Trans-facility collaborations
 - ✓ Regular meetings

What is the current situation?

- ❑ **Small research groups**
 - ✓ Patchwork teams
 - ✓ In general low IT background
 - ✓ Visit for
 - Few hours (structural biology)
 - Few weeks (superconductivity, chemistry)
- ❑ **Administration by local User Offices**
 - ✓ Tools: WUOs = Web-based User Offices
 - ✓ Users registered with local WUOs
 - ✓ Proposals as ordering elements
- ❑ **No official cross-facility information exchange**
 - ✓ Competition among users
 - ✓ Competition among facilities
- ❑ **Limited amount of data (Gbyte)**
 - ✓ Hard-disk in trouser pocket

What are the IT requests?

- ❑ ***Huge datasets***
 - Novel 2D detectors, real quantum leap in data quality, but also data volumes
 - ✓ multi-image techniques (tomography, lens-less imaging)
 - ✓ molecular movies at FELs
 - ✓ 'Petabyte' becomes a 'normal' unity; time over for hard-disk in the trouser pocket
- ❑ ***Trans-facility experiments***
 - ✓ Standardize proposal procedures on EU scale
- ❑ ***Remote data access***
 - ✓ analyze data remotely at facility
 - ✓ combine datasets taken at different facilities
 - ✓ clouds (commercial, community-centered)
- ❑ ***Remote experiment access***
 - ✓ basic: passive online access to measured data
 - ✓ advanced: active control
- ❑ ***PR Issues***
 - ✓ Improve corporate identity
 - ✓ Improve public lobbying

Required Solution Characteristics

- ❑ ***Incorporate confidentiality aspects***
 - ✓ High competition, especially structural biology
 - ✓ Time-window structured access to experiments and data
- ❑ ***Rely on existing local user office structure***
 - ✓ Great experience
 - ✓ Distributed operation
 - Users: manage their personal entries
 - User offices: supervising; manage authorizations
- ❑ ***Base system on professional authentication standard***
 - ✓ Shibboleth, federated Single-Sign-On System (SAML), widely used in the academic world;
 - ✓ special photon / neutron user federation
 - ✓ only one identity provider
 - ✓ supervising by local User Offices
- ❑ ***User friendliness***
 - ✓ New tools accepted only if advantage
- ❑ ***Facility friendliness***
 - ✓ New tools accepted only if advantage

Structure of meeting

- ❑ **Facility status and needs**
 - ✓ Understand, where the priorities at the individual facilities are

- ❑ **Tools**
 - ✓ Umbrella and ICAT are tools, which originate from work outside of PaN-Data
 - ✓ Should these tools be incorporated? What do we gain?

- ❑ **Proposals**
 - ✓ These proposals are starting this year
 - ✓ In the ideal case, the facility needs can be matched to these proposals

- ❑ **Discussions**
 - ✓ At the end should be not only discussions but real outcome
 - ✓ First resource planning
 - ✓ Road map

Remote data access, concept proposed

❑ Embargo vs. post-embargo period

- ❖ Here only embargo (most critical, confidentiality)

❑ Standard access rights rule

- ❖ No chance for manual central authorization
- ❖ 1'000s of experiments, 10'000s of users

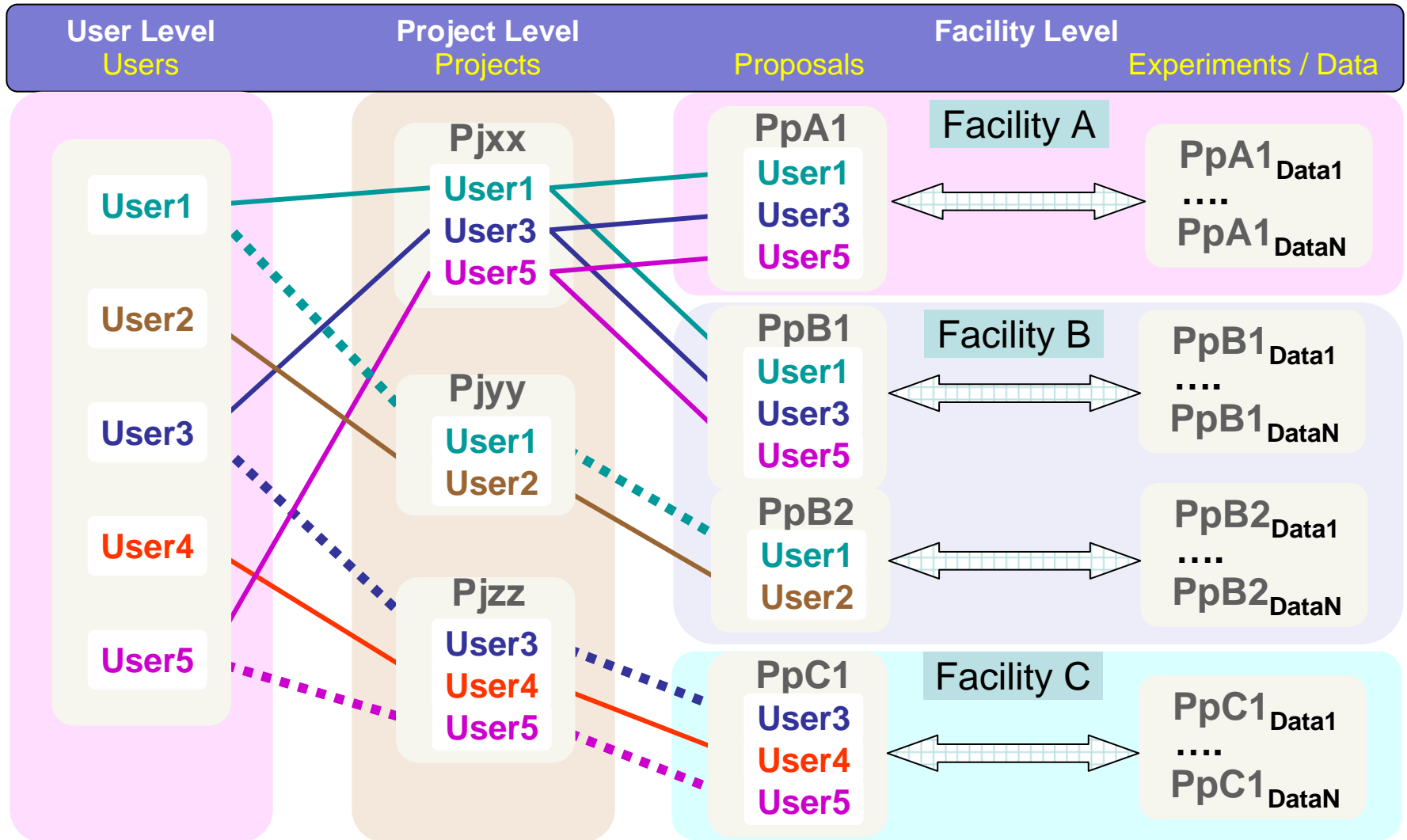
❑ Identity by Umbrella

- ❖ Unique, EU-wide user authentication

❑ Keep Role of proposal as organising element

- ❖ Users convene for a short time slot for performing an experiment
- ❖ Principal investigator / main proposer
- ❖ Who participates in experiment, has access right to data
- ❖ Proposal officially accepted by facility, PI is official contact
- ❖ PI defines who participates in the experiment (practically existing WUO tool)

Umbrella access right control



FP7 Programs, Job Sharing

❑ EuroFEL WP2

- Prototype developments for FEL facilities (March 2011)
 - ❖ Authentication: unique user ID
 - ❖ Umbrella proposal system

❑ CRISP WP6A

- **PSI** + ESRF, ESS, GSI, ILL, EU-XFEL
- Authentication for management of local and remote access to facilities, experiments, data, and IT resources
- Prototype development

❑ CRISP WP6B

- **ESRF** + ILL, CERN, DESY +
- Metadata management and mining service; data continuum
- Dual local / Umbrella operation possible


❑ CRISP WP6C

- **EU-XFEL** + DESY, ESRF, ILL +
- High-speed Recording of Data

❑ PaN-Data

- **PSI** + almost all European Photon / Neutron facilities
- Authentication implementation for Photon / Neutron facilities





**Welcome and let's have a
productive and harmonic
meeting**

**Bjoern Abt
Mirjam van Daalen
Heinz J Weyer**

Umbrella access right control

