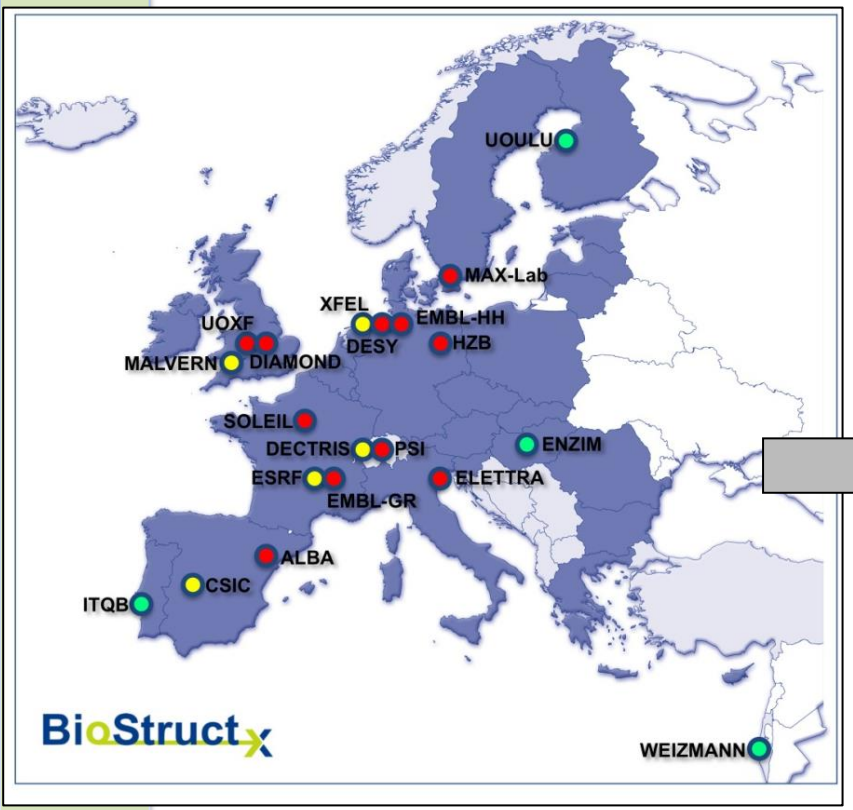
BioStruct-X
European User Offices Meeting
November 3-4 2014

Ivana Custic, BioStruct-X Project Manager

Project Partners and Status

01.09.2011 – 29.02.2016 (54 Months)



no.	Participant short name	Participant organisation name	Country
1a Coord.	EMBL-HH	European Molecular Biology Laboratory	DE
1b	EMBL-GR	European Molecular Biology Laboratory	DE
2	ALBA	CONSORCIO PARA LA CONSTRUCCION, EQUIPAMIENTO Y EXPLOTACION DEL LABORATORIO DE LUZ DE SINCROTRON	ES
3	DESY	Stiftung Deutsches Elektronen-Synchrotron	DE
4	DIAMOND	Diamond Light Source Ltd	UK
5	ELETTRA	SINCROTRONE TRIESTE SCPA	IT
6	HZB	HELMHOLTZ-ZENTRUM BERLIN FÜR MATERIALIEN UND ENERGIE GMBH	DE
7	MAX-Lab	Lund University	SE
8	PSI	PAUL SCHERRER INSTITUT	CH
9	SOLEIL	Société Civile Synchrotron SOLEIL	FR
10	UOXF	The Chancellor, Masters & Scholars of the University of Oxford	UK
11	CSIC	AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS	ES
12	DECTRIS	Dectris Ltd.	CH
13	ESRF	Installation Européenne de Rayonnement Synchrotron	FR
14	XFEL	European X-ray Free Electron Laser Facility GmbH	DE
15	UOULU	Oulun yliopisto (University of Oulu)	FI
16	ITQB	Instituto de Tecnologia Química e Biológica – Universidade Nova de Lisboa	PT
17	WEIZMANN	Weizmann Institute of Science	IL
18	ENZIM	Magyar Tudományos Akadémia Enzimológiai Intézet	HU
19	MALVERN	Malvern Instruments Ltd.	UK

Caption: TNA/JRA/NA partners, red; JRA/NA partners, yellow; NA partners, green.

- Partner Categories: experimental facilities (red), only R&D (yellow), TID (green)

BioStruct-X Project Tasks

TNA support for 44 installations:

- Biological small angle X-ray scattering (5)
- macromolecular X-ray crystallography (26)
- Biological X-ray imaging (4)
- Protein production and HTP crystallisation (9)

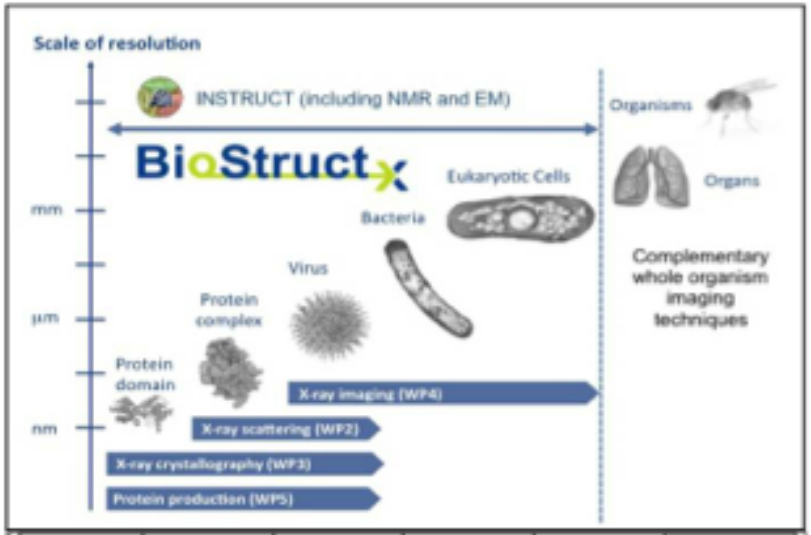
Level of funding: 60%

4 selected Joint Research Activities:

- To enhance methods integration
- Integration of emerging facilities (XFELs) and emerging methods (X-ray imaging)

Level of funding: 28%

- **Centralised** (via providing facilities) and **decentralised** (via TID centres) training and networking activities.



TNA Facilities	WP2 (SAXS)	WP3 (MX)	WP4 (XI)	WP5 (PP + HTP-X)	Total
EMBL-HH	2	5		1	8
EMBL-GR		1		3	4
ALBA		1	1		2
DESY		1	1		2
DIAMOND	1	5		1	7
ELETTRA		2			2
HZB		3	1		4
MAX-Lab	1	3			4
PSI		3		2	5
SOLEIL	1	2	1		4
UOXF				2	2
Total	5	26	4	9	44

Key features

- **BioStruct-X Unified Access Portal and Project Evaluation**
- **TNA Support objectives**: 3525 users, 2647 projects, by 43 installations (four different technologies) from 11 facility partners, funding volume 5,4 M€.
- **JRA objectives:** four focused projects, directly associated with TNA activities, funding volume: 2,52 M€.
- **Networking and training objectives**: in part at Biostruct-X partner facilities, in part at four user sites in Finland, Portugal, Hungary, Israel.

BioStruct-X application procedure

- Online application form (http://www.biostruct-x.eu/node/add/proposal) – registration required!

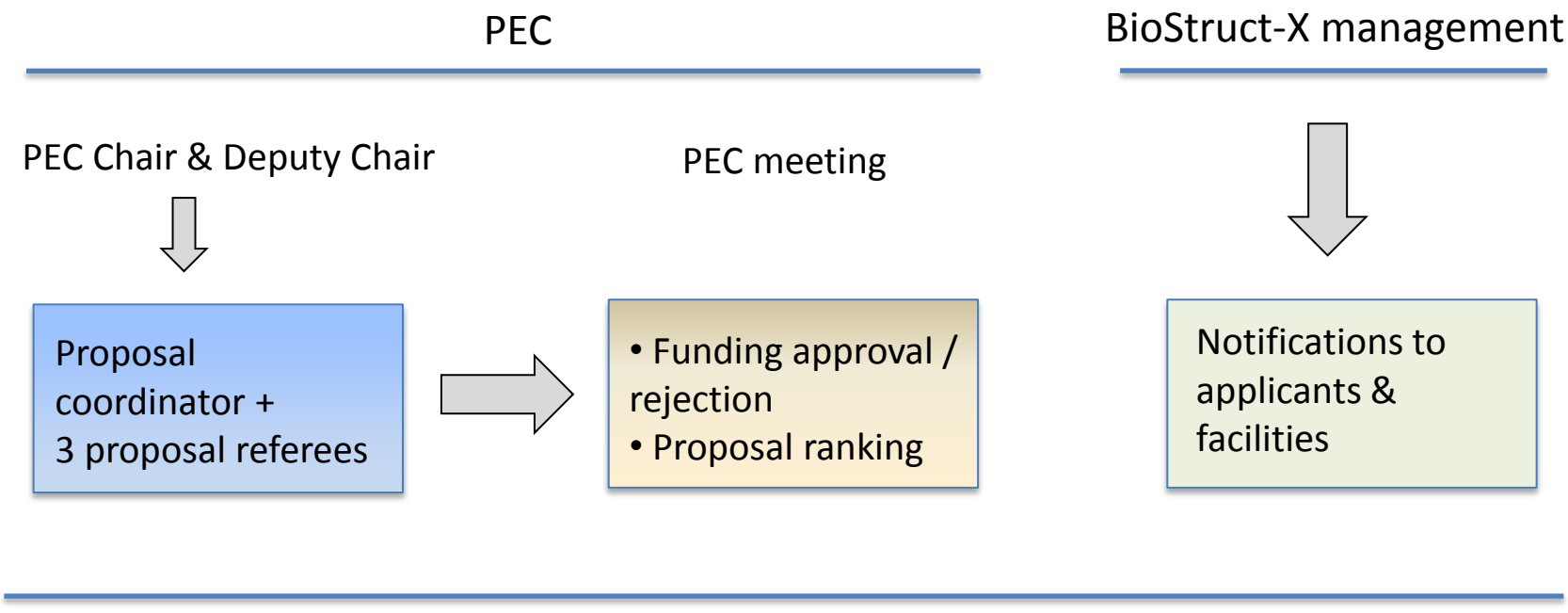
- Single project (SP)/BAG applications

BioStruct-X application procedure

- **Central Project Evaluation Committee (12 international experts, Chair**, Joel Sussman)
- **Block Allocation Group (BAG) Proposals:**
  - 5-15 independent research groups, minimum request min 5 shifts (8 hours each)
  - Areas of application: MX (mandatory), SAXS (optionally)
- **Single Project (SP) Proposals:**
  - Areas of application: SAXS (optionally), X-ray imaging, protein production, combined applications
- **3-4 calls per year**, evaluation time: 1 month
- Double evaluation **should be avoided**

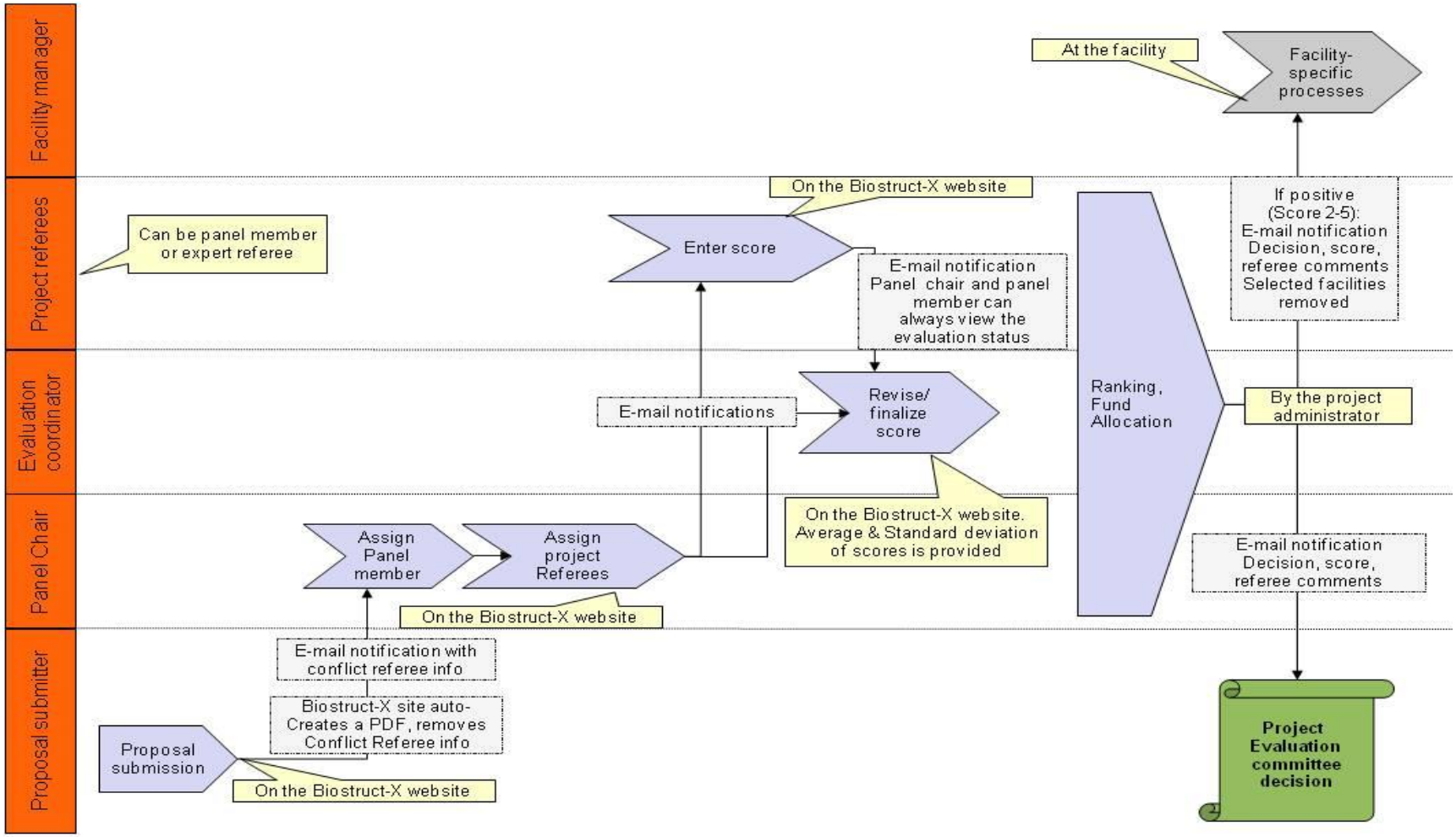
BioStruct-X evaluation procedure

- Within 30 days following each application deadline



Monitoring & Assistance by BioStruct-X management

Proposal Evaluation (within 30 days following each deadline)



Application deadlines

- 31 December 2014
- 15 February 2015
- 30 May 2015

Final deadline!

30 May 2015

Actions undertaken after the MTR (Sept 2013)

- Amendment to the Grant Agreement including project prolongation by 6 months and adjustment of TNA deliverables/re-budgeting for improved TNA provision (received by EC on 23.12.2013, accepted on 26.03.2014)
- Further simplification of present BioStruct-X procedures
  - *Waiving time BAG limits for remaining project duration*
  - *Pre-PEC technical review for those projects where there are frequent technical feasibility questions (WP4, WP5)*
  - *Rapid review for HTX applications*
- Further improvement of BioStruct-X / facility interfaces for facilitated application procedures
  - *Pilot project with EMBL-HH, Soleil and INSTRUCT to build a complete joint interface, requiring one submission for evaluation, technical feasibility assessment and partner site registration. This is carried out by C. Borges from the BioStruct-X side.*

Amendment: TNA Delivery (WP2-4)

Infrastructure name	Installation_Short_Name	Unit of access	Min quantity DOW	Adjusted min Quantity
CELLS (ALBA)	CELLS (ALBA)	1 beamtime hour	1264	676
DIAMOND	I02, I03, I04 I041 I21 I22	1 beamtime hour	6814	5928
EMBL-GR	BM14	1 beamtime hour	1555	1555
EMBL-HH	DORIS X11	1 beamtime hour	600	24
EMBL-HH	DORIS (X12, X13)	1 beamtime hour	1100	176
EMBL-HH	DORIS X33	1 beamtime hour	600	358
EMBL-HH	PETRA3 (MX1 MX2)	1 beamtime hour	4000	2500
EMBL-HH	P12 (BioSAXS)	1 beamtime hour	2000	1800
HZB	BESSY II	1 beamtime hour	7320	7320
MAX-lab	I911.2,3,5,5	1 beamtime hour	6800	5100
PSI	SLS-PX	1 beamtime hour	7500	7500
SOLEIL	SOLEIL	1 beamtime hour	6280	5964
DESY (HASYLAB)	PETRA III P11	1 beamtime hour	512	400
ELETTRA	XRD1,XRD2	1 beamtime hour	2304	1152
TOTAL (h)			**48,649.0**	**40,453.0**

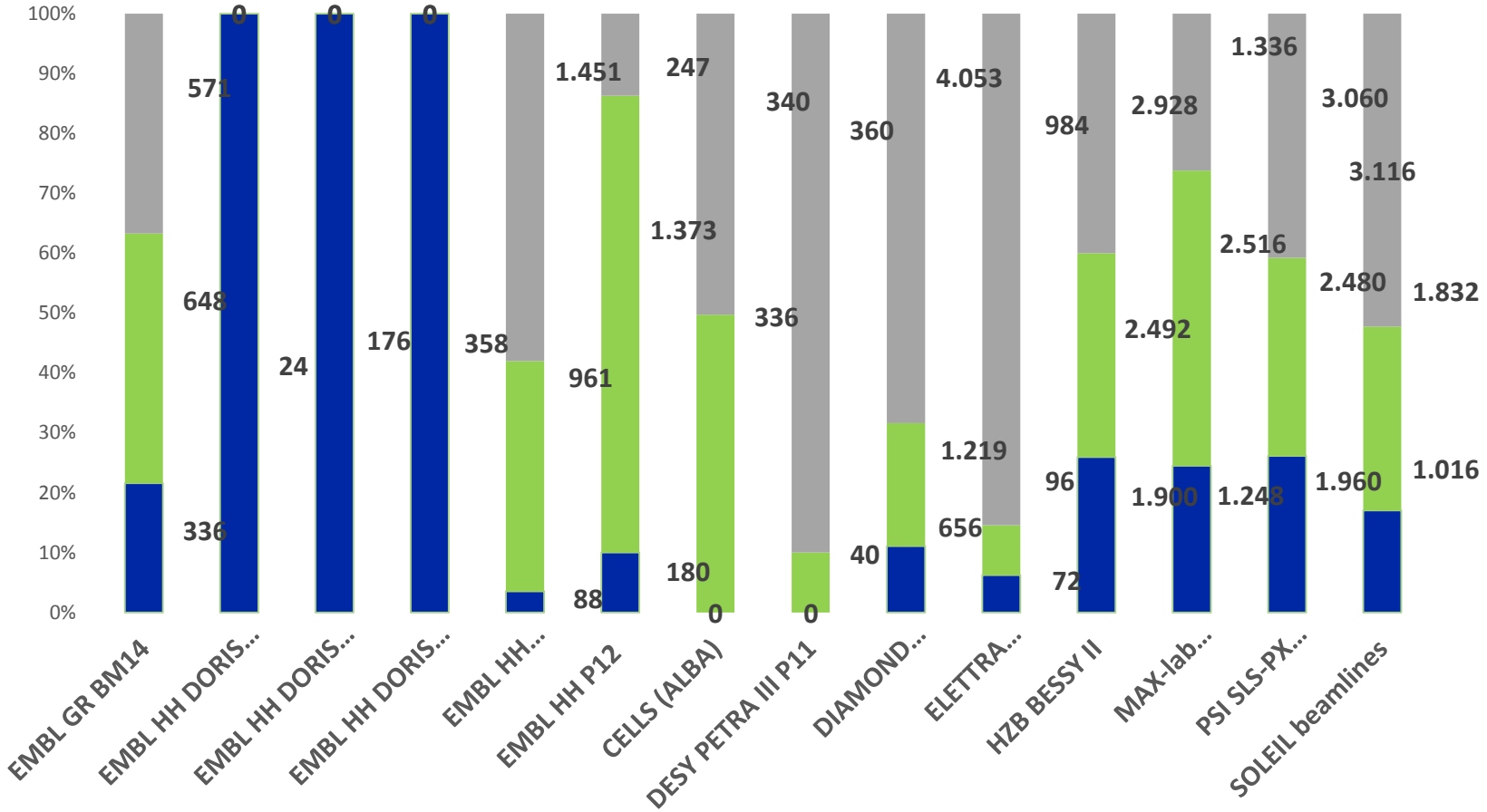
Amendment: TNA Delivery (WP5)

Infrastructure name	Installation_Short_Name	Unit of access	Min quantity DOW	Adjusted min Quantity
DIAMOND	Crystallisation	1 crystallisation plate	400	400
EMBL-GR	ESPRIT	1 library screen	10	10
EMBL-GR	MultiBac	1 MultiBac Expression experiment	12	12
EMBL-GR	Crystallisation	1 crystallisation plate	500	500
EMBL-HH	SPC	1 day of sample characterisation	56	100
PSI	Membrane protein expression	1 membrane protein production	10	10
PSI	Membrane protein crystallisation	1 crystallisation plate	100	100
UOXF	Mammalian expression	1 mammalian cell expr.experiment	20	20
UOXF	Crystallisation	1 crystallisation plate	1200	1200

More efficient work in PR2

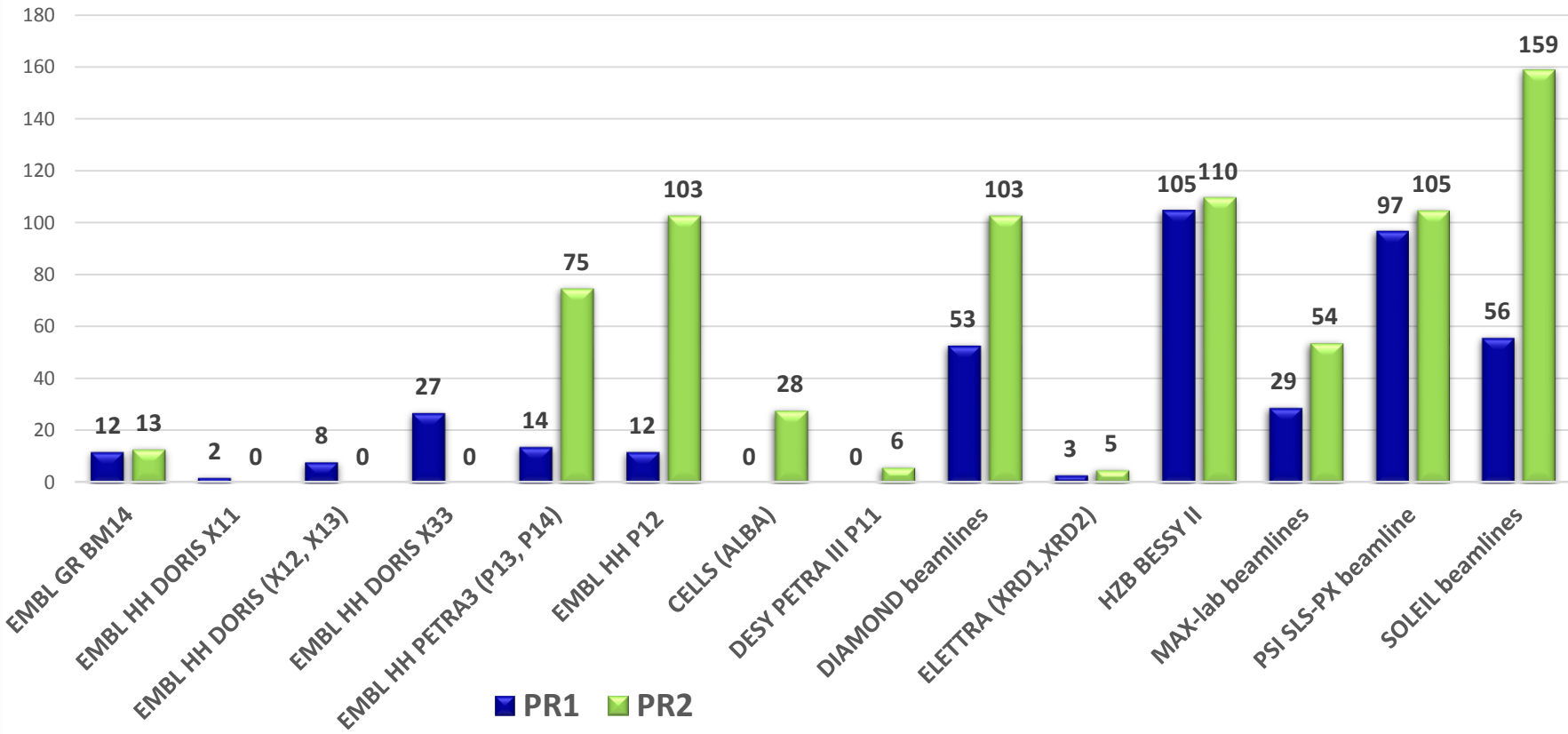
- XML exchange with partners aiming at automated data transfer from the BioStruct-X application site
- Growth in applications: PR1 (33 BAGs + 73 SPs)
  PR2 (41 BAGs + 146 SPs)
- Growth in TNA provision: PR1 (418 users), PR2 (837 users)
- Growth in publications: 2012 (2 publications), 2013 (35 publications), Jan-Sep 2014 (59 publications)

TNA delivery status WP2-4 (Units of Access)



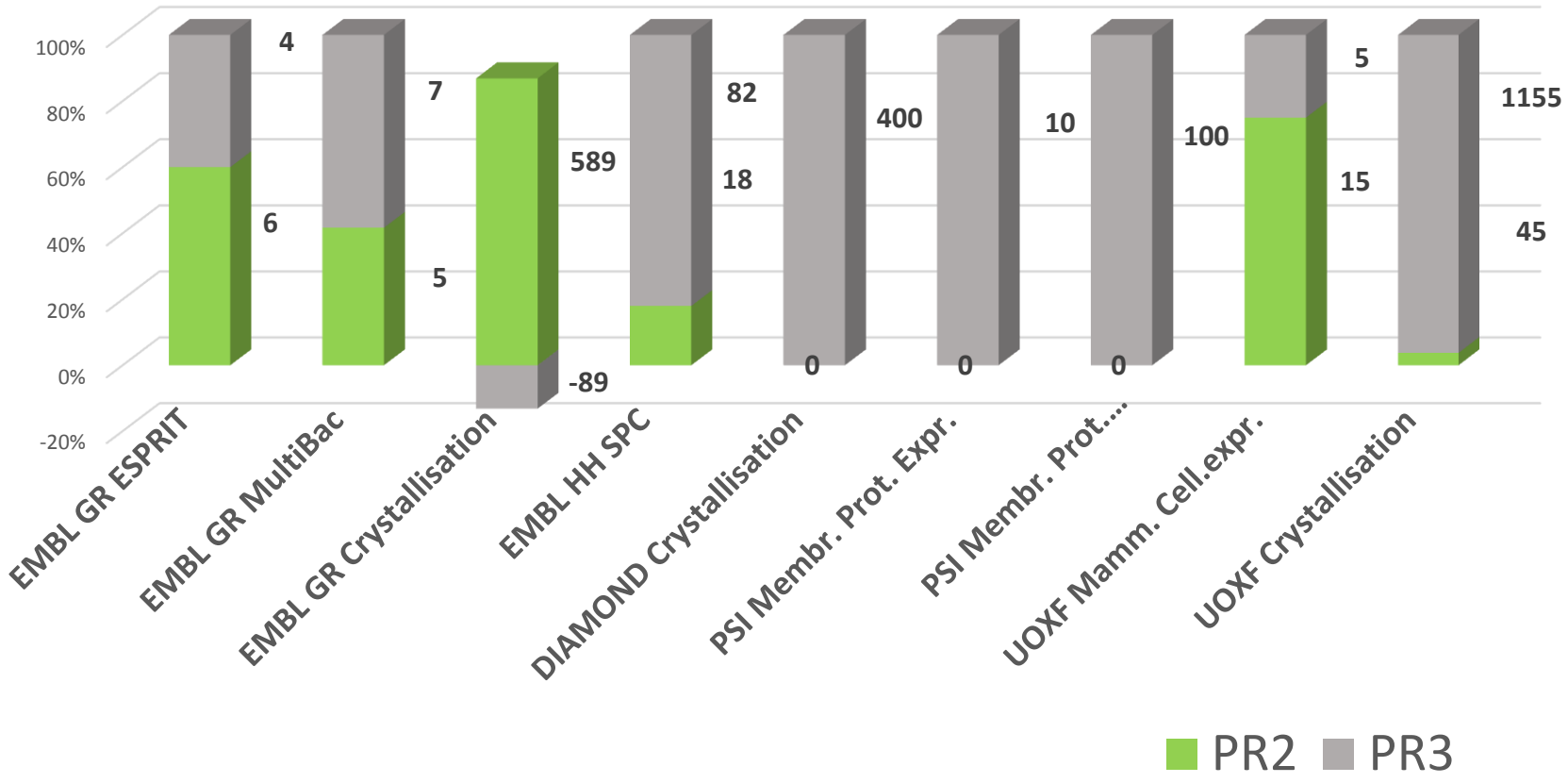
PR2 shows real progress over PR1 for many facilities, but not for all…

Number of Users WP2-4



- **PR1: 418 users; PR2: 761 users**

Delivery status WP5 (Units of Access)



- **Access started March 2013; PR2: 76 users**

EMBL

Project priorities for the remaining project time

- Complete delivery of BioStruct-X objectives**, especially TNA delivery**
- **Targeted support to facilities** with difficulties attracting transnational users
- **Targeted advertisement to communities** that are under-represented in BioStruct-X
- Further help to the users community to **organize into integrated BAG projects**
- Further **improvement of BioStruct-X / facility interfaces** to facilitate application and evaluation procedures

Thank you!