



# IRUVX-PP: review and achievements

- Review by the coordinator
- IRUVX-PP project management - WP0
- Achievements

Introduction to parallel workshops on  
Development of future EuroFEL collaborations  
J. Feldhaus

ESFRI  
Roadmap



MoU



Proposal

## 2006

- IRUVX-FEL on the ESFRI Roadmap 2006
- MoU signed by the directors, Berlin, 9. Nov 2006

## 2007

- Jan- Apr. conspirative proposal meetings  
(Elettra, DESY, HZB, STFC, MAX-lab)
- 5. May submission of IRUVX-PP proposal
- 31. Dec. end of EUROFEL design study



Proposal players:

C. Bocchetta, J. Knobloch,  
S. Werin, E. Seddon, W. Flavell,  
J. Schneider J. Feldhaus, U. Krell,  
C. Rizzuto, W. Eberhardt



- What do we, operating/planned FEL facilities, need to create a sustainable European Research Infrastructure?

**WP1 – WP6**

*no experience, all the time: **Do we want this?***

- Which joint technical collaborations are useful having in mind the experiences of the EUROFEL design study

=> numerous topics & budget limitation to ~40%

=> selection of two broad fields where most partners

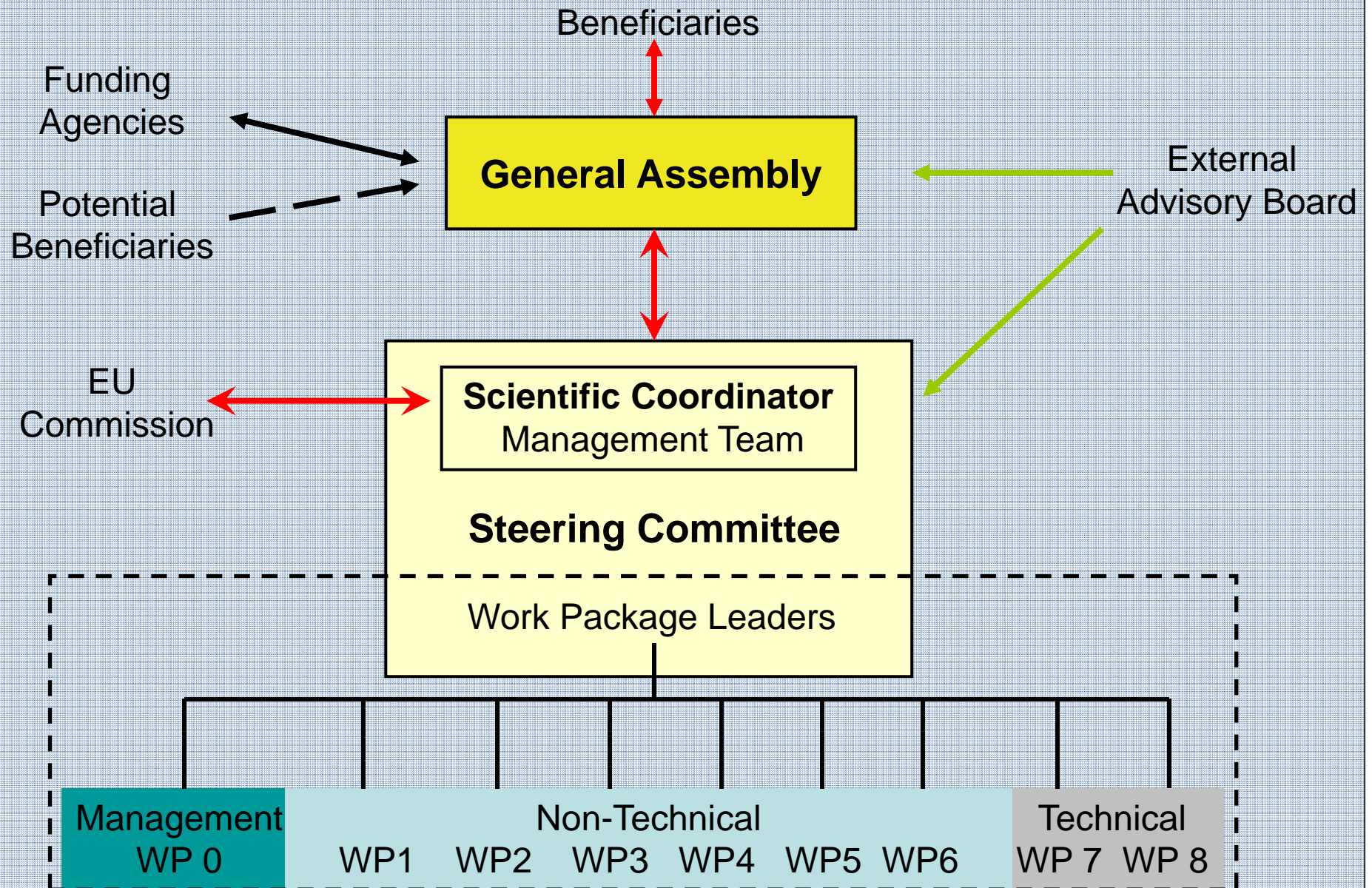
profit from: **WP7** Photon beamlines & Experiments

**WP8** FEL source (continuation of EUROFEL)

=> left over topics converted to non-techn. **WP3** Expert groups

=> technical work ~ 53% of total contract budget

# Management structure of IRUVX-PP



tasks defined in Annex 1

=> standard Coordinator responsibilities ....**but !!**

## WP0.1 Decision making management

CA manages and coordinates ....and **a number of decisions on the consortium level to be made within the non-technical work packages.**

## WP0.2 Communication and dissemination

- *Overall Project Meetings*
- *Planning and organising meetings of the general assembly and the steering committee*
- *Website of IRUVX-PP*

## WP0.3 Coordination & monitoring of the project progress

=> 7 deliverables (*Project meetings & EC reports*)

- We had to sell the idea of IRUVX-PP
- We had to convince the partners of the idea
- We had to train the new non-technical work package leaders & collaborators
- We had to ensure that the project ends successfully

this independently of our individual opinion

## **None of the proposal developers were involved in the project**

- ⇒ many misunderstandings of WP objectives
- ⇒ PMT had to clarify & redirect WP work
- ⇒ original WP1 issues had to be outsourced to a separate working group (Task Force) & coordinated by PMT

*“...defining the consortium structure, the constitution of the statutes, the means and methods of its management. This comprises the mission and scope, membership criteria and associated participants, obligations, agreements, staff and management structure, location, duration, monitoring and roles. ..” (WP1.1. of the IRUVX-PP Annex I)*

- ⇒ change of the function of the Steering Committee (SC)



## ■ Beneficiaries' contacts changed

- ⇒ small number of people in non-technical WPs were active
- ⇒ PMT had to take over parts of other WP roles & work

## ■ Non- technical WPs: extreme changes in WP leaders & lack of WP collaborators during the first 1,5 years

- ⇒ PMT had to train the contacts of other beneficiaries on the WP objectives

# IRUVX-PP contacts

Contacts										
Status 2011-01-18	<b>bold= WP leader</b>		<i>italic = WP deputy</i>							
Work Package No.	Descriptive Title	HZB	STFC	DESY	ELETTRA	MAX-Lab	INFN	PSI	SOLEIL	POLFEL
WP0	Management of the Project			Josef Feldhaus; Ute Krell; Matthias Kreuzeder						
	Non technical									
WP1	Construction of the IRUVX-FEL Consortium	Y. Tamm	J. Womersley	Josef Feldhaus Matthias Kreuzeder	Albin Wrulich Fabio Mazzolini	Sverker Werin	Roberto Pellegrini	Mirjam van Daalen	JP Caminade	Grzegorz Wrochna
WP2	User Policies	D. Herrendörfer	Anthony Gleeson	Rolf Treusch	Gioio Paolucci	<b>Ulf Johansson</b>	Maurizio Benfatto	Heinz Weyer	P. Morin	Robert Nietubyc
WP3	Coordination and consolidation of joint technical developments	Torsten Kamps	Graham Bushnell	129 different contacts 16 versions			Alessandro Gallo Gian Piero Gallerano	Rasmus Ischebeck	JP Caminade	Jacek Jagielski
WP4	Development of Human Resources	Ph. Wernet	Karl-Heinz Wernke				Patrizio Antici	Albin Wrulich	JP Caminade	Elzbieta Jamroz
WP5	Communication and Dissemination	H. Schlender	David Laundry	Monika Illenseer Ute Krell	Bibi Palatini	Annika Nyberg	Luciano Catani	Mirjam van Daalen	JP Caminade	Marek Pawlowski
WP6	Collaborations with Industry	-	Vlad Skarda	Markus Körfer	Riccardo Tommasini	Stefan Carlson	Claudio Sanelli	Robert Rudolph	JP Caminade	Jacek Jagielski
	Technical									
WP7	Photon Beamlines and Experiments	B. Löchel	Mark Roper	Kai Tiedtke	Daniele Cocco	Sverker Werin Jorgen Larsson	Valerio Rossi Albertini Roberto Cimino	Uwe Flechsig	P. Morin	Ryszard Sobierajski
WP8	FEL Source	Torsten Quast	Steve Jamison	Holger Schlarb Patrick Gessler	Laura Badano	Sverker Werin	Massimo Ferrario Luca Giannessi	Volker Schlott	M. E. Couprie	Robert Nietubyc
	General Assembly Delegate									
		A. Föhlich Christian Jung	J. Womersley Graham Bushnell- Wye	Holger Schlarb	Fabio Mazzolini	Nils Martensson Sverker Werin	Massimo Ferrario Luigi Palumbo	Mirjam van Daalen	M. E. Couprie P. Morin	G. Wrochna

82 roles



- Limited number of non-technical WP contacts at the beneficiaries
  - => SC members were not only WP leaders and PMT
  - => includes all active steering IRUVX-PP workers

## Members final & (before): ~20

WP0: **J. Feldhaus**, U.Krell, M. Kreuzeder

WP1: A. Wrulich, F. Mazzolini, J. Feldhaus

WP2: H. Weyer (O. Schwarzkopf), U. Johansson (H.Weyer )

WP3: G. Hirst (E. Seddon), C. Gerth

WP4: S. Werin (S. Svensson) M. Johanesson, A. Crivelli

WP5: M. Illenseer (U. Krell/ M. Kreuzeder), M. van Daalen (O. Schwarzkopf)

WP6: V. Skarda (S. Webb), M. Körfer (A. Kvick)

WP7: K.Tiedtke

WP8: L. Badano, P. Gessler

STFC: G. Bushnell-Wye (M. Bowler)

HZB: A. Föhlich

PSI: M. van Daalen

INFN: P. Antici

# Task force !!

- Some problems turned out not to be solved by any WP

=> instead of redefining a WP we created a specific task force

=> where all beneficiaries should be involved in the discussion

develop  
newFELs



## Starting point:

outcome of the 7 teams

- EuroFEL Mission
- Core activities
- Benefits
- Memberships
- Organisational Structure
- Financial plan
- Partner Contributions
- Statute



training



user

## Results:

EuroFEL Consortium  
- first draft -

## Members:

Patrick Bressler (BESSY)  
**Josef Feldhaus** (DESY/ PMT)  
Graeme Hirst (STFC)  
Ute Krell (DESY/ PMT)  
*Matthias Kreuzeder (DESY/ PMT)*  
Fabio Mazzolini ( Elettra)  
Marco Pedrozzi (PSI)  
Svante Svensson (MAX-lab)  
Mirjam van Daalen (PSI)

=> Dir Meeting/Döllnsee

- to prepare the 3rd Director's Meeting Nov 2010
- one delegate per beneficiary & associated partner

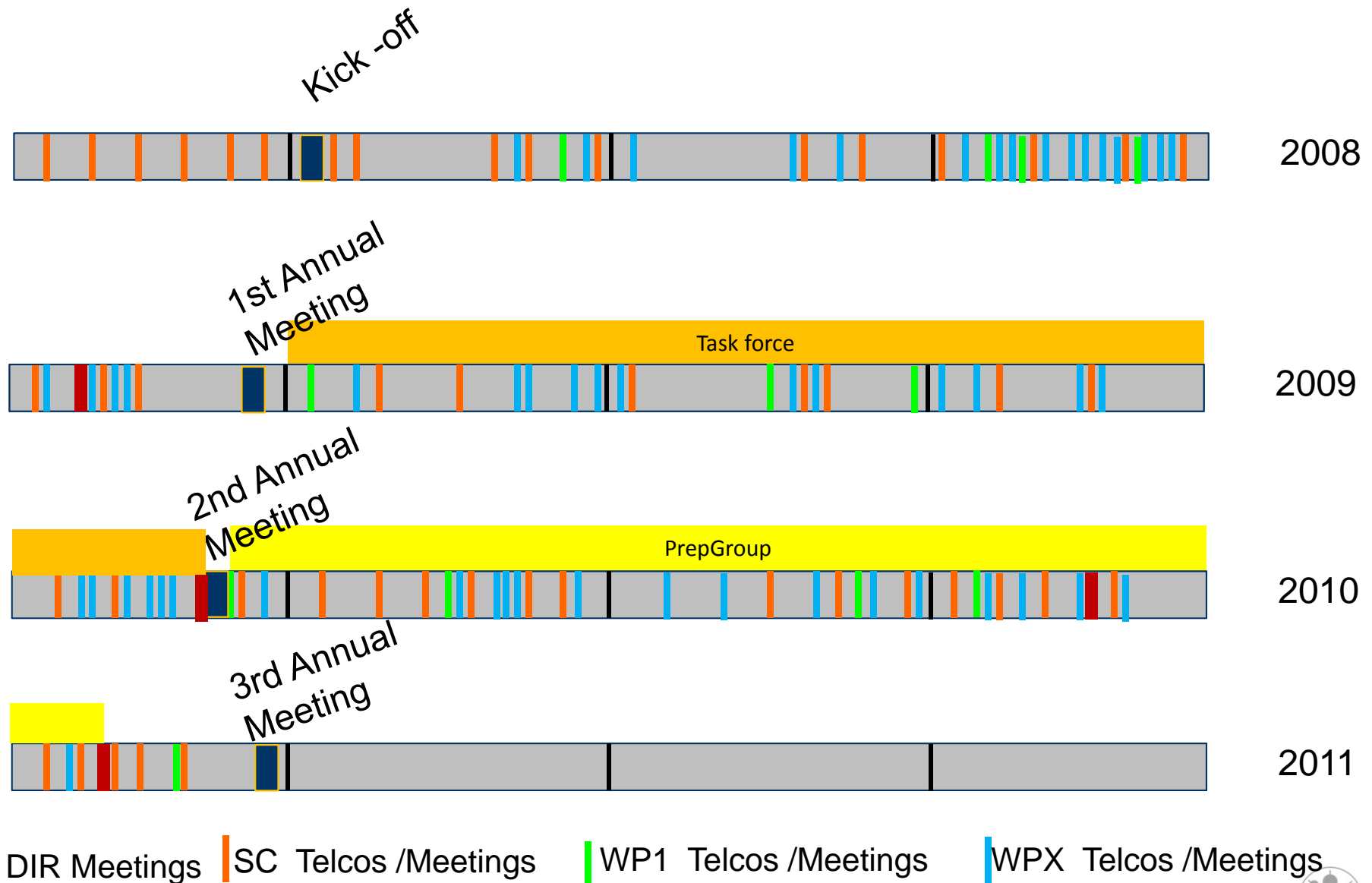
## Outcome:

- to get on the ESFRI Roadmap 2010
- update of „EuroFEL Consortium“

## Members:

Patrizio Antici  
Graham Bushnell –Wye  
**Josef Feldhaus**  
Alexander Föhlisch  
Ute Krell  
*Matthias Kreuzeder*  
Fabio Mazzolini  
Svante Svensson  
Mirjam van Daalen  
Albin Wrulich

# IRUVX-PP bar code (meetings)



# Technical workshops (10)

## 2008

- I. Tutorial on optical synchronisation (DESY/Hamburg)
- Workshop on high harmonic generation (INFN/Frascati)

## 2009

- II. Timing and synchronization workshop (Trieste)
- Workshop on frontiers of FEL technology (ELETTRA/Trieste)
- Wavefront propagation workshop (STFC/Daresbury)

## 2010

- IRUVX-PP meets industry (Döllnsee)
- PhotonDiag 2010 (DESY/Hamburg)

## 2011

- Mini workshop on synchronization of electro-optical bunch length measurements for accelerator development (PSI)
- Workshop on photocathodes for RF guns and lasers (Lecce)
- Timing and synchronization mini workshop (HZB, Berlin)



# IRUVX-PP project meetings

## Kick-off meeting (DESY/D)

9. - 11. April 2008

- 17 talks
- 78 participants



## 1st Annual Meeting (Trieste/IT)

10. - 13. March 2009

- 31 talks
- 99 participants



## 2nd Annual Meeting (Doellnsee/D)

2. - 5. March 2010

- 48 talks
- 116 participants



## 3rd Annual Meeting (HZB/D)

21. - 23. March 2011

- 44 talks
- 105 participants





*in addition to the outcome and highlights of the WPs presented before:*

- after the EUROFEL design study we continued to work together on a European level
- Initiated & developed a joint training activity => submitted as MC proposal MC-FEL to EC
- we know each other much better & what we want
- we got a feeling for the different & common interests
- we developed a concept for a future EuroFEL collaboration
- EuroFEL became a label

=> now we have to continue without EU money

- Communication is the most important & critical factor for success
- Reaction time is slower than expected
- Goals need constant reconfirmation
- Decision takers have to be involved as early as possible
- Awareness & consideration of the political dimension is important
- Political visibility needs a lively project website & PR activity

# Lessons learned II

I personally learned a lot on  
the European RI (FEL) landscape & team building processes



your turn



# Introduction to parallel workshops on Development of future EuroFEL collaborations

# Status after Directors' Meeting

## Directors decisions on 25.11.2010:

- IRUVX-PP shall be finalised without prolongation
- to prepare a MoU for future collaboration
- to inform European XFEL and ask how they wish to be involved

## Directors meeting on 25.02.2011:

- discussion of MoU together with European XFEL
  - Collaborations shall be included as individual appendices in the MoU
- => we need your input**

## Status of MoU (V12)

- Partners: DESY, ST, European XFEL, HZB, INFN, MAX-lab, PSI, SOLEIL, STFC
- it is not finalised
- it includes the EuroFEL Core Activities of which some shall be organised by activity boards

# Joint technical activities

ranking by MAX-lab, STFC, PSI, DESY

	Activity	1	2	3	4	5	D
1	High QE, long lifetime photocathodes		1		2	1	
2	High gradient, accelerating structures and peripherals		3		1		
3	Electron beam diagnostics		4				
4	Joint undulator development (In-vacuum, superconductive, multi-wavelength)		4				
5	Laser/Seeding (HHG etc.)		3	1			
6	Concept for attosecond FELs		1	2	1		
7	Beamline optics for FELs		2	1			
8	Metrology of optical components		2	2			
9	Damage studies of FEL relevant optics		1	3			
10	Photon diagnostics		1	3			
11	Readout electronics and software		1		1		
12	Simulation software (3D LSC, CSR, wavefront propagation, etc.)		2		1		
13	Joint test beamline			1	2		
14	Fs-timing and synchronization for pump-probe experiments on FEL accelerators		4				
	<b>further suggested technical collaborations:</b>						
	RF source developments		1				

1: very important, is part of our current RTD plan, no collaboration needed or wanted

2: very important, is part of our RTD plan for the next 2-3 years,  
significant own resources, collaboration welcome

3: necessary development within the next 3 years, little own resources, collaboration needed

4: less important but beneficial for us, interested to collaborate

5: no interest in topic or collaboration

# Joint training, communication, etc. activities

	Activity	1	2	3	4	5	
1	White paper on the European FEL landscape in 2020 - FEL science & infrastructures in EU		3		1		
	<b>Joint Training Activities</b>						
2	Joint FEL Machine Schools for PHD and Postdocs (like MC-FEL proposal)	2	2				
3	Joint FEL Photon School for PHD and Postdocs (like MC-FEL proposal)	1	3				
4	Joint User Experiment School for PHD and Postdocs (like MC-FEL proposal)	1	2	1			
5	Joint FEL Introduction Courses based on FEL book by A. Lindblad	1	1	1			
6	Joint FEL Summer School for students	1	2		1		
7	Joint Management Schools for PhDs and Postdocs (like MC-FEL proposal) on e.g. project & self management, intercultural team work, writing, CVs		1	1	1	1	
8	Courses on softskills together with joint technical/scientific workshops		1	1	1	1	
9	Training courses for engineers	1	2	1			
	<b>Communication/Outreach activities</b>						
10	EuroFEL website	3	1				
11	Central user portal	1	1	1	1		
12	Brochure "What is EuroFEL"	2	1	1			
13	Brochure "Research opportunities at FELs"	2	1		1		
14	Brochure "What is a FEL"	1	2	1			
15	EuroFEL quarterly newsletter	1	2	1			
16	Lobbying event in Brussels for politicians and stakeholders	1	2	1			
17	Presentation on FEL conference 2011, Shanghai	1	3				
18	Presentation on ESOF 2012, Dublin		1	1	1		
19	Tour with journalists to FEL facilities & partners		2		2		
20	Joint industry workshops e.g. $\mu$ TCA electronics	1	1		2		
	<b>Further suggestions:</b>						
PSI	EuroFel Workshop: Quantum optics at an XFEL (fundamental research) see details in word	x					
PSI	Training on how to collaborate with Industry (legal framework and procedures) for scientists and engineers	X					
PSI	Training on IPR for scientists, including using patent research in preparation of scientific project		X				





## Proposal for a EuroFEL collaboration activity



**Project titel:**

**Duration (months/years):**

If the project is continuous please suggest a first review date:

**Project leader (Partner & name, email):**

**Partners incl. responsible person/ contact:**

**Objective of the project:**

**Project benefit to FELs or/and to partners:**

**Description of work (1-2pages):**

**Describe the timing of the project and milestones :**

Brief deliverable description	When (Project month)	Who (responsible & involved partners)

**Describe the contribution (resources) by each partner:**

<b>Contribution (resources) by partner 1:</b>	
<b>Contribution (resources) by partner 2:</b>	
<b>Contribution (resources)</b>	

**Please send to  
Josef  
by the end of April**

<b>Which additional resources, travelling, equipment or other?</b>	<b>ops, exchange of staff, te:</b>

**Restrictions to any foreground/background knowledge<sup>1</sup> and/or any specific needs for intellectual property rights (IPR) regulations?**

Yes / No

If yes, please specify

<sup>1</sup> “Foreground” knowledge means generated within this EuroFEL collaboration activity, “background” knowledge means generated outside this EuroFEL collaboration activity but necessary to create and exploit the “foreground” knowledge.

- **FEL user umbrella system implementation, future developments, harmonisation with other EU projects (CRISP, PaN-data)**  
**Room 6312**; Convener: H. Weyer (PSI)
- **Joint human resource (HR) development opportunities – training and education**  
**Room 3365**; Convener: S. Werin (MAX-lab)
- **Future FEL communication in Europe**  
**Room 3453**; Convener: M. Illenseer (DESY)
- **Future collaborations on beam transport and beam diagnostic methods**  
**Auditorium**; Convener: K. Tiedtke (DESY)
- **Future collaborations in timing and synchronisation**  
**Room 3303**; Convener: P. Gessler (DESY)

We hope  
you will have fruitful discussions  
and  
come out with proposal  
which will convince our directors to be supported