

E-JADE is a Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE) action, funded by the EU under Horizon2020



**Mid-Term  
Review**

# Coordinator's Report

**Thomas Schörner–Sadenius**  
Santander, 31 May 2016



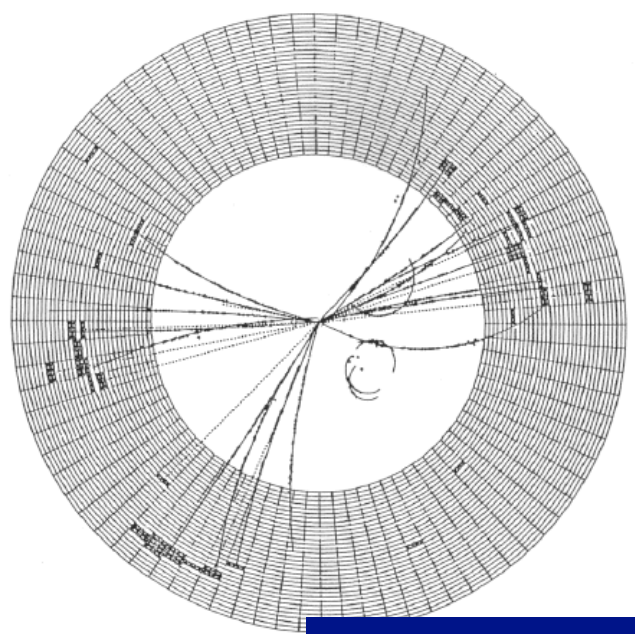
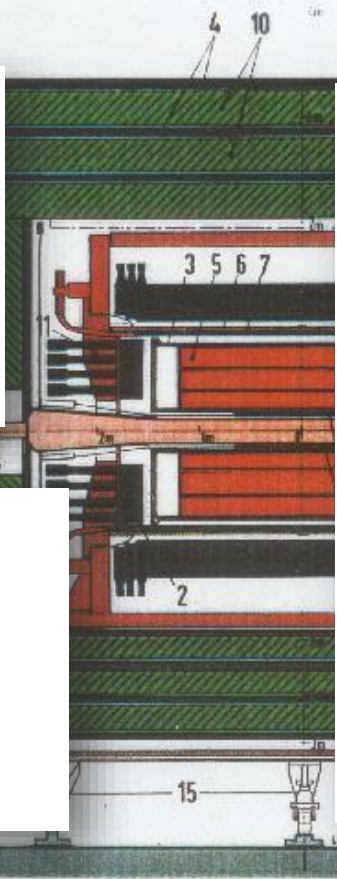
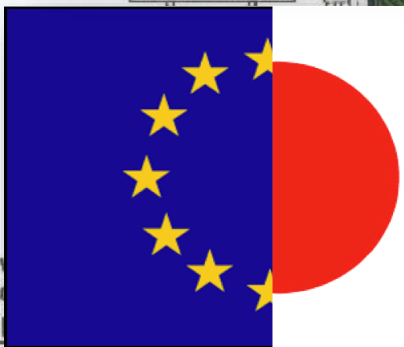
This project is funded by the European Union under Grant Agreement no. 645479

# E-JADE

- EU-Japan Accelerator Development Exchange Programme

## MAGNETDETEKTOR JADE MAGNET DETECTOR

- 1 Strahlrohrzähler BEAM PIPE COUNTERS
- 2 Endseitige Bleiglaszähler END PLUG LEAD GLASS COUNTERS
- 3 Drucktank PRESSURE TANK
- 4 Myon-Kammern MUON CHAMBERS
- 5 Jet-Kammer
- 6 Flugzeit-Zähler
- 7 Spule COIL
- 8 Zentrale Bleiglaszähler
- 9 Magnetjoch
- 10 Myon-Filter
- 11 Bewegliches Strahlrohr
- 12 Vorwärts-Detektor
- 13 Mini-Beta Detektor
- 14 Fahrwerk



Three-jet event in JADE at DESY's PETRA e<sup>+</sup>e<sup>-</sup> collider

Gesamtge...  
Magnetfel...  
Beteiligte...  
DESY, Hamburg, Heidelberg,  
Lancaster, Manchester,  
Rutherford Lab., Tokio

33188

# Overview

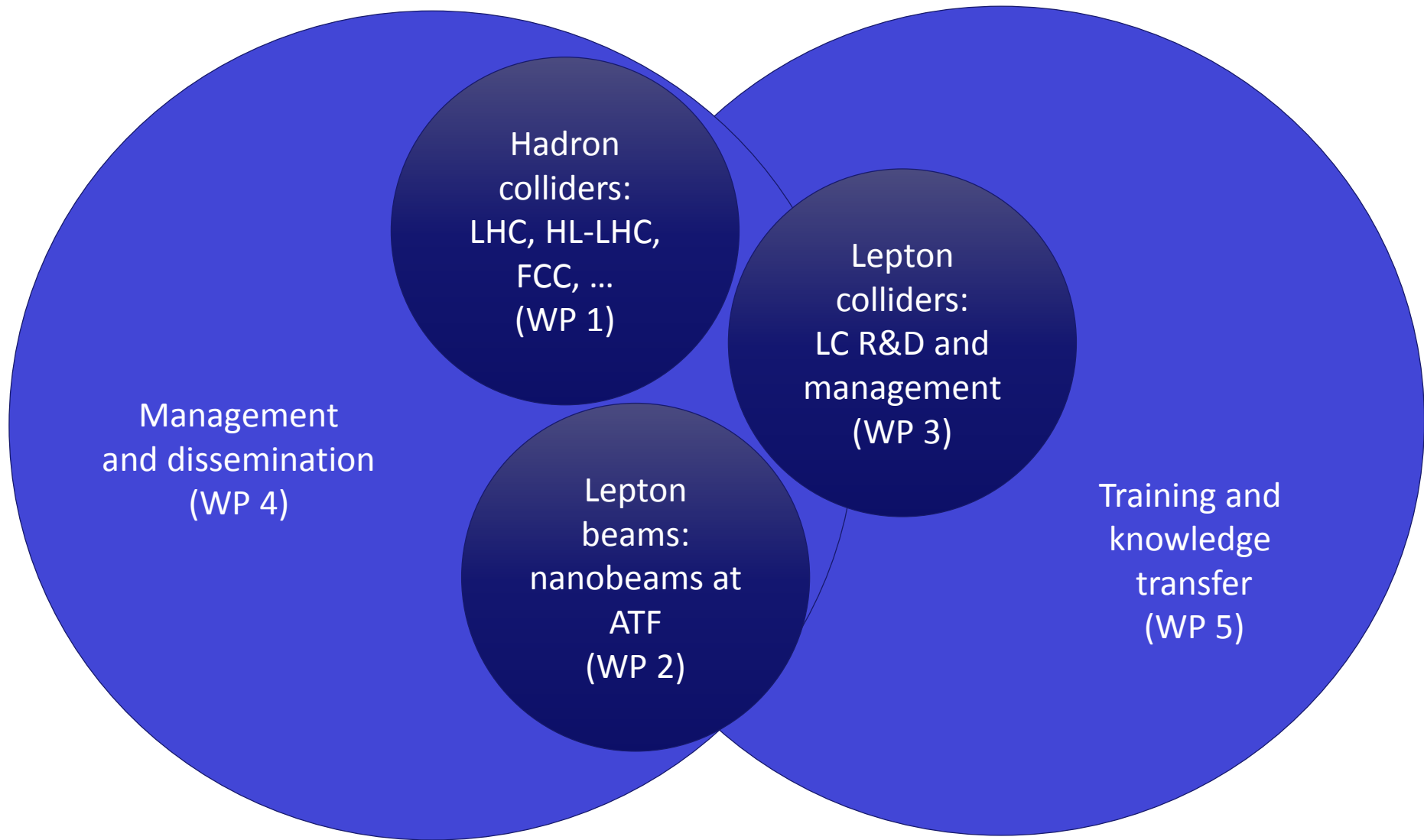
- The E-JADE project – science
- The E-JADE project – organisation
- The work packages – quick overview
- Status of secondments
- Feedback to EU
- Conclusions and outlook



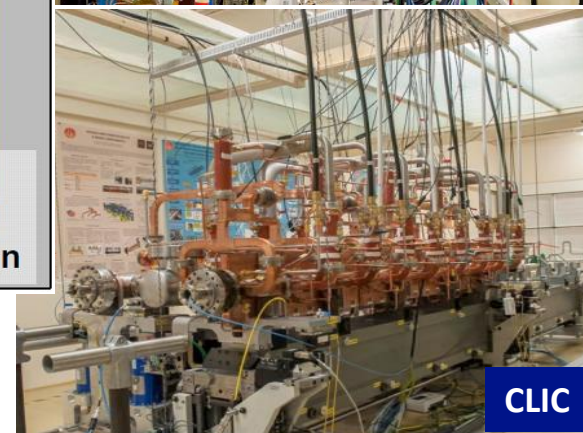
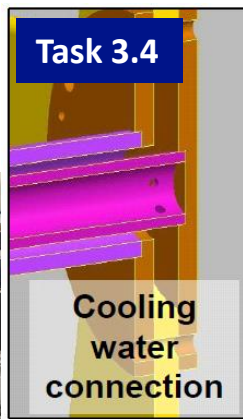
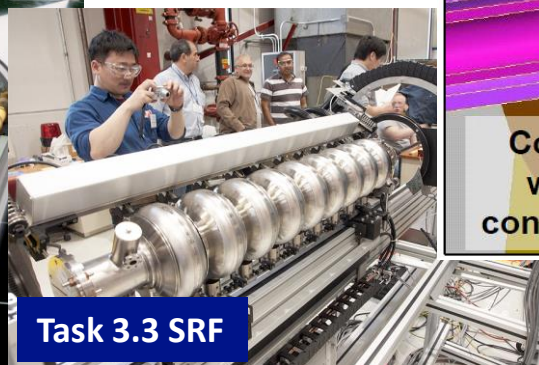
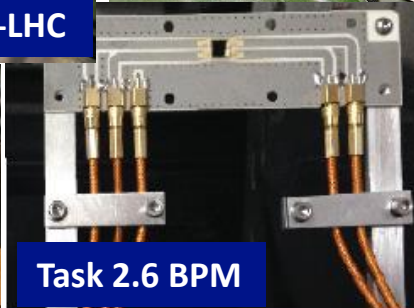
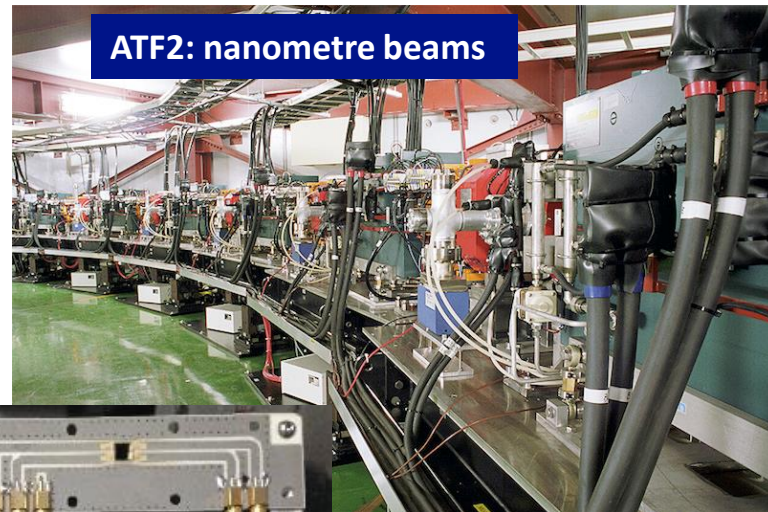
# E-JADE – The Science Scope

- Particle physics has since long been a very international endeavour
- For funding reasons, there will be only one accelerator of a given type at a given time (e.g. hadron collider,  $e^+e^-$  collider, ...)
- International roadmaps (European, Japanese, but also US) identify similar goals
  - ➔ increased collaboration and exchange between different world regions is mandatory for maximising the chances of realisation
- “... *E-JADE addresses the urgent need of exchange of ideas on R&D and implementation of future accelerators for particle physics.*”
  - Basic accelerator R&D
  - Prototyping
  - Implementation
  - Management

# E-JADE – Science Overview



# E-JADE - Our Facilities



# Overview

- The E-JADE project – science
- The E-JADE project – organisation
- The work packages – quick overview
- Status of secondments
- Feedback to EU
- Conclusions and outlook



# E-JADE – Organisation

- E-JADE has seven contributing institutes in Europe (coordinator: CERN) and two Japanese partner institutes

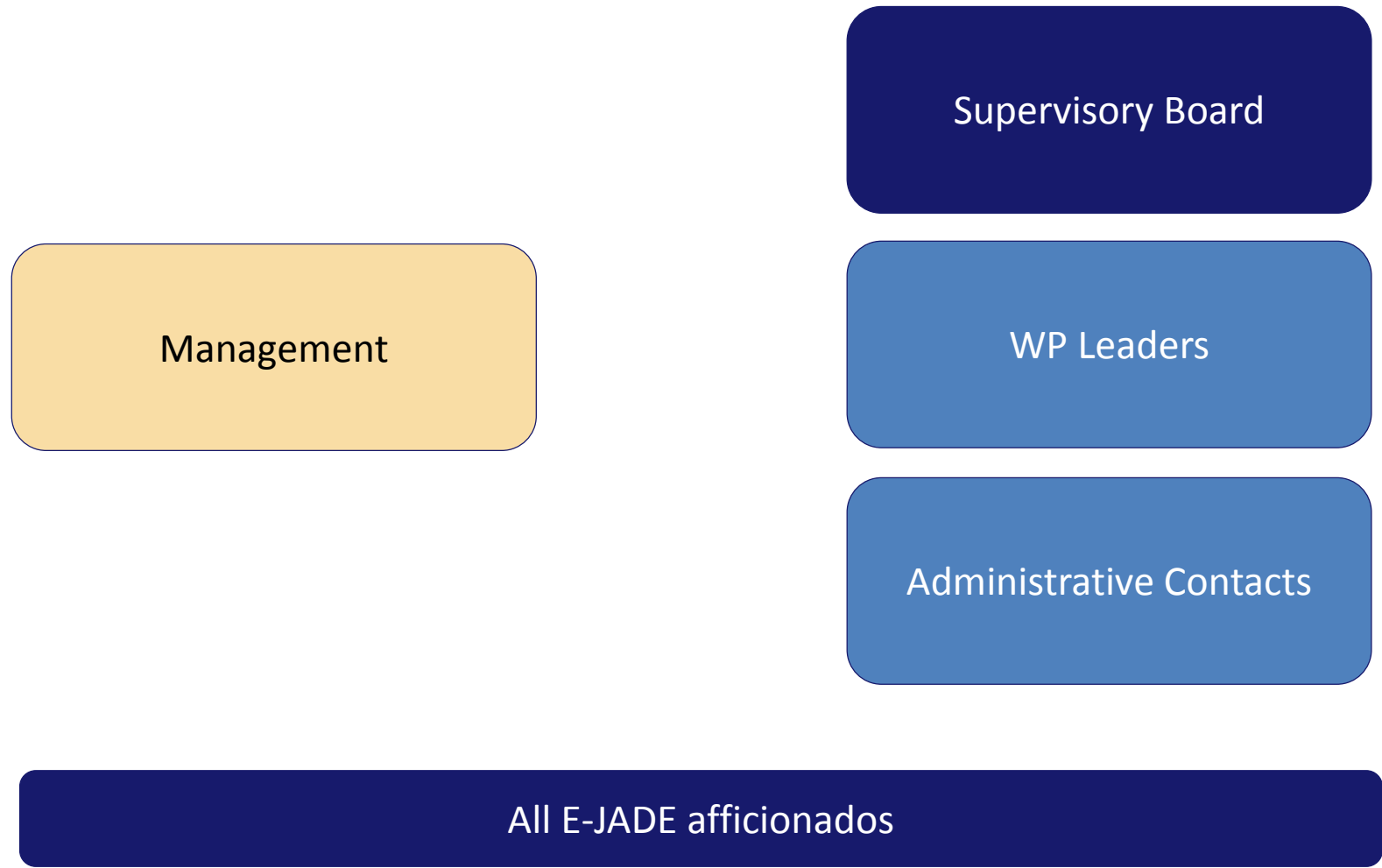




# E-JADE – Organisation

- E-JADE Scientific Coordinator: Steinar Stapnes
  - Interim: TSS
- E-JADE Project Manager: TSS
- E-JADE has five work packages:
  - WP 1: LHC consolidation, upgrades and R&D for future hadron machines  
Leaders: Lucio Rossi / Steinar Stapnes (CERN)
  - WP 2: Nanometre scale beam handling at the ATF  
Leader: Philip Bambade (CNRS Orsay)
  - WP 3: Linear collider targeted R&D  
Leader: Marcel Stanitzki (DESY)
  - WP 4: Management and dissemination  
Leader: Andrea Latina (CERN)
  - WP 5: Training and knowledge transfer  
Leader: TSS

# E-JADE – Governance



# Overview

- The E-JADE project – science
- The E-JADE project – organisation
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# WP 1: LHC Consolidation, Upgrades and R&D for Future Hadron Machines

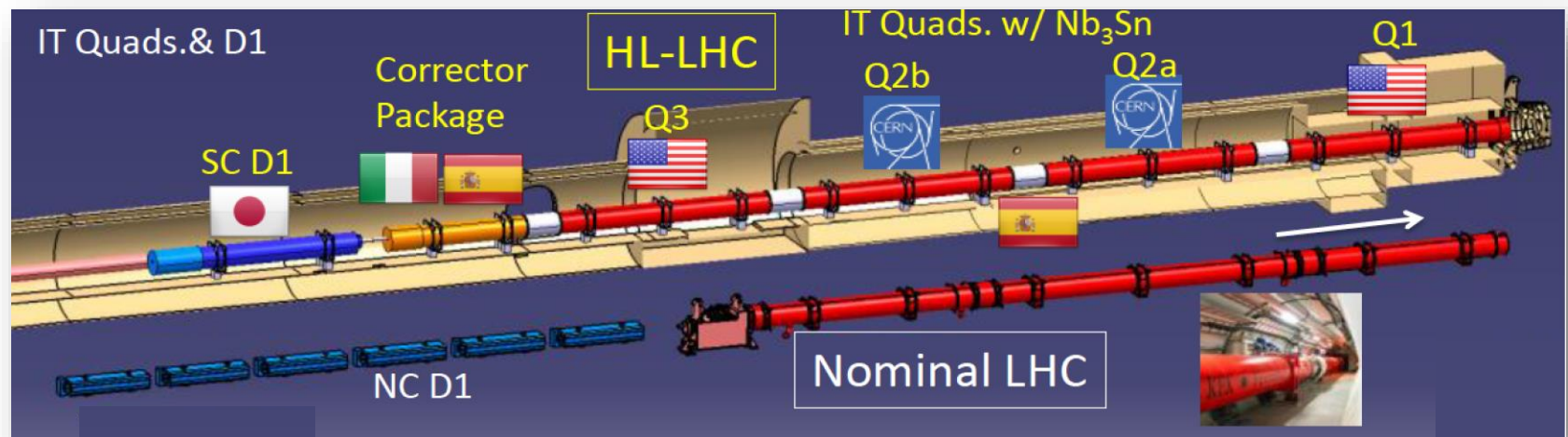
- LHC exploitation and upgrades (spec. planned Japanese contributions) and R&D for future high-energy/intensity hadron machines (e.g. FCC)
- Main objective: integration of European and Japanese efforts (plus other regions) on HL-LHC upgrade into a construction project
- CERN (30), KEK (36), U Tokyo (12)
- From proposal:

## **Objectives**

1. Execution of an intensified Japanese programme at LHC in preparation for future accelerator programmes
2. Advance the preparation for and execution of the European-Japanese collaboration on the High Luminosity LHC upgrade and associated R&D
3. Strengthen the R&D on High field magnets and RF systems for future or upgraded energy- and/or intensity-frontier hadron machines.

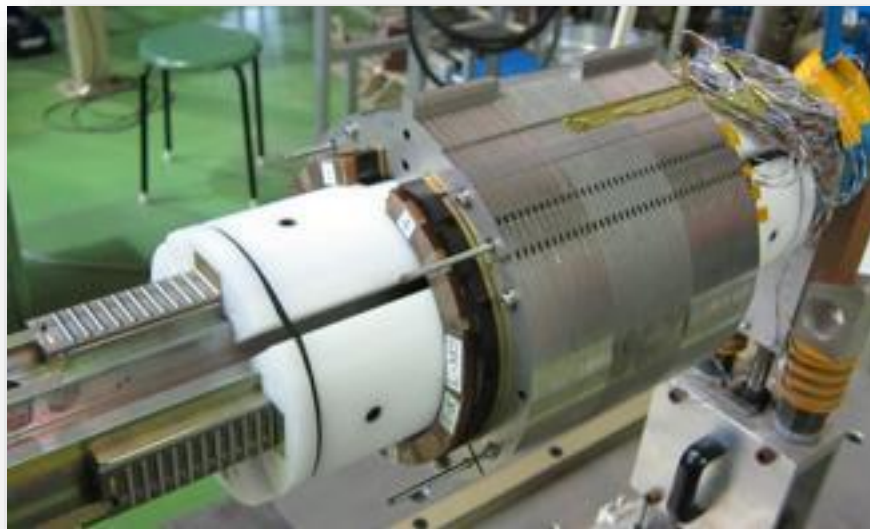
# WP 1: Tasks

- **1.1 – LHC operation and analysis:** Integrate Japanese efforts in operation of LHC machines / detectors; gain experience for future developments
- **1.2 – HL-LHC:** Engineering design and validation of two short prototype separation superconducting dipoles (D1) followed by construction preparation, construction and test of the 4 final (plus two spare) D1 dipoles for the upgraded LHC insertion regions. Studies for crab cavities (CC) for LHC luminosity upgrade, benefitting from KEK operational experience
- **1.3 – high-field magnet R&D and preparation of future hadron injectors / colliders:** R&D on HTS magnets of accelerator/collider quality (wideband cavities using magnetic alloy, solid-state amplifiers and low-level RF).
- **Example: Replacement of current NC D1 by SC D1**



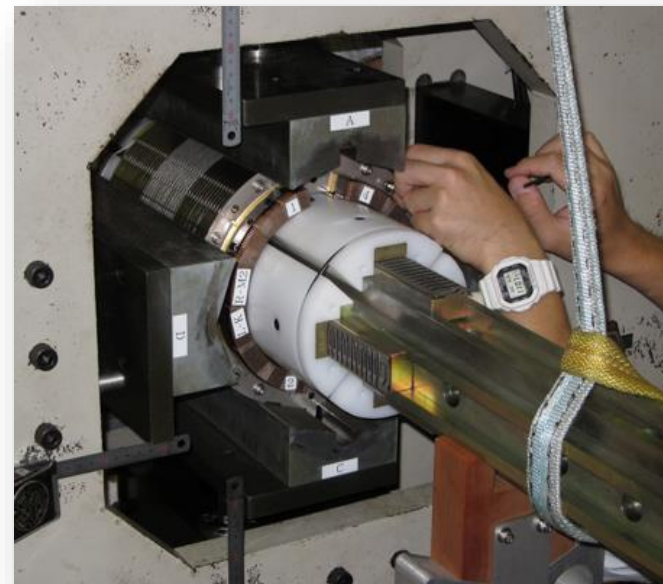
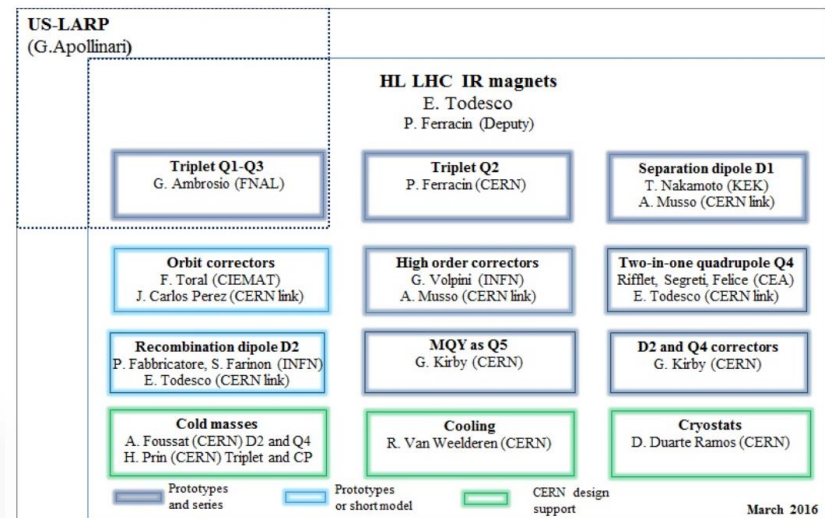
# WP 1: Example D1 Magnets / HL-LHC

- Secondments / travels currently mostly linked to preparation (prototyping) of the separation dipoles for HL-LHC
- Testing of 2m prototyping ongoing this week (A. Musso now at KEK)



- See comments about LHC injectors and FCC later (in WP 1 report)

## Structure



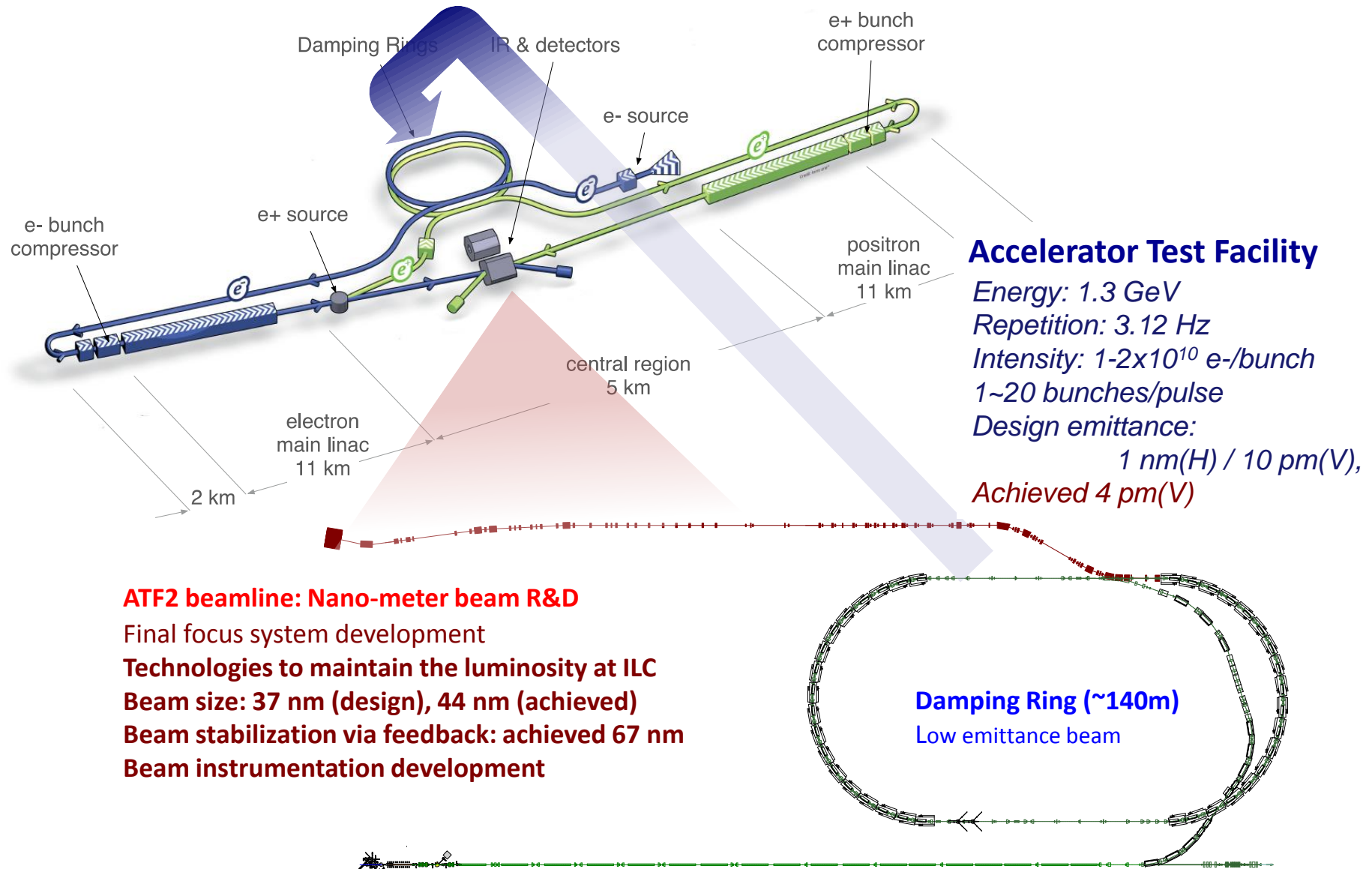
# WP 2: Nanometre scale beam handling

- KEK operates the ATF facility: damping ring meeting LC specifications with low-energy scaled version of LC final focus beam line
- Main objective: Test sophisticated LC beam handling techniques
- Partners: CERN (31), CNRS (50), CSIC (12), KEK (13), RHUL (21), UOXF (49), UoT (2)
- From the Proposal:

## **Objectives**

1. Achievement and maintenance of nanometre scale beam size
2. Measurement and feedback to stabilise beam position at nanometre level
3. Development of advanced beam diagnostics instrumentation
4. Control of beam halo and background mitigation
5. Training of junior scientists and students in accelerator science

# WP 2: ATF and LC



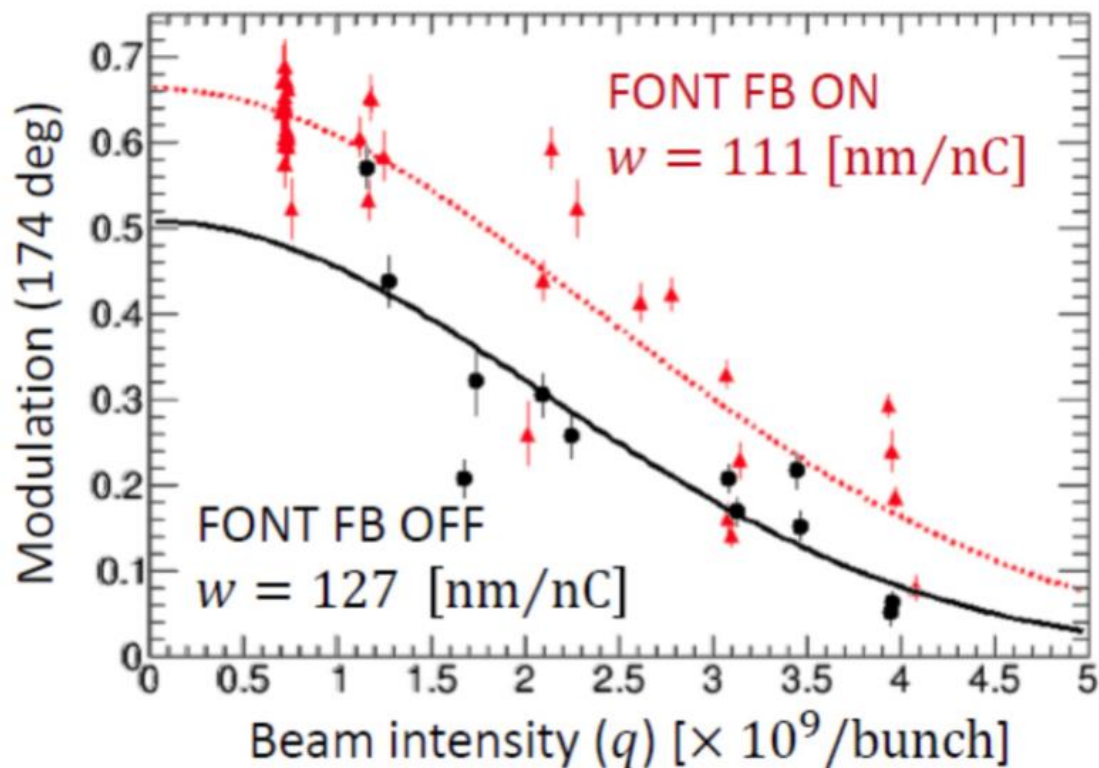


# WP 2: Tasks and Status

- 2.1 Beam Size Minimisation
- 2.2 Wake Field
- 2.3 Ground Motion
- 2.4 Halo Collimation and Backgrounds
- 2.5 Beam Instrumentation and control
- 2.6 Beam Position Feedback
  
- WP2 has followed the schedule of deliveries:
  - 2 submitted deliverable reports (**HaloCollBgds-1**, **Instr-1**) and 1 under preparation (**GM-1**)
  - Delay in secondments: Currently >600 eligible E-JADE days for WP2
  - Total in contract: 163 months → have used 10% so far
- Explanation (**see later**): slow start, 50% less ATF beam time in 2015 budget, eligibility criteria,...
- Solutions → later slide

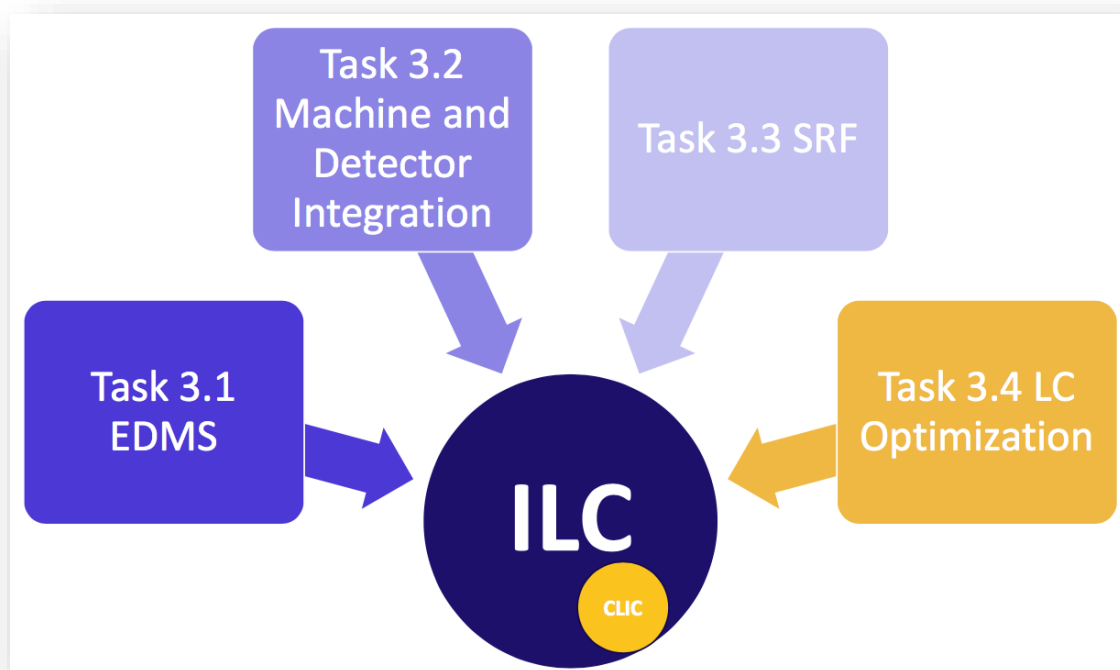
# WP 2: Example Highlight

- Improvement in modulation depth from the Shintake monitor (which measures the IP beam size at ATF2) when feedback is turned ON.
  - Clear positive effect of feedback for the ATF2 spot size



# WP 3: Linear Collider Targeted R&D

- Main objective: Perform site-specific optimisations for ILC, based on ILC TDR and the proposed site in Japan
- CERN (16), DESY (70), UOXF (10), CEA (8), CNRS (4)
- From WP 3 talk today:
- Tasks:
  - 3.1 EDMS
  - 3.2 MDI
  - 3.3 SRF
  - 3.4 LC optimisation (e<sup>+</sup> source, polarisation)
- From the proposal:

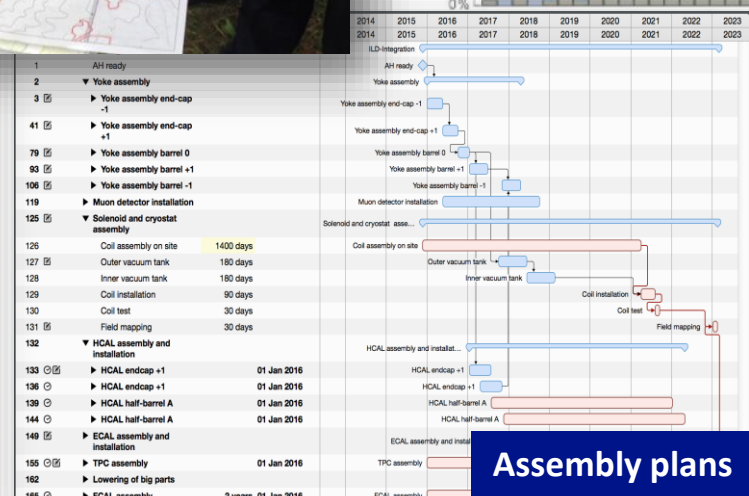
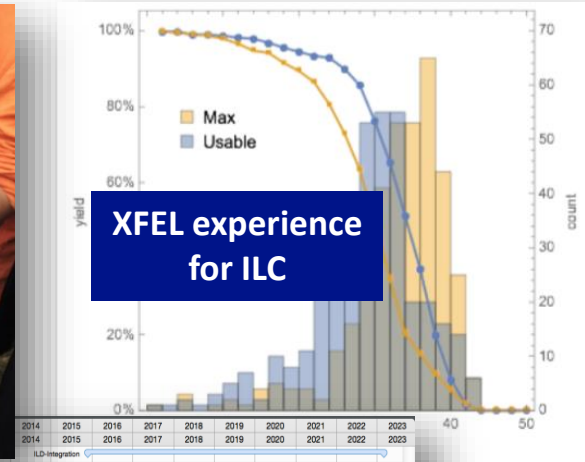
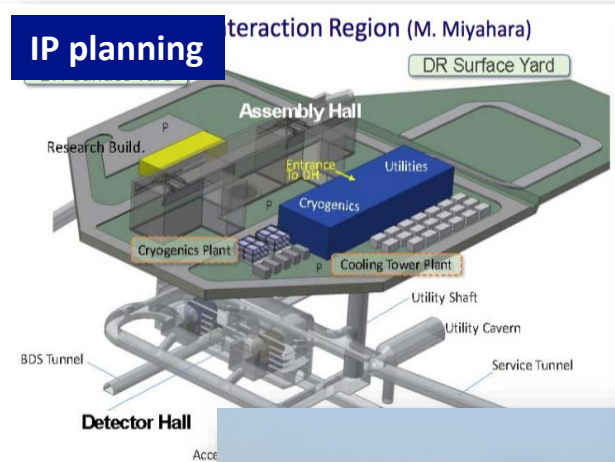


## Objectives

1. Advance the R&D for Linear Colliders to match the requirements of the ILC for project implementation and optimise operation of LC in general

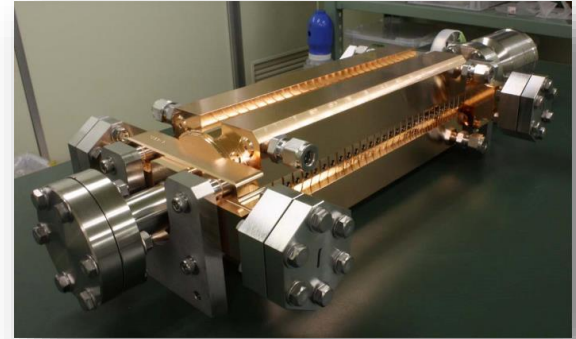
# WP 3: ILC-related tasks

- Unexpected delay of ILC project → delay e.g. in EDMS and MDI tasks (e.g. impact on *EDMSReqUser* deliverable)
- Nevertheless significant work on MDI/CFS, SRF, and optimisation
  - Numerous visits to Japan, many expert discussions

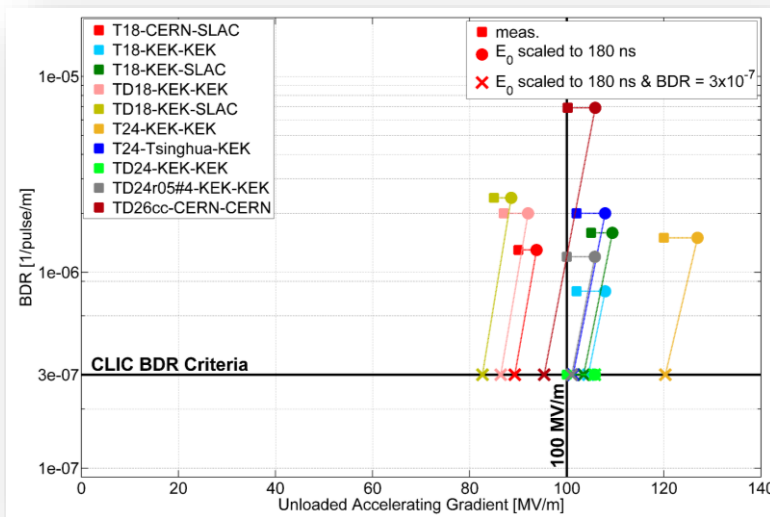
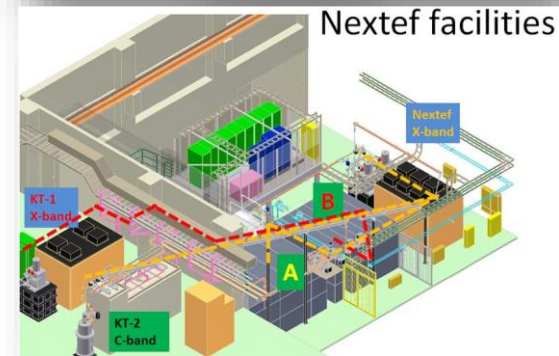


# WP 3: CLIC

- Under task 3.4 LC optimisation
  - 12 GHz copper cavities etc.
- Work: Optimisation of CLIC structures using key facility at KEK
  - Parameters: gradient versus breakdown rate; requires conditioning with high power RF system
- KEK tests structures produced with SLAC, and from Tsinghua and SINAP
- Importance of the facility:



Nextef facilities



# WP 4: Management & Dissemination

- Tasks

- **4.1 Scientific and Financial Management** (CERN & KEK): The management of the programme involves the organisation of programme events, managing the secondments of researchers and the financial planning, execution and reporting to the EU.
- **4.2 CERN & KEK Offices** (CERN & KEK): Permanent offices at CERN and KEK will be set up, which will support the researchers during the duration of their secondment.
- **4.3 Communication** (CERN & KEK): The Communication of E-JADE achievements experiences and results within the E-JADE programme will ensure most efficient sharing of knowledge and expertise of the seconded researchers. Annual meetings of all E-JADE participants will be organized as well as topical workshops as described in B4.3.1
- **4.4 Dissemination** (CERN & KEK): A program for dissemination of information from E-JADE will be setup. This involves setting up public web pages and social media accounts as well as providing information for media and general public. The publication of results in scientific journal articles and participation in international conferences will also be monitored

# WP 4: Deliverables and Status

- Kick-off and second general meeting:

The image shows two screenshots of meeting agendas. The top one is for the 'E-JADE kick off meeting' on 16 Feb 2016, 10:00 - 16:00 in CERN. The bottom one is for the 'Second General E-JADE Meeting' on 4 Feb 2016, 12:00 - 19:00 in CERN. The agenda includes items like 'Welcome, overview of the meeting, and general short report', 'WP 1 report', 'WP 2 report', 'WP 3 report', 'Why 4 and 5 report', 'E-JADE Administrative Matters', and 'Reporting and deliverables'. A list of participants is also visible, including Andrea Latina, Fawz Goffa Angles, Marcel Stantzi, Natalia Polyzkina Kuba, Pavel Karasik, Philip Barnabie, and Thomas Schoerner Saderius.

- Web pages

The image shows the homepage of the E-JADE website. The header includes navigation links: HOME, WORK PACKAGES, PROJECTS, NEWS AND EVENTS, CONTACT, and INTERNAL. The main content area is titled 'E-JADE' and contains a paragraph describing the program's purpose: 'The Europe-Japan Accelerator Development Exchange Programme (E-JADE) addresses the urgent need of exchange of ideas on R&D and implementation of future accelerators for particle physics. It does so by exchanging accelerator scientists and experts between Europe and Japan. The planned exchange of staff of leading European Laboratories and Universities with two prominent Japanese partners (KEK and University of Tokyo) will focus on the most critical subjects and profiles namely on the design, R&D and prototyping of the future accelerator facilities mentioned above. Key objectives beyond technical progress are related to sharing of technical knowledge, project organisation, treatment of multiple safety codes for technical equipment, purchase methodologies and industrial capabilities, innovation and networks to significantly advance these projects.' Below this is a link to the 'Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE) action, funded by the EU under Horizon2020. The original E-JADE proposal can be found [here](#).

- CERN-KEK Offices:

- CERN office at KEK: Building 3-403 (not permanently manned)
- KEK office at CERN: Building 30-6-021 (administrative trainee M. Watanabe half time)

## Implementation Contract

The High Energy Accelerator Research Organization ("KEK") and the European Organization for Nuclear Research ("CERN"), hereinafter referred to as the Parties collectively, or Party individually, hereby conclude an Implementation Contract concerning the funding of the CERN Office at KEK and the KEK Office at CERN under Appendix 10 to the Agreement on Collaborative Work ICA-JP-0103.

- Annual report

Grant Agreement No: 645479

## E-JADE

Europe-Japan Accelerator Development Exchange Programme  
Horizon 2020 / Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE)

## PROGRESS REPORT

### ACTIVITY REPORT FOR THE FIRST YEAR DELIVERABLE: 28

<b>Document identifier:</b>	E-JADE <a href="#">progress report</a>
<b>Due date of deliverable:</b>	End of Month 13 (Jan 2016)
<b>Report release date:</b>	13/05/2016
<b>Work package:</b>	WP1-WP5
<b>Lead beneficiary:</b>	CERN/DESY
<b>Document status:</b>	Final / published

# WP 4 – Dissemination

• All E-JADE partners use their established PR mechanisms to promote E-JADE

- Newsletters
- Days of open doors
- Other public events

• Nice example: Japan Science Agora 2015

- E-JADE featured prominently

## THE EU RISE PROJECTS E-JADE AND JENNIFER

Hubs for EU-Japan Collaboration in  
Accelerator and Detector Research and Development

### EU RISE and EU-Japan Collaboration

RISE (Research and Innovation Staff Exchange) is a Marie Skłodowska-Curie action within the European Unions HORIZON 2020 programme. RISE actions aim at funding short-term staff exchange to develop careers, combining scientific excellence with exposure to other countries and sectors. RISE enables more interaction between academia and non-academic organisations within Europe and worldwide.

### EU HORIZON2020 Programme

HORIZON2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.

HORIZON2020 is the financial instrument implementing the Innovation Union, a Europe2020 flagship initiative aimed at securing Europe's global competitiveness. By coupling research and innovation, HORIZON2020 is helping to achieve this with its emphasis on excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

HORIZON2020 is open to everyone, with a simple structure that reduces red tape and time so participants can focus on what is really important. This approach makes sure new projects get off the ground quickly – and achieve results faster.

### EU and Japan – RISE projects

Scientific collaboration between EU collaborators and Japan is well-established. However, with several existing and planned large-scale projects on the horizon, RISE is an optimal instrument to further advance this collaboration and built even stronger ties between the world regions.

Two RISE projects in the field of high energy particle physics and neighbouring disciplines involving Japanese partners have recently been funded: E-JADE and Jennifer.

### E-JADE

The EU-Japan Accelerator Development Exchange programme E-JADE addresses the urgent need of exchange of expertise and scientists for future accelerator projects. These projects – like the International Linear Collider envisaged by particle physicists to be built in the Japanese Kitakami area – are truly global endeavours and can only be mastered by collaboration of countries from all world regions.

For the period 2015-2018, E-JADE has a budget of 1.6 MEUR. This funding is geared towards the exchange of knowledge and people between Japan and the EU in four fields of research or work packages (WPs), all focused on accelerator R&D. The work packages comprise contributions to the upgrades of the Large Hadron Collider (LHC) at CERN (Geneva, Switzerland), but also activities geared towards future lepton colliders. The scientific work packages are:

- WP 1: LHC upgrades and consolidation, and R&D for future hadron machines. This work package will secure Japanese contributions to the LHC upgrade programme.
- WP 2: Nanometre scale beam handling at the ATF: At the Accelerator Test Facility at KEK, the final focus beam line of future machines like the ILC can be developed.
- WP 3: Linear-collider targeted R&D: Here, studies focusing on the ILC are prepared.
- WP 4: Management and dissemination
- WP 5: Training

There are nine partner institutions in E-JADE from Japan (KEK, Tokyo University) and European countries (France, Germany, Spain, Switzerland, United Kingdom)

### Summary

JENNIFER and E-JADE are high-impact funding instruments specifically geared towards fostering closer cooperation between researchers in the European Union and in Japan. The programmes involve numerous leading research institutions both in Japan and in the European Union. The amount of funding available in the programmes will facilitate unprecedented exchange between these world regions, thus benefitting their grand plans for new experiments.

### Towards a bright future

The E-JADE and JENNIFER work packages touch upon basically all international large-scale projects in particle physics on the global agenda. Large contributions are expected to the LHC and its experiment, to the International Linear Collider, to the Belle-II experiment, to TZK, and to HyperK. Physicists in all world regions are very much looking forward to realisation and scientific exploitation.

### JENNIFER

JENNIFER (Japan and Europe Network for Neutrino and Intensity Frontier Experimental Research) – is a RISE project that aims at jointly investigating the quark and lepton flavour structure of the Standard model of particle physics, through participation in world-leading experiments based in Japan:

- the Belle-II experiment, which will operate at the SUPERKEKB accelerator at Tsukuba, aiming to perform the most precise measurements of rare processes mainly for b quarks and tau leptons. The Belle-II detector is composed of different systems that will be installed between 2016 and 2018;
- the TZK neutrino oscillation experiment, being operated between Tokai and Kamikoka, will be upgraded to the HyperK experiment in the next decade. Both experiments aim to measure the details of the neutrino oscillation phenomenon and the possible presence of unexpected effects.

The JENNIFER consortium is formed by 13 academic and 1 Industrial European organisations, and by 2 Japanese institutions: the KEK laboratory and the Institute for Cosmic Rays research (ICRR) of the University of Tokyo. JENNIFER aims also at cross-fertilising different communities: flavour and neutrino physicists, European and Japanese scientists, academic and industrial approaches.

### Partners

### Example Work Packages / Projects

### Secondments

The most important instrument of RISE projects are secondments – in the E-JADE and JENNIFER cases travels of EU researchers to Japan.

### Secondment Eligibility

Eligible for RISE secondments are experienced researchers, early-stage researchers, technical staff, and managerial staff. Students can not be funded from RISE money.

RISE secondments are organised in minimum refundable time slots of four weeks. All in all, 540 person-months of secondments are foreseen for E-JADE, and a similar amount of time in JENNIFER. All in all, these numbers demonstrate the significant impact that the RISE actions can have both for individual scientific projects and for EU-Japan collaboration on a larger scale.

### Secondment Reporting

The EU is keen on optimising the RISE conditions and regulations. Therefore, and in order to monitor the impact of the E-JADE and JENNIFER activities, a rigorous reporting scheme will be set up, focusing not only on scientific and technological achievements, but also on personal and cultural experiences.

Navigation icons: back, home, forward, search, refresh, print



# WP 5: Training and Knowledge Transfer

- Tasks

- **5.1 – training:** All beneficiaries and partners will provide an extensive, relevant and high-quality schedule of training courses, individual coaching sessions and research experience periods to the researchers to be exchanged. These efforts will be directed towards the exchange of knowledge and expertise available at project partners, for the benefit of visiting and resident researchers. A detailed description can be found under section 4.3.1.
- **5.2 – evaluation:** In order to achieve the objective of increasing skills, knowledge and experience of the staff exchanged, the knowledge transfer schedule must be fully implemented (see Task 5.1). In parallel, as also described in WP 4, the consortium will develop and approve at the kick-off meeting an evaluation framework that will monitor the implementation of the knowledge transfer, and evaluate with individual participants to what extent the efforts conducted have been successful, meeting the individual and overall goals, and where/when any adjustments or improvements are necessary.

# WP 5: Training and Knowledge Transfer

- Deliverable KTTTool – evaluation framework
  - First look at “data” planned for second annual report

## E-JADE Travel Report Form

31 December 2020  
Europe/Berlin timezone

### Overview

List of registrants

Short-term evaluation form

### Overall scientific success of secondment

In this section, we ask you to evaluate the scientific (or administrative / managerial / technical) success of your secondment.

\* General scientific success of the secondment

-- Choose a value --

How do you rate the overall scientific success of your secondment on a scale from 1 (very poor) to 5 (very good)

\* Secondment objectives

How well were the objectives of your secondment met?

\* Personal scientific gain

How much did your personal work profit from the secondment?

\* Home institute's gain

How much did your home institute profit from the secondment?

\* Receiving institute's gain

How much did the receiving institute gain from the secondment?

**Dates:** 31 December 2020

**Timezone:** Europe/Berlin

**Location:**

<https://indico.de>  
Last modified: 2020-12-31 10:00:00

Hosted by  DESY

### Personal and "soft-skills" success of secondment

In this section, we ask you to report on the success of your secondment in terms of personal experience, cultural experience, social learning

\* What was your level of Japanese before the secondment?

-- Choose a value --

\* New language skills acquired?

Which new language skills did you acquire during your trip to Japan?

\* Cultural or social events in Japan?

Did you participate in any cultural or social event while in Japan (concert, museum visit, etc.)?

\* Working experience in Japan?

How was your experience working, collaborating, conducting or participating in meetings in Japan?

-- Choose a value --

Working experience in Japan - details?

Here you can specify details.

\* Hosting arrangements in Japan?

How were the hosting arrangements during your secondment?

-- Choose a value --

Hosting arrangements in Japan - details?

Here you can specify details on your hosting arrangements in Japan.

# All Work Packages: Deliverables

Deliverable No	Deliverable Name	Work Package No	Lead Participant Short Name	Nature	Dissemination Level <sup>1</sup>	Delivery Month
1	Magnets and Gradients	1	CERN	Report	PU	25
2	Hadrons at high intensity and energy	1	CERN	Report	PU	25
3	Physics at LHC	1	CERN	Report	PU	37
4	HL-LHC	1	CERN	Report	PU	37
5	HaloCollBgds-1	2	CNRS	Report	PU	12
6	Instr-1	2	CNRS	Report	PU	12
7	Instr-2	2	CNRS	Report	PU	24
8	GM-1	2	CNRS	Report	PU	18
9	BeamSize-1	2	CNRS	Report	PU	24
10	Wakefield-1	2	CNRS	Report	PU	24
11	Feedback-1	2	CNRS	Report	PU	24
12	HaloCollBgds-2	2	CNRS	Report	PU	24
13	Wakefield-2	2	CNRS	Report	PU	36
14	GM-2	2	CNRS	Report	PU	36
15	Feedback-2	2	CNRS	Report	PU	48
16	BeamSize-2	2	CNRS	Report	PU	48
17	EDMSReqUser	3	DESY	Report	PU	6

18	ILCRep	3	DESY	Report	PU	18
19	LCOPT	3	DESY	Report	PU	38
20	SRFSharing	3	DESY	Report	PU	48
21	EDMSDoc	3	DESY	Report	PU	48
22	MDIPlan	3	DESY	Report	PU	48
23	Kickoff	4	CERN	Event	PU	2
24	PubWWW	4	CERN	Web	PU	3
25	CERNKEKOffices	4	CERN	Infrastructure	PU	7
26	E-JADE-Report	4	CERN	Report	PU	12,24,36,48
27	IndustryWS	4	CERN	Event	PU	20,45
28	CommStrgy	4	CERN	Report	PU	12
29	E-JADESummary	4	CERN	Report	PU	36
30	KTTTool	5	DESY	Tool	PU	12
31	KTTSummary	5	DESY	Report	PU	48

- Overall E-JADE work progress well on track.

# Overview

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# Status of Secondments

- Shown are the days travelled on E-JADE funding until last week
- Japanese secondments → talk by Katsuo-san later

Beneficiaries	CERN		CEA		CNRS		CSIC		DESY		RHUL		UOXF		TOTAL days	Target / Actual
	KEK	UoT	KEK	UoT	KEK	UoT	KEK	UoT	KEK	UoT	KEK	UoT	KEK	UoT		
WP1	31	114	0	0	0	0	0	0	0	0	0	0	0	0	<b>145</b>	<b>16,1%</b>
WP2	90	0	0	0	159	0	33	0	0	0	199	0	120	0	<b>601</b>	<b>12,3%</b>
WP3	0	0	0	0	66	0	0	0	187	89	0	0	0	5	<b>347</b>	<b>10,7%</b>
WP4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	<b>2</b>	<b>0,1%</b>
WP5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>7</b>	<b>1,3%</b>
<i>Subtotal</i>	<b>128</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>225</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>187</b>	<b>89</b>	<b>199</b>	<b>0</b>	<b>120</b>	<b>5</b>	<b>1102</b>	
<b>TOTAL days</b>	<b>244</b>		<b>0</b>		<b>225</b>		<b>33</b>		<b>276</b>		<b>199</b>		<b>125</b>			
<b>Target / Actual</b>	<b>6%</b>		<b>0%</b>		<b>13%</b>		<b>8%</b>		<b>12%</b>		<b>29%</b>		<b>7%</b>			

# Status of Secondments

- View of seconded months after first complete month
- Numerous secondments not yet adding up to one month
  - Many will be completed soon → “threshold effect”
- Underspending becomes very visible
- Remedies → next slide

	WP1		WP2		WP3		WP4		WP5		TOTAL	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
CERN	30,00	1,63	31,00	1,60	16,00		48,00	0,00	4,00	0,00	129,00	3,23
CEA					8,00				2,00		10,00	0,00
CNRS			50,00	4,70	4,00	0,00			2,00		56,00	4,70
CSIC			12,00	1,10					2,00		14,00	1,10
DESY					70,00	5,67			4,00		74,00	5,67
RHUL			21,00	4,97					2,00		23,00	4,97
UOXF			49,00	3,20	10,00				2,00		61,00	3,20
	<b>30,00</b>	<b>1,63</b>	<b>163,00</b>	<b>15,57</b>	<b>108,00</b>	<b>5,67</b>	<b>48,00</b>	<b>0,00</b>	<b>18,00</b>	<b>0,00</b>	<b>367,00</b>	<b>22,87</b>

# Status of Secondments

- The overall secondment situation is below expectation
  - Roughly 10% of target after 30% of project time
- Reasons
  - Delayed schedule of ILC due to on-going in-depth official review process in Japan: In contrast to expectations at the time of writing the E-JADE proposal, there is no formal project → WP3,5  
Mitigation: difficult
  - Significant reduction (factor 2) of beam time at KEK for ATF2 → WP2  
Mitigation: Expect much larger beam operation time in future; increased CERN contributions to ATF
  - Absence of key persons → all WPs, specifically WP1,3,4  
Mitigation: Transition mastered
  - Slow ramp-up of some activities  
Mitigation: Now ramping up (e.g. injector activities in WP 1, positron injection / polarisation in WP 3, ...)
  - Unclear situation with eligibility criteria, and more problems than expected for senior researchers to spend long secondments  
Mitigation: eligibility situation now clearer
  - Rather ambitious initial planning  
Mitigation: exploit scientific / technological developments arisen during the project to maximise secondments → next slide

# Additional work within tasks

- Nanometre scale beams at SuperKEKB
  - SuperKEKB has recently started beam operation → ideal and unforeseen new testbed for important aspects of WP2 on “Nanometre scale beam handling at the ATF”
  - Suggest to extend WP2 to include additional work on “Tests of optical tuning methods and luminosity optimization techniques at SuperKEKB”
  - SuperKEKB fits naturally between low-energy small-scale ATF2 and “the real thing” (ILC)
  - Benefit also for WP3
  - See additional document / WP2 presentation
- ILC Project at KEK
  - KEK proposed follow-up works of the KEK-ILC action plan in a framework of collaboration between Europe and Japan.
  - Work towards “ILC action plan in Europe” plus initiate more technical work, supported by E-JADE: SRF (WP 3), nanobeam technology (WP 2), beam dump system engineering, civil engineering (both WP 3)
  - More details in WP 3 talk
- Natural and easy ways to maximise secondments.



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# A Word on ECAS / Continuous Reporting

- Rather impractical tool – download and bookkeeping of numbers not possible
  - → keeping our own separate book-keeping tool; doubles the work
- From Grant Agreement:  
*“the obligation of the researcher to complete and submit at the end of the training the evaluation questionnaire and two years later follow-up questionnaire provided by the Agency”*
  - Not implemented in ECAS
- Researcher declaration: Function and definition of “Family charges” information unclear
  - What if family status changes?
- Secondment declaration: If one person travels in two WPs, there is no way to distinguish which secondment was done for which WP.
  - → Define additional “WP” column for each secondment
  - Also give additional column “Days” for each secondment – to facilitate our book-keeping and cross-checking.
- In pop-up window “Edit researcher declaration” (clicking on researcher name): always “DESY” as “sending organisation”

# Eligibility Criteria

- Different situation of e.g. Ph.D. students at different institutes
  - Some with direct contract
  - Some with contract with central funding agency
  - Some with scholarships
  - Some from foreign institutes, but on MoU with European institute with full national European social security coverage, residence permit etc.
- Obviously different treatment of (also seemingly similar) cases at different partner institutions.
- Are there
  - ... different rules for these different cases?
  - ... different interpretations of the rules for similar cases at the various partner institutes?
- Question requires advice from EU; a clear guideline would be helpful.
- Besides this point: Criterion of 1 month minimum secondment extremely difficult, especially for senior people.

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# Conclusions and Outlook

- E-JADE is an excellent opportunity to promote EU-Japan collaboration and push common projects
- E-JADE can serve as a testbed for increased exchange and large common projects in Japan or the EU (e.g. ILC)
- All E-JADE work packages are well on track
  - Some delay e.g. in WP 3 – ILC has not turned into a project yet
- Delays in secondments
  - Reasons understood
  - Numerous mitigation measures envisaged and defined
  - Some necessity for discussion with EU
    - Broadening of tasks, i.e. nanometre beam studies at SuperKEKB, ILC project management at KEK
    - Moderate extension of E-JADE running period?
- All in all E-Jade is the right tool at the right time; long-felt profits still to be earned.

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**Mid-Term  
Review**

**Thank you very much for  
your attention!**



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