EUCALL Identity Package

Deliverable D3 / D2.2

Graham Appleby, European XFEL Facility GmbH
19.01.2016

Contents:

PDF Page:

2a – EUCALL Logo (.jpg)
2b – Logos of all EUCALL partners (.jpg)
2c – Logos of EUCALL, all partners and EU funding acknowledgement (.jpg)

3 – EUCALL Document Template (.docx)

4–5 – EUCALL Event/Meeting Program/Agenda (.docx)

6–10 – EUCALL presentation template - with additional standard slides with info about EUCALL to be used where appropriate/as required (.pptx)

11 – General A0 Poster about EUCALL (.pdf)

12–13 – An A0 poster template - with an additional page with standard info about EUCALL to be used where appropriate/as required (.pptx)
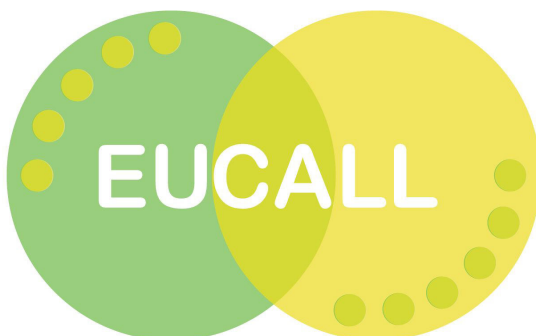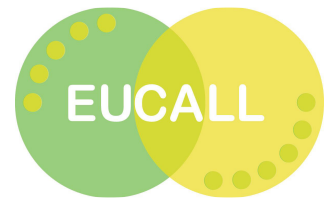
2a)
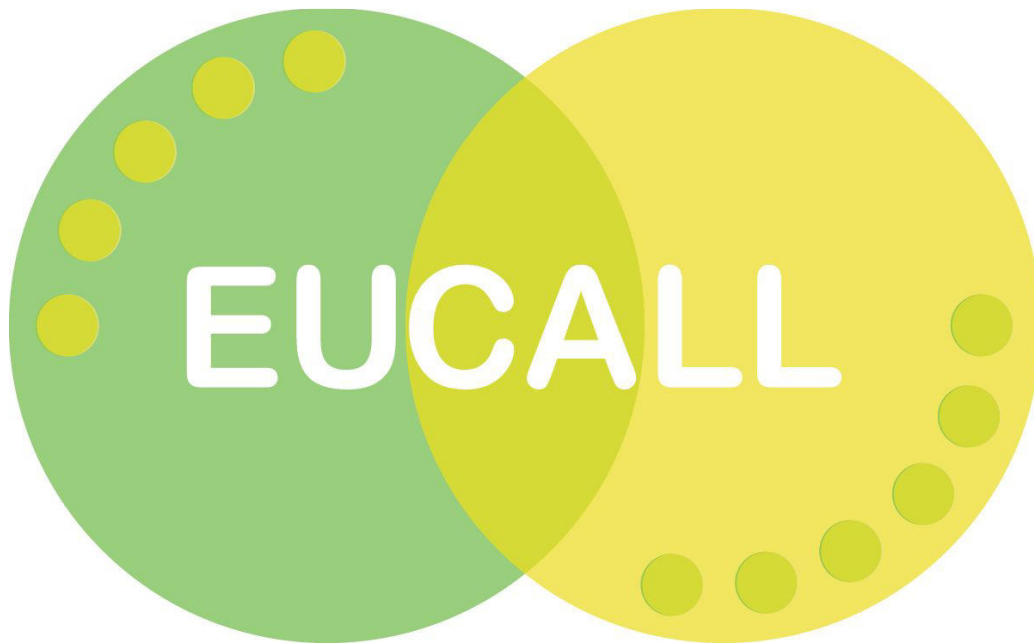
2b)

2c)

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* **under grant agreement No 654220**
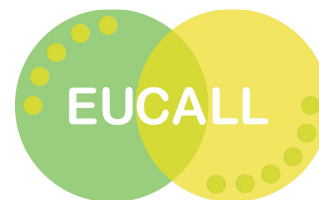
Title

Subheading

Author, Affiliation
Date

Normal. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce vitae nunc leo. Nam nibh odio, auctor vel hendrerit sed, molestie eget ligula. Donec urna magna, fermentum a blandit sed, pellentesque sit amet est. Phasellus massa diam, porta id fringilla in, vulputate accumsan enim. Aenean at eros et nibh volutpat viverra. Phasellus feugiat quam vitae dolor eleifend hendrerit ultrices odio elementum. Praesent enim dolor.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce vitae nunc leo. Nam nibh odio, auctor vel hendrerit sed, molestie eget ligula. Donec urna magna, fermentum a blandit sed, pellentesque sit amet est..
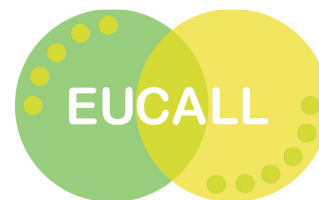
Meeting Name
Day Month Year

Venue: Room, Building
Address

1st Day Date Month Year

Time	Programme
13:00	*Title* – A. Author / Affiliation
14:00	**Coffee Break**
14:15	
15:00	
15:30	
16:00	
18:00	
20:00	

2nd Day Date Month Year

Time	Programme
09:00	
09:10	
09:20	
09:30	
09:40	
09:50	
10:00	
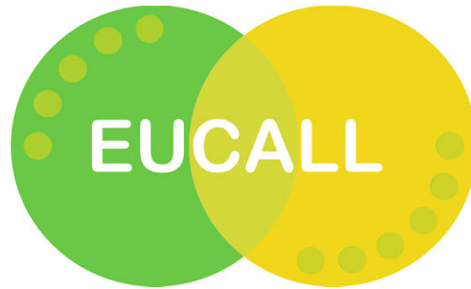
Foundation of EUCALL

- Overlap between optical laser light sources and accelerator based X-ray light sources has been limited for a long time, due to
  - → different photon energies
  - → different scientific applications
  - → different character of the light source installations
- Optical lasers have become so powerful that they can now drive intense secondary sources of coherent and incoherent X-rays.
  - → new RIs for user access being developed
- X-ray FELs combine the properties of laser light with X-ray radiation and provides unprecedented brightness in the X-ray regime.
- EUCALL formed to address the **emerging overlap of scientific applications** of laser and x-ray light sources

Delete this text and the XFEL logo, and replace it with your own facilitiy's logo

Delete this text and put in here: Date of the Talk, location, … (max: 1 line)
Put in here: Name of the speaker, affiliation, … (max. 1 line)

European XFEL

EUCALL

European Cluster of Advanced Laser Light Sources

EUCALL is a network between large-scale user facilities for:

- Free electron laser (FEL) radiation
- synchrotron radiation
- optical laser radiation

Under EUCALL, they work together on:

- common methodologies and research opportunities
- tools to sustain this interaction in the future

Facts and figures:

- 7M€ from Horizon 2020 for project period 2015 - 2018
- 11 partners from nine countries, and two further clusters

Delete this text and the XFEL logo, and replace it with your own facilitiy's logo

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 654220

Delete this text and put in here: Date of the Talk, location, … (max: 1 line)
Put in here: Name of the speaker, affiliation, … (max. 1 line)

European **XFEL**

EUCALL

European Cluster of Advanced Laser Light Sources

EUCALL's six FEL and synchrotron sources and five optical light facilities (red pins). Countries involved in the European clusters FELs of Europe and Laserlab-Europe are coloured.

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 654220
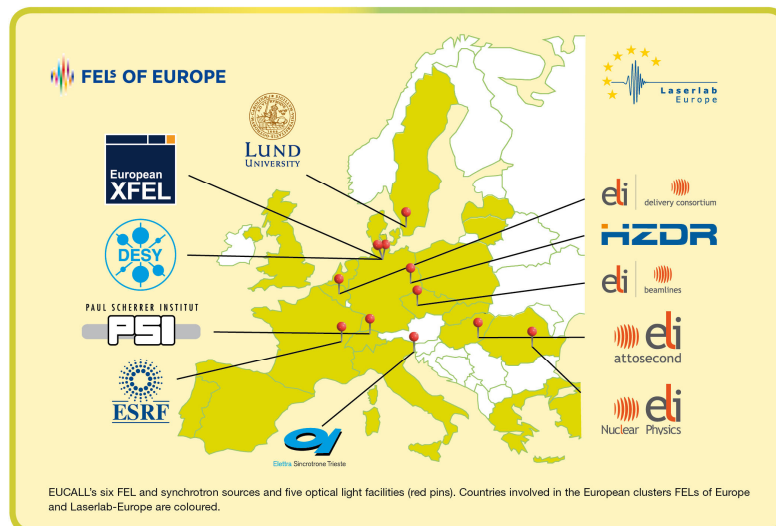
Delete this text and put in here: Date of the Talk, location, … (max: 1 line)
Put in here: Name of the speaker, affiliation, … (max. 1 line)

European **XFEL**

EUCALL's Strategic Goals and Objectives

EUCALL

Goals

Develop & implement cross-cutting services for photon-oriented ESFRI projects.

Optimize use of advanced laser light sources in Europe.

Stimulate & support common long-term strategies & research policies

Objectives

Analyze & promote efficient use of facilities

Identify & develop combined research potential

Analyze & promote innovation potential by the ensemble of facilities

Identify joint foresight topics in science & research policy

Develop & implement a simulation platform

Develop ultrafast data acquisition

Develop ultrafast sample handling systems

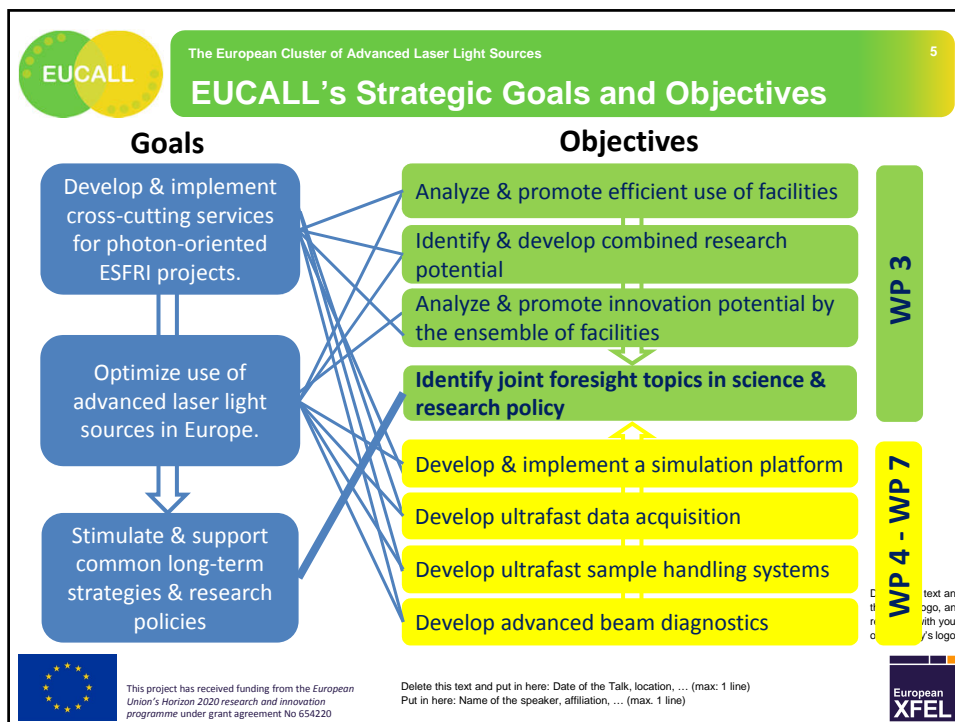Develop advanced beam diagnostics

WP 3

WP 4 - WP 7

Delete this text and the XFEL logo, and replace it with your own facilitiy's logo

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 654220

Delete this text and put in here: Date of the Talk, location, … (max: 1 line)
Put in here: Name of the speaker, affiliation, … (max. 1 line)

European XFEL

European Cluster of Advanced Laser Light Sources

EUCALL

EUCALL Work Packages

- WP1 – **Management** of the EUCALL Project
- WP2 – **Dissemination** and Outreach
- WP3 – **Synergy** of Advanced Laser Light Sources

Senior scientists from FEL and optical laser facilities will join together to identify novel research opportunities, methodologies, and technologies at EUCALL's network of radiation facilities.

Strategies will be implemented towards optimum use of the laser light facilities, promotion of innovation, and coordinated user training/experience exchange

Delete this text and the XFEL logo, and replace it with your own facilitiy's logo

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 654220

Delete this text and put in here: Date of the Talk, location, … (max: 1 line)
Put in here: Name of the speaker, affiliation, … (max. 1 line)

European XFEL

European Cluster of Advanced Laser Light Sources

EUCALL Work Packages

- WP4 – **SIMEX**: Simulation of Experiments

The key objective of **SIMEX** is to develop and implement a simulation platform for users and facility operators to fully simulate experiments at the various light sources.

- WP5 – **UFDAC**: Ultrafast Data Acquisition

UFDAC will deliver ultrafast online image processing, data transfer and injection, and processing of digitiser data for femtosecond and attosecond pulsed photon sources

Delete this text and the XFEL logo, and replace it with your own facilitiy's logo

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 654220

Delete this text and put in here: Date of the Talk, location, … (max: 1 line)
Put in here: Name of the speaker, affiliation, … (max. 1 line)

European XFEL

European Cluster of Advanced Laser Light Sources

EUCALL Work Packages

- WP6 – **HIREP**: High Repetition Rate Sample Delivery

HIREP will deliver an integrated concept for decentralised sample characterisation and fast sample positioning to give external user groups unhampered access to EUCALL's facilities

- WP7 – **PUCCA**: Pulse Characterisation and Control

PUCCA will deliver pulse arrival time monitors with femtosecond time resolution, wavefront sensor and analysis software, and a transparent intensity monitor
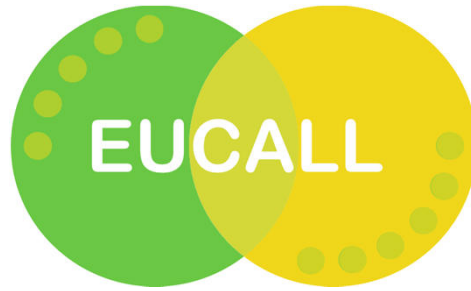
Delete this text and the XFEL logo, and replace it with your own facilitiy's logo

This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 654220

Delete this text and put in here: Date of the Talk, location, … (max: 1 line)
Put in here: Name of the speaker, affiliation, … (max. 1 line)

European XFEL

Thank you for your attention

www.eucall.eu / contact@eucall.eu

EUCALL
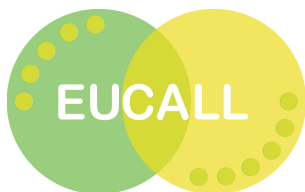
The European Cluster of Advanced Laser Light Sources

Graham Appleby, European X-ray Free Electron Laser Facility, Hamburg, Germany
Catalin Miron, ELI-DC International Association AISBL, Brussels, Belgium
**Thomas Tschentscher**, European X-ray Free Electron Laser Facility, Hamburg, Germany

EUCALL is a network between leading large-scale user facilities for free electron laser (FEL), synchrotron and optical laser radiation and their users. Under EUCALL, they work together on their common methodologies and research opportunities, and develop tools to sustain this interaction in the future.

EUCALL is organised into seven Work Packages (WPs). WP1 and WP2 are for Management and Dissemination while the other five are scientific/technical.

EUCALL's six FEL and synchrotron sources, and five optical light facilities (red pins). Countries involved in the European clusters FELs of Europe *and* Laserlab-Europe *are coloured.*

WP3 Synergy

Senior scientists from FEL and optical laser facilities will join together to identify novel research opportunities, methodologies, and technologies at EUCALL's network of radiation facilities.

Strategies will be implemented towards optimum use of the laser light facilities, promotion of innovation, and coordinated user training/experience exchange.
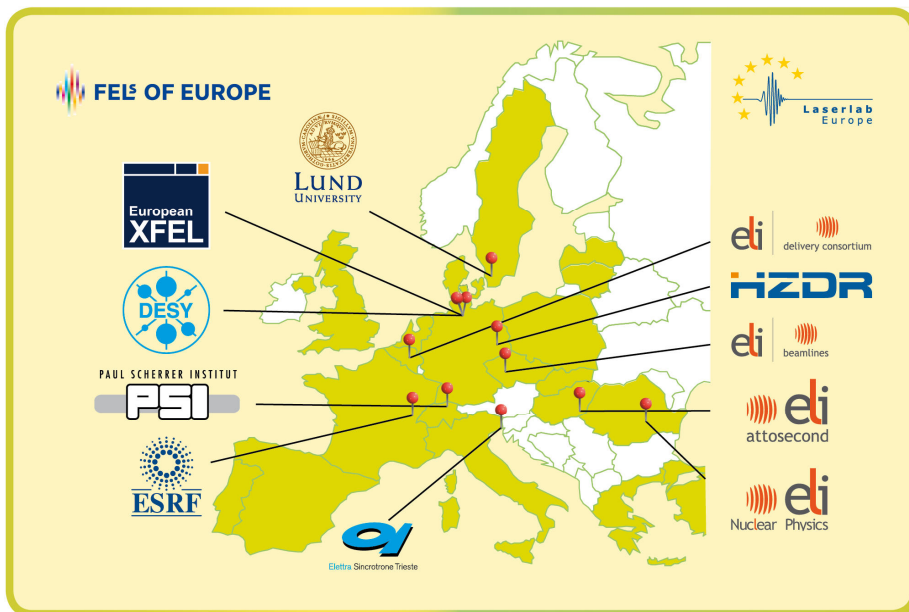
WP4 Simulation of Experiments (SIMEX)

The key objective of **SIMEX** is to develop and implement a simulation platform for users and facility operators to fully simulate experiments at the various light sources. The simulations track the photons on their way from the source through the optics and the interaction region, all the way to the detector. Samples range from weakly scattering biomolecules, density modulations following laser–matter interaction to dynamically compressed matter at conditions similar to planetary cores.
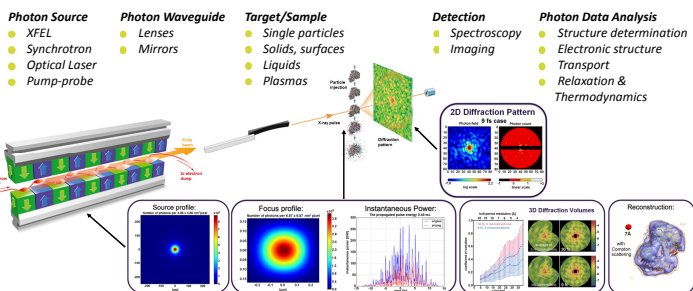

WP5 Ultrafast Data Acquisition (UFDAC)

The high repetition rates and the need for optimised usage of beam-time at optical laser and FEL facilities require higher performance and online data acquisition techniques.

European XFEL will generate pulse trains with up to 2700 pulses separated by 220 ns (600 µs total) followed by idle time of 99.4 ms.

UFDAC will deliver ultrafast online image processing, data transfer and injection, and processing of digitiser data for such demands.
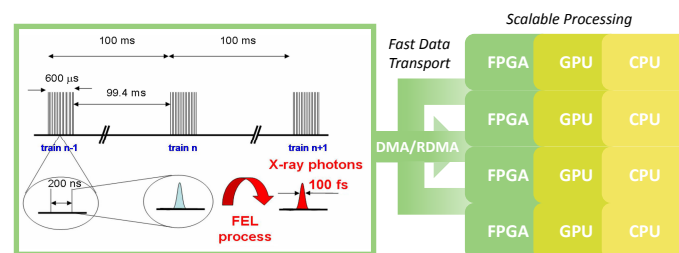

WP7 Pulse Characterisation & Control (PUCCA)

Each of EUCALL's facilities produce intense, ultra-short X-ray pulses whose characteristics change to some extent from pulse to pulse. It is essential to measure the characteristic properties of the light pulses shot-to-shot in a way that does not alter the pulses.

PUCCA will deliver pulse arrival time monitors with femtosecond time resolution, wavefront sensor and analysis software, and a transparent intensity monitor.

Gas-monitor detectors for online intensity and beam position monitoring developed at DESY for FLASH

- *Based on atomic photoionization → no degradation, indestructible*
- *Low particle density → transparent*
- *From time of flight of electrons photoionised from noble gases, uncertainty of the pulse energy: less than 10%*
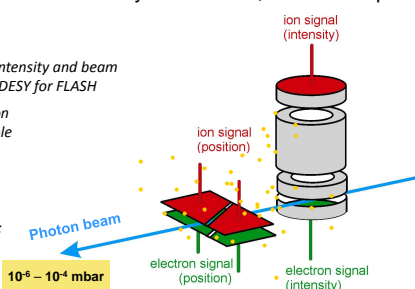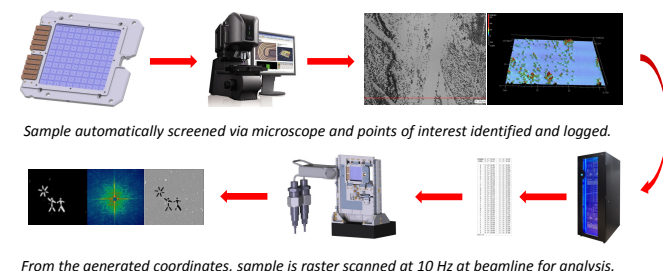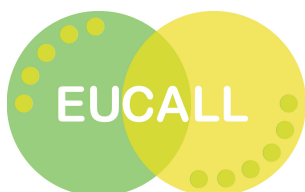

WP6 High Repetition Rate Sample Delivery (HIREP)

Every light source has systems for sample replacement, but no attempt has yet been undertaken to unify sample characterisation and positioning of samples in order to give external user groups unhampered access to the facilities.

HIREP will deliver an integrated concept for decentralised sample characterisation and fast sample positioning at EUCALL's facilities.
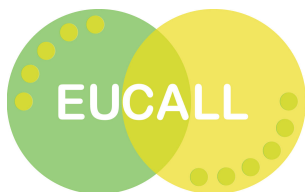

Sample automatically screened via microscope and points of interest identified and logged.

From the generated coordinates, sample is raster scanned at 10 Hz at beamline for analysis.

www.eucall.eu / contact@eucall.eu

Title

Author, Institute
Author, Institute

EUCALL

EUCALL is a network between leading large-scale user facilities for free electron laser, synchrotron and optical laser radiation and their users. Under EUCALL, they work together on their common methodologies and research opportunities, and develop tools to sustain this interaction in the future. EUCALL has received funding from the European Union's Horizon 2020 research and innovation programme and involves 11 partners from nine countries as well as the networks Laserlab Europe and FELs of Europe during the project period 2015 to 2018.

See the colour definitions for the green, green/yellow blend and yellow components of the logo:

	R	G	B
Green circle	152	206	124
Green/Yellow Blend	212	218	54
Yellow Circle	242	229	96

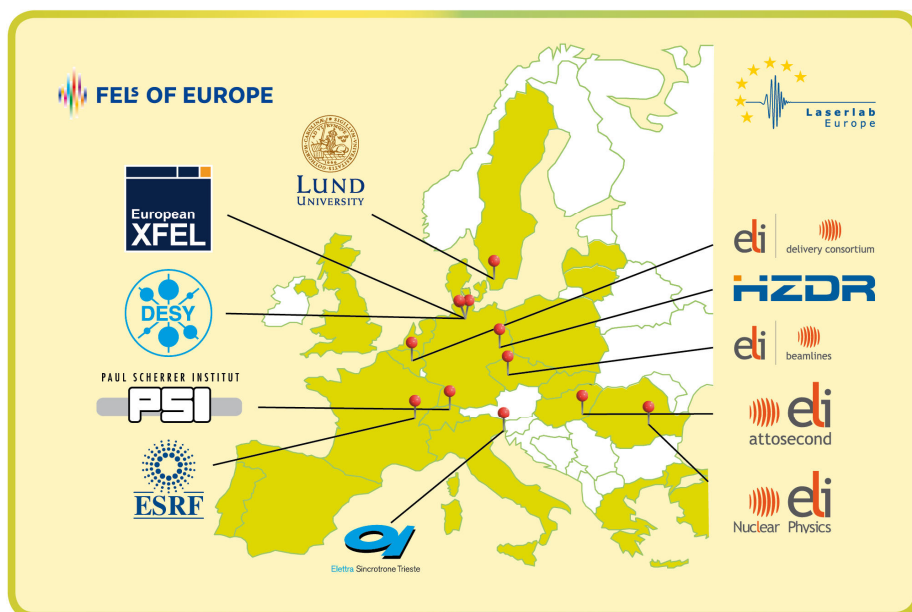## WP3 — Heading Bar 1

List 1
- *a*
- *b*
- *c*
- *d*

WP4 — Heading Bar – Left Column

Unt utat iure dio dignis alit, quamcon sectem velit am vel elit nulla autat. Umsan eum Unt utat iure dio dignis alit, quamcon sectem velit am vel elit nulla autat. Umsan eum Unt utat iure dio dignis alit, quamcon sectem velit am vel elit nulla autat. Umsan eum Unt utat iure dio dignis alit, quamcon sectem velit am vel elit nulla autat. Umsan eum Unt utat iure dio dignis alit, quamcon sectem velit am vel

Heading Bar – Right Column — WP5

Unt utat iure dio dignis alit, quamcon sectem velit am vel elit nulla autat. Umsan eum Unt utat iure dio dignis alit, quamcon sectem velit am vel elit nulla autat. Umsan eum Unt utat iure dio dignis alit, quamcon sectem velit am vel elit nulla autat. Umsan eum Unt utat iure dio dignis alit, quamcon sectem velit am vel elit nulla autat. Umsan eum Unt utat iure dio dignis alit, quamcon sectem velit am vel

EUCALL's six FEL and synchrotron sources, and five optical light facilities (red pins). Countries involved in the European clusters FELs of Europe and Laserlab-Europe are coloured.

www.eucall.eu / contact@eucall.eu