

Pantheon



BrightnESS²

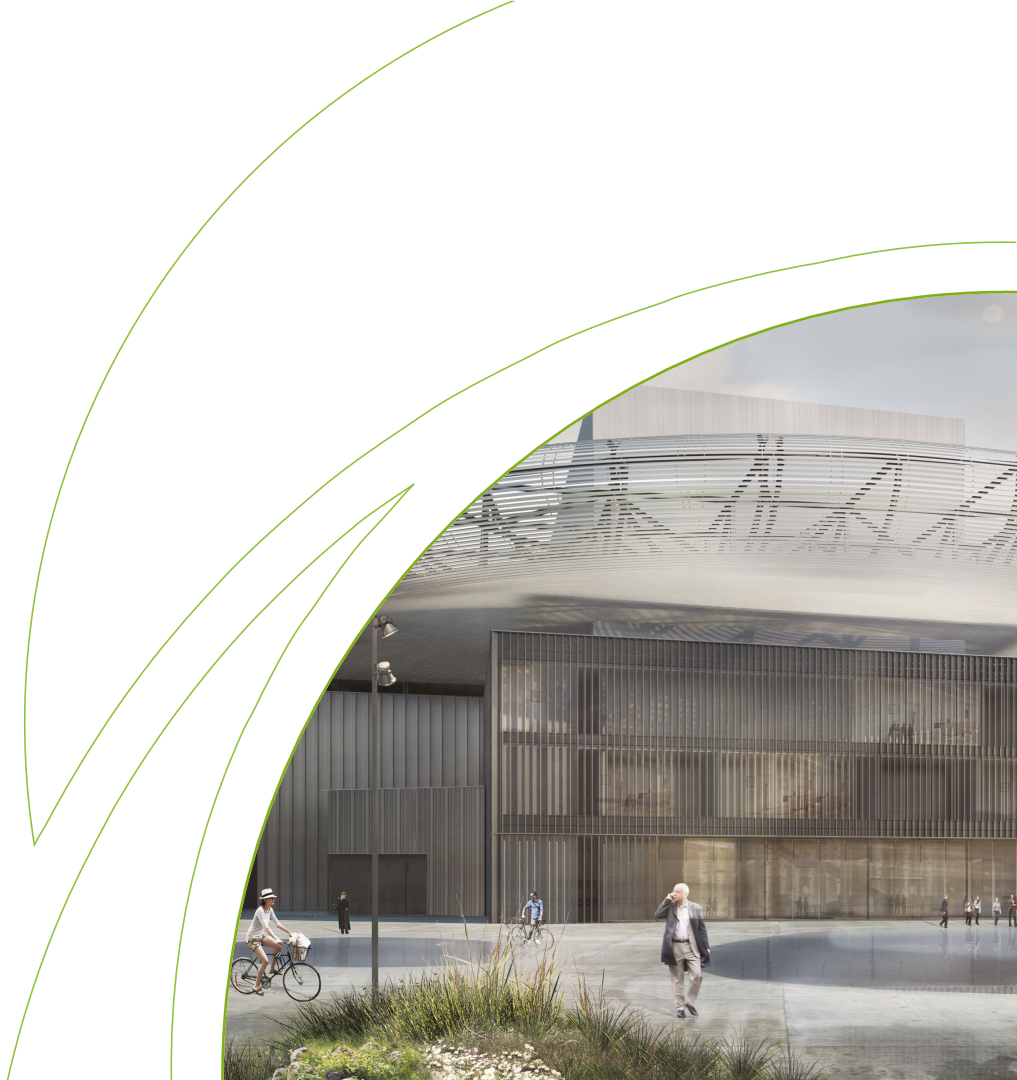
Project Overview, Goals and Objectives

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BrightnESS² is funded by the European Union Framework Programme for Research and Innovation Horizon 2020, under grant agreement 823867



Background

- INFRADEV-3-2018 call
- Long-term sustainability of Research Infrastructures
- Neutron landscape analysis



INFRADEV-3-2018 call



INFRADEV-3-2018 call

Individual support to ESFRI and other world-class research infrastructures

CHALLENGE

The implementation phase of new pan-European research infrastructures, such as those identified in the ESFRI roadmap, is the most delicate and difficult as financial sustainability must be proved and the trust and awareness of users must be earned.

SCOPE

Activities aimed at ensuring long-term sustainability, enlargement of the membership, European coverage, international cooperation, limited pilots of access provision, definition of service level agreements and business/funding plan, outreach, and technology transfer activities

DEADLINE

22 March 2018
20 March 2019

BUDGET

€15k and €45k

Long-term sustainability of RIs





European Strategy Forum
on Research Infrastructures

Established

In 2002 with a mandate from the EU Council

Mission

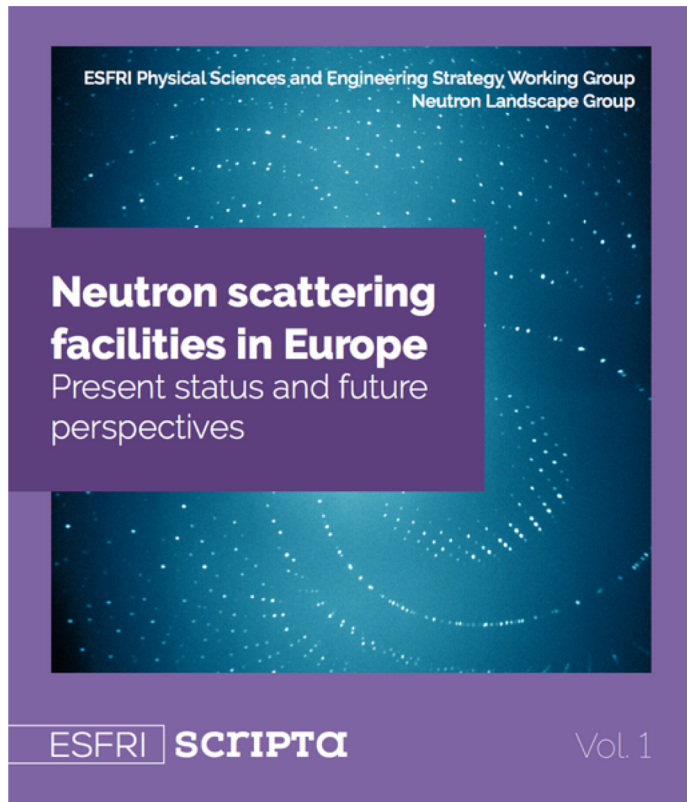
- Support a coherent and strategy-led approach to policy-making on RI in Europe
- Facilitate multilateral initiatives leading to the better use and development of RIs



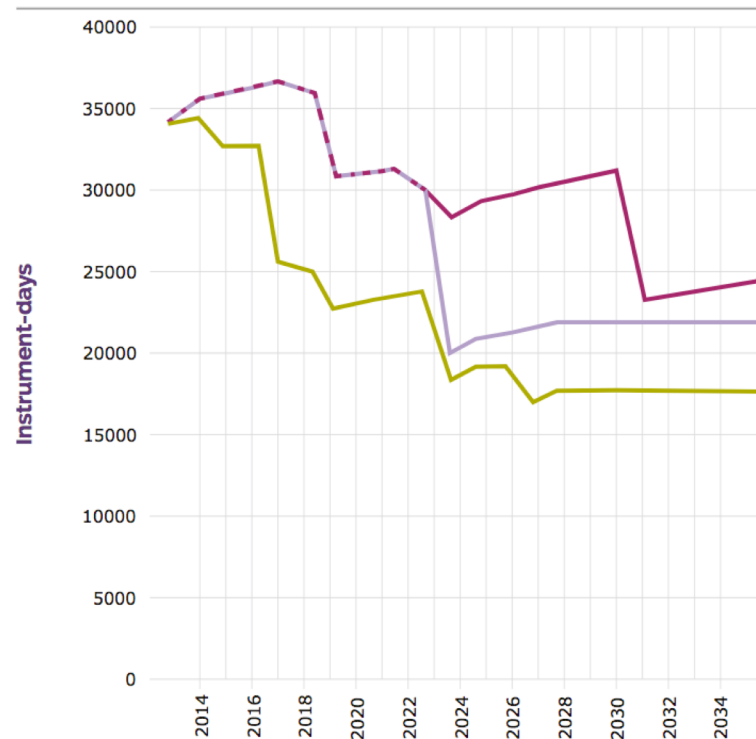
1. Ensuring scientific excellence
2. Attracting and training the managers, operators and users of tomorrow
3. Unlocking the innovation potential of RIs
4. Measuring the socio-economic impact of RI
5. Exploiting better the data generated by the RI
6. Establishing adequate framework conditions for effective governance and sustainable long-term funding for RI at every stage of their life-cycle
7. Structuring the international outreach of RI

Neutron Landscape Analysis





3 scenarios:



Enhanced Baseline

ILL operates until 2030, ESS with 35 instruments beyond 2035

Baseline

ILL operates at full output until 2023, ESS with 22 instruments beyond 2028

Degraded Baseline

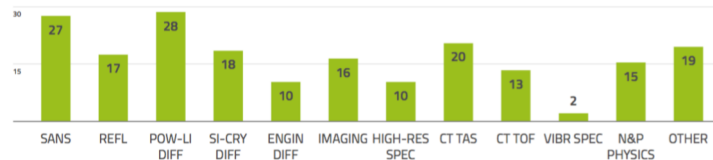
ILL operates at reduced output until 2023, ESS with 22 instruments beyond 2028. Earlier closure and/or reduced operations, for a number of medium power

brightness² Stakeholder analysis under BrightnESS (2015-2018)

A) Neutron users in Europe: Facility-based insights and scientific trends

Europe: Number of instruments per method

Total: 195 (176 + 19 non-scattering instruments)



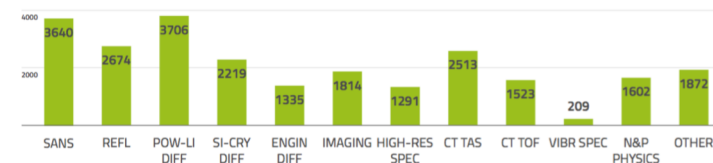
Europe: Number of experiments per year per method

Total: 4 788 (3 912 + 876 non-scattering experiments)



Europe: Number of beam days available to users per year per method

Total: 24 398 (22 526 + 1872 beam days for non-scattering methods)



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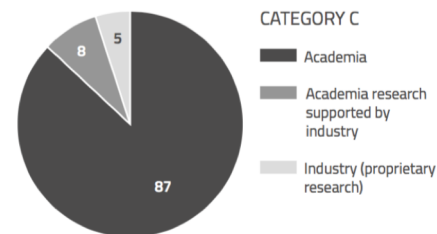
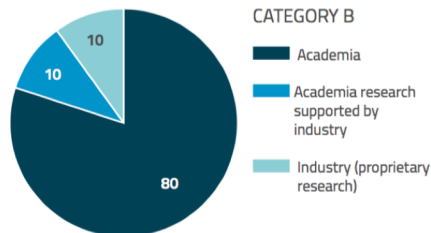
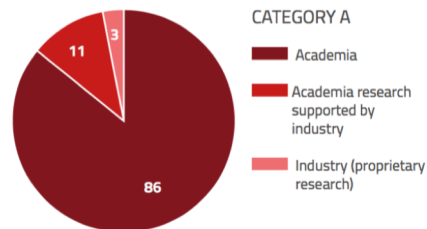
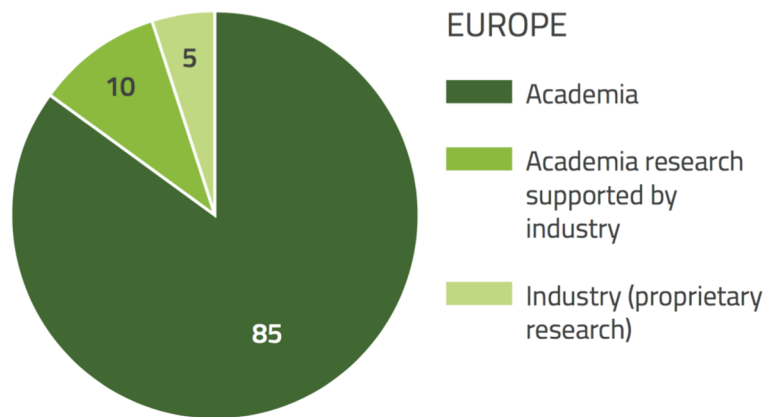
15
facilities

5 777
unique users

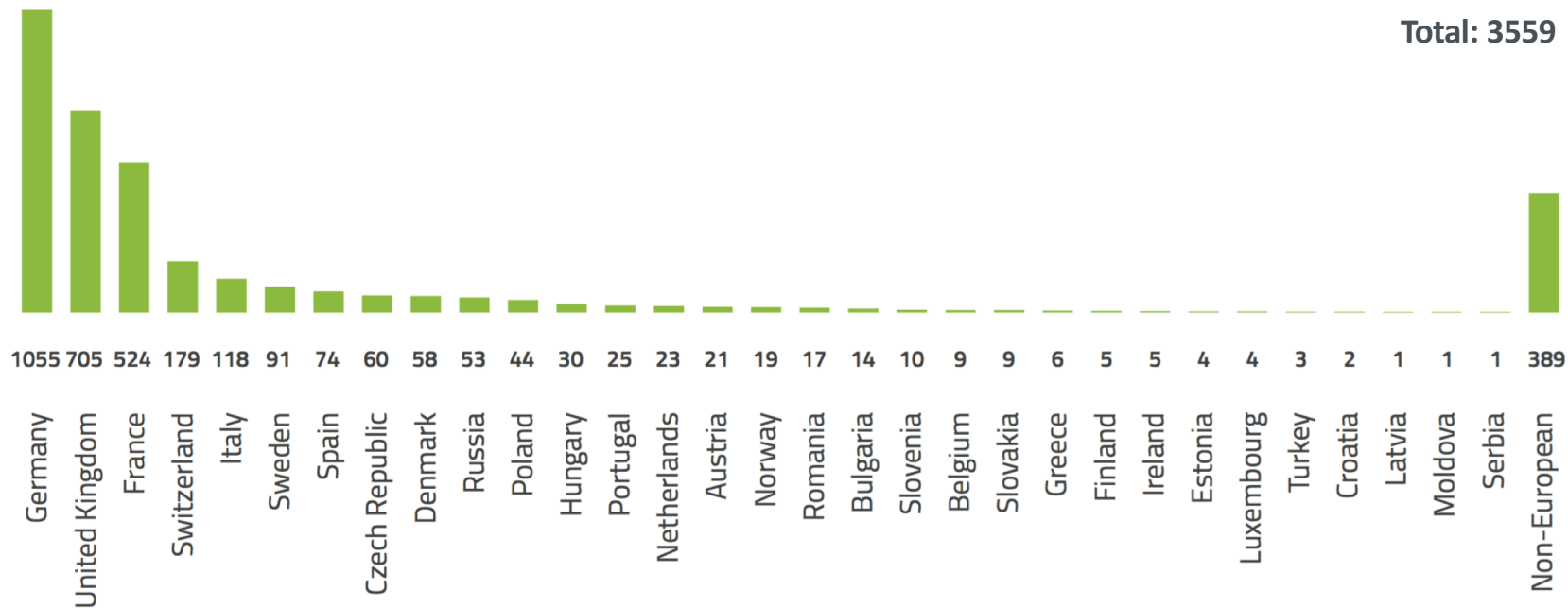
3 559
principal
investigators



Distribution of users according to affiliation expressed as percentage of beam time

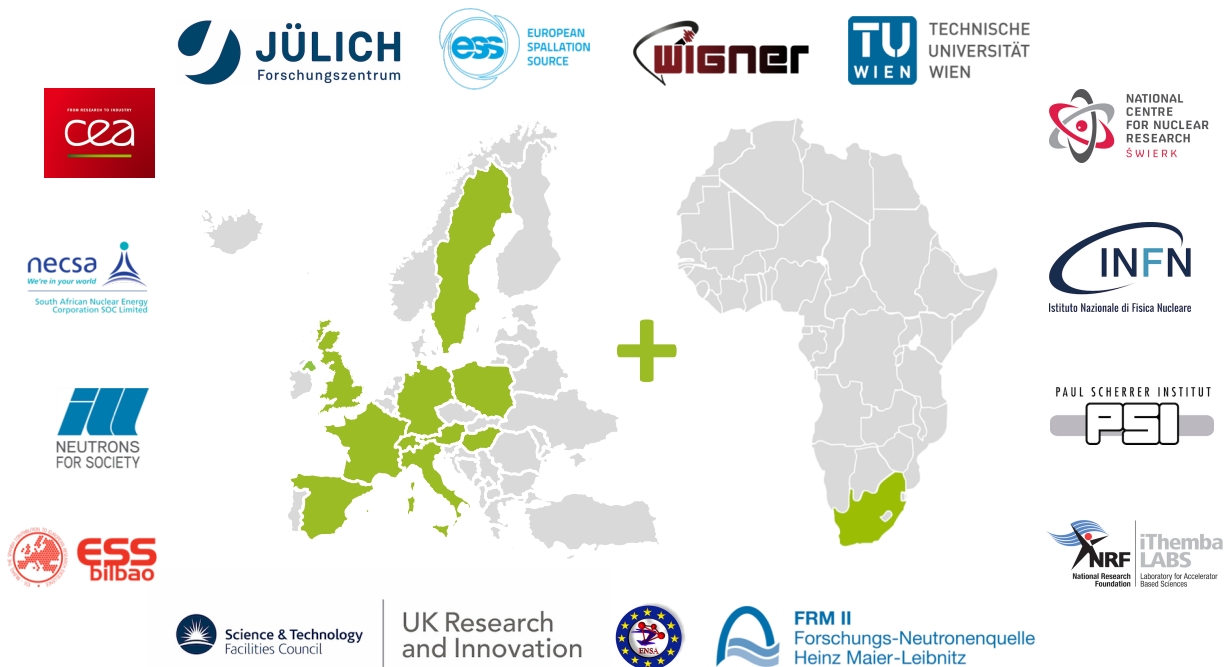


Total number of principal investigators per country



Introducing BrightnESS²





Quick facts

Timeline

Jan 2019 – Dec 2021

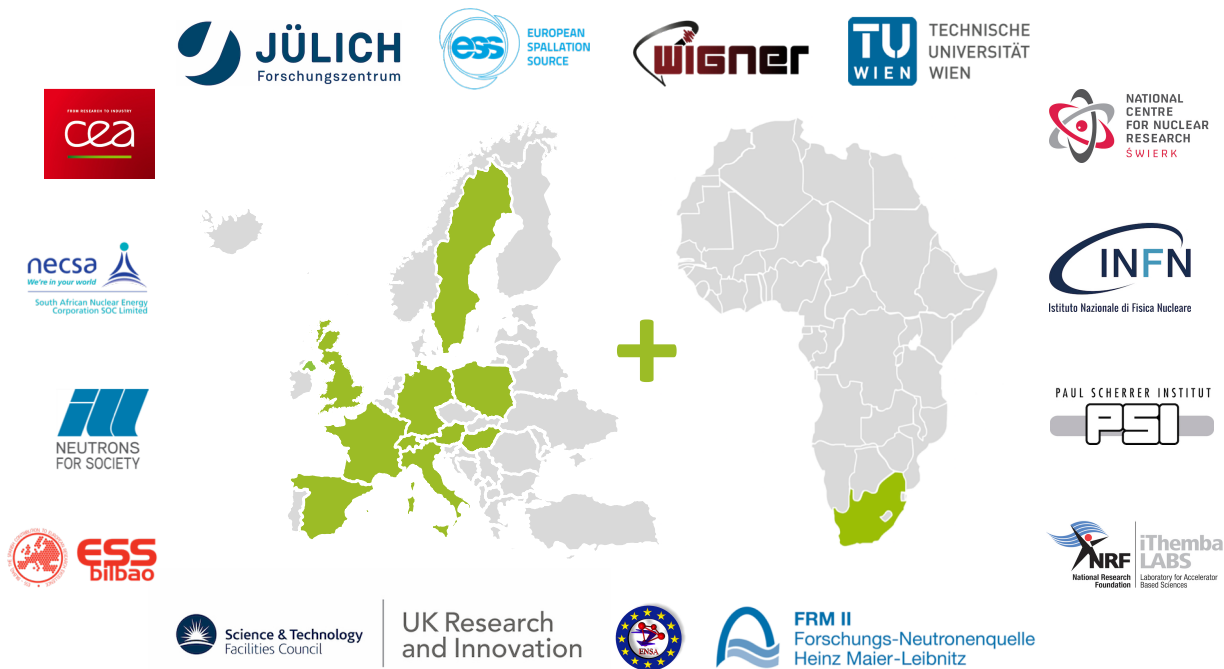
Budget

4 999 592.50 €

15 Partners

11 Countries





Quick facts

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brightness

- ✓ Up to 550 MEUR in IKC contracted or pending
- ✓ Alternative detector technology in place
- ✓ Moderator concept tested
- ✓ Innovative software infrastructure developed
- ✓ Innovation Framework established
- ✓ New Member Policy in place
- ✓ Future users from academia and industry analysed



Ensuring long-term sustainability of neutron scattering in Europe

brightness²

Shaping the European neutron strategy

Evolving the IKC model

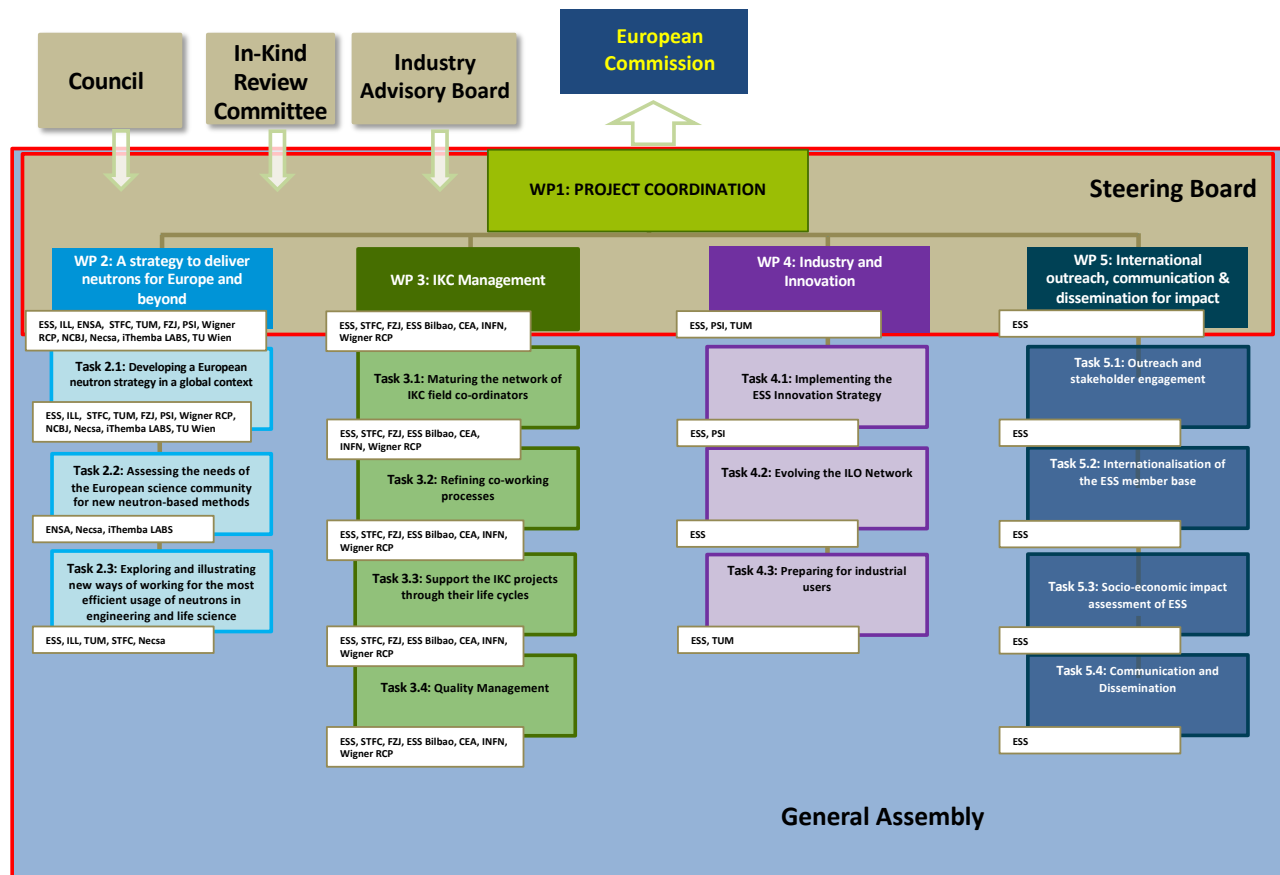
Boosting innovation

Reinforcing ESS as a global RI

Delivering socio-economic impact

Management structure

An efficient decision-making mechanism



Advisory Committees

Council of the European Spallation Source ERIC

- The Council is composed of up to 2 delegates from each Member Country in addition to a Chair and Vice Chair
- BrightnESS² will consult the Council on the project's progress as appropriate

In-kind Review Committee (IKRC)

- IKRC consists of delegates from the ESS Member Countries that oversee all IKC to ESS
- BrightnESS² will consult the IKRC to ensure smooth implementation of IKC-related matters on annual basis

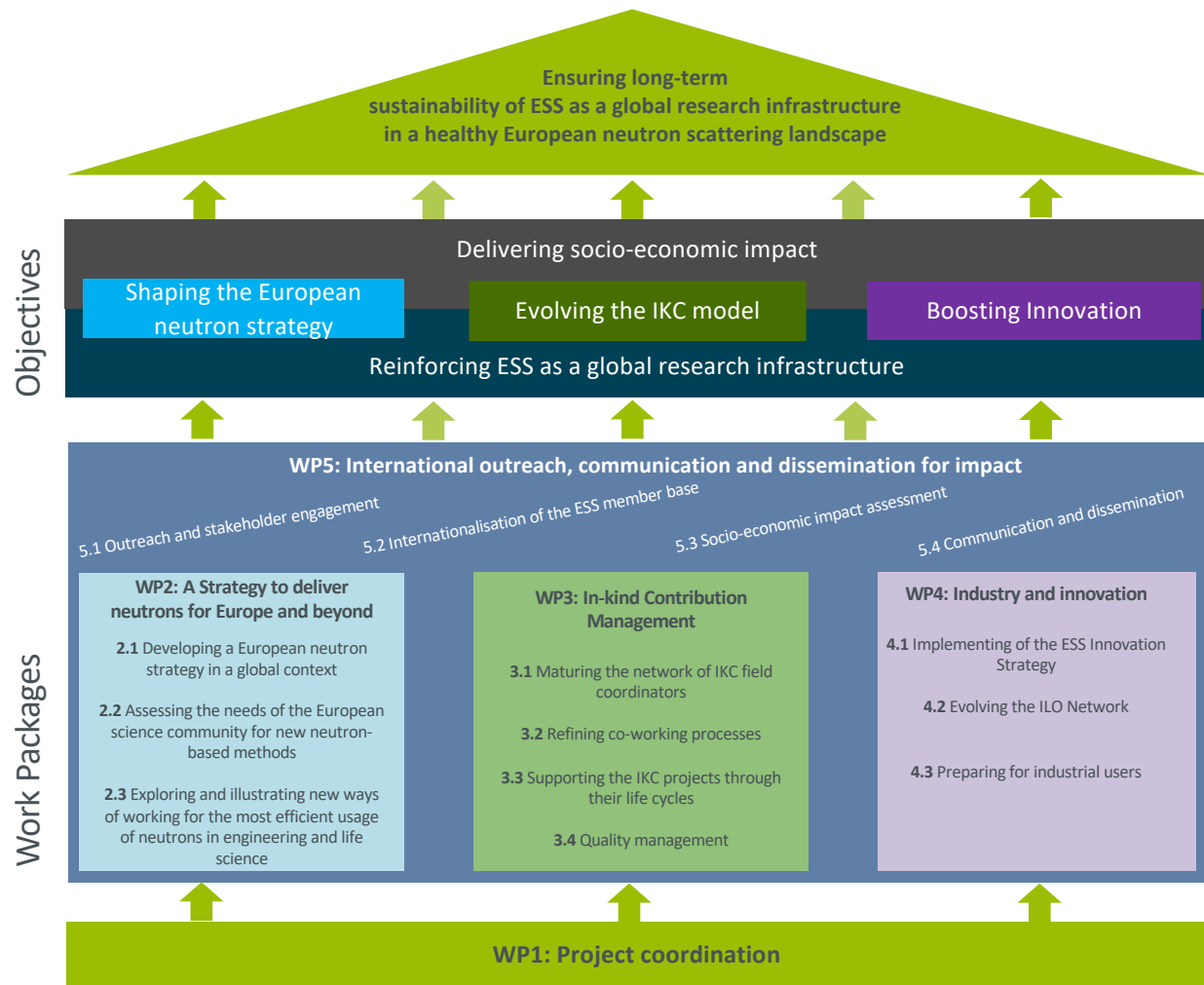
Industry Advisory Board

- An external board will be established by September 2019 to advice on the preparations for the implementation phase and the selection of (non-proprietary) industry-related R&D using neutrons
- BrightnESS² will consult board for industry-related matters on annual basis



Methodology

Delivering BrightnESS² through a house of collaboration



Steering Board



**WP1 &
WP6**

Margaret
Armstrong



WP2

Andreas
Schreyer



WP2

Christiane
Alba-
Simionesco



WP2

Mark
Johnson



WP3

Mauro
Zambelli



WP4

Sharon
Cosgrove



WP5

Ute
Gunsenheimer

brightness²



brightness.esss.se



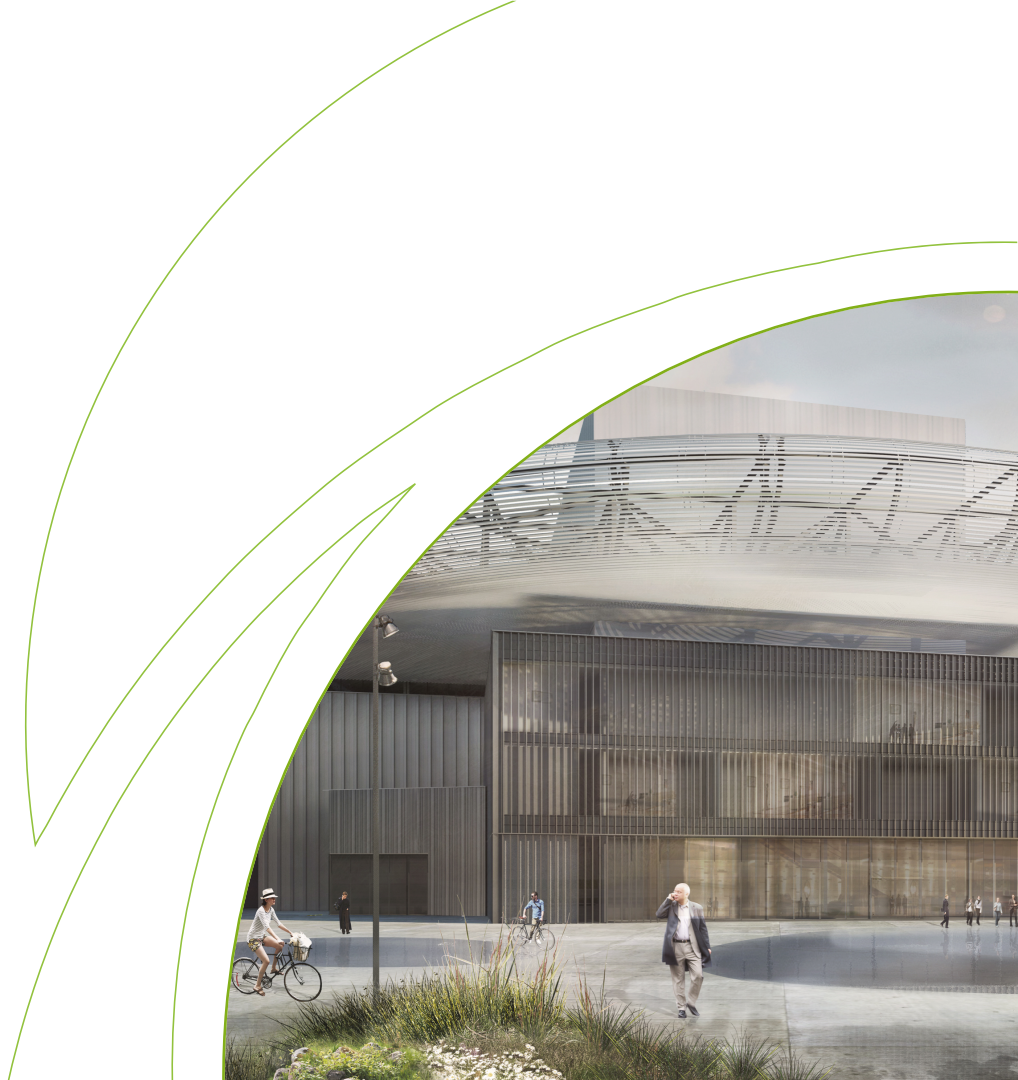
[@brightnessEU](https://twitter.com/brightnessEU)



brightness@esss.se



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Roman Senate

