



EUROPEAN  
SPALLATION  
SOURCE

# Engagement with a dream:

Designing a public engagement strategy for a facility with no science (yet!)

**Jo Lewis**

**Communications and Public Engagement**



# What is ESS?

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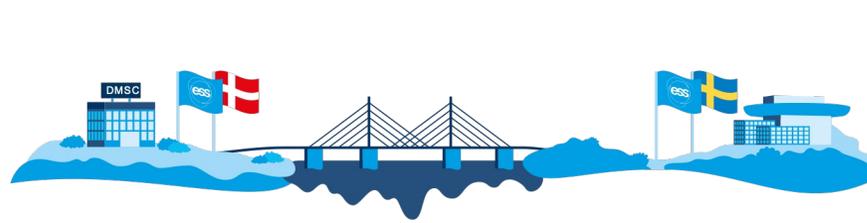
# A European Organisation for Science



## Host States:

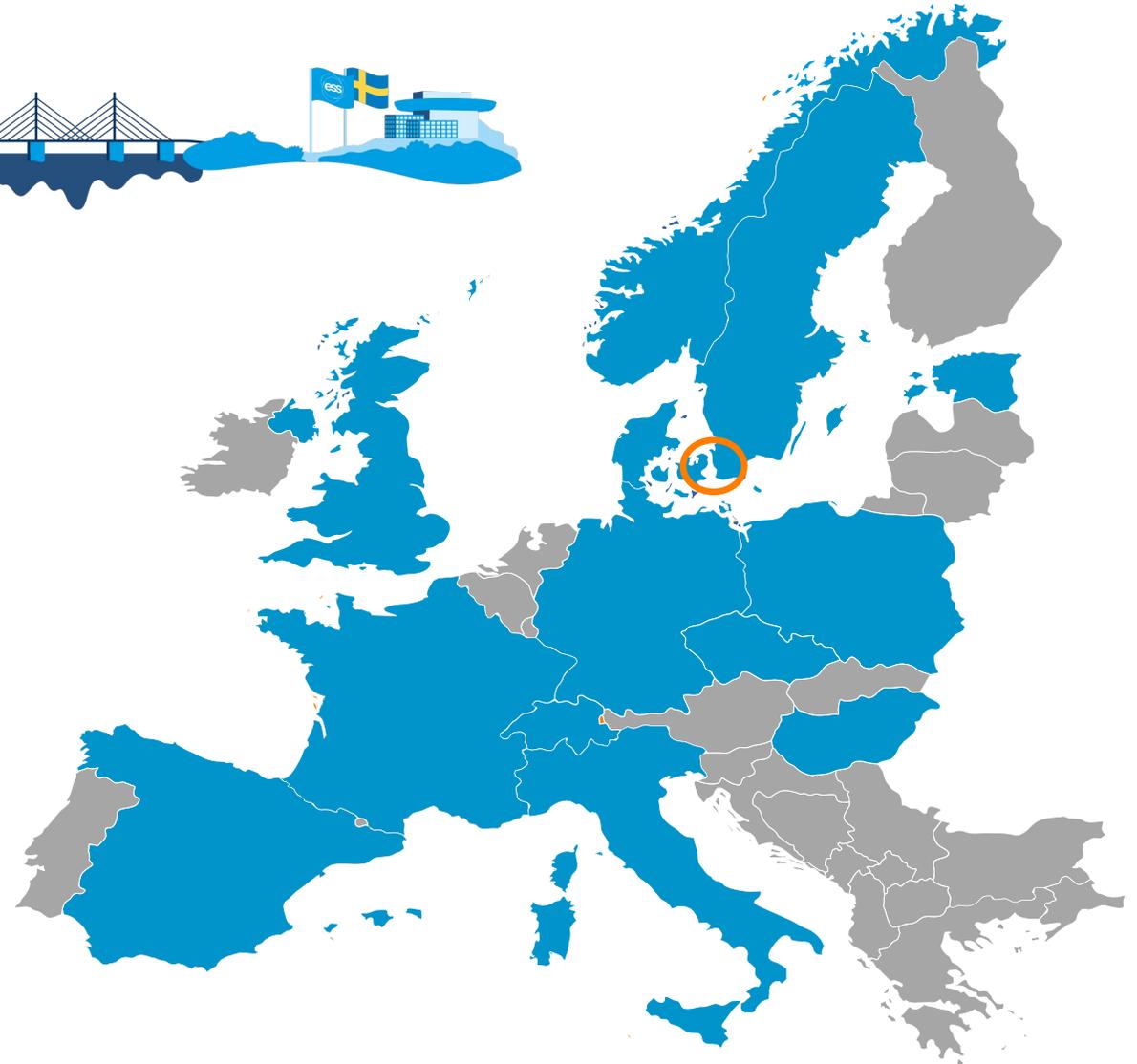
Sweden and Denmark

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## Member States:

Czech Republic, Denmark, Estonia, France,  
Germany, Hungary, Italy, Norway, Poland,  
Spain, Sweden, Switzerland and  
the United Kingdom



# Europe's future neutron source for research



- An neutron source
- A user facility with 2000 users per year
- ESFRI Landmark Project
- Still under construction
- Construction costs **€1.84 billion**

# Research areas



Chemistry of Materials,  
Magnetic & Electronic Phenomena



Engineering Materials, Fast Neutron Applications,  
Geosciences, Archeology & Heritage Conservation

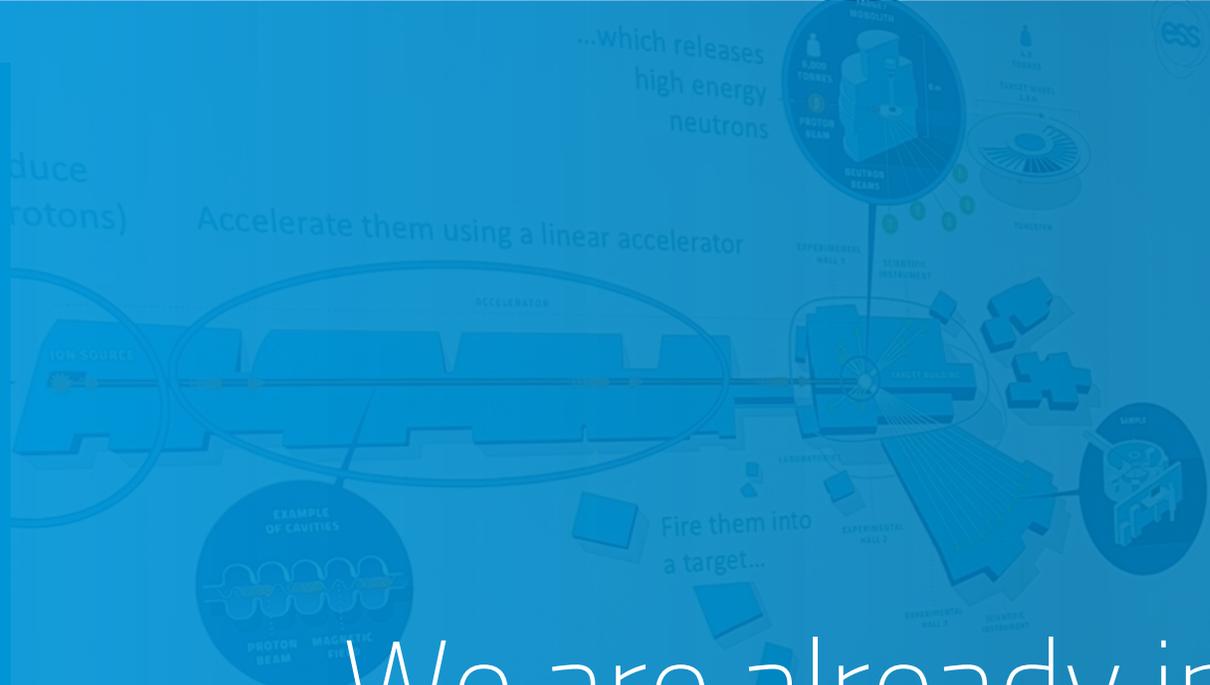


Life Science, Soft Condensed Matter



Particle Physics





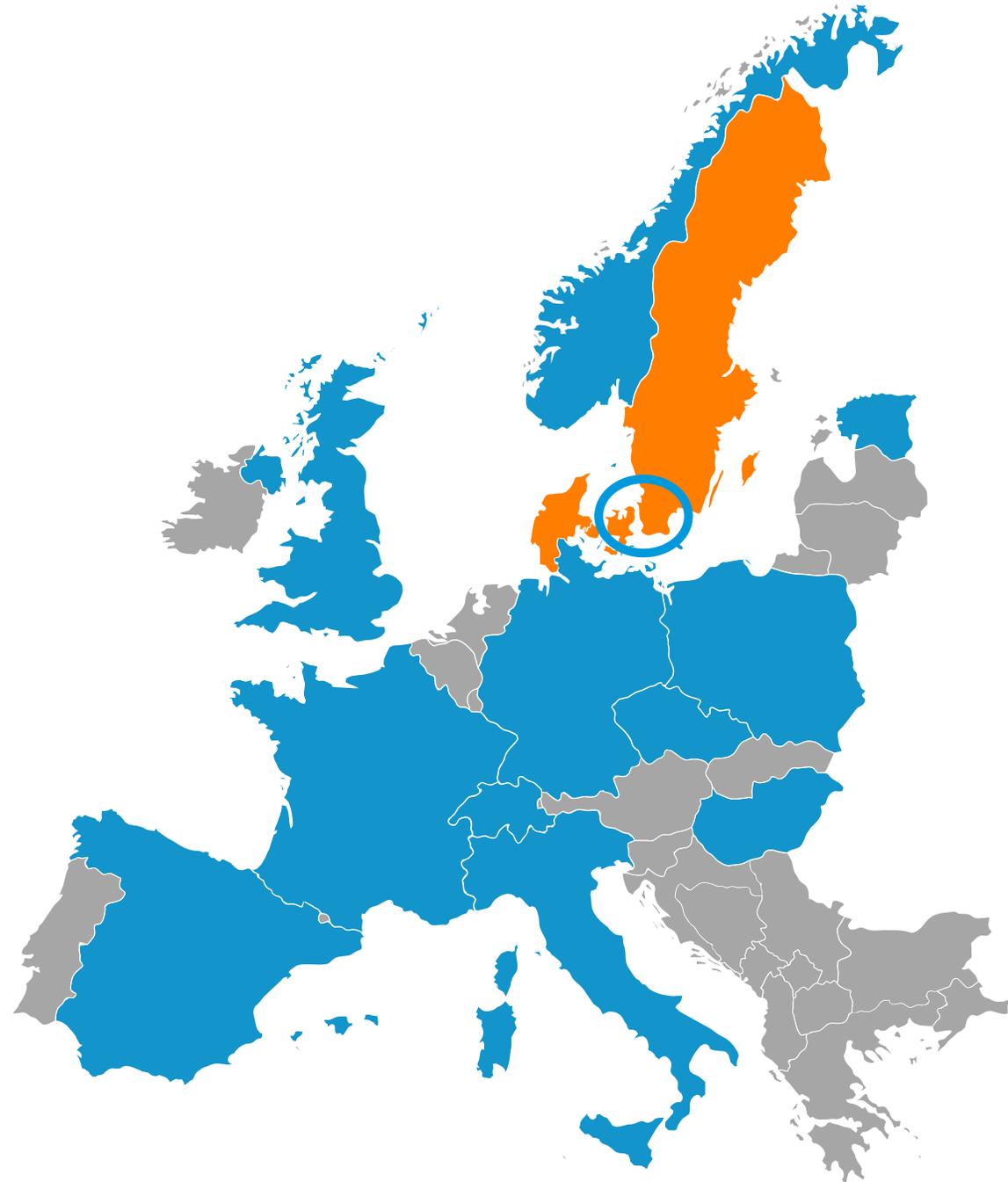
We are already implementing our  
Public Engagement strategy

# Mission



To be a trusted collaboration partner on major science engagement projects, sharing ideas about ESS's contribution to 21<sup>st</sup> century research with people all over Europe

This strategy covers  
from 2021 until  
First Science



# Why engage the public at this time?



- Bring people along a journey
- Build a sense of trust, ownership and support
- Inspire a generation of scientists, engineers and future users



# An engagement journey



- One-way Communication
  - Disassociation
  - Low awareness



- Dialogue and Listening
  - Interest
  - Inspiration
  - Excitement



- Participation and Co-creation
  - Trust
  - Ownership
  - Support

# What are the key strategic priorities?

Inspire 11-19 year olds in science and STEM subjects



Empower educators to use contemporary research in their teaching



Create cultural interactions between public and research



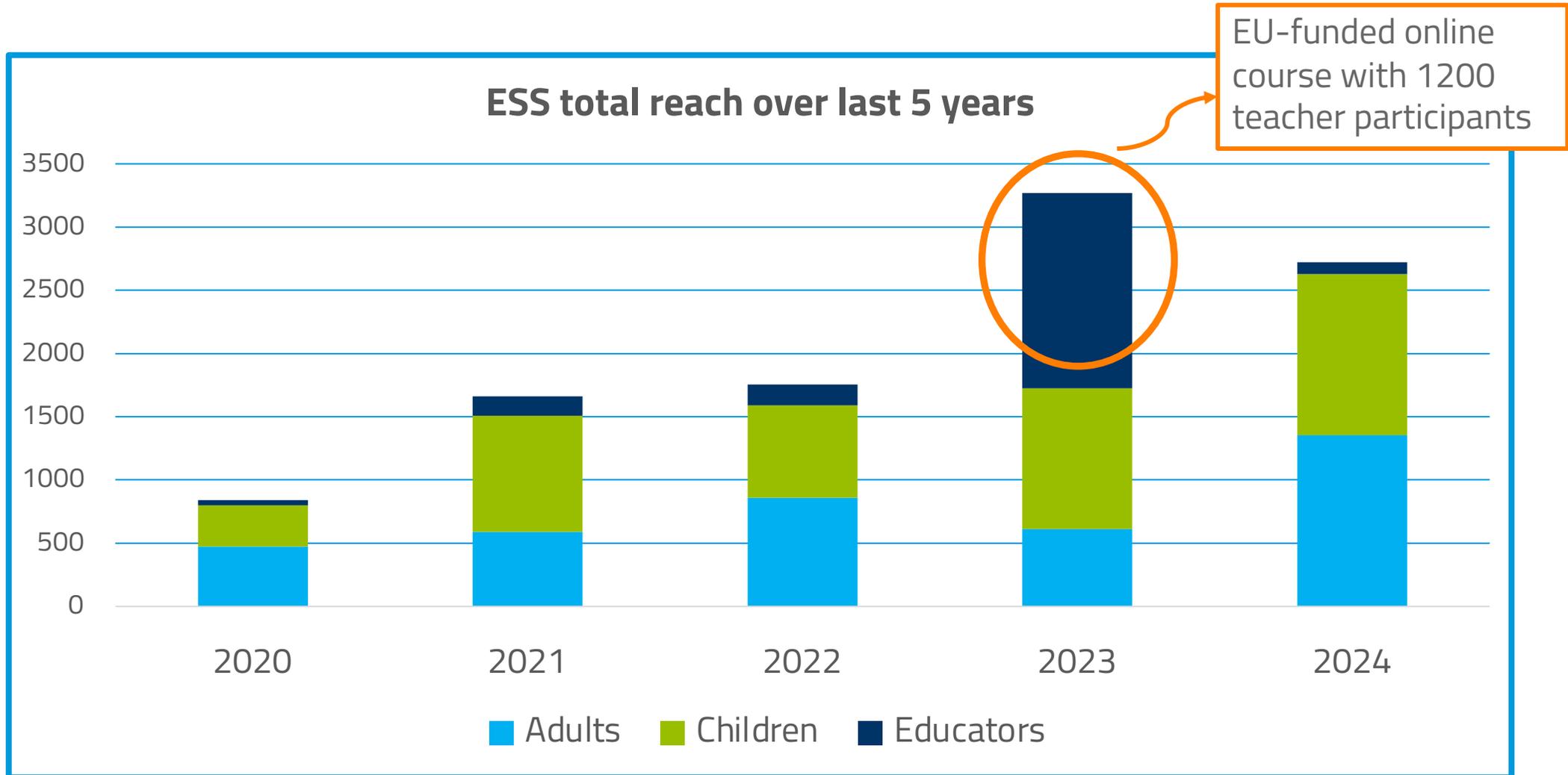
Collaborate with key regional, national and international partners

Develop processes for implementation within ESS

# ESS Public Engagement



Achievements 2020-2024 (Audiences over time)





# Case Study: Collaboration with key engagement partners

# Collaboration to reach new audiences

Goal: Use RI unique assets to help address a challenge highlighted by partners



## Challenge: Support teachers to

1. Bring to life topics like forces, magnetism, electromagnetic spectrum, atomic structure
2. Increase their knowledge of contemporary research to make it relevant and exciting
3. Stimulate students' skills:
  - Analytical and critical thinking
  - Collaboration and communication
  - Active participation

## RI assets:

- Existing online materials for training non-specialists
- People with skills and knowledge about the science and technical aspects
- Case studies of real people using high tech to address real-world problems



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EXPERI  
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# Accelerating Teaching

## Massive Open Online Course (MOOC)



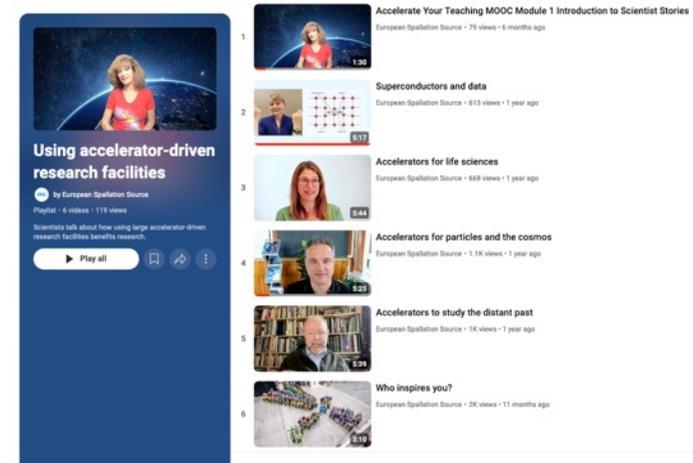
[https://bit.ly/AT\\_MOOC23](https://bit.ly/AT_MOOC23)



# Pedagogical tools



## Videos of Scientist Stories



*Race to Space*



Lesson 1 Lesson 2 Lesson 3 Lesson 4 Lesson 5 Lesson 6 Lesson 7 Lesson 8 Instruments



## Classroom game: Race to Space

PHYSICS FOR AGES 14 - 18

Use Neutron  
Scattering to Change  
the Future!



Teachers

Students

Enrolment for teachers available at European Schoolnet Academy



## Lesson plans

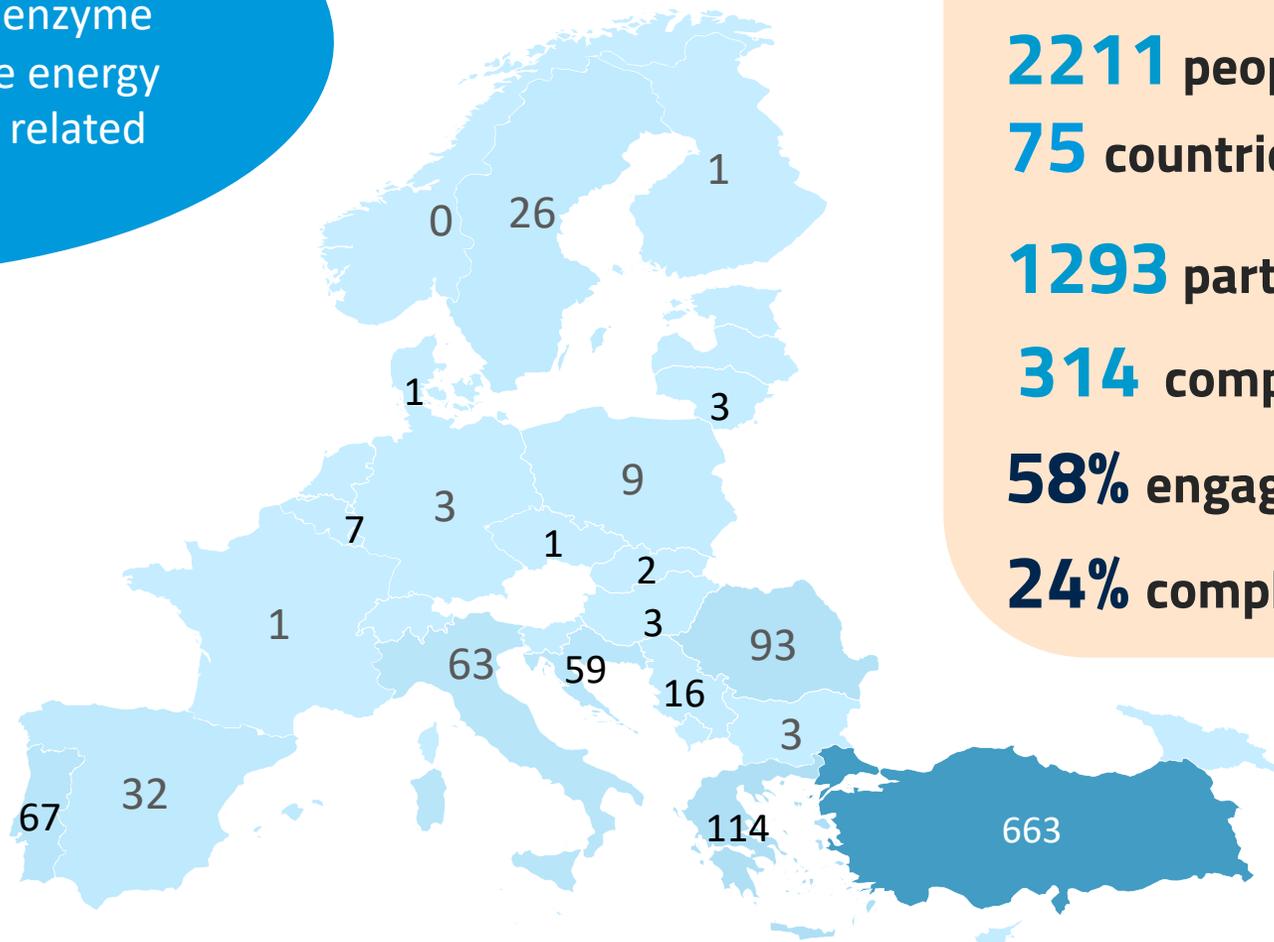


# Evaluation



I'm a Biology teacher. I will use particle accelerators at my lessons: Imaging devices, enzyme crystallography, renewable energy and many more topic are related with my lessons.

At first I was afraid of not being able to complete the course because it was related to Physics. But every module I enjoyed more!



**First 4 weeks**

**2211** people registered  
**75** countries

**1293** participated

**314** completed the MOOC

**58%** engagement rate

**24%** completion rate

A large, semi-transparent blue circular graphic is centered on the page. It features four quadrants with different images: top-left shows a stack of blue water bottles; top-right shows a solar panel being hoisted by a crane; bottom-left shows a person in a white lab coat standing next to a washing machine; bottom-right shows green leafy plants. The words 'SUSTAINABILITY', 'ENERGY', 'ENGINEERING', and 'HEALTH' are written in a light blue, sans-serif font along the top, right, bottom, and left edges of the circle, respectively.

# Case Study: Developing new processes within ESS

# Developing new processes within ESS

Goal: Pilot a large-scale on-site visit that engages a public audience



## Challenge: Site undergoing large-scale installations

1. Safety and security issues of the site
2. Timing: must not interfere with larger project plan
3. Event on a weekend
4. Staff motivation and engagement

## RI assets:

- Many hands-on activities developed with other projects
- People with skills and knowledge about the science and technical aspects
- Desire to show workplace to their friends and families

# Three High-Impact Events



## Saturday 24 August Friends and Family event

- 1100 people (of whom 800 were public)



## Saturday 21 September Lund Culture Night

Two events:

### ESS stand at MAX IV

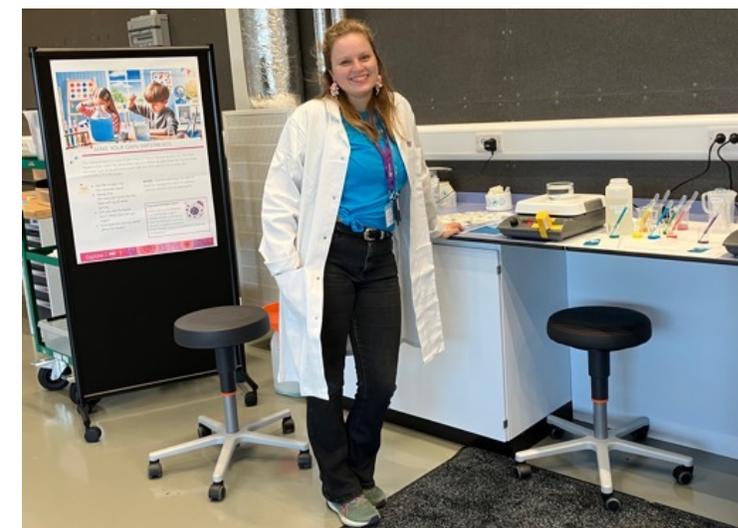
- 750 people
- mostly families with kids



### Bus tours round ESS

- 500 people
- Mostly adults



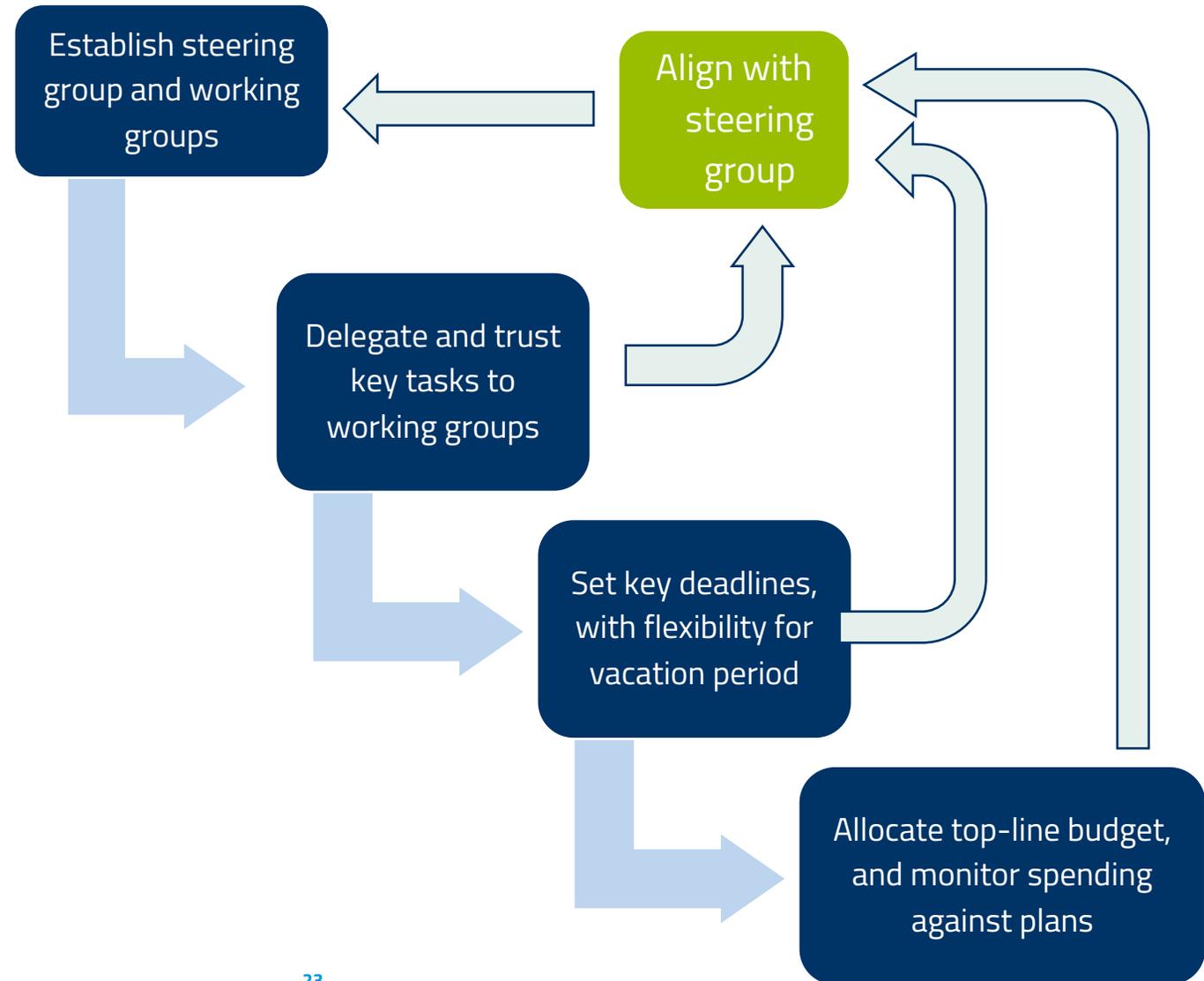




# New Processes developed



1. Trust-based task delegation with strong steering group
2. Strong Project team
3. Event booking Software
4. Training materials
5. Evaluation tools



# OUTCOMES: *What was the effect?*



When at ESS,  
I feel like I am a  
part of the  
future.

AMAZING! Very  
glad we got to  
bring our family!  
THANK YOU!

What I love about ESS is  
that it is all about  
experiments and  
excitement. I love the place,  
it is big and lovely and I am  
looking forward to be  
working at ESS. Thank you.  
Nesma, age 12

It was a lot of fun! It was  
interesting to see the exhibits  
about the science and walk along  
the accelerator tunnel. The food  
and drink were much appreciated,  
and it was very well organised.

I have never been to  
such a big scientific  
facility - spellbound!



# Questions and discussion

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DISCOVER



scan me

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