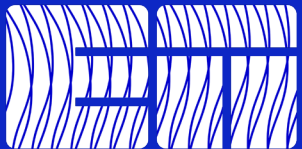




# Time to establish a legal entity

Monique Bossi, INFN  
ET PP WP2



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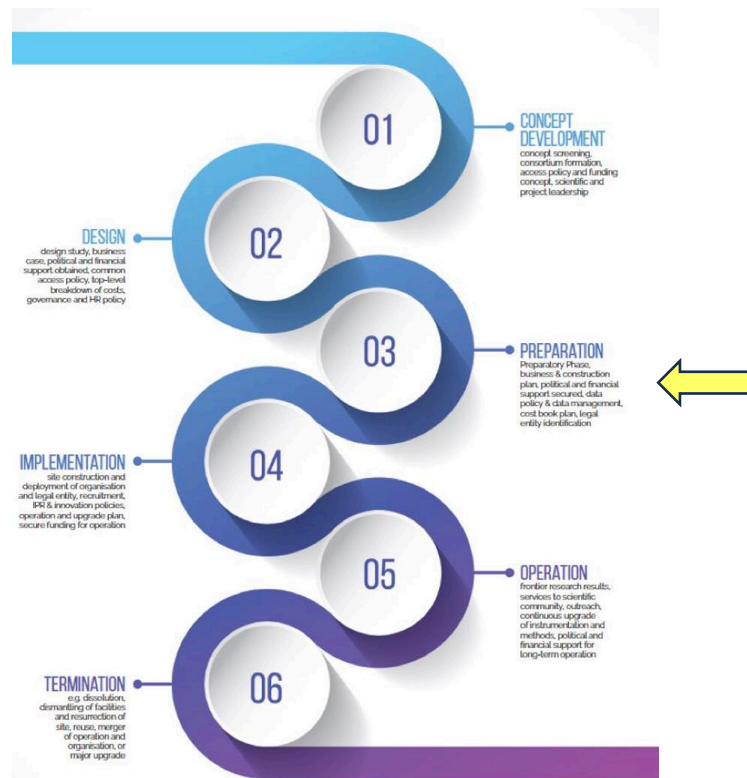
# Outline of the talk

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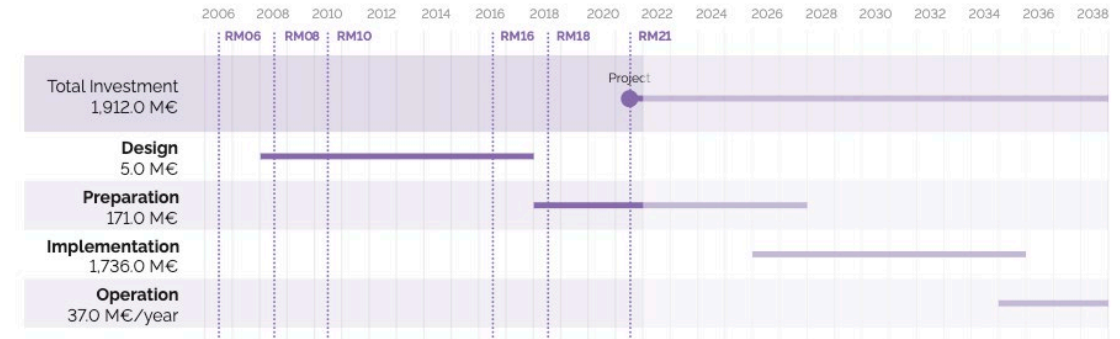
- ESFRI lifecycle
- Chronicles examples and ET timeline so far
- Open questions

# ET as an ESFRI project

The **ESFRI lifecycle approach** from projects to landmarks, the needs and targets of the implementation phase are understood as a sequence of phases from the concept to operation and to termination



## TIMELINE & ESTIMATED COSTS



- 10 years on the roadmap to reach implementation
- Progress towards implementation monitored against **minimal key requirements**
  - **Governance, management and human resources:**

Governance for operation with clearly defined responsibilities and reporting lines outlined, including Supervisory and other Advisory Board

# RIs journey: 2 examples

## European Spallation Source ERIC

STATUTES OF THE EUROPEAN SPALLATION SOURCE ERIC

Adopted by  
Commission Implementing Decision (EU) 2015/1478 of 19 August 2015  
on setting up the European Spallation Source as a European Research Infrastructure  
Cooperation (European Spallation Source ERIC)

Consolidated Version

### Unpreparedness and risk in Big Science policy: Sweden and the European Spallation Source

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The politics of European collaborative Big Science are inherently uncertain. The European Spallation Source (ESS) for neutron science, planned to be built in Sweden with a collaborative European funding scheme that was recently finalised is the most recent example. Sweden has so far invested around one billion SEK (≈€120 million), leaving a significant risk given these uncertainties and given Sweden's complete lack of experience in hosting such big jobs. Facing the Swedish government's inexperience in the ESS project, we argue herein that as for the Swedish ESS bid seems to be generally well founded, but that a long-term plan for the funding and a contingency plan for increased costs seem to be absent. This adds to the existing environmental risk of Sweden and stresses the already quite high level of risk for Swedish science and science policy of investing in the ESS.

Keywords: Big Science; European research policy; Sweden; European Spallation Source; research funding

#### 1. Introduction

European collaboration in Big Science has traditionally not been a policy area of the European Community/ European Union (EC/EEU) intergovernmental collaboration, and has therefore never become a coherent policy field. Most collaborative European Big Science projects such as CERN (the European Nuclear Research Laboratory in Geneva), the European Southern Observatory (ESO), and the European Synchrotron Radiation Facility (ESRF) have eventually become scientific and political success, but in the process towards their realisation they have had to rely on improvisation, ad hoc negotiation and political compromise, with limited transparency and significant build-in uncertainty (Kjapp 2002; Pappas 2004; Hallonsten 2012b, 2014). This has created a modified and unique policy field and a heterogeneous collection of jobs and institutions, and few institutionalised pathways exist that can provide a precedent and serve as assistance for those who seek to establish a collaboration and want to avoid previous typical pitfalls. One of the most recent Big Science projects in Europe is the European Spallation Source (ESS), to be used for a

wide range of studies of materials with the aid of neutron beams. It has been under planning for over two decades and is currently set to be located in Lund in Southern Sweden. According to the latest estimations, its construction costs will be €1.84 billion, of which Sweden has offered to cover roughly one-third. Since 2007, the Swedish government has been engaged in a lobbying and negotiating effort to encourage other European countries to participate and fund the other two-thirds of the costs, and as of July 2014, it was announced that a funding solution had been reached that allowed the start of construction. Already before this, and aware with the future of the project still in doubt, the Swedish government had received around SEK1 billion (≈€100 million) in the ESS.

Looking at history, both the European and Swedish science policy systems show worrying shortcomings for the ESS project, though in essentially different ways. Scholarly documentation and analysis of past cases show that the lack of precedent and structure on the European stage makes the politics of collaborative Big Science projects highly unpredictable (Kjapp 2002, 2005; Pappas 2004; Hallonsten 2012b, 2014). Sweden's experience of

- **1993: ESS Council formed, scientific collaboration to develop a conceptual design**
- **2000: ESS Scandinavia Initiative founded by scientific communities**
- **2003: new design concept adopted**
- **2007: national science policy priority, ESS Secretariat installed**
- **2009: selection of Lund announced**

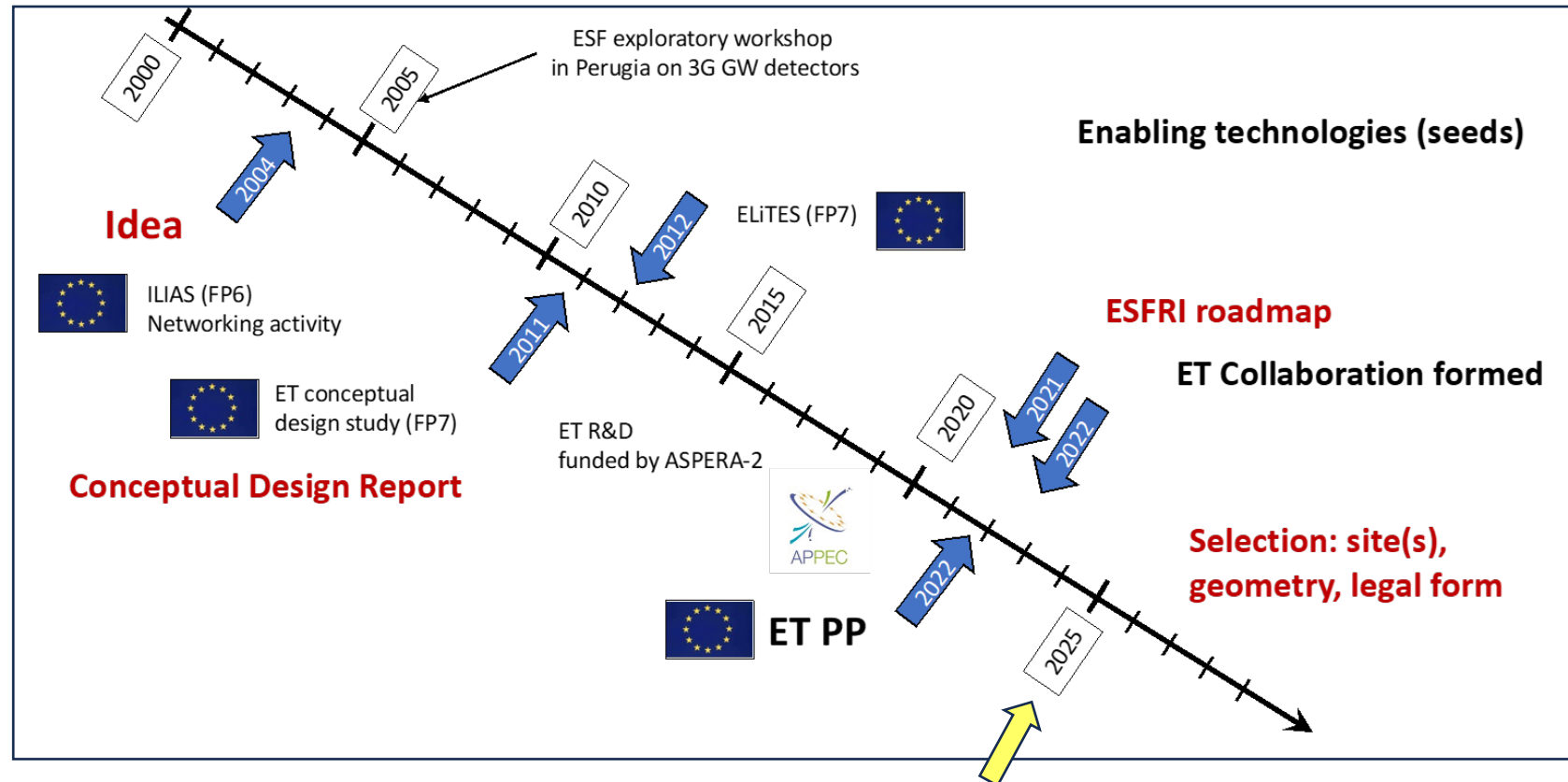
- **2010: ESS AB founded**
- **2014: 11 countries (≠co-hosts) committed to the construction in Lund.**
- **2015: ESS ERIC established**

## Square Kilometre Array Observatory IGO

- **1993: international working group set up**
- **2000: first Memorandum of Agreement**
- **2008/13: PrepSKA to full SKA design**
- **2011: SKA Organisation Ltd. formed, UK headquarters announced.**
- **2012: dual site selection**
- **2013: establishment of the international design consortia**
- **2015: International negotiations to establish the IGO**
- **2019: SKA Observatory Convention signed. Construction Proposal and the Observatory Establishment and Delivery Plan endorsed**
- **2021: Start of SKA construction activities**



# ET steps so far





# Food for thought

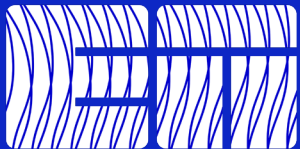
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- How can WP2 support the decision process?
- The legal entity has to be set-up for the construction
- Is ETO timeline realistic?
- Is there any disruptive issues?



# Thank you!

- References:
- <https://roadmap2021.esfri.eu/projects-and-landmarks/browse-the-catalogue/et/>
- [https://www.esfri.eu/sites/default/files/esfri\\_roadmap2021\\_public\\_guide\\_public.pdf](https://www.esfri.eu/sites/default/files/esfri_roadmap2021_public_guide_public.pdf)
- <https://etpp.iffae.es/deliverables-milestones/#:~:text=Report%20providing%20options%20for%20legal%20entity>
- [https://www.researchgate.net/publication/278830405\\_Unpreparedness\\_and\\_risk\\_in\\_Big\\_Science\\_policy\\_Sweden\\_and\\_the\\_European\\_Spallation\\_Source](https://www.researchgate.net/publication/278830405_Unpreparedness_and_risk_in_Big_Science_policy_Sweden_and_the_European_Spallation_Source)
- <https://ess.eu/legal-ip#documents-policies>
- <https://www.skao.int/en/about-us/91/history-ska-project>



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