

# ET-EMR MOU meeting

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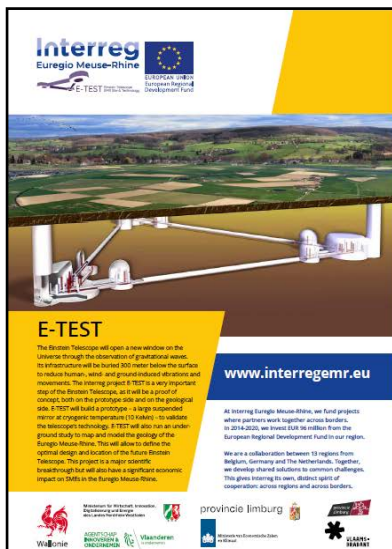
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# ET Ecosystem



[www.etpathfinder.eu](http://www.etpathfinder.eu)



[www.etest-emr.eu](http://www.etest-emr.eu)



[www.et2smes.eu](http://www.et2smes.eu)



[www.et-technologies.nl](http://www.et-technologies.nl)

## Dutch National Growth Fund

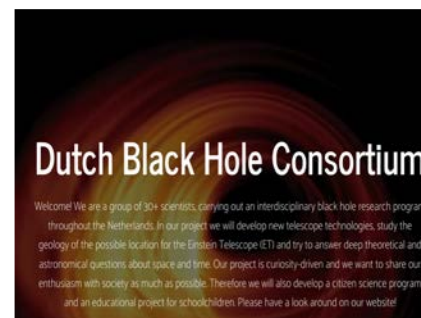
42 MEuro for geology, industry, R&D, local project office + 870 Meuro construction of underground infrastructure



Dutch government embraces plans for Einstein Telescope in Limburg region

14 April 2022

The Dutch government intends to conditionally allocate 42 million euros from the Dutch National Growth Fund to the Einstein Telescope, and is also reserving 870 million euros for a future Dutch contribution to the construction. This decision was taken by the Cabinet based on the advice of the Advisory Committee of the National Growth Fund. With this decision, the Cabinet gives an enormous boost to Dutch science and to the broad development of the South Limburg border region.



[www.dbhc.nl](http://www.dbhc.nl)

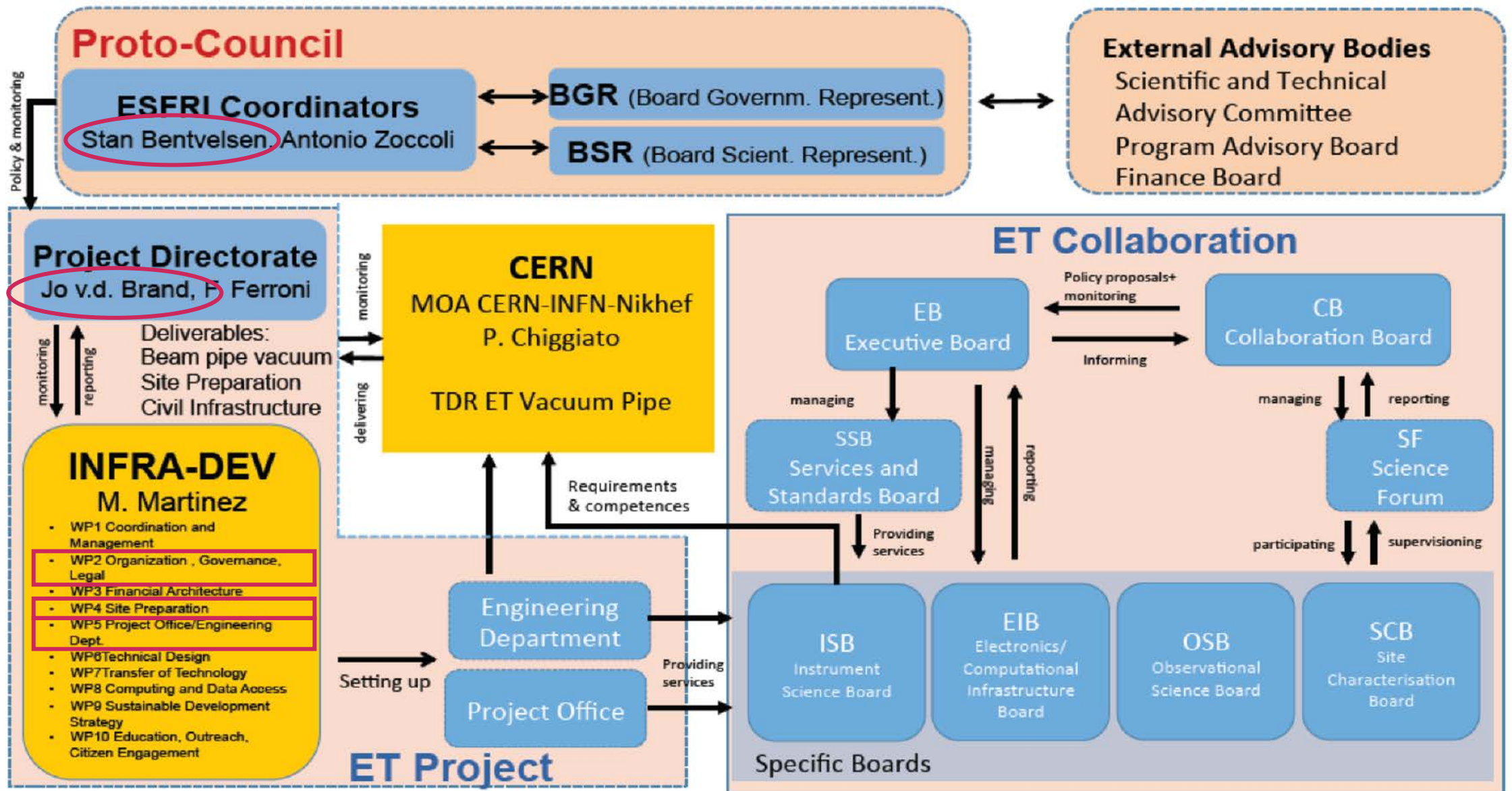
## INFRA-DEV

ca 4 MEuro for setting up an Project Office on European level.

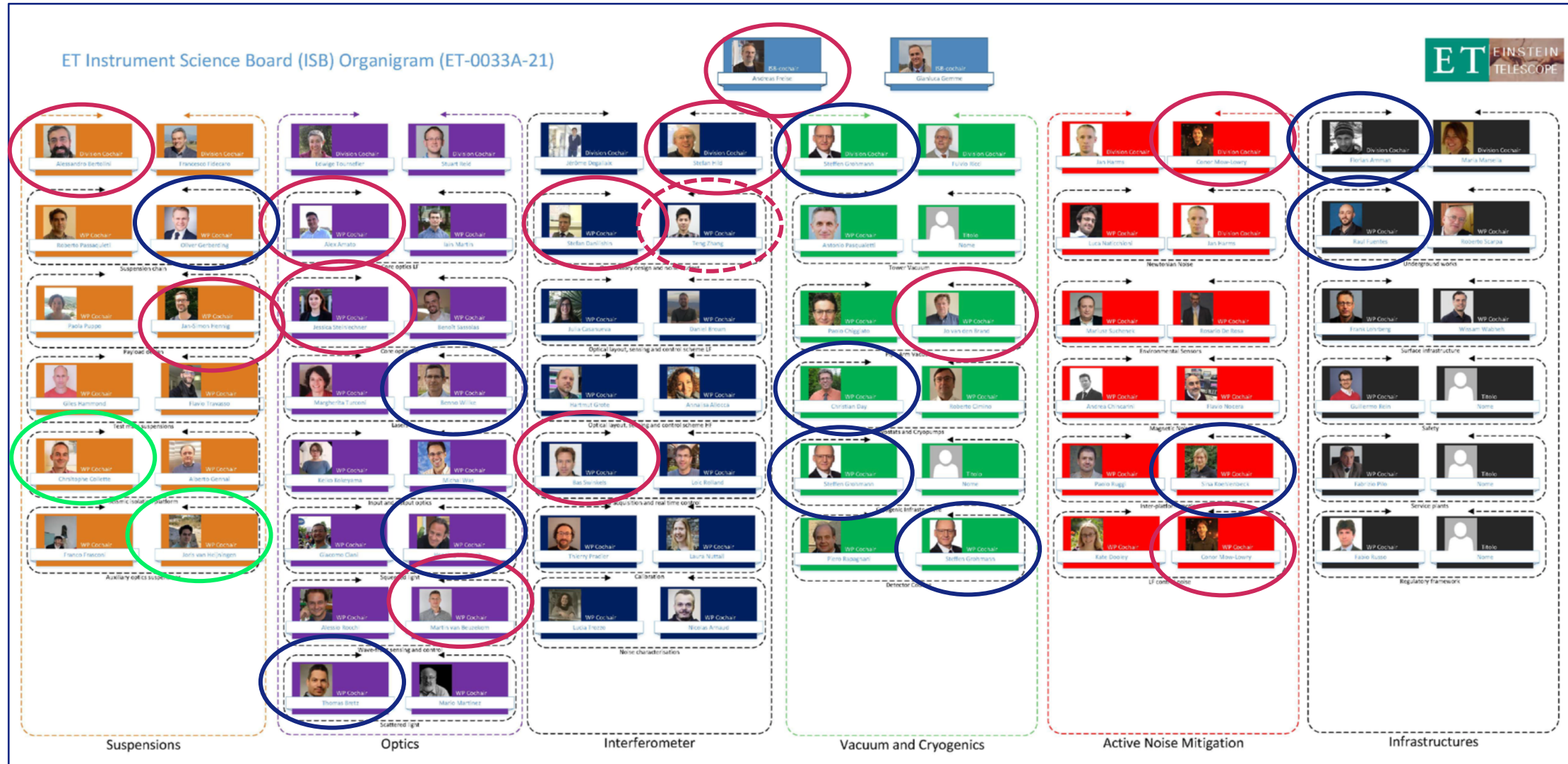
## INFRA-Tech

ca 10 MEuro for R&D activities across Europe. (deadline this Friday)





# ET Instrumental Science Board



# ET Technologies

## 2 Main Objectives

**Developing/improving technologies required for ET:**

- to achieve the accuracy and cost reduction required for the ET
- and to build the ET in the most sustainable way possible.

**Cooperation between companies and knowledge institutions in order to:**

- boost the regional economy and generate innovation and spin-off to other sectors.
- strengthens the case ET to situate in the EMR.



- WP1: Cryogenics
- WP2: Vacuum
- WP3: Gravity Gradient Sensors
- WP4: Remote Sensing Geology
- WP5: Artificial Intelligence
- WP6: Sustainability
- WP7: Project Management

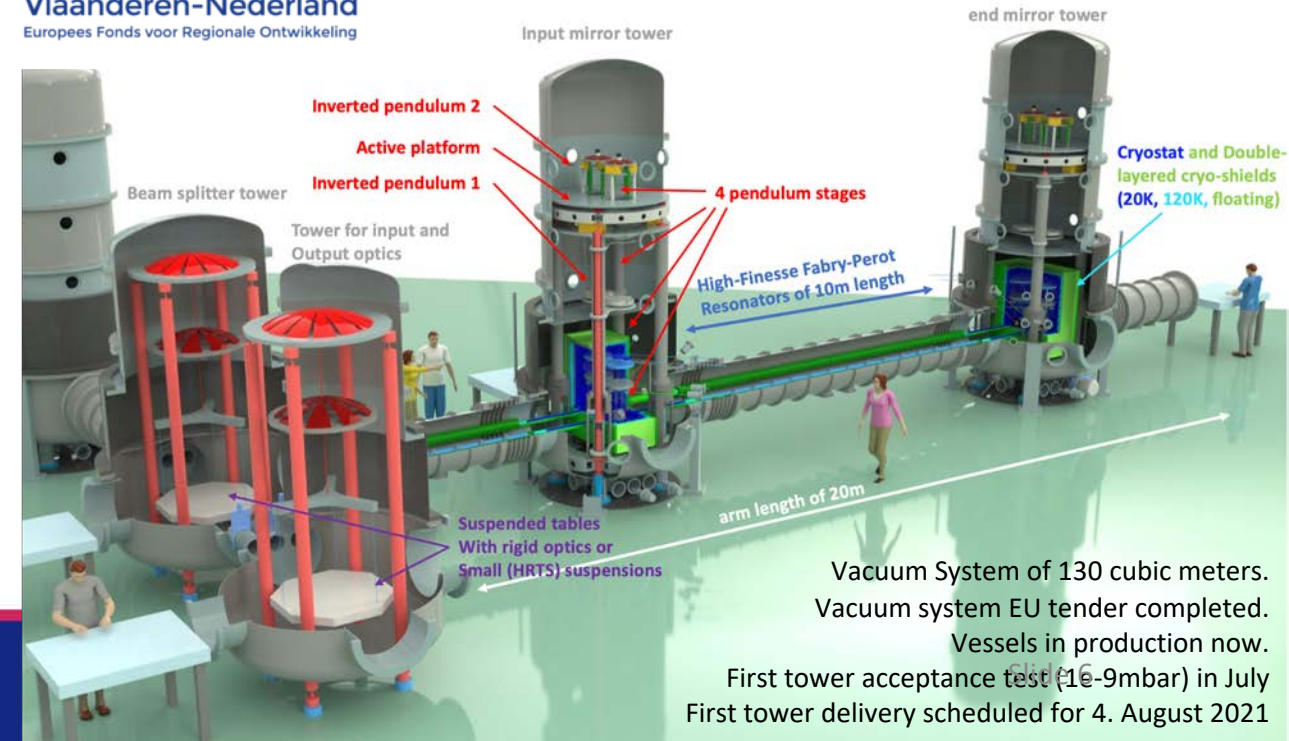


# ETpathfinder Overview

- New facility for testing ET-LF technology in a low-noise, full-interferometer setup.
- Key aspects: **Silicon mirrors** (3 to 100+kg), **cryogenics** (cryogenic liquids and sorption coolers, water/ice management), “**new**” **wavelengths** (1550 and 2090nm), coatings etc
- Start with 2 FPMI, one initially at 120K and one 15K (2022+).
- >20 partners from NL/B/G/FR/SP/UK
- Initial capital funding of 14.5 MEuro.
- Detailed **Design Report** available at [apps.et-gw.eu/tds/?content=3&r=17177](https://apps.et-gw.eu/tds/?content=3&r=17177)
- Open for everyone interested to join.
- For more information please see: [www.etpathfinder.eu](http://www.etpathfinder.eu)



**Interreg**   
Vlaanderen-Nederland  
Europees Fonds voor Regionale Ontwikkeling



# Collection of personal thoughts

- Mixing vs Separation of efforts related to **ET-EU** and **ET-EMR**. Lots of synergies, but also delicate balance. **Our current balance right?**
- Example: **Windmills** story ... gives lots of thought ...
  - How quickly could EMR bid **harmed**.
  - Do we have enough and the right expertise to respond quickly to certain threads?
- **COBA** process reflections ...
- With **project office for EMR bid starting up on NL side**, how can we make sure we get the best out and have other countries included?
- To play devils advocate: Do we have actually a **3-country** site bid?

#### Follow-up questions:

1. Do you also see an urgent problem for heat cold storage systems in the search area and the 10 kilometer protection zone? These kinds of activities are mostly in the upper underground layers. The geothermal systems are mostly in the deeper underground (minus 500m).
2. Is it urgent to exclude geothermal systems only in the search area or also in the 10 km protection bufferzone?
3. Do you also see an urgent problem for heat cold storage systems in the search area and in the 10 kilometer protection zone?
4. Co2 storage will probably not be the case in the Limburg part of the 10 km protection zone. It may be can be a activity at the Belgium part of the 10 km zone. Do you see Co2 storage as a source/activity that can lead to seismic noise?
5. About excavations. Are new extractions, or extensions of existing extractions of surface minerals such as gravel, sand, clay and limestone activities that should be excluded?

