



MINISTERIO
DE EDUCACIÓN
Y CIENCIA

4th European Conference on Research Infrastructures

SCIENTIFIC CAREERS WITHIN RESEARCH
INFRASTRUCTURES:
THE VIEWS FROM INFRASTRUCTURE OPERATORS

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Welcome to *ESFRI* initiative

- Present times of the beginning of a century show the need of accelerated changes in many aspects of our lives.
- Research organization do not escape to the need to a permanent review
- It is in this framework where the building of **large infrastructures** need consideration.





Welcome to ESFRI initiative

- As **national responsible** of these kind of facilities, the initiative of the DG Research called “**Roadmap**”, has to be welcome
- because ESFRI constitutes a permanent and **optimum forum** to discuss proposals far beyond the capacities of national research communities.



- The operation of large Infrastructures is attractive due the **challenging** circumstances
- It demands high **skilled** administrators, engineers and researchers
- They are **unique** facilities with differentiated characteristics





The operation implies numerous difficulties from several aspects

1. Finacing
2. Legal
3. Recruiting of staff
4. Operational
5. Excellence





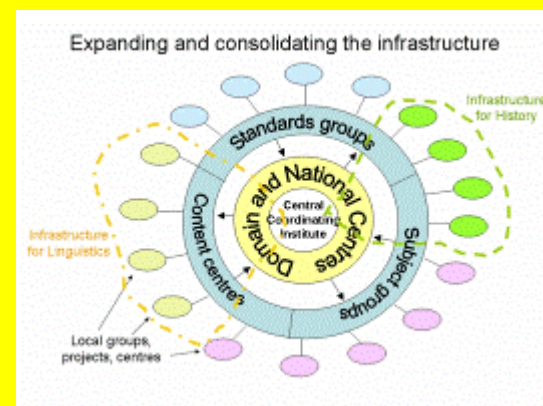
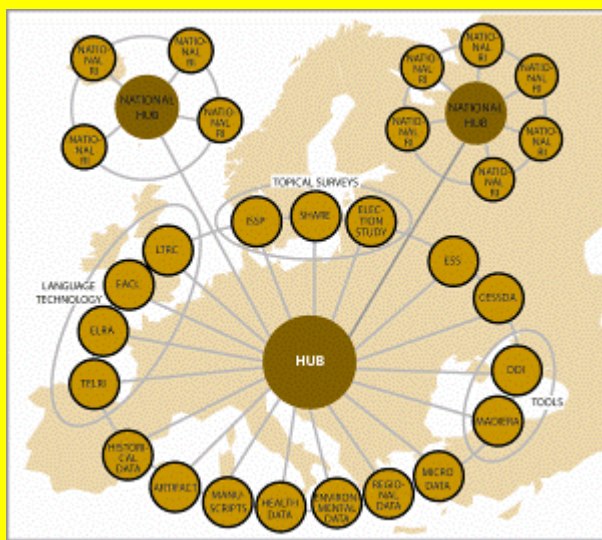
- It is a **major** problem
- There are too many possibilities of investment in large facilities at the **same time**
- **Conflicting** of national facilities and international investment
- Role of research communities: **risk** of frustration
- Establishment of clear **priorities**



Antartida: base Juan Carlos



- Particular **status** in each
- **Different** set of countries involved
- Need of **periodical** renovation of compromises





- Particular **demand** during constitution and construction
- Periodical revision of **objectives**
- **Updating**
- **Recruitment** of researchers
- Relation to the **industrial** needs





- Basic and **central** aspect: to attract the best people and projects
- **Maintenance** of the level
- Involvement of the **industry**
- **Intellectual** property



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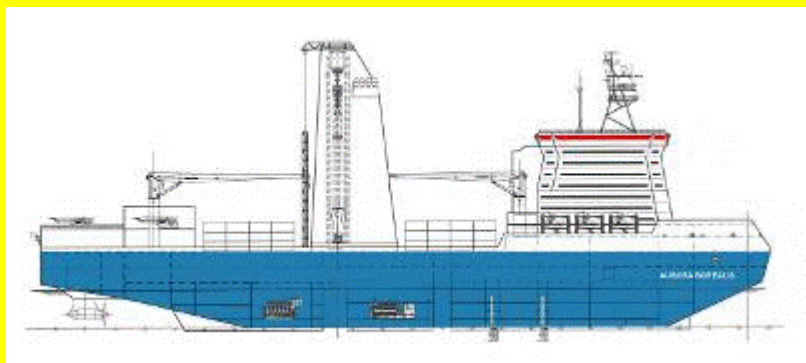
ESRF





Recruiting of staff

- There are **few specialists** in the engineering and in the research
- Offer adequate **salaries**
- **Maintenance** of the excellence



AURORA BOREALIS



HESPERIDES



Human resources

- From the perspective of large infrastructures, **equipment and ideas** complement each other



CLINICAL TRIALS



Research Career

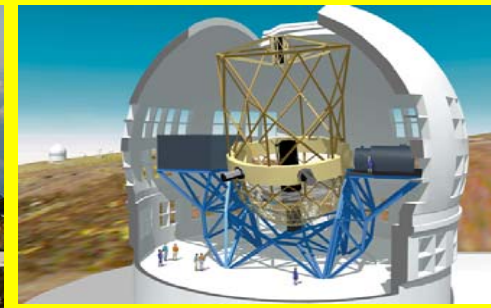
Characteristics of participating on large infrastructures of european or international dimensions are:

- 1. They are the forum for knowing the **frontier** of knowledge in the disciplines concerned.*
- 2. They stimulate **interdisciplinarity***



Research Career

- 3. They are an excellent school for the *young* researches and they contribute to the updating of researchers and of senior research subjects.**
- 4. They can help to promote *industrial advances*, either due the engineering needed for their construction and maintenance or due the direct test performed.**

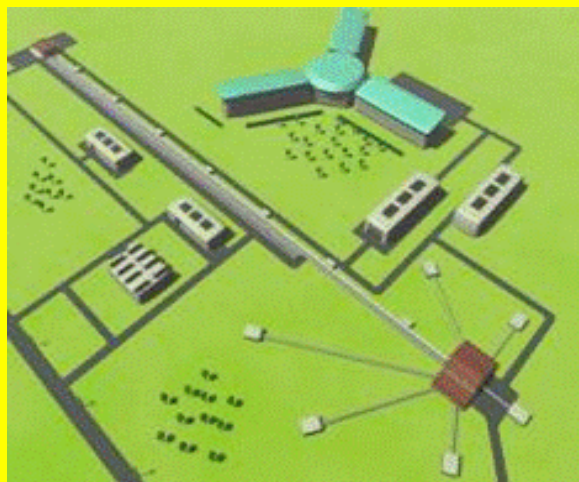




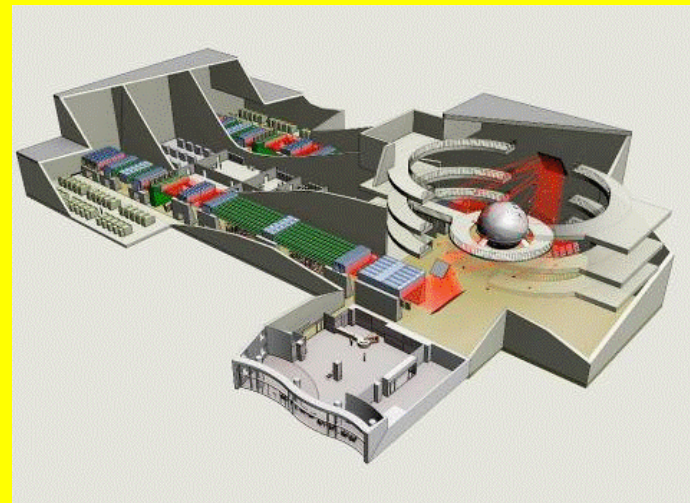
Human resources research career

Key questions for the researchers are:

- 1. Salaries**
- 2. Legal aspects**
- 3. Reversibility of Mobility**



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SUMMARY

- ESFRI Roadmap is **challenging** in numerous aspects
- Large facilities make research career more **attractive**
- There is the need for operators to create or consider **particular status** for the staff: researchers and engineers
- Reversibility of **mobility** is essential