Unintended Consequences;
the hidden impact of large-scale facilities

Background

- Business press have almost no mention of Research Infrastructure; yet an important capital and regional spend; Why?

- I come from the era of large, privately held RI– before Open Innovation became the norm.

- Mariana Mazzucato- socialising the risk—

- Engineer, corrupted by an MBA; what they teach you in financial analysis and "consolidated accounts"—

- Full disclosure, Ext Adv Board Member DERI.org, now merged with CLARITY to become INSIGHT: data analytics

http://www.sfi.ie/news-resources/jobs/insight-the-centre-for-data-analytics.html

Outline

- Current status of ESF
- Reflection on perceptions about this meeting
- RI and characteristics
- MERIL and project ambitions
- Advocated dynamic--

ESF Member Organisations

ESF is an independent association of 66 Member Organisations

🔴 research funding organisations
🔴 research performing organisations
🔴 academies and learned societies

in 29 countries

NOTE Relative Spending

A time of change

In parallel with the development of Science Europe – the Brussels-based policy organisation launched early 2012 – ESF is continuing the winding-down of a number of its activities in accordance with the Multi-annual Plan 2013-2015.

The Multi-annual Plan takes into consideration the commitments that ESF has made until the end of 2015 with the aim of ensuring that they are honoured and executed with the level of quality that ESF has always delivered.

Scientific Committees

ESF has replaced its former Scientific Standing Committees with smaller **Scientific Review Groups**.

Scientific Review Group domains:

- Humanities (HUM)
- Life, Earth & Environmental Sciences (LEE)
- Biomedical Sciences (MED)
- Physical and Engineering Sciences (PEN)
- Social Sciences (SOC)

Expert Boards and Committees

Currently hosted at ESF; models for sustainability are being explored:

- Nuclear Physics European Collaboration Committee
- European Space Sciences Committee
- Marine Board
- European Polar Board
- Committee on Radio Astronomy Frequencies
- Materials Science and Engineering Expert Committee

Budget in 2014

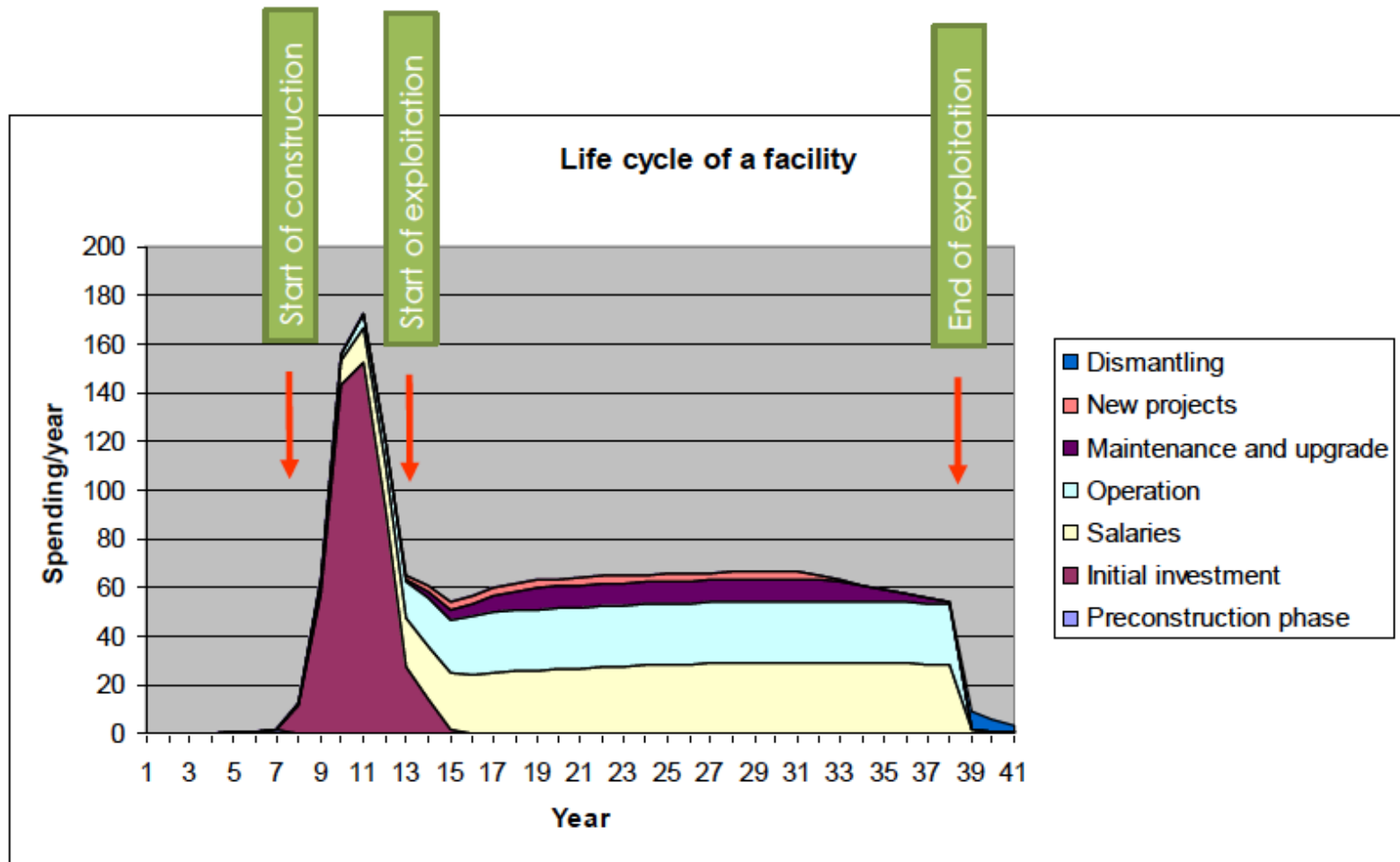## Total budget managed by ESF: 51 M€

- Allows for the completion of on-going commitments until end of 2015

- **3 M€** for core scientific activities facilitated by around 57 staff, mostly in Strasbourg

- **48 M€** for the following other activities:
  - *'à la carte'* activities (Research Networking Programmes, EUROCORES, Expert Boards & Committees) funded by Member Organisations on a voluntary basis
  - Institutional partnerships (e.g. Conferences)
  - External contracts, mainly with the European Commission (including COST, 60 staff in Brussels)

SERVICES

ESF is eager to serve the needs of the European research community and is currently developing offers of valued services to science and research in Europe through, for example:

● **Peer review services**

● **Evaluation services** for Research Organisations

● **Mapping Research Infrastructures** of European interest – MERIL

● Developing the **Career Tracking and Monitoring Platform**

Spending pattern for a 500 M€ facility

Life cycle of a facility

M. van der Rest

Research Infrastructures

Considering these matters one of the most urgent issues for an Innovative Europe is: Can the European Paradox be resolved by improving the transfer of knowledge from the Academic World to the Private Sector without jeopardizing curiosity-driven research and, hence, the research quality of European universities?

The answer is yes! However, *in order to solve the problems* it is extremely important that solutions are primarily aimed at by making existing facilities, such as research infrastructures, more efficient and less fragmented not by increasing funding but through evaluation and prioritisation to meet the requirements of industry.
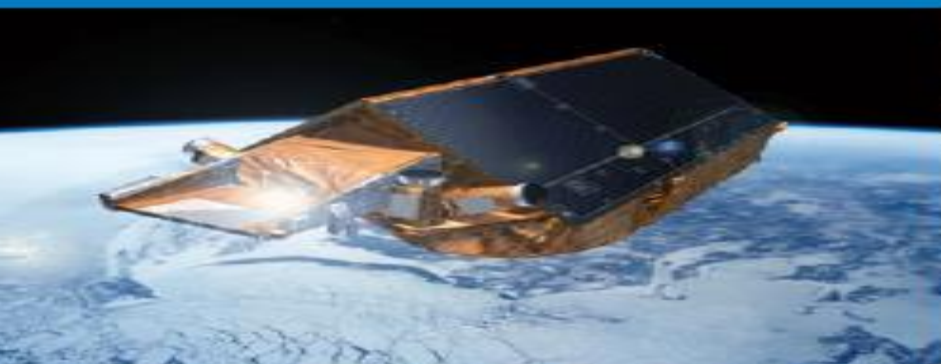
Research infrastructures should and could be key instruments in helping Europe respond to grand challenges in sciences, industry and society, however, as already pointed out by the EU Commission *"today's infrastructure in Europe does not always meet the requirements of industry"* and we totally agree.

Prof Hermann Grimmeiss

MERIL

MAPPING OF THE EUROPEAN
RESEARCH INFRASTRUCTURE
LANDSCAPE

The MERIL Portal –
The Gateway to Research
Infrastructure in Europe

What Was MERIL Designed For?

- To provide an authoritative public source of information on internationally significant, openly accessible research infrastructure in Europe, across all categories and scientific domains.

- To foster collaboration and a sense of common purpose amongst all RI actors in terms of strategic planning, funding, management, access and exploitation to maximize their utility for European science and society.
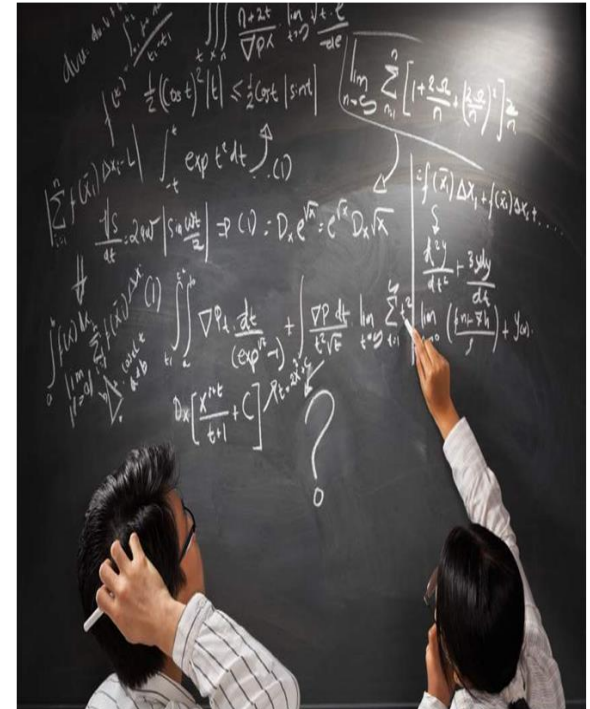
What does MERIL Provide?

- A valuable resource for researchers to source facilities, equipment and services and who to contact to gain access or support;

- A network for research infrastructure operators to identify communities of practice, synergies and complementarities, and initiate cooperation;

- An opportunity for facilities and initiatives, particularly those that are less well known, to raise their profile by inclusion in MERIL and find new customers;

- A high potential resource for policy-makers and strategic planners at national and international level containing baseline information which can be further elaborated for informed decision-making.

MERIL's Potential and Future Direction

- Simplifying an increasingly complex research environment via a dynamic mapping of the European RI landscape in Europe;

- Expanding data collection to include financial information;

- Linking and mining relevant other sources of data to enrich the data collected;

- Building an advocacy platform for RIs and RI domains;

- Working towards making pricing policies of research infrastructures transparent;

- Producing high-quality, systematic reviews of the research infrastructure landscape over time to assist decision-making for policy-makers.

Challenges

- Full coverage of extra-national RI landscape in ever changing Context

- Persuading RI's of the value of supplying data to the MERIL Portal

- Managing fears, reluctance re Financial data

Supports Needed

- Leverage from funders; timely data provision by RI's

- Development of MERIL Compliant Standard/Qmark

- Recognition of MERIL compliance on official funding documents

- Ongoing development of dynamic policy information rich resource

Assertion- and opinion

- Prof Michel van der Post- RI should have a social life or their own

- We need a new process– a tool– to encourage market facing actors to interact, to observe for themselves possible application cases

- 2 Billion photos per week on Facebook 2/3 of people and faces. SW on all leading smartphones. Technologists not nec. best placed to envisage new applications

- How best to encourage proper greed to avail of State investment in skills and technologies?

www.esf.org

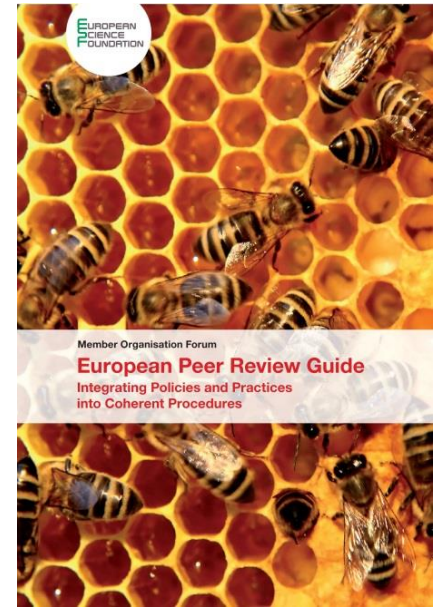About the European Science Foundation

Peer Review services for third parties

- Professional services to support competitive calls for proposals
- Modular approach:
  - *From external expert evaluation of proposals only to end-to-end management of competitive calls*
  - *Approach tailored to the size and scope of the projects to be supported*

Why ESF?
- Integrity and independence
- Tremendous network of independent, highly-skilled reviewers
- Strong experience and know-how (>5,000 research proposals evaluated since 2005)
- Quality controlled and optimised process and infrastructure
- Experienced scientific staff and efficient management of workflow processes
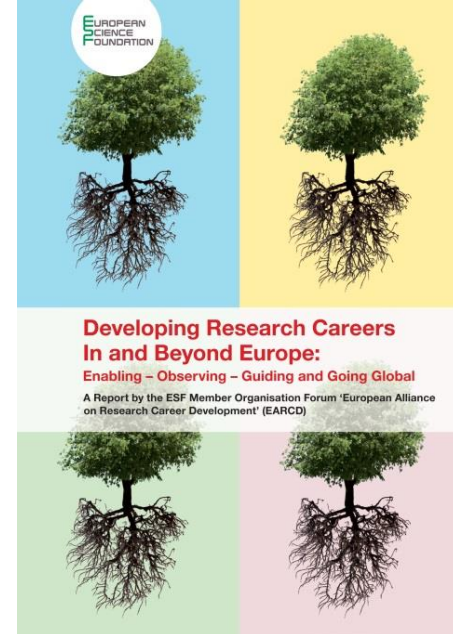
▶ *www.esf.org/peer-review*

SERVICES

Career tracking and management

- International Research Career Tracking and Monitoring Platform (CTMP) for surveys, studies and/or developing career tracking systems

- Tracking the quality of research training and skills

- Tracking to find out where researchers move in their careers

- Tracking for accountability & impact assessment

- Running joint international or national pilot projects

- Developing manuals

▶ *www.esf.org/career-tracking*

Developing Research Careers
In and Beyond Europe:
Enabling – Observing – Guiding and Going Global
A Report by the ESF Member Organisation Forum 'European Alliance
on Research Career Development' (EARCD)

Mapping of the European Research Infrastructure Landscape (MERIL)

- A continuously updated inventory of the most excellent research infrastructures (RIs) in Europe of more-than-national relevance, covering all scientific domains.
- A unique source of publicly available information for policy-makers and scientists.
- Initial development of the database and portal supported by the European Commission (2010-2012) – further development and exploitation in 2013 and 2014 supported by ESF member organisations.

Why ESF?

- Built on expertise of Member Organisation Forum on RIs.
- Able to mobilise and coordinate pan-European, multi-stakeholder effort.

▶ *www.meril.eu*

ONGOING COMMITMENTS

- Exploratory Workshops
- Research Networking Programmes
- EUROCORES Programmes
- Research Conferences
- Science Policy Briefings
- Finalising EURYI awards

Exploratory Workshops

- One-off specialist meetings
- Spearheading 'bottom-up' topics based on open calls
- Aiming to catalyse significant and strategic activities
- 25-30 scientists per workshop
- Funding per event: 15 k€

There are no plans to issue further Calls for ESF Exploratory Workshops

▶ *www.esf.org/workshops*

Research Networking Programmes

- Enable scientific endeavours over a 4-5 year period
- Supported by Member Organisations and other research and academic institutions
- Include workshops, conferences, exchange visits, summer schools, dissemination
- Can link to other initiatives, including the EC programmes
- Funding of 100-130 k€ per year per programme
- On average 11 000 participants per year in 60-70 programmes

There are no plans to issue further Calls for new Research Networking Programmes

▶ *www.esf.org/programmes*

EUROCORES (European Collaborative Research Programmes)

- Unique investigator-driven collaborative research scheme covering all scientific disciplines
- Opportunity for scientists to submit themes for collaborative research programmes
- International and joint peer review
- Research funding remains national, coordination and networking funded through ESF
- Any one programme includes about 15-40 individual projects from several countries
- Channels 5-10 M€ over 3 years
- 47 EUROCORES programmes have been created involving 67 funding agencies in over 30 countries in and outside Europe (more than M€230 national research funding)

There are no plans to issue further Calls for new EUROCORES themes.

▶ *www.esf.org/eurocores*

Research Conferences

- Interdisciplinary scheme in collaboration with institutional partners

- Stimulate dialogue between early-stage researchers and scientific leaders worldwide

- Cover topics proposed by the scientific community

- Grants of 20-60 k€ per conference, including specific support for early-stage researchers

- Organisation by ESF conference unit

▶ *www.esf.org/conferences*

Science Policy Briefings

● Addressing science policy issues of key concern to Member Organisations and the scientific community

● Drawing on the advice and expertise of top-level European researchers

● Providing evidence-based strategy recommendations to policy-makers

▶ *www.esf.org/spb*

European Cooperation in Science and Technology

- Intergovernmental Framework, governed by its Member States
  (35 COST Member States and 1 cooperating state, Israel)
- Annual total turnover: approx 30 M€ at present; 240 M€ over 7 years
- The Committee of Senior Officials (CSO) is the decision-making body responsible for the strategic development of COST
- Approximately 300 on-going Actions
- Meetings, workshops, conferences, short term scientific visits, training schools.
- Between 65 and 300 k€ per year over 4 years
- Continuous open call with collection dates in March and September
- Approximately 9-month decision period

▶ *www.cost.eu*