

# Future Access to European Research Infrastructures: Benefits to Academia, Industry and Society



Vetenskapsrådet

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# Welcome

- *National and international research facilities = Engines of tomorrow's technology.*
- Some EXAMPLES:
  - Accelerators and
  - Nano/micro electronics laboratories
  - Large databases
  - Biobanks
  - Computer networks
  - High performance computation



# Swedish Research Council's Committee for Research Infrastructures (KFI)

KFI's mission:

The KFI acts to ensure that Swedish researchers have access to infra structure for research of the highest standard.



# KFI's tasks

- Research funding:
  - planning grant
  - expensive scientific equipment
  - operational grant
  - support for databases
- Evaluations of research infrastructures
- Representing Sweden in international organisations
- Long term strategic planning, including developing and revising a national roadmap on research infrastructures



# Definition of research infrastructure

The criteria for the types of infrastructures that fall within the KFI's area of responsibility; they should:

- Be of broad national interest
- Offer scope for world-leading research
- Be used by several research teams /users with highly advanced research projects
- Be so large-scale that individual groups cannot operate them on their own
- Have long-term plans for their scientific objectives, funding and exploitation
- Be open and easily accessible for researchers

# A Swedish roadmap for RI

The *Swedish Research Council's Guide to Infrastructure* provides an overview of the long-term needs for research infrastructures to enable Swedish research of the highest quality in all scientific fields:

- Astronomy, Astro-, Nuclear-, and Particle Physics
- eScience
- Earth and Environmental Sciences
- Humanities and Social Sciences
- Materials Sciences
- Medicine and Life Sciences



# European Strategy Forum on Research Infrastructures (ESFRI)

Updated European roadmap for RI, 2008





## Research facilities, examples

- Astronomy, Astro-, Nuclear-, and Particle Physics:
  - CERN – European Particle Physics Laboratory
  - ESO – European Southern Observatory
  - FAIR – Facility for Antiproton and Ion Research
  - Onsala Space Observatory
- eScience:
  - SNIC – Swedish National Infrastructure for Computing
  - PRACE – Partnership for Advanced Computing in Europe
  - DISC – Infrastructures for Databases





## Research facilities, examples II

- Earth and Environmental Sciences:
  - EISCAT – European Incoherent Scatter Facility
  - ICOS – Integrated Carbon Observation System
  - LifeWatch – Biodiversity
  - IODP – Integrated Ocean Drilling Program
- Humanities and Social Sciences:
  - CLARIN – Common Language Resources and Technology Infrastructure
  - ESS – European Social Survey
- Energy:
  - ITER – Fusion research



## Research facilities, examples III

- **Materials Sciences:**
  - ESS – European Spallation Source
  - ESRF – European Synchrotron Radiation Facility
  - MAX IV – Synchrotron Radiation Facility
  - XFEL – X-ray Free Electron Laser Facility
- **Medicine and Life Sciences:**
  - EMBL – European Molecular Biology Laboratory
  - BBMRI – Biobanking and Biomolecular Resources Infrastructure
  - EATRIS – European Advanced Translational Research Infrastructure for Medicine



Very Welcome to Sweden and Lund!