ENES **Requirements** for a Future, Long-Term Partnership with EUDAT with Respect to **Contractual**, **Legal**, **Financial** and **Political** Issues

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ENES

- Develops a common
  climate and Earth system modeling
  distributed research infrastructure
  in Europe to
  - further integrate the European climate modeling community,
  - ease the development of full Earth system models (ESMs),
  - foster the execution and exploitation of high−end simulations, and to
  - support the dissemination of model results and the interaction with the climate change impact community.
- This infrastructure is supported by the I3 FP7 projects
  - **IS− ENES** (2009−2013) and
  - **IS− ENES2** (2013−2017).
- It provides the European contribution to
  - The international climate model database of the World Climate Research Program, i.e. **the Earth System Grid Federation (ESGF).**

ENES and EUDAT

- Core community in EUDAT since 2011
- Particular activities in the areas of
  - Metadata,
  - Persistent identification,
  - Networks, and
  - Workflows
- Integration of the World Data Centre Climate – WDCC1 into the EUDAT CDI.

ENES and EUDAT cont'd

- In EUDAT2020, ENES proposes to integrate the Centre for Environmental Data Archive (CEDA) to the CDI, with a focus on the integration of climate model reference data.
- ENES will use EUDAT services like
  - B2FIND for dissemination of climate data products where need arises beyond existing ENES and ESGF services,
  - B2SAFE for replicating climate reference data across centers with a view to improving data, or B
  - B2STAGE for moving climate data to PRACE facilities.
- ENES will work on integrating EUDAT work on AAI and PIDs into the ESGF infrastructure.
- EUDAT2020 has a strong focus on facilitating the uptake of its services by research communities through specific uptake plans driven by the active involvement of community experts.
- The ENES community is represented in the project by DKRZ, CERFACS, MPI-M, and STFC.

Requirements: Contractual

- ENES is *not yet* a legal entity
- LoIs, LoSs etc possible
- SLAs probably only with single centers
  - This might change once CoE or ESFRI or such have been established
- … ENES might turn into a legal entity (long timescale)

Requirements: Legal

- ★ Again single centers
  - ★ possibly establishing services for ENES, or the community …

Requirements: Financial

- ★ see above …

Requirements: Political

- LoS ENES → EUDAT has been provided
- Typical concerns/scepticism in the community:
  - Can those IS/IT guys really help us!?
  - Isn't our solution the best anyway?
- We do have a scalability problem, though:
  - The IMPACT community ….

To repeat: Questions from EUDAT

1. Can you please present the way your research infrastructure/community is organized. E.g.:
    a. What are the partners, who are the service providers, the users?
    b. What are the resources/services provided?
    c. What are the agreements related to access to the RI or the services it provides (e.g. machine time, software, data, support, etc.)?
    d. What are the current or planned legal structures and funding models in place, etc?
2. According to the EUDAT CDI concept, what would be the requirements from your RI to formally join and integrate components of this RI as part of the CDI?
3. EUDAT aims to provide storage resources and other related services to the widest numbers of researchers. These resources have a cost and their access should be regulated. In your opinion, what would be the best model for accessing these resources:
    a. Quality-based: researchers apply for resources which are allocated on the basis of scientific excellence, originality, quality, and feasibility of the applications
    b. Quota-based: access is based on quotas determined by e.g. the financial contributions from the CDI partners, or the research programmes agreed with pre-defined users)
    c. Market-based: access is granted to anyone against a fee
4. Suppose you are looking for a place to store and take care part of your scientific data for at least 10 years. What conditions/ requirements should EUDAT meet to be seen as the best place to put your data?
5. EUDAT is currently a network of independent centers working within a common framework to develop and propose services. At present, contractual agreements (e.g. SLAs) can only be backed by centers as individual legal entities. In your opinion, should EUDAT move towards a single legal entity?

Can you please present the way your research infrastructure/community is organized

- What are the partners, who are the service providers, the users?
  - Partners:
    - About 50 institutions in Europe dealing with or interested in climate/Earth system Modelling
  - Users:
    - All those using the services of our
  - Service providers:
    - most notably BADC, DKRZ, BSC, CMCC, IPSL/CNRS/CEA
- What are the resources/services provided?
  - Federated Data System
  - Compute resources per project
  - Services on models and tools (Doc, supp. etc.)
- What are the agreements related to access to the RI or the services it provides (e.g. machine time, software, data, support, etc.)?
  - Individual, or per project
- What are the current or planned legal structures and funding models in place, etc?
  - So far, Funding from EU, other possibilities under discussion/development

According to the EUDAT CDI concept, what would be the requirements from your RI to formally join and integrate components of this RI as part of the CDI?

- ★ Be as informal as you can!
- ★ Formal agreements should be arranged with single service providers on a case-by-case/ service-by-service base, e.g. DKRZ with WDCC/CEDA
- ★ EUDAT partners representing ENES:
  - ★ DKRZ, CERFACS, MPI-M, and STFC

EUDAT aims to provide storage resources and other related services to the widest numbers of researchers. These resources have a cost and their access should be regulated. In your opinion, what would be the best model for accessing these resources:

- 👍 Quality-based: researchers apply for resources which are allocated on the basis of scientific excellence, originality, quality, and feasibility of the applications….

  But still long-term!

- 👎 Quota-based: access is based on quotas determined by e.g. the financial contributions from the CDI partners, or the research programmes agreed with pre-defined users)
- 👎 Market-based: access is granted to anyone against a fee

Suppose you are looking for a place to store and take care part of your scientific data for at least 10 years. What conditions/requirements should EUDAT meet to be seen as the best place to put your data?

- ★ High-Quality support
- ★ Reliability
- ★ Easy, scalable access
- ★ Support of workflows
- ★ Affordable

EUDAT is currently a network of independent centers working within a common framework to develop and propose services. At present, contractual agreements (e.g. SLAs) can only be backed by centers as individual legal entities. In your opinion, should EUDAT move towards a single legal entity?

- ★ Hard to imagine that a single legal entity can serve all communities
  - ★ ENES needs taylor-made solutions
- ★ EUDAT should rather set standards for quality of service for such centers, and aid them to be well networked into the rest of the IS (HPC, networks, standards, methods)

Take Home

- ★ ENES is not an single RI yet, but a network of RIs, supported by IS-ENES2, on it's way to be turned into an ESFRI
- ★ Formalisms need to be with single service providers
- ★ We like it informal
- ★ Questions?