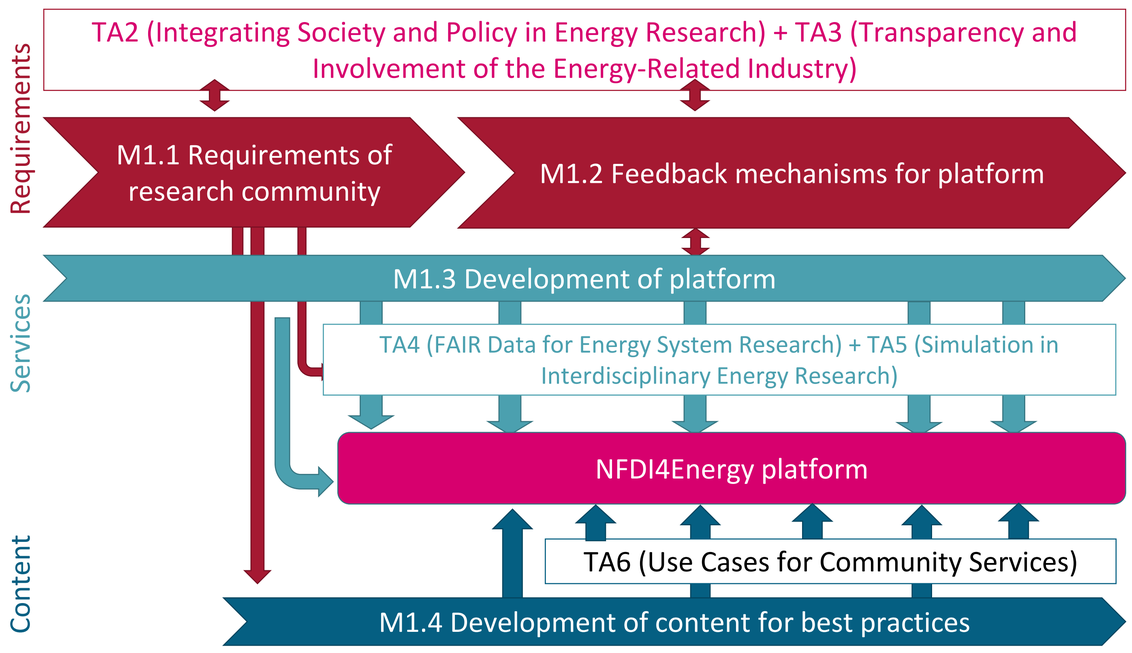
An Energy Data Service Platform for Whom? Understanding the Needs of the Energy Research Community

Franziska M. Hoffart[1,2]; Nina Kerker[1]; Oliver Werth[3]

[1]Sociological Research Institute Göttingen
[2]Energy, Transportation, Environment Department, German Institute for Economic Research
[3]OFFIS e. V. – Institute for Information Technology, Oldenburg

Task Area 1 of the nfdi4energy project



1. Introduction: Relevance and Objectives

- To combat climate change, energy transition and energy system transformation are crucial → significant role of energy-related research
- For the required research, **access to data** is necessary to develop new theories and models
- (Energy) research lags behind in **promoting open data** → various projects and initiatives are building **data platform solutions**
- New developments might be **difficult to oversee**
- **NDFI4Energy** aims to develop and provide an **open and FAIR research ecosystem** addressing the whole research cycle
- Includes successful elements of existing platforms and solutions and addresses unsolved and new challenges faced by researches
- Key: identifying and understanding **the needs** of the energy research community
- **Who** makes up the energy research community? What are the **needs** of its members in terms of platform development?

2. Who is the Energy Research Community?

- Platform requirements cannot be identified without acknowledging the **increasing diversity and interdisciplinarity** of the energy research community
- In the beginning, energy research had a **techno-economic focus**, today it is seen as a **socio-technical transition** embedded within society and current socio-ecological challenges
  - Inclusion of **non-technical aspects** → e. g. political feasibility, social acceptance and just energy transition
  - Evolution calls for the **strengthening of non-technical research**, e. g. from the social sciences to introduce new perspectives, approaches and tools

3. Platform Requirement Analysis

Expert interviews with scientists from different disciplines of the energy research community

Questions include, among others:

- What do you understand by the term energy research?
- How do you rate access to these resources in the energy research community? (Where do you see room for improvement in procurement?)
- In principle, would you be prepared to store your research outputs in a public data archive and make them accessible?
- Which specific functions or services would you consider particularly valuable on a platform for networking the interdisciplinary energy research community?

Preliminary results regarding challenges, needs and potential services for platform development:

1. Challenge: Overinvestigation in certain areas, where multiple researchers are active in the same regions, leading to duplicated efforts and frustration among respondents.
2. Need: Easily accessible information on other research projects, including geographical area, time frame, research interests, and contact details.
3. Potential Service: Visual map illustrating the "activity regions" of research project

4. Conclusions

- The researchers proposed an approach that **combines research community analysis with platform requirement analysis** which can be worthwhile for other research domains
- Acknowledging the development of the energy research community over the last decades towards more social science integration and interdisciplinary research, the community could be better described as an **energy transition research community**
- The refined research community understanding leads to **various needs and requirements in research**
- Further analysis is needed to **better connect** the insights of the evolution of the energy research community to the identified needs

SOFI Soziologisches Forschungsinstitut Göttingen
Carl von Ossietzky Universität Oldenburg
OFFIS
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