



# Highlighting opportunities for new and innovative applications of EPOS data, tools and services

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First and foremost EPOS is an e-Science Infrastructure delivering Data, Data Products and Software.

Data services are described elsewhere, also opportunities by integration and synchronisation with other RI's and services, e.g. EOSC, will be highlighted in the following presentations.

This talk concentrates on additional examples for (not only data-driven) possibilities, opportunities and offers for users/stakeholders.

# Using EPOS structures for the development of data products

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Example: New seismic hazard and risk map using cooperation and opportunities given by EFEHR, or TCS Seismology.

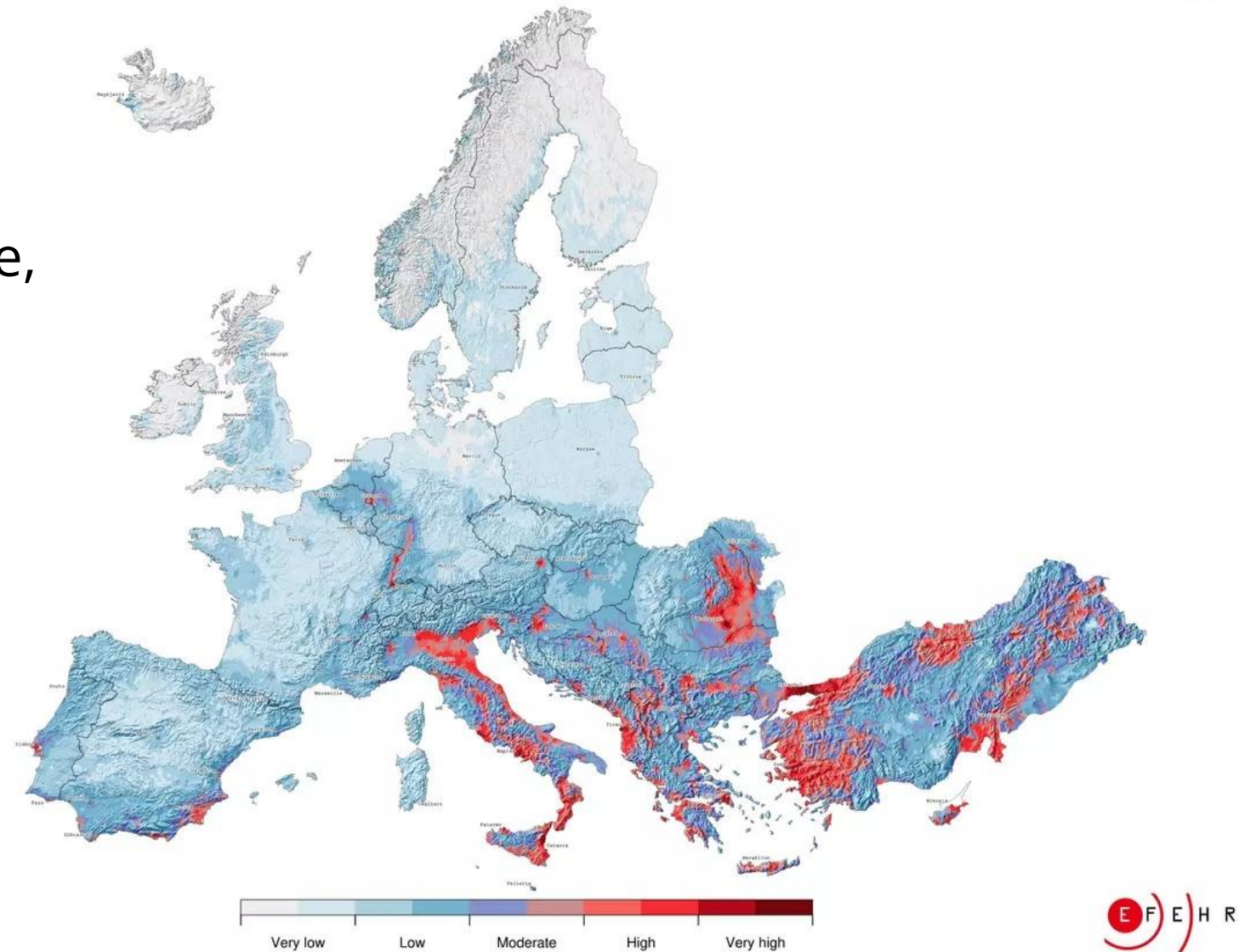
Broad cooperation between scientists, (very) small enterprises and assurance companies.

Excellent example for large cooperation based on broad data availability and homogenisation for the benefit of society.

Also good example for cooperation with Private Sector

Example:

New Seismic Risk Map for Europe,  
produced by EFEHR,  
Pillar 3 of EPOS TCS Seismology



Crowley H. et al. (2021) *European Seismic Risk Model (ESRM20)*. EFEHR Technical Report 002 V1.0.0, <https://doi.org/10.7414/EUC-EFEHR-TR002-ESRM20>

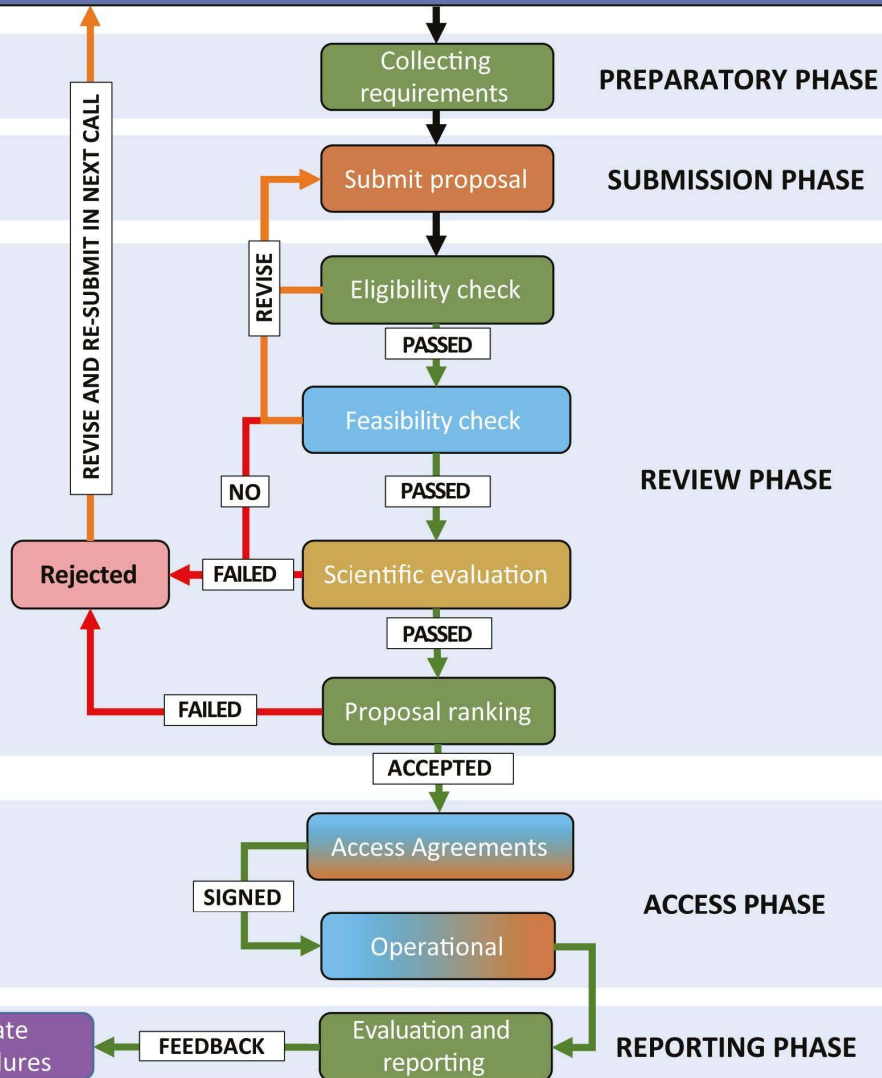
# TNA

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One major aspect of EPOS is the role as e-science infrastructure. Another potentially strong leg of EPOS could develop with TNA, Transnational Access to research facilities in Europe.

Target: Making available access to high specialized laboratory equipment, offering first class and unique facilities for researcher, young researcher and also Private Sector.

## EPOS TNA Procedures



TCS Consortium Board

TNA User

TNA Provider

TNA Coordinator

Scientific Evaluation Committee

## TNA Governance and facility example



# Initiation of large region-wide scientific experiments

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Mobilisation of science team and instrumentation for large scale international experiments, open science documentation and FAIR representation of data and results.

Example could be the Adria-Array (ABDarray), fostering EPOS services in the Adriatic-Balkans-Dinarides (ABD) region.

Thereby triggering national funding activities: e.g. U Kiel plans to apply for a DFG (German National Science Foundation) priority program.

# Role of EPOS for Knowledge Transfer to society

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Strengthening Natural Hazard activities as an example for enhanced EPOS driven interdisciplinary cooperation and transfer to society.

Example is the cTCS Tsunami.

- On the one hand it has strong scientific links to “disciplinary” TCS like seismology, GNSS, volcanology and satellite data.
- On the other hand it builds the bridge to mandated European and national Early Warning and Mitigation centres for the improvement of warning products.

# Future perspectives

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Formation of interdisciplinary platforms for large future geoscientific questions: We still have the challenge of solving many questions of energy transition or the question of (nuclear) waste deposit. These problems have to be tackled not alone by geosciences but together with other scientific disciplines and the Private Sector (e.g. how to solve societal acceptance and participation)

EPOS (together with other ESFRI RI's) could be driver of European-wide discussion fora

# Vision

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EPOS as a venue and competence centre for Solid Earth Sciences having access to:

- an enormous pool of experienced and skilled scientists,
- broad data basis and modelling competence and
- a large range of (unique) scientific instrumentation.