

# Modern research requires the use of standards: the Cost Action CHARME and its aims

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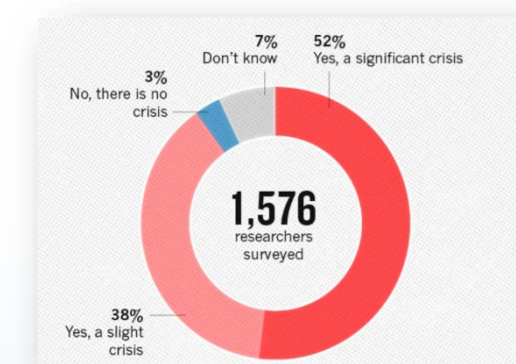
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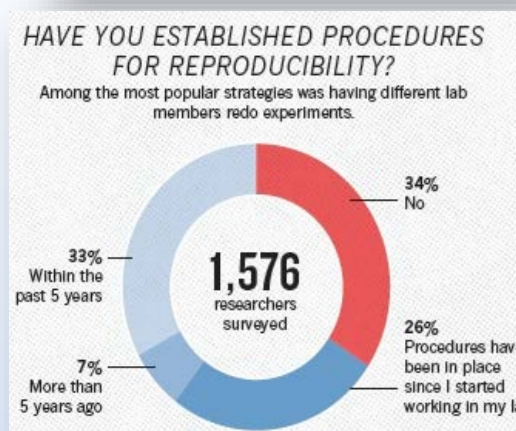
## Why CHARME ?

- 80-90% of the research data are not accessible or re-usable (DFG, German Research Foundation evaluation)
- There is a crisis in data reproducibility\*

\*Nature's survey of 1,576 researchers who took a brief online questionnaire on reproducibility in research



- Although 52% agree that there is a significant 'crisis' of reproducibility, less than 31% think that failure to reproduce published results means that the result is probably wrong, and most say that they still trust the published literature.



- More than 70% of researchers have tried and failed to reproduce another scientist's experiments, and more than half have failed to reproduce their own experiments.

\*<http://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970>

## Reasons

- Data are not shared via (public) repositories
- Appropriate metadata missing
- Information missing about experiments
- Data formats are not appropriate

## Problems of current life-science research

- Standardisation Initiatives are currently working largely independently from each other
- The available tools and legislation on standards and Standard Operating Procedures (SOPs) are still not:
  - Sufficiently comprehensive
  - Efficient
  - Harmonised
  - Adopted by the communities

## The COST Action CHARME is based on the work and outcomes of different initiatives (among others)



## Expected Outcome

- Use of standards for the acquisition, analysis and publication of research data is essential to maximise research efforts and technology transfer.
- Adherence to standards provides greater confidence in data quality, and facilitates data interoperability, sharing and re-use.
- Reproducibility of data and experimental procedures are essential for good research practices, and can only be achieved if research data are produced and published in accordance with well-established quality standards.
- Standards and SOPs must be key elements of any research project, and should be adopted in both wet-lab procedures and in silico research.

**CHARME** - Harmonising standardisation strategies to increase efficiency and competitiveness of European life-science research



## Aim & Primary Objectives

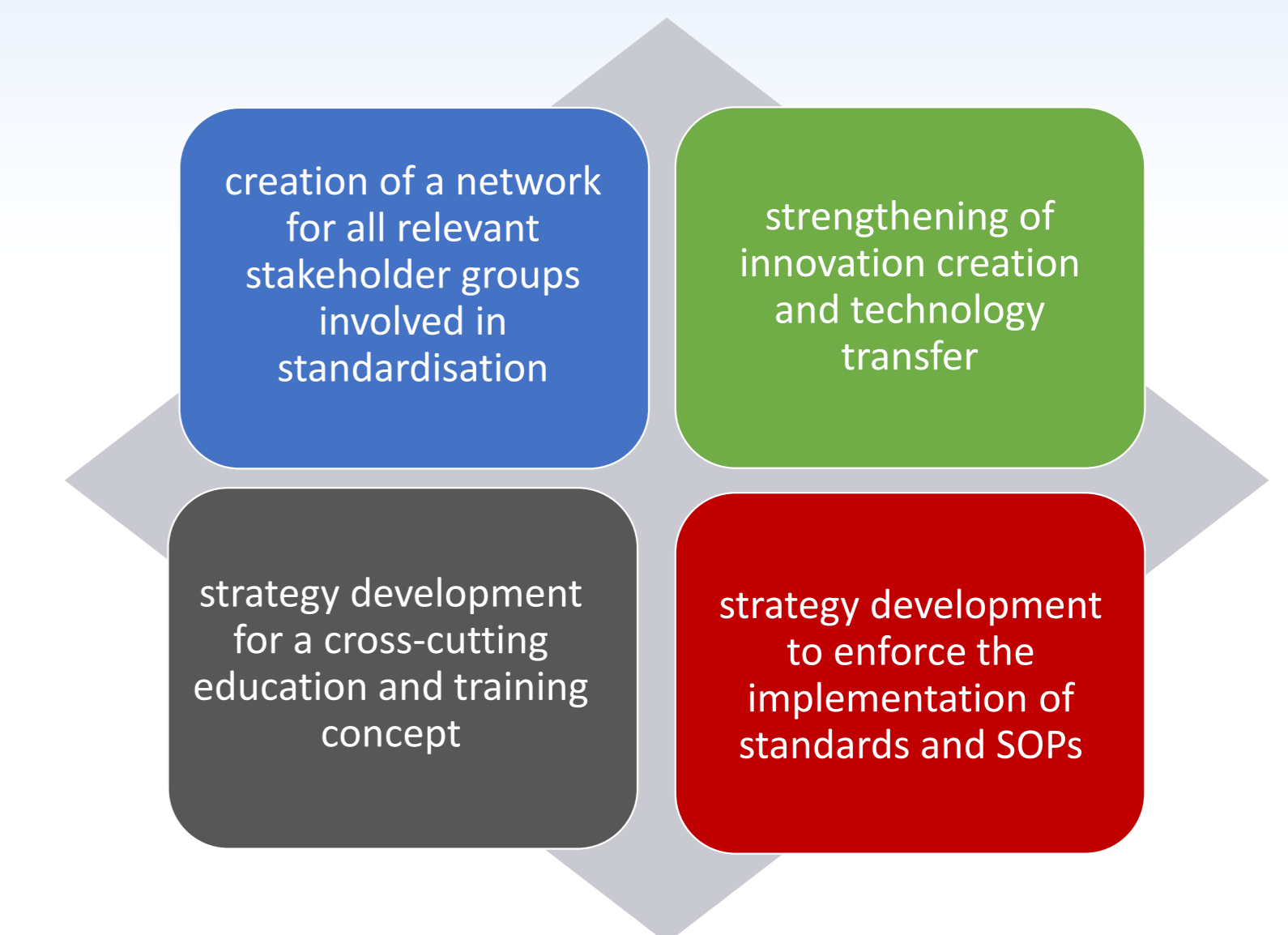
**CHARME** aims to **bridge and combine** fragmented initiatives in the development of new norms and standards, to achieve a breakthrough in standardisation efforts.

**CHARME** will identify needs and gaps, teaming up with other initiatives and organisations to avoid duplication and overlap of standardisation activities.

**CHARME** will develop a common, coordinated, long-term strategy, by active involvement of all stakeholders (from research, industry and policy), to successfully assimilate standards into researchers' daily work-flows.



## CHARME Pillars



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We need to create a link between Academy and Industry including Funders and European Standardisation Bodies

<http://www.cost-charme.eu/>

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