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Title: Change Culture, A Research Grant at a Time

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Research Evaluation criteria are increasingly placing importance on measurable real world impact beyond academia. The definition of "impact" is diverse and frequently difficult to quantify, and this challenge in itself has created an urgency to train the next generation of researchers in a range of "soft skills" to help them translate complex research in societal context.

Open Science is just one such "soft skill" in a spectrum of skills. A handful of research institutions across the globe are now recruiting researchers based on Open Science practices<sup>1</sup>. Through its relevance to reproducibility, re-use of research, return on investment for funder and Open Innovation, Open Science will very likely be a criteria in near future Research Evaluation Frameworks.

The EC has also funded a range of pan-EU projects on advocacy, training, and e-infrastructure development at disciplinary and generic level building capacity across the academic ecosystem to support uptake of best practices. Yet despite the clear urgency, documented benefits for researchers, maturing training approaches and a diversity of tools and infrastructures available, Open Science is still far from being the natural component of daily scientific working routines. So what is the missing culture change ingredient?

The *Open Science Clinique* attempts to package mature Open Science practices, tools and e-infrastructure and integrate them in one of the most competitive research grants: Marie Sklodowska Curie Actions (MSCA). MSCA grants target the next generation of researchers, building up "soft skills" and setting up alternative careers are a pre-requisite for funding. The highly competitive nature of MSCA offers the ideal testing environment to demonstrate if and how Open Science adds a competitive edge to grant proposals.

In a multi-annual experiment (2014-2018), Open Science-Knowledge Transfer and Science Literacy were offered to MSCA applicants as a spectrum of soft skills than can improve the research method rigor, dissemination and exploitation of results, as well as overall project impact. As part of the *Open Science Clinique*, MSCA applicants were offered individual, proposal-specific advice on how to make Open Science part of the research method design.

The training approach is not new, and the advice offered is freely available, crowd-sourced intelligence by the Open Science Community of practitioners and advocates that has produced resources like the "Open Science Training Handbook", the "FOSTER Open Science ToolKit" and "Open Science MOOC". The Clinique also has the underlying mission to force MSCA applicants to rely on, and include in the research method

<sup>&</sup>lt;sup>1</sup> Academic job offers that mentioned open science, <a href="https://osf.io/7jbnt/">https://osf.io/7jbnt/</a> Created 18 Jan 2018

design and proposal formulation, local institutional Open Science experts, librarians, advocates and trainers in order to bridge the gap between researchers and research support communities advocating for Open Science and "soft skills".

The added value and competitive edge of the proposals was gauged via the Evaluation Summary Reports for each proposal, and compiled in a database that can be used by Open Science trainers and advocates, and ultimately future MSCA applying researchers.

Open Science, when credibly coupled to pro-active knowledge transfer strategies and science literacy outreach activities, clearly adds a measurable competitive advantage to research grant proposals. The lessons learned are generic, and potentially easily transferable to any national funding research grant instrument.