Soft Skills for Hard Impact

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Marine and Earth Science graduates will be under increasing pressure in future to delve into research questions of relevance to societal challenges. Even fundamental research focused on basic processes of the environment and universe will in the coming decade need to justify their societal impact.

As the Research Excellence Frameworks (REF) for research evaluation shift more and more away from the classical Impact Factor and number of peer-reviewed publications to "societal impact", the question remains whether the current graduates, and future researchers, are sufficiently prepared to deal with this reality.

The essential compliment of skills beyond research excellence, rigor and method are traditionally described as "soft skills". This includes how to formulate an argument, how to construct a scientific publication, how to communicate such publications to non-experts, place them in context of societal challenges and relevant policies, how to write a competitive proposal and "market" one's research idea to build a research group around an interesting research topic.

Such "soft skills" can produce very measurable and concrete impact for career development, but are rarely provided systematically and coherently by graduate schools in general.

The presentation will focus on Open Science as a set of "soft skills", and demonstrate why graduate schools should train Open Science competencies alongside research excellence by default. Open Science is about removing all barriers to research process and outputs, both published and unpublished, and directly supports transparency and reproducibility of the research process.

Open Science as a set of news competencies can also foster unexpected collaborations, engage citizen scientists into co-creation of solutions to societal challenges, as well as use concepts of Open Science to transfer new knowledge to the knowledge-based private sector, and help them with formulating more competitive research proposals in future.