

Visions, needs and requirements for (future) research environments: An exploration with ERC Grantee Emanuele Campiglio

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Researchers are at the very heart of the EOSC: So what do researchers really need to do cutting-edge research? How do they think the EOSC could support them in their endeavors? Let's see what Emanuele Campiglio, researcher at the Vienna University of Economics and Business, has to say.

“Research should be a collaborative effort that is beneficial to society”

TU Wien: What does your research currently focus on?

EC: My research is about climate, economics and the impact of climate change on socio-economic systems as well as the impact of a transition of a low-carb economy on socio-economic systems with a focus on the macro-financial side.

TU Wien: What do you do to answer your research questions?

EC: Basically, I use existing datasets to run some analysis on the data, or I use the data to calibrate a model that I want to build. In order to do that, I need access to databases. The crucial ones are the databases provided by international organizations such as the International Monetary Fund (IMF), or by national statistical agencies. Every now and then, I need access to financial databases like Bloomberg. There, money can get an issue. Often, I can access the data without having to pay for it. Financial databases, however, are usually not free. In my case, I plan for these costs when I apply for funding, or I get access via my university's subscription. The Austrian academic system is generous on average. However, not all

systems are like that. When I worked in other environments, I simply did not access the data at times. Still I am quite lucky, because my research is not that data-intensive compared to other research, meaning that I can afford not always having access.

TU Wien: Then what do you need in your line of research in terms of data, services, tools etc. in order to increase your research capacity?

“We need to join efforts to find scientific solutions to threats to humanity on global scale”

EC: Project-related work and research requires a lot of administrative work that is highly time-consuming. At this university, there is a project manager, who helps us out a lot. It really is good to have people with specific expertise to contact. Of course, when you are responsible for your research project you want to be aware of everything, but still knowing whom to consult and being able to do so is a time-saver. It would be also great, if it were easier to quickly find and

contact experts on e.g. how to anonymize data, or with a specific background that I need for my research team.

TU Wien: In that case, I would like to discuss two ideas that came up during other interviews and at workshops. The first idea was to have some kind of catalogue or services that enable EOSC stakeholders to find experts not only in research domains but also on skills needed for a day-to-day research routine. The second was to establish support teams for scientific experts on e.g. programming, statistics, data stewardship etc. Depending on which expertise is needed, researchers could contact these support teams to speed up scientific processes.

EC: I would love that. I mean, it would be amazing.

TU Wien: Okay. Let's talk about future research environments. What components does your preferred future research environment consist of?

“Especially when research is funded publicly, we should be motivated into sharing results as well as data, code, etc. Otherwise, research is not reproducible”

EC: I have a long list of dreams, but I would like to stay pragmatic. First, the reproducibility of research matters. I am often not comfortable, for instance, with requests of reviewing papers that present a model or an analysis without the underlying code. Even though I can relate to the authors reluctance to share, I just feel this is something that has to happen: If I want people to believe that my results are indeed correct and meaningful, then they need to be able to replicate my analysis. However, I feel that things

are moving in that direction more and well they should.

“I would appreciate if this initiative could lead to an on-going dialogue about needs, requirements and research environments”

Second, I feel that research should be a collaborative effort that is beneficial to society, not only to individual careers. However, given the actual system it is very hard to push people into that direction. Science is very competitive. You fight with super-strong people for jobs at top-level institutions; you need to deal with being allocated a lot; you need to know the right people; you need to publish in the right papers. That really concerns me because the actual system supports research that is mainly of interest to scientific communities and individual researchers, not so much to society.

Third, I think that interdisciplinary research is very likely to become more important. Why? Because we face global challenges such as climate change, or pandemics and this is way too complex to deal with from only one perspective. We need joint efforts to find scientific solutions to threats to humanity on global scale.

TU Wien: What has to change to get there?

EC: Especially when research is funded publicly, we should be motivated into sharing results as well as data, code, etc. Otherwise, research is not reproducible. In addition, I feel that maybe some sort of social change has to come about. My attitude, my favouring open access so much, was primarily shaped by the people that I worked and work with. Thus, it would help to

support and push environments, where people find it natural to share things. Interdisciplinary research is being pushed already by e.g. funding that applies only for interdisciplinary research.

TU Wien: Having said all this, what would you need the EOSC to be or to offer you to actually make a change and to support research?

EC: Without having a very concrete idea of what the EOSC is or could be that is quite hard to say. I could state the obvious, of course: we need access to data, results, code, papers, etc. However, I would appreciate if this initiative could lead to re-thinking some of the topics mentioned above and add to an on-going dialogue about needs, requirements and research environments.



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