

Open Data: Results of the MAP Survey

Executive Summary

This survey by the Platform Mathematics, Astronomy and Physics (MAP) of the Swiss Academy of Sciences (SCNAT) was launched in response to recurring comments, questions and sometimes concerns expressed by scientists on the transition towards Open Research Data. Following on other activities of the Swiss Academies of Arts and Sciences, such as the Open Data Workshop¹ and the factsheet on Open Science in Switzerland², this survey successfully collected the diverse opinions of active researchers in Switzerland on this important topic. The survey was accessible on the SCNAT website from 10 June to 15 July 2020 and completed by 201 scientists: from PhD students to professors of all scientific fields covered by the Platform MAP and beyond, by researchers in biology, chemistry, geosciences and even in medicine and in the social sciences. The great majority of the participants sees the benefits of the transition towards Open Data policy, but a large fraction of them is concerned about aspects of its implementation. In addition to answering the 16 multiplechoice questions, about a third of the participants took the time to write comments to better express their opinion on the subject. Many are concerned about the time-investment and the costs compared to the potential use and benefit of Open Data. The need to differentiate the practice depending on the scientific field and the type of data is often mentioned. The most critical voices see this transition as an additional administrative burden that takes away resources from actual research. Overall, the results suggest that the scientific community is generally ready to make further efforts towards research data sharing, provided that the needed infrastructures, as well as the financial and technical support gradually improves, and that the effort is in line with the expected benefit of Open Data in the different scientific fields.

1. Introduction

The survey was accessible on the SCNAT website from 10 June to 15 July 2020. It was advertised in the SCNAT Newsletter and announced per e-mail to members of the affiliated organisations of the Platform MAP and to the participants of the MAP Open Data Workshop of 2018. Further distribution to collaborators and colleagues was encouraged.

The survey was intentionally kept short with a set of only 16 questions with multiple-choice answers to ease the completion and evaluation of the results. The answers could only be submitted when the survey was fully completed. An optional free text field was provided for any additional feedback or comments.

The focus is on national rather than international initiatives and disregards the question of data policy of scientific journals. The introduction in October 2017 by the Swiss National Science Foundation (SNSF) of the Data Management Plan (DMP) as a formal requirement at project submission was, for many scientists, a first direct contact with Open Data policies. From a rather theoretical concept, Open Data became tangible and started to influence their research activities.

¹ https://scnat.ch/en/id/AbPfB?embed=ndYGe

https://scnat.ch/en/id/xUe25?embed=ndYGe

This is why the DMP is an important subject of the survey and triggered many comments by participants.

The present document gives a snap-shot of the current opinion of a part of the scientific community on the transition to Open Data in Switzerland. We do not attempt to make a comparison of the results with earlier surveys on the same topic, because this is a difficult exercise due to the specificities of each of them, be it in the formulation of the questions, the distribution to the target audience, and the diversity of the participants.

Although the representativeness of the survey is rather limited and there are some inherent biases, briefly discussed below, the results can nevertheless provide interesting clues to people developing the national strategy and the action plan on Open Research Data under the leadership of swissuniversities, as well as to the SNSF, and other institutions promoting Open Science in Switzerland.

1.1. Representativeness of the survey

No technical issue was reported and we received 207 anonymous submissions. Possible duplications by the same person were checked based on the IP number of the remote computer. We found six cases of resubmission within minutes with almost the same content. In such cases, only the last input was kept. The need to answer all questions before submitting apparently prevented the misuse of the survey by a person or a robot providing random answers. At least, no clearly suspicious submission was found. The total number of valid answers is therefore 201.

Although this is a rather small number compared to the whole scientific community in Switzerland the results below show a broad distribution of career level of the participants and of scientific fields. As there are comparatively much less professors than PhD students, the results show that we did succeed to obtain a high proportion of answers from group leaders. An estimation of the overall level of response is only possible in specific subfields, where we know that the whole subcommunity has been informed about the survey. For instance, 25 experimental particle physicists participated to the survey out of a community of about 320-330 scientists, which yields a participation rate of ~8% in this subfield.

The survey being an initiative of the Platform MAP, there is a clear bias towards the scientific disciplines of physics, astrophysics and mathematics. A full representativeness of the whole scientific community is therefore not achieved. Another inherent bias is that people willing to spend time to fill a survey are those being the most interested and sometimes also the most concerned about the topic. The results are therefore to be read with such caveats in mind.

1.2. Presentation of the results

For the sake of clarity, we present all results in colour charts rather than tables. They contain all the necessary information and allow us to keep the accompanying text rather brief. The data are presented as they are, without statistical tests on their significance and without making complex correlations. The text emphasises the most interesting results and, if pertinent, indicates a link to other answers. Questions allowing to select several answers are displayed with a chart having bars of different length that indicate the percentage of participants having selected each of the possible answers. The percentages are displayed with decimal rounding, so that it can happen that they do not exactly sum up to 100% in questions with only one possible answer.

In the charts, the text label indicating the possible answers is sometimes a shortened version of the actual option in the survey. This is done to avoid too long labels and should not much alter their meaning. The accompanying text usually refers to answers with the original phrasing, as provided in a separate document presenting the questionnaire.

The optional comment field at the end was sometimes used to add information to some answers, but more often to give a viewpoint on the transition towards Open Data. As researchers took the time to write them, it is appropriate to attempt to present them, at the end of this document, in all their diversity.

Because the provided comments are not easy to be fully anonymised and we did not ask for agreement for disclosure, we do not provide the full dataset of the survey on-line. The data with or without the comments are available upon request.

2. Survey answers

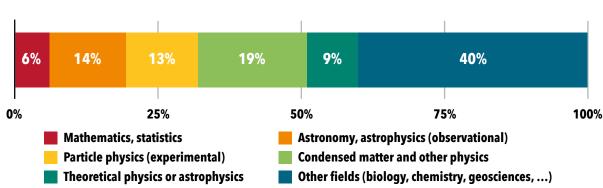
We present here the charts with the results of the 201 submitted sets of answers to the survey. The charts are rather self-explanatory, so that the text below each of them is kept brief just to emphasise the main results. In some cases, we report a possible link to answers given to other questions, in particular to Question 2 on the field of research of the participants.

33% 30% 19% 18% 2 0% 25% 50% 75% 100%

Professor (or similar) Senior scientist Postdoc PhD student Not active (anymore)

Q1: What is your academic position?

Question 1. The survey was mainly intended for professors and senior scientists confronted with the DMP that the SNSF requests at proposal submission. It is therefore very nice to see that the most experienced researchers also responded the most to the survey. Only 2% of the answers are from people not, or not anymore, active in scientific research. This fraction is small enough to not significantly bias the results away from the opinion of active researchers. We had no way to check that the responses came from scientists actually working in Switzerland, but the way the poll was announced and the lack of motivation scientists would have to complete a foreign survey makes it very unlikely that a significant fraction comes from researchers outside of Switzerland.

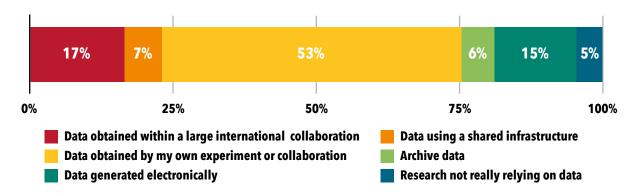


Q2: What is your main field of research?

Question 2. The survey being an initiative of the Platform MAP, the multiple-choice answers were specific to the disciplines of mathematics, astronomy and physics. Scientists from other disciplines

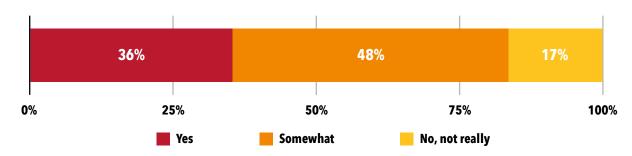
were however also welcome to participate and could specify their field of research in a separate text box. 76 participants did so and the answers are quite diverse. Trying to classify them gives the following repartition: 23 in environmental sciences; 20 in biology, ecology, or evolution; 9 in chemistry or crystallography; 9 in geosciences (including hydrology); 4 in engineering or material sciences; 4 in social sciences; and 2 in medicine (epidemiology, clinical research). Finally, 5 others are linked to physics and could have been indicated in one of the provided categories.

Q3: What kind of data do you mainly work with?



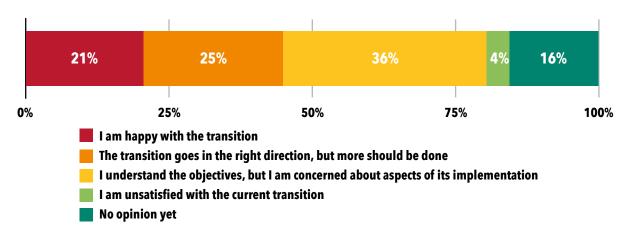
Question 3. More than half of the participants (53%) work with data obtained by their own group/collaboration or with their own experiment. Particle physicists and astrophysicists often use data obtained within a large international collaboration.15% of the participants work on data generated electronically (e.g. via computer simulations), whereas only a small fraction of the participants works with data from a shared infrastructure (telescope, synchrotron source, etc.), uses archive data from one or several sources, or is doing research not really relying on data (e.g. mathematics, theory).

Q4: Are you quite familiar with Open Data issues?



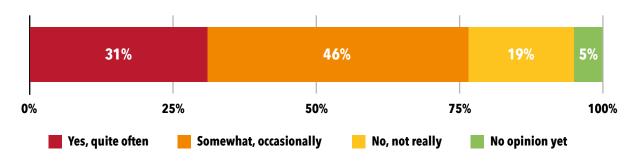
Question 4. This question shows that the large majority – more than 80% – of participants are already at least somewhat familiar with Open Data issues, whereas only 17% is not. There is probably a bias here in the sense that the scientists who took the time to answer the survey are more likely those having already some knowledge and opinion on the topic. It suggests, nevertheless, that the national and international initiatives promoting the transition to Open Data are progressively reaching the whole scientific community.





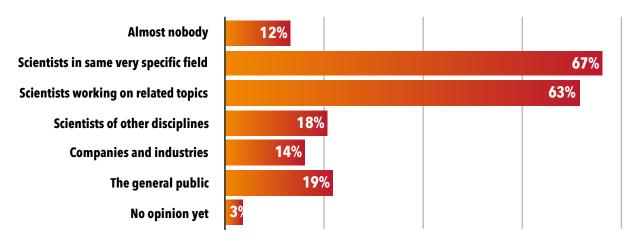
Question 5. The question on the perception of the transition towards Open Data policy received quite diverse answers. The large majority of the respondents with an opinion sees the benefits of this transition, but many of them are concerned about aspects of its implementation. 25% of all participants think that more should be done, which could either mean that the transition does not go fast enough or that there is not enough support for it. Only a very small minority (4%) declares to be unsatisfied with the current transition and often expressed the reason in comments (see below). The majority of them uses data obtained by their own group/collaboration or with their own experiment (Question 3) in condensed matter and other physics or in material science (Question 2).

Q6: Are you interested in accessing data of other researchers?



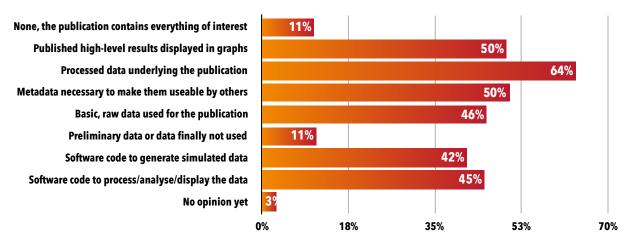
Question 6. Most participants (77%) are interested in accessing data of other researchers, which indicates a clear general interest in sharing data between scientists. Around 40% of them wish to do this even quite often, the other 60% rather occasionally.

Q7: Who could be interested in accessing your research data?



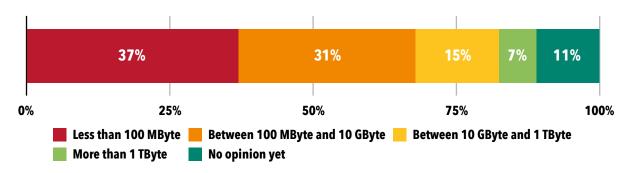
Question 7. The answers to the related question on who could be interested in accessing their research data shows, unsurprisingly, that they are primarily scientists working in the same very specific field or on related topics. Nevertheless, 72 participants (36%) would have data, which could be of interest to one or several of the following groups: scientists of other disciplines, companies and industries, or the general public.

Q8: What type of your data would be useful/interesting to share?



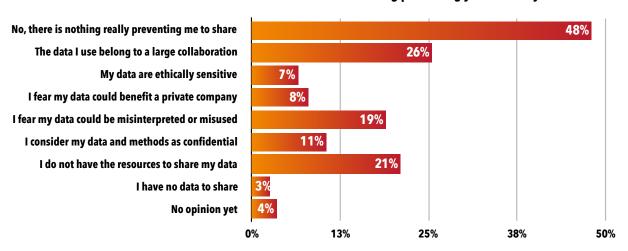
Question 8. The answers on the type of data, which would be useful or interesting to share are confirming that scientists generally see the importance to share research data. Only 11% of them say that the publication contains everything of interest. Some of them come from fields such as mathematics or theory, where data are not so important (Question 3), but also a minority of scientists from diverse other disciplines share this opinion. The large majority, however, sees it useful or interesting to share data or code, i.e. primarily the processed data underlying the publication (64%), the published high-level results displayed in graphs (50%), and metadata necessary to make them useable by others (50%). Nearly half of the participants find it useful to also share basic, raw data used for the publication (46%). Noteworthy, there is also an interest by 112 participants (56%) to share software code, either used to generate simulated data (42%) and/or to process, analyse and display research data (45%). Only a small minority (11%) would find it useful to also share preliminary data or data finally not used in the publication. This option was mainly selected by scientists working in the following disciplines: observational astronomy (7), biology (6), crystallography (2), and environmental sciences (2).

Q9: What data volume would this represent for one publication?



Question 9. The data volume this would typically represent for one publication is important for the planification of data storage infrastructures. Since estimating this is not always easy and the amount varies from one publication to the other, the possible answers were defined as large bins increasing by two orders of magnitude. Whereas 100 Megabyte are enough for 37% of the participants, more than half (53%) of them would need more storage per publication. 13 participants say they would even need more than 1 Terabyte. They are all from the fields of observational astronomy, particle physics, or theoretical physics or astrophysics. Scientists requiring between 10 Gigabyte and 1 Terabyte include researchers from other disciplines, such as biology, chemistry, and crystallography.

Q10: Is there something preventing you to share your data?



Question 10. The answers to this question divide the participants in two groups: about half of them have nothing really preventing them to share their data, whereas for the other half this is not so easy for various reasons. A quarter of the participants (26%) sees a problem due to their data belonging to a large collaboration. This concerns mostly astronomy and particle physics, but sometimes also other fields of physics, as well as biology and environmental sciences. 21% of the participants express a lack of resources to share their data, which is specifically the subject of Question 16 (see below). Another concern for every fifth scientist (19%) is the possibility of data misuse or misinterpretation. This is a problem expressed mainly by physicists (including astro- and particle-physicists) and by environmental scientists. Researchers considering their data and methods as confidential (11%) are mostly physicists using data obtained by their own group/collaboration/experiment or data generated electronically (see Question 3). Finally, less than 10% of the participants consider their data as ethically sensitive (7%) or possibly benefitting a

private company (8%). The ethically sensitive data belong to fields such as social sciences, environmental sciences and clinical research.

I have no extra need to share my data 20% Better infrastructures are needed 44% I would need additional technical support 36% I would need additional financial support 32% I wish to share only after full exploitation 36% 23% I wish to share only with countries doing so 28% I wish to share only upon a motivated request I have no data to share No opinion vet

13%

Q11: Under which conditions are you willing to share your data?

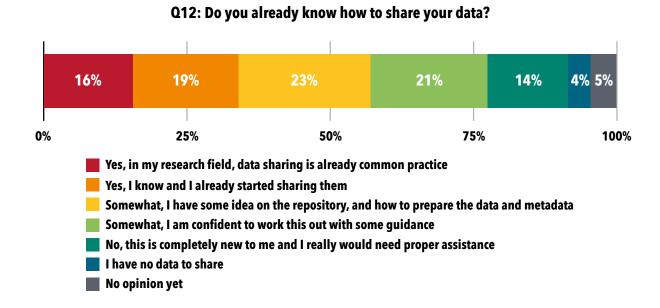
25%

38%

50%

Question 11. Whereas half the participants have nothing really preventing them from sharing (Question 10), only 20% of them say they have no extra need to share their data. Furthermore, nearly half of these 20% nevertheless also selected one or more of the six following options. This is a strong indication that the conditions are not yet met for making Open Data commonly and easily practicable by scientists. A majority of the scientists (61%) would at least need better infrastructures and/or additional technical support and/or additional financial support. Interestingly, more than one third (36%) of the participants wishes to share only after full exploitation within their collaboration. Selective sharing only with people motivating their request is wished by 28% of the participants, whereas sharing only with countries following similar Open Data policies is favoured by 23% of the participants.

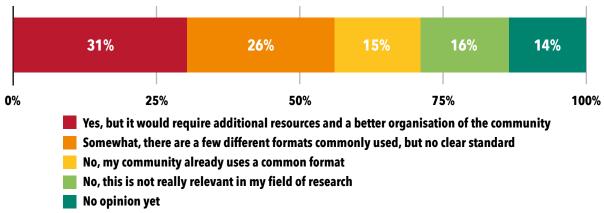
0%



Question 12. The answers received here show that the scientific community has a very diverse degree of knowledge on how to share their data. Globally, one can say that about 35% of the participants are well aware and/or already practicing data sharing. A large fraction (44%) of the

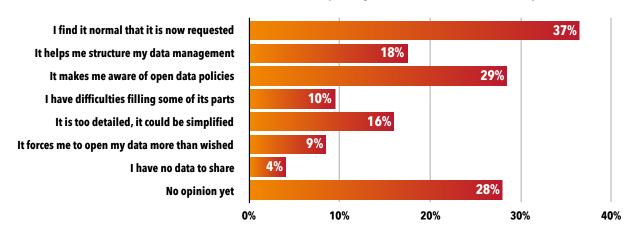
participants have looked into this and are confident to work this out with some guidance, whereas the issue is completely new for 14%, which would need proper assistance. There is no clear trend with the degree in the careers (Question 1) or with the scientific fields (Question 2). The answers are apparently more related to the interest of the researcher about Open Data issues (Question 4).





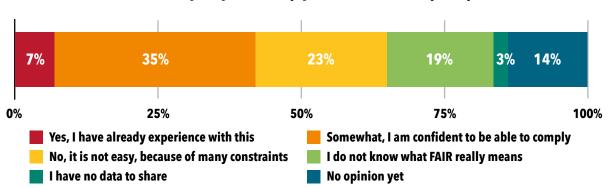
Question 13. The answers to this question on the need to define common formats for data and metadata are also quite diverse. Globally, the need of common standards is recognised by a majority of the participants (57%), whereas it is not really an issue for 31% of them. Almost one third of the participants (31%) see the need to agree on common formats for data and metadata, but this would require additional resources and a better organisation of the community. There is no clear trend with respect to scientific discipline, which suggests that the lack of standard data formats is not generic for a discipline, but is rather an issue for specific research fields within each discipline.

Q14: What is your opinion on the SNSF Data Management Plan?



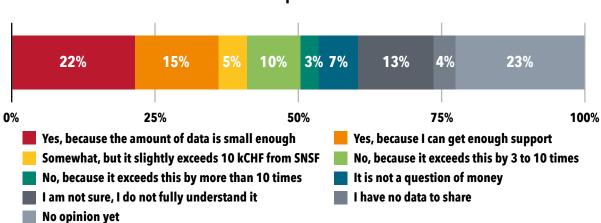
Question 14. A majority of researchers answering the survey have a rather positive opinion on the SNSF Data Management Plan (DMP). If one excludes the 28% having no opinion yet on this question, 50% of them find it normal that it is now part of the proposal submission. For many of them and several other participants, the DMP helps them structure their data management and/or makes them aware of open data policies. 53 participants (37% of those with an opinion) have selected one or several of the three more critical following answers: they find the DMP too detailed and/or have difficulties completing some of its parts and/or think that it forces them to open their

data beyond what they are willing to. Nobody used the opportunity to specify, in the comment field at the end of the survey, which parts are difficult to answer or what could be simplified.



Q15: Is it easy for you to comply with the FAIR data principle?

Question 15. On the question about how easy it is to comply with the FAIR (FAIR=Findable, Accessible, Interoperable, Reusable) data principles, a third of the participants (33%) did not really know what it is about or had no opinion yet. The majority (54%) of the remaining participants having data to share has not yet experience with it, but is confident to be able to comply with FAIR principles. More than one third (35%) of the researchers with an opinion on the question think, however, that it is not easy to comply, because of many constraints on metadata, etc. Only 7% of all participants have already experience with FAIR data sharing.



Q16: Do you have the necessary resources to share your data according to applicable open data policies?

Question 16. The last question was about the resources needed to share research data according to applicable Open Data policies. Here again, a large fraction (40%) of the participants has no opinion yet or has no data to share. If we exclude them, a majority (62%) of the remaining participants has no problem of resources, but for 30% of them the support of 10 kCHF that can currently be provided by the SNSF is not sufficient. For a small number of researchers – 6 in total either working in particle physics or in theoretical physics or astrophysics and 4 of them using more than 1 Terabyte of data per publication – this should even be increased by more than a factor 10 to allow them to share their huge dataset in a useful way. For 7% of all participants, it is not a question of funding. We received two specific comments on this, both referring to the additional workload taking time away from research, which is an issue also mentioned by many other participants.

3. Summary of received comments

About a third of the participants entered comments in the text field provided at the end. That so many researchers took the time to write shows that the topic is important for them and that they wish to have their opinion heard. However, since the participants were not asked whether or not they agree to have their comments published and because some of them mention specific datasets and are therefore not fully anonymous, we prefer to not disclose them in full.

In the following presentation of the comments, we aim at a compromise between an exhaustive fidelity to the original text and a synthetic presentation of the main points. We do this by grouping together the main ideas developed by the participants and give original quotations to show the diversity of the comments received. To structure this a bit more and to distinguish rather positive from more negative opinions, comments are presented in different sections based on the answer given to Question 5 on the opinion about the transition towards Open Data policy.

3.1. Comments by participants being happy with the transition towards Open Data policy

Seven comments were written by participants being happy with the transition towards Open Data policy. They generally think that "open data and data sharing can be useful". One participant notes in particular that "data made available by 1 scientist eventually gets used by 2-3 others", but there is a need of "defining common standards and formats of data and metadata". Another participant also regrets the absence of a common standard in his/her field: "Several efforts have been undertaken. However, standardisation is hardly doable." About Open Data, the idea that "one should not impose it top-down" is clearly expressed by a participant, who adds: "There has been a lot of turmoil about this. This can be avoided in the future if administrators, librarians and informaticians stop imposing open data policies top-down and base their activities on the advice of the scientific community." Another participant notes that "the main impediment to more mainstream sharing is the time that is required to format the data appropriately and write/format the associated metadata." An idea taken up in another comment stating that "the limiting factor (or let's say stress factor) for me is the extra time required to prepare that deposition, especially when the journal requests some deposition and your home institution also wants a deposition in their own data server (with different requirements)." The two remaining comments are more specific: one is on the difficulty to share data in "large collaborations where we do not control the data policies" and the other mentions the use of "github and gitlab" to share code.

3.2. Comments from participants who think that this transition goes in the right direction, but more should be done

We received 15 comments by participants who think that the transition to Open Data goes in the right direction, but that more should be done. Whilst one participant notes that "open and well documented datasets are essential", many others express obstacles making data sharing difficult: "consider that some scientific data is very dangerous to share"; "I would need other parties of my collaboration to agree and be active in making our data open-access"; "The data repository options offered by my institution are hence still not clear to me"; "For experimental particle physics, it seems very complicated to share data".

The question of data ownership and intellectual property is specifically addressed by three participants: "I am a PhD student, my professor decides which data to share and which to keep."; "Group leaders still often prevent the rightful scientists to be principal investigator on the publication [...]. This effectively prevents the 'legitimate' principal investigator to play a role in the data sharing."; "it is very unclear from the intellectual property point of view to whom the things I produce during my worktime actually belong. Officially they belong to my University. Hence, I have

no rights to decide on my own, about making any of my work accessible to others." The latter participant also notes "a lack in appropriate licensing tools" and regrets that "people harvest open accessible data, source-code etc. without attributing properly the original creators".

The costs associated to Open Data are also a concern for three participants: "I think that the costs of moving to open data have been underestimated. Institutions will have to make substantial investments."; "Last publication, open data access fee would have been 3500 USD."; "We provide a platform, getting SNF funding directly or as a fraction of contributor funding is difficult in terms of administrative barriers."

Speaking more generally, a participant writes that "the emphasis should not be on individual young researchers to produce data at publication, but on the large consortiums who hoard data to make it public." Another participant wishes Open Data to go beyond academia: "Science is not just research, but also building research infrastructure [...] whereby non-university organizations can play an important role.", which is echoed by another participant thinking that "we are in need of a much better public open data policy – not just for science but also for public data."

A final comment gives a clear view to go forward: "It is very important that the transition to Open Data happens soon and becomes common practice in particular for young scientists. It has to go along with adequate incentives, skills developments, assessment frameworks and rewarding opportunities. Information from EU and CH sources on action plans for FAIR Data should be easily available to all researchers."

3.3. Comments from participants understand the objectives of this transition, but being concerned about aspects of its implementation

The most common answer to Question 5 on the transition towards Open Data policy was "I understand the objectives, but I am concerned about aspects of its implementation". We received 27 comments from participants with this answer. They often describe a particular situation related to the specificity of their own dataset. One of them summaries it as "one format does not fit all" and a few others would like "different formats of open data policy according to the research fields". Some researchers note that their data are too specialised for reuse, e.g. "My experiments are so highly specialized [...] that interpretation of the raw data is almost impossible by someone else, without heavy involvement by my own group."

The additional effort Open Data policies imply is pointed out by many researchers: "I find it exaggerated to do a huge effort to share data in my field"; "I expect the benefit/cost ratio of the Open Data activity to be very low"; "This policy is quite energy demanding and time consuming"; "the ever-increasing amount of constraints and requirements (ethical committees, DMP, and, and, and) is cutting deeply in OUR life cycle as researchers"; "the time of researchers is not free to use in meaningless (or with very little positive return) tasks"; "transition [...] to FAIR data, software and publications costs enormous effort which is not justified in normal scientific process"; "It would require a 50% position to convert the data and processing routines in a share format and document it"; "Question 16: It is money but also time resources".

Four participants specifically note that the "The SNF data management plan requirements need simplification", that it "might be useful for small collaborations, but a waste of time for large collaborations" or "asks too many questions". One of them further thinks that: "The whole approach to open data is way too bureaucratic". But concrete simplifications are not proposed.

A particularly interesting comment is the need of data specialists to help implement Open Data to have it really useful: "I think simply dumping the raw data, pre-processed data, and software in public is a long way from guaranteeing meaningful reuse and reproducibility"; "The amount of documentation needed to make my research data truly reusable for other researchers is beyond what I can do"; "Preserving and disseminating data is a science by itself. [...] SNF should found people and infrastructure that know how to do that properly".

A few participants question the need to have the data publicly available rather than sharing on demand: "it would be sufficient to share data upon request by other researchers"; "It would be much more effective to develop a scheme where scientists are given strong incentives to share data with their peers on demand"; "it is not necessary that data are freely available for everyone. We can continue to ask the permission to authors if we need to study some dataset".

Two other researchers question the need to keep an embargo period: "What I don't like with the planned implementation of open data policy is the foreseen embargo period. Either data are open, or they aren't!"; "there should be no embargo period on access to raw data, otherwise more sophisticated hosting capabilities need to be developed and maintained."

Finally, three comments mention the issue of software code sharing: "Preservation of the software is also necessary; this requires possibly much more resource than 'just' data storage"; "The important thing is that the numerical code used to produce data or analyse them is freely available"; "there should be a way to fully credit the author of the code so that writing it would count as an academic merit, not just the publications made using it".

3.4. Comments from participants being unsatisfied with the current transition

Only 4% of the participants expressed being unsatisfied with the current transition towards Open Data policy, but six of them wrote comments. Unsurprisingly, they are the most critical on the topic. Three of them emphasise the issue of being already overloaded with administrative tasks: "We have more and more bureaucracy in our tasks, please do not add this useless task to us, and leave us work as we think it is the best for us and our domain"; "I find this activity highly time-costing. We are already too much overloaded with administrative tasks in doing research"; "the workload of sharing the data will be larger than it would be to other people to reproduce the experiment."

Another comment just mentions the need to have "environmental data on chemicals, also from Industry", whereas the two last ones are the longest comments received, which are both enumerating many issues concerning Open Data. The first list states that "the issue of open data is more political/ideological than driven by the needs of scientists.", and is rather critical about the justification by the SNSF of the Open Data policy: "It is not true that in other parts of the world the same policy is enforced: this is not the case in the US nor in China or Japan, our main competitors. It is easy to see many reasons why a one-sided open data policy will make us lose competitiveness." The participant further argues: "In the field where open data is clearly beneficial, open data happens spontaneously. Imposing it in fields where it is irrelevant or not particularly useful is a waste of time, efforts and money."

The second, long list of comments on Open Data is written by somebody having "serious concerns about its impact on research quality, cost, and competitiveness". The comments cover the need of "agreeing on common formats", the question of data ownership and their possible misuse, the issue of data requiring "commercial software with proprietary licences", and states that "research know-how is also in the 'doing and making', not only in the data and metadata". As for other researchers, the additional workload is seen as particularly problematic: "The Data Management overhead on our research activity can become unbearable, diverting human resources from the main tasks, that is, producing and analyzing new data, to data conversion and classification. This overhead will ultimately affect the competitiveness of the research groups, in the face of increasing and aggressive competition from abroad." A new point not raised by others relates to the fact that research is often done in "collaboration with industrial partners": "Full dissemination of proprietary information can be problematic and drive away industrial support from both basic and applied research, even if exceptions are made in the case of privately funded activities."

3.5. Comments from participants having no opinion yet on the transition towards Open Data policy

Five comments were written by participants with no opinion yet on the transition towards Open Data policy. One of them experienced that "the nonexistence of interesting data in many parts of mathematics is not really taken into account", whilst another one raises the issue of anonymisation of sensitive data: "In policy research especially towards developing countries, a lot of raw data is subjective and sensitive. Care needs to be made for anonymising such data sets".

The three remaining comments basically question the effort versus benefit of Open Data: "I am just wondering if the necessary time / money dedicated to make the data open access is really useful"; "the resulting infrastructure (to be maintained for decades?) would be prohibitive. It is very doubtful anybody would use my data beyond the results contained in the publication"; "Sharing data in order to be understandable and somehow useful to another expert needs a large amount of explication on the specifics of the data. This takes unavailable workforce."