

FAIR-IMPACT project response to “Community-driven governance of FAIRness assessment: an open issue, an open discussion”

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Background

At the end of 2022, an author group led by the EOSC Association Task Force on FAIR Metrics and Data Quality published '[Community-driven governance of FAIRness assessment: an open issue, an open discussion](#)'¹ which, as the title suggests, aims to foster an open debate with the community around FAIRness governance and the mechanism(s) that could be used to implement it. The FAIR-IMPACT project² is keen to take part in this open community discussion, as many tasks and activities in this project focus on advancing FAIR assessment metrics and tools in various ways.

The whitepaper presents the need for a governance model around a standard definition of FAIRness and the considerations around how such a model could be implemented in such a way that it can be trusted, broadly representative, appropriately scoped, and sustainable. Different stakeholders and use cases are presented, as well as explorations of possible governance models to use for this purpose. The whitepaper is meant to seed community discussions on the topic to advance the realisation of this "FAIRness Governance Body".

FAIR-IMPACT supports the implementation of FAIR-enabling practices, tools and services across scientific communities at a European, national and institutional level. One of our overall objectives is to expand FAIRness assessment metrics and tools to cover a broader scope of digital objects (data, software, semantic objects) as well as to add community-specificity to the metrics and tools. Working so closely with FAIR assessment metrics and tools, as well as being involved in the projects' [synchronisation efforts](#)³ to better harmonise the current landscape, we acknowledge and experience the complications that the lack of governance entails for the field of FAIR and assessment. This document presents our thoughts and views on the whitepaper and is our public effort for participation in the community discussion.

FAIR-IMPACT's response

The FAIR-IMPACT project would like to thank the authors for the opportunity to respond to this whitepaper in an open community discussion. We would also like to note that while there is some overlap in the members of the EOSC Task Force FAIR Metrics and Data Quality

¹ Mark D. Wilkinson, Susanna-Assunta Sansone, Eva Méndez, Romain David, Richard Dennis, David Hecker, Mari Kleemola, Carlo Lacagnina, Anastasija Nikiforova, & Leyla Jael Castro. (2022). Community-driven Governance of FAIRness Assessment: An Open Issue, an Open Discussion (Final). Zenodo. <https://doi.org/10.5281/zenodo.7390482>

² <https://fair-impact.eu/>

³ Grootveld, Marjan, Pittonet Gaiarin, Sara, Davidson, Joy, Dillo, Ingrid, O'Connor, Ryan, Marjamaa-Mankinen, Liisa, Verburg, Maaïke, & Jonquet, Clement. (2023). M1.7 - First synchronisation workshop. Zenodo. <https://doi.org/10.5281/zenodo.7692063>

and FAIR-IMPACT project partners, this response paper has been written without direction or influence from these individuals.

In general, the whitepaper describes some ideas of what a governance body could look like and its potential tasks. However, a more clear and detailed description of this governance body seems to be lacking, which results in ambiguity of the actual proposal and a complicated starting point to the intended open community discussion. The language used in the document could benefit from more unison, as the terms “governance”, “governance model”, “governance process”, “governance body”, “governance mechanism”, and “governance structure” are all used at different points throughout the text, but it is not always clear whether they are indicating the same concept or aspects and forms of governance that are considerably different. The key objectives presented in the whitepaper are quite high-level and broad and make substantial claims about the capabilities of the governance body, but delving deeper into the details mentioned throughout the whitepaper, complexities start to arise. From the described use cases, we gather the governance body is intended to review, evaluate, endorse, harmonise, and certify FAIR metrics and assessment tools in the entire scientific community, with sensitivity to domain-specific interpretations and applicability to different object types, facilitated by a group of experts on these topics. Moreover, this body would make sure users are assisted in their use of certain metrics and tools and that the full collection of metrics and tools is unified to present consistent results.

We agree with the idea that the FAIR principles themselves do not require governance. The acknowledged expansions and developments in the field in terms of objects and domains, as well as the important, but separate, strand of work focusing on data quality present a clear and agreeable scope of the whitepaper and the potential governance of the field. Plus, we agree with the concept that *governance for FAIRness assessment* is required and that the community at large requires better coherence around the assessment process. We need projection of the FAIR Principles into multiple domains and for all forms of digital objects. Such a projection will create a diversity that is complex to harmonise and manage. Also, we agree that it is important to keep aspects of digital objects that are not FAIR related (popularity, quality, technology) out of the FAIR Principles.

In the supporting rationale of the whitepaper, it is mentioned that “The community is genuinely concerned that mechanisms to evaluate FAIRness can be misused or misinterpreted, especially when these become a decision-making instrument in funding scenarios.” Though this claim does not (yet) seem to have much evidence to it, we see it recurring in the community. This concern was also discussed in FAIR-IMPACT’s Synchronisation Force 2022 workshop⁴, where experts from the field were invited to discuss

⁴ Grootveld, Marjan, Pittonet Gaiarin, Sara, Davidson, Joy, Dillo, Ingrid, O'Connor, Ryan, Marjamaa-Mankinen, Liisa, Verburg, Maaïke, & Jonquet, Clement. (2023). M1.7 - First synchronisation workshop. Zenodo. <https://doi.org/10.5281/zenodo.7692063>

the topic of metrics and assessment with the aim of better aligning initiatives and developments in the broad and fast developing field. There may appear to be a misunderstanding of the term ‘assessment’, where the community seems to have assigned the negative connotation of ‘punishment’ to it, when assessment tools have never been developed with this goal in mind and in some cases the developers have been actively resisting negative uses of their tool. Assessment tools are intended as a way to identify a current state of affairs, after which there always should be the intention to focus on gathering a better understanding and potentially improve the FAIRness of the object, based upon the results, as part of an ongoing capability and maturity process. Any decision or policy making based on the scores of assessment tools alone does not fit with this intended use. So far, assessment scores have not been included as requirements in funding calls and there is no evidence suggesting there is an intention to this end. However, there may still be a perception that this will become the case, as we present in our [FAIR-IMPACT project response](#) to “FAIR Assessment Tools: Towards an “Apples to Apples” Comparisons”, also by the EOSC FAIR Metrics & Data Quality Task Force. It is not a question of assessment *versus* assistance, but rather assessment *and* assistance. Moreover, preference may be given to the term ‘support’ instead of ‘assistance’, since the latter seems to imply a person is incapable of interpreting assessment results or improving FAIRness by themselves.

We also wonder whether the instalment of a governance body will be able to soothe this fear of misinterpretation and misuse of metrics and tools. The concept that people will know to trust certain metrics and tools because a body has deemed it so underestimates the critical thinking of the community. There would likely be many worries in the community about the evaluation mechanisms the governance body would use to evaluate, endorse, and certify certain metrics and tools. Moreover, if the governance body is swamped with various requests, can the community, and in particular the developer stakeholders, trust that new tools or domain-specific versions are evaluated and endorsed in a timely manner? How could we arrive at a protocol for this body of which the community would recognise and approve, to make sure this supposed trust in the body can be instilled? Would the judgement and punishment not be amplified when a governance body imposes a top-down demand for the use of certain metrics and tools only? Much more extensive bottom-up requirements for a governance body must be elicited and defined before it could be instated.

We observe a contradiction in the whitepaper: the point is clear that the FAIR Principles are not standards and we certainly agree on this. However, despite the authors’ insistence upon this, the whitepaper arrives at the notion of a governance body as an overarching organisation, or group of people, that will be fully knowledgeable and trustable on keeping the FAIR philosophy “*untouched*”. The examples of organisation models that come from the standardisation world (e.g., IETF, W3C) oppose the statement that FAIR is not a standard. If FAIR is not a standard, it is debatable whether it requires a top-down governance body to

advise and impose standards regarding the FAIR principles. Instead, what is required might be closer to an endorsed set of guidelines and best practices of FAIRness metrics, together with awareness raising/advocacy activities, to help communities set a direction.

As mentioned before, insights into the envisioned tasks of the governance body mostly come from the use cases presented in the whitepaper. The descriptions there suggest roles for the governance body in reviewing, evaluating, endorsing, harmonising, and certifying FAIR metrics and assessment tools, as well as providing assistance and focusing on unifying results. The key objectives also speak of unbiased and consistent examinations of FAIR, as well as ensuring universal understanding and trust. The example use cases depict scenarios in which the governance body would receive requests for information, endorsement, evaluation, or assessment and it is described that such processes would optimally take the governance body a few days to complete each request (with exceptions to this rule in more complex cases). With how the different stakeholders have been defined, anyone ranging from an individual researcher to an organisation can make such requests. Given the vast size of the scientific community and the current interest in expanding FAIR metrics to cover more domains and object types, the number of requests sent in to the governance body could quickly swamp it in both the short and likely long term, in the way described in the whitepaper. The suggested approach for the use cases will not be able to scale effectively to the level envisaged, which is another indicator that this role is not what will be most efficient for the scientific community. Considering the “small time-investment” mentioned later on in the envisioned features of the governance body, there are likely to be implications in the use cases and objectives presented, which counter that perceived situation.

On the other side of the process, the different stakeholders may also be overextended with these new processes put in place, especially in the case of negative conclusions from the governance body. For example, the use case for ‘FAIR researchers’ (section 3.2.4) describes a scenario where the FAIRness of a proclaimed FAIR object is challenged. While the whitepaper explores the potential value of being able to generate a report that could provide evidence of compliance and therefore FAIRness under a specific set of parameters, it does not make any reference to the scenario in which the FAIRness of the object cannot be validated. In case of such an outcome, would there be an obligation on the part of the data repository, the FAIR researcher, or both to take any action? The ramifications of such outcomes could be worrying for any of the stakeholders.

Another issue on the topic of feasibility is the makeup of the body. The whitepaper describes the desired balance of experts needed on certain topics, but it is not specified how ‘expertness’ will be evaluated. It is not clear which mechanisms will ensure that stakeholders agree the governance body has authority based on their expert status. Especially when the body aims to concern itself with badging and certification, it is important to establish how

this body would have legitimacy in doing so. The suggested roles and objectives for the governance body seem too broad and potentially not feasible to carry out.

Furthermore, the role of the governance body can certainly be more limited in our opinion. Several roles and objectives do not need to be attributed to a governance body, as the community itself can be very successful in approaching and solving certain issues in a bottom-up, community-driven manner. For example, the harmonisation of the different assessment tools and their results is a process that is already being undertaken by the developers of the tools in the so-called 'Apples to Apples' approach, where the suggestions for next steps seem to mostly still remain within the community⁵. In a recent landscaping study⁶ The European Commission was advised to support such initiatives to further increase understanding, training, and recommendations on the topic of assessment tools and their correct application and interpretation.

Another role that is currently carried out by the developers of the assessment tools is the provision of expert advice on how to interpret assessment results and increase FAIRness accordingly. We do not see a reason to move this task to a governance body, as the only experts with authority to give this advice would be the same people. Instead of moving this to a governance body, more support and means could be given to the original developers to offer the assistance or support that is so vital when using assessment tools.

There are many projects and initiatives currently putting in work to advance the FAIR principles and address issues that are present in the community. It would be optimal to not move all activities to one governance body, but instead focus on synchronisation to effectively advance the community.

Conclusion

Taken together, the topic of governance of FAIRness assessment could profit from a different approach, where the focus remains bottom-up and community-focused. The specific needs, issues, and requirements of the various different communities, with possibly incompatible interests, are not yet clear enough to be answered with the installation of a governance body. Without this properly defined, it would be debatable whether such a body could have the authority to impact the community in the way the authors suggest. A focus on defining standards and advancing current initiatives in synchronisation and harmonisation should take priority. This can be established in relevant projects, initiatives, and networks. For example, the concept of a network that is envisioned for the Trustworthy Digital Repositories

⁵ Wilkinson, Mark D, Sansone, Susanna-Assunta, Grootveld Marjan, Nordling, Josefine, Dennis, Richard, & Hecker, David. (2022). FAIR Assessment Tools: Towards an "Apples to Apples" Comparisons. Zenodo. <https://doi.org/10.5281/zenodo.7463421>

⁶ European Commission, Directorate-General for Research and Innovation, European Research Data Landscape : final report, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2777/3648>



in Europe could provide the opportunity for the community to discuss issues and solutions together in a bottom-up manner, where community-consensus would be the authority to set standards and governance⁷. The FAIR community might benefit more from this style of approach, where the focus remains bottom-up to identify where solutions can be found together and where there would be a need for a defined body to step in. This way, the scope and focus of the governance body would also be more feasible, and the community would be able to trust what it is intending to do.

We surmise that a governance model for FAIRness assessment should be open, distributed, and community-based. A bottom-up, community-driven approach, would suggest the need for multiple scientific domains' involvement and to be represented in the governance body, primarily because of the multitudinous approaches to scientific methods, data use and reuse, and how other digital research objects are utilised in the day-to-day work of researchers. The research landscape is so large and variable it is unlikely that a single governance body could serve the needs, in their entirety, let alone fully comprehend the diversity of requirements. Therefore, we suggest that the governance of FAIRness should be managed 'closer to the coalface', be that, in Europe in an ERIC, a community of practice such as a trusted digital repository network, a domain-specific foundation e.g. Europeana⁸, or cross-ERIC research communities eg ELIXIR⁹, or ENVRI¹⁰. Not only do some of these infrastructures already have management and governance policies in place but they are trusted by their designated communities out of which they grew. We do not envisage a single "FAIR community"; FAIRness is a means, not a goal that binds us all.

We believe that FAIR governance should be distributed, to ensure trustworthiness and connectivity with research communities. As we suggested earlier, a top-down set of guidelines and examples, together with awareness raising and advocacy, would facilitate synchronicity in governance across communities establishing and integrating FAIR Principles. A reference model of governance guidelines for FAIR principles, metrics, maturity and FAIR assessment could be the starting point to move the current situation from an *ad hoc* phase of FAIR implementation to a defined phase, rather than to a 'managed' or 'optimised' phase in a single leap, as suggested in the whitepaper. Such a reference model would include a glossary to ensure all involved in FAIR governance are communicating with common agreement on terminology, an issue we identified with the whitepaper. The reference model then can be implemented by research domains and communities of practice stakeholders to

⁷ Philipp Konzett, Ingrid Dillo, Françoise Genova, Natalie Harrower, Vasso Kalaitzi, Mari Kleemola, Amela Kurta, Pedro Principe, Olivier Rouchon, Hannes Thiemann, & Maaïke Verburg. (2022). Towards a European network of FAIR-enabling Trustworthy Digital Repositories (TDRs) - A Working Paper (v2.0). Zenodo. <https://doi.org/10.5281/zenodo.7034315>

⁸ <https://www.europeana.eu/en> digital cultural heritage infrastructure

⁹ <https://elixir-europe.org>. "ELIXIR unites Europe's leading life science organisations in managing and safeguarding the increasing volume of data being generated by publicly funded research."

¹⁰ <https://envri.eu>. "ENVRI is a community of environmental Research infrastructures working together to observe the Earth as one system."

build the governance structure suitable for their community's maturity, ethos and requirements, by utilising elements of the model they need and extending where required.

Reference models exist in many fields, but perhaps the most appropriate example here is OAIS - The Reference Model for an Open Archival Information System^{11,12}. Although there is no rule that insists that research data repositories must follow this model, many do because it has clearly defined terminology and processes, but it can be both selected from and extended, thus allowing the repository to conform to the standard but also meet their designated community's specific needs.

This reference model for FAIR Principles, metrics & FAIR assessment will itself require a form of governance, which is then lightweight enough for a high-level body of experts, such as that proposed in the whitepaper to manage. However, FAIRness is of global interest, amongst many stakeholders, and is not just an EOSC or even an European centric topic, thus the reference model should also be of global importance, and therefore should be under the auspices of a global community of concern such as the [Research Data Alliance](#), providing valuable international buy-in, knowledge and experience.

Usually when there is a real need for something, many solutions will emerge, but in the end one will survive. The simplicity and relevance of the solution are always important elements. In the end the real challenge is to get agreement on a common set of characteristics.

¹¹ <http://www.oais.info>

¹² We note that the OAIS reference model is an ISO standard. However, it has taken many years to achieve this status and was widely adopted prior to becoming a standard.