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Dear Andrea

I am writing this letter on behalf of the NanoCommons research infrastructure (starting community tasked with scoping out the needs and development of initial approached for nanosafety data management solutions) project funded by the H2020 framework to express our interest in collaborating with the proposed NFDI InnoMatSafety project. NanoCommons¹ is driven by the European nanosafety, nanomedicine and emerging materials research and regulatory communities need for an e-infrastructure providing a standardised, reproducible and interoperable way to access all available data, knowledge and analysis and modelling tools that have been adapted and verified as suitable for application to nanomaterials. One-stop solutions provided include the Knowledge Base² storing data and linking existing sources, nanoinformatics services listing and documentation³ and integration, and provision of training materials for each model, tool and service in the form of a user guidance handbook⁴ and a series of webinars⁵. The intention of all of these activities is to bring together information and best practices from all EU-funded and multiple international nanosafety projects together, and to ensure a harmonised onward development of global nanosafety data resources. However, NanoCommons will end on 30th June 2022 and as such, in the absence of further EU funding, via Horizon Europe infrastructures destination, will not be able to provide long-term sustainable solutions. Additionally, while significant progress has been made by the project, it has really only scratched the surface of what is needed in terms of nanosafety data management and FAIRification, and thus there is enormous synergy with NFDI, which is a highly welcome initiative. Indeed, as we continue to seek EU-funding, reciprocal letters of support from NFDI will be sought to demonstrate that both EU and member-state investment is needed in this important topic, which will have enormous implications across a vast range of materials sectors and applications.

The NFDI consortium InnoMatSafety and NanoCommons share the same goal of creating a central and universal FAIR data infrastructure for Germany and on the European level, respectively. The integration of all existent repositories / databases into a trusted and sustainable federation instead of creating a new resource that replicates all the existing data is at the heart of both projects. Therefore, both

¹ <https://www.nanocommons.eu/>

² https://ssl.biomax.de/nanocommons/cgi/login_bioxm_portal.cgi

³ <https://infrastructure.nanocommons.eu/>

⁴ <https://nanocommons.github.io/user-handbook/>

⁵ <https://www.youtube.com/channel/UCuawpRvXNpglwyltefTctw>

projects will benefit enormously from open sharing of their concepts, approaches and application programming interfaces, as well as working jointly to further develop solutions for such an integration. This includes sharing of technical specifications like application programming interfaces and potential adaptations to provide data to InnoMatSafety but even more importantly involves collaborative research and contributions from NanoCommons experts to InnoMatSafety and vice versa via working groups on semantic annotation of data and training activities to increase the amount of open and FAIR data. Finally, the collaboration will foster harmonisation and alignment of InnoMatSafety with activities on a Pan-European level, strengthening the nanosafety area both in Germany and Europe further establishing it as a strong and experienced partner for other NFDI consortia as well as internationally (*e.g.*, European Open Science Cloud, EU Open Data Portal and EU observatory for nanomaterials).

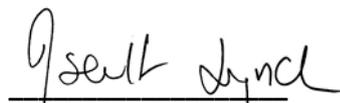
Specific areas of possible collaboration and knowledge exchange have already been identified, including:

- (Meta)data schemas and file templates to report nanosafety data
- FAIRification of datasets
- Ontology development based on eNanoMapper ontology to cover all nanosafety related information
- Data upload and data resource integration workflows
- Data exchange formats and application programming interfaces to access different data resources
- (Meta)data stewardship and shepherding
- Training on all the above.

Joining forces is the only chance to master the immense task of making existing data and newly generated data available to the community in real-time and in a sustainable way to reach the full innovative potential available from the use and re-use of information and knowledge extractable from it. Indeed, NanoCommons has already shared all of its relevant deliverables (including those not yet public pending final approval by the Commission) have already been shared with InnoMatSafety to help them describe the current state of the science and determine where critical gaps remain. InnoMatSafety could serve as an important mediator not only for Germany but for the entire European and international community. If successful, we would therefore be pleased to join forces and are fully committed to becoming strong collaboration partners and to acting as scientific advisors to the project bringing in the European and international perspectives.

Should you require any additional information please do not hesitate to contact me, at i.lynch@bham.ac.uk.

Yours sincerely,



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