

Proposals for NORMAN Joint Programme of Activities 2025

Title	NORMAN Database System 2.0
Type of activity	Database update
Leader	EI
Topic / activities	<p>Background / Justification for the proposed activity:</p> <p>Since the start of the NORMAN project in 2005 and then network in 2009, the NORMAN Database System (NDS) is at the core of the NORMAN activities, providing data and tools to fulfil its goals and visions (cf. also JPA 2025 proposal NORMAN Database System). In many aspects it supports the vision of the EU Common Data Platform where reliable data of transparent origin are used at the risk assessment of chemical substances in the environment. Also, it copes with the concept of One Substance One Assessment envisioned by the EU Chemicals Strategy.</p> <p>During its development, the NDS used various hardware and software platforms and tools. Many of them become obsolete and the volume of data slowed down the search capabilities. In order to be flexible and reflect ever-changing demands of the NORMAN network members, many of the developed modules/tools were made <i>ad hoc</i>, without using proper standardised framework. This proposal is to update the database system up the level of latest developments in the field of database management and in the standardised framework.</p> <p>The data would be in the virtual server provider with daily backups using operating system UBUNTU Linux 24.04 Long-Term-Support. The source code would be published on GitHub, and thus all members of the network could contribute to its further development.</p> <p>The database would include the installation of Docker Service, PostgreSQL Database, connection to GITHUB, PHP/LARAVEL framework, and SSL certificate for secure browsing (https) and periodic management and server health-checks.</p> <p>Compared to current server solution it would include faster disks, high-performing database, GITHUB support, and monthly management which offers tailored adaptability to new requests and using Docker Service, with which the entire database can be moved to different server within minutes (for more details see https://kubernetes.io/).</p> <p>Description of the proposed activity and expected outcomes for 2025 (and beyond):</p> <p>The task for update of the NDS and its continuous upgrade in 2025 include:</p> <ul style="list-style-type: none"> • Speedup the search process and improve user interface; • Integrate API for external users; • Consolidate data and data links between SusDat and other databases; • Running on new servers; • Changed from SSD drives to NVME drives - 10x speedup in data extraction; • Running dedicated database solution; • Migration from current MariaDB to new PostgreSQL - the ability for data partitioning to search group - 100-1000x speedup; • Server resources not shared with database; • Changed back-end architecture; • Moving from pure PHP to Laravel framework - standardized code writing; • Publication of the source code on GitHub; • Laravel back-end comes with professional API capabilities; • Queued exports: User will get an email, that export of data is ready to be downloaded; • User access and activity log auditing; • Each user will have his/her own dashboard and activity log; • Differentiation of individual admin/user roles for data maintenance, e.g., only users associated with specific project will have access to unpublished data. <p>Added value / Link with other NORMAN activities and / or other projects</p> <p>The proposed tasks will benefit all WGs and CWGAs in the NORMAN network.</p>
Participants	EI, all interested members
Proposed in-kind contribution	EI – overall coordination
Contribution needed from NORMAN	<p>High-performing server with management (12 months):</p> <ul style="list-style-type: none"> - EI: 4,800 € <p>Transfer of the NDS to the new platform (all modules):</p> <ul style="list-style-type: none"> - EI: 8,200 €



Association ¹	
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¹ Please, provide here a transparent justification of the requested resources and of the in-kind contribution, thereby distinguishing between the costs associated with “person-months” for the organisation, the “travelling costs” for invited speakers and the costs for the logistics (e.g. meals, room rental etc.)