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Goal

The goal of WP9 is to make all data expertise available to every researcher in a university medical center, irrespective of whether that expertise is available in their own hospital, any other academic hospital, or outside of the network of academic hospitals. This should be accomplished without unnecessary duplications, and with educational facilities that can be used to spread expertise.

In points:

- Facilitating contacts between researchers and experts at all aspects of data processing;
- Avoiding undesired duplication of work in building expertise and knowledge;
- Extending available knowledge through training and education;
- Promoting the reuse of developed techniques, tools and trainings.

How:

- Leverage existing expertise networks and initiatives within the UMCs;
- Establishing a “no wrong door policy” for data experts;
- Connect to the DTL Data and Technologies programmes, which can bring data desks into contact with each other and can keep in contact with expertise available outside the UMCs (Dutch Universities, SURF, other sectors of the life sciences, and ELIXIR internationally);
- Connect to the DTL Training programme whenever experience or expertise must be shared in the network. This also enables national and international reuse of materials.

Current status and plans for 2017-2018

In the past period, we have made a round along 7 of the 8 UMCs to make an inventory of the existing activities and plans for a unified data service desk in the specific UMC. We will soon complete this first round. In some UMCs a follow-up meeting with a wider range of service providers will be organised. Six of the UMCs have appointed a responsible person for the process; these six representatives have been added to a mailing list where experience can be exchanged. Fall 2017 we will organize a first meeting with all representatives to get to know each other, and to make first plans on joint priority actions. In the meantime, ELIXIR-NL has submitted a grant proposal for the the NWO roadmap for large scale research infrastructures (“Grootschalige Infrastructuren”). The network of data desks are an important aspect in this proposal. If it will be funded (decision due in 2018), this will provide a major boost in the capacity and cohesiveness of the network of data stewardship expertise desks.

Interesting topics that have already been identified for meetings of the help desk organisers:

- Cost Recovery (business models) for the help desks;
- Web sites and ticket systems to make the help desks accessible;
- Possible adoption of the ELIXIR Data Stewardship Wizard;
- Current hot topics in the questions researchers raise at the expert desks.
- What do the researchers need from a help desk? Can we make an inventory?
- How would referral from one helpdesk to another UMC work in practice?

Background

Situation in the hospitals

A lot of expertise on different aspects of research data acquisition, processing and integration is available in the research groups in the academic medical centers. It is, however, difficult for any researcher to locate the right experts, as the information about the available expertise is scattered. All of the UMCs now have efforts to solve this problem, to make the expertise available where it is needed. The breadth of the efforts and the solutions chosen differ distinctively, and there is a risk that different UMCs will run into the same issues while implementing their expertise help desks.

DTL as nation-wide data & technology expertise platform

WP9 is coordinated by the Dutch Techcentre for Life Sciences ([DTL](#)).

Across the life sciences fields in the Netherlands, a broad group of technology and data experts assemble in DTL. Data stewardship and data integration are core to the DTL expertise fields, concentrated in the DTL Data programme. Here, DTL unites the efforts of the Netherlands Bioinformatics Centre with expertise built up in a great number of collaborative initiatives such as the Translational Research IT (TraIT) project of the Center for Translational Molecular Medicine (CTMM), data projects of [BBMRI-NL](#) and NGI centres, as well as in [SURF](#) (SURFsara and SURFnet) and the [Netherlands e-Science Centre](#). DTL involves scientists and engineers to cover data expertise in research and clinical/industrial practice, and is therefore perfectly suited to build up the expertise network required for Data4lifesciences. The broad representation of DTL outside the UMCs (e.g. in agricultural, nutritional and biodiversity related life sciences) can be used to benefit also from expertise that has been acquired in these other fields. DTL also represents life sciences in The Netherlands in international networks working on research data policies like [ELIXIR](#) and the [Research Data Alliance](#).

Expertise exchange across institutions

Even if all knowledge about data and technology expertise within each academic hospital becomes available through an in-house data desk, it is likely that external skills will often be needed: the UMCs have only partially overlapping areas of expertise, and the best expert for a project may be in one of the other academic centres.

Data4lifesciences WP9 aims to establish an active network of data expert teams across the university medical centres that are connected through an expert brokering and service desk that is well connected in DTL.

Through collaboration between the people involved in the data desks at the various hospitals, and through DTL across other organizations, e.g. university groups, research institutes, and the private sector, the available expertise can be shared effectively in support of research projects.

Much of the frequently required expertise and technology will be available at all (or at least multiple) locations, but for detailed specializations it is likely that one specific institution is best suited to provide the expertise.

If a specialization turns into frequently demanded expertise, dedicated training programs can be developed within the UMCs to extend the number of experts available at different locations. The experts in the network will be recruited as teachers.

True north

The long-term vision would consist of the following perfect situation (“dreams”):

- Researchers associated with any of the UMCs are made aware of professional approaches to comply with local (UMC) and international data stewardship guidelines.
- Each researcher has low-barrier local access to help desk services of national programmes.
- Each UMC offers data-related expertise via a local data desk that is well-connected to similar data desks of other UMCs and further into DTL. For frequently asked questions scientists will be supported by local experts, for specialist requests by the best available expert in the collective data expert network. This may also lead to new research collaborations.
- Experts in a wide variety of relevant life science technology fields will be teaching research scientists about new techniques that have become relevant for their work.
- Participating data scientists will be trained in new techniques on the job by offering them a coherent set of training programs, so that supply and demand for data expertise will continue to grow in balance.
- Offering expertise to others will be an acceptable (respected) career path in the hospitals; it is not required for personnel offering technical support to produce exclusively first-author or last-author papers.
- Re-usable tools can be identified, professionalized and deployed coherently and efficiently for multiple projects among the academic centres.
- In-house data stewardship approaches among the UMCs are all run in comparable fashion, in the scope of Data4lifesciences guidelines that are continuously tuned with international standards for (clinical) research data.
- Best practices in data management are identified and become easily available to potential users.
- Data sets can be saved and really reused in future research.

Opportunities and threats

Opportunities

- Avoiding unnecessary duplication of developments, pushing for re-use of existing solutions that have been developed nationally or internationally.
- Support of researchers by the right expert, even if the expert is in a different location or outside of the academic hospital research field.
- Cross links to technologies developed in other sectors of the life sciences and to international programmes, through the network of DTL
- Developing effective collaborations between experts and researchers with a need for their expertise between the academic hospitals and beyond.
- Exchange of operational experience between the data desks
- A training programme that systematically transfers and extends expertise in strong demand.
- Development of a career path for service-directed data scientists, ensuring the preservation of built-up expertise.

Threats

- Competition between the hospitals hindering exchange of expertise.
- Insufficient participation of the UMCs in the work programme.
- Self-declared experts unaware of the limitations of their expertise (“Oh, I can help you with that too”).
- Ignorance about the need for an expert (“we can do that ourselves”/“wow! that expert is too expensive, we will do it cheaper ourselves”).
- Unwillingness to involve an expert (“we need to be able to do that ourselves”/“We already have too many partners”).
- Expert groups with the capability, but not the capacity to serve others.
- Lack of a scientific career perspective for service-directed scientists because they are judged only on their personal scientific output.
- Dedicated personnel providing expertise to others losing connection with the latest developments.
- Insufficient user-focus to be truly supportive for researchers; inability to speak the same language as the researcher.

Organisation

The cohesiveness of the national network must be guaranteed; we will organize both group meetings as well as regular one-on-one meetings (just like in other projects where DTL is involved).

Financing and business case

The setup of easily accessible data management expertise is an essential investment. Without it, research projects often underestimate risks they are running in data management (this includes data loss, wrong results as well as mismanagement of privacy-sensitive information). To make the investment efficient, aligning data expertise between the UMCs will be crucial:

- It promotes efficient use of resources by avoidance of unnecessary duplication of expertise.
- It limits costs by learning from each other's experience.

To bootstrap this work package, NFU invests in the coordination of this work package. DTL delivers in-kind contributions in the form of meeting organisation and facilities. The academic centres will each contribute their local service desk coordination and time from their experts for participation in projects, and as teachers in training sessions.

A successfully operational WP9 will forge new collaborations between different groups, possibly across UMCs. These can be very short lived (a single consultation) or long lived (expert participation in a project). It is clear that long term involvement of external experts in any research project should be paid from the project budget. The financing of short consultations is not yet clear: many short-lived demands for expertise could potentially cause a significant workload for the data expert desks and the expert groups. This, and other issues regarding the funding model for data services, will be subject for future meetings of the data desk coordinators, as well as part of broader discussions on research infrastructure funding in the context of [Health-RI](#), the national overarching infrastructure for personalised medicine & health research.

Abbreviations

- [BBMRI-NL](#) Biobanking and BioMolecular Research Infrastructure Netherlands and to bring together BBMRI researchers focusing on integrative omics studies in Dutch Biobanks
- [CTMM](#) The Center for Translational Molecular Medicine
- [CTMM-TraIT](#) A Sustainable Infrastructure for Translational Biomedical Research
- [DTL](#) Dutch Techcentre for Life Sciences
- [ELIXIR](#) A distributed infrastructure for life-science information
- [FAIR](#) Findable, Accessible, Interoperable and re-useable
see also <http://datafairport.org/>
- [NFU](#) Nederlandse Federatie van Universitair Medische Centra
(Netherlands Federation of University Medical Centres)
- [SURF](#) ICT-samenwerkingsorganisatie van het onderwijs en onderzoek