

## DTL DATA PROGRAMME

DTL Data supports life scientists in their increasingly data intensive life science research. DTL Data focuses on solutions for the common data challenges:

- big data – dealing with the volume & variety of life science datasets
- data stewardship – from experimental design to data management beyond the project to retain relevant research data for future research
- data interoperability – functionally interlinking datasets across institutes, using international standard approaches

Experts from the **DTL community** exchange best practices on methodology, expertise, tools and infrastructures to address these data challenges.

### Collaboration

Modern life science research is data intensive life science research. All technical expertise needed to deal with these data is rarely available in the same lab where the biological expertise is housed. This makes data intensive research a prime candidate for interdisciplinary collaboration. DTL Data facilitates exchange among life scientists and bioinformaticians to boost data intensive life science research, and to prevent re-invention of wheels.

### Stewardship

One of the buzzwords in data intensive research is *data stewardship*. This is often explained as *the things a scientist must do after his data-intensive experiments to make sure the results can be reproduced by others*. The DTL Data programme proposes a different view: *data stewardship can and should benefit the scientist (and science) directly*. In the DTL view, data stewardship is the combination of all expertise needed to treat data well in a project:

- experimental design and data-design;
- re-use of existing data where possible;
- planning of the storage, networking and computing infrastructure;
- data acquisition and processing;
- data publishing in a format that allows functional interlinking of data-(sets) so that scientists can optimally compare data and make use of computers in their analysis (see: **FAIR Data**)

Even if expertise is very specific to a particular field, it is likely that other labs are dealing with similar issues. Where possible, DTL promotes the sharing of solutions between groups active in distinct life science fields and sectors (cancer biologists and plant biologists do not often meet, and the same holds for data engineers among different organisations). Also, we borrow solutions from and shared with other science fields such as high-energy physics, astronomy and social sciences, e.g. through our co-founding organisations SURF, the Netherlands eScience Center, and internationally through ELIXIR, EUDAT and RDA.