

Report DTL Partner Advisory Committee meeting

November 25, 14h00 – 17h00

Hosted by Wageningen UR, Gebouw 115 Stippeneng 2, Wageningen Campus

Partner representatives: An overview of all Partner representatives can be found in Annex 1.

Changes in attendees: dr. ir. B. (Bas) van Breukelen (UU), prof. dr. B. (Bart) M.J. Haex (MU), dr. C. (Cyrille) Krul (TNO), G.F. (Gabino) Sanchez Perez, PhD (DLO), O. (Olaf) Lodbrog, MBA (Elsevier), ir. H. (Harry) van Haaften, CMC (The Hyve)

Not attending: representatives from Leiden University, Radboud University, University of Twente, UMC Utrecht, AT Computing, Omnigen, DSM, IOS Press

Speakers: Richard Visser (WUR), Inge Schats (Data Computing), Bas Reichert (BaseClear), Ben Schaap, WUR/GODAN), Reinout Raijmakers (UU)

Representatives DTL team: Alain van Gool, Celia van Gelder, Ruben Kok, Jacintha van Beemen (report)

1. Opening by Ronald Stolk, chairman of the DTL PAC

a. Short introduction of new partners

Ronald Stolk opens the Partner Advisory Committee Meeting and welcomes all participants with a special 'thank you' to Wageningen UR for hosting this meeting. New DTL partners are introduced.

Ronald Stolk emphasizes almost all universities and medical centers are on board of DTL, as well as a growing number of private partners. One of DTLs strengths is the combination of public and private partners.

b. Welcome and introduction to Data, Technologies and Learning at Wageningen UR, host of this meeting (Richard Visser, Dean of Sciences WUR)

The presentation of Richard Visser explains the need for good data management, with a specific focus on his own research in the Plant Breeding department which is the only plant breeding group at university level in The Netherlands. The group consists of 200 employees from more than 35 nationalities, 50 PhD and 40-50 MSc students. Facilities are available in house as well as at commercial partners.

In the field of plant breeding, research is moving away from art and green fingers to more precision breeding which is much faster and more direct towards particular wishes of consumers and companies. This improves the success rate. New developments will have to be incorporated. Breeders will need to more and more talk with bioinformaticians and better understand bioinformatics tools, bioinformaticians will need to have a better understanding of biology. Breeders need to keep pace with faster developments of technology. Lastly, access to germplasm will become even more crucial - if a breeder does not have access to plant material, he/she cannot start the research.

Questions

Q: What is the link between WUR and DTL?

A: WUR uses all kinds of technologies and resources, that is where DTL can be of added value. Hotel functions are used quite a lot; good that there is an organisation like DTL that is able to combine forces and make it accessible for everyone who would like to use it. For many organisations it is unaffordable to have all facilities in house.

Q: If all data would be FAIR, would there still be an added value to use Watson Potato? (Wageningen UR started collaboration with IBM a year ago to develop a Watson Potato, a computer program containing all the scientific and practical information on potatoes.)

A: Watson is able to combine data better than we can, so the answer is probably 'yes'. It can access all data and databases, make links which we otherwise are not able to make.

Q: Does your group also do risk analysis?

A: There is a lot of debate on risks. Breeding has always been seen as quite safe. However, new technologies to incorporate things that we were not able to include before causes new risks, e.g. allergenic proteins. But there is a lot of experience which of course is used.

Q: Related to Watson Potato – are you only feeding the system with data or also with methodology (deep learning)? A: We try to educate the “infant watson potato” including methodology.

2. Report of the 4th meeting of the DTL Partner Advisory Committee (Annex 2)

There are no comments on the minutes of the previous PAC meeting.

3. What happens in the DTL network?

a. Follow-up workshop 3rd PAC meeting and step-up towards an Industry Platform in DTL (Inge Schats)

Inge Schats introduces herself. She has recently started as industry partner manager at DTL. She will get in touch with all private partners to make an inventory on the interests, benefits, wishes, needs and goals in order to make sure both the DTL partners and DTL itself most optimally benefit from each other. She has 25 years of experience in the information technology business and 3 years of experience in the open source research in LS. Her role within DTL is to engage the current DTL industry partners and expand the industry network.

In dialogue with the partners, DTL would like to continuously improve in the way it facilitates the (industry) partners. A roadmap for 2017 will be made for the industry platform. Expansion of the network will go outside the health domain and will include agri-food, microbiology, biodiversity, etc. It would be ideal to use partners' networks in order to expand the DTL network.

One of the ideas is to setup an industry platform on the DTL website where private partners are able to present services, products and have a portal to connect to other industry partners. Partner meetings will be used as one level of organising communication among partners. The DTL office location will most likely move to another location, more seats-to-meet-like, offering partners a place to meet other DTL partners in the future.

Questions

Q: Will this be a separate group or will there be a link with the academic partners?

A: The academic partners are more organised than the industry partners so there is a need on the industry part, however the connection between public and private partners is important and will get the attention needed. An idea is to setup a 'digital whiteboard' where people can put virtual sticky notes with messages like “I'm looking for...”, “I have ... to offer”, “I have this great idea” or “Can you help me with...”. **Put on wishlist: Action A20161125-1.**

Q: Should the agenda not also arrange public-private interaction? How can we find more common ground between academic/industry and give more win-win, which is needed for collaboration?

A: The reason to put a focus on industrial partners is that quite a number of relative small but high tech companies joined DTL. At this moment, half of the DTL partners is academic, and about the other half consists of these high tech companies. DTL develops a role in facilitating partners to meet, also bilaterally. With an initial focus on the industrial partners in Inge's activities, we try to enable quick wins, strengthen our network and enable partners to meet. Of course this can extend to public-private interaction.

Q: Would 'dating' among industrial and academic partners be an idea?

A: Maybe it indeed is a good idea to facilitate dating sessions between academic and private partners. One of the negatives is the 'speed' factor, which could make it hard to follow up. Inge Schats may be able to support the follow up proces. **Put on wishlist (Action 20161125-1).**

b. MyMicroZoo (Bas Reichert, BaseClear)

Bas Reichert presents the MyMicroZoo initiative, a BaseClear spin off. More and more health promoting products are getting into the market, like e.g. the iWatch, iPhone, etc with which people measure their own data. There is also an increasing interest in the relation between health and food, and the influence on microbionics on your health status. MyMicroZoo enables you to check the influence of your diet on your gut bacteria, monitors the effect a change in lifestyle has on your gut bacteria and join in the discussion with fellow researchers on a forum.

The aim of MyMicroZoo is to build a large community of users (50-100k) in order to compare data and offer these data to other parties like, academia, industry, researchers, to e.g. test out a new yoghurt or do research on a certain disease. The end goal will be biomarker and drug development based on a large database. The FAIR principles developed in DTL, and mechanisms like the Personal Health Train fit into this plan.

Questions

Q: Do the people that give features also give permission to use their data for other purposes? Do they know what happens to the data and what kind of projects will be done?

A: There are levels to which a customer agrees. The legal issues are nicely translated into simple questions one has to answer with yes/no. The use of their data will be explained.

Q: How does MyMicroZoo compare individuals with a group?

A: Metadata is gathered in order to get more use out of data. Questions like "what have you eaten", "do you sport", "do you have a diseases" etc. give more insight.

Q: How does this company differentiate from other companies doing the same thing?

A: Most competitors are in the US, there is only one in the UK which leaves much space for the European market. MyMicroZoo has more data in the system and made the system more user friendly.

c. GODAN (Global Open Data for Agriculture & Nutrition (Ben Schaap, WUR)

GODAN supports the proactive sharing of open data to make information about agriculture and nutrition available, accessible and usable to deal with the urgent challenge of ensuring world food security. It is a global initiative with a rapidly growing partner network from national governments, non-governmental, international and private sector organisations that have committed to a joint Statement of Purpose (in

short: “To advocate, support and enable global efforts to make agricultural and nutrition data available, accessible, usable for unrestricted use world wide.”) One of the most important goals is to provide enough and good food for the global community.

DTL supports the GODAN goals and has become a GODAN partner.. The initiative initially started during the G8 meeting in 2012 and was announced at the Open Government Partnership Conference in October 2013 following 2012 G8 discussions, advocating for more transparency in the agri and food sector making a difference in food security. The secretary exists from 2015 onwards, is located in Oxford and has a limited life span of 5 years.

Open data exists in many forms, GODAN covers all and doesn't discriminate between them. The agro and food sector is becoming more data driven. There are opportunities for transport and retail like efficiency, transparency and sustainability.

Questions

Q: In academia people are more in favour of open data than in industry. What is the benefit of sharing the data?

A: That is explained in our 'responsible data use' paper. More and more industry partners feel they have to give something back to the world. Furthermore, the speed of innovation is decreasing, and industry partners feel the need to open up a little more to work together with other partners. From a DTL perspective, getting into the FAIR way of working with data makes it possible to pinpoint what open data is available in the "eco system".

d. Bioscopy initiative: Following the building blocks of life at work inside living cells (Reinout Raijmakers, UU)

The work of Reinout Raijmakers covers the basics of life at the atomic level. There is a lot going on with respect to research infrastructures. Our national funding agency (NWO) is preparing a 'Roadmap large-scale Research Infrastructure' for the upcoming years. In October 2016, the Royal Netherlands Academy of Arts and Sciences (KNAW) published its vision on large-scale infrastructures in the next 10 years. 13 Research infrastructures have been adopted in this vision document, only two in life sciences. Both are very relevant to DTL: a) Health-RI (personalized medicine) and b) the Bioscopy initiative.

KNAW asked the Bioscopy initiative to describe their dream infrastructure: "What would you like to be possible in 15 years from now". This dream is to follow building blocks of life inside living cells. This will help answer questions such as 'how do different tumors arise?', 'how can we better cope with biotechnology methods?', or 'how do we develop crops in the future?'

It is already possible to determine the structure of individual molecules in cells and map and visualize cellular structures in very high resolutions in 3D, even including motion following the dynamics of cellular structures in living cells (movement) - but the resolution is poor. The Bioscopy initiative wants to unravel complex networks of molecules that interact with each other by combining technologies, involve all types of data and also involve the bioinformaticians in the design.

Questions

Q: Next to the involvement on the NWO Roadmap and link with Health-RI, are there any other links between your initiative and your DTL partnership?

A: We talk about developing technology and opening up methods to users. Technologies we will use will be developed with companies in The Netherlands or in Europe, but there could also be partners that would like to make use of the data we provide in the future. Many people involved in this initiative are already partners in DTL. We need to think at forehand what data we would like to find and make sure it is FAIR.

4. DTL exchange

a. Update, funding prospects and outlook 2017 (Ruben Kok)

DTL is now three years old and has grown to over 45 partners. It tries to build a growing network of partners, work towards cross-disciplinary life science research, and not limited to health and agro. DTL combines technologies and datasets and brings in all disciplines needed to do high quality measurements and to deal with the data challenges.

About 50% of all research seems to be not reproducible which makes it hard to re-use and/or use it as evidence. Therefore we need high quality experimental design, high quality measuring, and a better data stewardship. About 25% of this whole problem can be linked to bad data design and bad data stewardship. That was the reason to setup DTL.

How does DTL work? DTL was build as a cross disciplinary expertise network, the methodology used within different disciplines is quite similar. DTLs role is to create an overview, promote acces, build bridges between partners (not only public-public but also private-private and public-private). Focus lies on challenges that can only be tackled in collaboration, and to facilitate in building this collaboration and setting an agenda together with the DTL partners, in topics such as technology acces, a connected infrastructure, cross-disciplinary experiments, work on data integration & stewardship and standards to exchange data. DTL started by facilitating the hotel overview and associated ZonMw/NWO calls. Subsequently, new initiatives followed, such as the development of the FAIR data approach, the vision on establishing a linked data backbone for personalized medicine & health research in Health-RI.

FAIR

FAIR was launched early 2014 during a FAIRport Lorenz workshop, where the FAIR principles were designed. In March of this year the FAIR principles have been published in Nature Science Data and in September 2016 FAIR was even adopted by G20.

European Open Science Cloud

The European Open Science Cloud was announced as a model to exchange data very much based on these FAIR principles. The EC will launch a €2 billion programme across Europe to establish a data infrastructures based on this approach. The Netherlands is a frontrunner here..

GO FAIR

Under the label of GO (Global Open) FAIR, a task force was setup chaired by Karel Luyben, to kickstart the Open Science Cloud by 15 EU member states, with The Netherlands in the lead. The ambition is to develop a large programme that will focus on establishing the open science cloud with a number of member states together, not only in the life sciences. It will be possible for the DTL partners to get involved.

KNAW

The KNAW infrastructure agenda has been published October 31st.

Health-RI and the Bioscopy initiative are two very strong examples on dreams on infrastructures that fit nicely together and also perfectly fit DTL,

Health-RI

Health-RI brings together biobanks, data collections and experimental facilities in the biomedical and broader health research and related data science, and it has a strong focus on personal health-related data, making sure we can exchange on information contained within the data, even if the data may not leave 'their station' (Personal Health Train model). Health-RI is supported by DTL and other initiatives, and many DTL partners already have parts of the technology in house to make this work. Health-RI will take shape in the coming years.

NWO Roadmap

The NWO Roadmap Large Scale Research Infrastructures will be an opportunity for DTL partners. NWO will set out a call in two weeks from now with up to € 100M of funding. This will be repeated in two years time. This roadmap has existed for a couple of years but so far, the life science field has not been very successful. This time, partly with input from DTL, there is very strong presence of life science on the roadmap. About € 45M will be reserved for life sciences, €45M for beta sciences, and €10M for humanities and social sciences.

The Permanent Roadmap Committee chaired by Prof, Hans v Duijn has prepared this Roadmap, which started a year ago with a 'landscape analysis'. About 130 facilities across the science fields have been identified with an ambition as national research facilities, way too many to sustain. Many applications have been put in clusters, and each cluster only has one position on the roadmap. Several DTL-associated scientists are closely involved in organizing these clusters; e.g. Alain van Gool chairs the cross-omics cluster, Jaap Heringa is coordinator of the ELIXIR-NL cluster, and several members of the DTL Scientific Advisory Committee (SAC) are involved in other clusters. Ronald Stolk is closely involved in the BBMRI-NL cluster.

The Roadmap call opens December 13th 2016, it will be open for half a year. Clusters are competitive on the one hand, but also have a relationship between them. That is where DTL may play a role: to help arrange this connection and prevent the formation of 'silos'. Infrastructures must connect to make better use of each other's capacities (access) and data.

ELIXIR-NL

ELIXIR-NL is on the NWO Roadmap and will form a bridge between all clusters. The Roadmap Committee has asked all clusters to harmonise their data approach with ELIXIR.

Learning

Training is an important topic in DTL. Celia van Gelder coordinates these activities. She builds relationships and a programme of activities that focusses on many training aspects, following the themes treated within DTL. DTL's role is to create the overview, connect groups around similar topics where feasible, prevent duplication and make sure white spots are identified and filled, so that all important training topics in the field are covered. Partners are invited to make their training staff aware of these activities. **A20161125-2 (Partner representatives).**

Recently, an Interreg proposal has been formulated in cooperation with FlandersBio and LSH, focussing on data-related training, with involvement of several partners (e.g. TU/e, MU, LUMC).

Reach out to partners

It is a challenge for DTL to reach all people within the partner organisations. PAC meetings are organized only twice a year and may only reach the PAC members. Activities are always posted on the DTL site and in related DTL communication channels. Therefore the request to all DTL partner representatives is to make their colleagues aware of the DTL website and newsletter, and attend any meetings of their interest. **A20161125-3 (Partner representatives)**

DTL Board

Karin Maex resigned as member of the DTL board, because of her new role as rector magnificus at the University of Amsterdam. The Board has asked the deans of the betafaculties to propose a new candidate dean as Board member.

The Board currently has one representative of (large) industry (DSM). There are many small industry partners, and it therefore might be good to advise the Board to create an extra seat in the Board for a person of an SME industry partner to represent this group. The PAC members agree with this idea. Ruben Kok will forward this message to the board during the next Board meeting, which will be held on December 16th 2016. **A20161125-4 (Ruben Kok)**

b. Call to update hotel profiles for enabling technologies call early 2017 (Alain van Gool)

Update upcoming ZonMw/NWO hotel call

Currently about 100 expert groups have registered with DTL as technology hotel. DTL will try to map the facilities to the European infrastructures, the ESFRIs, (ELIXIR, EATRIS, BBMRI, NL-Bioimaging and others). One of the main goals is to have transparency on quality, although there is still a lot of discussion how to accomplish that. We aim for harmonisation of DTL technology facilities, particularly on FAIRifying their data. To facilitate this we need some oil. NWO/ZonMW provided funding for the last 3 calls, €3,5M in total for about 90 projects.

The next two calls will be combined into one call in 2017. There will be 1.9M available for about 60 projects that want to get access to the enabling technology hotels (ca. €30k per project). Alain presents the expected set-up of the call. Final details will follow shortly from NWO/ZonMW,.

The call intends to stimulate innovative technology approaches and covers different sectors. In the first three calls only projects that involved a private partner could apply for access to a facility. New for the upcoming call is that fully public projects now also may request access. Also new is the fact that private partners can also participate as a hotel.

Call details

- There will be one call, divided 50/50 between public-public and public-private partnerships.
 - Public-private projects: the application is always done by an academic scientist; the private partner can either be a co-applicant, or a technology hotel. Public-private projects require an in kind or in cash contribution of the industrial partner of at least 10% (30k project which means at least ca. 3k in kind or in cash).

- Public projects: For the public-public projects again a public partner should be the application, furthermore, the applicant needs to be young scientist, this to promote young people to build their network.
- Only facilities published on the DTL technology hotel website can participate in the call.
- Projects will have to provide a data management plan, but only after granting, to avoid that parties spend a lot of work on proposals that are not funded. A good DMP is conditional to really get the funding.
- The call is expected to open early 2017 and project plans need to be described in 4 pages: relatively lightweight. The call probably closes mid 2017, the selection outcome should be Autumn 2017.

DTL will invest time and efforts to make sure all current hotel profiles on the DTL website are updated. The website should facilitate match making, and indicate to which ESFRI hotels would link.

Questions

Q: Are there currently any hotels by private DTL partners?

A: DTL does have a short list of private service providers mentioned in the hotel list. However, so far the hotel programme was not accessible to them. Now that the private partners are able to get involved in this new NWO/ZonMW call, we will put more effort in those hotel pages. If any (private) partners would like to be added to the hotel list, please get in touch with Merlijn van Rijswijk.

merlijn.van.rijswijk@dtls.nl. **A20161125-5 (request to DTL partners)**

Q: How does the hotel concept work in terms of costs, how are costs arranged?

A: The grant money budget (max 30k in a dedicated project) is available to spend in the hotel only.

Q: It would be good to rent out facilities like an AirBNB, is that possible?

A: It is the final goal of the hotel setup to make facilities more easily accessible. It is not yet possible to do so in a direct booking fashion such as for real hotels, but there is no limitation to get in touch with hotels directly to make use of their services. DTL currently has no reservation and billing system in place. This can be added to the wishlist. **Put on wishlist (Action A20161125-1).**

5. Closure and drinks

Before closing the meeting, Ronald Stolk asks for any topic suggestions for the next PAC meeting in Spring 2017:

- Celia van Gelder proposes training as a topic.
- It is also proposed to cover the legal aspects of data sharing, including using open and FAIR data (could also be separate focus meeting).

Contact Ruben Kok (ruben.kok@dtls.nl) or Ronald Stolk (r.p.stolk@rug.nl) if you have more suggestions for topics or if you would like to be the host for one of the next PAC meetings. **A20161125-6 (request to DTL partners)**

Actions:

A20161125-1	<p>Add to wishlist:</p> <ul style="list-style-type: none"> • Setup a digital whiteboard to post partner requests in Industry Platform • Speed dating with industrial or academic partners • Explore the possibility to develop a broker-role for hotel services (incl. 'booking' through DTL hotel website) 	<ul style="list-style-type: none"> • DTL team; Inge Schats • DTL team; Inge Schats • DTL team; Merlijn van Rijswijk 	When feasible
A20161125-2	<p>Partner representatives are requested to make their training staff aware of the DTL training activities. Please consult Celia van Gelder celia.van.gelder@dtls.nl)</p>	Partner representatives & training staff	
A20161125-3	<p>Partner representatives are asked to make their employees aware of DTL activities in general, posted on the DTL website and newsletter</p>	Partner representatives	
A20161125-4	<p>Request to DTL Board to make available an extra Board seat for a representative from small industry partners</p>	Ruben Kok	DTL Board Meeting Dec 16
A20161125-5	<p>(Private) partners with an interest to register as a technology hotel listed on the DTL website, please get in touch with Merlijn van Rijswijk (merlijn.van.rijswijk@dtls.nl)</p>	(Private) DTL Partners	Preferably before upcoming ZonMW call (opening Q1/2 2017)
A20161125-6	<p>Partner representatives are asked to contact Ruben Kok (ruben.kok@dtls.nl) or Ronald Stolk (r.p.stolk@umcg.nl) with suggestions for topics for next PAC meetings.</p>	PAC members	