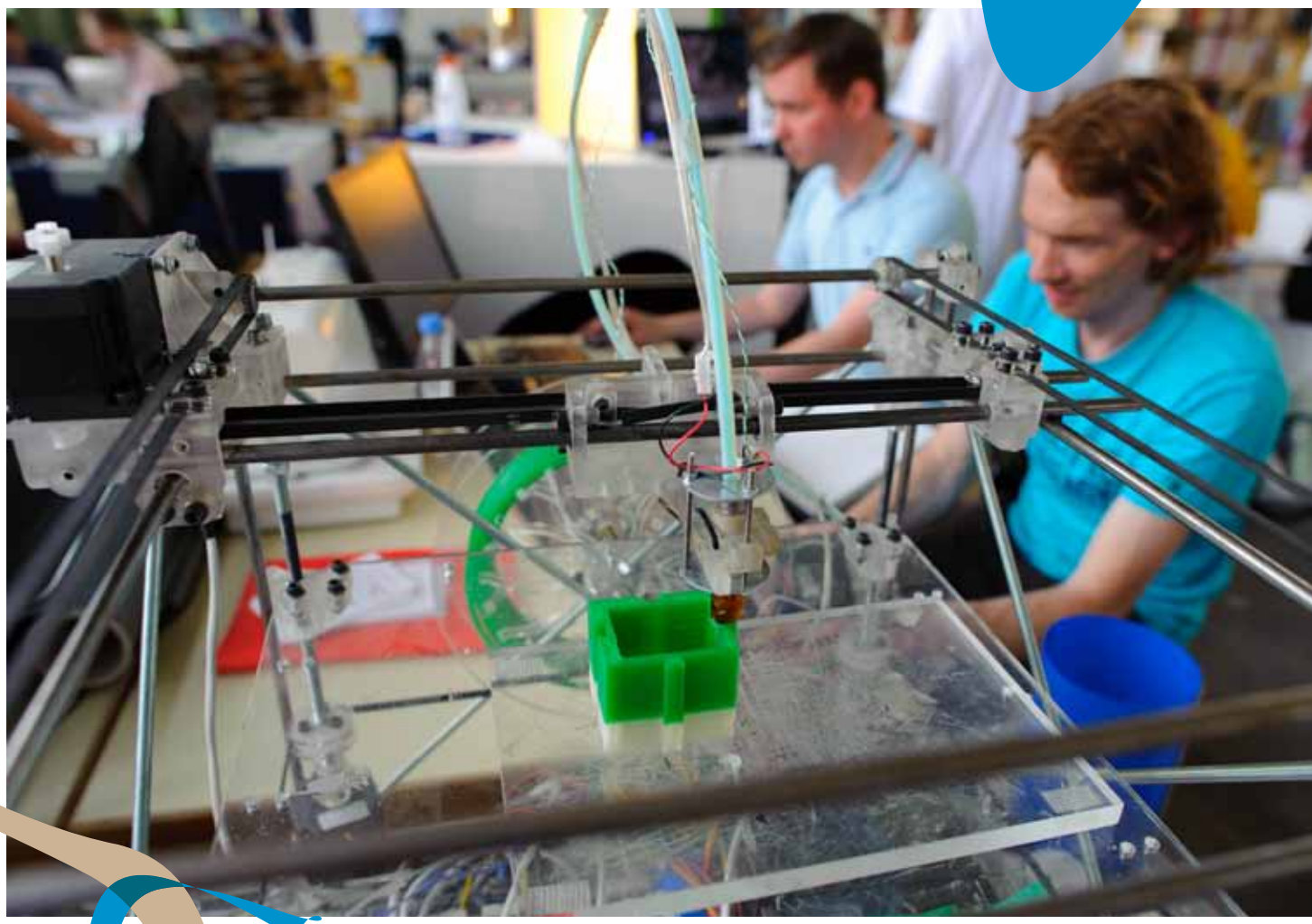
magazine
waag society

#20 - FALL 2010



Redesign the world @

♥ PICNIC

Waag Society has already proven itself with innovative healthcare projects such as The Storytable where stories are the starting point to connect senior citizens to each other, social connectedness for kids that are hospitalized for a longer period with their loved ones via Scottie in the GATE-project (Game research for training and entertainment), communication through the intuitive e-mail program Pilotus for the mentally disabled and their caretakers, serious gaming in Self City for young people with social-behavioral disturbances and X-Match for sexual and relational education of young people.

In all projects, the end user is centrally placed and the *users as designers* principle is guiding: via co-creation (with the users from the target-group) concepts and prototypes are developed, where the feedback of the end users is taken into account in the designing process. With the expertise that's built up in the area of design and usability we can make designs more oriented to 'our future self': the designers of today are themselves the end users of the future.

waag.org/storytable
waag.org/gate
waag.org/xmatch

Photo (right) showing The Storytable. Scottie can be seen on page 4.

creative care lab
waag society

Designing for our future self

BY SABINE WILDEVUUR AND DICK VAN DIJK

All activities of Waag Society in the field of care are combined in the Creative Care Lab. The Creative Care Lab strengthens the social services sector by structurally developing, mobilizing and anchoring knowledge about creative and innovative effort of modern media and IT, in the domain of care, with the end user as a starting point (from healthcare provider to healthcare user). This combination of knowledge and projects enables us to take a distinguishing position in the healthcare field and to act as a contact, partner and initiator. What will the world, in which we want to get old, or in which we possibly will have to deal with illness, look like?

PARTICIPATORY MEDICINE
The trends are clear: we're dealing with an increasing ageing of the world population, there is a shortage in healthcare personnel, the number of chronic illnesses is rising, there is a shift from intra- (between the walls of a hospital or other care institution) to extramural care (outside of those walls) as well as mounting pressure on people to monitor and manage their illness themselves. This trend fits the increasing social need for a greater transparency of information and more commitment concerning decisions that affect personal life. In this context, this is called 'participatory medicine'. Information goes back and forth more often and there is a growing interaction between healthcare provider and patient. This is caused by the role of the Internet but also by the way in which patients process information into an opinion. Innovation is necessary to secure the quality, accessibility and affordability of care, to keep it human and workable.

To anticipate the dynamics in care and its changing demand, there is great need for innovation in which IT solutions and new media play an important role. Care-oriented solutions of sensors, cameras, radio frequency identification (RFID), robotics, demotic (in house), e-health, social media and serious gaming can permit the public to shoulder a greater responsibility for their own care, and it can increase the independency and freedom of movement of vulnerable groups. In addition to this, healthcare providers will be better able to cope with the challenges in healthcare with the aid of these instruments.

In the years to come, there will be a new shift, in which healthcare users will be given a more active role, healthcare organizations will develop a stronger virtual service and the doctors will have a more coaching role. Obviously a similar (pro-) active role isn't a suitable solution for everybody, or for every need. In case of complex medical situations direct contact with a specialist will always be essential, but especially in the scope of prevention and the monitoring/managing of chronic illnesses, a shift to an ability to cope for oneself is a starting point for innovation. The more people are able to take and play a more active role concerning their health, the less pressure there will be on the funding of healthcare and the acute shortage in this field.

Another trend in healthcare in the Netherlands is that healthcare has become an increasingly individual affair. With diminution of social cohesion and solidarity, a more and more fragmented society has arisen, with the consequence that support from a circle of acquaintances that was matter-of-course, now often has become a case of professionals and institutions. This results in a deterioration of social relations. In this context, Waag Society focuses on the connection and the development of tools and methodologies that stimulate inspiring and encouraging social surroundings.

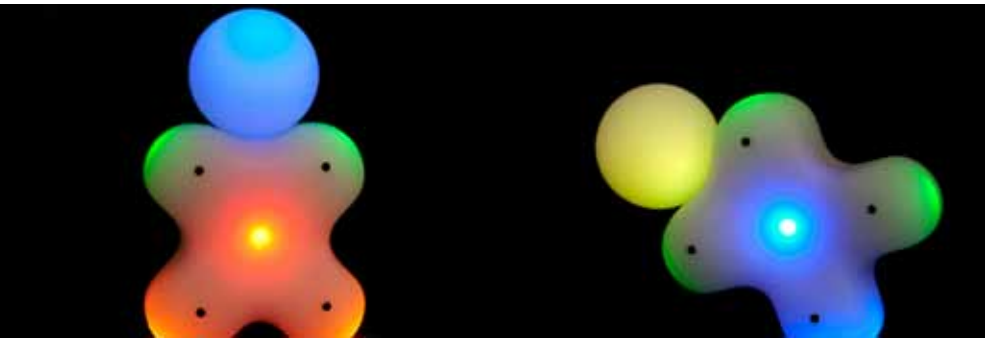
USER CENTERED RESEARCH
A lot of innovative services and products are developed from technology and are supply-oriented. Waag Society sees itself playing a role to develop technology that connects better with the needs of the end user. A lot of systems are developed for the elderly. Nevertheless, there is often no possibility to adapt the systems to the needs of the user, or to be adapted by the user. For instance: with the expensive screen-to-screen connection that is often offered, the patient can contact the nurse, but it isn't possible to add children and grandchildren to the system. How can we 'tweak' the technology in such a manner that the end user can take his/her own responsibility in this, if the wish is there? And in this way to see to it that an 'ecosystem' is developed with the help of the user and other stakeholders. In a well functioning system, as intended here, it's all about the reciprocity between makers and end users as well as an optimal harmonization of social themes, policy, actual (technological) developments.

Everything points to possibilities and challenges ahead to arrive at (social) innovations that resist the outlined problems in healthcare with the aid of Creative thinking. An approach driven by Creative thinking for innovation in healthcare means a shift in thinking, away from the point of view of the technology to the point of view of the people involved; the ones in need of care as well as those providing care. The strong user centered approach combined with the ability to develop creative solutions and if possible make use of existing technologies is essential in Creative thinking. In the light of the above-mentioned shift to an increased participation, prevention and self-management, different means and circumstances are necessary to begin with (as, for example, the provision of care from a distance), as is a change in behavior of those involved (not only the patients themselves, but also their network of informal volunteers and formal healthcare providers).
The creative sector can play an important role in these developments; the sector has achieved quite a lot in successfully linking new products and services to the needs of the end users, by designing interfaces in such a manner that the use of the services and products are intuitively and optimally user-friendly, as well as increasing the degree of acceptance of new services and products.

waag.org/healthcare

Over the years, Waag Society has built up a lot of experience in the area of: research (of needs), users as designers, as a method of development and research, development of concepts and prototypes with the aid of the FabLab and the Living Lab methodology. The Creative Care Lab of Waag Society distinguishes itself from other parties that operate in the field of IT and healthcare and is the connecting link between the creative industry, SME and research institutions.
The creative and innovative applications are explored and tested in practice, in collaboration with healthcare institutions, knowledge institutions, research institutes, client and patient supporting organizations and others. It is not only important that developments are made, but particularly how developments are made.

There is often no possibility to adapt the systems to the needs of the user, or to be adapted by the user



ZUIDZORG AND WSG

Development of services with senior citizens, their support and professionals in care and service. At the request of the healthcare institution Zuidzorg and WoonService Gemeente Geldrop-Mierlo (WSG), Waag Society and STBY have studied the needs amongst the potential users of residential services of WSG in the area of well-being.

In co-creation workshops, ideas and concept-directions for new services have been developed with the multidisciplinary team of WSG and professionals from, amongst others, the field of communication, care, technology and policy, together with senior citizens and their carers Co-creation is a way of working in which the intended users of a future service are closely involved in the development thereof.

waag.org/zuidzorg

BIO-GUIDE

Waag Society is developing the Bio-guide, in collaboration with the Dr. Leo Kannerhuis, center for autism. This biofeedback system serves to support employees with Autism Spectrum Disorder (ASD) during stressful situations at work. For people with ASD, finding and keeping a job is problematic.
The development of an application is desirable, departing from the idea that a timely observation of stress enables problem-solving as well as treatment and prevents possible drop-outs on the labor market.

waag.org/bioguide

EXPRESS TO CONNECT (E2C)

Express to Connect is a research project within the European research project Ambient Assisted Living, where possible solutions are sought to increase the social interaction amongst senior citizens, with the aid of technology. In this project, Waag Society cooperates closely with partners from Denmark, Sweden and Finland. One of the central thoughts behind the European collaboration of Express to Connect is that this service can only be valuable if it is designed together with the target group.
In the meantime, ethnographic research has been conducted amongst a group of 60 people between the ages of 35 and 87 from the Netherlands, Sweden, Denmark and Finland. Mid-April 2010, LEGO REALplay workshops were held in Halsted (Sweden), Copenhagen (Denmark), Amsterdam (the Netherlands) and Helsinki (Finland), where Lego is used as an aid to get to know more about social relations and social activities with senior citizens, but also about difficult subjects, such as loneliness and social isolation.
With the use of Lego during the workshop, participants are forced to speak 'the same language'.
All participants of the different countries have had the same tasks, the end task being to build a collective model of Lego that depicts the obstacles to 'escape' loneliness. The knowledge from the workshop and additional in depth-interviews will be used in the next months for the development of concepts and prototypes, that will lead to a new service.

waag.org/expresstoconnect

Designers & Artists 4 Genomics Award

BY LUCAS EVERS

wetlab
waag society

This year, PICNIC devotes a lot of attention to biotechnology as a area in which technological creativity will play a more and more important role. The contribution of Waag Society's 'Studiolab' program (in collaboration with the University of Leiden) consists of a Wetlab conducted by Richard Pell of the Centre for Post-Natural History, and a master class by bio-artist Daisy Alexandra Ginsberg.

Another part of the program is the Designers & Artists 4 Genomics Award (DA4GA) The DA4GA, to which an amount of € 25.000 is attached, is to be spent on the realization of a proposal that is submitted by a designer/artist and one of the fifteen Dutch Genomics Centers. The prize is meant to bring science, development of technology and creativity together and to stimulate designers and artists in the bio-arts. The fact that this is happening in the area of Genomics (research into the heredity and the genes of organisms) is something new in the Netherlands.

There are only a few designers and artists in the Netherlands that focus their practice on genomics, but the attention for it is growing. In 2009 a team of the TU Delft won the IGEM contest, which is organized each year by MIT with the realization of an e-coli bacteria culture that is capable of genetically passing a GFP (Green Fluorescent Protein) from cell to cell, as a sort of relay race. The Arts and Genomics Centre (TAGC) of the University of Leiden organizes 'wet' hands-on workshops about bio-arts and invites foreign bio-artists on a regular basis to come and work in the Gorlaeus Lab. Designer and scientist Koert van Mensvoort gives shape to the thought that man, in his instinct to cultivate nature, creates a second nature that can't be seen apart from the 'original' nature. 'Designing for Next Nature' is a course that Mensvoort teaches at the TU Eindhoven and it enjoys a growing interest.

Designer Joris Laarman made the 'Bone Chair' and the 'Half-Life lamp'. The aim of the Bone Chair is that it eventually will grow from in vitro bone tissue; the Half Life Lamp consists of bio-luminescent stem cells that won't survive outside of the isolated conditions of the lamp. You could say that specifically the latter two are examples of something you could call genomics design. Genomics design occupies itself with the outward manifestation this technology can assume in our daily environment and which meaning it can produce. Of course there are many more genomics developments that are not directly visible or cannot directly be experienced in our daily life; consider agriculture, food production, pharmaceutics and forensic tracing techniques, but for now these applications are fully developed by science and industry without the use of the potential of artists and designers.

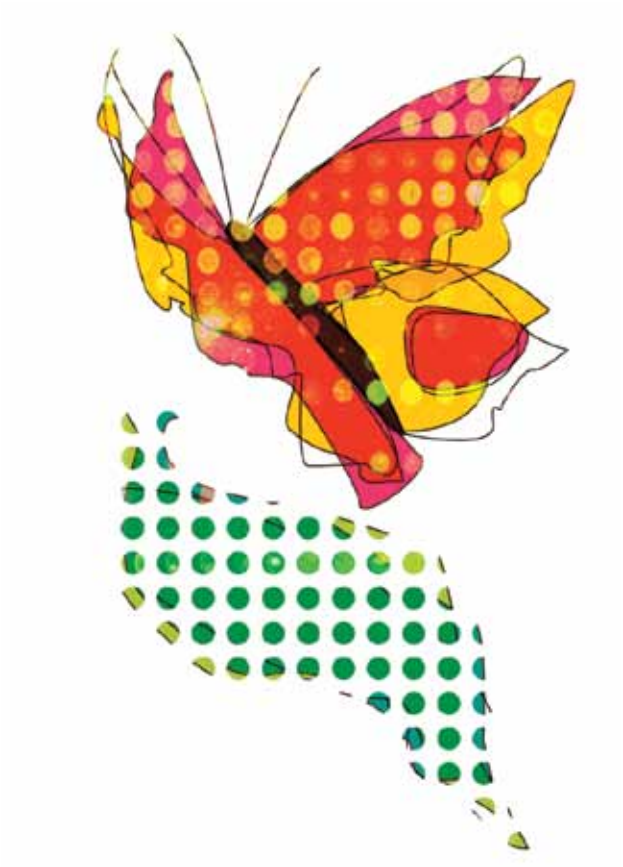
The Designers & Artists 4 Genomics Award has the ambition to unite the designing capacity of designers and artists with that of genomics. Everyone who hasn't graduated longer that five years ago at an art academy, design institute or technical university in the Netherlands, had the opportunity to submit a concise idea, of which twenty will be selected, who can present themselves to an audience of interested people and representatives of fifteen Dutch Genomics Centers during PICNIC. After the presentations, matches will be made with these Genomics Centers and the process, where it's all about, will start: the collaboration between designers/artists and Genomics Centers. In the first place to formulate a well thought-out project proposal that will be adjudicated by a set of five prominent experts of science, art and design, from which three winning proposals follow. Secondly to realize those proposals, again in a close collaboration between designer/artist and the Genomics Center: it's this collaboration between highly specialized research facilities, designers and artists that makes DA4GA unique, especially for the Netherlands. Internationally there are only a few other initiatives in which the development of technology, design and artists enter into such a bond, but the sense of this kind of collaboration wins more and more conviction and is being followed more and more.

Daisy Alexandra Ginsberg who, previous to the pitches of the twenty pre-selected DA4GA ideas, will talk in a master class about her practice of interaction of art-science and her E-Chromi project (bacteria that produce color), is part of an international group of artists, designers, technologists and scientists under the flag of the Synthetic Aesthetics program. This program is initiated by bio-information scientist Drew Endy of Stanfort University and emphatically asks the question which design challenges the synthetic biology has before itself, what artists and designers can learn from this challenge, but even more: what they can contribute to that challenge. Expressly, next to non-scientific participants, not only physicists, but also representatives of the humanities are involved.

The latter matches the intention of the Studiolab of Waag Society, The Arts & Genomics Centre and the Leiden Institute of Chemistry. Not exclusively debating about the sense, form and meaning of biotechnology, sessions are being organized, in which a broad palette of those involved is invited in a lab to take the technology under hand, to experience it, to produce it themselves, to subsequently experience that this changes the discussion; a discussion, by the way, which isn't only about rational considerations on deciding or not deciding about biotechnology, but also gives room to feelings and emotions.

Rich Pell, who is at the moment composing a collection of genetically modified organisms for the Smithsonian Institute proceeding from the thought that these organisms should also be included in the general taxonomy, is coming to PICNIC to give a public lab about this subject. Meanwhile, a considerable number of new live forms are being brought forth in laboratories all around the world and the preserved samples of those could form a considerable collection - each with their own preservation-requirements and techniques - that form a valuable addition to that of the Smithsonian or another arbitrary museological flora and fauna collection. Those who are interested, can help Pell with the preparation of GMO's for his museum and engage in a conversation with him and other experts on the subject.

Genomics design occupies itself with the outward manifestation this technology can assume in our daily environment



DESIGNERS & ARTISTS
4 GENOMICS AWARD

Subsequently, on PICNIC one can hear and see, amongst others, Robert Kirschbaum of DSM on biomaterials for sustainability; bio-architect Philip Beesley; journalist Denise Caruso about the need for trans-disciplinairy collaboration in the field of genomics; Esther Dyson on genetics and preventive health care; under reservation, Gabor Fogacs about printing living tissue and organs. Oliver Medvedik en Mitchel Joachim will teach a public lab in which visitors not only learn about synthetic biology, but also get to work with it: synthetic single-celled organisms, that communicate with each other by means of light, are made.

The three winning proposals of the Designers & Artists 4 Genomics Award will be realized and exhibited mid-March 2011 in science center Naturalis in Leiden.

The Studiolab recently received an honorable mention at Ars Electronica in the category 'The Next Idea' and an interactive installation, composed by nature-scientist Huub de Groot and artist Adam Zaretsky is exhibited there; the audience was given the opportunity to inject strange DNA into embryos and zebra fish.

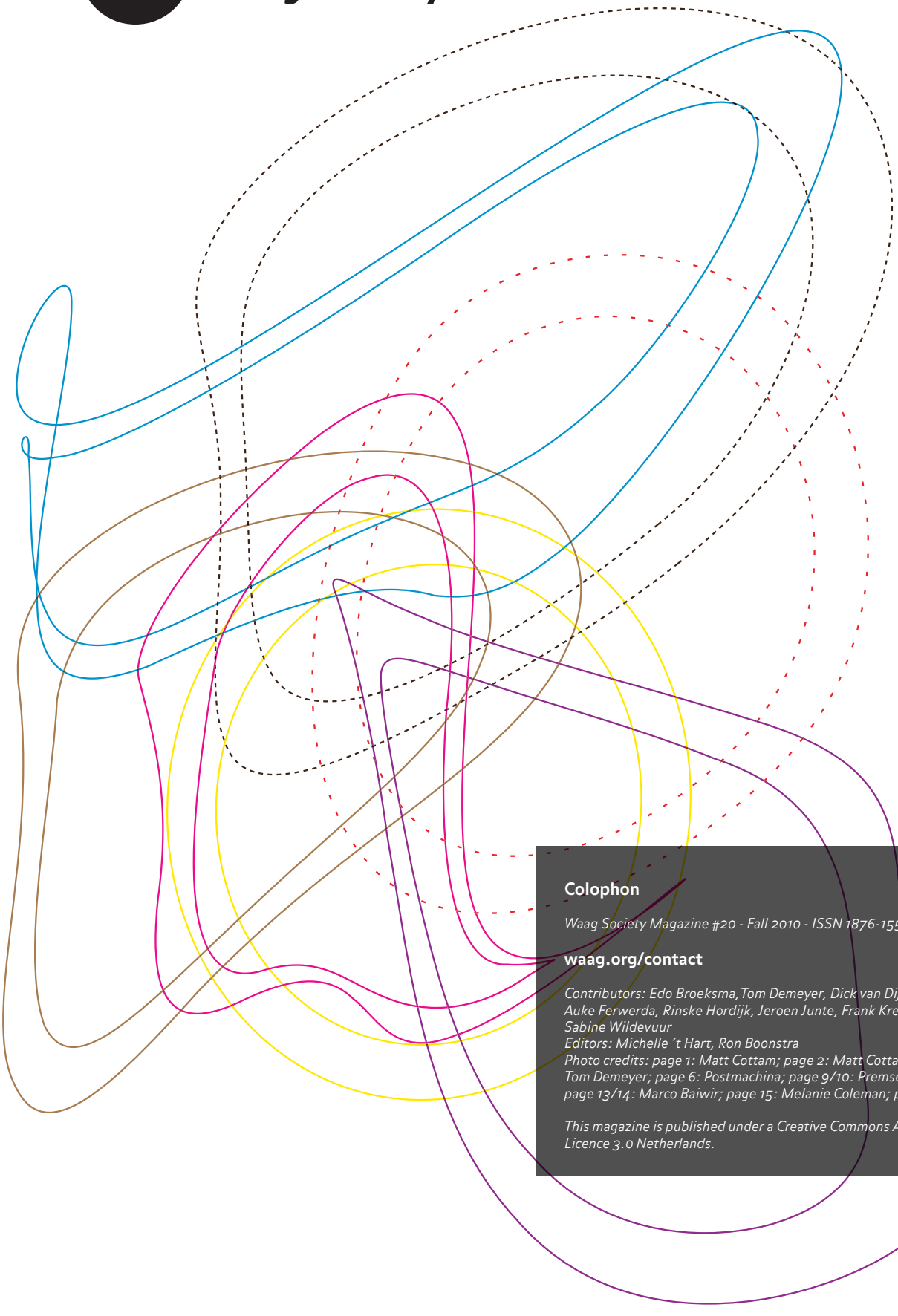
De Designers & Artists 4 Genomics Award is a collaboration of the Netherlands Genomics Initiative, the Center for Society and Genomics and Waag Society and is enabled financially by the Netherlands Genomics Initiative.

The Studiolab is a collaboration between the Art & Genomics Center, the Leiden Institute of Chemistry and Waag Society and is enabled financially by the Dutch ministry of Education, Culture and Science.

waag.org/genomicsaward

Imagine there is a digital printer everywhere, where you can download your design, print it and take it home with you.

open design lab
waag society



Colophon

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Open Design is not a clear-cut ideology, but it has different manifestations

BY JEROEN JUNTE

With angular movements, but extreme precision, the laser cutter moves over a piece of fabric in the Fablab in Amsterdam. Little by little, a sharp pattern forms itself in the fabric. In front of the machine, that resembles a large copying machine, a fashion designer is standing, hands on hips. She waits patiently, as the piece of fabric is transformed into a bathing suit in just a few minutes. In her own workshop it would have taken her days to cut the pattern out of the fabric, but in the Fablab she only has to enter her design into the computer, after which the laser finds its own way. A little further down the Fablab, a designer makes an elegant decoration in a wooden plank with the digital milling machine. The graphic decoration is designed on the computer, after which the milling machine applies it to the wood, all just by pressing one button.

Next to an array of computers, the Fablab has almost ten similarly advanced appliances at its disposal- from knitting machines to laser cutters. And in front of almost every machine, someone is waiting for his or her design to be ready.

"The Fablab is a high tech open workshop where everybody can produce his/her own design or somebody else's", Bas Van Abel of Waag Society, the initiator of the first Fablab in the Netherlands, explains. The use of the machines is free, the participants only have to bring the material. And each design can only be produced once. "The Fablab isn't a factory where designers can produce their products in large quantities." Meanwhile, the Netherlands already has five of these fabrication laboratories, while worldwide, there are already more than forty. All Fablabs are connected by an enormous database. "Everyone who makes something here has to record how his/her product is manufactured. This way we build up an enormous open source database about how you can easily make self-designed products." A wall of the Fablab in Amsterdam is filled with monitors, which show live footage of foreign Fablabs. Van Abel: "If we, for instance, don't know for sure if a material is suitable to be cut with a laser, we can easily check it with a Fablab in Barcelona or Boston."

3D-PRINTER

This innovative way of digital production, where knowledge is freely accessible, is called Open Design. "If someone in the Fablab has engraved a piece of soap with laser, it must be possible for everyone to read how this is done, so that not everything has to be reinvented over and over again. "The extent in which the design is really shared, depends on the designer. Van Abel: "With the peer-to-peer system, all knowledge is freely accessible. But a designer can choose to only share knowledge about the production process and not give permission to reproduce the design."

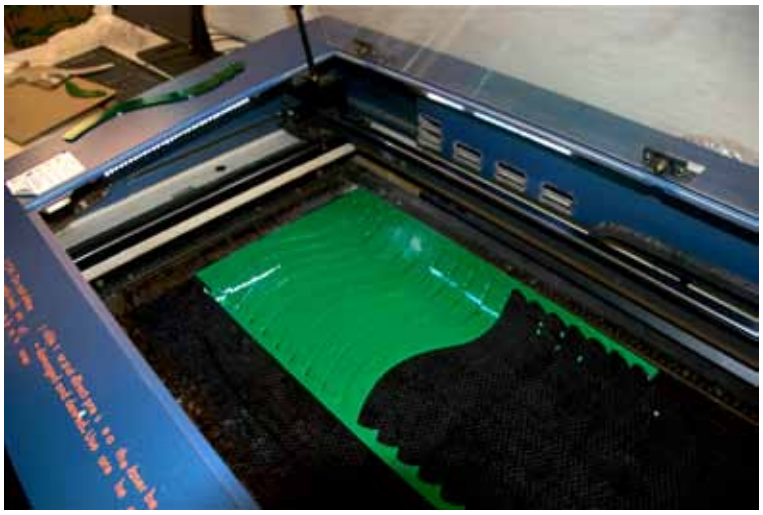
The rise of the Open Design is closely connected to the development of digital production techniques, such as computer-controlled milling machines or laser cutters.

The cost price of such machines has dropped to less than a thousand Euros. The most extreme example of this is the 3D-printer, an advanced machine that builds up products layer by layer by 'burning' synthetic fabrics to each other with a laser beam. This makes it possible to realize almost every design with one push on a button, on condition that the design is digitally filed. This way, the production of goods shifts from manufacturer to consumer. "Imagine there is a digital printer in every post office, or DIY stores like Gamma, where you can download your design, print it and take it home with you." One step further would be that consumers have their own printer at home. According to Van Abel, that's only a question of time. "Already there is a RepRap out there, a digital 3D-printer that can reproduce itself. It won't be long before everybody knows somebody with a 3D-printer to make their own 3D-printer with."

The advantages of this Open Design are evident. Van Abel: "In principle, everybody can make products themselves, without interference from the industry. A consumer, say, in Japan can manufacture a product from a designer in Norway using a technique that has been developed by someone in Brazil. Just think about the amount of energy saved in transport and distribution of raw material. With this, the process of innovation will be accelerated; creativity and knowledge will be shared. After all, two know more than one." Another asset of this personal fabrication is that products can be better adjusted to the individual wishes of the consumer. By way of illustration: someone with extremely big hands can very easily produce gloves in size XXXL, thanks to Open Design. "Nowadays,

FABLAB DESIGN PROCESS

Consider what you want to make. Create a digital design. Go to a Fablab.



Make your design on one of the digital machines.

Assemble your product and upload your design.

companies produce bulk to recover the investments made in moulds and machines".

INSTRUCTABLES RESTAURANT

The rise of Open Design is closely connected with the Internet, which has expanded the possibilities to express and share creativity tremendously. Millions of people build websites, edit pictures or post clips on YouTube. This do-it-yourself-culture is now crossing over to the physical world. Already on the website Instructables.com, more than a million people post their ideas, varying from culinary tips to the design of new products.

During PICNIC, the annual media and technology conference that takes place in the Westergasfabriek in Amsterdam, a restaurant is built that is entirely composed on the basis of ideas on Instructables.com. One of the supporting themes of PICNIC this year is Open Design. "Just as people freely swap recipes so that everybody can prepare a course, you can find all information on how to equip a restaurant yourself on websites like www.instructables.com" says Arne Hendriks, co-initiator of the Instructables Restaurant. "The Instructables Restaurant is really a metaphor for Open Design. Presently we find it's totally normal to download recipes. Why wouldn't it be self-evident to make a chair using a design from the Internet?" Of course Hendriks has put the manual for the Instructables Restaurant on the site too. "The beauty of it is that everyone can adapt the restaurant to their own wishes. A vegetarian in Berlin will make a slightly different restaurant than a meat-eater in Rio de Janeiro."

Meanwhile, next to peer-to-peer platforms such as Instrucables.com there are also websites that offer professional designers and amateurs the possibility to commercialize their ideas. On Ponoko.com designers can find a manufacturer for their products. On Etsy.com they can sell their self produced designs. Hendriks: "Open Design is not a clear-cut ideology, but it has different manifestations. As long as knowledge is shared, there will be a case of Open Design. The only difference per case will be what is shared and what is not."

GYM SHOES

If soon everybody is a designer, the professional product-designer should re-educate him/herself. "It won't come to that", predicts designer Frank Tjepkema. "Anyone can design a vase. It only needs a water reservoir and a hole to put the flowers in. But a gym shoe for example, takes years of research by Nike or Adidas.

After all, when everybody can copy a design for free, how will a designer make money?

Fablamp II by Joris

That's not something you design just like that in your attic room." According to Tjepkema, it's mainly that the production will shift to the consumer, not the designing. "The concept of the product with which consumers can get to work, will always be devised by a professional designer."
But developments go fast. This summer, the first Fablab House was built in Madrid. This flexible house is energy-neutral and can be reproduced in fifteen days. "No-one knows better than an architect how to build a house. But a thousand people know more than one architect." Although, Hendriks also wonders who will monitor the safety of the Fablab House when there is no longer one architect with final responsibility. "These are interesting questions to which there is no answer at this moment."

Of course it's a small group of pioneers that want to build a do-it-yourself house. Even the number of consumers that will make the effort to design products and produce them afterwards, will always be the minority. Tjepkema: "When the DIY stores shot up like mushrooms in the eighties, that didn't mean everyone started building their own house. Someone who isn't creative will not feel the need to spend a lot of time and effort to invest in a self-made product. In practice it will usually be about customizing, the adaptation of mass products to individual wishes of the consumer."
Still, there are various designers that flirt with Open Design. Last March, Joris Laarman presented a concept in New York where 5 different robots folded a chair within a few seconds. "The consumer him/herself can change the sizes. If you're somewhat smaller, you can make the seat smaller, for instance. Unfortunately, his furniture manufacturer Vitra isn't interested in developing this prototype until further notice."
So Laarman experiments with his own studio about the possibilities of digital manufacturing. A few years ago he invented the Bone Chair. This chair is designed and produced with the aid of advanced software from the automotive industry and could be produced digitally anywhere around the world. The problem, according to Laarman, is the monitoring on the production and the as yet limited choice of material.
"Maybe the manufacturers use inferior raw materials, or maybe they make a stack which they sell illegally, after you're gone." With the design platform Droog Design and Waag Society, Laarman is devising a way in which this production can be regulated. He has already decided to make advance use of this development: "I hope that in a few years time I will have a workshop in which I produce designs for others. Not ashtrays or doormats, but cool products that I wished I had thought of myself."

MYSPACE.COM

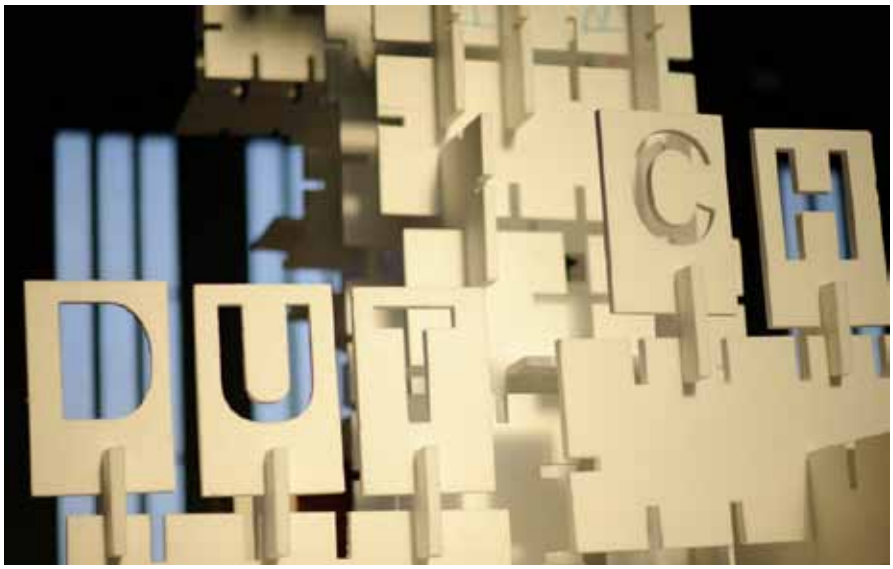
Even though, Laarman is also still sceptical about the blessings of Open Design. His main concern being 'how do I prevent my design from being copied illegally if I release it?'
By protecting it with Creative Commons, says Lucas Evers of Waag Society, that together with the think tank Nederland Kennisland and the Institute for Information law, makes a case for the promotion of this new system of license. "With Creative Commons a designer can indicate whether his/her design can be adapted unlimited, or reproduced,

provided that his/her name will be mentioned. But the designer can also indicate that the design can't be adapted or that reproduction for commercial purposes is forbidden. In total there are six of these kinds of restrictions." And that, according to Evers, is the difference with the existing copyright, where a design is always fully protected. "With Creative Commons a designer can decide the extent to which the design is released. If someone infringes on the limitations that are registered with Creative Commons, you can go to court for a production ban or damages, just as you can with the traditional copyright. In this respect, nothing changes." But, Evers warns, there is also a downside to Creative Commons. "Once a design has been released, there's no way back." Another dilemma with which Laarman – and many other designers with him – struggles is how Open Design can generate income. After all, when everybody can copy a design for free, how will a designer make money? "Open Design forces designers to choose a different business model", says Van Abel of the Fablab. "If a design is frequently downloaded and produced, the designer can make money by selling a limited or signed edition of that product. Open Design acts as a stage on which designers can make themselves known." Moreover, a manufacturer will often present itself, wanting to take a popular design in production. The designer will receive royalties – provided a design is protected by a Creative Commons license of course. As Van Abel is convinced there will always be a demand for traditional ways of production and distribution. "Open Design is no replacement, but an alternative. You can compare it to bands that offer a free song on Myspace.com to download, hoping that a consumer will pay for the rest of the album on iTunes."

Evers of Creative Commons feels that even companies can profit from Open Design. "A manufacturer of prams can put the sketch of the wheels or the spring system on the Internet. If that part breaks down, the consumer can simply download a sketch and print the wheel or the spring system. The manufacturer can simply have a once-only increase of the purchase price in place for this service and doesn't have to maintain an intensive system of distribution and sale of spare parts, which makes the company more efficient and more lucrative."

(UN)LIMITED DESIGN CONTEST

In the end the manufacturer, as well as the consumer and the designer will profit from Open Design. But, Van Abel also has to admit, it's not that far down the road yet. "The communication between the Fablabs isn't optimal either, because there is no universal code yet with which the knowledge can be documented. Just as for software, a new language has to be invented for digital fabrication." Besides that, most digital production machines are valuable and not easy to use. No wonder that only a select company of students, artists and other creative professionals have found their way to the Fablab.



MakerLab at DMY Berlin

To promote the use of Open Design, the (Un)limited Design Contest has been organized together with design platform Premsela and Creative Commons NL. "As everybody has to be able to participate, we have kept the procedure very simple," Van Abel says. "Make a digital design, print it and put it together. That's it." Participants can send in their own design or use an existing design from the database of Fablab as a starting point. Categories vary from Form, Food, Fashion and Fusion. Entirely in style, the best design will be awarded with a 3D-printer.

The only condition is that contributions are all actually made in the Fablab and can also be imitated or adapted. The (Un) limited Design Contest is the only design contest in which all participant can be sure that their design will actually be taken into production. Van Abel: "They can even offer their design for sale on Etsy.com. This is Open Design in optima forma!"

waag.org/opendesign
unlimiteddesigncontest.org
instructablesrestaurant.com

Open Design is no replacement, but an alternative

Dutch incubation: from local to global

Media Guild is a new media incubator based in Amsterdam, and is a spin-off of Waag Society. It came into being when Marleen Stikker (founder of Waag Society and co-founder of PICNIC), decided to do something with all the requests from ambitious, young entrepreneurs that had approached her organization for help over the years. As Waag Society is more of an internal 'breeding place' for talent (with the capacity to develop an idea, research and prototype it and implement it in-house) there was no such thing as a sandbox for external ideas.

BY EDO BROEKSMA & AUKE FERWERDA

Enter Media Guild, at the time of its launch (2006) one of the first incubators with a focus on new media within the Netherlands. Incubators, or organizations that aid startups from an early stage onwards, are still a relatively new phenomenon in the Dutch innovation landscape.
Unlike the United States, where business incubation has proven itself on numerous accounts over the past decades, it took until the late nineties until it picked up speed in Holland as well. Nevertheless, many of the incubators that were founded at the time of the Internet hype took a beating when the bubble burst, leaving many bankrupt in the crisis that followed.

Recently, the concept of incubation has picked up again. Most Dutch universities have at least one business incubator today, to experiment with 'valorization', the process of turning knowledge and research into money. More and more Dutch companies use 'incubators' to help their employees become more pro-active as internal entrepreneurs (unsurprisingly called 'intrapreneurs'), and to develop new products and services with various small competing project teams rather than large groups of staff. In addition, several 'independent' incubators and accelerators have been founded by 'serial' entrepreneurs and angel investors but also local governments and NGO's with an interest in innovation.

GROWING PAINS OF INNOVATION

The development of various innovation-driven support organizations marks a great step forward for the Dutch innovation ecosystem as a whole; it's great to see so many people working within the 'innovation industry'. Nevertheless the establishment of such organizations is usually more a point of departure than a finish line. As there is no real 'handbook for successful innovation' yet, almost every organization will have to start from scratch, and will have to develop their own instruments and methodology in order to become successful. One of the side effects of this approach is that many organizations tend to focus on their 'own' sector and region first, before looking to other regions (not to mention countries) and disciplines for inspiration and collaboration.

The result is a growing number of specialized organizations, all looking for talent in their respective discipline in the same crowded talent pool of students, young graduates and early stage starters. In effect, there is a lot of competition within our small country as the total number of standout talents is restricted. At least in part due to this scarcity, organizations seem to have become even more protective of their own success stories, which is not always a positive thing for the entrepreneurs involved. It leads to interesting questions about universities claiming a substantial share in patents of its students, companies having trouble dealing with spin-outs of their employees, and incubators struggling to strike a fair deal with their startups. In fact, different Dutch innovation organizations, big or small all suffer from quite similar 'growing pains', and can learn a lot from each other in dealing with them.

CONNECTING THE DOTS

When observing successful innovation globally, there is no doubt that collaboration is among the key factors. Whether you look at the success stories of Silicon Valley, or other up and coming innovation hubs (like Bangalore or Singapore), the explanation for their success lies in structural collaboration between the stakeholders, and the free flow of ideas and information. Only when talents from schools and universities are able to mix freely with ambitious employees of innovative companies and business angels are ready to jump in, one gets the explosive mix that provides enough thrust to put the innovation engine in top gear. The question is: how to connect the various dots on a regional, European and ultimately an international level?

For many advocates of an innovation dialogue, especially those that are part of larger organizations the shift from closed towards opener forms of innovation can be a major hurdle. To strive for open innovation within a company or even an industry that has been earning a major share of its income by being protective of its IP in the past, a radical change in strategy is often necessary; a change that is impossible to achieve overnight, but manageable if taken step by step. Seeing the right examples and meeting the right people however, can sometimes be instrumental in changing one's outlook and perspectives, and ultimately, in changing one's future.
The fact that Media Guild is a consistent factor at PICNIC is therefore no coincidence. Apart from the opportunity to take a peek in the kitchen of the Haute Cuisine of innovation, PICNIC is one of those events where we can showcase some of our national talents to the world, and find new connections and inspirations among other innovation professionals, that we would normally not run into.

mediaguild.com

Seeing the right examples and meeting the right people however, can sometimes be instrumental

A few Media Guild members: Hugo & Paul Braam (VirtuaGym), Renato Valdés Olmos (Postmachina), Joris Kluivers & Jeffrey v.d. Goot (My name is e)

MEDIA GUILD @ PICNIC

Through events at PICNIC and other international innovation events, Media Guild is now building a 'Dutch Valley', a knowledge and collaboration platform for innovation professionals. This year we co-host two all-day sessions about topics that concern us all: one about crowdfunding and one about the role of Intellectual Property.Some of our startups and our staff are present at the Marketplace, during morning sessions, throughout the festival.

picnicnetwork.org

MEDIA GUILD @ INCUBATOR EXCHANGE

"Working with experts in a different field is the quickest way to learn."
Based upon this premises Media Guild is, together with Dialogues House, one of the found-ing fathers of the Incubator Exchange. The Incubator Exchange, founded in 2008, is a non-profit foundation, aimed at connecting professionals, bringing serendipity and dialogues to the table. During several events per year the Incubator Exchange enables a wide variety of incubator managers, corporate venturing unit team members, venture capitalists focusing on innovation, true innovation specialists (experts and practitioners working on innovation and venture creation) and distinguished academic and research professionals to learn from renowned speakers and to share insights on their field of work. Currently, around hundred parties are aligned as a member. In 2009 Emerce became partner of the organization.

incubatorexchange.nl

MEDIA GUILD @ A2 CHALLENGE

In order to encourage innovation and entrepreneurship in 2009 Media Guild started, together with Philips and HTCE, the A2 Challenge: a challenge meant to invite people to share their innovative business ideas and to help them develop their ideas into a business plan. We welcome ideas in the fields of Consumer Lifestyle, Media & Communication, Healthcare and Clean Tech & Energy Participants, starting with an idea written in just 100 words, build and grow their idea into complete business plans and perfect pitches. All with critical and encouraging support by a team of experts from the A2 Challenge.

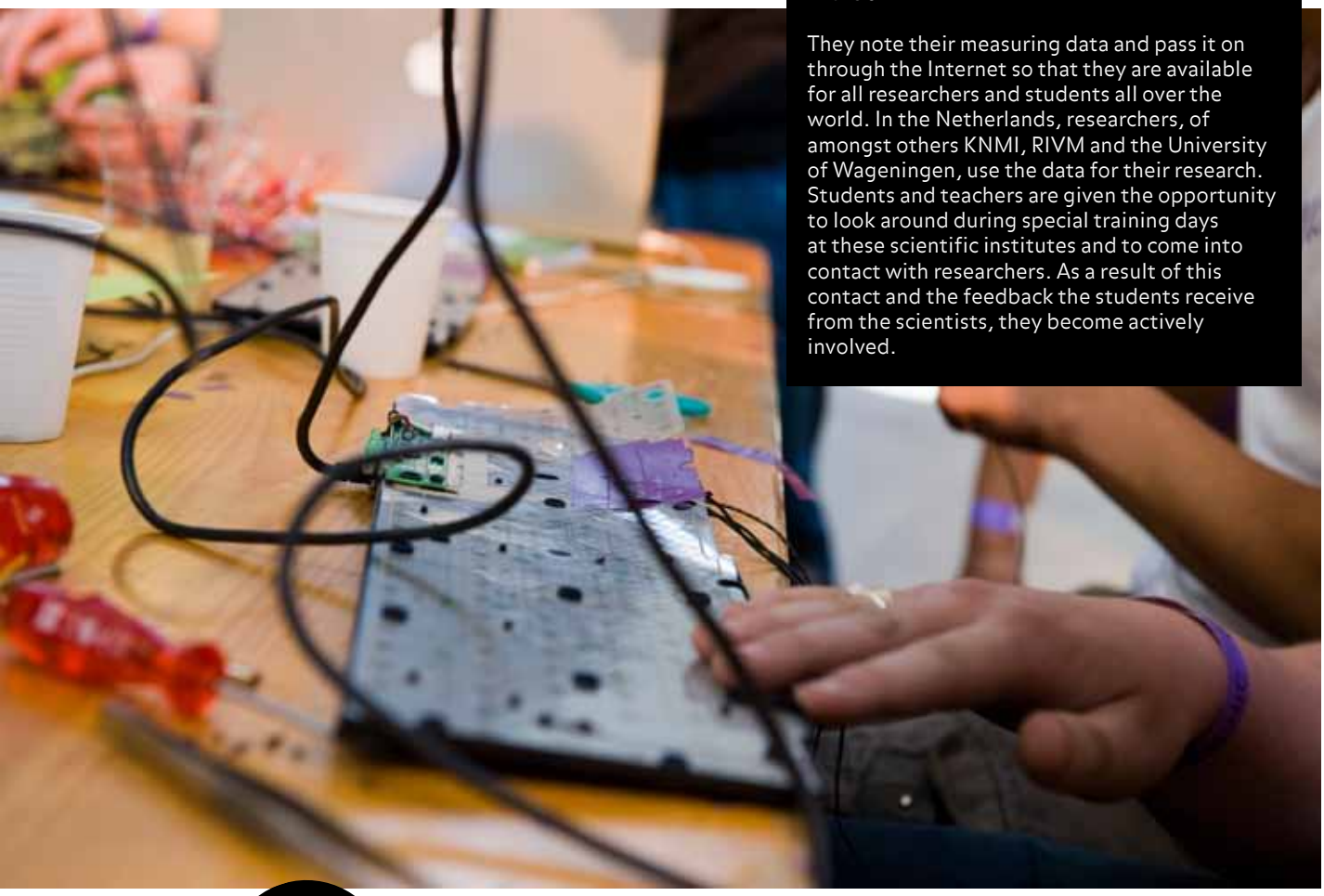
aachallenge.nl

SensorLab @ PICNIC

BY RINSKE HORDIJK AND CAROLINE POST

SensorLab is a collaboration between Creative Learning Lab and GLOBE Netherlands at PICNIC. GLOBE is the educational program for science and environment, started up by Al Gore. Students of more than 22,000 schools and in 111 countries collect data about the global environment in collaboration with scientists. Students, for instance, research the life in soil, the weather/climate or particles of dust and soot in the air.

They note their measuring data and pass it on through the Internet so that they are available for all researchers and students all over the world. In the Netherlands, researchers, of amongst others KNMI, RIVM and the University of Wageningen, use the data for their research. Students and teachers are given the opportunity to look around during special training days at these scientific institutes and to come into contact with researchers. As a result of this contact and the feedback the students receive from the scientists, they become actively involved.



PICNIC
What are you bringing?

creative learning lab
waag society

In our daily lives we chance upon sensors more and more, but not everyone is conscious of this fact. Consider, for instance, sensors on the Dutch public transport (OV) chip card, on books in the library, tags to get into buildings. In addition to the identification of objects and people, sensors can also be used to measure the quality of the air, the intensity of light, movements, temperature, sound or resistance. This offers an endless series of applicable possibilities.

Creative Learning Lab wants to raise awareness in education concerning the possibilities of sensor technology for various educational themes. Sensor technology allows insight into the effect of actions, so that these actions can be reflected upon.

Going out on the street with unique, self-built sensor-machines

Where beforehand the sensors and the data they generated was only available to scientists and technicians, sensors have become easier to use by the public. The use of sensors makes it possible to involve citizens with the measurement of environmental parameters, such as the quality of air, soil and water in the living environment. This 'Citizen Research' means more data will be available for science, but also for the citizen him/herself. As a result of this, he or she can more rapidly adapt his or her behavioral patterns for the benefit of his or her health, for instance. The Internet is a crucial linking between citizens, sensors and science. With the arrival of sensor input in mobile phones we are now at the cradle of many projects in the area of Citizen Research.

Citizen research offers the possibility to bring the theme of sustainability to the attention of young people through the school curriculum. To this end, Creative Learning Lab has equipped the SensorLab. In this context, the design of new applications to collect and visualize 'community based' sensor data via Citizen Research methods is central here. During such a SensorLab, students in secondary education work on smart tools and prototypes together with artists, designers and professionals from the e-technology sector, where sensors are deployed to measure certain aspects in the living environment of young people. Consider here sensors to measure the pollution of surface water in ditches or the quality of air along the street and in a park. The students make prototypes on the spot and learn to program the sensors in an easy manner, with the help of arduino's and phidgets. Together with the workshop leaders and the professionals, they devise which sensors can be used that can provide an indication about the quality of the air, soil or water in their living environment, and how they can carry out and visualize those measurements with so-called 'sensor machines'.

At this moment there are number of initiatives in this area already in progress: take for instance the mayor network Geluidsnet. Geluidsnet is a network of multiple measuring points around Schiphol. The online data of the measurements can be found on the Internet. With this, Geluidsnet is an important means in the dialogue concerning the nuisance of air traffic around Schiphol between the public, the government and business.

In June 2009, the French FING first tested their own developed Green Watch , a watch that registers the concentration of ozone as well as the level of sound in the environment every second and couples it to GPS coordinates. The goal of the project was to show the potential for the involvement of citizens in collecting climate data, to improve knowledge about urban surroundings, to bring about changes in behavior and establish new connections between local authorities, interest groups and people in the city. The Collaborative Rain, Hail and Snow Network (CoCoRaHS) in the USA is a non-profit network of volunteers of all ages and backgrounds that map rain, hail and snowfall in the country. The organization uses simple measuring instruments, an interactive website and emphasizes the importance of education. The goal is to collect data of the highest possible quality for agriculture, education and research.

The inspiration for these machines comes from, amongst others, Natalie Jeremijenko of the Environmental Health Clinic in New York, and Frits van der Wateren of Chess with his experience with the Atalanta project. Both are speakers of this year's edition of PICNIC. Atalanta is an autonomous mechanical butterfly, that is capable of saving itself, of finding its own energy and carry out commands independently without bumping into something. Natalie Jermeijenko has developed projects in which technology, environmental issues and campaigning with sensor technology are approached from an artistic point of view, in collaboration with local residents and young people in New York. She held workshops with groups of young people where existing robot dogs were built into 'pollution-sniffing eco-dogs'. These robot dogs smell damaging substances in the air, the concentration of ozone and other environment polluting substances. The idea behind this workshop was that students went out in an involved and playful manner, to measure the quality of their own living environment with the sensors attached to the robot dogs, but especially to engage with local residents concerning how different people experience the living quality. It was precisely the playful aspects of the activity, the 'patrolling' groups with robot dogs, which made people stop in the streets to see what was happening and start talking to each other. The measurements of the dogs are shared with communities and local residents through online visualizations.

This is exactly what the SensorLab @ PICNIC is all about: by going out on the street with unique, self-built sensor-machines, the young people don't just contribute to the measurements of local (pollution) data; they also alert people in a playful way to the quality of their living environment and stimulate the discussion about what you can contribute to it yourself.

creativelearninglab.org
geluidsnet.nl

Salt water sensor

Open Data

BY FRANK KRESIN AND TOM DEMEYER

Access to information is (in)valuable. Information, and knowledge, eventually builds on data. The public sector generates and owns many of the most valuable data sets, e.g. on mobility, infrastructure, sustainability, education and healthcare. Waag Society actively promotes Open Data and hosts a session on the topic at PICNIC '10.

Now that the Internet provides us with the means and the tools, access to public source information (PSI) is recognized to be a valuable stimulator of innovation. In Europe alone, the value of PSI is an estimated 27 billion Euros. Recognition of these facts has resulted in many 'open data' initiatives, both by governments and through private initiatives. The US governments' data.gov and the UK's data.gov.uk are the best-known examples but many other initiatives are to be found on the web.

Tim Berners-Lee's linked data initiative is seen by many as the 'Web 3.0'. Open data and linked data, while not the same, are powerful allies. Linked data provides the technical and semantic foundation, while open data provides the applications that, through their democratizing and communicative effect, engender the social push needed for rapid and wide takeoff. This process of 'data democratization' is on the way and many meaningful and innovative applications are envisioned and, in fact, have been developed.

An excellent example of linked data in action is the BBC's music site, which combines data from many different sources in a smooth front end, while also providing data in a machine-accessible format.
A good starting point for exploring examples of open data applications is the San Francisco Innovations showcase at while the Global Climate data concept demonstration is also worth a look.

The open data landscape in the Netherlands is fragmented. There are some initiatives, but they are isolated. The UK, the US, Finland, Spain and Sweden seem to be much further in terms of broad-scale public open-data policy. Forced through circumstance the Dutch government has announced open availability of traffic data and public transport data but the time path and details of accessibility remain uncertain. Nevertheless, there are encouraging signs; the Ministry of the Interior is actively seeking advice in the community; more and more government data comes with a CCØ license and on the local level awareness and interest is growing.

While this is happening, many issues still need reflection. Government initiatives are there and the value is recognized, both on the national and European levels. Policy on the local governments' levels often lags. Various forms of 'freedom of information acts' provide legal contexts in many countries but these do not necessarily translate well to the Internet age. Both local and national governments have a need for 'best practices' and need to consider issues around accountability, privacy and indeed, cost of the technical implementation.

bbc.co.uk/music
datasf.org/showcase
labs.geo.me/climate_data
wiki.creativecommons.org//CCo_FAQ

This is a visualization of the frequency of occurrence of the words 'sex' and 'scandal' in the New York Times, since 1981.