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Ageing

Editorial

Grandparents are not typically seen as especially tech-savvy. They won't be queuing up for the latest smart phone release. But as European seniors get older, technology will become a more important element in their daily lives.

By 2060, one in three Europeans will be over 65 years old. Two out of three pensioners will have at least two chronic conditions. These demographic changes have already started to challenge our welfare systems. As the number of seniors grows, there are fewer people to take care of them.

This issue's special report is about the future of ageing. How can technology improve healthcare services and make us work smarter to provide better care? During the spring and summer of 2014, the PACITA project engaged more than 300 European stakeholders with the aim of identifying opportunities as well as challenges related to care technology. Although European countries have responded to the demographic challenges in quite different ways, technology seems to be a common factor for policy makers planning care in the future.

Paro, the robot seal, is one example. While dogs and other pets have frequently been used in nursing homes to calm patients with dementia, Paro represents a radical shift – using robots to provide emotional care. It raises some ethical questions: is it okay to have patients with dementia cuddling and caring for a robot? Or should tasks involving emotional care being left to humans?

Would you leave your grandmother with a robot nurse?

Marianne Barland on behalf of The Editorial Team

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Climate control

Climate protection measures are showing little impact. Are we any nearer to direct technological intervention – climate engineering?

Decades of research needed for substantial progress

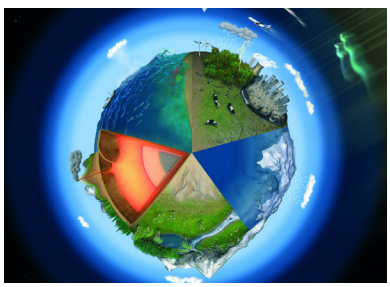


Photo: ESA/AOES Medialab

Policy makers and society faces major challenges for the development of climate engineering. But according to a recent report from the Office of Technology Assessment at the Bundestag, TAB (*Büro für Technikfolgen-Abschätzung beim Deutschen Bundestag*): "The level of technological and scientific knowledge on the effects and side effects of various climate engineering options is still very limited." The report, commissioned by the Committee for Education, Research and Technology Assessment, considers current technological research for the two main systematically different approaches (CDR - carbon dioxide removal and RM - radiation management), alongside existing strategies, the current regulatory framework, research policies and the need for public discourse. TAB suggests the (potentially highly controversial) status of climate engineering has been 'significantly enhanced' as it has been taken up by the Intergovernmental Panel on Climate Change (IPCC) which is likely to result in increased media attention. However, debate at a policymaking and societal level is taking place in 'only very few' countries at present. Ethical, legal and social criteria need to be considered and expanding fundamental knowledge is a critical requirement in this regard: "Improved information provision seems to be absolutely essential to enable the general public to take a constructive role in assessment and decision-making processes relating to climate engineering."

www.tab-beim-bundestag.de/de/aktuelles/20140924.html

Broadening the debate on shale gas

Concentrating on 'risk and safety' is out of sync with public opinion

Shale gas debates are in full swing in Europe but focusing on 'risk and safety' does not reveal the whole picture according to a paper from the Rathenau Instituut. The Dutch Ministry of Economic affairs commissioned a study to highlight the importance of clarifying the opportunities and risks involved, and the question of whether this is properly regulated. The Rathenau Instituut suggested the 'risk and safety' focus of this study should be expanded to include other dimensions. Their media analysis showed the debate is also about how the role of shale gas extraction worldwide affects the Netherlands, as well as on local support (Waes, 2013). Dutch members of parliament have now stressed the need for a broader debate.

Verbreding van de discussie over schaliegaswinning Arnoud van Waes, Annick de Vries, Rinie van Est, Frans Brom. Rathenau Instituut, 27-6-2014
www.rathenau.nl/publicaties/publicatie/broadening-the-debate-on-shale-gas.html

Coming up

New horizons

PACITA's 2nd European TA Conference, The Next Horizon of Technology Assessment, will include 35 sessions on topics covering: Human Cognitive Enhancement, Responsible Research and Innovation for Energy Transitions, Ageing Society, Energy from the Earth, Chances and Challenges of Deep Geothermal Energy, Big Data as a TA issue, TA in e-infrastructures, Towards Robust Decisions in Energy Policy, Dilemmas of Digital Democracy, Horizon Scanning: Give Parliaments the long view, Science Journalism, and others.
http://berlinconference.pacitaproject.eu/registration/
PACITA 2nd European Conference, Berlin, Germany, 25-27 February 2015

Citizens and climate change

On 6th June, 2015, starting in the Pacific region and ending on the west coast of America, thousands of citizens will participate in the global citizen consultation, World Wide Views on Climate and Energy. After receiving unbiased information and material, citizens will debate the issues and express their views on 30 questions, the results of which will be relayed online. WWVs on Climate and energy will be held six months before the climate change conference, COP21, in Paris. Fundraising for the coordination costs is ongoing.
http://climateandenergy.wwviews.org/
World Wide Views on Climate and Energy, 6 June 2015

Science for policymakers

This two-day seminar organized by the Fellowship for Evidence Based Policymaking together with the Rathenau Instituut, the Karlsruhe Institute for Technology (KIT) and the Graduate School of Public Policy of the University of tokyo provides an opportunity for senior level researchers who are involved in research, policy and politics to engage with high-level scientists, policy makers and directors of advisory bodies to exchange insights about evidence-based policy making. Participation fee is euros 500.
Scientific evidence never comes alone
Brussels, Belgium, 9 and 10 February 2015
www.rathenau.nl/agenda/bijeenkomsten/scientific-evidence-never-comes-alone.html

The price of data

The UN has called for a 'data revolution' in setting the framework for its Post-2015 development goals. But what will that cost?

$254 billion to monitor UN development goals

Next year the United Nations will announce its sustainable development goals (SDGs). A 15-year framework - currently consisting of 17 goals and 169 targets - for tackling issues ranging from extreme poverty to climate change. The UN has called for a 'data revolution': "Data are the lifeblood of decision-making and the raw material for accountability. Without high-quality data providing the right information on the right things at the right time; designing, monitoring and evaluating effective policies becomes almost impossible." (*A world that counts*, The Secretary-General's Independent Expert Advisory Group on a Data Revolution for Sustainable Development).

Economist Morten Jerven, in an assessment paper for think tank the Copenhagen Consensus Center, has put a cost on the UN's data revolution: $254 billion. And his estimate for providing data to support targets would only cover minimum data collection. At the national level, there are capacity issues. Poor countries don't have the resources to maintain a statistical office, or train analysts, or disseminate data. Six out of 49 countries in sub-Saharan Africa have never had a household survey. As a point of comparison, the report looks at industrialized countries. Statistics Norway had a budget of 0.2% of government spending in 2013. Assuming the international community would spend a similar proportion on statistical analysis, it suggests 5 (not 169) SDGs could be monitored.

In reaching the figure of $254 billion – or $1.5 billion per target over the next 15 years - Jerven has suggested minimum data requirements: a population census every 10 years; Demographic and health surveys every 5 years; Living Standards Measurement Study every 5 years; Annual Core Welfare Questionnaire. There are more ambitious aims for the 2015 goals. Jerven argues that the data revolution is likely to over-stretch the capacities of statistical offices, shifting resources away from local needs towards global monitoring activities. The UN's data aims: "*Setting tailored targets and disaggregating data in order to address inequalities within all goals, targets and indicators*" should therefore be tempered by moderation and an appreciation of the resources needed to produce those data, according to the report.

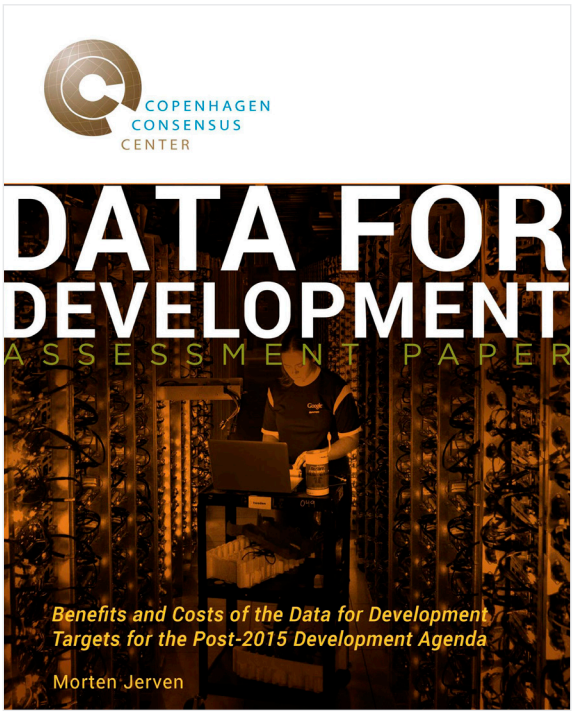


Photo: Copenhagen Consensus Center

Jerven gives examples of how good data have real benefits, but also the dangers of inferior data: "particularly if demand overshoots supply and the data provision process is incentivized through a system of rewards and punishment. Unfortunately, these conditions were met in the previous MDG [Millennium Development goals] agenda."

Considering the likely benefits, enabling the data revolution for 169 targets would not be effective. Is data a catalyst for change? Jerven: "It is tempting to think that having the correct information will improve policy choices, but there is no automatic connection."

Read More?

The Copenhagen Consensus Center, established in May 2004, is a non-profit organization that commissions, conducts and publishes new research and analysis into competing spending priorities. The Post-2015 Consensus project brings together more than 50 top economists, NGOs, international agencies and businesses to identify the targets with the greatest benefit-to-cost ratio for the next set of UN development goals.

Post-2015 Consensus: Data for Development Assessment, Jerven
www.copenhagenconsensus.com/publication/post-2015-consensus-data-development-assessment-jerven

06

Can technology fill the care gap?

Connected ageing

Text:
Marianne Barland
Photos:
Ellen Lande Gossner

With the number of Europeans aged over 60 set to double in the next 50 years, and the number of over-80s to triple, meeting the future care needs (and health costs) of ageing populations is critical. How can telecare, telehealth, robots and ICT help Europe's senior citizens?

'It is not possible to introduce new technology and not adapt the systems surrounding it. We need to look at governance, procedures, processes and patient involvement.'

Meet Annabelle. She's a retired lawyer and lives in a large city and has been exceptionally healthy almost all her life. In the last year, however, Annabelle has gone through intensive rehabilitation after a femoral neck fracture. She is still, to a certain degree, physically impaired and has become more anxious after the incident. Annabelle lives alone. Though she has used a computer for many years in her working life, she is not interested in technology or other digital tools. Annabelle finds new software or gadgets 'demanding' and she is sceptical about the safety of her personal information when it is processed by the different systems.
From the PACITA scenarios

Annabelle is just one of many European senior citizens who will need care in the near future. Projections show that she could live well into her nineties, alongside many of her peers. Annabelle

Technology can execute domestic chores, assist with medication or personal hygiene and remind us of our appointments. Oh, and it can help us to relax.

could be diagnosed with a chronic illness, or with dementia. She is a widow and her children live elsewhere. Who is going to take care of Annabelle?

Digital empowerment

The EU sees technology as a key solution. In the *Digital Agenda for Europe*, it expands on ICT's capabilities for supporting ageing citizens, revolutionizing healthcare and providing better public service. Mrs Neelie Kroes, Vice-President of the European Commission and responsible for the Digital Agenda recently stated:

"Let us work together to capture the massive opportunities of new technologies - for our people to stay active and independent, empowered and in control. In turn, helping our healthcare systems and our economy. You are all aware of the facts: they are inevitable. People are getting older and more demanding. But getting older shouldn't mean losing your dignity and independence. If facing a possible health problem, people expect answers about what they themselves can do about it. In a digital age, it should not be impossible to meet that expectation."

Technology can play an important role in many areas of the care sector, explains Hilde Lovett, project manager at the Norwegian Board of Technology: "It can execute tasks, such as domestic chores, assist with medication or personal hygiene, and remind us of appointments and social occasions. It can increase mobility and active participation in society and help maintain and build social relations." But we should also be aware that new technology could bring negative and undesired consequences. If visits by healthcare personnel are replaced by technology and remote communication, the risk of loneliness and isolation could be high.

That was one of the fears that came up at the PACITA workshops that took place in ten European countries during the spring of 2014. The workshops engaged stakeholders in discussion with the aim of producing policy recommendations for national and European policymakers on the topic of care for the ageing and technology.

Policymaking for the ageing in Europe

George (79) has dementia. He lives in his own house in a small town but depends on professional help and support in order to live on his own. George was a long-distance bus driver and his retirement pension is relatively modest. He's in good physical condition and enjoys moving around

European stakeholder initiatives

In the UK, the Technology Enabled Care Services (TECS) programme, announced in September 2014, aims to create the right commissioning environment to support and encourage the innovative use of technology to improve health outcomes, empower patients, and deliver more cost-effective services. The re-focus from its predecessor, the 3millionlives project, is a result of demands from health and social care professionals for more practical support in evaluating technology-enabled care services. An online tool is to follow later this year. The TECS Stakeholder Forum's collective views and proposals on how to address the barriers to wider adoption form the basis of the TECS Improvement Plan 2014-17.

The EU's Innovation Partnership on Active and Healthy Ageing has an overall goal of increasing the average healthy lifespan by two years by 2020. They also see great market potential in healthcare technologies, and see stakeholder involvement as a chance to "boosting and improving the competitiveness of markets for innovative products and services, responding to the ageing challenge at both EU and the global level."

inside and outdoors. But since dementia causes disorientation, George needs help finding the way. His occasional amnesia makes him dependent on others for managing his personal finances in order to be able to live alone. George enjoys different social activities – but he does not always remember how to take the initiative.
From the PACITA scenarios

'Even though many senior citizens will struggle with health conditions, many will live long and healthy lives. These seniors could contribute in many ways.'

Although the EU looks to technology to solve the challenges ahead, there are several barriers that need to be overcome if technology is to contribute to the care sector in a positive way. Stakeholders at the PACITA workshops identified some of these barriers and discussed potential solutions. Since developments in technology move a lot faster than policies, it is important for policymakers to address these challenges as soon as possible.

Health not wealth: managing ageing earlier

Many of the stakeholders involved in the PACITA project emphasized the need for a governmental strategy to serve as the starting point. That strategy should aim at tackling the challenges in the healthcare system but also support societal values and encourage social contact for senior citizens. Stakeholders argued that a governmental health service has to be the starting point, to ensure that everyone receives basic care. On top of this, different approaches to implementing technology and new ways of organizing care services should be considered. Without such a fundamental strategy, stakeholders feared the development of a societal divide: seniors with wealth and who were technologically competent would be far better off than others.

Privacy and data protection are two issues that were considered very important by stakeholders. If the care sector were to start relying on self-monitoring, home alarm systems and GPS tracking, for example, there need to be new regulations and routines that can handle the growing amount of data which will be generated. Who should be allowed access to these data? Should relatives be able to monitor their loved ones any time they want?

Another recurring theme at the PACITA workshop was the need to take responsibility for our own ageing process and to a greater degree than before. We need to start earlier and talk with relatives and friends about how we want to live as seniors. If the greatest wish is to live at home as long as possible, adjustments that will make this possible need to be made early on. What types of technology could make your everyday life easier? Many people (but not everyone) will be diagnosed with dementia, so there are privacy and ethical implications that should be discussed with your relatives or doctor. How would you feel about your children being able to track your movements with a GPS? Would you be more comfortable moving to a care facility where there are personnel who can watch out for you?

The potential of innovation

To what degree different countries and regions have implemented technology in the care sector differs widely. But there is clearly an emerging trend of using technology – and the industry is flourishing.

César Rubio works with FENIN, the Spanish Federation of Healthcare Technologies, an organization that acts as a link between the industry and public administration in order to improve the health quality of Spanish citizens. He states that although technology is a part of the future, there are other changes that also must be acknowledged. It is not only technology that is changing, argues Rubio, but also the way we deliver healthcare services.

Hilde Lovett agrees with this: "It is unfortunate if the technology is implemented without looking at the bigger picture. How to work smarter, be more efficient and at the same time deliver better services will be a challenge." Although there is a need to make care services more efficient, the stakeholders engaged in the PACITA project argued that the focus need to be on creating better care, not just on the economic benefits.

There are high hopes for the business potential of technology for care. The European Innovation partnership on Active and Healthy Ageing is one of the initiatives that the Commission has introduced to enhance competitiveness in addressing social innovation. The Commission has financed numerous research and development projects with the aim of building knowledge capacity and environments for innovation in the field of care technology. As stated on the website of the Innovation partnership "...the field of active and healthy ageing has potential for Europe to be in front when it comes to research and innovation."

Hilde Lovett sees the Commission's effort as positive. One of the main feedbacks from the workshops in the PACITA project is the need for arenas where knowledge exchange can happen between different types of stakeholders. In order to create solutions and strategies that will work when implemented, they need to be developed in a cooperative manner, taking into account the arguments from policymakers, the industry, employees in the care sector and the end users themselves.

César Rubio looks at the future changes from the industry's side. We need to change the whole healthcare system, he argues. It is not possible to introduce new technology and not adapt the systems surrounding it. We need to look at governance, procedures, processes and patient involvement. Hospitals today are built around a 'one size fits all' approach. For newer concepts of care, flexibility is a must, in order to achieve the necessary changes.

Rubio also sees commitment as an important issue: policymakers need to create a platform where relevant stakeholders can meet and discuss different approaches. But there will also be a need for a clear strategy and decision makers need to show the industry and other stakeholders that they are willing to carry out changes according to the strategy, he argues.

'Life expectancy will continue to increase, yet unhealthy life years make up around 20% of a person's life.'

The need for flexibility was emphasized during the scenario workshops. It became evident that cultural and social traditions in Europe are quite different. It will therefore be important to make systems that have room for national or regional adaptations, so that the changes in the healthcare system have the best possible chance of succeeding.

Cost-effective?

For governments and policy makers designing strategies to deal with the ageing demographic and its impact on care budgets, determining the cost-effectiveness of new technologies is a critical consideration. Recent research from the the Parliamentary Office of Science and Technology in the UK suggests that not only will telehealth and telecare need to be implemented on a 'large scale' if it is to be cost-effective but coordination between a wide range of care sectors will also be required for success.

In assessing existing telecare and telehealth initiatives in the UK: "The largest of these showed a potential reduction in deaths among patients, but found that telehealth and telecare did not reduce use of social or healthcare." Using technology brings risks and acceptance issues. There are many thousands of 'health' apps for mobile phones and while those providing diagnostic or dosage information could be considered 'medical' devices and therefore covered under the EU Medical Devices Directive, are they being monitored effectively? Interactive devices that self-monitor and manage conditions such as diabetes are predicted as one of the technology growth areas according to the report, also sensors – organic electronics - and the use of neural networks and interpretive systems.

Cost-effectiveness is only one measure of success. Studies that look at patient satisfaction and quality of life following the introduction of technology get mixed results, the report stated. Might a patient with a chronic condition reject a device that continually reminds them of their illness?

Disentangling the effect of technologies within the context of care, the role private companies have to play, even whether those who commission services are in a position to judge whether they are being delivered to high standards, are all important considerations. The conclusion in the UK was cautious: "However the technology develops, it is unlikely to deliver a silver bullet. Successful implementation of new technology will depend on the coordinated efforts of patients, clinicians and workers throughout the health and social care sectors."

In theory, technologies should free up time and space for more personal care. There have been a number of promising applications.

Robocare

Robots come in a variety of shapes, sizes and functionality. In Denmark, most municipalities have experimented with robotic vacuum cleaners in nursing homes - an evaluation made by Copenhagen Business School in 2009 estimated that implementing these robots on a regular basis could save approximately one thousand cleaning jobs. A robot vacuum cleaner might not seem like a huge change; using technology to do mundane tasks like this has not received much criticism. Low-tech changes to lighting and flooring can also make a real contribution to creating more dementia-friendly living environments.

A robot that has caused far more debate is Paro - a robotic seal intended for social contact and for providing emotional stimulation of patients with dementia.

"Stress and anxiety in patients with dementia can be hard to treat and demands a lot of attention from care personnel", explains Hilde Lovett.

Innovative ageing

Telemedicine, eHealth, ambient assisted living (AAL) and telecare are some of the many concepts describing the use of technology in care services. There is a lot of innovative effort in these areas.. A technology overview made by the PACITA project shows the European care sector has implemented a wide array of technologies ranging from alarm systems, fall sensors and detectors, to smartphone apps and self-monitoring equipment connected to the Internet. Employees in the care sector are also equipped with communication and administrative devices.

"One can use sedatives of course, but what if there was another way that does not include heavy medication?"

Paro was developed in Japan but has been tested and implemented in several European countries since 2003, including Denmark, Germany and the UK. Marketed as the 'World's most therapeutic robot', Paro reacts to touch and sound and responds with small movements and noises. Some have expressed scepticism about the ethics in this, because they feel that the patients are deceived into thinking they are interacting with a living creature, but there are also many arguments in favour of its use. Paro has been well received in many pilots, Lovett explains: "The robot gives the patients a sense of being a care-giver and the response the seniors get from the seal seems to calm them and stabilize their mood without having to use medication."

doctor@home

The number of seniors with chronic diseases will increase in the coming years. Seeing that the need for monitoring and frequent check-ups by medical personnel will exponentially increase, several technological solutions have been developed to reduce the pressure on the health services and put more of the care responsibility on patients themselves.

'However the technology develops, it is unlikely to deliver a silver bullet. Successful implementation of new technology will depend on the co-ordinated efforts of patients, clinicians and workers throughout the health and social care sectors.'

One of the most common chronic conditions is chronic obstructive pulmonary disease (COPD). The World Health Organization (WHO) predicts that COPD will become the third leading cause of death worldwide by 2030. A technology that has been developed for this condition is a COPD-kit, which allows patients to monitor their condition at home. They measure their vital signs, and answer questions related to their feeling of well being. Many of these telehealth kits also include options for communicating with medical personnel via video or email if a patient needs advice.

Unwelcome illness

Living with a chronic condition can be psychologically difficult. If patients have a bad day, they might seek reassurance from an appointment with their doctor. If they leave it until it is too late, a stressful hospital admission becomes necessary. Daily monitoring can create a continuous overview of a patient's condition providing important information for medical personnel and can help identify triggers that worsen or improve well being. It could empower patients, giving them a greater feeling of being in control of their own condition. Although being a constant reminder of an unwelcome illness, the patients seem to appreciate controlling it in a comfortable, familiar environment, rather than having to make daily trips to a hospital.

A technology overview made by the PACITA project shows that alarm systems are among the most widespread use of technology in European homes. But we are just at the starting point of really exploring this field. Innovation and implementation projects, developing and testing technology that seniors could use at home, are taking place all over Europe.

Visiting Alma

In Oslo, Norway, 'Alma's House' is a fully furnished apartment which functions as a testbed showroom of assistive technology (AT) for people with dementia and cognitive disorders that can be implemented in the home. These include safety-oriented aids, like fall sensors or smoke and fire detectors, and technology for social contact and communication. These include easy-to-use telephones, calendars and watches with speech implementation. Sensors detect if a resident leaves the house in the middle of the night with tracking devices that can locate residents who are lost. The aim of the showroom is to have a place where decision-makers, seniors and relatives, healthcare personnel and other stakeholders can visit, and see and try different technologies.

Sigrid Aketun works as an advisor at the City of Oslo Resource Centre for Geriatric Care and has been involved with the development of Alma's house. "The feedback has been great", she reports. "Since the opening in 2012, we have had approximately 3,000 visitors. They range from decision makers and other actors who plan and organize care services, but we also see groups from senior centres and organizations. The project has also gotten international attention and representatives from five other countries have visited Alma's house."

Providing an informal arena where different stakeholders can visit is one of the key successes of Alma's House. The perceived conflict between 'cold' technology and 'warm' hands when it comes to care might be overcome with initiatives like this; it's not a question of either/or. According to Aketun, "Our advantage has been that we have placed the technology in a physical environment which is adapted to the users. It shows how the technology can fit into the homes of seniors and help with everyday challenges without the technology 'taking over' the home completely."

Are there, apart from sedatives, other ways to reduce stress in elderly patients?

A shared responsibility

Kevin (72) and Laura (68) live with their son and his family. Kevin is in poor health and does not go out very much to meet other people, but he is an active user of social media. He is part of a municipal online community for senior citizens where he helps others to choose and use new technology. As a retired engineer he likes to share his technological expertise and has a key role in the community.

Laura is still very healthy and uses her daily trip to the grocery store to keep in shape. On her way to the grocery shop, she checks in on three of her neighbours who are less mobile than herself. After her visits, she clicks 'ok' on a smartphone app that sends a message to the local care services. Laura is happy to help the neighbours and also appreciates the free hour of housekeeping she receives in return for looking after other seniors.
From the PACITA scenarios

At several of the PACITA workshops it was stressed how important it is to look at senior citizens as a valuable asset to society and not simply as a burden on the healthcare system. Almost all stakeholders had positive reactions towards an imagined scenario which emphasizes a strong volunteer effort.

"Even though many senior citizens will struggle with health conditions, many will live long and healthy lives", explains project manager Hilde Lovett. "These seniors could contribute in many ways, whether it is grocery shopping for other seniors, organizing social events or staffing the cafeteria at the care centre. It should be possible, and encouraged, to engage volunteers, both seniors and others, in care work in the future", Lovett argues.

Stakeholders from all kinds of backgrounds agree that technology can be a solution for many of our challenges. But even more importantly, they highlight that the need to uphold societal values like privacy, dignity and a social network will increase in importance as technology makes its way into the care sector and our homes.

Care services for the elderly will probably look very different in the future. But we can all be part of forming policy for those services, whether we work in the care sector, develop technology, volunteer in our local community - or simply because we all grow older. It is important that national and European policymakers involve a broad spectrum of stakeholders to make the best possible future for Europe's seniors, particularly in the light of the demographic and economic challenges Europe is facing. Seniors need help and support and although technology can solve some of these challenges, there needs to be a cooperative effort among many stakeholders to create technology and care services that will work together.

Care service for the elderly will probably look very different in the future.

Ageing in 2025: What choices will we have?

During the spring and summer of 2014, the PACITA project organized scenario workshops in ten European countries, engaging more than 330 stakeholders in discussion about care, technology and the future of ageing. The aim has been to identify policy options for European policy makers, and make recommendations on how we can deal with the dilemmas that will occur when technology is introduced in the care sector.

In addition to the workshops, the PACITA project has studied the current use of technology in different European countries, and how far decision-makers have come in making explicit policies on the topic.

Why engage stakeholders?

Those that are affected, positively or negatively by research, technological development and policy decisions are not always consulted, even though they have a stake in the issue. Stakeholder involvement is one way of making decisions more robust and socially acceptable and the variety of voices will make the discussions open to different kinds of knowledge, perspectives and dilemmas. PACITA stakeholders included those from backgrounds such as local decision-making, the care sectors, IT, volunteers and representatives from senior organizations. They discussed and identified challenges and possibilities related to the implementation of technology in care.

Future scenarios

To create a common starting point for the stakeholders, the PACITA partners developed a set of future-oriented scenarios that served as a starting point for the discussions. The scenarios described different ways of organizing and funding care services, and different ways of using technology to increase the quality of healthcare for senior citizens. The scenarios also included stories presenting fictional characters, describing the way their everyday life is affected by the choices politicians make.

Scenarios are a great tool for facilitating forward-looking discussions and using fictional stories forces participants to consider different ways of organizing healthcare services, by giving direct feedback on the scenarios. The fictional characters can be used to show ethical and social dilemmas that seniors might experience in their everyday life, and how different ways of implementing technology can create different dilemmas.

Ethical issues

Could care technologies be experienced as intrusive or unpleasant surveillance? How is privacy balanced against feeling secure? Will using technologies result in senior citizens feeling more or less isolated in their communities?

http://wp6.pacitaproject.eu

Further reading

WHO Facts about ageing/Age-friendly world
WHO publish data on many aspects of global ageing. A new website, Age-friendly World, launched in October 2014, aims to highlight initiatives in cities and communities that make life easier and more enjoyable for older people.

www.who.int/ageing/about/facts/en/
http://agefriendlyworld.org/en

Digital agenda for Europe – Ageing well with ICT
The focus of EU policy is that ICT can help older people to stay healthy, independent and active at work or in their community.

http://ec.europa.eu/digital-agenda/en/policies-ageing-well-ict

European Innovation Partnership on Active and Healthy Ageing
Brings together a wide array of stakeholders, shared interests and projects, geared towards achieving common goals and promoting successful technological, social and organizational innovation.

http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing

European Commission: the 2012 ageing report
The economic and budgetary predication for Europe's ageing population.

http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-2_en.pdf

Almas Hus (Alma's House)
A 50 sq meter flat, opened in 2012, which is a dementia-friendly environment demonstrating assistive technology (AT) to support people with cognitive impairments and dementia, and which also services as a knowledge service on AT.

www.almashus.no
www.aldringoghelse.no/?PageID=4668&ItemID=3651

FENIN – Spanish Federation of Healthcare Technology companies

A multi-sector federation of manufacturing, import and distribution companies, and associations of healthcare technologies, who supply to all the Spanish healthcare institutions.

http://fenin.es

TA projects on ageing and technology

PACITA – Ageing Society
PACITA has put into practice cross-European stakeholder involvement into debating ageing and provided both national and EU level policy makers with substantial input for meeting the societal and technological challenges and opportunities of an ageing population. The workshops took place during the spring and summer of 2014, and the policy advice will be presented to European policy-makers in January 2015.

http://wp6.pacitaproject.eu

Telehealth and Telecare
UK Parliamentary Office of Science and Technology POST note 456, 14 February 2013, Peter Border

Current UK telehealth and telecare initiatives and the role they may play in delivering future care.

www.parliament.uk/briefing-papers/POST-PN-456/telehealth-and-telecare

Ambient intelligence and healthcare

Report from the Rathenau Instituut, 2009

Identifying desirable applications of ambient intelligence in the field of healthcare, together with potential problems or pitfalls.

www.rathenau.nl/en/publications/publication/ambient-intelligence.html

The future of ageing and new technology

Report from the Norwegian Board of Technology, 2009

The report gives an overview of the possibilities and challenges related to welfare technology and the possible implementation these in Norway.

http://teknologiradet.no/english/more-care-with-better-technology/

In debate

The societal impact of new technologies should be a cornerstone of policy-making (but often isn't). VolTA highlights three publications encouraging debate.

Text:
Ann Maher

Engaging with new technologies

The fifth volume in the series Studies of New and Emerging Technologies showcases the research activities of the multidisciplinary S.NET community - an academic society in which ITAS has been involved from the start. S.NET is dedicated to research and dialogue on a broad variety of societal aspects of emerging technologies extending beyond nanotechnology to include synthetic biology, geoengineering, artificial intelligence, robotics and more. This volume comprises papers that were presented at the fifth annual S.NET Conference in Boston in 2013 where academics and practitioners from diverse disciplines and backgrounds exchanged ideas about new and emerging sciences and technologies.

Innovation and responsibility: Engaging with new and emerging technologies AKA, Berlin, 2014.

www.itas.kit.edu

Ethicisation

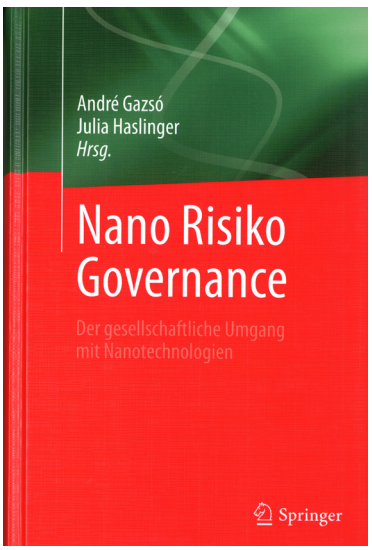
Ethical issues have replaced health and environmental risks as the centre of the debate around new technologies. This recent collection of essays, edited by Alexander Bogner, senior scientist at the ITA, deals with the consequences of this development: "Today we are debating if we actually should do what we can do, and which knowledge is really needed," says Bogner. "Now that ethics have gained such great importance in technology issues, ethics councils have a considerably higher standing within political consulting." An exceptional case of political ethics consultation is examined in an essay by Kathrin Braun - the appointment of an Ethics Commission by the German Federal Government after the nuclear disaster in Fukushima.

The Ethification of Technology – the Technification of Ethics. The rise of ethics in light of science and technology research (*Ethisierung der Technik – Technisierung der Ethik: Der Ethik-Boom im Lichte der Wissenschafts- und Technikforschung*). Alexander Bogner (ed), Nomos, 2013

www.oeaw.ac.at/ita/publikationen/publikations-news/buch-vorstellung

Nano perspectives

This collection features 14 perspectives focussing on the regulation and practical applications of nanotechnologies. The topics discussed include the use of nanomaterials in waste, mandatory labelling for consumer products as well as an analysis of German-speaking media reporting. Co-editor André Gazsó is the leader of the nanoTRUST project, commissioned by the Austrian Federal Ministry for Transport, Innovation and Technology, which provides a public information platform seeking to identify the most pressing issues. For the first time in Austria, these important aspects of technology development are being investigated in a systematic way rather than on the level of individual R&D projects.



Nano Risiko Governance – Der gesellschaftliche Umgang mit Nanotechnologien
André Gazsó, Julia Haslinger (eds.) 2014

www.oeaw.ac.at/ita/publikationen/buecher/nano-risiko-governance

Strong stories

Patients are increasingly vocal – at least in theory. But patient empowerment in hospitals is problematic. In a recent TA project on healthcare, narrative methodology was used to unlock patient insights.

Text:
Stans van Egmond and Marjolijn Heerings

Photo:
Birgitte Heneide

'Narrative analysis offers new ways to look at patient-oriented care.'

Patients should have a strong voice in the shaping of care and can see things that are missed by other stakeholders. Yet hospitals are complex technological organisations that can be difficult to navigate. If patients do not speak up, they run a risk of being ignored or receiving bad care. But those who do speak up run the risk of being seen as aggressive. Dutch patient organizations, medical occupational groups and some political parties have disputed whether the 'independent and active' patient exists. How could TA examine the feasibility of this position?

In the *Patients Know Better* project undertaken by the Rathenau Instituut, a novel method of technology assessment derived from the field of narrative health research was used to analyse the perspective of patients in hospitals.

Patients submitted their experiences to a website in the form of a letter between 200 and 2,000 words together with a 'wish'. Open and exploratory storytelling is a central feature of narrative research. After posting the 'letter', participants were asked to answer a few questions related to its interpretation, for instance if they felt it was a positive, ambivalent or negative experience and for what reasons. This was done to gain insight into the themes that were important to participants while in the hospital and to identify the main lessons to be learned from their perspective. Background questions related to the writer were also asked about their kind of illness, length of stay, location and type of hospital and socio-economic variables such as gender, age, educational level and income of the writer. Writers of the stories were a heterogeneous group of varying gender, age, education level, income and experience with hospital care.

The narratives underwent story analysis: in-depth analysis of single stories and broad analysis of all stories in order to find patterns of differences and similarities. This resulted in nine experience types, which were used as an analytical framework for the remainder which were then summarised into four themes, each indicating a particular dilemma or tension related to the research question regarding the feasibility of the active and independent patient.

The stories from patients had a powerful impact. Patient experiences give insight into where and how the quality of care can be improved in hospitals, at all levels. Hospitals should embed listening to patient experiences in their quality systems to make care more efficient and patient centered.

It was a message that was well received by relevant stakeholders and politicians. Two Members of Parliament asked the Dutch Minister of Health Care for a response to the report during a meeting on hospital care. In her letter, the Minister stated she subscribed to the main conclusions of the report.

Read More?

What can TA learn from patient narratives? Using narrative methodology to assess the role of patients in Dutch hospitals. In *Technology Assessment and Policy Areas of Great Transitions*, proceedings from the 2013 PACITA conference. Heerings M, Egmond S van, Sools A, Duijvenbooden L van & Drossaert S. 2014.

www.patientenwetenbeter.nl
www.rathenau.nl/en/themes/theme/project/patients-know-better.html

16

Ulla Burchardt on separating science from politics:

What politicians need from TA

'Scientists sometimes tell politicians what the world should be like and how we should make it happen. That does not work.'

Text:
Joost van Kasteren
Photos courtesy of Ulla Burchardt

"It is essential that politicians are actively involved in technology assessment," says Ulla Burchardt, who was a member of the German Bundestag until last year, and chair of the parliamentary committee for Education, Science and Technology-Assessment (Technikfolgen-Abschatzung) for many years. "But we have to keep in mind that science and politics are two different things. That distinction makes TA important."

Ulla Burchardt spent more than twenty years as a member of the Social Democratic Party SPD in the Bundestag. Since her voluntary resignation, she works as a consultant in the areas of strategy development and innovation. She is also a lecturer at the Technical University of Dortmund, and at the Business School Berlin/Potsdam. As a member of the Bundestag she got involved in the TAB, the Office of Technology Assessment at the Bundestag, after its pilot stage in 1993.

'The art of politics is that you need to take into account those who are affected, those who benefit from your solution and how you can make sure that the majority of people are content with it.'

The TAB is not an institute of the Bundestag but 'at' the Bundestag. Burchardt: "The TAB is separate from the bureaucracy. Every five years we select – in competition - a research institute to operate the TAB. The director of the selected institute is also the director of the TAB. Since its beginning, the TAB has been run by the Karlsruhe Institute of Technology (KIT) and from 2013, in conjunction with three other institutes that are specialized in environmental research, future studies and innovation and technology. "KIT has done it for many years and they have done it very well", notes Burchardt, "but we thought the TAB needed to broaden its scope. Not purely TA but also horizon scanning and innovation."

Too few friends: the OTA lesson

The mother of all TA institutes - the American Office of Technology Assessment (OTA) - inspired the German TAB. "The OTA was founded in 1972 in a period when members of the American Congress realised that their government put a lot of money into science and technology, the results of which had major implications for society, while at the same time Congress was almost entirely dependent on that same government for information. Quite soon after the OTA started, it dawned upon members of the Bundestag that they were in more or less the same situation."

The debate in Germany however took quite some time. Burchardt: "Some scientists and people from industry feared that technology assessment would increase fears among the public about new technological developments. Others feared that parliament was trying to gain control and take over science. But at the end of the eighties, the German parliament was convinced that it needed to seek assistance from an independent agency to take sound, fact-based political decisions."

By that time the OTA had almost disappeared from the TA stage. "Not because they had too many enemies", says Burchardt, "but because they had too few friends. Nobody in Congress felt responsible for TA, so the OTA got less and less budget and was slowly starved. We did not want to make the same mistake in Germany so we decided that the status, operation and financing of the TAB was stipulated in the regulations of the Bundestag; that its work program is decided upon by parliament and that TA studies are done in close cooperation between the TA spokespersons of parliamentary groups and the scientists who work for the TAB."

Consensus is needed

Proposals for TA-topics come from the standing committees of the Bundestag. The spokespersons for TA in parliament - one for each party represented - together with the TAB-director, evaluate the political and scientific relevance of the suggested topics and the practicability of the study. Burchardt: "An important requirement is that the TA spokespersons fully agree on the topics that go into the work program. Consensus is needed to prevent the report itself becoming the subject of political controversy. It should not be that one party rejects the report because it has too much of the colour of another party, or vice versa. If there is no agreement, the topic won't make it into the work program."

Avoiding political controversy also means that big issues, for example the German phase-out of nuclear power (Ausstieg), cannot be the subjects of a TA study. Burchardt: "Apart from the fact that the subject itself is quite large for a TA-study, the Ausstieg is also the subject of a heated debate. The subject is too politicized; every fact has got a political meaning. We cannot roll back to the time when you still would be able to get agreement on the facts."

When performing a TA-study, researchers operate independently from politics. However there is regular consultation with the TA spokespersons of the parliament, though - according to Burchardt – purely on practical matters. "The spokespersons sometimes

Ulla Burchardt (1954) studied pedagogy, social sciences and psychology and worked in adult education before being elected as a member of parliament for the Social Democratic Party (SPD) in 1990. She was chair of the Parliamentary Committee for Education, Science and Technology Assessment for many years. After stepping down in 2013, she now provides consultancy on strategy and innovation and lectures at the Technical University of Dortmund and the Business School Berlin/Potsdam.

want some more explanation or the researchers suggest splitting a too-large research project into smaller ones. As far as I can remember it happened only once that a report was sent back because of its content, but that was because the researcher based the report on ten-year-old data and one interview with a stakeholder."

Despite these regular consultations, science and politics are strictly separated in the German TA model. Burchardt: "You often see that scientists in an advisory role position themselves as political consultants. They tell us politicians what the world should be like and how we should make this happen. That does not work. Firstly, TA-studies are about very specific, concrete questions that are relevant for political decision-making, for instance about the possible effect of nano-particles on the health of workers. Secondly, we expect from researchers that they give us an overview of the technical developments; the opportunities and risks and the options for decision-making. We don't want them to tell us what to do, but we do want them to tell us what we can do. Decisions have to do with values, and they belong in the political arena. What we want from scientists are facts with their margins of uncertainty, so that we can base our decisions on knowledge and not just on gut feelings."

Parliamentary guinea pigs

Burchardt is pretty satisfied with what she calls the 'institutional design' of the TAB in the German Bundestag. "We have based it on a number of principles and that seems to work well," she says. Those principles are: scientific independence; political neutrality; exclusivity, meaning that the TAB only works for the Bundestag; inclusiveness, which means that researchers and parliamentarians work together; and absolute transparency of processes and results. And the reporting has to be accessible, says Burchardt."Researchers are required to present their results in such a way that every citizen can understand them. You could say that parliamentarians serve as guinea pigs; if they understand it, anyone can understand it."

The institutional design seems very agreeable, but what about the TA reports? Do they play a role in decision-making? "Formally speaking, a TA report, once it has been accepted, is an official document of the Bundestag, so not just an opinion of some scientists. Sometimes nothing happens with it, but far more often TA reports are used in parliamentary debates as a factual knowledge base. A recent example is the debate on Big Data, during which politicians referred to a TA-report on the legal and social consequences of data-mining."

TA studies also provide new perspectives. As an example, Burchardt mentions a study on the possible health effects of radiation from cell phone masts. TA researchers analyzed all the scientific publications on the subject and classified them according to the measure of scientific reliability. One of the striking findings was that telephone companies - parties with a big stake in the matter - commissioned most of the

studies. Burchardt: "That does not make the results scientifically better or worse, but you do run against a problem of credibility. Based on the TA-study, we called for more funding for independent research. In addition, we have asked for regulations to limit the radiation from cell phone towers as much as possible."

The cell phone example shows that socially controversial topics can almost never be solved with a simple 'yes' or 'no'. A theme like climate change, for example, has many more layers and perspectives than simply the classic 'believer' or 'denier'. The same applies to nuclear power, genetic modification and the extraction of shale gas. Burchardt: "It is these layers and different angles that make it possible for politicians to seek solutions. There is no one big solution for climate change but you still can tackle the issue by trying to find practical solutions on a smaller scale, like how to reduce household energy consumption. TA is needed to ask the right questions and to map possible solutions."

"It only works," she continues, "when scientists realize that knowledge and facts are not enough for decision-making. You could say 'this is how it should be done', but you will have to find a majority for your solution. After all, we do not live in Plato's Republic where a ruling class of wise men control the state, but in a democracy where everyone has a vote. The art of politics is that you need to take into account those who are affected, those who benefit from your solution and how you can make sure that the majority of people are content with it. On the other hand, politicians will have to accept that scientific evidence might affect their views. It is this distinction between a scientific approach and the handiwork of politicians that makes TA indispensable."

The Collingridge Dilemma

In 1980, a year before the IBM-PC was launched, a British academic wrote of the complex ethical quandaries inherent in the introduction of new technology. The central insight – the dilemma of control – remains an influential reference point for technology assessment today.

Text:
Joost van Kasteren
Photo:
iStockphoto

'Can we get technology to do what we want and can we avoid its unwelcome consequences?'

"Ask technologists to build gadgets which explode with enormous power (atomic bomb) or to get men to the moon (Apollo program), and success can be expected. But ask them to get food for the poor or anything else where the technologic hardware can fulfil its function only through interaction with people and their societies, and success is far from guaranteed."

David Collingridge, who is quoted above, saw that technology often has unanticipated social consequences which are not welcome. In his book, *The Social Control of Technology*, published in 1980, he sets out to address this problem: how can we get the technology we want without also having to bear the costs of unexpected social consequences? Or, to put it another way, how can we control technology in a better way than now? His book was written almost 35 years ago when microelectronics was in its infancy and lots of people were very worried about its effect on employment.

A central problem concerning this issue is what Collingridge called 'the dilemma of control', that following the publication of his book, has become known as the Collingridge Dilemma. To avoid any harmful social consequences of a technology, you first have to know what they are and secondly, have the means to change the technology to avoid these consequences.

In the very early stages of development, it is relatively easy to change a technology: its rate of development can be reduced or stimulated, it can be surrounded by all kinds of controls or it can be banned altogether. The problem is that in these early stages it is very difficult or even impossible to predict the social consequences, at least with sufficient reliability to justify the control measures.

By the time the technology is well developed and diffused and its unwanted social consequences become clear, it is no longer easily controlled. As society has slowly adjusted to the new technology, a major change in the technology itself or its applications will require changes in other, related technologies and in social and economic institutions. Or, as Collingridge put it himself:

"*When change is easy, the need for it cannot be foreseen; when the need for change is apparent, change has become expensive, difficult and time consuming.*"

Rinie van Est, Rathenau Instituut:

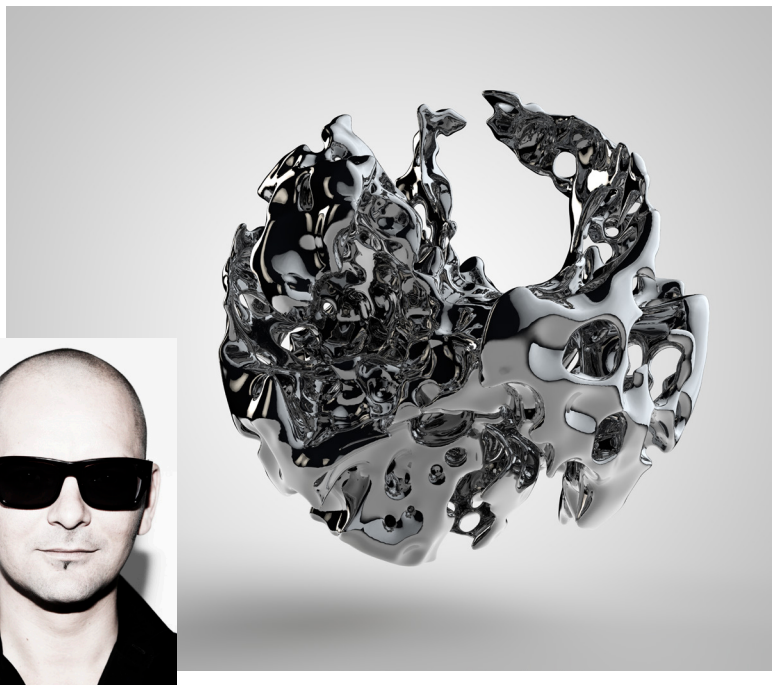
"The Collingridge Dilemma is still topical in thinking about governance of technology, but I have always had problems with the concept. In our rapidly changing society - partly induced by technology - uncertainty is a key factor. Zigmund Bauman speaks of 'liquid modernity'. What Collingridge describes is no dilemma for me, but rather a fundamental characteristic of our techno-human condition. The (constant) uncertainty ensures that the possibilities to manage technology are limited."

Intangible, inaudible, invisible

Artist Frederik de Wilde acts between science, technology and art, using base materials such as nanotechnologies and quantum physics. His work addresses the “indistinct, diffuse, ‘fuzzy’ arena where the biological and technological overlap and commingle.”

Text:
Pál Hegedûs

Photos courtesy of
Frederik de Wilde



Present state of mind?
Excited yet focused.

Biggest success?
Phew. Difficult question. There are 'small' things like eating less meat, for instance, to helping out friends and people in general but also being selfish when I need to... traveling to the US when I was 21 years old and exploring the world before me, trusting my intuition and intellect ...and 'bigger' things like integrating 3D printing to lower my carbon footprint and waste. Working with Rice University, Melotte, NASA. Being able to connect art with science and technology, my blackest black art...

How did you get here?
Curiosity and self-criticism 'helped' me a lot. Balancing ratio and intuition is another thing, or finding a balance between choosing the most 'conductive' and 'non-conductive' (read easiest or more difficult) path.

Biggest failure?
Haha. Sure. Where do I start?

What are your dreams?
There are very personal things. I have dreams, which ‘can’ come true in my lifetime, and things I am probably never going to be able to realise (except the thought of it of course). From an artistic point of view I want to paint the world NANO BLACK to lower global warming, and render all photonics energy into thermal to electricity with almost no loss. When I was a child I dreamt of creating the first artist colony on the moon. That's still within hand reach.

What will it take to make them come true?
Devotion, timing, patience, help.

Biggest fear?
I don't fear death, I fear that I won't have enough time to realise my dreams and ambitions.

What inspires you?
Can be solitude, being surrounded by amazing people, experiencing art, science, making technology, an algorithm or formula, a quote, an expression, a story, music, a movie, an act, a gesture, a situation, an image...a cup of coffee.

Plans for the future?
Nope. Just kidding. I am keen on complexity and try to find elegance in there, mostly by connecting different disciplines etc. There is commission work, software, audio-visual and kinetic artworks dealing with radiation, energy, randomness, etc, 3D printed art in production, new collaborative work with NASA, Rice University...

What would you change?
I am inclined to say ‘nothing’. On the other hand I would like to have a deeper impact on society. That's my goal and ambition. Art is my main driver but the scope can be pretty wide. I am researching how and try to 'stretch' its meaning as far as I can (imagine).

www.frederik-de-wilde.com

Citizens consult

How can European policymakers gain insight into which measures for promoting sustainable consumption will be received enthusiastically (or not)? The PACITA Citizens' Panel recently asked 1,100 citizens in 11 countries.

Text:
Marianne Heselmans

Photos:
Jordi Pareto, The Danish Board of Technology Foundation.

'Should governments assume an active role in influencing the behaviour of its citizens or should citizens themselves take more responsibility?'

On Saturday 25 October, in a huge hall in Utrecht, the Dutch participants at table number nine are in complete agreement: we use far too much plastic. All those plastic bags in our homes are not necessary at all.

But how best to reduce the plastic waste? Would a return and reward scheme for bags be more sustainable? Or "Are we going use the car to take the bags to the shop?" says participant Kelly, "that also causes CO_2 emission." Mirjam suggests citizens could save bags and take them back to claim a deposit. Elske feels that government should explain why recycling is important and supply enough drop off points for plastics in every neighbourhood. The humming of conversations at ten other tables surrounds us. There too, participants are discussing how to bring about a more sustainable lifestyle. Sometimes a whole table bursts into laughter or pauses for a group picture or a sandwich.

Europe Wide Views on Sustainable Consumption is the last of three example projects to be held in the EU-funded PACITA project and is based on the World Wide Views method developed by the Danish Board of Technology Foundation and the WWVs Alliance. It is focused on the role citizens should play in addressing sustainable consumption. In free markets, consumption choices are viewed as a private matter for individuals. Governments are generally hesitant to intervene too much in their citizens' private space. As a result, policies aimed at enhancing sustainable consumption tend to be focused on the production of goods and services, rather than on private consumption. But should governments assume an active role in influencing the behaviour of its citizens, or should citizens themselves take more responsibility? That is the main question today. "Until now, the EU has mainly focused on what consumers can do in a 'free' market," explains André Krom, project leader of the Dutch citizen consultation. "With this panel, we also want to address individuals as citizens. That opens up a discussion on whether individuals perhaps have certain responsibilities to further sustainable consumption. Adding this perspective can offer new understanding for policymakers." Europe Wide Views has been designed to engage citizens in a discussion about broadening the policymaking surrounding sustainable consumption to include measures aimed at private citizens. Furthermore, it also wants to discuss the different roles that citizens could play in increasing sustainability in society.

A head facilitator and group moderator lead participants through a programme divided into four sessions. Each of the discussion rounds is preceded by a short film showing scenarios based around the themes of consumption and sustainability: eating less meat, reducing food waste or recycling natural resources, for example. After each round, all participants fill out a questionnaire. Citizen answers are being sought for questions such as 'Which policy measures should the EU implement to stimulate sustainable consumption?' and 'Which economic measures to increase the sustainability of transport are acceptable to you?'

'Do we use the car to take our plastic bags back to the shop?' Participants discuss how to bring about a more sustainable lifestyle.

Ideas fly across the table: 'Buy solar panels with the whole neighbourhood. Start a kitchen garden with friends. Share cars.'

The citizens' panel is held simultaneously in nine countries. Citizens in the Netherlands, Austria, Denmark, Bulgaria, Belgium, Portugal, Spain, Lithuania and Ireland are having the same discussions, watching the same films and filling out the same questionnaires. Czech and Hungarian citizens held their meetings on 18th and 19th October. All 1,100 European citizens received the same brochure before the meeting, so they could read background information.

Table nine has moved on to mobile phones. Estimations indicate that by around 2020, the EU will generate 12 million tons of electronic waste every year. "I replace my mobile phone only when it's really necessary," Jan Pieter says, "but many young people continually want the latest model." According to Mirjam: "Young people want to wear the latest fashion and therefore buy cheap clothes". Daniel, 18, feels that schools could provide more information on the production process of mobile phones and clothes. But government or teachers should not enforce a 'This is OK but that is not OK' stance. Informing poor and not well-educated families about such issues is not easy, is the conclusion of the table. According to one of the participants, "Many parents raise but do not really educate their children anymore."

At 2.35, we can see the Lithuanian citizens on a large screen sitting at their tables. "Hi there, are you getting anywhere? We have solved the sustainability problems!" We wave to each other. *Daaag*, 'Bye', *Sekmes*, and all tables carry on.

The main conclusions of the citizens' panels will be presented to politicians and policymakers at a meeting in Brussels in early 2015. "I am curious to see the results; the discussions could have all kinds of different outcomes," says André Krom. "On the one hand, people might say that governments are doing the right thing, on the other, they might want governments to get more active. We really try to capture the opinion of the participants, regardless of whether they are pro-sustainability or less so."

The facilitator on table nine asks what initiatives the participants could take to stimulate more sustainable behaviour in their immediate circle. Ideas fly across the table. Buy solar panels with the whole neighbourhood. Start a kitchen garden with friends. Share cars. But Elske finds the role of consumer far easier than the role of citizen: "Shopping is something I need to do anyway, but if I have to start taking initiatives as a citizen, it will take too much of my time."

Regulators can play their role in sustainability though, such as reducing plastic waste, according to Frans : "At work we used to throw the plastic coffee cups in the trash. It was not until we were required to recycle, that we began to think properly about sustainability. Now all colleagues have taken along their own coffee mugs and as a result we have stopped using plastic cups altogether."

Results: Participation changes viewpoints

Of all 1,100 people who filled out the questionnaire, 67% said their view on sustainability had positively changed; almost 90% would participate again and 96% want more of such European dialogues in the future.

Belgium: applause (eventually)

70% of the 100 Belgian participants would participate again. But there were a few issues according to Benedikt Rosskamp. Some of the participants didn't like the closed questions: "They missed the opportunity to come up with a serious alternative for the current capitalist system." A second criticism concerned the absence of Flemish citizens. (The organizers had decided that a panel in two languages would go beyond their mandate and be too time-consuming and expensive.) During an extra plenary debate at the end of the day, the organizers promised the participants a more qualitative analysis based on the notes and recordings at the tables. "Fortunately, a few citizens stood up and defended the process," according to Rosskamp. "And were applauded by most of the audience. So at the end we felt very satisfied."

Austria: from debate to policy recommendation

Some countries organized a 'national session' after the main consultation using the outcomes of questions asked in order to formulate clear and short policy recommendations. . 'Give less priority to economic growth and aim more for sustainability' was one of 16 recommendations that the Austrian citizens formulated for their own country. Other recommendations included 'more teaching of ethics and sustainability in schools', 'improved product labeling' and 'stricter rules for advertisements and more transparency of the Transatlantic Trade and Investment Partnership (TTIP)' - an upcoming agreement with the US. "Our national session was very effective", according to Leo Capari, one of the organizers, "it enabled citizens to add qualitative information to the quantitative results. Participants could use their debate outcomes to generate focused recommendations." Two citizens have been invited to present the results to the Austrian federal Ministry of Agriculture, Forestry, Environment and Water Management and parliamentarians Petra Bayr and Matthias Köchl who attended as speakers, have promised to report on the results in their parliamentary committees.

National variations

All citizens answered 27 questions and there was clear agreement on some topics. For example, 89.8% participants were willing to 'voluntarily' reduce their personal consumption and 80.29% thought that public authorities should regulate marketing campaigns to reduce consumption. Countries differed more in their opinions on governmental regulation. Of the 80% that agreed there should be regulation in public authority marketing campaigns, 21.25% of all European participants agreed with the statement: Prohibit campaigns encouraging overconsumption or waste like "buy 3, pay for 1" but 45% citizens agreed in Lithuania compared with only 15% of Danish citizens.

Read More?

http://citizenconsultation.pacitaproject.eu

To drill or not to drill?

Shale gas has sparked debate in many member states alongside concerns over safety, public health and environmental damage. What do members of parliament think about the opportunities and risks of exploration in Europe?

Text:
Arnoud van Waes

Photo:
iStockphoto

No more fossil fuels

"Shale gas is not the energy source of the future. Risks for the environment and public health are unjustifiably high. The recent Commission proposal, which merely suggests guidelines, fails to create an enforceable legislative framework, and is totally inadequate to even start exploration drillings. In Europe, which has lower reserves, higher population density and a problematic geology, the situation is even worse and the costs of extraction significantly higher. A choice for more fossil fuels is unthinkable in a time when abandoning fossil fuels is crucial to reach the climate goals that we so desperately need to pursue."

Kathleen van Brempt (Belgium), Group of the Progressive Alliance of Socialists and Democrats in the European Parliament
http://kathleenvanbrempt.be

A 'social license to operate' is needed

"The EU must strike a right balance between energy and climate and we must recognise the important role of natural gas in a transition to a more renewable economy. Yet, in Europe's energy mix there are contradictions in our policies: we are approving new coal-fired power plants and shutting down gas-fired ones. Industry in Europe must display strong commitment to safe and sustainable extraction of unconventional hydrocarbons in Europe, but also needs a 'social license to operate' vis-à-vis local communities. This concept is the paramount issue central to any potential success story pertaining to shale resources in Europe."

Niki Tzavela (Greece), Europe of freedom and democracy Group
www.europarl.europa.eu/meps/en/96660/NIKI_TZAVELA_home.html

Explore the geology further

"The EU has the highest standards of environmental protection, which everyone who decides to explore and produce unconventional sources has to comply with. The issues of water and air quality, flora and fauna, biodiversity, are well protected by over 40 directives and regulations. According to the EC this framework of legislation is well implemented by those Member States who are exploring possibilities. It is too early to estimate the impact of the new gas on the European energy market and industry. We need to know more about the geology, and therefore we urgently need a higher number of exploration sites. If we do not want to lose these sectors in Europe, we must solve the problem of high prices. That's why we need unconventional gas as well."

Konrad Szymanski (Poland), European Conservatives and Reformists Group
www.konradszymanski.pl

Waste of effort and capital

"Shale gas and the destructive method of fracking pose very real environmental and public health concerns. Pushing ahead with shale gas extraction is a waste of effort and capital at a time when we need to be looking for ways to use less, not more, fossil fuels. We have already found more fossil fuels than we can burn without totally destroying the climate and our environment. We the Greens are advocating a moratorium on fracking in Europe."

Carl Schlyter (Sweden), Group of the Greens/ European Free Alliance
www.mp.se/om/carl-schlyter

Read More?

EU Recommendation (January 2014) Environmental Aspects on Unconventional Fossil Fuels http://ec.europa.eu/environment/integration/energy/unconventional_en.htm