



## **PACITA**

**Collaborative project on mobilisation and mutual learning actions in  
European Parliamentary Technology Assessment**

Grant Agreement no. 266649

Activity acronym: PACITA

Activity full name:

Parliaments and Civil Society in Technology Assessment

### **Deliverable 2.4**

#### **Making cross European TA**

Due date of deliverable: November 2012

Actual submission date: December 2012

Start date of Activity: 1 April 2011 Duration: 4 years

Author(s): Marianne Barland, Walter Peissl, Danielle Bütschi and Anders Jacobi

Organisation name of lead beneficiary for this deliverable: The Norwegian Board of Technology

## Change Records

Version	Date	Change	Author
1	26.11.2012		M. Barland
	27.11.2012	Comments	D. Bütschi
	29.11.2012	Comments	W. Peissl
	07.12.2012	Comments	J. Ganzevles, B. Rosskamp, P. Delvenne
	10.12.2012	Comments	L. Hebakova, T. Michalek

## PACITA Partners

### Teknologirådet – Danish Board of Technology (DBT)

Toldbodgade 12, DK-1253 Copenhagen, Denmark,

Contact: Anders Jacobi

[aj@tekno.dk](mailto:aj@tekno.dk)

[www.tekno.dk](http://www.tekno.dk)

### Karlsruhe Institute of Technology (KIT)

Kaiserstr. 12, 76131 Karlsruhe, Germany

Contact: Leonhard Hennen

[leonhard.hennen@kit.edu](mailto:leonhard.hennen@kit.edu)

[www.kit.edu](http://www.kit.edu)

### Rathenau Insituut (KNAW-RI)

Postbus 95366, 2509 CJ Den Haag, the Netherlands

Contact: Geert Munnichs

[pacita@rathenau.nl](mailto:pacita@rathenau.nl)/[g.munnichs@rathenau.nl](mailto:g.munnichs@rathenau.nl)

[www.rathenau.nl](http://www.rathenau.nl)

### Teknologiraadet – Norwegian Board of Technology (NBT)

Prinsens Gate 18, 0152 Oslo, Norway

Contact: Christine Hafskjold

[Christine.hafskjold@teknologiraadet.no](mailto:Christine.hafskjold@teknologiraadet.no)

[www.teknologiraadet.no](http://www.teknologiraadet.no)

### The Institute of Technology Assessment (OEAW/ITA)

Address: Strohgasse 45/5, A-1030 Vienna

Contact: Pacita-ITA team

[pacita.ita@oeaw.ac.at](mailto:pacita.ita@oeaw.ac.at)

[www.oeaw.ac.at](http://www.oeaw.ac.at)

### Applied Research and Communications Fund (ARC Fund)

5 Alexander Zhendov str., 1113 Sofia, Bulgaria

**TEKNOLOGI-RÅDET**



**Rathenau Instituut**



Contact: Zoya Damianova  
[zoya.damianova@online.bg](mailto:zoya.damianova@online.bg)  
[www.arcfund.net](http://www.arcfund.net)



**Instituto de Tecnologia Química e Biológica-  
Institute of Technology of biology and  
chemistry (ITQB)**

Avenida da Republica, Estacao Agronomica  
Nacional,  
Oeiras, 2784-505, Portugal  
Contact: Mara Almeida  
[marasilvalmeida@gmail.com](mailto:marasilvalmeida@gmail.com)  
[www.itqb.unl.pt/](http://www.itqb.unl.pt/)



**Institute Society and Technology (IST)**

Leuvenseweg 86, B-1011 Brussels, Belgium  
Contact: Johan Evers  
[johan.evers@vlaamsparlement.be](mailto:johan.evers@vlaamsparlement.be)  
[www.samenlevingentechnologie.be](http://www.samenlevingentechnologie.be)



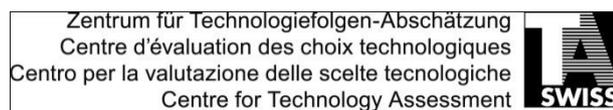
**The Catalan Foundation for Research and  
Innovation (FCRI)**

Pg. Lluís Companys, 23, ES-08010 Barcelona,  
Spain  
Contact: Belén López  
[belen.lopez@fundaciorecerca.cat](mailto:belen.lopez@fundaciorecerca.cat)  
[www.fundaciorecerca.cat](http://www.fundaciorecerca.cat)



**Swiss Centre for Technology Assessment (TA-  
SWISS)**

Brunngasse 36, CH-3011 Berne, Switzerland  
Contact: Danielle Bütschi  
[danielle.buetschi@ta-swiss.ch](mailto:danielle.buetschi@ta-swiss.ch)  
[www.ta-swiss.ch](http://www.ta-swiss.ch)



**Association Knowledge Economy Forum  
(KEF)**

Galvydzio 5/96, LT-08236, Vilnius, Lithuania  
Contact: Edgaras Leichteris  
[edgaras@zef.lt](mailto:edgaras@zef.lt)  
[www.zef.lt](http://www.zef.lt)



**Technology Centre ASCR**

Ve Struhach 27, 160 00 Prague 6

Contact: Lenka Hebakova

[hebakova@tc.cz](mailto:hebakova@tc.cz)

[www.tc.cz](http://www.tc.cz)



**Scientific and Public Involvement in Risk  
Allocations Laboratory (SPIRAL)**

Boulevard du Rectorat 7/29, B31, 4000 Liège,  
Belgium

Contact: Pierre Delvenne

[pierre.delvenne@ulg.ac.be](mailto:pierre.delvenne@ulg.ac.be)

[www.spiral.ulg.ac.be/](http://www.spiral.ulg.ac.be/)



**University College Cork (UCC)**

Western Road, Cork, Ireland

Contact: Frederic adam

[PACITA@ucc.ie](mailto:PACITA@ucc.ie)

[www.ucc.ie](http://www.ucc.ie)



**Secretariat of the Hungarian Academy of  
Sciences (HAS-SEC)**

Nádor utca 7, H-1051 Budapest, Hungary

Contact: Janka GAUGEZ

[gaugecz.janka@office.mta.hu](mailto:gaugecz.janka@office.mta.hu)

[www.mta.hu](http://www.mta.hu)



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# Making Cross European Technology Assessment

## Executive summary

This paper is written as part of the PACITA project, and discusses the past, present and future Cross-European work going on in the field of Parliamentary Technology Assessment. PACITA (Parliaments and Civil Society in Technology Assessment) has set an aim to broaden the European field of technology assessment (TA) and create a vision on the future of cross European TA. The whole of Europe is getting more closely connected, the European Union is growing and with the rapid technological development, there is a need for establishing networks and knowledge bases in a cross European manner.

The technological development is more than ever taking place on an international level. Therefore, it is logical that the assessment of this development also has an international or European level. This has already been identified in the area of European science policy, moving from “science in Europe” to “European science”. Focus has moved from coordination of national projects, to the development of a more integrated, pan-European science base. PTA has to play a role in this.

Main questions to be dealt with in this paper will be:

- Why is there a need for Cross-European TA?
- How can it be established in a most efficient way?

To answer these questions we studied several cases of finished (P)TA projects. It turned out that the project structure i.e. organization and funding are crucial parameters for success or failure of such projects. Another structural challenge is the tension between national/regional scope of (P)TA institutions and the efforts necessary to go European. When topics are relevant across borders, it's reasonable to think that it would be more effective to make projects on a cross European basis, than every unit doing similar projects in their country/region. However there are only few examples to be found. Despite the fact that technological issues are going to be more and more international, there is not a clearly defined “European” addressee of (P)TA. Cross European projects are vulnerable to time and resource demands, making cheap and yet consistent methods necessary. The conceptualization of cross European TA is still in its creation. An important aspect of this is the identification of efficient, high-credibility cooperation modes for national actors and actors on the European level.

The paper will present the added value in doing work across borders, argue the importance of identifying the right addressee and target groups, and address the tension that may arise from national/regional TA structures and the prospect of doing cross European projects. The paper derives findings from several case studies of finished “cross European TA” projects and discussions from two workshops organized by the PACITA project, in June and November 2012. Based on these we will present a vision for “European TA 2020” showing how cross European TA may continue to develop in the future.

## Introduction

PACITA<sup>1</sup> aims at increasing the capacity and enhancing the institutional foundation for knowledge-based policy-making on issues involving science, technology and innovation, mainly based upon the diversity of practices in Parliamentary Technology Assessment (PTA). One of the specific tasks is to describe schemes for using PTA trans-nationally and at European level<sup>2</sup>. This task provides a basis for an extended use of cross-European technology assessment (TA). The work focused on the following aspects of cross-European TA: (i) the added value of cross European work and lessons from past experiences. Case studies of successful cross-European TA are described and the pros and cons of the project constructions were analysed. (ii) Modes of cooperation: The conceptualisation of cross-European TA is still in its creation. An important aspect of this is the identification of efficient, highly credible cooperation modes for national actors and actors on the European level. In order to facilitate the future cooperation a vision for European TA 2020 was produced. (iii) Addressees and target groups: The purpose of setting up cross-European TA needs to be attached to a customer relation. Therefore the issue of “the European public” and specific addressees and target groups have been analysed.

The following paper is based on the analysis of eleven case studies of concluded cross-European TA projects<sup>3</sup>. The findings have been discussed in two workshops<sup>4</sup> with PTA and non-PTA stakeholders and experts.

## Technology assessment in Europe

The Office of Technology Assessment (OTA) advised the US Congress on questions related to the complex relationship between society, science and technology for 23 years (1972-1995). Some of the most evident heritage from OTA is the huge inspiration it played when the field of TA developed in Europe.

In the 1970s, initiatives were taken to introduce technology assessment in Europe, from the OECD, the European Commission and individual states. Following this, offices for parliamentary technology assessment (PTA) were established in several European countries and regions. In 1990 Lord Kennet (POST) proposed to establish the European Parliamentary Technology Assessment (EPTA) network. Founding member institutions were POST<sup>5</sup>, OPECST<sup>6</sup>, TAB<sup>7</sup>, the Rathenau Instituut, the DBT<sup>8</sup> and STOA<sup>9</sup>. Today, EPTA has 14 members and four associate members<sup>10</sup>. It aims at strengthening the links between offices for technology assessment throughout Europe, and establishing technology assessment as an integrated method when advising parliaments in decision-making. The member institutions are various, both in their organizational structure and working methods<sup>11</sup>. This makes EPTA a network with a broad knowledge base, which draws on input from experts, NGOs and citizens.

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<sup>1</sup> [www.pacitaproject.eu](http://www.pacitaproject.eu)

<sup>2</sup> Talking about Europe we mean geographical Europe and not the European Union only.

<sup>3</sup> see Annex 1

<sup>4</sup> see Annexes 2-3

<sup>5</sup> Parliamentary Office of Science and Technology - UK

<sup>6</sup> Parliamentary Office of the Evaluation of Scientific and Technological Choices - FR

<sup>7</sup> Office of Technology Assessment at the German Bundestag

<sup>8</sup> Danish Board of Technology

<sup>9</sup> Christine Wennrich (1999): European Parliamentary Technology Assessment Network (EPTA) in Bröchler S. et al. (Ed.): Handbuch der Technikfolgen-Abschätzung, 2 edition, Berlin: Edition Sigma, 535-537

<sup>10</sup> [www.eptanetwork.org](http://www.eptanetwork.org)

<sup>11</sup> For a more thorough description of the different TA institutions, see PACITA Deliverable 2.2

Besides the broad EPTA-network there is a specific institution dealing with TA at the European level. STOA<sup>12</sup>, which itself is part of the network, serves the needs of the European Parliament. STOA is at the same time an important actor by commissioning TA studies to several institutions. Since October 2005 the European Technology Assessment Group (ETAG) serves as one of the contractors to STOA. ETAG is led by ITAS and consists of the following partners: DBT, IST, Rathenau Instituut, Fraunhofer ISI, FCRI, ITA and Technology Centre ASCR<sup>13</sup>.

Despite the establishment of PTA institutions in many European countries and at the European level (STOA), cooperation between the different (P)TA institutions remains limited. Although there have been a number of joint projects in the framework of EPTA as well as projects funded by the European Commission (see below), one cannot speak of regular cross European TA cooperation. The whole of Europe is getting more closely connected, the EU is growing and the rapid technological developments have implications that go beyond national borders. In this respect, there is a need for establishing result-oriented European networks in the field of (P)TA, so that technological innovation can be considered in a global perspective, taking into account both national and European realities.

This endeavour for a closer cooperation between European TA institutions lies at the core of the PACITA initiative (Parliaments and Civil Society in Technology Assessment). The project has set an aim to foster the European scope of technology assessment and create a vision for cross European TA in 2020.

### **What is cross European (P)TA?**

In the context of this paper we define cross European TA as TA (projects) done by a group of TA institutions across borders. It implies a common objective and cooperation but not necessarily applying the same methods. Cross European TA is not necessarily pan-European TA in the sense that the whole of Europe (27+) is covered in terms of membership neither in the PACITA consortium nor with regard to the results and impact of the project. Pan-European TA on the one hand aims at a collective Europe, whereas cross-European cherishes the diversity of approaches and cultural contexts in order to reach added value for all addressees and involved actors.

Within the PACITA project, several workshops have been organized in order to better define the vision of a TA that would perform at a cross European level. From the discussions, it appeared that cross European TA should be understood as cooperation processes between different institutions of technology assessment in Europe. The idea is that the specificities and qualities of the different institutions may bring valuable insights on common and/or global issues.

The EPTA network has on several occasions conducted joint projects where EPTA members have cooperated and made cross European PTA activities. These projects are carried out in the "Joint EPTA Project Framework", where three or more members can initiate a project, which is open for participation from other EPTA members. The projects are adopted at either a Directors' Meeting or a Council Meeting. There are now EPTA reports on four such joint projects from 2004 until 2012 available.<sup>14</sup> Issues cover "ICT and privacy in Europe", "Genetically modified plants and food", "Energy transition" and "Preparing for the next wave", dealing with synthetic biology.

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<sup>12</sup> European Parliament - Science and Technology Options Assessment (STOA)

<sup>13</sup> <http://www.itas.kit.edu/english/etag.php>

<sup>14</sup> [www.eptanetwork.org](http://www.eptanetwork.org)

In recent years, many TA institutions have also cooperated in project consortia funded by the European Union.<sup>15</sup> The EU research programs are now reflecting the “new” and expanding Europe and many policy decisions are made across borders. The knowledge production financed by the EU needs to reflect this, and encourage cross European projects to have an impact on the processes that shape European policies.

Parliamentary technology assessment and TA methods have been seen as instruments for reviving the power of parliamentary bodies in Europe and broadening public discussion and awareness of technology’s impacts on society<sup>16</sup>. PACITA aims at enhancing the (P)TA capacities in Europe, by supporting institutionalization and encouraging TA activities in countries and regions that are less experienced in the field of (P)TA. PACITA’s work on cross European TA aims at lowering the threshold for cooperation between countries.

This paper will discuss three topics that may help reaching this goal: (i) to identify the added value of cross European work, (ii) to identify addressees and target groups of cross European projects and (iii) to indicate how to deal with the tensions between national/regional TA structures and the ambition to act European. In addition, a vision for cross European TA 2020 has been formulated, that illustrates, on a more general level, the values that will be important in the future of cross European cooperation. PACITA has organized two workshops where these questions have been discussed among PACITA partners and other TA actors in Europe<sup>17</sup>. In addition, partners in the PACITA project have written several case descriptions of previous conducted cross European projects. These have been compared with regards to process, financing, mode of cooperation etc., to find the strengths and weaknesses cross European projects.

### **Why cross European TA?**

The emerging technologies debated in different countries are more or less the same. But contexts and timing of discussions, and the shaping of technologies will differ nationally. Thus, cross-European TA can contribute with agenda-setting and policy support at the European level and at the same time inform national science and technology discourse.

All European countries (whether EU members or not) relate to European regulation in some areas. These areas of regulation might be interesting subjects for cross European TA. It could create a common platform between the partners, and it will create a connection between the national and the European spheres. If a European issue is important for policy-making at the national or regional level, it would probably be a suitable topic for a cross European TA project.

There have been several research projects and reports documenting the activities and methods of (P)TA in Europe<sup>18</sup>. But few of these have discussed cross European cooperation and how this can be done in the best possible way. A STOA study from 2012, describes collaboration between PTA institutions as limited<sup>19</sup>. Most PTA units have formed their role around the specific needs of their national or regional parliaments, and other national or regional target groups. Therefore, the report argues, it can be difficult to shift focus and create a new role for them in a European sphere.

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<sup>15</sup> Actually the first kind of “joint project” was EUROPTA (1998-1999), which was partly financed by the TSER programme of the European Commission. Other examples are Meeting of Minds (2006), TAMI (2004), PRISE (2006-2008), CIVISTI (2008-2011), DESSI (2011-2013), SurPRISE (2012-2015) and PACITA (2011-2015)

<sup>16</sup> Vig, N.J. and Paschen H. (1999), *Parliaments and Technology. The Development of Technology Assessment in Europe*. New York: University Press

<sup>17</sup> Including partners from EPTA and STOA that are not active partners in PACITA.

<sup>18</sup> For example EUROPTA (2001) and the TAMI project (2004)

<sup>19</sup> STOA (2012), *Technology across borders. Exploring perspectives for pan-European Parliamentary Technology Assessment*

## What is the added value in doing cross European projects?

(P)TA institutions have their mandate mainly focused on the national and regional sphere. Some have an identified task to “watch trends in science and technology”<sup>20</sup> (both national and international), but none have participation in international projects as a formal task. Identifying and understanding the added value in cross European projects may help to open up and stimulate more cooperation and at the same time justify international cooperation at the national level.

PACITA is a good example of how (P)TA institutions can benefit from doing cross European projects. PACITA will strengthen the ties between the existing (P)TA units, and also help institutionalize and strengthen new (P)TA initiatives in Europe. By aiding the institutionalization of new units, the network will also get fresh input from the “newcomers”. Also, the organization of summer schools and practitioners training enables mutual knowledge production and exchange across Europe.

For the institutions, the participation itself can produce added value. The cooperation with other institutions provides for institutional learning and exchange of experience. How one approaches a topic, the method one chooses and the framing of a project is highly contextual. Input from and discussions with other practitioners can be mutually beneficial. It broadens one's perspective and can shed light on new sides on an issue. The networks can also strengthen capacity, both in the institutions and the (P)TA community as a whole: for (P)TA units with limited resources, the contact with other units can enhance their portfolio, broaden their field of expertise and range of methods.

The technological developments are more than ever taking place on an international level. Therefore, it is logical that the assessment of these developments also has an international or European level, through networks and cooperation. This has already been identified in the area of European science policy, moving from “science in Europe” to “European science”<sup>21</sup>. Focus has moved from coordination of national projects, to the development of a more integrated, pan-European science base.

When topics are relevant across borders, it's reasonable to ponder whether it would be more effective to make projects on a cross European basis, than every (P)TA unit doing similar projects in their country/region. Adding a backdrop of the situation in Europe could also be interesting for the communication of national/regional projects.

## Who are the addressees and intended target groups when doing cross European TA?

One of the main characteristics of many European PTA units is their strong connections to the parliaments. This has often been institutionalized either by organizing the unit *inside* the parliament (the parliamentary committee or parliamentary office models<sup>22</sup>), or stated in the terms of reference; identifying the parliament as the main addressee (independent institute model)<sup>23</sup>. Many of the PTA units additionally communicate their results to a larger audience consisting of different target groups. This could be scientific communities, ministries or other governmental offices and the general public.

To separate the notion between an addressee and target group<sup>24</sup>, one can describe the addressee as the main recipient of the message. The addressee can take decisions based on the communication from a

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<sup>20</sup> PACITA Deliverable 2.2

<sup>21</sup> M. Nedeva and M. Stampfer (2012), From «Science in Europe» to «European Science». SCIENCE VOL 336

<sup>22</sup> STOA (2012), Technology across borders. Exploring the perspectives for pan-European Parliamentary Technology Assessment.

<sup>23</sup> PACITA Deliverable 2.2

<sup>24</sup> This distinction is based on discussions at the PACITA T 2.2 Workshop in Copenhagen, June 21<sup>st</sup> 2012.

project. Target groups are a broader audience of relevant scientific environments, NGOs, interest groups or specific citizens groups.

When the (P)TA activities move up to the European level, it becomes more difficult to identify addressees and potential target groups. In the national contexts there exists a defined public sphere; while there is no clearly defined “European public”. Brussels serves as an important policy arena, with many important target groups within the EU. But as (P)TA activities include institutions and countries that are not members of the EU, it becomes important to also identify target groups outside the Union. This raises a considerable challenge when conducting cross European projects: to have impact, one needs an addressee.

Knowing the importance of a clear addressee there is a need to find the best ways to identify and communicate with addressees and target groups at the European level. First of all, it demands a thorough dissemination strategy in all projects. Every project has to identify its own public, both addressees and target groups, something that most likely will be quite different from project to project. The identification process has to start at the same time as the project itself, and continue throughout the project. In this way, the project can identify recipients, get input from relevant communities and actors during the project, and know where to direct the message in the end.

Another approach is to have a more systematic view of addressees and target groups when working at the European level than at the national/regional level. If the goal of (P)TA is to give input for knowledge-based decision-making, it might help to broaden the definition of who decision-makers really are. In national contexts, parliaments and government stand out as the main decision-makers. In the European context, the European Commission and the European Parliament play important roles. But Europe is multifaceted and consists not only of the European Union; national representatives on different levels do have a say too. Besides this, many others (lobbyists, NGOs, the media) also take part in decisions and hold power in important discussions.

An important target group that several projects might have in common is the TA community itself. Communicating the results from well-conducted cross European projects can both be used at the national level from institutions not involved in the specific project and also to encourage others to participate in future projects and enrich and communicate the value of these projects. This would contribute to a bigger portfolio of cross European projects, and a broader field of participating institutions – hence raising the legitimacy and the trust in cross European projects.

### **How to deal with the tension between national/regional TA structures and the ambition to act European?**

For many PTA units, there arises a tension between doing national projects and participating in European projects. Easing this tension might be one of the factors that can lower the threshold for doing cross European TA.

Tensions arise from the fact that PTA institutions mainly have a national focusing their mission. Thus, participating in European projects might take away both focus and resources from the national working programs. Therefore, providing sufficient resources for cross-European activities can be one important factor in lowering the threshold for national bodies to engage in European activities. The increasing participation in EU funded projects also supports this notion; when there are special funds available for working at the European level, institutions easily see the added value of joining a consortium.

However, there is a strong argument that cross European TA may be stronger if there is structural financing for cross European cooperation, which is not limited to individual projects. It is easier to stay present in a field if you know there will be more than one single project. The opportunity to really establish TA as a field, and having the finances to keep up the work, might make the European sphere more enticing. Long term presence and more structural financing could be an incentive for more cross European work.

For some institutions, their organizational set-up creates a barrier for participating in European projects. Mainly, the institutions organized as parliamentary committees have restricted access to participation in European projects. Having the national/regional parliaments as the sovereign in budgetary matters, they cannot bind themselves by contracting with the European Commission. For parliamentary offices the same arguments apply with regard to their closeness to parliament. The more independent (P)TA bodies are, the lower the barriers for seeking EU-funding are. With a structural fund for cross European TA activities there might be a chance to overcome these barriers and involve all types of (P)TA bodies more closely.

Being part of a European network is in itself of great value for many institutions. It gives input and updates both on topics of interest and the development in the field of technology assessment. Networks like EPTA strengthen the position of technology assessment in Europe and the rest of the world. Through EPTA, and initiatives like PACITA, countries and institutions that seek to establish (P)TA structures, can get access to a larger group of (P)TA units, and possibilities for mutual learning. Nevertheless the barriers described above hinder a more vital development of cross European TA so far.

## A vision for European TA 2020

During a workshop, PACITA partners elaborated a vision for European TA 2020 shaped by cross European activities<sup>25</sup>. The vision consists of important cornerstones for cross European TA, describing both the added value and the features of cross European TA for the future.

Cross European TA needs to be **inclusive** and **diverse**. Over the last couple of years, the field of (P)TA has changed. Several institutions have been transformed and one can see a need to broaden the scope of European TA, from purely Parliamentary TA (PTA) to other forms of TA involved in policy-making processes in different ways. Having an inclusive and diverse approach will broaden the TA landscape and include diversity in approaches as well as institutional settings. This will create room for several kinds of technology assessment, not only parliamentary technology assessment. Inclusiveness also implies that TA will spread to more countries in the coming years. Progress made during the first phase of PACITA has given good signals, and one could envision a goal of covering all of Europe, and even beyond. A diverse use of methods is something that already identifies the TA field. How to identify methods that are well suited for cross European cooperation and spread these methods between the institutions is a challenge that should be tackled in the near future.

Although this is a vision for European TA, being **international** is another important cornerstone. Technology assessment is a growing field all over the world, and wide spreading TA in Europe enables things to happen also elsewhere in the world. Acknowledging that others in the world have the same challenges but deal with them differently can give knowledge and new perspectives.

An essential element in our vision for European TA is the notion of **independence**. This refers to the independence of TA institutions from stakeholders' interests and influence as well as the independence

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<sup>25</sup> This vision is a result of a workshop held in Karlsruhe 12.-13. November 2012. Participants were from the PACITA partner and other European TA actors.

from funders and policy-makers themselves. Independence is important to keep the TA institution's credibility, and it will strengthen the reputation of TA in Europe at a more general level. Giving well-founded and independent advice is one of the main strengths of TA, compared to the advice from NGOs and lobby groups, who have their own interests in mind.

One of the main targets of PACITA is to help institutionalize new (P)TA units. Processes like these can often be long and difficult, but a more **permanent** and **stable** presence of TA at the European level will be an important support for "TA startups". The argument that there exists a strong and stable landscape of TA institutions in Europe will be helpful, not only in PACITA, but for similar processes in the years to come.

A result of a stronger and more stable TA structure is that **promoting** and **lobbying** for TA will be easier. Communication of project results, both national/regional and European, can help promote technology assessment as an important input for knowledge-based policy making. Having a continuous communication of TA in Europe will also make it easier to identify the possible addressees and target groups, in general and for specific project topics.

Having TA institutions all over Europe will make in the field of TA highly dynamic and create a **catalytic** effect. Issues will be dealt with together and common projects will enhance and thereby broaden the horizon of the individual institutions and bring feedback to the national and regional contexts. The **knowledge sharing** between institutions will be a real added value of a stronger TA community. PACITA has already developed a common platform – the TA Portal<sup>26</sup> – that guides interested actors to relevant resources like reports, publications and experts. Cooperation between institutions and a platform like this will ensure exchange of ideas, development of methods and joint projects.

The catalytic effect and knowledge sharing between the institutions creates a community that is **more than the sum of its parts**. Doing projects together and using the knowledge base of others will help create synergies and learning effects. The community will in itself create added value, both for the institutions and their addressees and target groups.

The most important overall goal of this vision and of TA in general is **making an impact**. This will be strengthened by all the arguments in this paper and the developments mentioned above. A growing TA community in Europe will demonstrate the relevant addressees that TA is important and make them seek advice from TA institutions. Projects like PACITA can contribute in making technology assessment a player on both international and national/regional level, by broadening the field of TA and supporting a strong TA community in Europe.

## **Conclusion and recommendations**

There are many arguments that prove the added value in doing cross European work in the field of technology assessment. But there are also some barriers; the difficulty in finding the right addressee and making an impact on the European level, and the tension that can arise between the national/regional structures and resources when participating in cross European work. In this paper we have discussed the added value and the potential barriers, and formulated important cornerstones to create a stronger European basis for TA in the future.

Lowering the threshold for doing (P)TA across borders depends on several factors, some structural, external factors, and some factors that the institutions involved can influence themselves.

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<sup>26</sup> [www.technology-assessment.info](http://www.technology-assessment.info)

The biggest external challenge is financing. There is a need for more structural financing of cross European activities. Engagement beyond single projects will help establishing PTA as a stronger branch in advising European decision-making, and will encourage institutions to commit on a longer basis. Successful projects are probably the best encouragement for the establishment of new projects. To achieve this and adapt to the European level, there are certain internal factors the institutions should consider on the project level.

Being used to working in an interdisciplinary field, using a wide range of methods and involving different groups of people, the (P)TA institutions are well prepared for cooperation with different institutions and across borders. However, one area that is more complex at the European level is the communication and dissemination of the projects results. To have an impact, the addressee and potential target groups must be defined for each project. This takes time and effort, but will prove useful both during the project and when communicating the message in the end. This could involve defining addressees and target groups in a much wider sense than what one is used to from national or regional structures.

For many (P)TA units and their funders, the best use of their resources so far, is on the national or regional level, where they have their main tasks and addressees. To overcome the tension that might occur between the national/regional and the European level, there are several things to consider. First, if a more structural financing is established, cross European work will not take up resources that would otherwise be used nationally or regionally. Also, the exchange of knowledge that occurs in cooperation might actually save resources. If an institution has done work in a specific area, others should not be afraid to use the experience and knowledge already produced in this specific field. To participate in European networks and common projects can provide institutions with valuable knowledge. PACITA has started the work on this, by doing three exemplary projects involving different kinds of partners. Using three different methods, PACITA will conduct projects on public health genomics, the future of ageing and sustainable consumption. This will encourage TA activities in several European countries, also in countries that don't have an established TA institution yet. PACITA has also created the TA-Portal, which is an open resource for knowledge sharing and learning about technology assessment.

Partners in the PACITA project have, after the two workshops on cross European TA, taken the initiative to set up a working group that will look into the possibilities of establishing a European association for TA. This association will embrace the vision for European TA 2020 created by PACITA, and continue the work on lowering the threshold for and spreading cross European TA. This will be important work to ensure that TA will have impact on the European level in the future.

Taking a more inclusive and diverse approach, is something that might help creating a stronger TA community in Europe. Including institutions beyond parliamentary technology assessment will broaden the field and create a stronger basis for impact on decision-making on the European and national/regional levels.

Having an impact on decision-making and knowledge production in Europe should be an overall goal of European (P)TA institutions. This demands more activity by the institutions and a strong presence in the European arena. All (P)TA units more or less have to deal with the same or similar technological trends in society. Even though the political culture might vary in different countries and regions, one can learn from each other and give input to the policy-making processes, also in a cross European manner.

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# Annex I: Case Descriptions

## **Technology options in Urban Transport**

### **Name**

Technology Options in Urban Transport: Changing paradigms and promising innovation pathways

### **Partners**

Institute for Technology Assessment and System Analysis (ITAS); Karlsruhe Institute of Technology (KIT) - coordinator

Danish Board of Technology

### **Initiators**

The project was carried out by Institute for Technology Assessment and System Analysis (ITAS); Karlsruhe Institute of Technology as a member of ETAG (European Technology Assessment Group) and commissioned by STOA (Science and Technology Options Assessment) which is an official organ of the European Parliament working with the assessment of scientific and technological policy options.

### **Funding/Budget**

200.000 € / STOA, European Parliament

### **Time scale**

January 2010 – October 2011

### **Short description**

Urban transport is a basic pillar for economic growth and the quality of life in European cities. At the same time, transport has many negative impacts on the environment and on human health. As motorized individual transport has grown and as oil-dependency of modern transport systems is projected to become a serious problem in the future, solutions to urban transport challenges are needed more and more. The project had the ambition of looking at technologies from an innovation-oriented angle stating that innovative technologies and organizational innovations have to be not only developed but also implemented on a larger scale to become effective. The overall aim was to highlight promising innovation pathways to a more sustainable urban transport system.

### **Objectives**

The projects objectives were to:

- provide an inventory of both existing and future technology options in urban transport as well as an overview on the scientific knowledge about their (potential) impacts on health and/or environment.
- look at the socio-economic context in which these technologies are or will be implemented.
- analyse the knowledge about perceptions, motivations and the changeability of behavioural patterns of the actors, in particular users, which are relevant for the successful implementation of technological and organisational innovations in urban transport.

## **Process design**

The project consisted of five phases:

The aim of phase 1 was to sharpen the focus and to optimise the methodological approach of the project. Interested MEPs of the transport committee were identified and interviewed on views and interests that should be included in the project. Another important task was screening and scoping of existing material relevant for the project.

Phase 2 gave a description of perceived problems of recent urban transport systems by looking at existing technologies in urban transport and their impacts with particular focus on health, demand for transport and modal split and congestion/transport flow. A description of changing paradigms and visions of future urban transport systems was only made by looking at the historical development of transport paradigms and by comparing different visions about future urban transport systems in relation to their goals, their degree of concreteness and to the preferred technologies and policies mentioned to reach these goals. Special focus was put on the perceived role of sustainable transport.

In relation to the paradigm of sustainable transport described in phase 2, phase 3 investigated how this paradigm is materialising. This was done through researching on which technology options and organisational innovations are discussed to enable a transition to sustainable urban transport, which framework condition seems to be needed for successful development and implementation of technology options and organisational innovations and what kind of user behaviour is anticipated in relation to the discussed technologies.

In phase 4 perceptions and attitudes of different user groups in relation to selected innovation strategies was investigated through conducting interview meetings in Copenhagen, Budapest and Karlsruhe.

On basis of results of the previous phases, phase 5 integrated conclusions of the project in a final report discussing how the potential of technology options and innovation can be better exploited and which innovation strategies to a more sustainable urban transport system are most promising.

## **Methods used**

Desk research and expert consultation (interviews, workshop) where the primary tools in the first phases of the project. In phase 4 interview meeting were conducted in three European countries (Denmark, Germany and Hungary) which is a method combining the filling of a questionnaire with group interviews. Using initial experts/stakeholder consultation supported a mapping of the questions of interest and created interest and engagement among the MEPs who were to use the results of the project. Desk research gave an extensive impression on the knowledge in the field and on the current state of innovative and sustainable transport initiatives in European cities as well as on expected developments in the future. Data gathered in the interview meetings provided a "reality check" as to which factors were in competition with environmental concerns when transport users choose and change transport means. Further, the enabled to tackle more in-depth some open but crucial questions related to relationship between transport technologies and mobility behavior.

## **Stated target groups**

The project's primary target group was the members of the STOA panel and other members of the European parliament. Secondary target groups were other relevant policy makers, officials, industry, the scientific community and the general public.

**Output**

The output are a number of Deliverable which as summarized in a final report. The key-message is that more holistic approach needs to be applied to understand and govern the dynamics in the transport sector. This needs to be supported by highly interdisciplinary research and also demonstration activities. Innovation are not coming into a static system, but into a dynamic one. Policy packages are needed, that take into account this dynamics and the interplay between them.

**Formal evaluation**

No

**Problems met**

Always difficult the design project that are producing additional information for policy maker sin a field where already a lot of research has been conducted.

## **Challenges of Biomedicine**

### **Name**

Challenges of Biomedicine: Socio-Cultural Contexts, European Governance and Bioethics (COB)

### **Partners**

- [University of Vienna](#), Department of Social Studies of Science (Coordinator)  
Prof. Ulrike Felt, Maximilian Fochler, Ruth Müller, Peter Winkler
- [Humboldt University Berlin](#), Department of European Ethnology  
Prof. Stefan Beck, Katrin Amelang
- [University of Lund](#), Sweden, Centre for Theology and Religious Study & Dep. of European Ethnology  
Prof. Susanne Lundin, Helena Röcklinsberg, Anna Johansson
- [Makarios III Medical Centre](#), Cyprus, Nicosia Dept. of Clinical Genetics  
Violetta Christophidou Anastasiadou, Costas Constantinou
- [University of Utrecht](#), The Netherlands, Institute for Ethics  
Prof. Marcus Düwell, Annika DenDikken, Nils Nijsingh
- [University of Latvia](#), Latvia, Department of Sociology  
Aivita Putnina
- [University of Nancy](#), France, Research Group on Information, Communication and Propaganda  
Anne Masseran, Philippe Chavot
- [University of Leeds](#), UK, Institute of Health Sciences and Public Health  
Prof. Darren Shickle, Marcus Griffin
- [University of Goettingen](#), Germany, Department of Medical Ethics and History of Medicine  
Prof. Silke Schicktanz, Mark Schweda

### **Initiators**

The project was initiated by Silke Schicktanz, then at the Max Delbrück Centre for Molecular Medicine. As Silke Schicktanz left Max-Delbrück, the institution left the consortium and the University of Vienna took over the project coordination.

### **Funding/Budget**

810.000 Euro

Funding came from the European Commission, 6th Framework programme "Science and Society"

### **Time scale**

April 2004 – September 2007

### **Short description**

The CoB project aimed at exploring the interrelation between socio-cultural conditions and public perceptions of medical research and practice. It posed the question to what extent concepts of identity on the cultural, bioethical and political level are influenced by biomedicine and, conversely, shape and regulate biomedical practices themselves.

The socio-cultural background of modern biomedicine was examined in a comparative analysis of qualitative empirical data gathered in different European countries: Germany, France, the Netherlands, Sweden, Austria and Cyprus. Moreover, perspectives from Latvia and Great Britain were taken into account selectively. The emphasis of the project was on the question how laypeople and patients view modern medicine and live with it. The interactions and interdependencies between medicine and culture were analyzed along two main comparative axes. On a first level the countries involved were compared to trace different cultural approaches. Secondly, two different medical technologies, organ transplantation and postnatal genetic testing, were used as comparative examples. These two technologies raise different ethical and social problems and hence challenges for governance.

On this basis, the CoB project developed conclusions and recommendations for the academic context as well as for European and national policy makers. These address questions of European harmonization, citizen participation and governance as well as bioethical issues.

## **Objectives**

### Thematic objectives

- Qualitative comparative research on different socio-culturally framed ways of dealing with modern biomedicine in selected European countries
- Investigation on how members of the public assess the impact of modern biomedical technologies on their body, identity, ways of knowing and social relations
- Analysis of how European citizens reflect on the socio-political consequences of modern biomedical technologies, different modes of governance as well as opportunities of public participation
- Investigation of the role of cultural concepts like identity and bodily integrity in the present bioethical discourse
- Reflection and evaluation of the consequences of the cultural plurality of moral conceptions on the debate on European bioethics
- Recommendations for the development of ethical regulations and possibilities of governing research and practice in the field of medicine and life sciences

### Methodological and theoretical objectives:

- Contribution to interdisciplinary research at the interface of bioethics, social studies of science and medical anthropology
- Advancement of qualitative comparative methods for investigating patients' and laypeople's attitudes towards questions of biomedicine in an international and interdisciplinary research setting
- Development of key concepts for an intercultural bioethical discourse
- Establishment and structuring of a European network for the exploration of biomedicine from an ethical and sociological point of view

## **Process design**

The project investigated the influence the European public and the biomedical science exert on each other. This bio-political relationship was examined by analysing the variety of important concepts such as 'identity', 'citizenship', and 'integrity of human body' and to what extent biomedical science interacts with them. The significance of this interaction was examined in two dimensions:

- opportunities of participation and governance of medical science, and
- cultural plurality and diversity of public preferences towards biomedicine (esp. genetic testing and transplantation medicine).

The cross-cultural comparative investigations were done in an interdisciplinary team from 8 different countries in Northern, Southern, Western and Eastern Europe. Empirical data of local lay people and patients attitudes towards participation and cultural aspects of biomedicine was recorded by focus group discussions, interviews and ethnographic studies. The analysis was organized in four sub-projects:

- The forms and processes of medicalization and geneticization in European countries.
- The importance of 'body', 'health', 'gender' and 'religion' for the public acceptance of biomedicine and gene technology.
- Ethical reflection on cultural diversity, governance and participation.
- The interference between public understanding of science and participation/governance in cultural contexts.

The synopsis of these sub-projects clarified:

- How governance of science and medico-ethical standards in Europe can be harmonised with cultural variety and multitude of preferences.
- How and to what extent lay people and patients should participate in decision processes in health care and medical institutions.
- The role the various actors, stake holders, lay people, scientists and policy makers could play in European governance of science and clinical research.

In the end the results contained recommendations for policy makers and was disseminated by public presentations and publications.

### **Methods used**

The project employed a multi-method research design, comprising

- [desk-based research on the state of the art](#) of the legal, socio-political and socio-economic specificities of biomedicine in different European countries to facilitate later comparative work,
- [focus group discussions in different national contexts](#), in order to grasp different public approaches and attitudes towards modern biomedicine,
- [in depth ethnographic interviews](#) (in Sweden, Germany and Cyprus) to gain deeper insights into people's every day practices of coming to terms with biomedicine.

Building on the findings of the above, a more fine grained and comparative analysis was done with focus on:

- concepts of medicalization and geneticization,
- public understandings of science, governance and participation,
- bringing together bioethical reflections with public moral claims concerning the body, identity and religious beliefs.

## Stated target groups

The stated target groups were academia and European and national policy makers.

## Output

What was produced/what was the output? Which recommendations were given?

The project presented recommendations on the basis of interdisciplinary socio-empirical research and ethical reasoning on attitudes of European citizens (lay people and patients), taking into account their moral opinions, cultural experiences and expectations about participatory issues and governance in the field of biomedicine (predictive genetic testing and organ transplantation).

The recommendations aim at assisting future activities of European and national policy makers to engage the public in a broader debate in ethical, social and cultural issues on biomedicine. Additionally, they should also prove useful to European and national research policies and agendas at the interdisciplinary intersection of social and ethical studies of science and medicine.

Recommendations:

- *Rec. 1: The harmonization of Europe should be re-thought while the richness of the large diversity as well as shared communalities of techno-political cultures should be acknowledged*
- *Rec. 2: Civic and citizen epistemologies should be recognized*
- *Rec. 3: The search for common values and overlapping consensus is in need of deeper reflections about impacts of medicine and technology on culture and identity*
- *Rec. 4: Ethical discourses should be understood as mutual learning process instead of static mapping of recent values*
- *Rec. 5: Bioethics in Europe needs multilayer empowerment on decision making instead of ensuring informed consent procedures*
- *Rec. 6: The concept of participation is in need for differentiation*
- *Rec. 7: Participation should not be seen as ‚standard recipe‘ solution, because it is not unconditionally welcomed by citizens*
- *Rec. 8: Context matters – The differences of technology and political culture should be taken into account*
- *Rec. 9: Strengthening qualitative comparative research in Europe is in need of specific financial support and structural conditions*
- *Rec. 10: Cross-disciplinary research in social science and ethics need dense expert exchange and time for mutual learning*
- *Rec. 11: Research on gender issues in the medical system should be enforced on the qualitative and quantitative level*
- *Rec. 12: Informal forms of knowledge should be recognized*
- *Rec. 13: Self-help groups and patients associations should be engaged as mediators between individual patients and professionals*
- *Rec. 14: Participatory elements in the health care sector should be strengthened and expanded*

- *Rec. 15: Public information policies should not be built upon the idea of public's deficit of information but on public's demand for information*
- *Rec. 16: Ensuring the right not to know should be based on the right to refuse modern medicine and to refuse personal support/donations.*
- *Rec. 17: Information policies should avoid stigmatization of patients and disabled people and stress the individual*
- *Rec. 18: Bioethics and public policies should acknowledge the variety of body concepts and anthropological premises in bioethical arguments and biopolitical efforts*
- *Rec. 19: A more patient adequate communication should avoid simple one-side rhetorics of science, progress and innovation.*

#### **Formal evaluation**

There has not been a formal ex-post evaluation of the project.

#### **Problems met**

In principle, the project was carried out as planned.

As mentioned in the recommendations, one major issue the project had to deal with is that comparative qualitative research would need another funding structure, which allows for more and longer face-to-face meetings and interaction in the interpretation of the data.

## **Citizen visions on science, technology & innovation (CIVISTI)**

### **Partners**

Teknologiradet – The Danish Board of Technology (coordinator)	DBT	Denmark
National Consumer Research Centre	NCRC	Finland
Institute for Society and Technology	IST	Belgium
Malta Council for Science and Technology	MCST	Malta
Applied Research and Communication Fund	ARC Fund	Bulgaria
Medián Opinion and Market Research Institute	Median	Hungary
Austrian Academy of Sciences, Institute of Technology Assessment	OeAW-ITA	Austria

### **Funding/Budget**

The CIVISTI project is a research project, supported by DG Research and Innovation of the European Commission under the call Blue Sky Research on Emerging Issues Affecting European S&T, Socio-economic Sciences and Humanities programme of FP7.

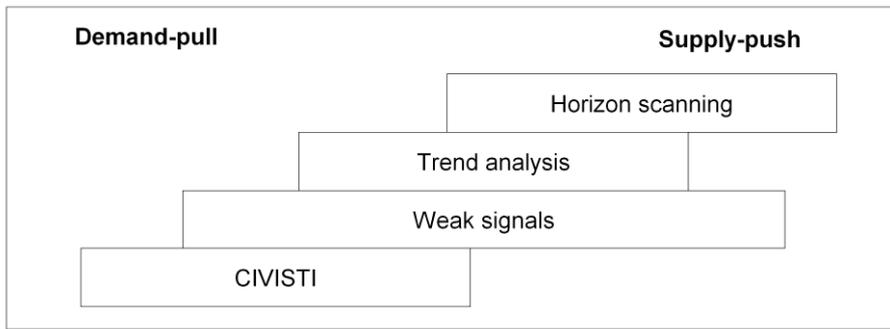
<b>CIVISTI</b>	<b>Total</b>
Person months	61,90
<b>Total budget</b>	<b>909570</b>
Personnel	309128
Travel & subsidy	72500
Other direct costs	136685
Subcontracting	43000
Indirect costs	348258

### **Time scale**

September 2008- February 2011

### **Short description**

The CIVISTI method is a new approach in foresight studies and forward-looking activities to investigate the demand for research. Most forward looking activities have taken their starting point in what could be called the supply side, understood as technological development and research disciplines



**Figure 1: The CIVISTI method as compared to other forward-looking approaches**

. CIVISTI was an experimental project. From the beginning a high risk was taken in the CIVISTI project, first of all because this kind of methodology had never been tried before. And secondly because this new, innovative and experimental process and method was developed during the project, so to say, CIVISTI has been a “learning-by-doing” process. Therefore the CIVISTI project included some degree of risk of not succeeding. At the same time the interdisciplinary; experienced consortium on foresight studies and participatory methods was a guarantee for achievement of project targets.

In the end though it is clear that CIVISTI did succeed. CIVISTI produced the results that were targeted by making a list of future S&T issues as well as recommendations for policy options related to future European research policy and base this on a novel and innovative methodology of involving citizens as well as experts and stakeholders. CIVISTI consortium received positive reactions from citizens, academia, and policy level when the results were presented at a Policy Workshop in Brussels in January 2011. The presentations of results in the follow-up process at national levels indicated the interest of the academia and policy makers on CIVISTI results and method.

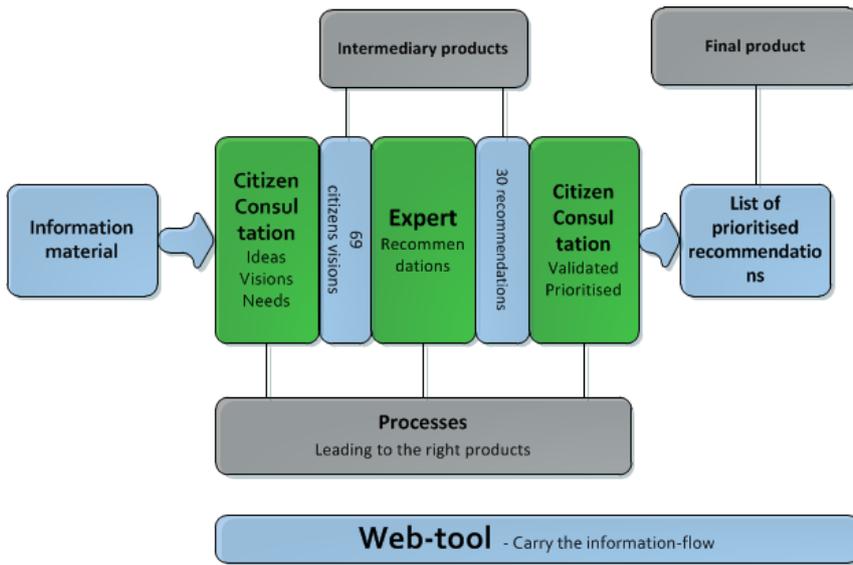
### **Objectives**

CIVISTI had the challenging task of producing a list of new and emerging issues for European S&T, produce a set of policy options of relevance to future European framework programmes, and base these products upon a novel process of citizen participation in seven member states, supported by the analytical capacity of experts and stakeholders

### **Process design**

The CIVISTI methodology builds on the interplay of foresight and participatory technology assessment, where citizens describe their visions of the future following the normative approach, while stakeholders and experts have the very challenging task to “translate” these visions in S&T issues and policy options, thus in this way through concrete recommendations supporting the process of defining Horizon 2020 and EU research policy in general. Citizens produced in the first step 69 comprehensive visions for the future of Europe. In the second step of the CIVISTI methodology a group of experts and stakeholder produced a list of 30 recommendations for future European S&T and research policy. Just like in the visions there is a lot of diversity in the recommendations. Many of the recommendations relate to today’s grand challenges: Ageing society; sustainable energy production and transport; environment and climate; and supply and quality of water and food.

As the third step of the CIVISTI process the citizens were asked to prioritise the recommendations made by experts and stakeholders. That resulted in this top ten list with a recommendation about research in attractive public transportation as the top prioritised.



**Figure 2: CIVISTI method** (Jacobi et al. 2011, see p. 10).

The CIVISTI methodology consists of three overall steps. First citizens around Europe were asked about their visions for the future. Seven Citizen Panels of 25 people were established, one in each of the CIVISTI partner countries (Austria, Belgium, Bulgaria, Denmark, Finland, Hungary and Malta). The people in the panels were not representative for each country, but they were selected to ensure diversity in the panel and there were some basic criteria for the selection gender, age, education and occupation). Each Citizen Panel made a long-term view into the needs, wishes, concerns and challenges of the future through a process of deliberation, informed by introduction material and expert and stakeholder input. This was done in 7 national citizen consultation weekends in May-June 2009. The result of this process was 69 visions for the future. Secondly experts and stakeholders analysed the citizens' visions and transformed them into research agendas and policy options for European research in a two-day expert- and stakeholder workshop in June 2010. The framework for extracting new S&T policy options from citizen visions practically was inspired by Kingdon's (Kingdon 1995) *streams model* of policy agenda setting, which is a widely applied approach in policy analysis.<sup>27</sup> The overall result of the expert- and stakeholder workshop was a list of recommendations for research agendas and policy options derived from the citizens' visions. Thirdly these results were given back to the citizens in the third step of the process where the citizens validated and prioritised the new S&T agendas and policy options before the results were presented to the relevant policy makers at a Policy Workshop in January 2011.

The more detailed process of carrying out the CIVISTI methodology had the following steps:

1. *Framing*

At the framing stage it was decided what should be the aim of the deliberation process. Furthermore an information material was developed for the citizen panels and a detailed process for the first citizen consultation was planned

2. *CC1 – First citizen consultations producing citizens' visions*

In the first round of citizen consultations the citizen panels in the seven countries met and developed their visions for the future. This was done in seven national citizen consultations that each lasted for two days

<sup>27</sup> Most basically, the streams model pays attention to the specificity of problem and solutions sides and 'timing' a critical dimension in pairing the two; the streams model idea was translated to evaluation criteria (essentiality, novelty, timing) that were used in the assessment of the policy recommendations produced in the project.

3. *Analysis of the visions and creation of an analytical model for expert-stakeholder workshop*  
The visions developed by citizens were analysed and 37 topics were identified. The content analysis informed the building of the analytical model that structured the work in the following Expert-stakeholder workshop
4. *Expert-stakeholder workshop extracting recommendations from visions*  
In the Expert-stakeholder workshop 18 experts and stakeholders worked for 2 days on extracting recommendations for future S&T from the citizens visions
5. *CC2 – Second round of citizen consultations evaluating the policy recommendations*  
At the second round of citizen consultations the citizen panels validated the expert/stakeholder recommendations on the basis of the citizen visions and prioritised the recommendations
6. *The results were presented and debated at a policy workshop*
7. *Support from a web-based content coordination tool developed in the project*  
The whole process was supported by an online web-tool. The web-tool was central in documenting the process as results of the different steps

### **Methods used**

Which methods were used and how did they complement each other?

In CIVISTI a novel methodology of citizen consultation and expert/stakeholder analysis was developed. This new and innovative methodology consists of three major steps. First citizens around Europe were asked about their visions for the future. About 25 citizens “lay experts” took part in each citizen panel. Four table moderators and a main facilitator supported the small groups discussions, brainstorming, discussions, presentations and selection of visions in Plenum.

Second an interdisciplinary group of experts and stakeholders analysed the visions and transformed them into research agendas and policy options for European research. Third the results were given back to the citizens to validate and prioritise them.

### **Stated target groups**

Initial plan for dissemination

1. Internet dissemination. CIVISTI website, giving information about objectives, methods and results of CIVISTI, and linking to the public parts of the web-based content coordination tool. The web-site also published the public deliverables of CIVISTI.
2. Production of slides presentations for presenting the process, methods and results of CIVISTI at conferences, seminars, workshops etc. of relevance. A) A slide presentation on the project, aims and objectives, methods, consortium, etc.; B) A slide presentation of the results.
3. Policy workshop at the end of the project to give opportunities for the potential users of the results to discuss the results, conclusions and policy options made by the CIVISTI.
4. Active press contact in order to attract attendance to the novelty and political meaning of consulting citizens in long-term forward-looking studies, and to communicate the CIVISTI project and the involvement of the EU Commission research into citizen consultation.
5. Scientific publications and conference presentations on the methods and results of CIVISTI.

Blue Sky Research on new and emerging issues for European science and technology will have the main client in the EU Commission Services, since the final results of CIVISTI will very much be about creating new development or focus for European research (ERA and Horizon 2020).

In general, the CIVISTI project was aimed at S&T policy-making at the European level. However, most of the partners were nationally well-established policy analysis providers, and had extensive national networks and contacts to policy-makers, so as far as it is appropriate, the project extended the dissemination to policy-makers in the seven participating countries. All partners had an active communication strategy at the institutional level, and some partners were supported by communication officers, who were engaged in national dissemination. Also, the partners made follow-up activities nationally after the closure of CIVISTI.

Effective dissemination to the main clients at the European level was brought about by the final policy workshop, of which European actors were the dominating target group.

### **Output**

Citizens produced 69 visions for the future of Europe in the first step of the CIVISTI process. The “Analysis report” shows that these visions were characterised by being holistic, multi thematic, interdisciplinary and that they spread across multiple domains of society.

Below is a short formulation of the 30 recommendations:

1. Humanistic research to explore what dignity during the dying process means to contemporary Europeans.
2. Tools for disabled people.
3. European TV – unity in diversity. A permanent lab for experimentation on building and expressing identity (IdenTVLab).
4. Plug and play communication: development of standards for smart gadgets.
5. Foresight and research to explore sustainable options of decentralized energy production systems and the resolution of energy related conflicts.
6. A ‘Platform of the future of work’ at a local, regional and global level should be considered within upcoming calls of the SSH program.
7. Stimulate research to expand/augment the human sensory capabilities.
8. Enhance the ethical reflection on science based organic and “bionic” production.
9. Optimization of urban space: towards dense European eco-cities.
10. From CAP to European Agricultural policy: back to a gardening tradition.
11. Research to overcome the tension between the use of highly complex materials in products and their recyclability.
12. Increase direct democracy through e-voting.
13. Recognition policy.
14. Develop Sofia into an eco-model for European capitals.
15. Agreements with farmers’ organizations on avoiding antibiotics and hormones.
16. Innovative participatory structures.
17. Social innovations for aging societies are needed.

18. Promote technical and social innovations that can enhance people's access to and use of public transportation.
19. Develop avatars that are able to act as a remote physical representation of myself.
20. Select or develop plants and techniques for areas with extreme climate conditions.
21. Policies towards immigrants and refugees appreciation.
22. Foster the use of biorefineries.
23. Project for Finnish best practices to be disseminated and used in other countries.
24. Go and re-appropriate countryside!
25. European integrated policies on sharing work.
26. Develop effective urban infrastructures supporting a multigenerational lifestyle.
27. Encourage alumni work in corporate governance.
28. Worldwide collaboration on space technology.
29. Project to explore global governance.
30. Stimulate research on human-machine interfaces.

**Table 1:** Comparison of priority lists of citizens and experts on recommendations (for CIVISTI project)

<b>Citizens voting</b>	<b>Experts voting</b>
Attractive public transportation	Attractive public transportation
Decentralised energy	Innovations in participation
Re-appropriate the countryside	(European) eco-cities
Tools for disabled people	Recycling complex materials
(European) eco-cities	Ethics of 'bionic' production
Social innovation for ageing society	Tools for disabled people
Direct democracy through e-voting	Decentralised energy
Develop effective urban infrastructure	Platform for research in future of work
Policies towards immigrants and refugees	Organic Agriculture
Dignity in the dying process	Sofia as an eco-model

Plants for extreme weather	
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It is not only similarities in table 1 that are relevant, but also the differences between the priorities of citizens and experts indicate needs for actions.

**Some Lessons learned**

Developing and performing the CIVISTI methodology has been very educational experience. This also means that there are important lessons to take into account when performing similar exercises in the future.

A main challenge was related to the great amount of translation in the process. For citizens and experts from different countries to be able to discuss and develop visions and recommendations there has to be a lot of translation in the process: Translation from national language to English and back and also translation of meaning from lay people’s visions to experts’ recommendations and back to citizens. All this translation is very challenging and it is more or less impossible not to lose parts of the original meaning in the process.

The broad scope of CIVISTI gave visions and recommendations with very high diversity. This is not in itself a problem, but it makes the process much more challenging. Therefore experimenting with more thematically focused CIVISTI processes could be very interesting and lead to some very concrete citizens based results.

**Formal evaluation**

The formal evaluation was done by Regina Brandstetter, Martin Felix Gajdusek, Alexander Kesselring, Klaus Schuch, Centre for Social Innovation Linke Wienzeile 246 A-1150 Vienna Tel: + 43 1 4950 44 <http://www.zsi.at>

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• The basic process – how new S&amp;T guidelines will emerge from Citizen Consultations (including the feedback consultation after the expert-stakeholder workshop) – is transparent and well-thought-out.</li> <li>• The methodological mix including quantitative and qualitative methods is adequate to restructure and cluster the citizens’ visions as well as to capture the more specific aspects.</li> <li>• The analytical model is sensitive for different “dimensions” of the citizens’ visions, including the reflected value orientations.</li> <li>• The analytical model combines important functions which are clearly described: Structuring the input for the expert-stakeholder workshop and the second citizens’ consultation, and analysing the citizens’ visions on different levels (vision, country, cluster);</li> </ul>	<ul style="list-style-type: none"> <li>• The focus of CIVISTI is explicitly specified in a very general way. This may be useful in terms of giving citizens the opportunity to think about their visions without restrictions. However, a clearer focus would probably enhance the quality of the visions in terms of specificity and detailedness and would make it easier to structure and cluster the visions.</li> <li>• Some of the proposed typologies are probably not differentiated enough to really capture all relevant dimensions of the citizens’ proposals.</li> <li>• The description of the visions sometimes gives the impression that typologies based on the collected visions are “representative” for larger populations. These statements should only be made if there is additional material (studies, data), which confirms the findings from CIVISTI (for example that environmental issues are of high importance for citizens, etc.)</li> <li>• Regarding “representativeness” it also seems problematic to generally rely on “frequencies”</li> </ul>

	<p>to judge the relevance of certain visions/topics for “the population”. The assessment of relevance and prevalence is only possible on the basis of expertise and additional data sources.</p> <ul style="list-style-type: none"> <li>• There is a procedural danger that Experts and stakeholders will only focus on the “main topics” and will neglect visions which deal with topics aside from the mainstream.</li> <li>• It cannot be excluded that typologies will fail to capture important dimensions of the citizens’ proposals if the categories are not sufficiently differentiated.</li> </ul>
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**Next steps:**

- Exploring the experience of CIVISTI in thematically areas, business area, at national/regional level, etc.
- Experimenting with a fast track CIVISTI, different vision creation process, and comparison of different social/cultural backgrounds.

**Information:**

<http://civisti.org> (CIVISTI Homepage)

<http://epub.oeaw.ac.at/?arp=0x002a6717> (An analysis of the CIVISTI method in ITA manu:scripts).

Jacobi, A., Andersen, I., Rask, M., Lanckriet, A., Cruyce, E. V. d., Damme, L. V., Warrington, B.,

Damianova, Z., Bakonyi, E., Sotoudeh, M. and Peissl, W., 2011, CIVISTI final report, Copenhagen:

Danish Board of Technology. [http://www.civisti.org/files/images/Civisti\\_Final\\_Report.pdf](http://www.civisti.org/files/images/Civisti_Final_Report.pdf)

## **Energy transition in Europe**

### **Name**

Energy transition in Europe

- **Partners**

- Institut für Technikfolgen-Abschätzung – Institute of Technology Assessment, Austria
- Teknologirådet – The Danish Board of Technology, Denmark
- Scientific and Technological Options Assessment (STOA), European Parliament
- Tulevaisuusvaliokunta – Committee for the Future, Finnish Parliament, Finland
- Vlaams Instituut voor Wetenschappelijk en technologisch apectenonderzoek (viWTA) – Flemish institute for Science and Technology Assessment, Flanders
- Office Parlementaire d'évaluation des choix scientifiques et technologiques, French Parliament, France
- Büro für Technikfolgen-Abschätzung beim Deutschen Bundestag – Office for Technology Assessment at the German Parliament, Germany
- Committee on technology Assessment, Greek Parliament, Greece
- Comitato per la Valutazione delle Scelte Scientifiche e Tecnologiche (VAST) – Committee for Science and Technology Assessment, Italian Parliament, Italy
- Rathenau Institute, The Netherlands
- **Teknologirådet – The Norwegian Board of Technology, Norway (Coordinator)**
- Association of Swedish Members of Parliament and Researchers (RIFO), Sweden
- Zentrum für Technologiefolgen-Abschätzung – Centre for Technology Assessment at the Swiss Science and Technology Council, Switzerland
- Parliamentary Office of Science and Technology (POST), United Kingdom

### **Initiators**

The project was initiated at the EPTA Directors 'Meeting in 2006.

### **Funding/Budget**

Funded on the partners own budget.

### **Time scale**

January 2006-January 2007

### **Short description**

The project was initiated at the EPTA Directors' Meeting at Svalbard in 2006. The aim of the work was to provide parliamentarians and other policy makers with a valuable tool for developing energy policies. It was also an aim to facilitate the discussions at the EPTA Conference 2006.

The thematic focus of energy transition was chosen because many EPTA partners were doing energy projects at that time; technological, political and environmental developments had placed energy high on the parliamentary agendas around Europe.

## **Objectives**

The project's objective was to give an overview of energy transition in fourteen European countries/regions and the different policy tools, strategies and technologies that were developed around Europe. The presentations share a common structure, while at the same time allowing for a focus on country-specific issues:

- Present status: what are the main energy sources, and what is the relative contribution from renewable energy?
- Renewables: which renewable sources are used for energy production, and what are the political strategies for the future?
- Clean fossil fuels: is there current or planned activity to capture and store carbon from coal and gas in environmentally safe ways?
- Nuclear energy: is it important for electricity supply, and what are the future prospects within each country?

The presentations were kept short to ensure readability, accessibility and oversight.

## **Process design**

The project partners all wrote an overview of the situation in their countries. The overviews were presented in a common structure, and with focus on the same issues: present status, renewables, clean fossil fuels and nuclear energy. There is no overarching analysis of the overviews.

## **Methods used**

This was a distributed project, where all partners contributed with experiences from their own country. The project was done by desktop research, investigating reports and status in the different countries.

## **Stated target groups**

The report was presented at the EPTA Conference 2006, with parliamentarians and policy makers from all over Europe present.

## **Output**

The project produced one report: "Energy transition in Europe. An overview of status and policy strategies for transforming European energy systems". The report presented the state of affairs in 12 European countries, the region of Flanders and from a European Union perspective. It showed that renewables played a limited role in the energy production of most countries. The report also gave an overview of the different policy tools, strategies and technologies that were being developed around Europe.

As a background for the EPTA Conference 2006 in Oslo, the thematic angle of the report was repeated at the conference, with MPs from different countries giving statements about the national situations.

## **Formal evaluation**

No formal evaluation of the project.

## **Problems met**

None, the projects proceeded with no delays and limited costs within the timeframe.

## **Genetically modified plants and foods**

### **Name**

Genetically modified plants and foods: Challenges and future issues in Europe

### **Partners**

- Office of Technology Assessment at the German Bundestag – TAB (coordinator)
- Danish Board of Technology – DBT
- Austrian Institute of Technology Assessment – ITA
- The Norwegian Board of Technology – NBT, together with the Norwegian Biotechnology Advisory Board
- British Parliamentary Office of Science and Technology – POST
- Flemish Institute for Science and Technology – IST
- Scientific Technology Options Assessment (STOA – European Parliament)
- Centre for Technology Assessment - TA-SWISS

The partner organisations were represented in a Project Manager Group, which met regularly to discuss about the different steps of the project and the delivered texts, to write working document and to take part in the writing of the final report.

### **Initiators**

The project has been submitted to the EPTA by the eight partners, under the coordination of the TAB. The EPTA Council approved the joint EPTA project and its approach on 17th October 2006.

### **Funding/Budget**

There was no specific budget for the project. The project was funded by each participating partner, who actually paid for the researchers / project managers involved in the project as well as meeting related costs (seven 2-days meeting). Project estimates at the start of the project were of 40 working days for each partner. There is no document attesting the effective working days each partner invested in the project, but these were certainly more (especially for some partners who took an active role in the drafting of the final report). The costs of the survey (online questionnaire) were covered by one of the partner organization, on its own initiative.

### **Time scale**

Kick-off meeting: December 2006  
Publication of the report: April 2009

### **Short description**

The project explored the challenges to European policy on GM plants and food. It made the assumption that GM plants have long been controversial issues, but that developments with respect to new technologies, expanding international trade and the increasing demand for food and fuel may challenge the established way in which GM plants and food have been dealt with in Europe so far.

The project was built on the combined experience of eight European TA institutions who, in the past years, carried out projects on issues related to GM plants and food, including consensus conferences, expert surveys, or scientific assessments. The EPTA project aimed to make use of the many insights gained during these projects and of the different expertises of the partners involved.

The project came to the conclusion that all in all, the regulatory system for GM plants and food in Europe did not seem to be fully prepared to meet all existing and foreseeable future challenges. Five key areas of challenges for the European system of GMO regulation in the years to come were identified, as were a number of possible approaches for future technology assessment activities.

## **Objectives**

The project's objectives were to provide information on the following:

- Regulatory challenges for the European system in the years to come,
- Points of public debate in the future,
- Approaches for TA to handle the issues identified.

## **Process design**

### **1) Identification of issues**

In a series of brainstorming sessions among the group of researchers (Project Manager Group), several issues were identified that merit further investigation. These sessions took place during the initial project meetings, and the results were further discussed via electronic communication.

### **2) Review and discussion of results from past TA projects**

The project reviewed previous TA project reports on questions pertaining to GM plants in order to put together different pieces of knowledge from various perspectives. The reviews served to learn more about the developments that gave rise to the present situation, and to identify questions that might still be relevant for the future. The reviews also flagged up topics that could be investigated further through the following experts' survey.

The range of projects covered very different topics related to issues of GM plants, as well as different TA approaches, in order to gain an overview of the status of the debate and of different opinions and standpoints in society.

### **3) Preliminary conclusions identifying points to consider**

In a next step, the major results of the reviewed projects were screened for statements with regard to prospects for the future, predicted problems, possible impacts of decisions, and demand for future action. These statements were grouped in three clusters: technological challenges, societal challenges and regulatory challenges.

### **4) Experts survey**

The aim of the survey was to collect information and opinions from experts (from a wide variety of backgrounds and fields of expertise) on major challenges in the area of GM plants and foods as identified in the previous step. The questionnaire covered a very broad set of issues, including technical, regulatory and societal ones. It contained mainly closed questions, with space for comments. In total, 183 experts in the

field of GM crops and food were invited to participate in the questionnaire (online survey), and 71 filled it out.

## **5) Analysis and discussion**

In a final step, the results from the project reviews and the experts' survey were brought together. The material was sorted and divided into chapters, and project members joined in "tandems" to perform a first analysis of each chapter. The draft analyses were further refined in several rounds of discussions with all project members. A draft report was then written.

The draft report was peer-reviewed by six experts. The reviewers addressed strong critics towards the report. As a result, three project members were assigned the task of writing of a new version which took the reviewers' comments into account. The second draft version was again reviewed by the same six experts. The report was discussed in a final round of all project members and has been approved by the EPTA Council for publication.

## **Methods used**

The project was based on a combination of two methods:

- a) reviews of existing TA or similar project in order to learn where we are today, how the debate has evolved and what is still relevant for the future;
- b) a questionnaire in order to collect information and informed guesses from TA practitioners and important people on new challenges in the area of GM plants and food.

## **Stated target groups**

Policy makers, TA practitioners and the general public.

## **Output**

The project ended with the publication of the final report. Summary of the report has been translated by some partners organizations in their national language in order to disseminate the results in their county. A press-release has been sent to major European and national newspapers and medias after the publication of the report.

The report concluded that all in all, the regulatory system for GM plants and food in Europe did not seem to be fully prepared to meet all existing and foreseeable future challenges. Five key areas of challenges for the European system of GMO regulation in the years to come were identified, as were a number of possible approaches for future technology assessment activities. For each identified challenge, areas of action (recommendations) were drafted.

## **Formal evaluation**

No

## **Problems met**

### **1) Timing problems**

All in all, it took one year more to finalise the project as this was originally planned. This is mainly due to two factors:

- the development of the questionnaire needed more time than foreseen

- it had been decided to give the final report for peer review. Some of the comments made by the reviewers were rather critical, and made it necessary to make an in-depth revision of the final report.

## **2) Methodological and financial problems**

For the survey stage, the Project Manager Group decided to use a questionnaire with closed questions in order to facilitate the interpretation of the results. As a matter of fact, each involved institution could only allocate limited resources in the project and analyzing open question with qualitative methods would have implied much more efforts. This quantitative approach has been problematic and strongly criticized during the peer-review process, resulting in the re-writing of the report. The peer-reviewers criticized the fact that some of the questions were ambiguous in their formulation, so that it was difficult to evaluate the answers. They also criticized the limited number of interviewed experts (71), which made it difficult to interpret the results using quantitative analysis. The fact that most interviewed experts were researchers has also been criticized.

## **3) Organisational problems**

During the course of the project, the person coordinating the project couldn't plenty fulfill his role because he was engaged in others projects of his own organisation. This problem became acute during the revision process of the report (inclusion of peer-reviewers' comments), as this stage had not been planned and expanded beyond the foreseen end of the project.

## **ICT and privacy in Europe**

### **Name**

#### **ICT and privacy in Europe**

- **Partners**
  - Teknologirådet (DBT), Denmark
  - Teknologirådet (NBT), Norway
  - Institute of Technology Assessment (ITA), Austrian Academy of Sciences, Austria
  - POST, UK
  - viWTA (now IST), Flanders/Belgium
  - TA-SWISS, Switzerland
- **Initiators**

This project was a joint initiative of DBT, NBT and ITA.

### **Funding/Budget**

No formal budget, internal resources used by partner institutions.

### **Time scale**

Formal: 03/2004 – 03/2006 not included the preparation phase and the presentation of results in 10/2006.

### **Short description**

The ICT and privacy in Europe was the first joint EPTA-project. The fundamental idea of the project was twofold: First to show that EPTA is more than just meetings, exchanging information and sometimes colleagues asking for advice on bilateral basis. EPTA rather should demonstrate being a platform for real cooperation – the guiding idea was to foster the network. The second aim was to deal with an issue of European dimension and to show that there is a value added in cooperation among members with different backgrounds and different methodological approaches – selling diversity. By setting up this project, rules for cooperation were proposed and adopted and an advancement of EPTA envisaged.

As this was the 1<sup>st</sup> cooperation amongst the EPTA members, they had to find a way to proceed and to design a common framework for analysis. The project went fine and could be completed within the given timeframe. The final report was presented to the EPTA Council as well as to decision makers in a Policy Meeting in Brussels. Some of the consortium members widely used the results on national level too.

### **Objectives**

The main purpose of this project was to reach decision-makers on the European and national level in order to provide them with options to face the highlighted challenges to privacy, which originate from technological as well as societal and political developments.

The project aimed at analysing and synthesising reports from different European TA units to find overlapping fields as well as blind spots. It was designed to give an overview on technological and political threats and solutions to the issue of privacy, as well as to build a scenario for the European future in 20 years time, in which governance, law, organisation and technology ensure ICT-privacy for the European citizen. Deriving from the scenario, the project addressed policy options and recommendations for the European as well as national decision makers.

## **Process design**

This project is the result of the close co-operation between staff members in the six participating EPTA institutions. A total of 28 projects conducted by these institutions over the last years have been reviewed, offering a broad cross-European knowledge base on privacy issues.

Each institution has provided reviews of their projects in a common template, to ensure that all participants can understand and discuss the results of the total project portfolio. The reviewed projects showed that the different TA institutions have looked at many different aspects of privacy, and also used different methodologies in their approach to the issue.

After reviewing all the projects, the group decided to focus on 8 themes where ICT technologies challenge privacy: security and surveillance technologies, access to information and services through ICT, new ways of societal interaction through ICT, convenience of ICT solutions for users, the use of ICT to make economic benefits, e-Government, e-health. The responsibility of each theme was assigned to different author groups. These groups have worked on drafting, reviewing and finalising each chapter. All the participants in the project have later reviewed the full report, and the conclusions and policy options.

Five experts on privacy were invited to a workshop to discuss the policy options derived from the different chapters of the report.

A draft of the report has also been discussed within the director group of EPTA. However, the group of participating institutions is fully responsible for the analysis and conclusions in the report.

## **Methods used**

As the project was not designed to do new research, it analysed projects of partners already done in the field. Methods used were brainstorming and group discussions as well as classical desktop research. A reality check of the findings, conclusions and policy options was done in the form of an expert workshop.

## **Stated target groups**

Policy and decision makers on European as well as national levels.

## **Output**

A report: **ICT and Privacy in Europe**. Experiences from technology assessment of ICT and Privacy in seven different European countries. Final report October 16, 2006, European Parliamentary Technology Assessment network (EPTA) <http://epub.oeaw.ac.at/?arp=0x0013038d>

A policy meeting in Brussels (with one MEP as guest-speaker)

Several press releases and interviews on national basis, academic presentations by members.

## *Which recommendations were given?*

The report ended up with a chapter "Conclusions and policy options", which gives an overview on the state of affairs and why a new policy on privacy is required. It also identifies eight challenges related to privacy and describes how to handle them. The headings of the conclusions chapter read as following:

### ***Why we need a renewed policy on privacy***

*Short term gains but long-term effects*

*An unbalanced relationship*

*The need for a precautionary approach*

### ***The challenges – and how to deal with them***

*Challenge #1: To provide security without infringing privacy*

*Implement surveillance systems only if they are effective, not easily circumvented, and will produce a real security benefit*

*Assess surveillance systems at all stages*

*Challenge # 2: e-government makes citizens more transparent to the authorities*

*Empower citizens to real informed consent*

*Give citizen access to case records and logs*

*Challenge # 3: The enforcement of privacy legislation is too weak*

*Strengthen the mandate of data protection agencies*

*Allocate more resources to data protection agencies*

*Challenge #4: Systems development neglects privacy*

*Encourage data minimisation and privacy enhancing system designs*

*Make privacy impact assessment mandatory*

*Contribute to international privacy standards*

*Require the use of best available technologies (BAT)*

*Make privacy part of the funding criteria for ICT research*

*Challenge #6: The value of privacy is underestimated*

*Promote an unique European Privacy Label*

*Challenge #7: To create privacy policies based on research*

*Explore the technological development and its legislative implications*

*Initiate research on social consequences of increased data retention*

*Challenge #8: Future pervasive systems multiply the challenges to privacy*

*Adapt regulation to the new reality*

*Make pervasive systems visble*

*Establish ICT free zones*

*Ensure Log-off/switch-off possibility*

- **Formal evaluation**

An evaluation has been done internally by the team and reported to the EPTA Directors Meeting at Svalbard April 2006. The main findings were the following<sup>28</sup>:

#### ***Experiences from our first joint project***

- *It worked!*

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<sup>28</sup> Tennøe 2006, ppt presented at the EPTA Directors Meeting, 1<sup>st</sup> April 2006

**We deliver...**

- *a good report*
- *in time*
- *made by 6 partners*
- *with no serious problems or crises*

**In addition...**

- *Proving that EPTA can be more than just an arena*
- *Spin-offs (we got a PRISE)*
- *Practical learning of methods*
- *Improving the network*

**Some things we did right:**

- *Rotating meetings*
- *No common budget*
- *Shared ownership*
- *Building a project culture*
- *Internal reviews*
  - *The raw material for analysis*
  - *Shared insights*
  - *Useful also for local websites*
- *Project website*
  - *A reliable, up-to-date hub*
  - *Common workspace*
- *Using external experts*
  - *Reality check: what's interesting?*
  - *Challenging our conclusions*

**Lessons**

- *We are the expert group*
- *Conclusions and options must be found*
  - *They do not jump at us*
  - *A fact sheet is not enough*
- *A clear focus on the output*
- *Tight project management*
- *A clear project design*

- *Integrated in members' annual plans*
- *Delimited work, clearer ownership*
- *Predictability for PMs*

***The scope***

- *Neither too broad...*
  - *It's a challenge to develop precise insights*
  - *And to wrap it up*
- *nor too narrow*
  - *We need enough projects on the topic*
  - *Problem-driven vs tech-driven projects*

## **Meeting of Minds - European Citizens' Deliberation on Brain Science**

### **Partners**

Meeting of Minds is an initiative of an international group of 12 organisations coordinated by the King Baudouin Foundation (Belgium).

- King Baudouin Foundation (Belgium)
- University of Westminster (UoW, UK)
- Flemish Institute for Science and Technology Assessment (Flemish Community, Belgium); now called Institute for Technology and Society (IST, Flanders, Belgium )
- Teknologirådet (Danish Board of Technology, Denmark)
- Cité des Sciences et de l'Industrie (France)
- Stiftung Deutsches Hygiene-Museum (Germany)
- Fondazione IDIS Città della Scienza (Italy)
- Rathenau Institute (The Netherlands)
- Science Museum's Dana Centre (United Kingdom)
- University of Debrecen, Medical and Health Science Centre (Hungary)
- Eugenides Foundation (Greece)
- University of Liège, SPIRAL (French Community, Belgium)

### **Initiators**

King Baudouin Foundation (Belgium)

### **Funding/Budget**

The initiative also has the support of the [European Commission](#), Directorate-General on Research under the 6th Framework Programme for Research and Technological Development in the European Union. Total cost = 2.280.220 euro.

### **Time scale**

Meeting of Minds. European Citizens' Deliberation on Brain Science is a two-year project that ran from 2004 till 2006.

### **Short description**

"Neuroscience will have an impact as powerful as that of Darwinism.", stated Tom Wolf, the American novelist. The future will judge his clairvoyant skills. But there is no doubt that there exist high expectations on the development in neuroscience. Neuroscience will deliver profound insight in the nature of the brain and will probably provide solutions for brain disorders. Neuroscience might also make it possible to slow aging or deliver drugs to enhance brain performance. The rapid growing field of brain imagining will make it possible to diagnose diseases and disorders (even long before they will strike) but maybe also to search for delinquency or to monitor thoughts.

It is clear from above examples that brain science raises ethical and social questions. 'Meeting of Minds. A European Citizens' Dialogue on Brain Science' is an unique European project that run in 2005-2006. The central objective was to address these issues and to ensure that they are heard and acted upon. The core

of the project was a European panel of 126 citizens from 9 European countries. During 3 national and 2 European gatherings (5 weekends), they assessed the societal aspects of brain science.

But this project was not only about participation of citizens into discussions on the development of science and technology (i.e. participatory Technology Assessment or pTA). From the very beginning, major effort was put in communication about societal aspects of brain sciences and involvement of relevant stakeholders and experts.

### **Objectives**

The overall objective of the Meeting of Minds initiative is to involve European citizens in assessing and publicly discussing the issue of brain science with relevant research, policy and ethics experts, various stakeholders as well as representatives of European decision-making organisations. As such, the initiative aims to give relevant inputs into European policy-making and wider public debate on brain science. It will also help set the issue of brain science on the policy and wider political agenda. Meeting of Minds will help develop new forms of social debate and decision-making processes at European cross-national level.

### **Process design**

The project consists of three national and two European meetings held in 2005 and early 2006. Initially, 126 citizens from across Europe have been invited to explore the issue of brain science. This led to the creation of a common framework and a common set of questions, setting out those aspects of brain science that need to be examined further and discussed in greater depth. National panels took these proposals home and continued working on them at two national assessment meetings. Each panel produced its own conclusions on desirability and potential of brain science and put forward selected issues for the European agenda.

The second European meeting took on board the national conclusions and recommendations and ran further with them, producing a European assessment report on brain research issues. The participants discussed areas of overlap, agreements and disagreements, the underlying reasons for them and what can be learnt. The results of these discussions have been incorporated in a European report with conclusions and recommendations handed over to high-level European officials and representatives of the European scientific and research community at a public ceremony on 23 January 2006. One of the aims of this exercise is to create an ongoing dialogue at European level between the general public and policy-makers on science-related matters.

### **Methods used**

The project run on the basis of a 10-steps methodology, hereby using existing pTA-experiences.

1. Issue-analysis: a group of leading European experts and stakeholders identified the societal aspects of brain science. This resulted in the publication of a book and a citizens information brochure.

2. In every country, the local partner recruited a panel of 14 citizens.

3. At the same time, facilitators at national and European level were selected and trained.

4. In Spring 2005, there was a first national citizens' meeting. During one weekend, the different panel explored the societal aspects of brain science. This resulted in a long list of possible topics and issues.

5. Early June 2005, the first European Citizens' Convention took place in Brussels. Here, the 126 citizens mutually discussed this list. By the end of the weekend, this dialogue resulted in 6 clearly described themes (Regulation and Control, Normalcy versus Diversity, Public Information, Pressure from Economic Interests, Equal Access to Treatment, Freedom of Choice), the common agenda for the parallel national assessments.

6. In Autumn 2005, the national panels worked during 2 weekends on these themes. The first weekend, they formulated questions for experts and stakeholders. The second weekend, the citizens had an extensive dialogue with the selected experts and stakeholders, based on their questions. Each panel then produced an own national report, with conclusion and recommendations for policy-makers and stakeholders.

7. In January 2006, the citizens met again in Brussels. After three long days of dialogue and debate, of exchange with European experts and stakeholders, they succeeded in realizing an integrated European Citizens Assessment on the societal aspects of brain science. On the 23th of January, they presented their final report during an official ceremony in the European Parliament.

8. Since then, an intensive process of European and national policy advice and dissemination activities took place, presenting and discussing the results of this project on every possible national and European forum.

9. During the whole process, every piece of produced knowledge, either content or methodology, was analyzed, written down and communicated in reports, books, manuals, articles,...

10. Every step in this process has been evaluated, ongoing internally as well as by an independent external partner

### **Stated target groups**

Policy-makers on the European, national and regional level.

### **Output**

On 23 January 2006 the citizens presented the results of their deliberation process at the European Parliament and handed over their European Citizens' Assessment report to important decision makers in the European Union. Their report contained [37 recommendations](#) on the ethical, legal and social implications of advances in brain science.

The most important recommendations are:

A major concern about the poor level of effective communication between the scientific world and the lay public was reflected in the ten recommendations made under this theme. One of these asks regulators to:

- provide early training for science students in communication skills so that they can inform the lay population without oversimplifying the information;
- encourage scientists to produce "popular" accounts of their work;
- and to provide expert help for this.

Unsurprisingly, the citizens were also worried about the role played by the pharmaceutical industry in the field of brain science and under this theme they made three recommendations, one of which stressed that regulators should: Provide additional incentives for pharmaceutical companies to take up appropriate research in fundamental, applied or in rare diseases research. This citizens' recommendation provides powerful support for the continuing need for EU regulators to develop mechanisms for balancing societal and market interests.

Naturally, there was similar concern about equality of access to health care provision in this field and the citizens made 8 related recommendations including a request for regulators to: Establish long-term priorities ensuring that all European citizens have non-discriminatory equal access to equal treatment in the neurological field. Here they were unwittingly ahead of the game as the European Commission was contemporaneously preparing its Green Paper on "Improving the mental health of the population: Towards a strategy on mental health for the European Union" which is in part concerned with this

recommendation. Accordingly, the Meeting of Minds project team responded to the Commission's consultation process on this Green paper highlighting the relevant citizens' recommendations.

Generally, the citizens' recommendations were very supportive of research. However, they did not want research that resulted in pressures to label natural variability as abnormal (and "chemically correctable"). 7 related recommendations were made in this area, the third of which requests the Commission to: Promote research to clarify the range of variations that exist within "normality" and identify what conditions should be labelled as "abnormal" in order to avoid unnecessary treatment and reduce the modern tendency to medically treat every departure from the norm. This recommendation might be met under the next Framework Programme for EU Research (FP7). In FP7, the Second Activity under the Health Theme is entitled "Translating research for human health" and the second bullet point under this activity is concerned with brain research under healthy and disease conditions. (Underlying this theme is the huge variability of brain morphology and the judgement of what constitutes normality.)

Since this was a European level project, the citizens were of course concerned with the regulatory system and in particular with an ethical oversight of brain science. 5 recommendations were made, the first of these requesting the authorities to: Establish a pan-European ethical and legal advisory committee. They were worried that a variety of ethical views from across Europe could result in an unacceptably wide range of responses to sensitive areas of research. An advisory committee already exists at European level, namely the European Group on Ethics in Science and New Technologies (EGE) . However, the EGE is simply an advisory committee (to the European Commission) whereas the citizens want a central ethical committee that "lays down guidelines for brain research".

Staying with ethics, the citizens were worried about the ability to exercise freedom of choice in the mental health area and made 4 recommendations related to this issue. One of these recommends the: Development of a European procedure for nominating trusted representatives for mentally handicapped individuals ("trusted persons"). Clearly, this is a human rights issue and there seems to be a need for a uniform system of representation for the mentally handicapped throughout the EU.

### **Formal evaluation**

The Meeting of Minds project has been subject to an internal and external evaluation process. Each had a different focus.

The external evaluation was commissioned to an independent external team to review the methodological concept, the procedural design and the actual performance of the ECD-Project focusing on the European process level. Meeting of Minds was "innovative and significant for European policy making and as rewarding for all who had the opportunity to participate," states an independent external evaluation report written by Rüdiger Goldschmidt and Ortwin Renn from Dialogik gGmbH. The external evaluation team had been commissioned by the partner consortium to review the methodological concept, the procedural design and the actual performance of the Meeting of Minds ECD-Project. "It accomplished all envisioned objectives - the content related objectives with great succes, the procedural objectives with satisfactory success." On the basis of systematic observations of communication and interaction processes at European level of all those involved in the process, including stakeholders, the report concludes that "the Meeting of Minds Project documents the feasibility, the effectiveness and the efficiency of public participation even at a multinational European level." It considers that all the methodological experiences gained during the process constitute a valuable base for developing participatory governance and technology assessment at European level. In effect, Meeting of Minds has already served as a reference of best practice for the [European Citizens' Consultations](#) launched Autumn 2006 under the lead of the King Baudouin Foundation.

The internal evaluation consisted of a process of self-evaluation focusing on the internal aspects of its implementation and organisation. This process was aimed at immediate learning, adjusting the participatory process and knowledge building throughout the duration of the project. It incorporates the feedback from the citizens throughout the trajectory. The internal evaluation report written by Alison Mohr from the Centre for the Study of Democracy at the University of Westminster, points out that the 126 laypeople who took part in the deliberations consider that "their personal expectations were highly congruent with the outcomes of the European conventions."

Both reports give a critical assessment of the project which according to the external evaluation report "accomplished all envisioned objectives - the content related objectives with great success, the procedural objectives with satisfactory success. Furthermore, they provide valuable insight into Meeting of Minds and how it was implemented.

## **NanoSafety**

### **Name**

Nano Safety – Risk Governance of Manufactured Nanoparticles

### **Partners**

- **Institute for Technology Assessment and Systems Analysis (ITAS), Karlsruhe Institute of Technology (KIT) (Coordinator)**
- Institute of Technology Assessment (ITA), Austrian Academy of Sciences, Vienna
  - The project is under the European Technology Assessment Group (ETAG), consisting of the following members
    - Institute for Technology Assessment and Systems Analysis (ITAS), Karlsruhe
    - Danish Board of Technology (DBT), Copenhagen
    - Catalan Foundation for Research and Innovation (FCRI), Barcelona
    - Fraunhofer Institute for Systems and Innovation Research (ISI), Karlsruhe
    - Institute Society Technology (IST), Brussels
    - Institute of Technology Assessment (ITA), Vienna
    - Rathenau Institute, The Hague
    - Technology Centre AS CR, Prague

### **Initiators**

ITAS and ITA under ETAG

### **Funding/Budget**

The Science Technology Options Assessment Panel of the European Parliament (STOA) funded the project.

### **Time scale**

January 2010 – October 2011

### **Short description**

The NanoSafety project deals with the state of research of the potential environmental, health and safety (EHS) risks of manufactured particulate nanomaterials (MPN). Because of the great scientific uncertainties regarding their actual health and environmental effects and numerous methodological challenges to established risk assessment procedures (toxicology, exposure and hazard assessments, analytics, and others), risk management of MPN is confronted with serious challenges. However, risk management is a prerequisite for risk governance employing the precautionary principle that is demanded by a number of stakeholders and parts of the general public. Risk governance under knowledge gaps raises fundamental political questions of how policy makers should regulate risk in the face of scientific uncertainties. To explore this issue in greater detail, the project focuses on two important perspectives of regulation: Risk management strategies for MPN as discussed or proposed for the EU or its member states, and risk communication problems and needs for EHS risks of MPN.

Due to a number of unsolved scientific defiances, uncertainties and technical challenges, as well as the different normative perspectives that the plurality of decision makers and stakeholders involved in the

process have on regulation of chemicals and technologies, and the balance between a responsible development and safe use of nanomaterials, some questions are left.

### **Objectives**

- Survey the state of the art in hazard assessment of MPN
- Identify and address questions of the risk assessment of MPN
- Discuss current legislative activities at the EU level regarding EHS risk regulation of MPN and their challenges and implications (both hard and soft law)
- Find out which perceptions and expectations concerning EHS risk communication of MPN can be found in the general public

### **Process design**

1. Characterising and defining manufactured particulate nanomaterials (MPN)
2. Set criteria for a legal definition
3. Explore basic regulatory approaches
4. Perform concern assessment
5. Identify challenges for risk assessment and risk governance
6. Consider the importance of risk communication

### **Methods used**

A discursive method will be used in an empirical module to explore the set objectives.

### **Stated target groups**

The findings of the project have been reported to the MEPs of the STOA panel of the European Parliament in several project reports, providing an overview of the state of affairs of risk associated with nanoparticles

### **Output**

A report was published, in which a set of recommendations were proposed, after the following main challenges were identified:

1. Finding an adequate legal definition
  - The Parliament should continue the support of the progress towards a harmonised legal/regulatory definition of nanomaterials. Such a definition should be science-based, and should focus on manufactured nanomaterials. As a legal definition might be difficult to achieve, it is recommended to establish a size range in which the most size-dependent properties appear could serve as an appropriate, albeit imperfect, heuristic
2. Developing an adequate precautionary approach
  - What nanomaterials should be affected by law, or rather, how precautionous should the regulations be? Should it only affect those materials known to be hazardous, or should a 'risk prevention' approach be adopted? Assuming nanomaterials are defined broadly, some questions should be posed: Do the regulatory agencies and other affected parties have sufficient resources to implement and enforce this regulation? What are the implications of this approach on existing and future social practices, technological innovation and economic

development? Are there mechanisms to “release” nanomaterials from that regulatory regime, assumed they were proven to be “safe”? And how “safe” is safe enough to justify this decision?

3. Handling limitations of risk assessment methodology for regulatory strategies

- The methodology for the assessment of nanomaterials applied in most countries consists of four parts - hazard identification, hazard assessment (including dose-response relationships), exposure assessment, and risk characterisation. Each of these four elements holds a number of limitations such as the question of linkage to systemic effects, the lack of toxicological studies, methodological challenges and limited opportunities and incentives for publication.
- It is recommended to significantly increase the funding for interdisciplinary research on safety and risk assessment. The results of this research should be made available, in a suitably structured form, to society. Furthermore, Parliament should consider supporting the publication of otherwise unpublished data, and creating a research database. Finally, Parliament could consider supporting the development of a suitable precaution-oriented risk characterisation heuristic.

4. Handling limitations and gaps of existing regulatory measures

- Should existing regulatory frameworks be adapted to MPN, or is there a need to develop a new framework? Parliament should consider commissioning a study project that develops a concept for a new regulatory framework for nanotechnology, tests its feasibility and discusses its advantages and disadvantages compared to the current incremental approach.

5. Risk communication

- Parliament can actively contribute to the implementation of risk communication measures by encouraging voluntary activities as well as by making various risk communication measures mandatory in relevant legislative acts.

6. Market transparency for consumers and traceability

- To achieve transparency regarding the application of nanomaterials in consumer products, a dedicated labelling of consumer products in which engineered nanomaterials are intentionally used could be considered. Attempts to develop a broader (mandatory) labelling scheme for nanoproducts should include a multi stakeholder forum that permits all affected parties and civil society to introduce their respective proposals, justifications and concerns. Science could support this process, but the ultimate design and scope of labelling schemes are results of political decisions.

7. Intensifying the dialogue towards social and ethical issues

- Parliament could want to consider the important role of concern assessment for the entire risk governance process, broadening public communication of on-going efforts and current findings and intensifying participation in the relevant international discussion.

**Formal evaluation**

No formal evaluation

## **PRISE**

### **Name**

**PRISE** – Privacy enhancing shaping of security research and technology – a participatory approach to develop acceptable and accepted principles for European security industries and policies

Supporting Activity within PASR: Preparatory Action on the enhancement of the European industrial potential in the field of security research

### **Partners**

- Institute of Technology Assessment, Austrian Academy of Sciences, Wien, AT
- Teknologirådet, København, DK
- Unabhängiges Landeszentrum für Datenschutz, Kiel, DE
- Teknologirådet, Oslo, NO

### **Initiators**

ITA initiated and coordinated the project. It was a direct spin-off of the cooperation during the EPTA ICT and Privacy in Europe Project. Three EPTA partners and one new partner (ULD) joined the consortium.

### **Funding/Budget**

Total Cost: € 824,329

EU Contribution: € 617,900

### **Time scale**

- 02/2006 – 05/2008

### **Short description**

The PRISE project was the direct spin-off of the EPTA ICT and privacy in Europe project. During the 1<sup>st</sup> one we learned each other to know and to trust and as the Commission released a call in the Preparatory Action on Security Research ITA found the issue interesting, inline with its Medium-Term Research Programme and therefore asked the partners whether they want to join a consortium for a EU funded project or not. The project developed as we wanted and there were no real troubles. One of the most interesting things about PRISE is, that this was the 1<sup>st</sup> project, which brought citizens into the debate on security and privacy. PRISE tried to figure out that the trade-off between privacy and security is not a zero-sum game, rather there is room for maneuver to build in privacy enhancing technologies and to get both privacy and security. The participatory events in 6 countries (4 partners and 2 subcontractors in Hungary and Spain) gave very valuable insights into the attitudes of citizens towards the issue at stake. The PRISE project was a real success because of high attention it got on commissions level.

### **Objectives**

#### **Vision**

To contribute to a secure future for the European Union consistent with European citizens' civil rights – in particular privacy – and their preferences.

#### **Objectives**

- Guidelines for security solutions with a particular emphasis on human rights
- Sets of criteria for privacy enhancing security technologies

- Assistance for the European Union in designing their forthcoming security research programme
- **Process design**

The process design was a classical work package oriented project management.

**Tasks:**

- Identification of relevant security technologies
- Analysis of impacts and options for privacy enhancing design
- Development of implementation scenarios
- Participatory technology assessment
- Criteria for privacy enhancing security technologies
- Dissemination
- Evaluation
- **Methods used**

In PRISE a combination of classical expert TA and participatory approaches were used. The first tasks were based on desktop research, expert interviews and scenario techniques. The participatory TA was based on interview meetings in six European countries. This method is a combination of questionnaires and focus groups.

PRISE also organized several workshops and a conference during the project.

**Stated target groups**

The project’s stated target groups and addressees:

- The DG Enterprise designing the FP7 Security calls, other DGs with regard to ethical checks.
- Proposal writers and (potentially all) technology developers, who are aware and willing to implement privacy enhancing technologies.

**Output**

- The PRISE Matrix – Procedure (how to be sure to be inline with privacy regulation in the course of a project)
- The PRISE Handbook – Guidance (hints how to overcome certain problems)
- Checklists – Realization (short track check for almost finished proposals)
- Statement paper (recommendations presented by the team, discussed with stakeholders at the final conference and published as an output of the project team together with the advisory panel)
- Recommendations
  - Baseline of privacy
  - No zero sum game
  - No general access to databases
  - Essential non-functional requirement

- Shared responsibility
- Regular reassessments as safeguard

**Formal evaluation**

There was a formal (and positive) review by the EC and external reviewers.

## **Study on Human Enhancement**

### **Name**

Study on Human Enhancement

### **Partners**

The project was commissioned by STOA. It was carried out by the Institute for Technology Assessment and Systems Analysis (ITAS), Research Centre Karlsruhe, and the Rathenau Institute, as members of the European Technology Assessment Group (ETAG).

### **Initiators**

STOA

### **Funding/Budget**

120.000 €

### **Time scale**

Start: February 2008

End of Study: March 2009 (publication of the study: May 2009)

### **Short description**

The study attempts to bridge the gap between visions on human enhancement (HE) and the relevant technoscientific developments. Human enhancement is defined as any “modification aimed at improving individual human performance and brought about by science-based or technology-based interventions in the human body”. The study is distinguishing between (i) restorative or preventive, non-enhancing interventions, (ii) therapeutic enhancements, and (iii) non-therapeutic enhancements. It discusses various developments in several fields of R&D which are related to human enhancement, the chances and challenges (individual, medical, cultural, political, etc.) that are raised by human enhancement technologies, and how the ongoing discourse on human enhancement changes the views on human corporeality, (dis)ability, tendencies toward medicalisation, and old and new visions of individual and societal perfectibility. The study outlines possible strategies of how to deal with human enhancement in a European context.

### **Objectives**

- Providing both an overview and detailed analysis of human enhancement technologies and the pertinent political, academic and societal debates.
- Developing recommendations and policy options for fostering an ethically reasonable political handling of human enhancement-related issues
- Contributing to creating a strategy for stimulating a broader societal and academic discourse on the topic of human enhancement.

### **Process design**

Writing of a report with the following structure:

- Definition of human enhancement and related concepts

- Presentation and discussion of existing emerging technologies for human enhancement.
- Presentation and discussion of societal tendencies and issues that provide the context of the debate on human enhancement and presentation of the actors promoting the vision of human enhancement.
- Presentation and discussion to key technoscientific development, with a view to their actual societal, political, and cultural significance.
- Outline of the major lines of the debate about human enhancement at the EU level.
- Identification of the most relevant legal aspects and of possible starting points for regulating human enhancement technologies in Europe.
- Discussion of possible first steps toward a governance of human enhancement.
- Outline and discussion of possible general strategies of how to deal with the topic of human enhancement and with related technologies in a European context
- Finally, presentation of a concrete proposal (establish a European body to oversee human enhancement technologies).

#### **Methods used**

- The study is based on a broad literature review.
- Two expert meetings have been organized to complement the literature review and to work on recommendations and policy-options:
  - The first expert meeting entitled *“Shifting Boundaries, Changing Concepts: The Challenges of Human Enhancement to Social, (Dis-) Ability, Medical and Ethical Frameworks”* focused on how human enhancement may change, or is actually changing, notions as “(dis-) ability”, “normalcy”, “therapy”, “perfectibility”, “impairment”, “ableism”, and related social en ethical frameworks and policies.
  - The second meeting entitled *“The Governance of Human Enhancement: Exploring Regulatory Gaps and Wastelands”* was organized on the basis of the first deliverable and the first expert meeting. Stakeholders were invited to discuss the governance of human enhancement.
- A STOA workshop entitled *“The New You: Smarter, Stronger, Faster and Better? A European Approach to Human Enhancement”* took place in Brussels at the end of the project (February 2009). The workshop was held to conclude the project and to discuss policy options that the EU could take towards human enhancement. Around forty participants attended the meeting, representing various research institutions, universities, advisory councils, non-governmental organizations and government bodies, including the European Parliament and the European Commission.

#### **Stated target groups**

EU-policy-makers, academics, NGOs

#### **Output**

The study ended with the publication of a report

([http://www.itas.kit.edu/downloads/news/news\\_etag\\_coua09a.pdf](http://www.itas.kit.edu/downloads/news/news_etag_coua09a.pdf) )

The report proposes setting up a European body (temporary committee or working group) for the development of a normative framework that guides the formulation of EU policies on human enhancement.

#### **Formal evaluation**

none

#### **Problems met**

No particular problem met, except the fact that Human Enhancement is a thorny issue and needs a cautious and balanced consideration.

As a matter of fact, the debate on human enhancement involves different views on the prospects of Human enhancement technologies (visionary views vs more realistic ones) and different perspectives on the desirability of Human enhancement (transhumanism vs critical perspectives). As the authors state: *“Given the highly visionary and ideological notions, it is obvious that the discussion of human enhancement is not straightforward. Yet beyond competing worldviews, it is characterised by conceptual diffuseness and a lack of differentiation. For example, with respect to health practice, the question is whether the distinction between human enhancement and therapy is tenable enough for policy purposes. The boundary between therapy and enhancement has never been clear cut. Is there a need to reframe the discussion? Some of the differences in the assessment of the state of the art in R&D in HET can be explained by the wide variety of definitions of human enhancement. Given the conceptual problems, there is a need for substantial efforts to develop a pragmatic notion of human enhancement and a heuristic to identify the relevant HET, both of which must be viable for handling the issue and the ongoing developments in a policy context”* (p. 13).

## **World Wide Views on Global Warming**

### **Name**

World Wide Views on Global Warming

### **Partners**

World Wide Views on Global Warming (WWViews) was coordinated by the Danish Board of Technology.

WWViews was structured in a global alliance of institutions, including public councils, parliamentary technology assessment institutions, civil society organizations and universities. Over 50 National and Regional Partners in 38 nations are part of the WWViews Alliance. Together, they facilitated 44 deliberations on September 26, 2009:

Australia - Institute for Sustainable Futures, University of Technology, Sydney

Austria - Institute for Technology Assessment (ITA), Austrian Academy of Science

Bangladesh - INCIDIN

Belgium (Flanders) - Flemish Parliamentary Technology Assessment

Bolivia - Lidema

Brazil - Coalition: Observatùrio do Clima + Centro de Estudos em Sustentabilidade

Cameroon - ADEID – Action pour un Développement Équitable, Intégré et Durable

Canada - Faculty of Communication and Culture, University of Calgary

Chile - Centro Shalom

China - UNEP Tongji Institute of Environment for Sustainable Development

Denmark - Danish Board of Technology

Egypt - Care Egypt

Ethiopia - British Council Ethiopia

Finland - National Consumer Research Centre Finland

France - Cité des Sciences et de l'Industrie

Germany - Institute of Technology Assessment, Karlsruhe Institute of Technology – KIT

India, Delhi - Centre for Studies in Science Policy

India, Bangalore - Centre for Social Markets

Indonesia, Jakarta - Dana Mitra Lingkungan

Indonesia, Makassar - Enlightening Indonesia

Italy - Department of Political Science, University of Bologna

Japan - Centre for the Study of Communication-Design, Osaka University

Malawi - Coalition: British Council Malawi + Care Malawi

Maldives - Strength of Society

Mali - Centre Djoliba

Mozambique - Coalition: Impacto + Fundação para o Desenvolvimento da Comunidade

Netherlands - The Rathenau Institute

Norway - Norwegian Board of Technology

Russia - Friends of the Baltic

Saint Lucia - St. Lucia National Trust

South Africa - Ikhwezi Community College of Education

Spain - Coalition: Research Unit on Scientific Culture of CIEMAT + University Institute of Science and Technology Studies in Salamanca + Organizacion de estados Ibero-americanos

Sweden - Nordregio

Switzerland - Coalition: TA-Swiss – Centre for Technology Assessment + Interface sciences-société, University of Lausanne + University of Lugano

Chinese Taipei - Coalition: Taiwan Institute for Sustainable Energy + College of Social Sciences, National Taiwan University

Uganda - FRA – Food Rights Association

United Kingdom - Involve

USA, Arizona - CSPO at Arizona State University

USA, California - Coalition: The Loka Institute + Pomona College

USA, Colorado - Colorado School of Mines

USA, Georgia - Georgia Institute of Technology

USA, Massachusetts Coalition: Boston Museum of Science + Boston University, Dept. of Environmental Health + The Brookfield Institute

Uruguay - Simurg

Vietnam - Urban-Rural solutions

Visit [www.wvviews.org](http://www.wvviews.org) for contact information for partners

### **Initiators**

WWViews was initiated by the Danish Board of Technology.

### **Funding/Budget**

The project had two main kinds of expenses: Coordination and National/Regional WWViews meetings.

The costs of coordinating the project are estimated to be approximately 1 million Euro. Most expenses were covered by the Danish Board of Technology. The Swedish Ministry of the Environment gave a grant of 17,400 Euro to support the production and distribution of a Policy Report, the Norwegian Ministry of Foreign Affairs gave a grant of 20,400 Euro to sponsor a side event, Det Norske Veritas gave a grant of 13,000 Euro and the Loka Institute 11,400 Euro in support of the general coordination. Smaller donations

and in-kind contributions were also given by private companies, organizations and individuals, including a donation of

The costs of organizing the National and Regional WWViews meetings were covered by the project partners. Support was, however, given to the participation of low-income countries. A grant of 135,000 Euro was given by the Ministry of Foreign Affairs of Denmark, the Norwegian Ministry of Foreign Affairs gave a grant of 132,000 Euro and project partners in Switzerland, Flanders and the Netherlands supported partners from low-income countries with smaller grants. In addition, National and Regional partners were able to secure funding and in-kind support from a number of different sources, including private companies, research foundations, embassies, and public authorities.

### **Time scale**

Preparations started in the beginning of 2008 and the project finished at the end of 2009.

### **Short description**

World Wide Views on Global Warming was the first-ever global citizen consultation. It involved roughly 4,000 citizens in 38 countries spanning six continents. The citizens, chosen to reflect the demographic diversity in their country or region, gathered in their respective nations to deliberate about the core issues at stake in the December 2009 UN negotiations on climate change (COP15). They received balanced information about climate change, discussed with fellow citizens and expressed their own views, by voting on predefined questions and writing their own recommendations to the COP15 negotiators. They did so on daylong meetings on September 26, 2009, following the same schedule and guidelines.

Results were reported to the WWViews website as the meetings evolved around the globe, and were immediately available for comparisons across countries and regions. The results were also analysed and presented in a Policy Report as well as directly communicated by National and Regional Partners to their decision-makers. They were also presented at a side event at the official COP15 venue and at the alternative venue, Klimaforum, in Copenhagen.

### **Objectives**

As markets, technologies and environmental issues become increasingly global in scale, so does policymaking. In this new reality, the distance between citizens and policymakers increases, thereby diminishing the citizens' sense of ownership in decision-making. This creates a need for new initiatives to bridge the widening democratic gap.

Global warming requires global policymaking. Despite this, climate policy debates have to a large extent been limited to scientists, politicians and powerful interest groups, further widening the gap between citizens and policymakers.

Citizens have to live with the consequences of climate policies. Their views should therefore be taken into consideration. Until WWViews, no systematic and in-depth global citizen consultancy on climate change had been organized. WWViews aimed to fill this void and to establish a model for the future inclusion of the world's citizens in global policy making.

### **Process design**

Early 2008 and onwards – The WWViews design: Once the initial idea was conceived, the development of the method commenced. The main components were developed early in the project, but the methodology kept evolving throughout the project.

2008 – May 2009 – Selecting the partners: Another first step was the establishment of the World Wide Views Alliance: a network of partners with the capability of organizing citizen consultations in their own countries. To become partners they should preferably

- have some experience with citizen participation methods
- be unbiased with regards to climate change
- be able to follow the common guidelines
- self-finance their participation in WWViews

Contacts were made to established networks that helped to identify potential partners. In the end, over 50 partners joined forces to arrange 44 deliberations in 38 countries spanning six continents. The partners typically included public councils, parliamentary technology assessment institutions, non-governmental civil society organizations and universities.

Fundraising: Fundraising started early as well and continued until late in the project. Much time was spent on this, both by the coordinators and the National and Regional Partners.

Mid 2008 and onwards - Questions and information material: The questions put to the citizens worldwide were chosen to be of direct relevance to the COP15 negotiations. They had to be identical in all countries in order to allow for cross-national comparisons. To ensure clear communication to policy-makers, the questions were predefined with alternative answer options. The 12 questions chosen were clustered in 4 themes:

- Climate change and its consequences
- Long-term climate goal and urgency
- Dealing with greenhouse gas emissions
- The economy of technology and adaptation

To compensate for the restricted format of predefined questions, it was decided to also allow time for the citizens to formulate and vote on their own recommendations.

An information booklet of 40 pages was produced with background information about climate change (drawing on IPCC's fourth assessment report) and the COP15 negotiation issues.

Information videos (each 5-12 minutes long) were made for each of the four themes, repeating the most essential information available in the booklet and ensuring that all citizens would participate in the meetings with the necessary information. All WWViews information material was translated into local languages.

The questions and information material were developed in close cooperation between the WWViews partners. An international scientific advisory board was responsible for assuring the quality of the material, and it was also tested by focus groups in different parts of the world before completion.

Late 2008 and onwards - The web tool: A special web tool was designed for the purpose of near-instant collection and presentation of the results from the WWViews meetings. The tool allows for statistical presentation and comparison of results between countries and various international groupings (i.e. continents, Annex 1 countries, non-Annex 1 countries, low income countries, high income countries). It can be found at [wwviews.org](http://wwviews.org).

March 23-25, 2009 - Training of partners: A training seminar was organized in Copenhagen for all project partners in March 2009. The purpose of the seminar was to ensure a common understanding of the project, uniformity of method implementation and procedural solutions for culturally specific challenges. Partners joining WWViews later than this date came to Copenhagen for individual training sessions.

September 26, 2009 - WWViews Day: On September 26, 2009 the first WWViews meeting started at 9 am in Australia. The last one finished 36 hours later in California, USA. As the day progressed, citizens voted on alternative answers to the predefined questions and developed their own recommendations. These results were instantly reported on [wwviews.org](http://wwviews.org), so that anyone with Internet access could – and they still can – compare answers to the various questions across countries, regions, political and economic groupings, etc.

Photos and videos from the various meetings were continuously uploaded to a media share server. Video interviews with citizens were made available as well. Some countries arranged to link up via Internet videoconferences. Others presented pictures and results from other countries to their participants.

All meetings followed the same schedule: The 100 citizens, divided into tables of 5-8 people, were led by a head facilitator and group moderators through a program divided into four thematic sessions and a recommendation session. During the thematic sessions, citizens voted on alternative answers to a total of 12 questions, thus making international, quantitative comparisons possible. Each thematic session was introduced by the facilitator and an information video. The participants then engaged in moderated discussions at their tables, the purpose of which was to give all participants time to listen to other opinions and respect prior to voting. Moderators were trained in advance to provide un-biased facilitation at the tables. Each thematic session concluded with citizens casting their votes anonymously on two to four questions. Votes were counted first at the tables, then by the staff and immediately reported to [wwviews.org](http://wwviews.org).

During the recommendation session, citizens wrote in their own words what they believed to be the most important recommendation to pass on to COP15 negotiators. Each table produced one recommendation and all citizens then voted for the ones from all the tables that they found most important, resulting in a prioritized list of recommendations, also reported to [wwviews.org](http://wwviews.org).

Most meetings were either opened or closed by ministers, COP15 negotiators or other government officials.

September 26 and onwards - Making the citizens' views heard: National and Regional Partners communicated results to decision-makers in their countries in various ways. The results were also analysed by the coordinators and invited experts from partner organizations. Results were also presented at a side events at the official COP15 venue and at the alternative venue, Klimaforum, in Copenhagen.

## **Methods used**

The cornerstones of the WWViews method were laid down in a workshop with some of the first partners to join WWViews and developed in further detail during 2008 and 2009. As method, WWViews is a hybrid of a handful of well-tested citizen participation methods previously used at the local, national and regional levels, such as the Voting Conference and Interview Meeting (voting on choices), Citizen Hearing (table brainstorm and meeting priority-setting on recommendations), the Consensus Conference (principles of composition of the information materials), Focus Groups (test of information materials and questions). The method falls into the same method cluster as for example the Citizen Summit (AmericaSpeaks) and the Deliberative Poll® (James Fishkin), but with some important differences – for example, the procedure for selection of citizens is more elaborate than in Citizen Summit, and less elaborate than in Deliberative Poll; also, the WWViews method is specifically designed for simultaneous use at smaller meetings, arranged by many partners, with many languages on very many sites.

## **Stated target groups**

The target groups for receiving the WWViews results were politicians, negotiators and interest groups engaged in the UN climate negotiations leading up to COP15 and beyond. The WWViews results were especially significant for climate policy-makers because they respect the informed and considered views of a broad range of citizens across the world concerning the complex issues to be addressed at COP15.

In order to disseminate the views of the citizens, all national and regional WWViews partners had made plans for how to reach these target groups. The goal was to make them aware of results and ensure that they were taken into consideration.

## **Output**

The results are remarkably consistent across national income groups and geographical regions. The participating citizens voted on alternative answers to 12 predefined questions and produced a large number of recommendations phrased in their own wordings. After synthesizing the results, nine clear Policy Recommendations from the citizens were deduced. The recommendations were:

- Make a deal at COP15
- Keep the temperature increase below 2 degrees
- Annex 1 countries should reduce emissions 25-40% or more by 2020
- Fast-growing economies should also reduce emissions by 2020
- Low-income developing countries should limit emissions
- Give high priority to an international financial mechanism
- Punish non-complying countries
- Make technology available to everyone
- Strengthen or supplement international institutions
- WWViews results can be studied in detail at [www.wwviews.org](http://www.wwviews.org)

In addition to these concrete recommendations, WWViews created a global network of organizations able to organize citizen consultations, it proved it possible to organize citizen consultations on a global level and helped build capacity for involving citizens in political decision-making processes in countries where such methods for public participation had not previously been applied. On September 2012, World Wide Views

on Biodiversity took place, involving many of the partners from World Wide Views on Global Warming, and this time organized jointly with the UN Secretariat to the Convention on Biological Diversity.

### **Formal evaluation**

WWViews has resulted in several research articles, some of which are collected in “Citizen Participation in Global Environmental Governance”, 2011, Routledge, edited by [Richard Worthington](#), [Mikko Rask](#), and [Lammi Minna](#). Exit surveys were administered to participating citizens in over 20 countries and project partners were invited by the Danish Board of Technology to comment on the WWViews methodology. All these evaluations basically agreed that the WWViews method worked well and pointed to possible improvements. Although these suggestions for improvements pointed in different and often mutually exclusive directions, adjustments were made of the WWViews methodology used for World Wide Views on Biodiversity. One of those was to replace the recommendation session with the possibility for National Partners to address issues of national concern instead.

### **Problems met**

Although the WWViews method is more cost-effective than previous experiences with European-wide citizen participation, funding was a major challenge throughout the project. Considerable time and efforts were spent by both the coordinators and the National and Regional Partners in order to secure the funds needed, and despite high motivation several partners had to give up their participation in WWViews, due to lack financing.

Another major challenge was to connect the citizen consultations to the official UN process. Being an experiment and the first-ever global citizen consultation, both the UN and the Danish COP15 hosts were reluctant to give WWViews a role in the official UN program. Results were presented at a side event at COP15 and at many different national venues, making the results available to a host of relevant decision-makers, but it was considered a civil society initiative and not part of a UN decision-making process. WWViews on Global Warming did carve the way, though, for future integration of global citizen consultations in international decision-making processes. WWViews on Biodiversity was considered to be partly a UN initiative and it was therefore recognized as such at the UN biodiversity COP11 in India, 2012.

# Annex II: Agenda for workshops

# Cross European TA: Experiences and Prospects

**When:** Thursday June 21st - 0900 – 1600

**Venue:** The Danish Board of Technology

- 0900 Welcome and introduction – Making cross European TA  
Marianne Barland/NBT
- 0915 Who are the addressees and intended target groups of European TA?  
Introduction by Leo Hennen/TAB and Paidi O’Reilly/UCC
- 0930 Group discussion
- 1015 Plenary session
- 1100 Coffee Break
- 1115 What is the added value of European projects and motives for cooperation for national TA bodies?  
•Input to European and/or national politics?  
•Learning process for the institutions involved?  
Introduction by Walter Peissl /ITA and Mara Almeida/ITQB
- 1130 Group discussion
- 1215 Plenary session
- 1300 Lunch
- 1400 How to deal with the tension between national/regional TA structures and the ambition to act European?  
Introduction by Mariann Deblonde/IST and Lenka Hebakova/TC
- 1415 Group discussion
- 1500 Plenary session
- 1545 Closing remarks  
Anders Jacobi/DBT

# International Workshop

## Cross-European TA

November 12th-13th 2012, Karlsruhe , Germany

### Monday, 12th November 2012

- 12:00            Opening Lunch
- 13:00-13:15    Welcome and Introduction to the Workshop
- 13:15-15:00    Cross-European TA VISION 2020 Part I  
                    Presentation of central elements of the VISION TA 2020  
                    Comments, group work and plenary discussion
- 15:00-15:30    Break
- 15:30 – 17:00   Cross-European TA VISION 2020 Part II  
                    Presentation of central elements of the VISION TA 2020  
                    Comments, group work and plenary discussion
- 17:00-17:30    Sum up  
                    Dinner

### Tuesday, 13th November 2012

- 9:00 – 12:30    The existing European TA Landscape and how to organise the future?  
                    Presentation by Lars Klüver  
                    Group work and plenary discussion
- 10:00-10:30    Break
- 12:30 – 13:00   Sum up