

review

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Contents

Welcome: The shining star of Europe	3
Just do it: We didn't invent the iPhone	4
In a nutshell: Enterprise Europe Network	5
Focus on figures: Who receives funding from EWI?	6-7
Policy in practice: The UNIDO trust fund for industrial biotechnology	8-9
Focus on: Social innovation: the whys and wherefores	10-11
From Europe: The European Institute of Innovation and Technology	12-13
In the spotlight: Institute for Agricultural and Fisheries Research	14-16
Foreword: Towards a sustainable society	17
Central theme: The Belgian presidency of the EU: priorities for research and innovation in the EWI policy area	18-21
Central theme: Actors in the EU research and innovation landscape	22-23
Central theme: On the move! A Flemish action plan for researchers	24-25
Central theme: The career and mobility of the modern researcher	26
Central theme: Stick a socket in your tank	27
Central theme: EurOCEAN 2010 Conference: major challenges for marine and maritime research	28-29
Central theme: More European cooperation = less global warming	30-31
Central theme: Research, development and innovation for a safer Europe	32-35
Central theme: Turning challenges into opportunities with biotechnology	36-37
Central theme: Industrial Technologies 2010: small is beautiful – and useful	38
Central theme: ICT 2010: facing societal challenges	39
Interview with: Six months in the service of Europe	40-43
The policy research centres: Policy Research Centre for Mobility and Public Works – Traffic Safety	44-47
Afterthoughts: Transformation in time of crisis: towards a new industrial policy	48-49

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shining star Europe

The twelfth Belgian presidency of the European Union is now at the half-way stage. Within the framework of competencies agreed by the different Belgian governments, Flanders and the Flemish administration are playing an important role in this presidency. And so a Flemish star is shining brightly in the European firmament. By the same token, the European constellation is also helping to illuminate the path which Flanders needs to follow. Reason enough to give the Flemish contribution to the EU presidency – viewed in particular from the perspective of the EWI policy domain – a central place in this edition of the EWI Review.

In this number we will be looking first and foremost at the major conferences which are being actively supported by the EWI or where the department is responsible for a significant part of the organisation. This includes the EurOCEAN Conference (p. 30), the Security Research Conference (p. 27), the KBBE Conference (p. 36), the Industrial Technology Conference (p. 38) and the ICT Conference (p. 39). A number of Flemish themes will also be described in more detail, such as researcher mobility (p. 26) and electric cars (p. 28). We will also be offering further explanation about the organisation and priorities of the trio of presidencies (p. 18). In this context, our interview with the Flemish member of the Permanent Representation of Belgium at the EU is particularly relevant (p. 40).

In addition, there is still plenty of room for our regular features. The UNIDO Trust Fund announces its launch (p. 12), the Institute for Agricultural and Fisheries Research reveals some of its secrets (p. 14) and the spotlight is focused on the Enterprise Europe Network's organisation of its annual conference. The EWI is also pleased to present the latest edition of its Budget Browser (p. 6). In keeping with tradition, the edition is rounded off with a topical column (p. 50).

I would also like to draw attention to the new possibilities which the EWI Review is able to offer its readers: you can now submit suggestions for articles to be included in future editions! Do you think that it might be interesting for the Review to tackle a current issue, or interview a particular person or highlight a special theme? Even better, would you like to send us a text on one of these matters? The EWI Review website offers you the chance to put forward ideas and opinions of your own. Some people have described this initiative in trendy terms, such as tapping the 'wisdom of the crowds', applying 'wikinomics' or the 'long tail' concept, implementing the 'Civil Servant 2.0' philosophy or exploiting social media techniques. Others prefer to keep it simple, and talk about the opening of an electronic suggestion box. Innovation comes in all shapes and sizes – even in the EWI Review.

However you choose to describe it, why not just give it a try? Surf to the following URL (www.ewi-vlaanderen.be/review/suggestie), let your inspiration run wild and send us your own personal contribution to the next EWI Review. I am already burning with curiosity to see what you come up with, and in the meantime I wish you a pleasant and inspirational reading of our current edition.

Peter Spyns, General Editor



Flanders shines

The Belgian EU Presidency is an excellent opportunity for Flanders to celebrate Europe and to highlight Flemish assets. From 1 July until 31 December you can take part in several European festivities and events. For more information, see www.eutrio.be/belgium/flanders/flanders-shines/flanders-shines/

We didn't invent the Phone but it sure inspired us to become entrepreneurs

My name is Bart Decrem. I grew up in Flanders and Brussels. The confrontation with the diversity of my homeland made me adventurous and enterprising. It also made me curious to see more of the world.¹

13 and full of energy

I have always been energetic, constantly on the lookout for ways to get things moving or make things happen. This was the period when the free radios were bursting onto the scene and I tried to get a foot in the door at Brussels-FM. As a teenager, this wasn't so easy, but the station's founders finally gave me some space to publish their weekly newssheet. Later, I was also able to try my hand as a DJ, often in the early morning. It was a great experience and a great way to learn. I had more problems at school, where they made it clear that they didn't expect to see me back after the fourth year. And so I finally ended up at the European School in Brussels. After graduating in political science at the ULB and in international trade at the Cooremans Institute, I went to Stanford University to study law. From there, I went to work for a short time at McKinsey.

Palo Alto

After my studies, I ended up living in East Palo Alto, a small community in the very heart of Silicon Valley, where the gulf between rich and poor is painfully visible. With the help of a grant I was able to start the non-profit making organisation 'Plugged In', where I at least tried to narrow the digital divide by offering computer lessons and homework guidance for kids. We performed some really useful work for the local community. Our projects won awards and became widely known. We even had a visit from President Bill Clinton. A fantastic experience for Plugged In and for the whole community which took part... Plugged In has since grown to become a national organisation.

Silicon Valley

Silicon Valley is a highly stimulating environment for enterprising people. The high concentration of technology companies and the presence of Stanford University act as a magnet for creative and inquisitive spirits who are still eager to learn – and innovate. If you want to become an entrepreneur, this

is the place where you will find the right people and the right culture. At that time, I was active in the Linux community and was convinced of the opportunities it had to offer. As a result, in 1999 I set up 'Eazel', which developed Linux applications for the desk-top. The company no longer exists, but its software – Nautilus – is still used by millions of Linux users. Many of the Eazel staff went on to work at major names, such as Sidekick and Safari.

From Korea to Mozilla

The next stage of my career saw me move to Korea. I stayed there for a couple of years, working for a number of start-ups specialising in Linux applications and also learning to speak Korean. Back in Silicon Valley I became Head of Business Affairs at the Mozilla Foundation. Here, I was closely involved with the launch of FireFox, the internet browser. Amongst other things, I worked on the marketing campaign which brought FireFox onto the market and I helped to set up the collaboration with Google, Yahoo and Amazon; which was an important step forward for the Mozilla Foundation.

Floci

Using the experience I had gained at Mozilla, I decided to set up 'Flock': a social web browser which allows friends to keep in contact with each other. Flock was started with the help of a group of angel investors and advisors. I worked there as CEO until 2006. Following Flock, I took some time out, so that I could decide what I wanted to do next. Doll Capital Management offered me the chance to evaluate new projects as their 'entrepreneur in residence'.

Tapulous

When the iPhone came on the market, I was immediately sold on the idea. I was fascinated by the enormous potential which this platform seemed to offer to project developers. And so Tapulous² was born. We built a network of social games around Tap Tap Revenge, one of the most popular

games in the Apple Store. This game, based on the rhythmic tapping of the screen or the synchronised shaking of the unit, has been downloaded 25 million times and played no fewer than 600 million times (see Figure 1). Another winner was Riddim Ribbon, which stood at Number 1 in the list of best-selling games after just three days on the market. Tapulous has done well for itself and we were recently taken over by Disney. We now form part of the Disney Interactive Media Group.

Keeping Busy

I am still socially committed and regularly take part in community projects, if I think that they can bring about important changes. In recent years, for example, I have been collaborating with CTCNet, a technological community centre for people with a low income, and also with the Full Circle Fund, which seeks to support a new generation of Silicon Valley entrepreneurs.

Travelling is part of this commitment, and that means learning languages as well: I am always keen to master the local language. As a result, I can now speak eight languages (more or less): Dutch, French, English, Italian, Spanish, German, Korean and Chinese.

Most Creative

In May 2009 Bart Decrem was cited by Fast Company as being one of the 100 most creative people in the business world. He was also noted in the Top 10 of the most creative people in the music industry. This year Fast described him as 'A Blast From The Past' and he was again listed in the Fast 100. The magazine went on to say that he is "never hampered by the thought that what he is doing might actually fail". And that, it seems, is one of the secrets of his success.

Bart Decrem, Tapulous Frank Vereecken, Strategy and Coordination Division

- 1 Re-working of http://www.decremental.com/post/30268681/about-me
- 2 http://www.crunchbase.com/company/tapulous

Enterprise Europe Network Flanders

With the Enterprise Europe Network the DG Enterprise and Industry of the European Commission seeks to support European SMEs and advise them in their innovation and internationalisation programmes. Enterprise Europe Network Flanders is a collaborative venture between Enterprise Flanders and the Agency for Innovation by Science and Technology (IWT). These organisations have joined forces to use their combined expertise in entrepreneurship and innovation to put Flemish SMEs on the road to success in Europe.

SMEs are operating with ever increasing frequency across international borders. The new opportunities offered by the single European market, easier access to transnational markets, the financing of projects by the European Union... these are all factors which are contributing to the growing internationalisation of Flemish businesses. Cross-border technology transfers are also helping SMEs with their innovation processes and their progression towards better performance and greater competitiveness.

The Enterprise Europe Network offers guidance to these companies in their search for suitable partners for strategic and commercial collaboration, answers questions in connection with European legislation and helps them to access European funding for project financing.

The annual conference of the network

Each year a three-day conference is held for all the partners of the Enterprise Europe Network. The focus is put on the priorities of the network for the forthcoming work year, as set by the EU.

When the Enterprise Europe Network was started, it was decided that the country that is acting as president of the Union should also organise the network's annual

conference. As a result, the first conference was held in Strasbourg in 2008 during the French presidency. The 2009 meeting took place in Stockholm, Sweden. This year it is the turn of Flanders – and more specifically Enterprise Flanders, within the framework of the Belgian presidency – to welcome the more than 800 delegates to the Annual Conference. In addition to representatives from the various consortiums, the DG Enterprise and Industry and the EACI³ will also be present in Antwerp on 13, 14 and 15 October 2010, as will officials from the DG Regions, the DG Internal Market and the DG Research.

What are the themes for this year's conference? Firstly, what does the European SME need to do in order to face the challenges of 2020? Secondly, how can the Enterprise Europe Network help the European entrepreneur to meet these challenges? Via a variety of different workshops and 'do' sessions, the participants will be able to test new tools and new techniques, which they can later use in their own consortia. Through a number of 'best practice' work groups, the members of the Enterprise Europe Network will be able to exchange and share knowledge and experience. In addition, the evening events and other peripheral activities will offer numerous networking opportunities. Poster ses-



Business Support on Your Doorstep

sions and information stands complete the picture. Above all, the aim is to put 'open and enterprising Flanders' well and truly in the spotlight. The themes relevant to Europe in 2020 merge seamlessly with the Flanders in Action Pact 2020, particularly with regard to the breakthrough of 'Open Entrepreneur'.

This is a unique opportunity to enhance the visibility of Flanders, Enterprise Flanders and the Enterprise Europe Network. At the same time, it will allow greater attention to be focussed on the core themes of the network: entrepreneurship, internationalisation and innovation – which are also the spearheads of Flemish policy.

Lutgart Spaepen, Enterprise Flanders

Enterprise Europe Network Third Annual Conference

When? 13, 14 and 15 October 2010 Where? Antwerp More info? http://www.enterpriseeurope-network.ec.europa.eu/ Questions? Lutgart.Spaepen@ agentschapondernemen.be

Who receives funding from EW?

For once, our feature 'Focus on figures' should be renamed 'Focus on the figures bible'. By this, of course, we are referring to our own in-house publication: the EWI Budget Browser. This indispensible budgetary guide does not simply focus on a single figure – it focuses on many of them: 33 graphics and 24 tables illustrate all the department's credits for 2010 and highlight trends in the Flemish government's budgets for economy, science and innovation. The EWI Budget Browser is an annual 'facts & figures' magazine pur sang: the statistics speak for themselves, albeit with a little explanatory commentary to help you on your way. The following is a selection from this year's edition.

The content of the budget programmes for the EWI policy domain for the year 2010 amounts in total to some 950 million euros. More than a quarter of this total (27% or 259 million euros) is earmarked for the implementation of the economic support policy via the Fund for Subsidiary Economic Policy: the Hermes Fund, which is administered by the Enterprise Flanders.

The remaining three-quarters of the budget are largely devoted to science and innovation policy: valorisation and industrial policy, academic policy, science and technology communication and general policy.

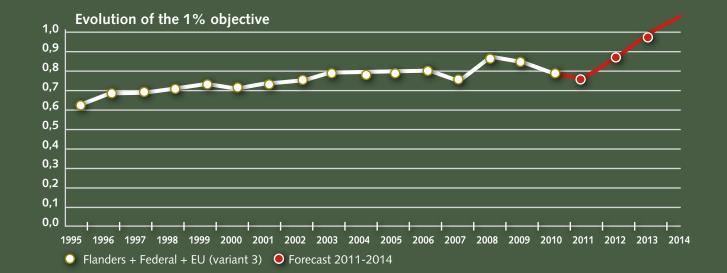
A slight fall in the figures

In 2010 the Flemish Government will make 1,711 billion euros available for science and innovation policy, of which 1,066 billion will be allocated to the funding of scientific and academic research (R&D). The other activities which are regarded as 'research-oriented' are education and training (E&T) and scientific and technological services (S&T). These credits have also felt the effects of the current world-wide crisis and the resultant need to make savings: the figures for 2010 show a slight fall in comparison with 2009.

Horizontal policy

The science and innovation policy is a horizontal policy: the available resources are spread across the thirteen different policy domains for which the Flemish administration is responsible and over the fields of competence of all the ministers of the Flemish Government. In terms of overall budgetary weight, the lion's share is devoted to 'actual science policy'4, which accounts for 94% of

the total budget. Translated into terms of ministerial competences, this means that the Flemish Minister of Education Youth, Equal Opportunities and Brussel Affairs is responsible for just over half the budget (51.5%), while another 41% of the credits are allocated to the Minister for Innovation. Public Investment, Media and Poverty Reduction. The remaining 7.5% is shared between the Government's seven other ministers. If we look specifically at the budgets for R&D, the figures show that the largest proportion of R&D funding (62%) is to be found in the second-named ministry. whereas the first-named ministry accounts for just 29%. This is attributable to the fact that university resources are only partially intended for R&D purposes (25%), with the remaining 75% being primarily used for education and training.



> Focus on figures

The EWI Budget Browser for 2010 was able for the very first time to analyse the way in which public R&D credits in Flanders are actually distributed between the sectors which carry out the research. More than half of the credits (56%) are allocated to higher education, with a further quarter going to business. A fifth of the available funding is used by the Government itself to finance its own research, with just 1% going to individual non-profit organisations. An international comparison⁵ of public R&D credits shows that Flanders⁶ is not a front-runner in this particular field. The Flemish figures more or less match the EU-27 average.

1% norm

The 2020 Pact7, which reflects the longterm vision, strategy and action plan of the Flemish Government and the social partners, contains an innovation objective for Flanders which foresees that by 2014 3% of gross domestic product (GDP) per region will be spent on R&D, of which 1% will be provided by the Government. The EWI Budget Browser made a prognosis of the budgetary efforts which will be necessary to achieve this 1% norm by 2014. On the basis of a number of reasoned assumptions8, it suggests that increases of 300 to 340 million euros per annum will be necessary.

Public support for eco-innovation

The 2010 edition of the Budget Browser also devotes attention to one of the new indicators which will be developed under the terms of the 2020 Pact: public support for eco-innovation⁹, including related research. A cross-section was taken of all the credits in the fields of science

and innovation policy. This revealed that each year some 180 to 190 million euros is spent on eco-innovation and related research – a figure which is equivalent to approximately 0.10% of GDP. The most important funding streams flow through the Enterprise Flanders $^{10}\,$ which makes 120 million euros available each year in the form of ecological grants, as well as co-financing the EFRD clean-tech projects (Objectives 2 and 3)11. VITO12 (industrial innovation, energy and environmental quality) and IMEC13 (photovoltaic research) also spend a significant proportion of their public subsidies on research related to eco-innovation. The Government also supports eco-innovation in the agricultural and fisheries sectors through the relevant department and through research carried out by the ILVO – the Institute for Agriculture and Fisheries Research¹⁴. The policy domain for Environment, Nature and Energy also makes a significant contribution.

Koen Waeyaert, Knowledge Management Division



- 4 Resources that come under the minister competent for science and innovation, together with resources for science policy for higher education.
- For international comparisons, the available budget is compared with GDP per region.
- In order to compare Flemish R&D credits internationally, the Flemish share of federal R&D credits was added using an allocation formula of 35.5% of ESA (source: VRWI) and 56% of the remainder.
- ⁷ EWI Review 3 (3): 35
- $^{\rm 8}$ $\,$ Including the likelihood that in 2011 a further saving of 2% on R&D credits will be necessary.
- 9 All innovation activities which result in or seek to achieve a significant improvement in the field of environmental protection.

Eco-innovation includes new production processes, new products or services, and new management and business methods which prevent or substantially reduce risks for the environment and/or optimise the use of natural resources throughout the lifecycle of related activities.

- ¹⁰ EWI Review 3 (3): 18 19
- 11 EWI Review 2 (1): 28
- ¹² EWI Review 2(2): 23 25
- ¹³ EWI Review 1 (1): 20 23
- ¹⁴ Also see elsewhere in this edition: p. 14



Het UNIDO trust fund for industrial biotechnology

The bio-economy acts as an important motor for the wider economy. Moreover, it also contributes to a more sustainable environment (with lower levels of CO2 emissions). At the same time, it can help to reduce our dependence on fossil fuels, by encouraging a switch to new and more viable methods of industrial production based on biomass¹⁵. This not only involves the development of new (second generation) bio-fuels, but also – and maybe more importantly – a new wave of bio-based products.





Within the EU, this priority is supported by the 'lead market initiative for biobased products'. The European Recovery Plan also contains two essential measures specifically designed to turn the negative economic tide: an economy with lower levels of CO2 emission, in order to tackle the problems of climate change, coupled with assistance for developing countries and the maintenance of the so-called Millennium objectives.

The green light for knowledge

The Department of Economy, Science and Innovation has concluded an agreement with UNIDO for the financial support of a trust fund for industrial biotechnology. The fund will be run by UNIDO and will be used to set up an international network, the aim of which is to facilitate access to knowledge and technology in the industrial biotechnology field¹⁶. This will help UNIDO to achieve its own objectives of making a significant contribution to economic development in underdeveloped countries and regions, based on viable sustainability criteria for both society and the environment. The Institute of Plant Biotechnology for Developing Countries (IPBO) was appointed as project manager for the trust fund.

Knowledge transfer through collaborative

ventures in industrial biotechnology can open up new research possibilities and ease access to up-and-coming economies for the Flemish agri-biotech sector. In this way, there is an added value for all the partners involved. Various representatives from Flemish industry and the academic world have already shown interest in taking part in the project. There has also been interest from several other countries. The intention is that the trust fund should work as a lever, which in time will attract more and more donors.

In concrete terms, the fund will make 250,000 euros available each year (financed by the EWI), of which 30% is destined for collaborative projects with developing countries. UNIDO will also identify the countries which are eligible to collaborate in joint workshops. These form the basis for the further definition of the collaborative projects. Flemish partners from industry and academia will be invited to participate, leading to a win-win situation for all concerned.

Physic nuts as bio-fuel

Typical projects involve the use of plants and vegetation from the South as a source of new products or new applications. A well-known example is Jatropha curcas,

also known (because of its laxative qualities) as the 'purging nut'. The nuts of this member of Euphorbiaceae family, which is only found in the tropical and sub-tropical belt, are rich in oil which is highly suitable for the production of biodiesel. The shrub grows in marginal conditions and is not edible, so that there is no question of it being a competitor to food production. Biological improvement of the plant strains can increase production and reduce the toxicity of the oil extract, so that the residual meal can be used as animal feed.

The trust fund was officially launched on 29 March this year, during a conference held in the UNIDO offices in Vienna. A number of prominent guests (see photo 1), including Kandeh Yumkella, the Director-General of UNIDO, and our own Flemish Minister for Science Policy, underlined the level of interest and support for this initiative. The fund must make a contribution towards a more sustainable society with global perspectives. Industrial biotechnology is an essential component for the realisation of this knowledge intensive bio-economy or knowledge-based bio-economy¹⁷.

Kathleen D'Hondt, Research Division

UNIDO?

The United Nations Industrial Development Organization (UNIDO) is an agency of the United Nations. Its mission? To promote sustainable industrial development in developing and growth countries, with the purpose of alleviating poverty and improving general living conditions. Knowledge, information, and technology are mobilised in order to stimulate employment, encourage competitive economic practices and ensure a sustainable environment, based on collaboration at global, regional and sectoral levels (www.unido.org).

UNIDO focuses on three themes in order to achieve a long-term impact:

- Combating poverty by increasing productivity and added value
- Trade capacity
- Energy and the environment

IPBO?

IPBO was founded in 2000 and has been a partner of UNIDO for some time. IPBO seeks to contribute towards socio-economic development in developing countries and in countries with growing economies. With this aim in mind, it facilitates access to the latest technological advances in plant biotechnology, with specific attention to effective bio-safety and regulatory mechanisms. Since 2004 the Flemish Region has been supporting the work of IPBO. IPBO collaborates with various other international organisations¹⁸. As a member of the UNIDO network, IPBO participates in the UNIDO e-Biosafety Programme (http://binas.unido.org/moodle/)19.

- Biomass is the collective name for all kinds of organic waste products, such as wood, garden waste, old paper, straw, compost, etc. – see als http://www.engineering-online.nl/?com=content&action=bioenergy.
- The International Industrial Biotechnology Network or IIBN (http://www.
- Also see elsewhere in this edition: p. 36 http://www.ugent.be/we/genetics/ipbo/en/about/cooperation
- http://binas.unido.org/moodle/

Social innovation: the whys and wherefores

About four years ago, our new dean asked me to set up a research centre which would group together all existing initiatives relating to the role of business within society. The man had a clear vision: sustainable entrepreneurship would become an important trend in the years ahead. And a top school like INSEAD must stand at the very forefront of this evolution.

In response to the dean's proposal, I set about amalgamating a number of more or less successful initiatives: our Health Management Initiative, the Sustainability Group (energy, environment, sustainable mobility, etc.), the Social Entrepreneurship Initiative, the Corporate Social Responsibility and Ethics Group, as well as my own Humanitarian Research Group. To this was added a new Africa Initiative, which aimed to devote more attention to the needs of the Dark Continent. It was quite a mixture of disparate themes and objectives! Yet at the same time, it was a golden opportunity to move beyond the stereotyped pigeonholing of such initiatives and to look more comprehensively at complex, multi-discipline problems with a group of highly motivated colleagues.

The INSEAD Centre for Social Innovation

It was certainly not our intention to create a group of tree-huggers or well-meaning do-gooders. The business world is being increasingly confronted with the need to take account of the impact of economic activity on society and the environment. This not only involves a certain degree of risk, but also presents an enormous opportunity for innovation in new products and services. In addition, the public sector and the non-governmental sector – in much the same way as all social entrepreneurs – are also urgently in need of a more systematic, business-oriented approach.

Our definition of social innovation? The introduction of new business models and market-based mechanisms that can lead to sustainable economic prosperity and sustainable environmental and social benefits. In other words, innovation within a triangular framework of profitability, respect for the planet and the improvement

of prosperity. It is important to be aware that the economy and profitability still occupy first place in the overall scale of priorities. But they are no longer alone. It is even more important to realise that the integration of the environment and the social context offer a huge potential for innovation in new products and services. Moreover, the success of these innovative business models can also pave the way for a process of renewal and greater efficiency in the public and social sectors.

A bridge between different worlds

After its initial phase, the Social Innovation Centre quickly developed into an incubator for multi-discipline projects focusing on innovation and renewal in the fields of education and research. A few examples. First and foremost, the centre devoted considerable time and effort to the harmonisation and strengthening of the curriculum for sustainable entrepreneurship (both compulsory and optional subjects). Many students now choose our MBA programme - at least in part because of the range and depth of this revised curriculum. Similarly, our 'alumni sustainability roundtable' has grown to become a regular discussion forum that involves companies, distinguished alumni, teaching staff and students. It helps everyone to keep their finger on the pulse. At the same time, we also bring stakeholders into contact with each other (with the result that we can sometimes involve them more closely with the school).

For the school's professors, however, the best thing continues to be the excitement of new things and new challenges. Many of our projects involve 'uneasy alliances': the study of complex problems with unfamiliar partners, such as companies,

non-governmental organisations, local authorities, local schools, international donors, etc.

Take, for example, the Pepal Project. The International HIV/AIDS Alliance provides support to local NGOs who work to combat AIDS in more than forty different countries around the world. Pepal seeks to bring together partners from private business and the NGOs, so that they can work on joint projects. The aim is to help these two very different worlds to get to know each other better, and (more importantly) learn from each other. A donor was found who was prepared to fund a pilot project.

In collaboration with our Social Innovation Centre, Pepal put together a programme which consists of a week's training (for 40 people, representing a good mix of business and non-profit), followed by a year of project work in situ (in countries such as Zambia, Nigeria, Myanmar, Ukraine), rounded off with a further week of training. It was possible for MBA students to work on some of the projects. A research programme has monitored the projects closely, to establish which characteristics and which environmental factors are most likely to contribute towards success. Such is the degree of satisfaction with this pilot project that six others are already being scheduled for this year.

Breaking the mould

What is so unusual about this project? Well, it is highly unusual for people working in the profit and non-profit sectors to exchange information and collaborate so closely. It has been a highly educational experience for all concerned! It is also unusual for a training programme to be di-



rectly linked to a project in a difficult environment (for example, a poor rural district in Africa). However, it is precisely in such environments that innovative thinking, a problem-solving approach and an ability to adapt successfully to changing circumstances can best be cultivated. Even more unusual is the fact that the further training (executive programmes) is linked to MBA studies within the same projects. Perhaps most unusual of all is the way in which the project has been able to break the mould of stereotyped thinking. Like most other organisations, our school is neatly divided into 'boxes': specific and well-defined zones of responsibility. Pepal has managed to break through the walls of these separate boxes. Finally, it is also unusual that a training project runs parallel with a research project, which allows the factors for success to be determined, analyses the best way to measure impact and assesses the best manner to expand the individual project plans.

From malaria to mobile phones

Another good example is the research project known as Medicines for Malaria Ventures, a private-public collaboration which aims to develop new ways of combating malaria. The fight against malaria not only requires new medicines: it also requires new and innovative methods to ensure that these medicines reach the often remote places and are used there

correctly. This in turn requires new and innovative logistical chains, which (yet again) involves a number of 'uneasy alliances' between national and local authorities, NGOs, commercial companies, sponsors and donors, etc. It further requires a high degree of insight with regard to the need for the right kind of subsidising in the right place, in order to keep the medicines affordable; and the ability to give the right stimulus to all the different links in the chain; and the foresight to make the right choices about all these different links. In the cities, it is possible to work with local dispensaries. In isolated rural areas - where often only the large food multi-nationals are able to penetrate - the help of the business community may be necessary. An understanding of local customs and culture is also indispensible. So, too, is a technical understanding of the medicines concerned: some medicines can actually have harmful consequences if they are used wrongly or irregularly. In this context, one of the most innovative measures is the use of mobile phones to check that the medicines are being administered correctly. Many rural areas have access to the mobile phone network, so that it is possible, for example, to 'reward' the correct taking of medicines by the award of extra dialling credits. An added advantage is that intelligent medicines make it feasable to use mobile telephones to track down counterfeit and sometimes dangerous drugs.

Meeting business challenges with social projects

It should be clear by now why the word 'innovation' stands at the centre of the title of our Social Innovation Centre. Innovation lies at the very heart of our operations. The centre is a focal point for experiments, where we test processes and procedures that do not fit neatly into our normal business units (Master in Business Administration, Executive Education, etc.). The things that work well can be readily absorbed into our regular activities. In other words, we are working with very complicated and important problems within the framework of a multi-discipline approach and in a highly unusual context. The path we are following is the path of innovation: searching for solutions to complex issues with a wide diversity of partners in constantly changing circumstances. This will make us better prepared to meet the challenges of the future, both in the business world and beyond, and will allow us as a business school to offer our students and our customers better courses of study.

Luk N. Van Wassenhove, INSEAD – Social Innovation Centre

More info?

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If the European Union wishes to maintain its position in the world economy, it will be necessary to make some serious efforts. In particular, Europe must work in a purposeful and well-targeted manner towards the further development of a knowledge economy, whilst at the same time tackling the great social challenges of our age. New ideas must lead to concrete commercial opportunities. It was for this reason that the EU set up the European Institute of Innovation and Technology (EIT) in 2008²⁰.

The EIT wishes to bundle together the many different innovative forces currently at work in Europe – forces which, until now, have always been fragmented. To achieve this goal, the EIT bases its activities on the three main pillars of the knowledge triangle: higher education, research and the business community. The common theme which unites these three pillars is entrepreneurship. But what exactly is the mission of the EIT? In short, to promote a giant leap forward in terms of both the capacity and the impact of European innovation.

Recognised KICs

In April 2009 the EIT launched a call for consortia who were interested in being recognised as Knowledge and Innovation Communities (KIC) for three specific themes: climate change, mitigation and adaptation; the future of the information and communication society; and sustainable energy.

At the end of 2009 the governing board of the EIT designated the first three KICs:

- Climate change: Climate KIC
- Information and communication society: EIT ICT-Labs
- Sustainable energy: KIC InnoEnergy21.

The KICs are founded on criteria which must actively stimulate innovation.21 For this reason, each KIC consists of partners from education, research, business, enterprise and finance. Their structure is based on face-to-face collaboration between these different partners. This collaboration takes place in co-location centres, which serve as innovation hotspots. It is their task to translate new research findings into new applications and new markets. Innovation is not simply the result of scientific or technological breakthroughs. New business models and models of intellectual property rights are just as important. In order to carry out their important task effectively, the governing bodies of the KICs are given a large degree of autonomy. As far as the financing of their operations is concerned, they will build further on existing funding streams at European, national and regional levels.

Flanders in KICs - KICs in Flanders

A number of Flemish partners are involved in the InnoEnergy KIC. The InnoEnergy consortium consists of six co-location centres, each of which conducts detailed research into a specific topic. The Flemish partners in the consortium's Flemish-Dutch co-location centre are the K.U.Leuven, the VITO and Eandis (the latter manag-

ing the electricity distribution network in Flanders). In addition, IMEC and Elia are also involved. As a result, Flanders is destined to become a European innovation hotspot for sustainable energy in Europe. The consortium hopes to be operational by the middle of 2010.

The Flemish partners will work on the theme of 'intelligent and energy-efficient cities' and will be based in Genk (Waterschei, Energyville). The cost-effective use of energy is a crucial factor for buildings, offices and transport within urban centres. The decentralised generation of energy by private individuals and the business community - via the use of solar panels, small wind turbine parks and micro co-generation plants – must be maximised. The provision of energy and its proper use must be constantly monitored and managed. This will require a fundamentally new approach. The different sources of energy (gas, electric, solar, wind, etc.) will need to be integrated more fully than ever before. It will be necessary to switch quickly and easily between the different sources, in function of availability, cost price, the ability to adjust demand and the possibility to store surplus capacity.

The proposed concepts are made concrete within the framework of the knowledge triangle. The educational concept seeks to enhance the spirit of entrepreneurship, mobility and the commitment of industry. For this reason, the drawing up of new curricula for European masters, doctoral and post-doctoral studies will not only need to take account of scientific advances and depth, but also the requirement to integrate an entrepreneurial profile and the development of inter-disciplinary skills. In order to ensure excellence, InnoEnergy will draw on expertise from a pool of talent: top researchers from universities and highly-respected partners from industry and business schools will put together tailor-made programmes for the students at the different co-location centres.

The EIT is set to be a key driver of sustainable European growth and competitiveness through the stimulation of world-leading innovations with a positive impact on the economy and society. Within this broadranging mission, Flanders is destined to become a European innovation hotspot for sustainable energy in Europe.

Karen Maex, Catholic University of Leuven

THE STRUCTURE

The administrative structure of the EIT operates at two different levels: on the one hand there is the governing board, on the other hand there are the Knowledge and Innovation Communities (KICs).

- The governing board provides strategic guidance and coordination. It defines the long-term strategic priorities in the Strategic Innovation Agenda (SIA) and in the Triennial Work Programme (TWP). The governing board is also responsible for the selection, evaluation and coordination of the KICs.
- The operational platform of the EIT is formed by the KICs: integrated partnerships between universities, research organisations and companies, which seek to promote the production, dissemination and exploitation of new knowledge products and best practices concerning innovation. The KICs enjoy considerable autonomy with regard to the setting of their own vision, focus, working methods and internal organisation.



Institute for Agricultural and Fisheries Research

The Institute for Agricultural and Fisheries Research – ILVO for short – is a Flemish Scientific Institute, part of the Flemish Government's Agriculture and Fisheries policy domain. The institute employs some 550 members of staff; more than a third of them are researchers. The research activities occur in four different units: Animal Sciences, Social Sciences, Plant Sciences, and Technology & Food Sciences. The core mission of the ILVO is to perform high-quality scientific research and to provide high-quality services to policy-makers and professionals in the agricultural and fisheries sectors. Let's take a look behind the scenes.



The ILVO has approximately 200 hectares of experimental fields and 15,000 m2 of experimental stalls for livestock. It has various analysis and detection facilities, a diagnostic centre and accredited laboratories for plant material, forage, insemination techniques, foodstuffs and genetically modified organisms. Test benches, a milktesting installation, a semen reception and processing unit and a test factory for food processing (dairy products) complete the institute's extensive infrastructure.

All creatures great and small

The mission of the Animal Sciences Unit is to carry out scientific research and to provide services to both the government and the professional sector. It seeks to promote sustainable livestock husbandry (cattle, pigs and poultry) and strives for sustainable exploitation of the natural resources of the seas, protection of land and marine environments, the general promotion of animal welfare, and the provision of safe and high-quality animal products.

Through a programme of research in nutrition physiology, the Animal Sciences Unit seeks to fine-tune the supply of nutrients according to the requirements of the animal. At the same time, considerable efforts are being made to reduce the discharge of minerals, such as nitrogen, into the environment. Functional animal nutrition not only improves the animals' health, but also gives an added health value to the end products which they provide.

Research into animal husbandry and animal welfare encompasses entire livestock systems. Researchers develop methods and strategies to evaluate and improve animal welfare, whilst simultaneously promoting research that both measures and reduces the emission of greenhouse gases. In collaboration with the Flemish Government and the agricultural and industrial sectors, ILVO is also currently evaluating several alternatives to the non-anaesthetised surgical castration of livestock in farming operations.

Fisheries research starts on the one hand from the close relationship between the exploitation and the quality of the aquatic environment and its living resources, and on the other hand in the need for a sustainable global management plan. Such

a plan would be useful to official authorities, commercial operations and society at large. The core tasks involve investigations into the ecology and quality of the aquatic environment and the food chain, the marine habitat, fishery biology, aquaculture (both on land and in the sea), the technical aspects of fishing, and product quality and technology. These different areas of research focus on large segments of the food chain from an ecosystem perspective.

The technical advice and service provision of the Animal Sciences Unit is channelled through the ANIMALAB (a laboratory for research into livestock feed and the nutritional value of animal end products; the quality of fish, crustaceans and molluscs; contamination in environmental samples and in the fat of fisheries products; biological habitats) and also through a number of technological advisory services (PreventAgri, ADVIS, CIVIS, and others). In addition, the unit performs contractual research for the agro-industry.

Living off the land?

The Social Sciences Unit, as the name implies, is the social-scientific pillar of ILVO. Allowing Flemish agriculture to develop towards greater sustainability - so that it can make a lasting contribution to the Flemish economy and prosperity - calls for a number of choices to be made. Irrespective of who is making these choices - farmers, policy-makers or other actors in the agricultural sector – the task of the Social Sciences Unit is to clarify the relevant issues on the basis of scientific research and to provide criteria, indicators and decision support tools to substantiate the decisions eventually taken. At the same time, the unit seeks to offer alternative choices and explores options which have not yet been considered.

This unit's research methods are based on the formulation of theoretical and methodological frameworks to support the decision-making process. The researchers start from actual questions that decision-makers are currently considering or those that they will be required to consider in the near future. For example, what is the best way to deal with increasing risks in agriculture? Or how can we best approach the development of fair trade? Or how do innovation processes work in the agricultural

and fisheries sectors? How can farmers be assisted in acquiring knowledge? This question-based approach integrates the development of scientific information with practical matters directly relevant to the decision-makers

An example of this integrated approach is The Assessment Tool for the Planning of Agricultural Areas. Agricultural land is often re-designated for other uses, such as the creation of nature reserves or for housing. The agricultural impact study was developed to offer guidance and support to those responsible for spatial planning processes that might influence the future of agriculture. This assessment tool allows the objectives and criteria to be clearly defined and integrated, which leads to well-founded decisions relating to the retention or surrender of agricultural land. The Social Sciences Unit – at the request of and in collaboration with the Flanders Land Agency and the Department for the Development of Sustainable Agriculture is also working further on the theoretical substantiation of this methodology.

We're in clover!

The tightening up of regulations in respect of the use of fertilisers and the growing demand for more proprietary sources of protein has led to increased interest in Flanders for leguminous species, such as red and white clover. The Plant Sciences Unit supports this trend through its research into cultivation techniques and the genetic characteristics of different species. The aim is to identify and make better use of the different agricultural facets of clover, such as differences in yield, persistence and disease resistance.

A few concrete example of ILVO's current clover research:

In clover, plant architecture has an important influence on yield potential, competitiveness and persistence in the meadow. However, very little is known about the genetic control of the architecture of red clover. The genetic factors which influence branching are being identified. What role do the genes play? What is their distribution and diversity? And how can this knowledge be applied in the breeding phase and in practice? Knowledge of the architecture of the model species Arabidopsis is currently being used to gain further insights into

- the architecture of red clover.
- Clover blight (brought on by Sclerotinia trifoliorum) is often the cause of the poor persistence of red clover. ILVO scientists study the diversity of the pathogenic agent, the development of an efficient screening method, the identification of clover genotypes with a lower susceptibility to infection and the possible hereditary nature of this susceptibility.
- Clovers, even more so than grass, are rich in -linoleic acid, a health-improving Omega-3 fatty acid. In addition, both red and white clover contain components (respectively polyphenol oxidase and saponin) which protect -linoleic acid from degradation during the drying, silage and digestion processes, so that greater residual quantities of Omega-3 fatty acids are found in milk and meat. ILVO scientists are investigating this protective mechanism. ILVO's breeding programme uses the sum of this knowledge to develop high-performance clover suitable for use in Flemish agriculture. Seven red and four white species of clover so far produced by the ILVO have been included in approved species lists throughout Europe.
- With regard to cultivation techniques, the ILVO is investigating the effect of adding clover to grassy areas on yield and nutritional value, plus how best to exploit grass-clover pastures.

Pilot tests

Industrial agro-food companies face numerous challenges: the expansion of

their product range, the improvement of product quality, the use of new raw materials, ingredients and additives, the rationalisation of the production apparatus, the development of energy-friendly and environmentally-friendly techniques, the implementation of new processes, etc. Pilot tests enable industry to explore possible solutions to these challenges via comparative investigations on a limited scale.

ILVO's Technology and Food Sciences Unit functions as a link between research and industry. It occupies a privileged position thanks to its ability to accommodate and manage a series of pilot projects. By carrying out relevant applied and fundamental research for the Flemish food sector, the unit has been able to build up a high level of expertise in matters relating to dairy technology. In order to continue making its valuable contribution to the optimisation and modernisation of the Flemish foodstuffs industry (sustainability, valorisation, by-products, etc.), it is essential that the unit's test facilities are kept fully up-to-date.

With this aim in mind, ILVO has teamed up with Flanders' FOOD – the centre of excellence for the Flemish food industry – to further extend and develop its installation into a multi-functional Food Pilot plant. This improved facility will be open to all companies in the food and supply industries. In addition, non-food manufacturers (such as the manufacturers of livestock feed, pet food and para-pharmaceutical goods) can also make use of the ILVO services. And it goes without say-

ing that the pilot plant's doors will also be open to knowledge institutions, consumer organisations, retailers and distributors are also welcome.

Companies from the agro-food industry can use the pilot infrastructure and its accumulated store of knowledge if:

- they do not possess their own pilot facilities of an adequate standard; the unit's facilities allow tests under semiindustrial conditions;
- certain technologies are new to them and they wish to test these technologies without needing to make major investments:
- they wish to take advantage of the added value of exchanging knowledge with ILVO (possibly in collaboration with other knowledge institutions). The proximity of ILVO's multi-disciplinary laboratories is an added bonus;
- they wish to benefit from the small scale, speed of implementation, limited production loss, limited investment risk and industrial representivity of the test results which the unit's facilities can offer (there is a possibility to upscale, on condition that industrial results are better compared with a pilot test than a laboratory test).

The message is clear: the ILVO is working in many different ways to assist and promote innovation in the agricultural and fisheries sector.

Karin Van Peteghem, Institute for Agricultural and Fisheries Research – Communication Division

A little bit of history

Professors at the National Agricultural College in Ghent took the initiative to set up (most) of the National Research Stations. This college was founded in 1920 and was responsible to the Ministry of Agriculture until 1933, when it was transferred to the Ministry of Education. Although during the early years a professor ran each of the Research Stations (as a secondary activity), they were fully under the control of the Ministry of Agriculture. The first Research Station – for plant breeding – was opened in 1932.

From National Research Stations to the ILVO

ILVO's present site at Merelbeke-Melle dates back to 1948, with the purchase of a farm in what was then Lemberge. The growing number of Research Stations were eventually centralised in the Centre for Agricultural Research (CLO). In 1965 – following the publication of the statutes for the scientific institutions of state and their staff – the Centre for Agricultural Research in Ghent became a Level 1 scientific institution. Together with four other similar institutions, the CLO was placed under the jurisdiction of the federal Ministry of Agriculture. These institutions were the Centre for Agronomic Research in Gembloux, the National Botanical Gardens in Brussels, the Institute for Chemical Research at Tervuren and the National Institute for Veterinary Research and Agro-chemistry in Brussels.

As a result of the re-structuring of CLO-Ghent in 1998, the nine Research Stations were consolidated into seven departments. In 2002 they were all transferred to the jurisdiction of the Flemish Community. This regionalisation of agricultural competences split the federal Centre for Agricultural Economics (CLE) into separate French-speaking and Dutch-speaking units. The latter was designated as one of the official scientific institutions of the Flemish Government. At the end of 2005 the accountancy and statistical functions were transferred to the Monitoring and Study Division of the Department of Agriculture and Fisheries. The (social-)scientific section of the CLE was fused with the CLO in 2006 and ILVO was born.

Towards a sustainable society

With the autumn of 2010 in sight, the Belgian presidency of the Council of the European Union is now into its third month. It is an important month for the EWI. The preparatory efforts which we have so far made will now be translated into the concrete results, with the start of the first of the three conferences which we are organising.

The daily task of the EWI Department is the implementation of policy preparation, policy follow-up and policy evaluation for the policy domain of Economy, Science and Innovation. Our purpose is to help Flanders to evolve into one of the most progressive and prosperous regions in the world. The interplay between the economy, science and innovation offers unique possibilities for the formulation and development of a long-term, forward-looking strategy.

We cannot escape the fact that internationalisation and globalisation are continuing to have an increasing impact on our work. The greater encouragement of Flemish participation in world-wide research and innovation activities, coupled with the fine-tuning of our economic policy with the international dimension of the Flemish economy, therefore remain essential priorities.

The stimulation of the economy, science and innovation is necessary, but it must not become an end in itself. We must not neglect its social importance and its impact on society at large. For this reason, the EWI wishes to profile itself as a promoter of research, entrepreneurship and innovation with an economic, social and ecological added value for Flanders.

That this is not simply a Flemish story is clear from the contents of the Europe 2020 strategy, the follow-up to the Lisbon strategy. Sustainability and lasting growth are also crucial within the wider European context. With this in mind, during the Belgian presidency the Council will investigate the contribution of R&D to a sustainable society via strategic initiatives relating to the bio-economy, the SET plan for the development of low carbon technologies, and maritime and marine research.

These three strategic initiatives will find their outward expression in the three conferences for which the EWI is responsible. The first of these conferences – to be held on 13 and 14 September 2010 – takes as its theme: 'The Knowledge Based Bio-Economy: Towards 2020'. The delegates will look back at what has been achieved since the first KBBE conference in 2005 and will look forward to see how we can all contribute toward a vision and an action plan for a sustainable bio-economy.

Two further conferences are planned for later in the year: the EurOCEAN 2010 Conference for marine and maritime research (12 and 13 October) and the Strategic Energy Technology Plan Conference (15 and 16 November). These conferences will both be examined in more detail elsewhere in this magazine. May they be a source of inspiration for Europe, for Flanders – and for you.

Dirk Van Melkebeke, Secretary-General, EWI Department





The Belgian presidency of the EU: priorities for research and innovation in the EWI policy area

trio.be

On 1 July Belgium assumed its role as the president of the EU for the coming period of six months. Our country therefore forms part of the first official trio of presidencies, an innovation introduced by the Treaty of Lisbon. This allows successive trios of Member States to fulfil the presidential role, based on a jointly-agreed programme. The aim is to enhance the degree of coherence between consecutive EU presidencies.

The trio of presidencies combines older member states of the EU with the newer ones, who have had no previous experience of the presidential role. This will help to ensure continuity. In addition to Belgium, Spain (EU president from 1 January to 30 June 2010) and Hungary (EU president from 1 January to 30 June 2010) also form part of the first formal teampresidency. Together, these three member states have drawn up an 18-month programme. ^{22, 23} In addition, each of the three partners has also drawn up its own individual presidency programme, in which it puts forward its own particular priorities.

Basic principles of the Belgian EU presidency

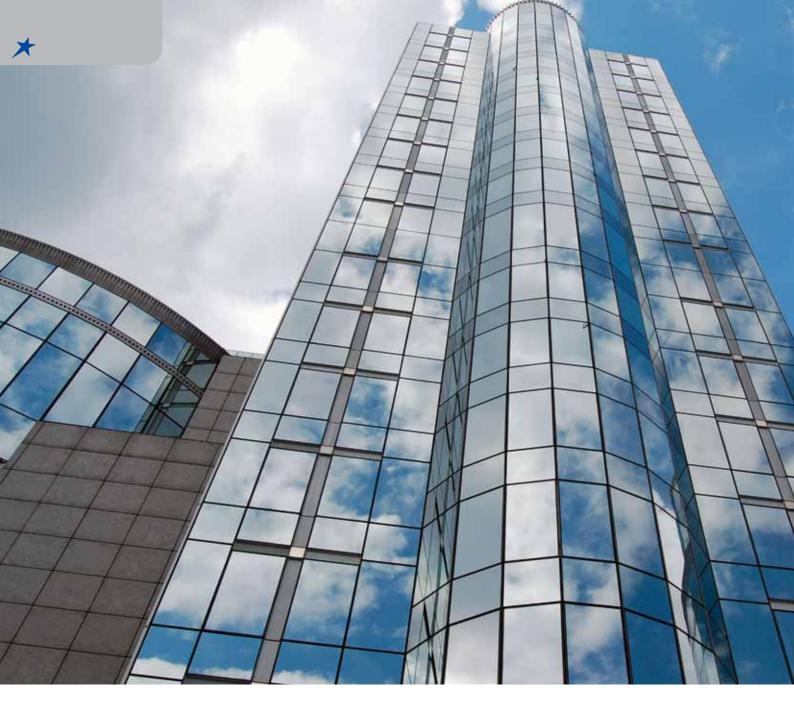
As current president of the EU, Belgian ministers – including Flemish ones²⁴ - will chair the meetings of the Council of the European Union ²⁵ (hereafter referred to as the Council).²⁶ The Council meets in differ-

ent formations, to reflect the nature of the matters being discussed.27 The question of which minister will chair which Council has been agreed long in advance. This follows a fixed schedule. Since the fourth series of state reforms in 1993, the federated entities or states (i.e. the Communities and the Regions) have been entitled to exercise their competencies at European and international level. As a result, ministers from the Regions and the Communities will represent Belgium in the Council whenever a subject is being discussed that falls under their exclusive competency. To avoid the possibility that Belgium might be represented by more than one minister at the same time, and to avoid any confusion relating to who is actually competent, a rotational system of representation has been agreed between Belgium's different governments. As a result of this agreement, the political entity representing our country rotates every six months.

For the EWI, the activities in the Competitiveness Council are of first importance. This council is composed by three other councils: the Industry Council, the Research Council and the Internal Market Council

- The Internal Market Council is primarily a federal competence and during the Belgian EU presidency will be chaired by the federal Minister for Enterprise and (Administrative) Simplification.
- The Research Council is chaired by the Brussels Minister for the Economy, Employment, Scientific Research and Foreign Trade.
- The Industry Council is chaired by the Walloon Minister for the Economy, SMEs, Foreign Trade, New Technologies and Higher Education.

The regional ministers do not act on behalf of their respective regions but represent Belgium as a whole. This reflects the fact that EU presidencies are allocated



to member states per se, irrespective of the minister who chairs a Council. The standpoint to be put forward at Councils is prepared beforehand at intra-Belgian level with the Europe Directorate-General of the Federal Public Service for Foreign Affairs. Depending on the subject under discussion, these coordination meetings are attended by representatives of the relevant administrations, ministerial offices and the Permanent Representation of Belgium to the European Union²⁸.

The Permanent Representation of Belgium – Belgium's diplomatic delegation to the EU – is the beating operational heart of the EU presidency. This delegation conducts preliminary negotiations with the member states, so that the ministers can take decisions more quickly and more efficiently during the meetings of the Council. The Permanent Representation also deals with contacts with the European Commission for formal matters (for example,

the notification of state aid dossiers); the elaboration of policy at a community-wide level for matters in which it is actively involved (for example, an action plan); or the events during an EU presidency (for example, conferences). Most of the Flemish policy domains, including the EWI, have one or more official seconded to the Permanent Representation, so that they can follow the work of the Council(s) at close range. The same is true for all the other governments in Belgium (at federal, regional and community level). Collectively, they all form an integral part of the Belgian Permanent Representation to the EU. However, it is not only the ministers and the diplomatic delegations who are closely involved with the EU presidency. The various administrations also have a role to play. They take part in the so called 'presidential conferences', which may (or may not) be co-financed by the European Commission or one of the Belgian governments. These conferences

discuss themes which are related to the current and future activities of the Council.

Priorities and opportunities during the Belgian presidency

The priorities for the Belgian EU presidency have been discussed and formally agreed by all the competent Belgian governments. The negotiations relating to these priorities were conducted long in advance of the presidency, and resulted on 16 June 2010 in the formal approval of the Belgian presidential programme by all the parties concerned. This approval was given at the overarching Belgian level, which encompasses the joint participation of the federal government, the regional governments and the community governments.

When the priorities were being set, particular attention was paid in the first place to the EU's 'rolling agenda' of forthcoming

initiatives (the anticipated proposals of the Council and, in particular, the Commission). This meant that account needed to be taken of known initiatives which the Commission and the Council intend to launch during (or immediately before) the Belgian presidency, and which require action to be taken during the six-month presidential period. This year's rolling agenda offers the Belgian presidency a number of unique opportunities.

Since the beginning of 2010 a new European Commission has been in office: the Barroso II Commission, named after its Portuguese chairman, José Manuel Barroso. One of the first exploits of the new Commission was the drafting of a follow-up to the Lisbon Strategy of 2000: the European Union's strategy for Growth and Jobs. The new strategy is called Europe 2020 and, like its predecessor, is based on a ten-year action plan. The implementation of this action plan will start during the Belgian presidency. The key themes, which are summarised in seven 'flagship initiatives', all require an ambitious and dynamic approach: youth on the move, a digital agenda for Europe, resource-efficient Europe, an industrial policy for the globalisation era, an agenda for new skills and jobs, a European platform against poverty and the Innovation Union.

These initiatives can be regarded as the European Union's guidelines for the next ten years. Or to put it another way, it will be another ten years before an EU presidency has the chance to launch new initiatives of the same scope and with the same range of importance. This means that Belgium, as the current president, is in a position to set the tone for the realisation of these objectives, including the Barcelona norm.²⁹

It is self-evident that the Competitiveness Council will play a leading role in a strategy which is focused on economic growth and job creation. In particular, the Europe 2020 flagship initiatives on the 'Innovation Union' and 'an industrial policy for the globalisation era' are directly related to its activities. ³⁰ The first of these two initiatives will receive special attention during the Belgian presidency. In this context the Commission has been preparing since last year a Research and Innovation Plan that will be presented this autumn. The European heads of state and government leaders will also discuss this matter. The Competitiveness Council will continue to prepare these discussions.

Research and Innovation

The main themes for our country are centred on:

- The EU 2020 strategy, particularly the concrete development of the 'Innovation Union' flagship initiative and the Commission's Research and Innovation (Action) Plan:
- The European Research Area (ERA);
- Research and Development (R&D) for a sustainable society;
- The role of the regions in R&D and innovation, and the development of an EU science policy.

As mentioned, the 'Innovation Union' flagship initiative is an important aspect in the implementation of the Europe 2020 strategy. Belgium will pay particular attention to the formulation of guidelines; the setting of political objectives; and the development of indicators which can measure the progress of the ERA. One of the core objectives in this respect is the Barcelona norm. The Commission, working in collaboration with the OECD, will complete this norm by adding an innovation indicator in September of this year.

On the basis of the Communications issued by the Commission on the Research and Innovation Plan, the Belgian presidency will opt for an integrated approach. This will cover the different facets of innovation (technological, non-technological and social), will promote the dissemination

of innovation across the entire economic tissue, and will provide answers to the current needs and challenges of the business community (in particular, the SMEs). The facilitating of access for SMEs – especially the SEs – to EU instruments and programmes for R&D and innovation (including the ERA nets³¹ and the Joint Technology Initiatives) and the improvement of their efficiency will be amongst other points for priority treatment. Within the context of the knowledge triangle, the 'clusters' and the relationship between the research centres, the training programmes and the companies will be examined.

To assist in the implementation of the Eighth Framework Programme for R&D (which starts in 2014), the Council will seek to achieve the simplification of the administrative and financial control procedures currently contained within the Seventh Framework Programme. In addition to a Commission Communication on this matter³², a proposal for the revision of the financial rules³³ and a Communication on the acceptable margin of error for research projects will form the basis for the debate.

- Define the conditions for the 'joint programming' initiative (the voluntary setting up of cross-border research programmes between different member states), with a focus on today's major societal challenges (including climate change, energy, resource efficiency and the ageing of the population);
- Continue with the further implementation of the European partnership for researchers, with the aim of increasing their mobility and improving their status;²⁴
- Promote the closer integration of the universities and the research institutions within the knowledge triangle.

The contribution of R&D to a sustainable society will be examined in depth. In concrete terms, this will occur via strategic initiatives in the bio-economy³⁵, the SET





Plan for the development of low carbon technologies³⁶, and the programme for marine and maritime research³⁷. The discussions relating to the ITER project³⁸ will be continued and investigations will be initiated to consider the possible prolongation of the Seventh Euratom Framework Programme (the end of which is foreseen in 2011), so that this will coincide with the Seventh Framework Programme for Research and Technological Development.³⁹ As far as space matters are concerned, the Belgian presidency will look closely at the progress of the European vision for space exploration.

Industry

Because innovation involves much more than 'just' R&D, the ministers responsible for industrial policy will also devote considerable attention to the 'Innovation Union' initiative. Together with their research colleagues, they will seek to reach a series of joint political conclusions. In addition, the ministers of industry are also expected to focus on 'an industrial policy for the globalisation era', another of the Europe 2020 flagship initiatives. The Commission is set to release three new documents relating to this initiative: a Communication with the flagship initiative as its title, a working document about competitiveness policy in the member states, and the EU Competitiveness Report (published annually). The new industrial policy will aim to accelerate the transition to a green economy. This policy will be debated by the European ministers during the Belgian presidency (at the end of November), with a view to reaching political conclusions which will show the way forward.

Within the Competitiveness Council, the Belgian presidency intends to focus more horizontal attention on SME policy. For example, within the context of the 'Innovation Union' initiative consideration will be given to the manner in which the EU's innovation policy can be made more relevant to the needs of the SMEs. The revision of the Small Business Act - a Commission initiative with a long series of (largely non-compulsory) recommendations for the better attuning of EU policy initiatives to requirements of small companies, under the motto 'think small first' - has been delayed. It will now be dealt with under the Hungarian presidency of the Council.

Internal market

The EWI keeps a watchful eye on the activities of the Internal Market Council. Although this council is largely concerned with federal matters, Flanders has a specific interest in a number of dossiers. First and foremost, there is the Services Directive, which has been subject to local implementation and application since the beginning of the year. The regional governments in Belgium have important responsibilities in this respect, since the directive requires significant sections of their legislation to be modified. A second issue of importance is the EU patent (also referred to as the Community patent). At the end of last year, during the Swedish EU presidency, a minor breakthrough was achieved, with the reaching of general agreement on most matters. except on the need for a patents court (for which a ruling from the European Court of Justice is awaited) and on the linguistic issue (which has been a stumbling-block in the patent's debate for a number of years). With the compliance of the Commission, the Belgian presidency intends to play the card of 'reinforced collaboration', an arrangement which foresees that a limited number of member states can proceed with the measure, if agreement with all the member states is not possible. An EU patent is of crucial importance to our knowledge institutions and innovative companies. If such a patent can be arranged, it will mean that intellectual property rights can be guaranteed throughout Europe at a fraction of the current cost.

Finally, there is the debate about the single market. At the request of Commission President Barroso, Mario Monti, a former Commissioner for Competitiveness, has written a report on options for breathing new life into the internal market. He presented his report to the Commission at the beginning of May this year. 40On the basis of his findings, the Commission has drawn up a Single Market Act, an action plan for the strengthening of the market. Within the framework of this programme, Belgium clearly expressed its preference to concentrate on the creation of a real online and digital internal market.

In short, these are exciting, challenging and busy times for Belgium as EU president. The implementation of the Europe 2020 strategy is the top priority, both in the Competitiveness Council and

at the highest political levels. Our country has an important pioneering role to play during the second half of this year. You can follow all the latest developments by regularly consulting the Belgian EU presidency website www.eutrio.be. It is well worth a look!

Niko Geerts and Karel Boutens, Strategy and Coordination Division

- 22 http://www.parlement-eu2010.be/pdf/droi_20100114_ 16771 nl.pdf
- ²³ In addition to the 18-month programme, the trio of presidencies is responsible for a number of other innovations. For example, the members of a trio presidency can decide to divide the separate presidencies in terms of policy domains, rather than in periods of time. Equally, they can decide that a Member State of the trio chairs a particular Council for the full period of the trio presidency. No use has been made of these options during the current trio presidency.
- The Councils for Education, Youth and Environment will be chaired by a Flemish minister during the current trio of presidencies. The Council for Agriculture is always jointly chaired by a Flemish and a Walloon minister. In the Fisheries Council, Belgium is always represented by the competent Flemish minister.
- Not to be confused with the European Council (the EU institution that consists of the heads of states or governments of the member states), nor with the Council of Europe (not an EU institution).
- ²⁶ Since the Treaty of Lisbon, there are two councils which are no longer led by the European presidency: the European Council (now led by the EU President, Herman Van Rompuy) and the Council for Foreign Relations (now chaired by the High Representative for Foreign Policy, Catherine Ashton).
- ²⁷ EWI Review 3 (3): 27 28
- ²⁸ Also see elsewhere in this edition: p. 40
- The Barcelona norm remains in force within the Council for Competitiveness: the objective is to spend 3% of GDP in the EU on R&D, with 1% from the government and 2% from the private sector.
- The 'digital agenda for Europe' initiative also contains aspects which touch on the competencies of the Competitiveness Council . However, responsibility for leading the discussions rests with the Telecom Council.
- 31 EWI Review 2 (1): 23
- ³² COM(2010) 187, "Simplification of the implementation of the Framework Programmes for Research", 29 April 2010.
- 33 See the Commission's press release: "Less paperwork and more focus on results: Commission reviews rules for access to EU funds", IP/10/629, 28 May 2010.
- ³⁴ Also see elsewhere in this edition: p. 24
- ³⁵ Also see elsewhere in this edition: p. 36
- 36 Also see elsewhere in this edition: p. 32
- ³⁷ Also see elsewhere in this edition: p. 30
- ³⁸ International Thermonuclear Experimental Reactor, a large-scale international research project in connection with the development of an electricity generating plant for the future which operates according to the principles of nuclear fusion www.iter.org.
- ³⁹ EWI Review 2 (1): 30 33
- The report can be consulted on: http://ec.europa.eu/bepa/ pdf/monti_report_final_10_05_2010_en.pdf

Actors in the EU research and innovation landscape

Nowadays, research and innovation are at the very centre of European interest. The European Commission is soon to unveil its Research and Innovation Plan. The plan will first be discussed and agreed by the heads of state and government leaders in the European Council in October or December. Research and innovation are the new growth motors for the European economy – so perhaps this is a good moment to take a closer look at the most important actors in the EU research and innovation landscape.

A good place to start our examination of the research and innovation landscape in the European Union is with the EU's most powerful⁴¹ institution: the European Commission. 42 Research and innovation (R&I) is a top-drawer priority for the current Commission. The Innovation Union flagship initiative of the Europe 2020 strategy is the clearest illustration of this importance. The initiative will be developed through the Research and Innovation Plan (R&I Plan), which is expected to be made public in September 2010. The responsible Commissioner is Máire Geoghegan-Quinn from Ireland.

The most powerful: the European Commission

In the past, the research and innovation portfolios were allocated to different Commissioners. R&I have now been merged into a single portfolio, but this has led to split responsibility at the level of the Directorates-General (which are the EU equivalents of ministries). The unit which is responsible for innovation policy still operates within the DG Enterprise and Industry, under the Italian Commissioner, Antonio Tajani. However, a large part of the activities relating to innovation policy are actually prepared by the DG Research.

In addition, there are numerous other DGs involved to a greater or lesser extent in R&I policy: DG Mobility and Transport, DG Energy, DG Environment, DG Regional Policy, DG Maritime Affairs and Fisheries and DG Information Society and Media. Some of these DGs – such as Mobility and Transport, Energy or Maritime Affairs and Fisheries - work together with DG Research for the management of specific elements in the Framework Programme for Research and Technological Development (FP RTD)43: the EU's most important research programme. Moreover, it should also be remembered that research policy often plays a supportive role in other policy domains within the EU.

Some of the other DGs work with more specific programmes. For example, DG Enterprise and Industry is responsible for the Framework Programme for Competitiveness and Innovation (CIP)44. This is an amalgamation of what was previously three separate programmes, and not all of the constituent elements are administered by Enterprise and Industry. For example, the Information Communication Technologies Policy Support Programme (ICT-PSP) is managed by DG Information Society and Media. DG Regional Policy has responsibility for other important R&I resources, in particular the resources of the Structural Funds⁴⁵, which are also allocated for certain R&I-activities.

The role of the DGs is primarily limited to the fields of policy preparation and evaluation. For the implementation of its programmes the Commission has a number of executive agencies at its disposal. In this manner, for example, the Research Executive Agency⁴⁶ is responsible for the assessment of proposals and the project management of the Framework Programme for Research and Technological Development (FP RTD).

One specific DG, the Joint Research Centre (JRC),47 is responsible for providing Europe's policy-makers with research information that will allow them to develop relevant and well-founded policies. The JRC can be compared with the Flemish Government's policy research centres48. DG JRC controls seven different research institutions, located in Belgium, Germany, Italy, The Netherlands and Spain.

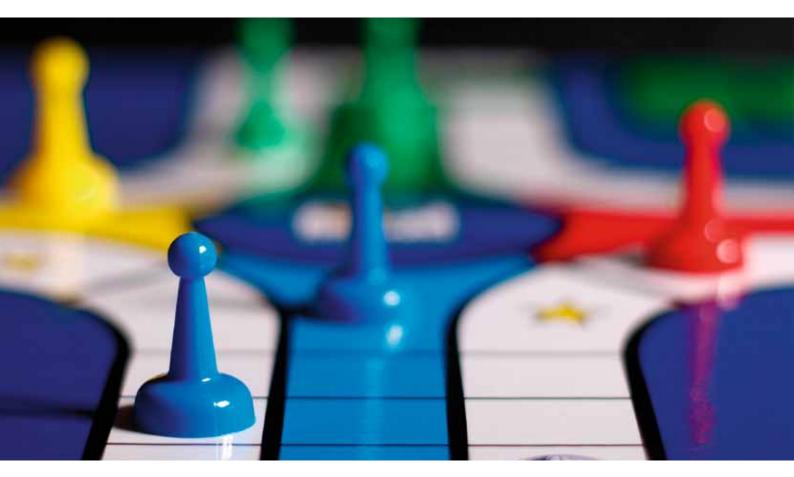
The member states - important for funding

The implementation of the communitywide framework programmes presupposes considerable assistance at national level. To facilitate this assistance, national contact points have been set up in each of the member states (also for the FP RTD). These contact points offer guidance, information and support for each aspect of the member state's participation in the programme. Flanders also has its own contact point⁴⁹, administered by the IWT.

At a higher level, the EU ministers take decisions in the Research Council⁵⁰ and determine EU policy in consultation with the European Parliament. The Council has set up a committee which not only assesses European policy, but also organises coordination with and between the policies of the member states. This is important: 95% of all research resources in the EU are to be found at national level. The committee was previously known as CREST (Comité de la Récherche Scientifique et Technique) but now operates under the acronym ERAC: European Research Area Committee. Its task is primarily a strategic one: within ERAC specific subjects are examined and defined for joint programming. This programming is passed on to the Commission in the shape of proposals for recommendation from the Council. The member states are free to attune their own programmes on the basis of these proposals and to pool their resources. An example of this kind of joint programming in which Flanders participates is the EU initiative for Alzheimer's51.

Industry is working towards the Barcelona

Industry is another important actor within the European R&I landscape. The EU objective is that 3% of GDP should be spent on R&D, of which 2% must come from the private sector. European industry will play an important role in this respect, but is not organised in a specific institution which can exercise effective power over policy.52 Nevertheless, the representatives of industry are closely involved with several EU policy instruments. A good example are the Joint



Technology Initiatives (JTI): public-private partnerships for the long term. These initiatives are put into operation through a Joint Undertaking agreed between industry, the Commission and (depending on the nature of the subject) the member states. Successful JTIs include ARTEMIS⁵³ (which deals with built-in computer systems) and IMI⁵⁴ (Innovative Medicine Initiative). The JTIs often build further on the work of the European Technology Platform, in which industry also plays a leading role. They concentrate on elements which require a significant mobilisation of both public and private investment, so that the EU level is the only appropriate level to achieve this.

The actors united in the knowledge triangle

A good instance of an initiative in which industry is an important (but not necessarily leading) player is the European Institute for Innovation and Technology 55 (EIT). The objective of the EIT is to close the innovation gap, which is characterised by a relatively large amount of research, but relatively few commercial applications. To achieve this, it aims to strengthen the knowledge triangle between education, business and research. The participation of the companies is essential, if this goal is to be reached. The EIT organises its activities within the framework of Knowledge and Innovation Communities (KICs). Three such KICs have already been set up. Flanders is participating in the InnoEnergy KIC.

Another European institution which is using

its policy to strengthen the knowledge triangle is the European Investment Bank (EIB). In 2009 the bank invested no fewer than 18 billion euros in the fields of education, R&D and innovation. The European Investment Fund – an offshoot of the EIT which provides risk capital to innovative SMEs – also makes an important contribution in this respect.56

The researchers: supporting the best

And what about the European researchers? Do they have any real say in the EU's research activities? Of course they do! Apart from the researchers who often act as expert advisers for the Commission, there is also the European Research Council⁵⁷ (ERC). Like the Research Executive Agency, the ERC is also an executive organ and is responsible for the implementation of a specific section of the FP RTD. However, its work is not restricted to particular disciplines. Its purpose is to finance 'research-driven' research. In this manner, the ERC seeks to promote research excellence by supporting the very best scientists, academics and engineers. These experts can submit proposals to the agency in every field of research.58

A complex landscape, but just one address

Reading between the lines, it is clear to see that the European research and innovation landscape is a complex one, populated by many different actors and instruments. However, for Flemish researchers and

entrepreneurs who have a brilliant research idea and are looking for the funds to turn it into equally brilliant reality, there is just one address: the Flemish Contact Point for the European Framework Programmes. Why not contact them at www.europrogs.be!

Karel Boutens. Strategy and Coordination Division

- Why is the Commission seen as the most powerful institution? Because it has the right to initiate action. Nothing can be decided unless the Commission first puts forward a proposal

- ⁴³ EWI Review : 2 (1): 31 ⁴⁴ EWI Review : 2 (1): 32 33
- 45 EWI Review : 2 (1): 27
- http://ec.europa.eu/research/rea/

- http://www.europrogs.be
- 50 http://consilium.europa.eu
- "The Commission intensifies its activities with regard to Alzheimer's Disease and other neuro-degenerative illnesses", IP/09/1171, 22 July 2009.
- The European Economic and Social Committee, a forum which brings together the social partners at EU level, is a purely advisory body and therefore has no 'power' within the context of this article.
- https://www.artemis-ju.eu/
- http://www.imi-europe.org
- http://www.eib.org/projects/topics/innovation/index.htm
- 58 http://europa.eu/agencies/executive_agencies/erc/index_en.htm



On the move!

Putting money into research – and into researchers – is a good investment for a knowledge society like Flanders. With an eye to the future, knowledge and innovation must continue to play key roles in the further development of our social and economic structures. However, the fact that researchers – much more than average employees – possess great autonomy and intellectual freedom, and are therefore subject to the need for greater flexibility and mobility, means that they are amongst the more vulnerable workers. For this reason, the European Commission asked the European Council and the member states to enter into a European Partnership for Researchers⁵⁹.

Across Europe, national action plans are currently being drawn up around four specific research themes: open recruiting, social security, attractive work conditions, and researcher skill and experience.

Working in consultation with representatives from the research community, the Flemish Government has prepared its contribution to the Belgian action plan for researchers, to which the French Community and the federal administration will also contribute.

The three objectives of the Flemish view of the research community

The Flemish vision for researchers contains three main objectives:

- Research and Development must offer attractive career prospects to young people with talent, so that a sufficient number of high-quality candidates can be attracted to a future in R&D, both in the academic world and the business world.
- Throughout the course of their professional career, researchers must feel sup-

ported and valued.

Flanders must play a role in an open international research community (either as a pole of attraction for researchers or as a source of researchers for others), in which researchers can move freely and are able to contribute towards the free exchange of knowledge.

This vision of a researcher's career is inspired by the following concepts: attractiveness, transparency, excellence, inter-disciplinarity and mobility.

From fine-sounding words such as 'attractiveness' and 'excellence'...

The prospect of an 'attractive' job in R&D will help to ensure that a sufficient number of high-quality candidates are prepared to consider a career as a researcher. This means, however, that vacancies, career structures, promotion and transfer possibilities, assessment policies, etc. must all be as transparent as possible, with sufficient attention being paid to specific target groups and research diversity. It is the task

of government to promote, create, stimulate and facilitate the conditions which can make a life-long professional career in R&D seem desirable.

Excellence is the main criterion when recruiting researchers. But in addition to absolute top talents, attention must also be paid to the need to recruit a broad and solid base of talented sub-toppers, who can support the top. It is crucial that the right person finds his/her way to the right place. Inter-university, inter-sectoral and international mobility, combined with inter-disciplinarity, are strong added values.

... To 20 concrete measures

In order to reach these objectives, we have defined 20 concrete measures in the Flemish action plan which will work to the practical benefit of researchers. Some illustrations:

 In order to realise an open, transparent and competition-based recruiting system, the Commission suggested that the EU research institutions should be given full autonomy to recruit personnel. This is



A Flemish action plan for researchers

already the case in Flanders. So where do we still need to make improvements? In the following areas: the implementation of a number of the principles contained in the European Charter for Researchers and the Code for the Recruitment of Researchers⁶⁰; the recognition of foreign diplomas; the objective and comparable evaluation of candidates from Flanders and abroad; the better regulation of language requirements, etc. The notification of publically-financed research posts on the Euraxess job-site also deserves to be further promoted. In addition, a workshop will be organised in the autumn of 2010 to discuss ways in which Flanders can be made more attractive for foreign research workers. The administrative support of mobile research personnel through the European Euraxess network is of the highest importance. For this reason, the Belgian website has been supplemented with a Flemish section www.euraxess.be/flanders - which has as its objectives: the transmission of correct information to foreign researchers; the provision of assistance for the recruitment of foreign researchers: the presentation of Flanders as a good environment in which to conduct research; providing information to outgoing researchers. The website www.doctorereninvlaanderen.be, administered by the FWO, contains - as the URL suggests - important information about doctoral studies in Flanders. This site will also be translated into English.

competence. This pillar of the action plan has therefore been dealt with by the federal government. The Flemish Government regularly consults the other Belgian players in the field of research policy with regard to specific action points which fall within the federal domain. The Flemish Government also regularly informs the federal authorities about research-related matters that it considers to be important, such as visa problems for foreign researchers, the flow of research information, social insurance and fiscality.

- In order to guarantee an attractive remuneration package and attractive working conditions, a new collective labour agreement is being negotiated for higher education personnel. The legal position of this personnel is also being re-examined. The funding available for tenure track mandates⁶¹ has remained stable and the system will continue to operate. The first funding stream for the universities will also be increased as soon as the overall budgetary situation allows. At the present time, the 'equal opportunities' working group of the Flemish Inter-University Council (VLIR) is preparing its third Equal Opportunities and Diversity Report, which will outline the current position with regard to equal opportunities policy in the Flemish universities. The universities are encouraged to comply with the recommendations of this report.
- The fourth priority in the action plan is the strengthening of the training, skills

and experience of researchers. With this aim in mind, the Flemish universities are continuing to develop their doctoral schools, with an emphasis on three particular aspects crucial to the development of young researchers: the international recruitment of PhD candidates; the availability of training programmes which allow the inter-disciplinary broadening and deepening of researcher talents, as well as the acquisition of transferable skills; and the improvement of career prospects for young doctorandi. An open debate is also being conducted about the competencies necessary for the different career profiles which follow a doctoral programme of research training.

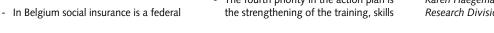
- In addition, the need for inter-sectoral mobility should be more clearly defined. The concept will be more accurately described and the instrumentarium correctly listed and streamlined. If necessary, lacunas will be filled and new possibilities explored for the stimulation of temporary mobility between the academic community and the business world.

Conference weighs up the pros and cons

9 and 10 November 2010 to assess the European Partnership for Researchers.6



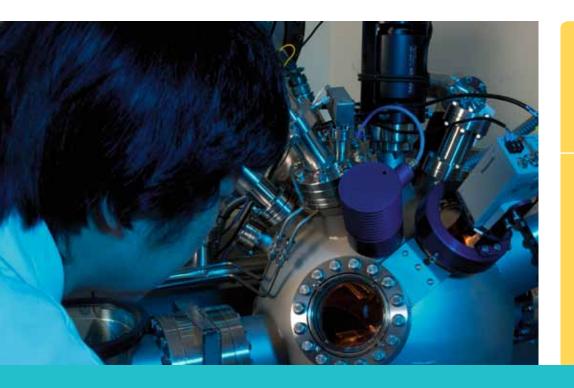
Karen Haegemans, Research Division



More information?

Are you interested to read the full vision text? Or would you like to know what measures are being planned for this year in Flanders? Then why not surf to www.ewivlaanderen.be/publicaties

- ⁵⁹ European Commission, "Better careers and more mobility: a European partnership for researchers", COM (2008)317.
- 60 EWI Review 1 (1): 7 8
- 61 Tenure track lecturers are temporarily engaged for a maximum period of five years, before being confirmed in the grade of senior lecturer (assuming a positive assessment report). The university board of administrators must determine the criteria for assessing such lecturers in advance.
- ⁶² Also see next page.



The career and mobility of the modern researcher

A knowledge economy cannot exist without a research community. Flanders and Europe can both benefit by making the creation of attractive career prospects for researchers a policy priority. One of the main pillars of the European Research Area (ERA) is the clarification of the policy relating to researchers, and this within the framework of the European Partnership for Researchers. 63

on an international scale. Europe wishes to continue to play a leading role in the research community, based namic, flexible and mobile researchers.

The momentum is already there

initiatives have been taken to benefit and Minister Biltgen of Luxembourg conclusions during the recent Spanish presidency. It is clear that progress the member states to move researchers still further up the European

hopes to build on this momentum.

The Partnership Conference: deepening the profile

On 9 and 10 November 2010 for Researchers. Prior to this, on 8

ing objectives

- To evaluate the progress being
- To exchange good practices.

international and intersectoral mobilinput is expected from the more than 300 delegates, who will be drawn from the four corners of the R&D

Partnership for Researchers; by acquirthe profession's characteristics with the ERA.

European Partnership for Researchers Conference

Where? Square -Brussels Meeting Centre When? 9-10 November 2010 More info? www.researcherscareer2010.be

Research, development and innovation for a safer Europe

The annual Security Research Conference (or SRC) is the ideal meeting place for all those interested in research, technological development and innovation as a means of improving the safety of Europe's citizens. At the same time, it is also an important discussion forum, which helps to give shape and form to the European agenda and strategy in relation to safety research.

SRC'10 is one of the actions in the European programme for safety research listed within the Seventh Framework Programme. The conference seeks to promote the development of knowledge and new technologies to increase the safety of Europe's citizens, whilst at the same time strengthening the competitiveness of the European economy. With these aims in mind, SRC'10 will focus on encouraging the dialogue between the European players in innovation research on the one hand, and the policy-makers and endusers on the other hand.

SRC'10 wishes to underline the importance of safety research for the people of our continent, with a view to defining the research agenda for the post FP7-period, taking due account of the 2020 objectives. Leading experts in the field will examine the consequences for safety research resulting from the signing of the Treaty of Lisbon, but framed within the wider context of the new world-wide challenges facing the safety sector as a whole.

Safety research: a rapidly changing process

Safety research needs to evolve very quickly, in view of the rapidly changing threats faced by our citizens. In order to avoid panic football and to protect ourselves from the risks of tomorrow, researchers and companies need to develop an appropriate long-term strategy. For this reason, most of the SRC'10 sessions

will deal with current issues and will seek to provide answers to problems such as cyber security, the ethical dimension of safety research, the safety of energy infrastructure and the consequences of chemical, biological and radioactive incidents.

Special attention will also be given to successful research and technological development projects in the field of safety, particularly when it was possible to involve the end-users and the SMEs to a significant degree.

For example, one of the sessions will be devoted to the safety of maritime borders. Innovative solutions to track containers and to monitor vulnerable harbours and routes will be demonstrated and discussed. These solutions allow a more accurate assessment of the risks, which in turn allows faster and better reaction to those risks

Another session will focus on transport security. Attacks on the transport infrastructure have a great symbolic value and instantly capture the attention of both the media and the public, as the growing incidence of modern piracy in the Gulf of Aden and off the coast of Somalia has demonstrated all too clearly.

Greater standardisation is also important for European and international security. This, too, will form the subject of a separate session. Products being launched onto the international market must all meet the same standards of safety. The

agreement of uniform norms would help to avoid many current problems, such as the dangerous Chinese toys which are available in huge quantities on the European market.

A brokerage event and a trade exhibition will improve networking between companies, research experts, operators and policy-makers in the member states and third countries.

Mieke Houwen, Enterprise and Innovation Division

Jan Vanhellemont, Strategy and Coordination Division

Security Research Conference

Where? Kursaal, Ostend When? 22 – 24 September 2010 Thanks: SRC'10 is organised with the support of the DG Enterprise of the European Commission, the Federal Administration for Science Policy, the federal Ministry of Transport, the Flemish Government's Department of Economy, Science and Innovation and the Civil Service of Wallonia, the administrative body of the Walloon Government.

More info? www.src10.be

Stick a SOCKet in your tank

If we assume an increase in world population of 20% between now and 2025, which will take the total to 8 billion, and if we assume a comparable level of urban growth, good for 40% of the world's carbon emissions, then it seems likely that the number of motor vehicles will increase by 80 million to reach a total of 3 billion by 2035. Without a transition to low carbon or zero emission vehicles, it will be impossible to cope with the resulting sustainability problems. The European automobile industry is therefore facing great challenges.

On the one hand there is a call for environmentally-friendly solutions, whilst on the other hand the vehicle industry is faced with the problems of restructuring, resulting from the economic crisis. Mobility and its impact are high on the European agenda. By anticipating future changes in transport needs, Europe can achieve growth, reallocate labour efficiently and develop skills which can contribute to stable and sustainable employment.

Trend-watching in mobility

If we want to have lower carbon emissions and to evolve towards safer, more efficient and more sustainable road transport, a number of alternative solutions will need to be found. Ultra-low carbon electric engines and the use of hydrogen as a vehicle fuel are the most promising technological options. But the question remains: how vehicles will change between now and 2020? It is predicted that the conventional vehicle park will retain its dominant position, but that it will be accompanied by a rapid advance in electric-driven road transport.

The reduction of greenhouse gases by 20% in the period 1990-2020; the ambitious 2050 transport objectives: these are crucial matters that will require some 'out of the box' thinking.

Decarbonisation requires first and foremost an integrated approach. The reduction of CO2 emissions can not be achieved simply through the development of new vehicle technolog. There will be a need for new infrastructure (electricity charging facilities), better traffic management and more eco-efficient driving behaviour. If we wish to avoid traffic jams and still make maximum use of our transport capacity, this will only be possible if we are able to achieve the smart integration of the different available transport modes .

Consumers are also becoming – or must be made to become – more eco-conscious. This growing consumer awareness is creating a new demand for alternative

forms of transport: for example, the use of collective or shared transport is increasing rapidly. However, it would be wrong to see our future mobility as simply a question of a continued increase in collective transport. It also implies a new concept of car ownership (e.g. car-pooling, car sharing). In this manner, urban mobility can be used as a lever for social inclusion. Mobility does not only mean better access to 'greener' vehicles. It can also mean access to 'other' forms of mobility: for example, ICT facilities that will allow virtual mobility to replace physical mobility (e.g. teleworking, internet shopping) or the better synchronisation of traffic lights. Such measures can provide us with individual mobility in a sustainable manner. Even the iPhone and other technical innovations can make important contributions in this

The policy-makers must aim to facilitate this transition towards new and more sustainable forms of transport by developing a consistent and predictable policy. This policy must be compatible with the product cycles of the automobile industry and must promote the reuse of ageing sites, whilst at the same time seeking to harmonise standards and infrastructure interfaces.

Market failures in a green economy

In addition to environmental externality (CO2 reduction), green technology also offers a knowledge externality. Green innovation generates public benefits, but these are not directly 'attributable'. This means that competitors can acquire the same knowledge at a much lower cost. This form of market failure makes companies very wary about innovation. Learning effects during the early stages of development and a limited access to finance make it difficult to achieve cost-effective configurations.

Once they have been brought onto the market, clean technologies often find themselves at a competitive disadvantage in their competitive struggle with polluting

technologies, since the latter can benefit from an 'installed-base' advantage. The replacement of technology is nevertheless necessary. However, the development of electric vehicles currently receives too little support from the electricity and distribution sectors, largely as a result of regulation, the low levels of competition, the difficulties of granting access to the distribution network to new technologies and the still unresolved technical problems relating to the effective storage of energy in batteries.

As a possible solution for these externalities or market failures67, there is an economic model that proposes the combined use of two separate government instruments. The first involves the setting of a sufficiently high and sufficiently predictable carbon price (within the Emission Trading Scheme)68, in order to eliminate the environmental externality, while the second foresees the payment of subsidies for the transition to green R&D investments. In this respect, timely state intervention can play a crucial role. As soon as the green technologies arrive on the market, the need for a fixed carbon price will gradually disappear.

The role of the EU

Decarbonisation and the electrification of transport are global issues. This leads to an obvious question: what kind of tax policy – unilateral or multi-lateral – is most beneficial in terms of climate change? Unilateral action can result in the disadvantage of what is called 'carbon leakage': this can have a polluting effect in regions that still manufacture and export high-carbon technologies, in the hope of building up a competitive advantage. To combat this effect, it is important that the advanced countries should take the lead - both quickly and on a scale - to make clean technologies available to less developed, poorer countries. The Emission Trading Scheme has led to the creation of a carbon market. However, in many EU countries the price is too volatile and too low. Shortsightedness and fragmentation can also be



translated into low levels of stimulation for green innovations. It goes almost without saying that the EU should encourage green technologies by increasing public investment in green R&D (via the framework programmes and subsidies). Receipts from carbon trading can be used to finance these increased R&D subsidies.

The EU therefore has a policy-coordinating task with regard to carbon tax, standardisation, public procurement between the member states and an increased green R&D absorption capacity in a unified electricity market. It can also play a leading role through the drawing up of a step-by-step plan for the setting of an international carbon price that includes an innovation incentive. There are already positive signals emerging from the risk capital market that cleantech (good for just 7% of risk capital investments in 2009) is beginning to strengthen its position. This must be further encouraged by timely public-private partnerships.

Recent developments in the European Green Car Initiative (EGCI)

The European Green Car Initiative is one of the three public-private partnerships contained in the European Economic Recovery Plan, which was announced on 26 November 2008. The objective of this plan is to provide R&D support for technologies and infrastructure which can be used in the fields of renewable energy sources, safety and fluid traffic. It seeks to achieve this objective with the following actions:

- 1 billion euros of R&D support via calls for the Seventh Framework Programme (50% FP7 - 50% member states and industry).
- 4 billion euros of loans from the European Investment Bank (supplementary to FP7), for the ECTF: European Clean Transport Facility.
- Demand-driven instruments, such as public procurement.

During the meeting of the Competitiveness Council on 25 May 2010 the EU ministers formally approved the Commission's strategy in respect of clean and energyefficient vehicles. The development and widespread use of such vehicles will be further encouraged. The strategy builds on Europe's leadership in the fight against climate change, without postulating particular technological options in advance.

The communication recognises a general lack of electrical mobility - notwithstanding the fact that this is being strongly promoted in some member states. Electric cars (including hybrid models) are now ready for wide-scale commercialisation. The strategy of the European Commission consists of forty or so specific action points, relating to matters such as regulation, research and innovation in green technologies, market development and consumer sensibilisation, trade and employment measures, rapid standardisation, a harmonised EU solution (anticipated in 2011) for the re-charging of electric car batteries, battery recycling, and the development of smart electrical distribution networks.⁶⁹ The Commission plans to implement the strategy during the Spanish and Belgian presidencies and by revitalising the existing CARS21 high-level group.70 In 'Resource-efficient Europe', one of the flagship initiatives of the Europe 2020 strategy, clean and energy-efficient vehicles have been placed firmly on the agenda, within the framework of proposed new technologies for a lower carbon transport sector.

Electric driving in Flanders

Belgium has committed itself to produce 13% of its energy consumption from renewable energy sources by the year 2020 (Directive 2009/28/EG). At least 10% of this figure must be contributed by the transport sector. An integrated approach by the industrial partners in the relevant domains can lead to a competitive advantage. It has been predicted that electric driving can help to create a new market model, with a significant impact on the electricity network. If the electrical vehicles are introduced on a large scale within the vehicle-to-grid-system⁷¹, this

would eliminate the disadvantages resulting from the fact that electricity cannot be 'stored'. This would make the production of electricity cheaper, more efficient and more environmentally-friendly than in a future scenario without electric cars.

Flanders is already taking steps to make the transition towards sustainable mobility. The priorities for 'zero-emission driving' include:

- Technological research and demonstration projects relating to cleaner alternative fuels and energy-efficient vehicles.
- Support and incentives for the purchase of vehicles with lower levels of emission.
- The development of existing and new forms of collective transport: the challenge for Flanders is to elaborate realistic scenarios which can take advantage of the European opportunities offered by the Green Car Initiative.

Hilde Vermeulen, Enterprise and Innovation Division

- Externalities or external effects: costs (in terms of environmental damage, knowledge development, etc.) or benefits that are not (or cannot) be calculated in the production cost, or where the benefits do not revert to the producer.
- 66 'Installed base': the number of units of an apparatus or system that is currently in use. E.g., why install a new solar-heated boiler when your old gas-fired boiler is still working?
- 67 Economists define market failure as a situation whereby the allocation of goods and services by a free market mechanism is not efficient, so that government intervention (regulatory measures, subsidies, etc) becomes necessary in order to adjust the situation or to reduce its worst effects (e.g., subsidies for or reduced taxes on bio-fiels)
- 68 EWI Review 2 (2): 37 38
- These are networks of power users and power producers, who buy and sell electricity in a 'smart' and dynamic manner at the most advantageous price (including, for example, surplus energy acquired from private individuals with solar panels).
- The Competitive Automotive Regulatory System for the 21st Century was first set up in 2005 and formulated recommendations for the policy and the regulation of the European automobile industry, with particular attention to global competitiveness and employment, based on safety and good environmental performance at an acceptable price.
- A vehicle-to-grid-system is a distribution network which allow cars to be loaded (i.e., take on electricity) or unloaded (i.e., discharge electricity), so that electricity can be stored in a cost-effective manner. The car battery provides (reserve) storage capacity within the network.



Eurocean 2010 Conference: major challenges for marine and maritime research



> The Belgian presidency of the EU

As you probably know, 71% of our earth's surface is covered by the oceans. Perhaps you are less well aware that the oceans also represent 99% of the total 'liveable' environment on earth. More than 3.5 billion people are directly dependent on the oceans as their primary source of food. And the oceans absorb between 30 and 50% of all CO2 emissions. What do these statistics prove? That the oceans are of crucial importance for the continued existence of mankind.

Even today, only 10% of the oceans have been explored and investigated by scientists. Further research is essential in order to chart both the manner of their working and the fauna and flora they contain.

With a view to evaluating the challenges facing marine and maritime research during the coming ten years, the EWI Department – in close collaboration with the Flanders Marine Institute (VLIZ)⁷² and the European Science Foundation – is organising EurOCEAN 2010: an international research conference for all sea-related matters. Other partners include the Federal Science Policy Office, the Royal Belgian Institute for Natural Sciences and the European Commission (DG Research).

A unique opportunity

EurOCEAN 2010, which will take place on 12 and 13 October 2010 in Ostend, offers a unique opportunity for the European marine-scientific community to discuss and assess the latest policy developments; to evaluate the results achieved since the last EurOCEAN Conference, held in Aberdeen in 2007; and to define the new challenges and opportunities for the forthcoming ten years. The purpose of the conference is to make a valuable contribution to the scientific underpinning of the European Strategic Plan for maritime and marine research. With this aim in mind, the conference will draw up an Ostend Declaration, which will contain a number of concrete action points for the attention of the policy-makers.

EurOCEAN 2010 is the seventh conference in the series of successful EurOCEAN / MAST Day conferences. The previous editions were held in Brussels (1994), Sorrento (1996), Lisbon (1998), Hamburg (2000), Galway (2004) and Aberdeen (2007). It was during EurOCEAN 2004 that a closing conference declaration was first drawn up. It was addressed to the European Commission and contained a list of priorities for the marine sciences which deserved consideration for inclusion in the Sixth and Seventh Framework Programmes. In contrast, the Ostend Declaration will be aimed primarily at the member states and other associated countries. Their commitment and support will be necessary for the further development of the European Research Area for the marine sciences.

The conference consists of an introduction and four sessions. The introduction will be given by Maria Damanaki, the European Commissioner for Maritime Affairs. The first session will offer an overview of the achievements and most important lessons in the field of marine research during recent years. The second session deals with the challenges and opportunities for the decade ahead, and will seek to set clear research priorities. The third session will focus on the main determining fator for the future development of the European Research Area for the marine sciences. The fourth and final session will be devoted to the Ostend Declaration.

The need for European attention

In order to increase the visibility of the conference and also to create greater awareness of marine research needs at European policy level, an opening event will be held in the European Parliament on the evening before the conference. Once again, the important challenges facing marine research in the coming decade will be central. Top speakers such as Ed Hill, Lars Horn, Adrianna lanora, Arne Hubregtse and Pierre Bahurel must shake Europe's parliamentarians out of their complacency and make them more conscious of the huge importance of the oceans for life on our planet. A related exhibition of posters will seek to hammer home the same message.

The timing of the EurOCEAN 2010 Conference and the Ostend Declaration could not be more appropriate. The European research funding landscape is set to undergo major changes in the near future.

EurOCEAN 2010 is the perfect opportunity to underline both the importance of marine research for the development of effective maritime policy and the key role which such research can play in the process of European economic growth and recovery.

Willem De Moor, Innovation and Enterprise Division





EurOCEAN 2010 Conference

When? 12 and 13 October 2010 Where? Kursaal, Ostend More info? www.eurocean2010.eu

² FWI Review 3 (3): 36 – 37

More European cooperation = less global warming

The Strategic Energy Technology Plan – known for short as the SET Plan – was published by the European Commission in November 2007 (COM(2007)723). Its purpose? To accelerate the development and the roll-out of low carbon technology, so that the EU's ambitious climate and energy objectives can be met. In this sense, the SET Plan is the indispensable technological pillar of European energy and climate policy. It is also a European first: never before has there been such a systematic European approach for the joint programming of research and innovation activities and policy in the field of energy technology. In this manner Europe is trying to offer a coordinated answer to the great social challenges of our time – of which energy provision is one of the most important.

The SET Plan aims at:

- a new joint strategic approach to planning (through the setting up of a steering group and the creation of a European information system for energy technology):
- a more efficient policy implementation;
- an increase in resources (both in funding and personnel);
- a new and enhanced approach with regard to international cooperation and improved coordination of the national and regional research activities carried out by the research institutions, the business world and government authorities, to be achieved via the setting up of the European Energy Research Alliance, the launching of European Industrial Initiatives and a separate action focused on the planning and development of future European energy infrastructure networks and system transitions

For the implementation of the SET Plan, the Commission has put forward two specific policy instruments: the European Energy Research Alliance and European Industrial Initiatives.

European Energy Research Alliance - EERA

The EERA was founded by ten trend-setting European research institutions, in order to achieve the better coordination and further strengthening of Europe's energy research activities. With this purpose in mind, they worked together to draw up a series of joint research programmes, making common use of research infrastructure in different domains (carbon capture and storage, wind, solar power, bio-fuels, materials for nuclear energy, fuel cells, smart (electricity) grids, geothermal power, marine applications, etc.). The core group of the EERA was recently expanded from ten to fourteen institutions. Their pan-European research programmes are open to all European energy research institutes and universities which are willing and able to make a significant contribution in terms of human resources or research facilities. On 4 June 2010 the EERA launched its first joint programmes in the following domains: wind, photo-voltaics, smart grids and geothermal energy.

European Industrial Initiatives - EII

Within the framework of the SET Plan a series of European Industrial Initiatives

have been devised for six strategic energy technology domains: wind, solar energy, electricity grid, CO2 capture, transport and storage, bio-energy and nuclear fission. There is also a seventh related initiative on the theme of smart cities. The objective of the EIIs is to bring together industry, the member states and the EU in innovative public-private partnerships which can accelerate the development and roll-out of energy technologies through technologyspecific Research, Development and Demonstration Programmes. The member states can participate in the Ells in accordance with the principle of variable geometry73 and are free to take part in the programmes which are most important in their own scale of priorities.

In addition to the six strategic energy technology initiatives, the 'smart cities' initiative was proposed in order to stimulate the integration of energy efficiency and renewable energy in the future development of our cities. The Smart Cities or Energy Efficiency initiative supports the transition towards low-carbon, green cities. Using a series of demonstration programmes, the participating cities must show that by 2020 they will be in a position to reduce their emission of





*







greenhouse gases by 40%, through the use of energy-efficient measures and low-carbon technologies which will transform their buildings, transport systems and energy networks. A distinction is made between ambitious cities and pioneer cities, with the latter being prepared to take greater risks. European financial support will be linked to the risk level of the city's own investment. The Hydrogen and Fuel Cells Joint Technology Initiative – which was set up in 2008 for a period of five years – can be regarded as the forerunner of the Ells.

The European Commission wishes to achieve maximum complementarity between the activities of the EERA and the activities of the EIIs. As a result, the EERA joint programmes will contribute towards both the implementation of the EIIs and the fulfilment of their long term and mediumlong term research needs. The final objective is a single coherent SET Plan, consisting of various different elements which interact on each other to a maximum degree.

Major investments required

On 7 October 2009 the Commission published its second communication with regard to the SET Plan: "Investing in the Development of Low Carbon Technologies" (COM(2009)519). In this document, the Commission once again emphasised that the SET Plan is the indispensable technological pillar of European energy and climate policy. This policy is based on three fundamental objectives: the reduction of greenhouse gas emissions, the safeguarding of future energy supply and the guaranteed competitiveness of European industry. It is Europe's ambition to transform our current energy system – which is 80% dependent on fossil fuels - into a new energy system which in 2050 will be capable of realising

an 80% reduction of greenhouse gas emissions in comparison with the 1990 figures. This will require dramatic and all-embracing technological change.

In order to achieve these ambitious targets, Europe will need to invest heavily. In the first instance, there is a need for an additional investment of 50 billion euros (from combined public and private sources) for the next ten years. This represents a yearly increase from the current 3 billion euros to a proposed 8 billion euros. The largest contributions will need to come from the member states and industry. The limited EU budget will only be committed to create a lever effect.

Why is this additional money needed? To begin with, it is necessary to finance the six Ells and the Smart Cities initiative: these are the backbone of the SET Plan, which will be activated in the course of 2010. The financing of the Hydrogen and Fuel Cells Joint Technology Initiative, which is currently part of the Seventh Framework Programme (FP7), also needs to be guaranteed when this programme comes to an end in 2013. Similarly, the recently founded European Energy Research Alliance also requires substantial funding. Last but not least, the so-called Breakthrough Science in the energy technology domain is also in need of financial support

In order to clarify the investment commitment for strategic energy technologies (the EIIs) for the next ten years, the EU, acting in collaboration with a large group of important stakeholders from industry and the research community, has drawn up a series of detailed Technology Roadmaps. Each of these technology-specific step-by-step plans lists clear market objectives, a number of technological objectives and an estimate

of the combined public-private investment which will be required. The technological objectives can be sub-divided into four groups: cost-reducing; performance/ efficiency-enhancing; the development of critical components and/or materials; inter-operability and integration at systems level. These objectives must be achieved by means of research & development and demonstration programmes.

The Technology Roadmaps (2010-2020) form the basis for the planning of the Ells. Building on these foundations, the Commission, once again working in conjunction with interested partners from industry, has drawn up detailed implementation programmes, with a list of priority actions for the first three years (2010-2012).

As a following step, the Commission now wishes to identify with the member states the most appropriate instruments for the execution of these priority actions. As part of this process, it will be necessary to establish the best level for public intervention. In March-April 2010 a number of EII teams were set up, with representatives from interested or committed member states, the research community (e.g. EERA) and the financial world (e.g. EIB).

The progress of the different actions will be closely monitored on the basis of a set of critical performance indicators. The various different EII teams will report regularly to the European steering group for the SET Plan. This steering group contains two representatives from each member state, one of whom is responsible for energy policy and the other for energy research policy.

The first four European Industrial Initiatives (wind, solar, electricity grids and carbon capture, transport and storage) were of-



ficially launched on 3 June 2010 during the SET Plan conference held under the Spanish presidency. The following two initiatives – bio-energy and sustainable nuclear power – will be launched on 15-16 November 2010, during the SET Plan conference to be held under the Belgian presidency. The Smart Cities initiative is currently in the brainstorming phase and will only be launched in 2011

European opportunities for Flanders?

What does this European strategic energy technology plan mean for Flanders? What is the incentive for a small region to involve itself in the larger European framework for energy technology? What is the added value of participation in the European Industrial Initiatives of the SET Plan? In order to explore the possible opportunities for Flanders, at the start of 2010 the EWI Department commissioned a study entitled: Energy technology in Flanders and European opportunities.

The purpose of the study was twofold: firstly, to map technology strengths with a significant economic potential for Flanders in the domains of renewable energy technology and smart networks; secondly, to assess in light of these strengths how Flanders might best subscribe to the European SET Plan. The EWI wishes to carry out this strategic exercise in consultation with its strategic partners in the field of energy technology: 'Generaties', a Flemish industrial innovation platform initiated by Agoria, and the Smart Grids Platform. This consultation takes place via a series of workshops in a number of energy technology domains which are crucial for Flanders: wind energy, photo-voltaics, smart networks, smart cities and bio-energy.

With this exercise, the EWI is trying to get a clearer picture of the Flemish innovation system for energy technology and also to assess how Flanders, as a small region, can most intelligently position itself in relation to international trends and strategic initiatives with strong innovation platforms. We need to realise that stimulating the development of low carbon technologies and accelerating their roll-out can also bring Flanders closer to the successful realisation of the three fundamental objectives on which the region's climate and energy policy are based: enhanced competitiveness, the safeguarding of our future energy supply and a reduction in the emission of

greenhouse gases. The European objectives of the SET Plan therefore serve to strengthen our own Flemish policy accents in the fields of economic, research, innovation and energy policy.

The study's end report, scheduled for delivery in mid-July 2010, will be a policy-relevant document, which can be used by the policy-makers to make well-founded decisions about Flanders' participation in the priority European Industrial Initiatives of the SET Plan.

During the Belgian presidency the EWI Department, working in conjunction with the European Commission, will organise the fourth SET Plan conference.

Lut Bollen, Enterprise and Innovation Division

Communications issued by the European Commission

When? 15 - 16 November 2010 Where? Square Meeting Centre, Brussels More info? www.setplanconference2010.be

SET Plan Conference, 15 - 16 November 2010

On 15 and 16 November, the EWI Department, working in close collaboration with the European Commission, will organise the Strategic Energy Technology Plan Conference. This is the fourth in the series of conferences organised within the framework of the SET Plan. Its objective is to accelerate the development and rollout of low carbon energy technologies, so that the EU's energy objectives for 2020 and 2050 can be met. The SET Plan Conference will give an update of the current state of affairs with regard to the implementation of the various lines of action. Amongst other matters, these include the European Industrial Initiatives, the Smart Cities Initiative⁷⁴, the pan-European research programmes of the European Energy Research Alliance and the Joint Technology Initiative for Hydrogen & Fuel Cells.

The target group for the conference is made up of the different stakeholders: the research community, representatives from industry, the financial world, policy-makers and international partners. During the conference special attention will be focused on the launching of two of the SET Plan's new strategic industrial initiatives: bioenergy and nuclear energy. These industrial initiatives are part of the implementation programme for the SET Plan and take the form of an innovative public-private collaboration between the European Commission, the member states and industry. In addition, the conference will also mark the start of the international dimension of the SET Plan. A broad but realistic European strategy for international cooperation in the field of energy technology will be put forward, based on common mutual interests and priorities. The focus will be set on the development of international cooperation on science and technology matters within the framework of the SET Plan, including possible collaborative ventures between Europe, the United States and Japan.

Willem De Moor, Enterprise and Innovation Division

Communications issued by the European Commission

- A European Strategic Energy Technology Plan (SET Plan) 'Towards a low carbon future', 22 November 2007, COM(2007)723
 Investing in the development of Low Carbon Technologies (SET Plan), 7 October
- Investing in the development of Low Carbon Technologies (SET Plan), 7 October 2009, COM(2009)519

⁷³ A member state is free to choose which research programme(s) it wishes to finance, in function of its own research priorities. The financing will be made in conjunction with other member states in varying coalitions, depending upon the programme concerned.

⁷⁴ A network of cities and researchers, whose purpose is to develop wire-free e-services for the public – www.smartcities.info .



Tuning challanges into opportunities with **biotechnology**

On 13 and 14 September 2010 the EWI Department, in collaboration with the Enterprise Directorate-General of the European Commission, is organising a high-level international conference on the theme of the bio-economy. But what exactly is the bio-economy? And why is it so important that Belgium wishes to make it a key point of its presidential agenda and the European Commission sees it as a spear-head of the EU 2020 strategy?

Bio-economy... more than just bio-fuels

Although definitions can sometimes give limited and even contradictory impressions of the full diversity of the bio-economy, we nevertheless try to define this economy as "an economy which produces and uses reneweable biological raw materials in a sustainable manner and on a large scale, and in which innovative bio-technological processes are applied in various industrial sectors." Sometimes we also speak of 'industrial biotechnology'.

The media have devoted considerable attention to (the debate about) bio-fuels. But the bio-economy has much more to offer than that. The wide range of biotech applications covers fields as diverse

as foodstuffs, animal fodder, chemicals, detergents, industrial lubricants, paper and pulp, textiles, pharmaceuticals and energy. Bio-based products are all around us, often much closer than we might think: ecological washing powders, jeans faded with enzymes, bio-degradable plastic bags, etc.

Green, sustainable and smart growth

De overgang naar een 'echte' Europese The transition to a 'real' European bioeconomy opens the door to numerous opportunities of first importance. The bio-economy not only helps to offer answers to the great social challenges of our time, such as food shortages, energy and water supply, climate change and threatened bio-diversity, but can also act as a stimulus for European farmers and for better rural development. The demand for biomass will inevitably rise once more and more sectors begin to make use of biotechnological processes and renewable raw materials. However, the increased pressure which this is likely to bring on agriculture will to a large extent be alleviated by the very same biotechnological processes, which will result in significant improvements in both quality and productivity. Sustainable (agricultural) production will continue to be central in the bioeconomy agenda. Moreover, if Europe can strengthen its competitive position in the field of bio-knowledge and bio-research in relation to countries such as the United States and China, this could be a crucial

imes The Belgian presidency of the EU



step towards structural, sustainable economic growth and prosperity in Europe.

Bio-economy: high on the European agenda

De Europese beleidsinstanties beseffen ten The European policy-making bodies fully understand the importance of devoting sufficient attention and sufficient resources to the successful development of the European bio-economy. The term 'Knowledge Based Bio-Economy' (KBBE) was officially launched in 2005 with the organisation of the first KBBE conference during the presidency of the United Kingdom.

The European Commission recently underlined the importance of the bioeconomy by allocating it a crucial role in the EU 2020 strategy, as a key part of the 'innovation union' flagship initiative. In 2009 the European Commission similarly recognised industrial biotechnology as one of the 'Key Enabling Technologies' in the fight against climate change. Research for the bio-economy also forms an integral part of the Seventh Framework Programme for Research, under the theme 'biotechnology, agriculture and food'. DG Enterprise and Industry also focused on the bio-economy with the launch of its lead market initiative75 for bio-based products and for a single market for research and innovation. DG for Health and Consumers makes a contribution through its drafting of legislation relating to genetically modified foodstuffs and animal feed, and through its Community Action Plan for the protection and well-being of

animals. Finally, DG Agriculture and Rural Development will play an important role in helping to realise an effective bio-economy during the forthcoming reform of the Common Agricultural Policy.

Notwithstanding the measures already taken, the many advantages which they have yielded and the strong competitive position of Europe, five years after the launch of the KBBE there is still much work to be done before the EU can claim to possess a true bio-economy. This applies not only in the fields to research and valorisation, but also in the political arena.

Leaning from the past, but with a focus on the future

All this provides plenty of food for thought for the KBBE Conference 'Towards 2020', which will take place on 14 September 2010 in the Square Brussels Meeting Centre. The main objective is to draw up a balance of the progress made since 2005. In addition, the conference will look forward to 2020 and seek to make its own contribiution to a new European vision and a new action plan for the further development of a sustainable bio-economy.

Bring on the heavyweights!

It almost goes without saying that a conference on a theme which stands so high on the European agenda is bound to attract many experts and important players from the sector. Amongst those the conference looks forward to welcoming are the European Commissioner for Research, Máire Geoghegan-Quinn; the former European Commissioner for Agriculture, Franz Fischler; and our own Flemish Minister for Innovation. Members of the European Parliament and high officials of the European Commission will also be present. In addition to senior Flemish and European policy makers, CEOs and managers of top bio-economy companies (DSM, Danisco, Novozymes, Roquette Frères, etc.) will be amongst the speakers.

Inter-active discussions

Na het bepalen van de uitdagingen en After determining the challenges and the social-economic drivers, policy recommendations based on the needs of the bio-economy will be formulated. The debate about the best way to proceed in the future will form the core of the conference. This discussion will be led (and fed) by respected experts from different biotechnology disciplines and by representatives of important stakeholders. In three parallel sessions the whole value chain of the bio-economy will be examined: from food to industrial production, and from fundamental research to innovation.

Afterwards, the input of all three sessions will be catalysed and synthesised in a final panel debate, chaired by Alex Puissant, before being crystallise into concrete policy recommendations.

The (Flemish) bio-economy in the spotlight

It is not just Europe which enjoys a good reputation for biotechnology research: Flanders has also built up an enviable reputation of its own. The KBBE 'Towards 2020' Conference offers an ideal opportunity to display the trump cards of the Flemish biotech sector to an international audience. With this purpose in mind, the EWI Department, together with FlandersBio, will organise a visit to Ghent Technology Park on 13 September 2010. The technology park houses a cluster for life sciences, which has been developed through the collaboration of the Flemish Institute for Biotechnology (VIB), its incubator and spin-offs, various industrial partners (BASF, Bayer, Innogenetics), Ghent Bio-Energy Valley 76 – one of the largest sites for the production of bio-fuel in Europe – and the BioBase Europe Pilot Plant⁷⁷. To round matters off, there will be a conference dinner in the evening, at which the Minister-President of Flanders and the European Commissioner for the Environment, Janez Potočnik, will be the most prominent speakers.

During the conference it will also be possible to visit an interesting exhibition dedicated to innovative bio-based products and processes, marketed by such leading names in the sector as Dupont, Realco, Danisco/Genencor and DSM.

The conference itself, but also the related site visit and exhibition, will ensure greater public and political visibility for the bio-economy and for the many social and socio-economic advantages it has to offer. And in the final analysis, that is the essence of all that biotechnology stands for: the improvement of well-being and the increase of prosperity within a greener, more sustainable society.

Knowledge Based Bio-Economy 'Towards 2020' Conference

When? 13 - 14 September 2010 Where? Square Meeting Centre, Brussels More info? www.kbbe2010.be

Eva Van Buggenhout, Research Division Monika Sormann, Strategy and Coordination Division

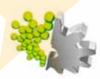
- 75 http://ec.europa.eu/enterprise/policies/ innovation/policy/lead-market-initiative/
- ⁷⁶ http://www.gbev.org/
- 77 http://www.biobaseeurope.eu/

Industrial Technologies 2010: small is beautiful – and useful

On 7 September 2010 Tour & Taxis in Brussels will act as host for Industrial Technologies 2010, the first of its kind in Europe. The event is being organised by the European Commission, working in collaboration with the Belgian presidency of the European Union. The ambition of the conference is to become the European forum where researchers, industrialists and policy-makers can exchange ideas about the development of new nano-technologies, materials and production technologies.

industrial technologies 2010

integrating nano, materials and production



The origins of this conference are to be found in the NMP theme contained within the Seventh Framework Programme of Research and Technological Development (7FP RTD). The NMP theme covers a multitude of different sub-themes: nanosciences, nano-technologies, materials and new production technologies. In fact, it involves a wide diversity of multi-disciplinary activities with a large range of applications in different industrial sectors. This explains the somewhat general name for the conference: 'Industrial Technologies'. NMP is everywhere: in foodstuffs, toothpaste, sun cream, textiles, computers, cell phones, paint, glass windows, solar panels, batteries, medication, prostheses, precision instruments, etc.

It is precisely because of this great diversity that there is a need for a periodic forum where an equally diverse group of players from the sector can meet and discuss, and where the integration of nano-, material and production technologies – as key success factors for an industrial transition towards sustainable production – stands central. And so the Industrial Technologies 2010 Conference was born.

This theme of 'integration' has been worked into the four main tracks of the conference programme:

- research and innovation, the horizontal aspects (including education and training):
- research and innovation, the human dimension (including health aspects);
- research and innovation for employment and growth (including globalisation);

 research and innovation in relation to the environment and climate change (including sustainable production).

The aim of the conference is to attract all the players involved in the development of nano-technologies, materials and production technologies: researchers, entrepreneurs, policy-makers, investors, end-users, intermediaries, the specialised press, etc.

Industrial Technologies 2010 – don't miss it!

The Industrial Technologies 2010 Conference offers something for everyone:

- The conference

During the different sessions, more than 60 respected international speakers will examine the latest trends in the NMP domain.

- Company site visits

On the second day of the conference the delegates will have the opportunity to visit leading companies in the sector, such as Atlas Copco, Materialise, Nanocyl, Sabca, Techspace Aero, Volvo Truck. (Prior registration is necessary.)

Exhibition and information stands
There is no getting away from NMP: it is interwoven into the most trivial everyday objects as well as into the most sophisticated high-tech applications. An exhibition in the central area of the conference will highlight the huge and surprising range of uses to which NMP technology can be put. The newest trends and techniques will also be on show, while the information stands offer

full information about the various ways in which you can benefit from the many different European initiatives.

The new NMP 2011 work programme and the 'match-making' event On the third day of the conference all eyes will be focused on the European Commission, which will announce details of the new NMP 2011 work programme. Running parallel with this, a matchmaking event will be held to allow you to find the right partners (business or research) or to discuss possible technology transfers. Every link in the value chain will be represented. This part of the conference programme is being supported by two European networks, namely the NMP Team (partner search) and the Enterprise Europe Network⁷⁸ (technology transfer).

Thanks to its relevant agenda and its wide range of activities, the Industrial Technologies 2010 Conference looks set to become the first in a long and successful series.

Karel Goossens and Eva Van Buggenhout, Research Division

Industrial Technologies 2010: Integrating Nano, Materials and Production

When? 7 - 9 september 2010 Where? Tour & Taxis, Brussel More info? www.industrial-technologies2010.eu



Finally! On 27 September Brussels Expo will open its doors for the start of the ICT 2010 Conference. This edition of the biannual conference is being organised by the European Commission in collaboration with the Belgian presidency of the European Union. The conference already has a long and proud tradition and has grown to become the largest ICT event for research and development in Europe. More than 4,500 visitors are expected. Following its longstanding tradition, ICT 2010 will act as the ideal forum in which researchers, industrialists and policy-makers can exchange their ideas about the digital future of Europe.

Since Belgium is currently president of the European Union, the ICT 2010 Conference will be held from 27 to 29 September in Brussels Expo. It is a unique opportunity to discover which trends are set to take off in the different ICT disciplines. This edition also wants to examine the contribution which ICT can make to meet the great societal challenges of the 21st century.

The following themes will be dealt with:

- The potential of ICT for the creation of sustainable growth in a low carbon economy;
- The constructive role of ICT in the daily life of citizens;
- The importance of public participation in the innovation process.

These themes have been incorporated into a balanced programme, spread over three days. The conference aims to reach a heterogeneous group of players who are active in the development of ICT in Europe: researchers, entrepreneurs, policy-makers, investors, end-users, intermediaries, the specialist press, etc.

ICT 2010 - Why take part?

There are plenty of good reasons why you don't want to miss ICT 2010:

- The conference

During the sessions key ICT trends and policy priorities (e.g. Europe's digital agenda) will be analysed by leading industrialists, academics and politicians.

- Network sessions

The network sessions will facilitate contact between researchers, industry and investors. There will be numerous opportunities to discuss new project proposals or meet potential new partners.

- Exhibition and information stands
In the different themed pavilions, good for a total area of some 10,000 m2, you can catch up on the very latest developments in digital technology. In the Belgian pavilion you can meet leading local players. The information stands offer full information about the various ways in which you can benefit from the many different European initiatives.

- The new ICT 2011-2012 work programme

ICT 2010 is an important landmark for the ICT theme in the Seventh Framework Programme for Research and Technological Development (2007-2013). It serves as a forum in which a wider public can become more familiar with the new work programme. This foresees a total of 2.8 billion euros of support for R&D.

ICT 2010 - and Flanders?

The ICT 2010 Conference is a unique opportunity for Flanders to focus the spotlight on its most important players and the spearheads of its ITC policy. Flanders will also be prominently present in the Belgian pavilion. Visitors will be able to learn about the state-of-the-art research projects currently being undertaken in the region. And, of course, our ICT-related strategic research centres – IMEC⁷⁹ and IBBT⁸⁰ - will also be present.

Following the example of the successful ICT 2008 conference in Lyon, it is now ICT 2010's turn to take the next step in Europe's digital future. So don't forget: Brussels Expo, 27 – 29 September. Let's make it a date!

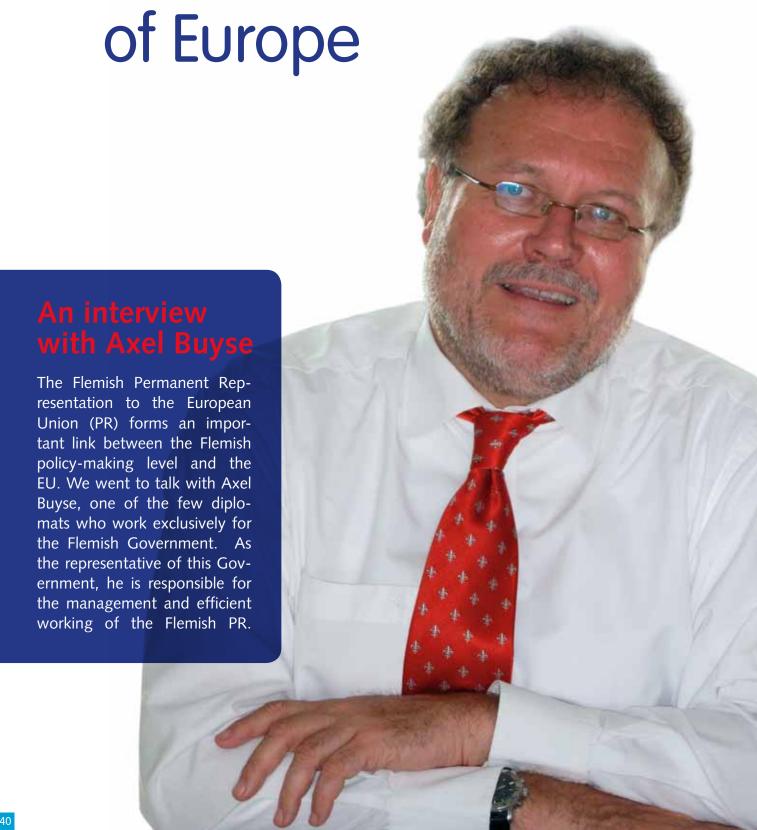
Karel Goossens and Eva Van Buggenhout, Research Division

ICT 2010: Digitally Driven

When? 27 - 29 september 2010 Where? Brussels-Expo More info? www.ict2010.org.

Website ICT 2008: http://ec.europa.eu/information_society/events/ ict/2008/index_en.htm Website IMEC: www.imec.be Website IBBT: www.ibbt.be







"The Flemish PR forms an integral part of the Belgian Permanent Representation, which is a bit like a Belgian Embassy to the European Union. In EU contexts, we work through the member states. In order to be able to work simultaneously on the development of foreign and European policy, both the federal government and the governments of the regions are represented. The Flemish PR consists of about 30 people: a number of administrative staff, supplemented by at least one attaché for each of the policy domains for which the Flemish Government is responsible. Together, they act as a kind of advanced guard - the 'front office' of the Flemish Government in the European Union. They make sure that the Government is kept in the picture about new developments in the EU with the minimum possible delay. This is particularly true for the Flemish spheres of competence, but also for the federal competences which could have an effect on policy at the Flemish regional level. In addition, we channel information from the Flemish Government to the European institutions, we maintain contacts with the European Parliament and we inform the Flemish Parliament about European developments which may have an influence on its deliberations. A last important function is the conducting of first-line negotiations between Flanders, the other Belgian regions and the federal government, in order to reach a mutually acceptable Belgian compromise on European issues."

Good for costs, poor for networking

It is said that the Belgian institutions have an advantage in their dealings with the European authorities, because they are also based in Brussels.

"All the member states have a permanent representation in Brussels. In addition, most of the other big or economically important countries also have their own permanent representations in Brussels, to keep an eye on what is happening in Europe. These delegations are sometimes an adjunct of the embassy, but not always. You also need to remember that there are about 265 regional bureaus in Brussels, representing every conceivable EU region you can think of, including all the German Länder.

The fact that all the Flemish and Belgian governments and administrations are located in Brussels works both as an advantage and as a disadvantage. From a financial point of view, it is highly beneficial in cost terms, since there is no need to pay travel and accommodation costs. However, it works less in our favour in other ways. The 'foreign' EU community in Brussels is very much a separate world. This is the case with diplomatic communities in every world capital. But when you are living in your own country, you don't automatically have the inclination – or the opportunity – to become a part of that community. Then there is also the matter of Flemings who work in Brussels, but who prefer not to live there. The average Flemish official commutes back to his/her home in Flanders in the evening. As a result, they almost automatically isolate themselves from a large part of the informal and even part of the formal

Eye-deep in Europe

Since 1 July Belgium has been acting as president of the EU. Has this had a major influence on the work of the PR?

"That influence is unmistakeable and strongly felt. The level of responsibility is also greater than usual. Yet we must be careful not to become over-fixated on the presidency. It is a relatively short period of six months in which one of the 27 member states provides extra services for the rest of the EU. These services take the form of accepting the chairmanship and the organisation of a whole series of meetings of the EU Council. The visibility of the Belgian presidency has also been significantly reduced, following the appointment of Herman Van Rompuy as the permanent president of the European Council under the terms of the Treaty of Lisbon."

Even so, the presidency is still an important event for various reasons. Firstly, a large part of the Flemish civil service and the ministerial cabinets are given added responsibilities and there are also numerous training sessions, organised and paid for by the Flemish Government. This forces our officials to think more deeply about Europe and to adopt a more open attitude towards it. In addition, the presidency is

The Council Secretariat plays a very important role. It's the 'living memory' of the Council.

the ideal moment to intensify the contacts which we already have with colleagues from other member states, the members of European Parliament, and the many officials of the European Commission. In this way, we can put not only Belgium but also Flanders more firmly on the European map."

Plenty in the pipeline

The preparation of the programme for the presidency began as far back as 2008. How were the priorities set and how did the PR help in their preparation?

"The PR had a crucial role in the preparation process. The first phase was the agenda setting. We drew up a programme by reflecting at both Flemish and federal level on the priorities which we wished to emphasise during the presidency. On the Flemish side, this process led to the distillation of five or six interesting themes. This is when the serious work really started for the PR: checking the details of all the measures and proposals in the European pipeline. Or to put it another way: to establish what had already been done in our priority areas and to check what might still be done by other presidencies during the period of our programme preparation. The activities of the European Commission, the European Council and the European Parliament were also mapped and analy-

Placing the Flemish emphasis

"The presidency is a service function. If we want to approach it seriously, it is important that we do so from the perspective of what is happening within the EU as a whole. What are the hot issues? Where do current policy priorities rest? The presidency offers the opportunity to emphasise certain aspects of these issues

and priorities, to give them a 'local' slant. This occurs primarily in the informal council meetings and at the conferences which are organised within their framework. Nevertheless, the same principle applies equally to the more formal aspects of the presidency: we must look closely at three things - what already is, what is still to come, and what can be achieved during the Belgian presidential period. Once completed, the preparatory work of the PR was forwarded to the ministerial cabinets, where the chosen themes were scrutinised from a political perspective. Here the themes were further refined, bearing in mind what was realistically possible. The official Belgian programme was finally presented to the European Parliament in Strasbourg at the beginning of July. '

There is another important link between Belgium and the EU: namely, the Council

"That is correct. The Council Secretariat plays a very important role. It is the 'living memory' of the Council and is responsible for implementing checks and balances. During the previous months there was frequent consultation with the Council Secretariat about the Belgian programme. For example, it was hoped that the European Commission would issue a first communication about sporting affairs, since sport has now become a formal competence under the Treaty of Lisbon. However, it has become clear that the issues are too 'new' for the Council to be likely to reach its formal conclusions during the period of the Belgian presidency. When faced with a situation of this kind, all you can do is drop your original proposal and replace it with another one. Or else lower the legal status of the matters which the Council needs to consider."

How can we measure the success of the presidency?

Is the number of final Council Communications still the most important yardstick for measuring the success of a presidency? "That is certainly the traditional method of assessment. However, we are starting to think in a more balanced way about such methods, since they often lead to the preTo bring the people closer to Europe is one of the most difficult challenges facing the EU.

sentation of premature Council Conclusions. As a result, these conclusions are not always well thought through, so that they are either rejected or so weakened during the debating process that they become 'toothless'. Viewed in purely mathematical terms, it may seem as though you have booked a number of impressive successes, but in reality you will have done little to help the EU to move forward."

When will you regard the presidency as a success for Flanders and/or Belgium?

"In the first instance, we can be satisfied if we start to receive signals from the other member states that we have actually been of genuine service to the Union: that we approached our task as honest negotiators, who were not prepared to force through their own ambitions at the cost of European consensus. That is still the main task of the presidency: to achieve consensus. In the second instance, we can also be happy if we have been able to place a new emphasis on a number of the priorities which are important to us. In the field of research, for example. Everything that the EU is trying to achieve is supported by the Flemish and Belgian research communities. So if we can make progress there - for example, with regard to the mobility of researchers⁸¹ – we are also contributing towards our own success.

Translating Europe for our citizens

Flanders also wants to bring the people closer to Europe. Is this a realistic objective? "In my opinion, this is one of the most difficult challenges facing the EU. We shouldn't have any illusions on this point. Nevertheless, I am firmly convinced of the enormous importance of the European Union as the best expedient for European countries and their peoples to have a future say in global matters. In some respects, its importance is even more farreaching than that: in a number of areas the EU has formulated truly enlightened ideas, which can be of real benefit to

the rest of the world. For example, the manner in which Europe has dealt with the climate issue has helped to waken other countries to the true gravity of the

Every member state of the European Union is struggling to make its domestic politics comprehensible and attractive for its citizens. European politics are even more abstract and difficult to follow. Moreover, Europe first came into being as an 'elite' project. During the early years, nobody ever dreamed to trying to 'involve' the people. In this respect, the fall of the Berlin Wall was a major turning point. This led to a realisation that Europe needed to sell itself to the European public. We now have the euro. We have seen the European Parliament grow from a purely advisory body to become the assertive institution that it is today. But this has not been enough to win a place for political Europe in the hearts and minds of the Union's 200 million citizens. We need to begin by addressing the problem at local level, by involving our own politicians in regional and federal government as closely as possible with Europe. If we can succeed in this, we will have taken a huge step forward."

The image of Belgium: a distortion of the truth?

Belgium is a complex country, both politically and socially. Does this compromise the chances of a successful Belgian presidency?

"The complexity of Belgian institutions is a consequence of the complex manner in which our society works. Problems arise if particular institutions fail to take account of the agreed division of competences within the Belgian system and ignore the effects of that failure on European policy in our country. If everybody continues to play his or her appointed role, we can certainly work together. In the course of my work I see every day how successful cooperation with the other regions and the federal government is perfectly possible.

Besides, there are clear provisions which allow us to deal with these difficult situations. There is always a federal government, even if it is only a government of current affairs. So let that government do its work. On the other side of the coin, the regions have acquired important competences in recent decades and it is important that these regional governments should not be affected by political problems at federal level. Even in the worst case scenario, where it proves impossible to form a new federal government, there is still no reason why our presidency should not be a successful one.

Having said all this, it is to some extent understandable that the press reports about Belgian politics in other European countries are distorted. Brussels is overflowing with foreign journalists, but they are mainly concerned with EU matters. But whenever a new crisis bursts onto the Belgian political scene, they are asked by their papers to see what all the fuss is about, even though it is not really their speciality. As a former journalist and foreign editor, I can confidently assert that the foreign reporting of Belgian domestic affairs is frequently superficial and sometimes sensationalist. "

How do you hope to look back on the presidency from your own personal perspective?

"What I look forward to in terms of the PR is the further improvement of the manner in which we work. We must keep our government informed as efficiently as possible and involve it as closely as possible with the European presidency. At the same time, contact with the other governments represented within the PR must take place in a rational manner. No political games here! We work within the existing order, but within that order we seek to exercise our responsibilities to the best of our ability and to maxi-

The PR has a crucial role in the preparation process for the presidency.



AXEL BUYSE Born in Kortrijk, on 27 April 1955

Master in Modern History, Catholic University of Leuven

- Teacher in history and economics (1980-1984) Adult Education, Leuven
- Foreign editor, De Standaard newspaper (1984-1995), specialising in Africa, the Balkans and international security issues
- Senior Foreign Editor and Commentator, De Standaard (1995-2003)
- Sabbatical year researching 'Ethical aspects of germ-line gene therapy" (at the instigation of the Flemish Institute for Biotechnology) (2002)
- Representative of the Flemish Government at the Belgian Embassy in The Hague (2003-2008)
- Representative of the Flemish Government in the Permanent Representation of Belgium to the EU

 (autumn 2008)
- Publications about the EU, journalistic integrity, terrorism, the radical right, Congo, the Balkans, nationalism

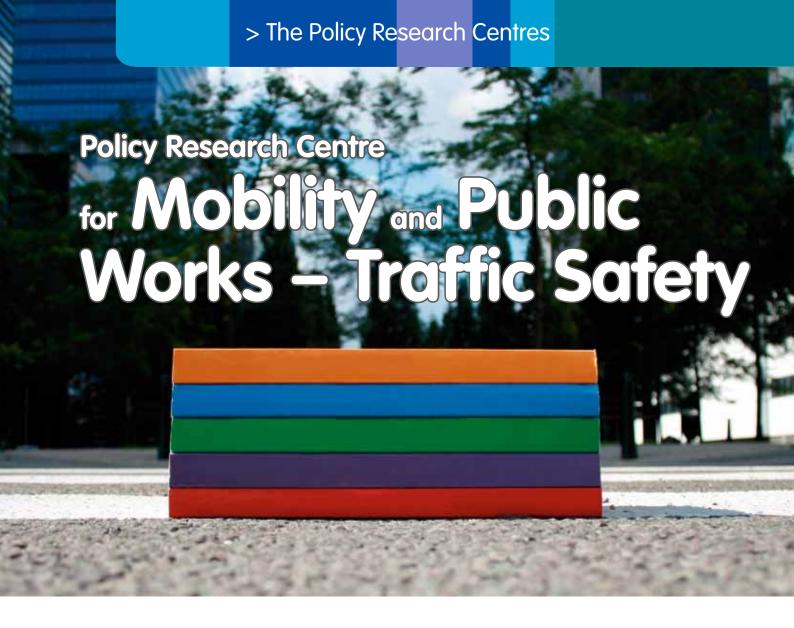
mum effect. We try, to quote the words of our minister-president, to be assertive in terms of our competences, but never in an aggressive manner to the detriment of others."

Keeping the Europe 2020 dream

"In the second instance, and in a broader context, I hope that during the presidency we will be able to finally calm the storm in the financial markets. This storm is one of the most serious threats to the future of Europe. The Europe 2020 strategy is a dream which may seem relatively simple at first glance, but its great virtue is that it represents a coherent project to raise our economy to new levels of efficiency, with the objective of increasing the

productivity, well-being and prosperity of us all. In this sense, it can be used as a guideline not only for the EU as a whole, but also for individual member states and regions in their search for a way forward. For example, a decision to try and make savings on the proposal to reserve 3% of GDP for research funding would be short-sighted in the extreme: it would simply rob Europe 2020 of the reason for its existence. The major strategic task of the Belgian presidency is therefore to ensure that the Europe 2020 programme - notwithstanding the need for major savings - is not wiped completely from the European political agenda."

Monika Sormann and Peter Spyns, Strategy and Coordination Division



As the name suggests the Traffic Safety track of the Policy Research Centre for Mobility and Public Works carries out policy-relevant research in matters relating to traffic safety (or its absence). The Policy Research Centre focuses on three types of research activity: data collection, short-term research and fundamental scientific research.

Data collection consists of the development of a reliable network of data sources, the compilation of exposure, risk and crash statistics and the drawing up of time schedules for (amongst other things) risk-causing and risk-reducing factors.

Short-term research is performed in response to policy questions and may involve, for example, the evaluation of new actions to reduce the number of traffic victims. The further development of the knowledge base relating to exposure risks, crash risks, outcome risks⁸² and the various feedback mechanisms in relation to traffic safety also forms part of this research.

Fundamental scientific research is focused

on aspects such as the organisation of traffic safety policy, traffic safety from the global perspective of sustainable development, the connection between traffic safety and accessibility, and the relationship between traffic safety and equal opportunities.

The centre's research agenda is broken down into eight separate research topics, each linked to a work package.

RESEARCH TOPIC 1:

Reference database for research into traffic safety in Flanders Policy-makers are expected to make wellfounded decisions about the design and working of the traffic system. However, the characteristic aspects of traffic safety can only be fully understood on the basis of the collection, retrieval and analysis of relevant information. The development of reliable databases is therefore of paramount importance for the output of highquality, policy-relevant research. On this same basis, it is possible at a later stage to draw up indicators which can be used to ensure the adequate follow-up of the agreed policy. With these aims in mind, the various partners of the research centre collected different kinds of traffic safety data during the first phase of the development of this work package. For example,



in addition to traffic crash data, they also provided data relating to road characteristics and traffic intensity. These different sources were then linked in a single reference database. In a second phase, a tool was developed – the road crash analyser – for the visualisation and interrogation of the database in a GIS environment. This made it possible to conduct detailed traffic crash analyses, so that the dominant causes became clear. These analyses serve to simplify and improve the evaluation of road safety measures.

RESEARCH TOPIC 2:

Infrastructure

With its research work in this area, the centre wishes to make a positive contribution towards maximising levels of safety in road infrastructure. The research programme is divided into four separate projects. The cross-sectional risk analysis examines and quantifies the existing risks at crossroads and dangerous stretches of road by comparing the characteristics of the road, its surrounding environment and the traffic it carries. The project relating to the impact of road infrastructure on traffic safety is intended to provide information which can be used for the creation of work tools for the design and management of the road system, such as the Safe Roads and Crossroads Guide (Flemish Government, 2009), the Guide for Cycling Facilities (Flemish Community, 2006), the Guide for Pedestrian Facilities (Flemish Community, 2003) or the Roundabouts Guide (Flemish Community, 1997). In addition, the research centre also carries out the evaluation of the Flemish Government's programme for the reconstruction of dangerous road locations. Finally, the

centre is developing a computational model which can estimate the consequences of policy decisions relating to land use and infrastructure on transport and traffic safety.

RESEARCH TOPIC 3: Accessibility

The purpose of this research is to develop a model which will provide insights into the positive and negative effects of a traffic safety measure in terms of accessibility. This can help policy-makers during their deliberations on the effectiveness of a proposed measure. The research was started in early 2010. During a first phase a choice will be made from a set of accessibility and traffic safety indicators, for which relevant data will then be collected. At a later stage a simulation which assesses the likely effects of the proposed road safety measure on accessibility will be developed and the role of incident management on the differing priorities of accessibility and traffic safety will be investigated.

RESEARCH TOPIC 4:

Innovation and ICT for safer mobility

Research in this field seeks to assess how traffic safety in Flanders can be increased through the introduction of technological innovations. The applications for new technology in the transport sector are many and varied, and can lead to important road safety benefits in several different areas. The focus is on on-board vehicle systems, with a priority on the translation into effective policy of the latest developments in the field of Intelligent Transport Systems (ITS). In this manner, for example,

ITS has been applied to increase traffic safety at crossroads with traffic lights and on motorways. Great importance is attached to the communication aspects of ITS technology and to the cost models for the most likely scenarios. At the present time, an analysis is being made of the feasibility of introducing a dynamic traffic management system (the channelling of traffic flows, the prevention of crashes, the provision of alternative routes, etc.). This analysis makes use of floating vehicle data: data which are transmitted directly from the vehicle.

RESEARCH TOPIC 5:

Methods for the evaluation of traffic safety measures

The Flemish Government has many road safety initiatives and measures from which it can choose. However, this choice must be made carefully and correctly. In view of the limited resources available to the Government, the most effective and most efficient measures must be selected on the basis of tried-and-tested socio-economic evaluation tools. For this reason, the main objective of work package 5 is to develop a methodology for the more uniform evaluation of proposed traffic safety measures. A number of such evaluation tools already exist, such as the cost-effectiveness analysis, the social profit and loss analysis and the multi-criteria analysis. They each have their strengths and weaknesses, and one tool may be more appropriate than the others, depending on the context. Thanks to the development of a decision tree it is now possible to select the most suitable tool for each given set of circumstances. In addition, a manual is being prepared which gives a detailed breakdown of the

> The Policy Research Centres

different methodologies. This manual and the decision tree will be used, for example, to assess proposals relating to (amongst other things) the installation of new speed cameras on motorways and dynamic vehicle management systems (DVM). Multiactor/multi-criteria analysis will also be applied, where appropriate, specifically for the evaluation of traffic safety measures. As the name implies, this methodology takes account of multiple actors and their likely conflicting criteria. In view of restricted budgets, the increasing complexity of the problems and the growing demand for public consultation, this powerful tool can provide an added value in comparison with other evaluation techniques for traffic safety assessments.

RESEARCH TOPIC 6:

Risk assessment

In order to improve traffic safety in Flanders, it is necessary to gain more detailed insights into the various risk factors, such as exposure, crashes and outcome. Only when the evolution of the most important risk factors can be analysed, compared between groups and predicted, will it be possible to reduce risks on the basis of specific measures, thereby reducing the number of traffic crashes and traffic victims. The policy in this respect must be focused on the users, the modes of transport and locations with a high potential for risk reduction. To assist this policy, work package 6 has been divided into three separate projects. The first project will develop better prediction models for traffic safety, based on a series of sub-criteria which cover the various aspects of traffic behaviour in Flanders. The second project will develop a set of relevant traffic safety indicators for the region. The third project makes a distinction between transport accessibility on the one hand and equal opportunities with regard to traffic safety on the other hand.

RESEARCH TOPIC 7:

Policy organisation and monitoring

Research in this area seeks to make a contribution towards the integration of traffic safety into a sustainable government policy programme, which will pay maximum attention to the interaction with other policy domains and sectors, such as spatial planning, environment policy and health policy.

With this purpose in mind, work package 7 is also divided into three sub-projects:

- The development of a sustainability monitor. This tool reveals the manner in which the effects of traffic safety policy are compatible with a sustainable society and gives policy-makers the chance to correct any defective aspects of that policy.
- Administrative organisation for a sustainable traffic policy. A manual is being complied which will advise government authorities at different levels (regional, provincial and municipal) with regard to the development of a quality care programme for a sustainable traffic safety policy which can be successfully tracked

- and implemented.
- Computational model to measure the impact of policy on traffic safety. A computational model for Flanders is being developed which will quantify the traffic safety effects of policy measures initiated by the government in the fields of mobility, road safety, spatial planning, the environment and health. This model will allow the evaluation of (combinations of) measures at regional level in a quantitatively well-founded manner.

RESEARCH TOPIC 8:

Sustainable mobility

Research into sustainable mobility focuses on the interaction between mobility, urban and rural planning, noise pollution, environmental impact and traffic safety. Based on this perspective, the research centre carries out both desk studies and field work relating to traffic management, vehicle technology and tools for policy implementation. The objective is to provide instruments and make recommendations which can be used (also by local authorities) to reduce the levels of noise and air pollution caused by road traffic, whilst at the same time improving both traffic safety and overall quality of life. With this purpose in mind, work package 8 is divided into various sub-projects:

- To study the impact of spatial planning and development on traffic, noise pollution and general quality of life, subproject 1 aims to devise a methodology which will take account of the manner

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PROMOTER-COORDINATOR:

Prof. dr. Geert Wets

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COMPETENT MINISTER: the Flemish Minister of Mobility and Public Works

BUDGET: 660,000 euros

The risk of a certain outcome occurring in relation to a crash. E.g., in the event of a pedestrian being hit by a car, the pedestrian runs a high to very high risk of being seriously injured, depending upon the speed of the car. in which traffic flows develop and the impact on both the road users and the people who live or work in the immediate vicinity. This methodology will not be restricted to the negative aspects of traffic, but will also examine accessibility and exposure during road travel.

- Sub-project 2 involves research into sustainable vehicle use and sustainable traffic safety measures in relation to vehicle speed. Investigations will focus on the best ways to achieve sustainable speed management, taking due account of human behaviour and technical innovations which can positively modify driving behaviour (Advanced Driving Assisting Systems).
- In order to provide budgetary information in relation to various traffic management options, a micro-traffic model, a noise model and an emission model have been selected and made operational. Working in close collaboration with the policy-makers, these models are currently being used to calculate the likely cost of various traffic management policy options.
- The fourth sub-project involves research into the need and possibility for optimizing and updating mobility plans, mobility effect reports (MOBER), environmental effect reports (MER) and business transport plans from an environmental point of view.

Stijn Daniels, University of Hasselt – Institute for Mobility



Transformation

Transformation in time of crisis: towards a new industrial policy

Flemish industry is having it tough in these times of crisis. If Flanders wishes to remain a top region, it will need to develop a strong policy framework for economic transformation. This will require a good deal of prior reflection on the factors underpinning a new Flemish economic policy which can implement a transition from economic recovery to genuine structural change. With this in mind, the EWI invited a number of leading Flemish economists – Wim Van der Beken, Bruno Tindemans, Leo Sleuwaegen, Jan Larosse, Alex Brabers and Ivan Van de Cloot – to discuss these matters during the EWI Focus Workshop held in April of this year.

Industrial policy is probably the missing link in the innovation paradox. Why is there such a huge gulf between ideas and the market place? The DNA of the Flemish economy urgently needs to be made 'whiter' and 'greener', with innovation as the driving force which must guarantee our future prosperity. The structure of our economy - and of industry in particular - will need to adjust to the geo-political changes, technological opportunities and social challenges of the 21st century. This theme is central in the forward-looking Flanders in Action plan⁸³ and was also the basis for the meeting of the States-General for Industry84 held earlier this year.

High transformation pressure

During the EWI Focus session, Wim Van der Beken, the director of Idea-Consult, stated his view that the present industrial fabric is being subjected to extremely high levels of transformation pressure as a result of structural change and system crisis. Exposure to this transformation pressure varies from sector to sector⁸⁵. The two most important enhancers of transformation pressure? On the one hand technological intensity, and on the other hand globalisation and market integration. To a large extent, the capacity to adjust is determined by nature of the surrounding institutional framework, with the level of employment performance reflecting the level of transformation pressure. In this respect, Belgium would seem to be comparable with the standard EU pattern in terms of enterprise dynamic, labour market dynamic and capacity for technological change. The low scores for change capability in the labour market imply that competence policy must

form an inherent part of transformation policy in a knowledge economy.

Van der Beken questions whether or not we have the courage to make hard choices in terms of our new industrial policy. The most important challenge lays in the need to evolve from a much fragmented instrumentarium into a more critical mass. Export promotion is also crucial for the development of spearhead sectors. The bundling of resources across the boundaries of policy domains is necessary to achieve a breakthrough.

A fault line on the way towards a knowledge economy

Bruno Tindemans, dean of the Flanders Business School, sees a fundamental difference between the current crisis and the depression of the 1930s. The challenge then was to reuse existing production capacity. The current crisis is a fault line on our way towards a knowledge economy. Today's challenge is therefore to find new production capacity for growth in the long term, on the basis of knowledge and global competition. This will inevitably result in increased speed, uncertainty and complexity, but this is something we must accept. In consequence, government policy will need to be intensive and focused, based on consensus and the concentration of available resources.

Important contextual challenges

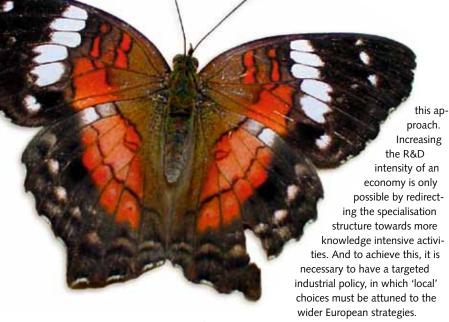
Leo Sleuwaegen, research director at the Vlerick Leuven Ghent Management School, analyses that our growth potential has declined as a result of the shift to a more service-based economy – where the levels of productivity are lower – and through the diminishing returns on capital intensification. New forms of growth need to be developed through the stimulation of economic creativity. The Schumpeterian vision⁸⁶ must lay at the basis of our search for new combinations. Ideally, this should occur indirectly, as a result of the creation of the right conditions. In this respect, the important contextual challenges we have to face are:

- the role of business density (and the presence of foreign companies), which can have a positive influence on enterpreneurship;
- 2) a population pyramid which will produce fewer and fewer entrepreneurs;
- 3) risk reluctance, an old problem resulting from our exaggerated respect for institutions, their culture and their stability (qualities which do not feature prominently on the wish-lists of risk-taking entrepreneurs).

Focus is the message

According to Sleuwaegen, the problem facing Flanders is the proper allocation of human capital: according to a trend study, the government is responsible for two-thirds of all job creation, not the globalised sectors. This defensive job creation increases the pressure on other sectors. This allocation problem is also the central core question of transformation policy. Increasing productivity in knowledge intensive sectors with know-how is the answer. We can no longer speak of policy for 'industry' or 'sectors', but rather of a policy aimed at activities. A transformation policy therefore means a more targeted search for foreign

> Afterthoughts



investment and the development of entrepreneurship in the right directions, instead of the scattered allocation of our resources.

Integrated industrial policy

Jan Larosse, policy adviser at the EWI Department, sketched the evolution of European industrial policy as a context for the development of Flemish industrial policy. Industrial policy is first and foremost accommodating or supportive: for standards and norms, for the EU state subsidy arrangements, for EU competition policy and for the general stimulation of entrepreneurship. In addition to this horizontal policy, there is also a more specific sectoral policy. This integrated industrial policy is closely linked with education policy, innovation policy, cluster policy, regional development policy and sustainable development policy.

Policy at the European level is also building on the realisation that an integrated industrial policy is necessary in order to effect the change to a knowledge economy, with the 3% objective being a good example of

The roles of the private sector and government

According to Alex Brabers, Executive Vice-President at GIMV, many existing companies wrongly assess the role of innovation for the future. New companies are needed in order to create 'disruptive' innovation. This type of innovation, supported by risk capital investors, is the real growth motor for employment, as witnessed by the classic examples of Silicon Valley and Boston in the United States. A good eco-system to take maximum advantage of risk capital is also necessary.

In Flanders there are currently too few strong projects with a sufficiently high economic return, notwithstanding the availability of sufficient resources. The government can help to change this situation by financing the incubation phase. The success factors for Flemish risk capital are the presence of R&D centres, tax incentives for private companies and matching state funding.

The future of industrial policy

Ivan Van de Cloot, chief economist at the Itinera Institute, also argues for a pragmatic approach. The lessons of the past must be interwoven with the necessary conditions which can lead to a successful industrial policy. Do we need new instruments? Or is it more a question of better policy coordination?

We are gradually evolving towards a 'soft' industrial policy, leaving behind the 'hard' approach of the past (import duties, tax benefits, production subsidies, etc.). Government input is important, providing that government is not too obviously present. Success stories, such as the Finnish Nokia company, often show that the state withdraws from the picture at an early stage.

Evolution

The roles of the different players (public, private, research) in the economic process are evolving. We are all facing new challenges. Europe has a number of strategic options available to accomodate structural change, including energy sufficiency through the use of renewable sources and a leading position in the fight against climate change based on a 'greener' industry. A well-considered and well-targeted re-allocation of resources is necessary if Flanders wishes to meet the social challenges of the future with a competitive economy.

Steven Schelfhout, Communication Team Jan Larosse, Enterprise and Innovation Division

- 83 http://www.vlaandereninactie.be
- http://www.ewi-vlaanderen.be/ewi/wat-doen-we/programmas-subsidies/sectoren-en-disciplines/staten-generaal-industrie
- Idea Consult conducted a pilot study for DG Enterprise in 2009: 'Measuring and benchmarking the Structural Adjustment of EU Industry'. The objective was to draw up an integrated analysis from a sectoral and national perspective. To achieve this, a model was used in which 'adjustment pressure' was converted via 'adjustment capacity' into 'adjustment behaviour'. The adjustment capacity is dependent upon: (1) the enterprise dynamic, (2) the labour dynamic, (3) technology and innovation. The three blocks demand an integrated approach. Mobility, export and R&D are important elements in this respect: only then is there a possibility of a multi-dimensional transformation.
- An entrepreneur must continue to innovate in order to lighten the burden on his cost structure and to be able to bring new and differentiable products onto the market. This allows the company to remain competitive or even to become more competitive than other companies in the sector.

About the EWI Focus workshops

Under the name EWI Focus, the Department of Economy, Science and Innovation organises open workshops on various occasions throughout the year, during which policy themes, challenges or results relating to the economy, science and innovation are examined and discussed.

EWI Focus stimulates debate and the exchange of knowledge as part of the process of policy preparation and evaluation. In this manner, we ensure that future policy decisions are well-founded, whilst at the same time offering a platform for new views and ideas.

The workshops are open to everyone who wishes to contribute their thoughts about the policies for tomorrow in the fields of the economy, science and innovation. If you would like to be kept informed about these workshops, please send a mail to info@ewi.vlaanderen.be.



We are currently about half-way through the twelfth Belgian presidency of the European Union. A good moment, perhaps, to draw up an interim report on the progress made so far? Or perhaps not? The fact is that, during the presidency, you have very little time to reflect on such matters. There is simply too much to do. Practical problems need to be overcome, deadlines must be met. Conferences, workshops, events and receptions follow each other in double-quick time.

But what if we try to take a bird's-eye view of the whole circus? Why shouldn't we take a moment to pause and think about what we are really doing? Why shouldn't I take a moment to pause and think about what I am really doing? (Let us assume that I am, indeed, speaking for myself). And, above all, what really are the ingredients for a successful presidency?

I have considered all these question seriously. And I quickly came to the conclusion that the success of a presidency is difficult to define, let alone measure. As research has shown, the results of a presidency are (to a large extent) dependent upon the expectations of the other member states.87 This, at least, is good news for us! The fall of the government and the holding of new elections just two weeks before the start of the presidency, and this in a country where the formation of a new government traditionally takes months ... The other member states probably expected little from our moment de gloire during the last six months of 2010.

But let's forget about expectations for just a moment. Instead, let's go in search of the true essence of the presidency.

What are we really doing?

If we look at the presidency objectively, in the first instance we try to establish how far the presiding country has been able to influence European policy. In academic circles, however, there are doubts about the extent to which any country is able to influence EU policy during the relatively short presidential period of six months. To support this pessimistic point of view, the academics often quote the famous words of the political analyst and former EU official, Jean-Louis Dewost, who once described the presidency as "responsabilité sans pouvoir" (responsibility without power).

Fortunately, other voices do not agree, and so there is no need to despair (yet). The political scientist Jonas Tallberg (to name but one) has stoutly defended exactly the opposite hypothesis! According to Tallberg every presidential country has three different methods at its disposal through which it can influence policy and events: 'agenda setting', 'agenda structuring' and 'agenda exclusion'.

'Agenda setting' is necessary for the bringing together of three key political elements: the recognition of the problem; the initial formulation of policy proposals, and the creation of a receptive climate for discussion. Through the combination of these elements, new points are eventually placed on the agenda.

With 'agenda structuring' Tallberg is referring to the possibilities open to the presidency to slow down or speed up procedures through its control of the process as a whole. The presidency can change the frequency with which meetings are held, so that this process is influenced in the direction the presidency wishes. Moreover, the presidency can also organise informal meeting which place the emphasis on specific presidential themes.

'Agenda exclusion' seeks to achieve precisely the opposite, by making sure that themes which are unpopular to the presidential nation are not debated – or are at least pushed into the background. The political analysts have long underestimate the value of this useful weapon, which was already neatly summarised in the 1960s as being "the power of non-decision making"

Ingredients for a successful presidency

When playing the subtle game of agenda setting, structuring and 'purifying', there is one pitfall which the presidential country must avoid at all costs: that it does not compromise the supposed neutrality of the presidency. A top Commission official once described this delicate balancing act as follows:

"This last sentence summarises the essence of the presidency. And so we now know what we need to do. With the necessary sense of realism, of course. As another official of the Commission once said: "A clever representative of the presidency has six key priorities and expects that four will be accepted. The Commission will actually accept three, but will then add one of its

Policy objectives as the only yardstick?

But is an EU presidency necessarily successful if you achieve all your policy objectives? Is this the only criteria? Maybe not. During the presidency, the presidential land wishes to focus the attention of its own people and its own political institutions on the European policy level. This will at least help to alleviate the main frustration felt by many European policy makers: the lack of interest (or negative interest) in European affairs. For many of Europe's citizens, the EU is a matter of little or no concern. It all seems so distant and remote: "over the hills and far away", as the Led Zeppelin song puts it. The presidency must try to make Europe more tangible and less impersonal, more meaningful and less complex. In short, there are challenges enough for us all!

Willem De Moor, Enterprise and Innovation Division

⁸⁷ Mazzucelli, C., (2008), Leadership in the European Union: Assessing the Significance of the Trio Council Presidency, http://www6.miami.edu/eucenter/publications/MazzucelliTrioLeadershipLong08edi.pdf



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