

# Going green

**Greening technologies to ensure standards of living are maintained while helping safeguard our future.**

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EUREKA is a European network for market-oriented R&D. Its aim is to strengthen European competitiveness by

promoting market-driven collaborative research and technological development. The EUREKA Initiative enables industry, universities and research institutes from 37 member countries and the EU to collaborate in a 'bottom-up' approach to developing and exploiting innovative technologies.

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## Small but influential

*German-born British economist E.F. Schumacher coined the phrase 'small is beautiful' with a series of influential books in the aftermath of the 1973 oil crisis. A key element of his argument was that our natural resources are finite and not renewable. Energy, climate change and sustainability are now even greater forces in the global economy as the whole world is waking up to the need to change attitudes and take positive steps to rectify the situation.*

*EUREKA is helping drive the changes needed with a bigger emphasis on green technologies close to the market – as reflected in this issue of EUREKA News – and by focusing increasingly on the small. The latter is highlighted by the endorsement of the new Cluster for Application and Technology Research in Europe on NanoElectronics (CATRENE) that takes over from the MEDEA+ microelectronics Cluster at the beginning of 2008.*

*CATRENE will build on the success of MEDEA+ and the previous EUREKA Cluster programmes JESSI and MEDEA in fostering the continued development of a dynamic European ecosystem able to compete at a global level. Like MEDEA+, it embraces all key actors in the value chain as well as involving industrial companies of all sizes, universities and other research institutions, supported by the public authorities. Recognising the increasing convergence of technology and applications, CATRENE will focus on the very small technologies required for large identified application markets.*

*In fact change is a consistent theme of EUREKA activities, with regular expansion in membership – our latest national information point is in the Former Yugoslav Republic of Macedonia (FYROM), no limitations in the type of technology supported and ever greater assistance to small and medium-sized companies (SMEs). We have high hopes for the success of the recently launched Eurostars Programme, which for the first time enables EUREKA to fund research directly in high-technology SMEs.*

*All this is being driven by a particularly close relationship between the EUREKA Secretariat in Brussels and the current EUREKA Chair held by Slovenia – a new, small and highly ambitious country with few natural resources apart from its people. Slovenia is also holding the EU presidency for the first half of 2008. And we welcome the appointment of Mojca Kucler Dolinar as the Slovenian Minister of Higher Education, Science and Technology. Her ministry is responsible for the Slovenian EUREKA Chair and I was delighted to recently learn that she will introduce the next edition of EUREKA News.*

*Despite more than 20 years of existence, the EUREKA name has tended to be hidden behind the success of our labelled projects. We are intending to change this by moving closer to our target audiences and communicating much more directly about the everyday benefits of our projects and the need for technical entrepreneurship to the citizens of our member countries.*

*For example, Portugal – the next EUREKA Chair – is keen to promote entrepreneurship in schools. The intention is to communicate the importance of enterprise to school-children and the role of technology in building business. A similar approach is being taken in the UK.*

*As our emphasis is on building business through technology, we are participating actively in the European Business Summit (EBS) in Brussels on 21 and 22 February 2008. The theme of this sixth edition is particularly relevant: 'Greening the Economy: new Energy for Business'. The event will focus on how Europe can turn the 'carbon challenge' into a business opportunity, giving new energy to growth and jobs.*

*In our recent position statement on the European Commission Green Paper on the new perspectives for the European Research Area (ERA), we also re-emphasised EUREKA's role as a key driver of ERA, especially in those technological fields where greater intergovernmental coordination and cooperation is needed. We look forward to more exchanges of ideas on those specific issues of the Green Paper that require special attention and warrant our direct involvement – especially the stronger role needed for business.*

*Moreover, EUREKA is not limited to ERA alone. We see an increasing need to widen our discussions and activities. Our Slovenian Chair is committed to further expansion and entrepreneurship drives in the new economies of eastern Europe. And we believe strongly that EUREKA should be seeking opportunities even further afield – we should not limit ourselves to Europe. We should go wherever new technologies take us.*



**Luuk Borg**



**Luuk Borg**  
Head of the EUREKA Secretariat

In EUREKA's position statement on the Commission Green Paper, we re-emphasised our role as a key driver of the ERA, where greater intergovernmental coordination and cooperation is needed.

Welcome to EUREKA News 79. This winter edition has been renamed 'the green issue' to concentrate on a subject that rarely escapes prominence in our national and international media. 'Going green' (pages 10 – 13) looks at how EUREKA is supporting projects that help improve our environment while maintaining our comfortable standards of living.

In the regular project showcase (pages 7 and 14) the LOGCHAIN E-W-TWO-WAY-NET project, which has drawn on the experience of European automotive giants, is increasing rail transportation of road vehicle industry supplies. And the EUREKA TOURISM Interoperability B2B project aims to make travel booking hassle-free with travel companies now able to send and receive secure information from one central platform, rather than contacting several parties through different channels and systems.

In the back-page viewpoint, EUREKA News speaks to Kari-Pekka Estola, former VP of Nokia and chairman of the EUREKA Advisory Committee (EAC), about business needs and the challenges public research programmes face today.

We hope you enjoy this first issue of 2008. Your questions and comments are welcome at [eureka.news@es.eureka.be](mailto:eureka.news@es.eureka.be).

## European Affairs

### Eurostars is right on track

EUREKA's Eurostars Programme saw its official launch on 2 October. Leading policymakers, public officers and industry experts gathered at the Résidence Palace in Brussels to witness this significant event in the evolution of the Programme. Keynote speakers included Science and Research Commissioner Janez Potočnik with interventions from EUREKA HLG Chairman Aleš Mihelič and Emmanuel Leprince of the European Federation of High-Tech SMEs. A forum enabled attendants to speak of the challenges facing them while exploring ideas on how to accelerate innovation to build a stronger knowledge-based European economy.



"Eurostars fills the gap that existed, using tools that were on our market but not used in this combination," said Potočnik. "The attraction of Eurostars is that it is designed specifically for SMEs involved in research," added Leprince. "The Commission tackles red tape, regulations, standards, etc. These are all important issues, but they are not the specific problems of SMEs."

The Programme offers funding to SMEs that invest at least 10% of their annual turnover in R&D. In addition to the Commission contribution of 100 million

euro, 22 EU Member States and five countries associated with the EU Seventh Framework Programme (FP7) will jointly contribute another 300 million euro, giving a total investment of 400 million euro over six years. It is hoped that this will, in turn, mobilise up to 400 million euro in additional private funding, resulting in an estimated 800 million euro package. The cut-off date for the first phase of applications is scheduled for 8 February 2008.

[www.eurostars-eureka.eu](http://www.eurostars-eureka.eu)

### EUREKA communicates its position on EU Green Paper

The EUREKA Secretariat recently communicated its response to the European Commission's Green Paper on the European Research Area (ERA). Through this position statement, EUREKA expressed its own views on the current status of the ERA, its role within the ERA and addressed specific issues which required special attention within the Green Paper. It emphasised the central role of business in R&D as a knowledge generator and user, the importance of greater interaction with intergovernmental initiatives and the necessity of fostering public-private partnerships.

<http://www.eureka.be/files/3669931>

## Clusters

### CATRENE replaces MEDEA+

MEDEA+, the EUREKA microelectronics Cluster, recently announced its successor, CATRENE. CATRENE recognises the increasing convergence of technology

and applications and will focus on large identified application markets, deriving from these the roadmap of required technologies.

"For more than a decade, the EUREKA JESSI, MEDEA and MEDEA+ Clusters made it possible for Europe's industry to reinforce its position in semiconductor process technology, manufacturing and applications, and to become a key supplier to markets such as telecommunications, consumer electronics and automotive electronics," said Jozef Cornu, chairman of MEDEA+ and designated chairman of CATRENE. "Nanoelectronics will offer enormous opportunities to those who are the first to master and bring to market new technologies and applications. We believe it will play a vital role in helping Europe's microelectronics industry to go from strength to strength."

[www.medeaplus.org](http://www.medeaplus.org)

### ITEA2 Symposium 2007

More than 450 visitors attended ITEA2's 2007 Symposium, held at the Berliner Congress Centre on 18 and 19 October. This time around, the event's theme focused on the use of ICT in dealing with societal changes.

It was also an opportunity to announce the winners of the ITEA Achievement Award for an outstanding contribution to European innovation. The Gold Award was handed over to the AMEC project, which focused on building embedded, intelligent, interactive, user-centred systems with seamless interfaces to back-end Internet services. The project consortium convincingly demonstrated

how, in the near future, people's lives in their connected homes will be eased by the support of an ambient 'ecology' of products, services and content which is adaptive and intuitive to use.

"Eco-systems of connected devices, content, applications and services still need to 'learn' how best to adapt and evolve and end-users must be able to shape these systems to meet their needs, defining the relationships and interactions between different devices. In our vision, people should ultimately be free to tailor their digital media and 'wired' experiences to their own unique situations," explained project leader, Gavin Proctor of Philips Design.

[www.itea2.org](http://www.itea2.org)

### Umbrellas

### Food for thought



Salzburg was the location for the first EUROAGRI+ strategic information and brokerage event under the newly appointed Romanian Chairmanship.

*Food – from Ideas to Successful Innovative Products* addressed food producers looking for R&D partners to develop innovative and successful new products, production processes or services for the food industry.

"We wanted to bring food producers, quality and marketing managers, certification and R&D specialists together because products must not only meet technical standards but also consumer acceptance," explained Adriana Macri, the Umbrella's Chairperson. The EUROAGRI+ Umbrella facilitates trans-

national business-oriented research and cooperative product development in the agriculture, food and feed sectors.

[www.euroagri.org](http://www.euroagri.org)

### First EUREKA TOURISM brokerage event

October 2007 saw the first EUREKA TOURISM brokerage event in Chiclana, southern Spain. European tourism and leisure organisations and technology providers were brought together for a working conference designed to create international collaborative R&D projects applied to the tourism sector. The event coincided with the opening of a new Technology Centre organised by Tecnotur, an active member of the EUREKA TOURISM consortium. It was also supported by the Council of Tourism, Trade and Sport of the Regional Ministry of Andalusia.

Topics under discussion included developing technologies for content, creativity and personal development, supporting public and private tourist companies and organisations, trust and security. It gave companies and organisations from the tourism and technology sectors the opportunity to establish contacts, present results and identify possibilities for collaboration.

[www.eurekatourism.eu](http://www.eurekatourism.eu)

### Past events

### EUREKA at INNOVA ENERGY

Using innovation to solve energy and climate issues was the main topic of discussion at the 2007 edition of INNOVA

ENERGY, which took place at the Brussels Expo centre in November. Representatives from EUREKA and its energy Cluster EUROGIA spoke of their desire to render energy supply safer, cleaner and less costly. "Finding solutions to the energy issues we are faced with, is the main objective of this Cluster," explained Guy Goyeau, EUROGIA's office director. "We need to optimise reserve use and rationalise distribution. Some of our project results focus on improving the technology for capturing and storing CO<sub>2</sub>, migrating towards a hydrogen economy".

EUREKA has participated in this event since 1992. A Belgian trade fair for the energy market, INNOVA ENERGY targets equipment manufacturers and companies who provide services to the energy industry. It also acts as a meeting place for European academics that work in the field of technological innovation on energy.

[www.innova-energy.com](http://www.innova-energy.com)

### European multimedia technology takes to the stand

EUREKA showcased its diverse multimedia and audiovisual projects at the Audiovisual Creative Fair (ACF) in November 2007 in Brussels. As well as a high-tech stand, the EUREKA Secretariat's director Luuk Borg told conference participants about how EUREKA and the recently-launched Eurostars Programme for research-performing SMEs help businesses to innovate. Peter Stansfield, who has let a number of EUREKA projects in the audiovisual and multimedia domain, also presented. He asked the audience if it realised the extent to which European talent is exploited in the major Hollywood

studios, dominating innovative multimedia technologies used for big screen blockbusters including Tomb Raider and the James Bond and Harry Potter series.



Started some 20 years ago, the ACF is the only audiovisual trade fair in Belgium. It covers all the key audiovisual areas and visitors can discover the latest technological innovations. The ACF has expanded over the years and currently brings together more than 170 exhibitors and attracts more than 16,000 visitors, creating national and international business and networking opportunities.

[www.acf.be](http://www.acf.be)

provide an excellent opportunity to exhibit the state-of-the art of telecommunications development towards integrated next-generation telecommunications and multimedia systems for seamless use across mobile and fixed networks.

[www.celtic-initiative.org](http://www.celtic-initiative.org)

### European Business Summit

EUREKA will be promoting its green projects at this year's European Business Summit (EBS), taking place in Brussels on 21 and 22 February 2008. During the event, this year entitled 'Greening the Economy', high-level speakers will talk in a series of plenary sessions, workshops and parallel sessions. They will look into how the EU can turn the 'carbon challenge' into business opportunities, giving new energy to growth and jobs.

[www.ebsummit.eu](http://www.ebsummit.eu)



### Forthcoming events

#### A showcase for telecommunications innovation

CELTIC, the EUREKA telecommunications Cluster, will organise its third official event on 27 and 28 February at the Marina Congress Centre in Helsinki, Finland.

In parallel to the workshop and conference sessions, CELTIC project teams will demonstrate their achievements, reveal demos and prototypes. The event will

## > Project showcase

# EUREKA helps increase rail transport in the auto industry

Partners in the 'Σ! 2458 LOGCHAIN E-W-TWO-WAY-NET' project have drawn on the experience of European automotive giants in a bid to increase the transport by rail of supplies for the road vehicle industry.

The European automotive industry continues to expand production facilities as car sales rise across Europe and the world. While this is good news for the European economy, it puts new pressure on freight transporters trying to keep up with automotive industry supply demands.

With lorries already major contributors to road congestion, LOGCHAIN partners from Germany and Austria are looking to help increase the use of rail transport in supplying the automotive industry. The project is based on case studies from European manufacturers Volkswagen, BMW and automotive supplier Magna and involves production sites in the Czech Republic, Slovakia and Spain, as well as suppliers in Germany and Austria.

### Solid research

"The case-study approach means we are not looking at a theoretical scenario but at real requirements of real auto manufacturers," says Peter Steinger of Transport Consult Austria (TCA), an SME with experience solving railway economic and logistics problems. "Basing this research on actual industry examples means our solutions are directly relevant to specific potential users."

Divided into several work packages, the project involved the creation of an extensive database and the elaboration of concept alternatives and ideas. Partners then came together for a workshop where the most promising concepts were selected.



Steinger says partners considered competitive limits and methodical restrictions in identifying inexpensive ways to get auto industry cargo off the road and onto trains. In the case of Austria, the project also considered new transit transport policy requirements.

The result is a rail-based, 'next generation', just-in-time logistical flow system that significantly reduces the burden placed by the automotive industry on European road infrastructure.

### Real results, real impacts

"Σ! 2458 LOGCHAIN E-W-TWO-WAY-NET emphasises the use of advanced information technologies to improve processes and links between automobile manufacturing partners and suppliers," says Steinger. The technical focus lies in the information systems used in rail-based systems and improving their integration into industrial supply chain management systems.

"We have developed a detailed implementation plan," says Steinger, "including an in-depth cost-benefit analysis addressing aspects of organisation, rail operations and application of the latest information technologies."

The final task for the project involves the transfer of similar solutions to other sites, regions, companies and industries. "We think we've shown that significant improvements can be made," says Steinger, "and we are currently in a position to deliver new ideas that will save both time and money in the automotive manufacturing industry, ultimately improving European competitiveness in a tough market."

### EUREKA for good business

Steinger describes Σ! 2458 LOGCHAIN E-W-TWO-WAY-NET as a crucial step for TCA. "For my company, this has been a key project. We have already benefited greatly through contacts and know-how exchange with different European partners, and we now believe this will lead to more work and new projects in the future."

Especially for SMEs, says Steinger, the advantage of EUREKA is the chance it gives partners to work as part of a team, developing high-quality networks and exploiting new research and business connections with other European organisations. "EUREKA enables SMEs to work together on a European level," he says, "and that is an opportunity not to be missed."

It is business people who are best placed to understand the markets, the opportunities and the strengths that Britain can use to develop and apply new technologies and ways to innovate.

# A major change in UK re

**Reorganisation of government research strategy seems set to increase UK participation in both EUREKA and the EU Framework Programme. The Sainsbury Review published in early October 2007 recommends that the newly-independent Technology Strategy Board (TSB) should take over support for EUREKA from the Department of Innovation, University and Skills (DIUS), and offer advice and guidance on the EU Seventh Framework Programme (FP7) to encourage more UK businesses to take advantage of the research funds available. Moreover it proposes the TSB should develop an international strategy that supports both the EUREKA and FP7 initiatives.**

A major change in UK government research strategy emerged with the new prime minister in mid-2007. Under Gordon Brown, the innovation part of the former Department of Trade and Industry (DTI) has been combined with the university section of the old Department of Education and Skills to form DIUS, reflecting the close match seen in the UK between innovation and university research.

The TSB itself had been an advisory board in the DTI but, in 2006, the decision was taken to make it an executive non-departmental body operating at arm's length from the government, a move completed in mid-2007. The intention was to make it easier for the TSB to operate across and give leadership to all the different government departments involved in innovation and to work more closely with UK research councils and devolved administrations.

## **Strong business focus important**

While separated from the business section of the old DTI, the TSB is very much business-led and supports companies carrying out research. "The new Technology Strategy Board is strongly business-focused for a reason," says UK

Innovation minister John Denham. "It is business people who are best placed to understand the markets, the opportunities and the strengths that Britain can use to develop and apply new technologies and ways to innovate."

The different parts of the UK have their own agencies to support regional development. The *raison d'être* of the TSB is to ensure all these organisations work closely together in a more coordinated approach.

Direct funding for the TSB was around 300 million euro this year, to invest in technology and innovation projects improving business competitiveness. However, the board works to lever more financial support and receives additional contributions from other organisations. Moreover, the UK government's comprehensive spending review announced in early October enhanced TSB spending to one billion euro over the next three years, although this includes contributions from research councils and regional development agencies (RDAs).

While EUREKA labelling is seen as a badge of quality in the UK, as all over Europe, it currently provides no funding advantage; UK participants have to obtain support

from other sources. EUREKA projects have been funded through the collaborative R&D call run by the TSB ([www.technologyprogramme.org.uk](http://www.technologyprogramme.org.uk)), and by the grant for R&D operated by the RDAs ([www.businesslink.gov.uk](http://www.businesslink.gov.uk)). But, in both cases, applicants have to take part in normal calls or assessment procedures for these funding mechanisms. However, all strategy is currently under review.

## **New international approach recommended**

Following a major review<sup>1</sup> of UK science and innovation policy carried out by former Science and Innovation Minister Lord Sainsbury, and published in October, the TSB is charged with taking on a leadership role to address the fragmented UK technology and innovation landscape.

"As the Review recognises, 90% of the world's scientific output is produced outside the UK," says Lord Sainsbury. "It therefore recommends that the TSB has more of an international focus, that it works closely with UK Trade & Investment (UKTI) to develop a strategy to enhance the UK's position as a place for investment by world-leading companies, and that it takes over support for the EUREKA programme from DIUS."

# search strategy

The UK is particularly interested also in the EUREKA-led Eurostars Programme but because its launch coincided with the Sainsbury review as well as the reorganisation of the DTI and the creation of the TSB, more time is required to reflect on the review and its outcome and to reformulate the TSB's international

strategy. However, the TSB strongly supports the objectives of Eurostars and is actively discussing with partner organisations the scope for the UK to join at an early stage.

<sup>1</sup> *The race to the top: A review of Government's science and innovation policies; by Lord Sainsbury of Turville, published 5 October 2007*

## The Sainsbury Review

The Sainsbury Review points out that the UK has had a very small participation in EUREKA, with no specific funds available to support the Initiative despite its popularity with SMEs. A major deterrent has been the double bureaucracy in applying separately for labelling and then funding under national schemes. Moreover, the UK is missing out on potential EU funding through the Eurostars Programme and through constraints on participating in Joint Technology Initiatives in electronics under FP7.

Lord Sainsbury therefore makes two specific recommendations for action to increase innovation opportunities for British businesses and stimulate more British collaboration with European R&D partners:

1. The **TSB** should take over support for the EUREKA programme from DIUS; and
2. The **TSB** should develop an international strategy that considers support for the European EUREKA programme and FP7 initiatives.

## Contacting EUREKA in the UK

EUREKA representation in the UK is split between **DIUS** and the **TSB**:

- Policy is the responsibility of **DIUS**, with new High Level Representative (HLR) David Rawlins; and
- Operations are the responsibility of the **TSB**, with new National Project Coordinator (NPC) Pete Munday.

The email contact point for EUREKA in the UK is: [EurekaUKNPC@tsb.gov.uk](mailto:EurekaUKNPC@tsb.gov.uk).



# Going green

EUREKA project participants are greening technologies – from energy to tourism to transport – to ensure European consumers can maintain their standard of living while helping safeguard our future.

World energy demand will make it necessary to rely on fossil fuels in the short and mid-term future. As alternative sources of energy have not yet reached technological maturity to be deployed widely, the energy industry will need to concentrate on efficiency and mitigate emissions.

Gabriel Marquette, Chairman of EUROGIA



Energy-saving light bulbs, recycling bottles and paper and choosing trains and buses as an alternative to private cars and airplanes. European consumers, it seems, are gradually going green. EUREKA, too, is supporting entrepreneurs across Europe who are working together to make technologies safer, cleaner and more efficient, offering sustainable solutions to help maintain standards of living while protecting the environment for future generations.

Hand-in-hand with a high standard of living and more disposable income, is a need or desire to travel more, to heat our homes more in the winter – or air-condition them in the warmer months. The habits of today’s fast-track society are having a worrying effect on our surroundings. It is clear that the demands of today’s society cannot be met by alternative new energies alone. Europe must also develop what it already has, but make it cleaner, safer and cost-efficient.

“World energy demand will make it necessary to rely on fossil fuels in the short and mid-term future. As alternative sources of energy have not yet reached technological maturity, the energy industry will need to concentrate on efficiency and mitigate emissions,” maintains Gabriel Marquette, Chairman of EUROGIA, EUREKA’s energy Cluster ([www.eurogia.com](http://www.eurogia.com)).

### Conventional versus renewable energy



According to the World Energy Outlook (WEO) 2007, published by the International Energy Agency (IEA) in November, without new government measures, global primary

energy demand will increase by 53% between now and 2030. Over 70% of this increase comes from developing countries, led by China and India. “WEO 2006 revealed that the energy future we are facing today is dirty, insecure and expensive. But it also showed how new government policies can create an alternative energy future which is clean, clever and competitive,” emphasised Claude Mandil, executive director of the IEA.

Coal-fired power plants are easier to run, cheaper and faster to build than their biomass counterpart. Energy producers are acknowledging that they need the technology to produce cleaner and more competitive fossil fuels. Capturing and storing carbon dioxide (CO<sub>2</sub>) has allowed



### EUREKA Lillehammer Award: rewarding green technology

The Lillehammer Award was established in 1994 by the EUREKA Norwegian Chairmanship, in the town which name it bears. Every year, national EUREKA offices nominate candidate projects and a jury of international experts selects the winner.

“The award recognises and rewards the vision and commitment required to transform an environmentally-friendly idea into a successful product. We are proud to have instigated this award as it acknowledges contributions made to improve Europe’s environment, developing sustainable solutions to waste and pollution problems,” says Dag Terje Andersen, Norwegian minister for industry. “Most of all, rewarding businesses involved in these kinds of projects is crucial to promoting Europe’s competitiveness in the environmental sector”.



for more sustainable coal-fired power plants. “EUROGIA’s COSMOS project is developing scientific and technical solutions to safely store CO<sub>2</sub> in deep suitable geological sites, saline aquifers or depleted O&G reservoirs,” explains Marquette. One important element of the project was to develop a type of cement that withstands the acid gas which can potentially destroy conventional cement normally used to seal the injection wells. The results provide the necessary long-term isolation for the wells needed in zero-emission power plants.

EUROGIA’s partnership with French competitiveness cluster Tenerrdis ([www.tenerrdis.fr](http://www.tenerrdis.fr)), has widened its scope and increased the potential for renewable energy projects. Calls for proposals have been opened and one project has already been labeled, while others are being evaluated. “Thanks to technology developers and suppliers involved in primary energy production and transport, we are creating innovative products and processes for conventional energies as well as alternative sources. Our objective is to respond to the two legitimate imperatives of sustainability and growth of energy consumption by providing technologies and processes to efficiently produce energy from all available resources in the energy mix,” adds Marquette.

### Intermodal transport

Globalisation and EU enlargement have created new challenges for European transport. Freight transport contributes to the economy but causes congestion, noise, pollution and accidents. It also depends on fossil fuels. Shifting traffic from roads to rail and waterways is now seen as a priority. EUREKA Umbrella

LOGCHAIN+ ([www.logchain.eureka.be](http://www.logchain.eureka.be)) sees intermodal transport as a concept close to its heart. “By integrating innovative techniques, advanced logistic systems, efficient operating procedures, and novel IT applications, we are helping to shift freight traffic from Europe’s roads and striking a balance between land, rail and sea,” says LOGCHAIN+ Chairman Felix Fiseni. “We are helping redesign long-distance freight transport to make it more efficient, customer-oriented and environmentally-friendly,” Fiseni adds.



One of the fundamental problems in getting more freight onto trains is the difficulty of arranging the movement of goods. Project Σ! 3161 LOGCHAIN+ E\_RAILMAP, involving participants from

the Czech Republic, Germany and Austria, has opened the way for more efficient transport and increased the attractiveness of rail versus road. Petr Kroca, from main participant JERID, explains that “nowadays, on the European market, it is possible to obtain only very general electronic maps or several types of wall rail maps. Conventional wall maps can only provide for basic orientation within the network”. The idea was to develop a powerful tool that collects information on rail wagon positions, using conventional methods of railway system data gathering and innovative telematics technologies. “We have created a real and profitable software product, with many satisfied customers, now numbering 200 in 12 countries all over Europe. Our maps include the positions of all railway stations and additional tools for tracking objects such as individual wagons, trains and locomotives,” adds Kroca.

### Giving back to the environment

Travel and more importantly tourism affects some of the most beautiful yet fragile European regions. EUREKA project Σ! 2408 ARCTIC TOURISM set out to study the possibilities for sustainable tourism. “We tried to encourage people not only to



prevent land degeneration but also recover damage already done and to generate revenue,” explains Stig Hirsbak from Danish project participant Ramboll. It focused on four locations: two in Greenland, and one each in Iceland and Norway. “At present, visitors tend to visit the same scenic sites, causing physical erosion,” he adds.

The project has brought hope to the North Arctic region which relies on just a few economic activities, making it vulnerable to unemployment. Each location had its own local project groups including local people, tour operators, government and tourism agencies. They examined what would make the locations more attractive to visitors and looked at the necessary steps to protect the region and its wildlife.

Research finally led to developing common guidelines for managing the delicate balance between sustaining the economy, culture and the environment. “If you can do all this, you can reduce dependency on the social system by having new sources of income, and at the same time you have cleaned up nature,” concludes Hirsbak.

### **Managing and preserving our water**

Protecting our surroundings, and more importantly, our water resources is a growing concern among most Europeans. Groundwater resource protection zones (GRPZ) are the underlying principle behind water protection and they are constantly under stress from human activity and long-term changes in nature. Σ! 2721 EUROENVIRON MADWICA developed a new and powerful software tool to manage GRPZ, thanks to the support from

EUROENVIRON ([www.euroenviron.com](http://www.euroenviron.com)), EUREKA’s Umbrella focusing on solutions to some of Europe’s major environmental problems.

“Water cycle is a dynamic system,” explains Jiri Sima from Czech project participant Aquatest. “Many factors can give rise to changes in both groundwater quality and quantity. Unfortunately groundwater deterioration is usually irreversible, and this is especially disturbing when it comes to unique resources such as curative mineral and thermal water.”



The system gathers information on topography, land use, geological structures, groundwater flow and hydraulics, and pollution sources. It can be used to basically describe natural conditions, assess groundwater resources and their vulnerability to pollution. We focused on developing a universally-applicable decision support system (DSS),” adds Sima. There are no language restrictions. Output is interactive and multi-lingual. Winner of the 2006, EUREKA Lillehammer award, MADWICA is a prime example of how EUREKA delivers real benefits to both commercial enterprises and society at large.

### **Changing everyday habits can make a difference**

- Recycle. Making drinks cans from recycled materials uses only 5% of the energy required for new aluminium cans. And recycling one plastic bottle saves enough energy to power a 60 watt light bulb.
- Think before you print. One bank has cut more than half its paper use in 10 years thanks to computers, saving 24,000 trees a year.
- Don't leave appliances on standby. Up to 10% of household electricity used is due to standby, creating 4 million tonnes of excess carbon.
- Use low-energy light bulbs. They last up to twelve times longer and use 75% less energy.
- Buy a hybrid car. They do more miles to the litre and emit less carbon than traditionally powered vehicles.
- Holiday by train or offset the carbon you generate through flying by supporting green projects. Calculate your carbon footprint by visiting [www.carbonfootprint.eu](http://www.carbonfootprint.eu)

## > Project showcase

### Taking the hassle out of travel



**Arriving at a hotel to find the booking has gone astray could become a thing of the past, thanks to a new IT system being developed by a Spanish-Russian partnership.**

A bride-to-be from Seville books a honeymoon in Moscow through her local travel agent but arrives in the Russian capital with her new husband to find there is no suite reserved under her name.

The case is all too common as phonecalls, faxes and other paperwork are exchanged between different companies – often using different booking systems – and increasingly across borders.

One Spanish-Russian partnership has a solution to cut mistakes – and the ensuing disputes between travel companies, reducing booking time and costs and resulting in more satisfied travellers. Doc on Time – a Spanish specialist in electronic transactions, whose main investors include Invernostroa (the industrial holdings unit of savings bank SA Nostra Caixa de Balears) and Spanish bank Caja Navarra – has teamed with Russia's certifying centre INTRUST to develop an IT system for electronically exchanging documents between travel companies.

"Industry was looking for a system which gives an accurate picture of information in real time – from the booking through to a guest's stay through to the subsequent invoicing and the sharing out of commission among the various agents," says Fernando Vega, general manager at Doc on Time.

The Spain-based Umbrella EUREKATOURISM ([www.eurekatourism.eu](http://www.eurekatourism.eu)) suggested Doc on Time use its contacts in Russia to form a EUREKA partnership to investigate the solution.

Doc on Time and its partners realised that at the moment, when mistakes in bookings are made, it can be a matter of days or weeks before the mistake is discovered. Lots of manual processes and paperwork slow down business, take up manpower and involve archiving paperwork which requires space.

Under the new system, travel companies will be able to send and receive secure information from a central platform, rather than contacting several parties through different channels and systems. Electronic signatures, which Doc on Time has successfully implemented in Spain, will be used to allow parties to contract suppliers' services and protect and prove the identity of those using the platform, thus improving security.

Doc on Time and INTRUST are currently modelling the information which companies need to share with one another and will then write the code for the platform. The next stage is for the two companies to exchange information between the European Union and Russia, two regions with different laws governing identity and certification. Researchers at Russia's State Social University are also helping tackle the legal and technical issues involved in electronically exchanging business documents.

"Our idea is not just to create a standard for the European Union but also at a world level. That's why we involved Russia in the project," says Vega.

Doc on Time intends to pilot the system among four or five companies in June 2008, putting the platform on the market in the last quarter of 2008. The challenge will be selling the platform to a sector which has tended to be slow in the take-up of new technologies, says EUREKATOURISM president Pedro Anton, who is also head of technology for SEGITUR, the State Association for the Management of Tourism Information in Spain, which holds the chairmanship and operates the secretariat of EUREKATOURISM.

"In the tourism sector there are a lot of small and medium-sized companies and the mentality is that technology is a cost, not an investment," he says.

The project's partners, though, have good contacts within industry, which have already reacted positively to the idea. In Spain, consulting, technology and outsourcing specialist Accenture is also working with Doc on Time on the project and has extensive experience of working with airlines, hotels chains and travel agencies. The International Air Travel Association (IATA), which developed a standard for billing and payment of airline tickets sold by travel agents, has already expressed interest in buying such a service.

Ultimately, some simple mathematics may convince industry of the platform's benefits. The study 'High Performance' by Accenture found the use of electronic processes instead of paper processes could save companies between 30 and 70 percent.

Cost cutting and efficiency improvements are also good news for the average traveller. "With the platform, a guest will have the security of knowing when they arrive at their destination everything will be in keeping with their order – any problems will already have been sorted out," says Vega.

# Business often does know best – and should be encouraged to show it

**Kari-Pekka Estola, chairman of the EUREKA Advisory Committee (EAC), believes strongly in the need for constructive cooperation between private and public authority partners in bottom-up public research programmes – and the need for business to take the lead once the ground rules have been established, as emphasised by the success of the major EUREKA Clusters. Estola has been chairman of the EAC since April 2006. This group, which consists of senior European industrial and scientific representatives, provides a structural dialogue between project participants and representatives of EUREKA, and advises on the activities and policy of the Initiative.**

## ***What do you see as the main challenges for public research programmes?***

A key need is to build a constructive environment where public authorities and companies speak the same language, and it is clear what is being put on the table by both sides. Sometimes, public authorities and companies appear to understand each other but their expectations are not the same, especially where those involved are not yet familiar enough with each other. This can be a problem politically, especially if promises are not being kept.

In addition, companies need to know where they are within a reasonable time frame – for example, it is still not clear what exactly is being offered by the Joint Technology Initiatives (JTIs), and when something will actually start.

## ***How can public organisations understand business needs and wants better?***

This is often a question of the instruments that could be used, which are being used and those that are successful. The way the EUREKA information and communications technology (ICT) Clusters built and launched their programmes demonstrates the best approach that public authorities can take and how they involved both companies and their customers from the beginning. However, it is crucial that, once such frameworks are operational,

the public authorities step back and let businesses run them.

The ICT Clusters are an important achievement, offering the strategies and constructive environments needed in areas of crucial importance to the European economy. Regular programme statements, good sharing of information and inputs from many sources have all contributed to their success.

Not only should people come to the table with the right 'win-win' attitude, but good dialogue should be promoted with clear decisions that are then followed.

## ***How can SMEs benefit from participation in public programmes?***

The statistics show Clusters are now the biggest part of EUREKA and that individual initiatives have been dropping. SMEs can benefit from participating in Clusters as

it enables them to see more of the value chain in their industries – and particularly how the end customer operates – rather than just interfacing with their immediate client, often a large organisation.

Initiatives such as the Eurostars Programme offer a different type of approach, focused directly on SMEs. We must make every effort to ensure that this programme is successful by involving all EUREKA member countries and ensuring that there is a positive spirit circulating.

## ***What do you see as the key issues facing EUREKA itself?***

A major issue is how to encourage new Clusters. These bottom-up initiatives offer centres of expertise that fit well in the EUREKA strategy and can work effectively. The question now perhaps is how can we extend this approach to nourish new areas? →

EUREKA itself has an important continuing role. However, it is a brand that needs more brand building in a period of rapid change, particularly political change. Moreover, we need to take time to look at some of the underlying issues that are coming to the fore in day-to-day operations.

Kari-Pekka Estola



Why for example are there no Clusters in biotechnology? Is the business environment or are the companies so different from the ICT sector where Clusters such as ITEA 2 or MEDEA+ have been doing so well?

We need to understand why Clusters work in some areas but not in others which have more individual ways of working. If Clusters do not fit, then these sectors will miss out on the 'virtuous circles' found in the ICT area, where MEDEA and ITEA are stronger and stronger every year.

**How can public programmes do better overall?**

It is possible there are now too many initiatives underway – from the Framework Programme through JTI's to regional developments. From the SME point of view, it is not obvious which initiatives are going to be successful and in which they should be taking part. This is equally a problem for

big companies, where usually a handful of people take part in all the initiatives and are now becoming overloaded.

Is it easier to start a new initiative rather than to carry it out? I am not saying there should be no new initiatives but any new programme needs to have a strong strategy behind it and must be implemented and executed within a clear timeframe – it should not be open ended. However this may be easier said than done as there are now so many different parties involved at both European and global levels.

Certainly EUREKA itself has an important continuing role. However, it is a brand that needs more brand building in a period of rapid change, particularly political change. Moreover, we need to take time to look at some of the underlying issues that are coming to the fore in day-to-day operations.

## Who is Kari-Pekka Estola?

This Finnish computer science expert brings a wide range of experience in academia, big and small companies, and public research programmes to his role as EAC chairman. Estola has been a professor and director of the Electronics Laboratory at the Technical Research Centre of Finland and was until recently Vice President and head of Technology Exploration at mobile phone manufacturer Nokia's research centre. He has participated in both the MEDEA+ microelectronics and ITEA embedded software Clusters, and has been a member of the Bureau of the European Research Advisory Board (EURAB) and the IST Advisory Group (ISTAG). He now operates as a 'business angel', providing private equity for technological SMEs.

