29 October 2013

2ND DAY SESSION 10 Collaboration in Danube: Creating an Attractive Environment To Facilitate Investments

Chair & Moderator: Jože Gričar, Chair Department of Informatics, University of Maribor, Slovenia
Relevance of the Cross-border eCollaboration in the Danube eRegion

Speakers:

Christian Kittl, Managing Director, Evolaris Next Level, Graz, Austria & Mobile Living Lab, & Steering Committee, ALADIN – ALpe Adria Danube Universities Initiative, Austria

Maurizio Fermeglia, Rector University of Trieste, Italy

Jani Recer, Assistant Director for Informatics University Medical Centre Ljubljana, Slovenia
eHealth Collaboration in Danube Region

Tomaž Breznik, Presales Specialist, SAP, Slovenia
Tourism Insight @ SAP HANA

Edi Kraus, Councillor for Economic Activities Municipality of Trieste & Director General, Julon Ljubljana d.d. & Board of Directors Member, Aquafil S.p.A. Trieste, Italy
Collaboration in Danube:
Creating an Attractive Environment to Facilitate Investments

JOZE GRIČAR, Chair Department of Informatics, University of Maribor, Slovenia, the chair and moderator of the session, welcomed the audience and briefly introduced the panellists.

Relevance of the Cross-border eCollaboration in the Danube eRegion

The session should be considered as a brainstorming leading to some ideas about possible joint actions, joint – working together, and actions, not just concepts.

The “Danube Region” is an important message to the citizens, to the population in the region, because all of a sudden people are noticing that there is an effort, a EU-level support to the region of 14 countries that encourages to collaborate.

During the first conference of the Danube Region Strategy organized by the European Commission in Ulm, Germany, in 2011, someone said: The Danube region used to be a connecting river in Europe. Then, for a long time, the Danube was a dividing river, and now the Danube is becoming a connecting river again. It’s something about a river and its role in bringing populations and nations together.

It is a blessing for the region, but it is also about neighbours working together. A lot of research has been done in Sweden and Finland, numerous dissertations have been published about what does it mean for the regions to come together in a new setting. What used to be the end of the world, a border, all of a sudden is becoming a central point of a new type of a hub.

When talking about cross-border, it is about any type of borders. There are numerous ones. This session would like to address some of the issues where we believe something has to be done. There are too many silos in countries and institutions.

It is also about eCollaboration. It is about collaboration and working together, about taking and acting together. Of course we have in mind collaboration using technology. During the session some ideas will be shared about what is going on in the region and what may happen in the region. What are the activities the attendees would like to engage and work together?

We all have regions, wherever we go there are regions, there are neighbours. The Danube Region and Baltic Region most probably have a lot in common. How could these two regions collaborate. How could they increase the exchange of goods and people -- more business, more tourism, better life, for the people in both regions.

This session is an expression of an invitation to collaborate and work together -- cross border, using latest and best technologies, engaging the right people, those who are the doers, those who are the optimists, those who believe we can do much more than we did in the past.
CHRISTIAN KITTL, Managing Director, Evolaris Next Level, Graz, Austria & Mobile Living Lab, & Steering Committee, ALADIN – ALpe Adria Danube Universities Initiative, Austria, presented a great initiative which has been established more than a decade ago by a small group of universities and which grew into a large network now being used to create new projects.

ALADIN – The ALpe Adria Danube Universities Initiative

The Danube region reaches from Lower Germany down to the Black Sea. There are many countries involved. Italy is not official partner in the Danube region, but this doesn’t prevent collaborations with Italian partners – or with partners from outside the Danube macro region.

Within this Danube macro region, the European Parliament has asked the European Commission to develop a strategy, a macro-regional development plan, similar to the one that was first developed for the Baltic Sea area.

The ALADIN network represents 19 universities and LivingLabs in the Danube Region. Many of the universities and partners also run a LivingLab, which is an instrument that was introduced in 2006 during the Finnish EU Presidency. It bases on a work that has been published by Henry Chesbrough in 2003, which aims at involving users and potential users early on in the creation processes of services and new products.

ALADIN tries to apply this concept in the region and forms a network of universities and Living Labs involving multiple stakeholders. The initial core group came from Graz, Trieste, Rieka and Maribor. It grew substantially, and nowadays there are also partners from outside of the region, e.g., from Dublin, partners form the US and even from Hong Kong. These partners form the extended ALADIN group.

Europe is characterized by a very diverse landscape of innovation activity. The regions that are most successful in innovation are in the Scandinavian region, the Baltic Sea area, or in Lower Germany and in the west of the Danube region. The further east one comes, the less successful are the regions in developing innovative products and services. The task of ALADIN is to use the experiences that have been made in the more advanced regions to assist and help develop those regions where the innovation is under a certain level.

Regarding the strategy for the Danube region, the EU strategy consists of a strategy plan and an action plan. The Action Plan for the EU Strategy for the Danube Region is based upon 4 pillars. Different actions are assigned to each pillar. The following three actions are those ALADIN can support most: To develop the Knowledge Society through research, education and information technologies; to support the competitiveness of enterprises, including cluster development; and to step up institutional capacity and cooperation.

ALADIN wants to apply a methodology, known as the Digital Business Ecosystem Model. This means that there are some catalysts or facilitators that help to build regional economic clusters, which would than on their part connect with clusters in other parts of the region to learn from these experiences. It also means to involve strongly the SMEs, because in many EU funded projects SMEs have been underrepresented and the EC is tying to increase the level of SME involvement for Horizon 2020, the upcoming research programme. It seems to be a suitable model and goes very well with the LivingLab approach, where you have the users, science, industry and where you also have the regional policy makers in order to get things going.

At the ICT2013 event in Vilnius, which takes place on 6 to 8 November, the ALADIN initiative will propose a project which aims at developing such a Digital Business Ecosystem in the Danube region and connecting it to the macro region of the Baltic Sea Area. This was
the region where the first macro region strategy was developed by the EC. Moreover, the region is far ahead compared to the Danube region when it comes to certain eServices, such as eInvoicing. The idea is to create a local network of actors and then again connect to the Baltic Sea area to lean from these experiences. The intention is to submit a proposal in one of the early Horizon2020 calls.

Another event is the Danube Business Forum which will take place on November 14 -15 2013 in Vienna. It will focus on issues of the Danube region, in particular on the two specific topics eInvoicing and eHealth.

MAURIZIO FERMEGLIA, Rector University of Trieste, Italy, delivered a great talk focussing on the four terms: barriers, perspective, research and higher education.

Universities are organized in disciplines (even though faculties no longer exist in Italy), and people still say, they are going to a faculty. These are barriers. The world is not expecting experts in disciplines; the world is expecting experts in transversal multidisciplinary fields: Energy, water, environment, food, health and many others. Most of these themes that will be very important for the world are multidisciplinary.

We are talking about creating an attractive environment to facilitate investment.

Horizon 2020 is strongly related to investment of money in Europe in the next 7 years. Societal challenges will be the main focus of Horizon 2020 – and here, one can find exactly the same themes mentioned above: Climate actions, integrated transport, secure and efficient energy, food, water, health. This is where one part of the money will go to.

Another part of the money will go to excellence science. We need to be prepared to have very good research centres in this area and very good integration of research with higher education. This is the second message. The third message is industrial leadership; and if looking at industrial leadership, there is something that is brand-new in the EU politics: it is facilitate access to risk finance. This is of highest importance right now.

And then there are the key enabling technologies. The paradigm is totally reversed with respect of what it has been several years ago: where we focused on technologies and then research was asked to apply their technology to solve some of the problems. Here we start with a problem and we have key enabling technologies that may be used together -- ICT, nanotechnologies, space, advanced materials and manufacturing. We have to think multidisciplinary, otherwise we are lost.

Industrial leadership is taking about 30 percent of the budget, and thereof most will be invested in leadership in enabling industrial technologies. But also in risk finance, which has proofed to be one of the limiting steps in this area in Europe.

In the context of financing key enabling technologies, ICT and nanotechnology will play a very important role. How to combine ICT and nanotech, and perhaps biotechnology, and photonics and microelectronics. If you really want to say something new in this arena, this could be one possibility.

Trieste has a high density of research, there are about 30 researchers over 1000 active citizens. Trieste University together with SISSA, the second university in Trieste, is surrounded by several important entities producing high quality science. This is a perfect environment for producing research and transferring research to the industry. Trieste is also very active in collaborations with universities and industries located in Central-Eastern Europe. This is a solid base on which to create a new perspective.
Nanothech and ICT will cover most of the investments of the EU in the coming years. A Technology vision 2020 shows among the enabling technologies for science and engineering technology, computational technologies is playing an important role, and computation and molecular science is placed as one of the first enabling technologies for this area. Why computation and molecular science that used to be something typical of a theoretical physicist or a theoretical chemist? Because of nanotechnology and particularly because theory modelling and simulation is playing an essential role in designing new materials, new tools, new drugs and carriers for nanomedicine. When talking about nanotechnology we have in mind several different sectors, from medicine to ICT, energy, material science, food, instruments etc. It is obvious how multidisciplinary and how may fields we can tackle if we have basic science and basic tools in this particular sector.

The National Nanotechnology Initiative Investments (US) shows an increase of investments in all sub-sectors of nanotechnology. The evolution of the National Nanotechnology Initiative Investments shows large percentage increases for nano-manufacturing and for environment, health, and safety. Guiding nano-manufacturing, investigating the effect of nanotechnology and nanomedicine on health and environment will be key for Europe in the next years.

The market is following more or less the same trend. The market evolution 2006 to 2015 shows a particularly impressive evolution for healthcare in terms of market exploitation, even though all the other fields will grow significantly.

It is interesting to notice that Japan is concentrating on nanotech for materials. On the other hand, South Korea and China are following more or less the same trend. A different trend is in the US, which puts less stress on nanomaterials and but focuses on nanomedicine, life science and environment. Europe should do the same and concentrate on life science and environmental aspects.

The passive nanostructures nanotechnology area is passed away. There is nothing really new to discover in this field. As well as in the active nanostructures, where the nanostructure is moving and adapting to the environment. What we can expect to have are nanosystems, 3D networking and new hierarchical architectures, robotic and molecular nanosystems, molecular devices “by design”, atomic design. And at the end, we will have totally converging technologies where nano-bio-info from nanoscale will converge. There will be no more difference between ICT and nanotech. It will be a totally new kind of convergence that will appear after 2020 – if it will.

The US Materials Genome Initiative is about developing a material’s innovation infrastructure, through advances in and integration of computational tools, experimental tools, digital data and informatics. Its objective is to increase the pace of developing advanced materials for energy, security, and human welfare with.

The power of simulation: The molecular complexity is the number of time steps multiplied with the number of atoms simulated in one day. A simple atom simulation for a simple monoatomic fluid is the number of atoms that can be simulated for 10ns in one day. This will grow exponentially in the future.

This is done by Multiscale Molecular Modeling, which means passing messages from one scale to another. Passing information to an atomistic level when we have atoms, passing information to the mesoscale level when we have groups of atoms, passing information to the typical process engineering level, which is the final element simulation where we have plenty of codes, ready to be run.
However, big data together with simulation is not enough. It needs continuously to be compared with experimental data.

Money invested in research will give results. Results of a research is not giving money. It is through innovation the results of the research will provide money. Innovation is discontinuity in knowledge -- generating an advance of productivity.

We have to virtually re-pave the Gemina roman road, using technology, science and high education.

**JANI RECER, Assistant Director for Informatics University Medical Centre Ljubljana, Slovenia, provided some very interesting insights into**

**eHealth Collaboration in Danube Region**

Digital Agenda for Europe aims at helping European citizens and businesses to get the most out of digital technologies. It is the first of seven initiatives under Europe 2020, which is the EU strategy to deliver smart, sustainable and inclusive growth.

With respect to healthcare, there is a directive in place, the Directive on the application of patients' rights in cross-border healthcare. It aims to enhance interoperability between electronic health systems, continuity of care and to ensure access to safe and quality healthcare. The EU eHealth policy refers to tools and services using ICT that can improve prevention, diagnosis, treatment, monitoring and management. The goals we would like to achieve through eHealth policy are 1) to improve citizens health by making lifesaving information available between countries when necessary using eHealth tools; 2) to increase healthcare quality and access by making eHealth part of the health policy and the coordinating countries’ political, financial and technical strategies; 3) to make eHealth tools more effective, user-friendly and widely accepted by involving professionals and patients in strategy design and implementation.

In the Danube Region Forum that we establish we have initiatives that are ideas with proof-of-concept, they are called prototypes. Among the large list of published prototypes, the following three are most promising ones: The first one is Collaboration between Emergency Services along boarders.

The second prototype is Drug Event Reporting. In this prototype three hospitals are collaborating: the University Medical Centre Ljubljana, the Cattinara hospital in Trieste and the University Hospital in Graz. Drug Event Reporting with mobile information solution is about medication errors in hospitals. The overall goal of the cross-border project is to achieve significant reduction in medication errors through an advanced and easy-to-use reporting, analysing and feedback tool. Today, only up to 10 percent of incidents are being reported according to international statistics. The developed prototype enables medical staff to briefly report medication problems with their mobile devices, in addition to a more detailed format available on standard PCs.

The third prototype is a Regional Arthroplasty Register. An increasing number of hip and knee replacements demands a careful follow-up of success of implants and techniques used. Expected cross-border impacts is to establish the registry which comprises national and regional registries in the region, with the goal to provide information on the clinical performance of a particular type of orthopaedic prosthesis.
The intention is to submit a proposal for funding of the prototypes in the framework of the Horizon 2020 initiative, which is the financial instrument for implementing the Innovation Union and securing Europe’s global competitiveness.

**TOMAŽ BREZNIK, Presales Specialist, SAP, Slovenia,** presented a powerful analytic tool that allows municipalities to get a deeper understanding of their tourism activities

**Tourism Insight @ SAP HANA**

The initial motivation was to help the business environment, either the public or the private sector, to run their business more effectively in the tourism industry. A prototype, called Tourism Insight, has been developed.

Tourism is one of the most important industries for any country due to its high economic potential. At the same time, tourism is very complex.

There are countries which are doing better than others. Generally, a ranking is done in Tourism Reports, and the most attractive countries are those with a very friendly hotel environment, good infrastructure and something to offer to the tourists. It is important to understand how good a region is working today, what is done wrong and what needs to be improved.

A typical challenge in tourism is that the institutions responsible for tourism don’t have enough insight in the information. There are a lot of data produced by tourists, but they don’t know how to use them in order to optimise tourist’s offerings and pricing. Competitiveness in terms of offerings is highly important, especially in times of economic crisis.

The objective of the Tourism Insight prototype is to help governments, regions and municipalities to increase revenues from the tourism industry. Another important aspect is that, investments in infrastructure and activities also attract more citizens and the final objective is to create wealth for the citizens of the respective country.

It was decided to start the prototype on a country level, i.e., the neighbouring countries of Slovenia, Italy, Austria, Croatia and Hungary.

Publicly available data -- available on sites like Eurostat, the United Nations etc. -- were compared to evaluate how they could this be used for the pilot.

The example of an individual analyses of performance for Italy compared to the neighbouring countries, Slovenia, Austria, Croatia and Hungary, has been presented: Tourism Insight displays the overall historical view of the general trend of tourism as well as the contribution of tourism to the GDP. Around 250 billion dollars are generated by the tourism industry in Italy. Before the crisis, the trend went up and now stabilizes.

Another important aspect is to understand the employment contribution of tourism: About 5 percent of the employment in Italy is related to tourism.

Compared to its neighbouring countries, one can see a drop in tourism revenues in Italy, while this is rather stable in the other countries. In terms of employment, Croatia, with about 15 percent, has the highest direct contribution to employment.

The idea is now, how to use this on a local level, which also strongly depends on tourism. Points of interest which might be relevant for municipalities
Tourism in municipalities can be mapped on economy and environment of citizens and their nationality, socio-demographic information of the tourists (sex, age, education, occupation, annual income), the tourists travel scope (travel purpose, duration of visit, origin and destination, modes of transport, types of accommodation), but also on the number of tourist attractions, the seasonal trend of tourist flow, survey information at places of interests and the administrative impact.

The benefit of this kind of innovative analytic tool is that it helps municipalities to get a deeper understanding of their tourism activities -- where they are today, where they have been and where they are going. It also helps to understand tourism patterns – what is selling well and what doesn’t. It can be used as tool for municipalities to decide where to invest to increase tourism in their region.

The prototype uses historical data from governments or municipalities, which are then uploaded to the SAP HANA solution. The results, which are available in milliseconds despite millions of tourist data, are presented on web browsers.

The input needed from the municipalities is the data provided in standard format. The technical infrastructure would be provided by SAP. SAP Slovenia is working with its development centres all over the globe. In the case of Tourism Insight, there is a close cooperation with SAP India, who also launched this initiative.

**Edi Kraus, Councillor for Economic Activities Municipality of Trieste & Director General, Julon Ljubljana d.d. & Board of Directors Member, Aquafil S.p.A. Trieste**, Italy, illustrated the impressing transformation of the company from a local SME to a global player.

Aquafil primarily deals with the production of Nylon 6 fibers and polymers. The company is headquartered in Trento, Italy.

In 1996, when the owner wanted to internationalise the company, he decided to go to Slovenia, because it was only 5 hours driving and the facilities were there. At this time, working cross-border in a completely new environment was not easy for an SME of 500 employees, however the short distance allowed to communicate very fast and to acquire a lot of experience and knowledge on how to work internationally. Based on this experience, the second step was done in the same manner and another plant was opened in Croatia. In 2001, the company opened a factory in Slovakia.

Thanks to the different languages and cultures gathered in this very small region, Aquafil was able to obtain an enormous experience – and this wasn’t even very costly. The same when the company decided to use SAP systems: due to the closeness of the company, Aquafil was able to skill their employees in a very smart end easy way. And resulting from this policy, it was very easy to make a big leap and to open a new factory in the US in 2003.

The company didn’t lose money and the investment was successful. And it get the help from it best engineers from its plants all across the Danube region.

In 2007, once Aquafil get the experience from the US, the company applied the same approach to go to Thailand and, in 2009, opened a plant in China.

Within these 15 years, the company created between its employees, across the entire hierarchy, a veritable international mentality. This is crucial, because the internationalisation was accepted enrichment and not as a risk that someone will lose a job.
Today, the Aquafil has 2300 employees and an annual turnover of over then 500 million euros. On a global market, the company is still a very small player, but thanks to the richness in the small Danube region, it was able to expand worldwide. For this reason it is very important that this region remains as it is -- culturally different with different languages, but all together in the European Union without borders in order exchange experience, do business and get a lot of experience without spending a lot of money.

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Q&A

The statements are not comprehensible as most persons didn't use a micro when speaking.