

## SMART Europe

### Final, In-Depth Assessment Report

#### *Tampere*

#### Summary

*The first page of the Report should include a one-paragraph description of the key points of the Report, notably the key findings, conclusions and recommendations.*

The Peer Review focus was on the implementation of a proactive strategy of change management, in particular as related to the ICT sector, being Tampere part of the Nokia success story. This big picture has been defined “Tampere New Deal” intended not only as a newly developed partnership concept to identify proactive operational models through some stakeholders representing different political and economic levels, but also a roadmap, a visionary picture, a project plan. It seemed to be a kind of umbrella over all the stakeholders, in which everybody knows that cooperating is necessary, but nobody seems to manage the picture officially. This specific focus was chosen because the uncertain global economic environment and the increased youth unemployment required a fast renewal of professional skills and knowledge and an urgent development of new businesses and investments. The general context has highlighted an elitistic approach to strategy matters, managed through an informal networking and without formal responsibilities, and also a lack of promotional activities among key-players. The regional culture lacks an entrepreneurial attitude and marketing thinking: the expert group found a tendency to look only at big investors and not pay enough attention to the “marketing storytelling” of the region. The dominance of the technocrats and a still insufficient multidisciplinary (marketing and business in the whole education) prevent the programmes to be oriented to a social education and do not contribute to establish a balance between job demand and supply. According to these key findings, the peer review week brought to several recommendations referred to regional strategy, education and human resources, partnership, innovative environment and sustainability of jobs creation. First comes the suggested possibility to involve in the “inner circle” people from the social scientist field and to keep implementing a more efficient regional PR work. Furthermore, combining R&D investments with figures about results, identifying relations between patents and start-ups in order to find indicators allowing to evaluate the whole system, could be actions encouraging in particular young people to be self-sufficient for their own business. In particular as regards the ICT sector, many tools are used to improve the matchmaking between companies’ needs and students competences, but a planning activity is more and more required, together with educational institutions, employment, authorities and companies on future competence need of the employees. The innovation environment in the Tampere region is rather

specific, in the sense that it has a culture of engineers, it is R&D focused, it is steered formerly by public organizations, it is city-centered, with a tight personal network. But it is also recommended to change the perception of innovation from 'ICT as industry' to 'ICT for industry', towards a horizontal approach, because ICT represents a tool underpinning most sectors. In this sense, a partnership should revolve around the New Deal in a more pragmatic and wider sense, involving more kinds of industries and people. To conclude, each action should be taken towards a more balanced focus of investments, support of existing initiatives for sustainability of jobs, the need for external advisors and systematic promotion and marketing the attractiveness of the region.

## Section 0: Introduction

### (a) Short introduction to the SMART Europe Project

SMART Europe is based on the concept that smart and targeted regional policies and interventions can be designed to boost the employment directly in the regional innovation-based sectors.

With this aim, a consortium of 13 partners, representing 11 EU regions, will exchange policies and instruments for identifying and supporting the main regional economic actors able to generate job opportunities in the innovation based sectors of their economy.

SMART Europe will support decision makers to improve their strategies with the aim of incorporating the creation of employment as an additional key feature of their activities.

### (b) Short introduction to the Peer Review methodology

The SMART Europe Peer Review Methodology helps regions to improve their policies in boosting employment in the sector of their “innovation anchor”.

The SMART Europe Peer Review Methodology is an adaptation of the peer review methodology of the Assembly of European Regions (AER), developed directly to be used within the SMART Europe project, when assessing different regions’ innovation anchors. The methodology standardizes the relevant aspects that need to be measured, in order to enable experts with different backgrounds to assess the regional situation in an objective way. By this, they will be able to give appropriate recommendations on the field of innovation-based job creation in the host region. The other important advantage of peer reviews is the selection of experts, who are practitioners in the field of assessment, which means that the recommendations given by them after the review will be practical and realistic.

## Section 1: Overview

### (a) Short description of the Host Region, general overview, economic profile.

*“Tampere Region. It’s All Bright! So what makes Tampere so special? Sun-bathed lakes and lush ridges, local baker’s butter-eyed buns, fresh urban nature, animated and at the same time peaceful environment, welcoming like a small village with a cosmopolitan atmosphere.”*

The Tampere Region is one of Finland’s fastest growing centres, with a population of over 215,000 in Tampere, almost half a million in the Tampere Region, well over five million in Finland; there are 22 municipalities in the Tampere Region and 11 of them are towns or cities. The Centre of the Tampere Region is the third largest city in Finland and the largest inland city in the Nordic countries. Around 170 km far from the capital Helsinki, it takes 1 ½ hours by train or car. A monumental industrial history: the Finlayson cotton mill was the first large-scale industrial enterprise in Finland.

Finland is a country with a non-elected regional level. Regional decision makers play a crucial role in supporting the long term development and competitiveness of the regions by securing a constant and efficient innovation policy implementation.

The Tampere Region is considered a knowledge hub zone: the key operators in the innovation process producing new information in Tampere are at the multidisciplinary Tampere University and the Tampere University of Technology. Tampere is a leading centre in technology, research, education, culture, sports and business: since the 1990s, Finland's innovation performance and innovation policies have repeatedly been ranked high in international comparisons.

The regional economic environment is characterized by a GDP at market prices of 14.544 M€. The economic activities in the region mainly fall into the service sector (52% GDP): Tampere has been a major global product development hub for Nokia since 1986. Unemployment rate is 10,2%: in particular, the unemployment of young people has resulted to be a big challenge in the region, so a strong focus has been taken to decrease the rate. The overall economic status of the Region is high.

The region has about 30.500 places of business (2011), with a third of the jobs in manufacturing or construction industries (*“Some 4500 kg of the national delicacy – black sausage – is manufactured daily”!!!!*).

The total revenue of industry is about 29 billion euros. In the region there are 26 companies employing more than 500 people. The largest private employers include Nokia, Metso, UPM, Metsäliitto, Sandvik, Itella, Saarioinen, Pirkanmaan Osuuskauppa and Nokian Tyres.

In September 2012 the **Tampere New Deal 2015** was launched, which is a preventative partnership concept (region, state, universities, TEKES, EU and privates) to face the acute and forceful structural change situation. It was developed for the ICT –sector (Nokia case), but the concept will be able to scale for similar situations in other sectors crisis.

### **(b) Description of Peer Review focus (why it was chosen, specific questions and expected outputs of the Host Region)**

The Peer Review focus was on “Can we manage structural changes proactively? – Case of ICT sector and Tampere New Deal”. The Tampere New Deal is a newly developed partnership concept that aims at identifying proactive operational models to manage the structural changes in the ICT sector and other business sectors, and it is about renewal of expertise, developing new businesses and investments. This specific focus was chosen because the main problem in the Region, hindering job creation, seems to be the underdeveloped capacity to create dynamic SMEs which are willing to grow, due to the fact that the region is not able to use its potential to originate new enterprises.

In this framework (orchestration of regional key players to fight against structural change in ICT sector) the recommendation of specific policies for boosting job creation in innovation-based and creative sectors is presented to the Host Region. The key findings and recommendations of the expert group refer to regional strategies, education and human resources, innovative environment, partnership and sustainability of innovation-based jobs, and are presented below.

## Section 2: Regional Strategy

### (a) Key Findings

#### - Well coordinated city developing strategy

The expert group was very impressed by your climate/strategy of changes, that seemed to always include a preparation for handling new structural changes. The expert group saw that a lot of structural changes already had passed this beautiful city, but also a lot of nice well-kept buildings that showed that the Tampere Region has been taking care and developing the city after the changes. It was easy to understand its history just walking through the city.

#### - Innovation appears in strategy

The expert group observed that the region has several and different tools to take care of new ideas in the surroundings when pressed into new situations; private initiative and initiatives from the universities and from the local and regional authorities seemed to work well together.

The expert group found that a good work was made in Tampere in using different EU-project to develop processes; one negative aspect about using new projects all the time was that the one that just finished was not enough implemented before passing to the next one, one with new names and new ideas. So in that case, always working with new projects causes a kind of negative effect to the “ordinary on-going work”

#### - Job creation appears in strategy

The expert group saw different tools developed or reused in a different way to take care of people in need of transforming processes, they observed that in the region there was a good cooperation between companies, authority and university levels.

### (b) Recommendations

#### Vitalize the existing culture of change

- **“Don’t be so modest, be proud”**

The expert group thinks the region has so much good experience of earlier structural changes that it will easily handle any future change too; Tampere seems to have the right attitude; the only sure thing about the future is that it will not be the same as today.

- **Take care of the short and informal decision making chain**

Even if Tampere is a quite big region there seems to be a good networking climate among many different levels in the region. It is known who to call when something happens, and of course that is good when you have to handle a quick upcoming crisis.

- **But also be aware of the risk of exclusion this kind of small informal groups can create**

What the expert group also saw was a risk of being too closed and too informal (the “inner circle” of people who are always involved) in the decision making process and

some difficulties in finding the formal level of decision making for the regional strategy. Another risk of being too introvert in the decision making process is that a lot of good information go missed when people with different backgrounds, different values and different experience are not involved early in the process.

### **Switch from just a systemic approach to a more storytelling approach**

- **Keep implementing Tampere marketing oriented strategy (Tampere All bright!)**

The expert group saw a nice start of the brand for the region of Tampere's "Tampere all bright" and we think it is important to "stick at the road" for a very long time this time, not just for as long as the project is going on. Build up a well-known brand takes many, many years. The expert group thinks that the region has a really strong and interesting history that needs to be told, big potential of telling different success stories when presenting itself to investors, establishments, new students or new inhabitants. And absolutely the biggest local brand NOKIA should still be used.

During the peer week the expert group saw many, many nice processes maps made by very good engineers, and that was nice and needed, but it could be even more winning if people from the social scientist field were more and always involved in the strategy process.

- **Use ambassadors for your purposes**

During the stay in Tampere, there was the possibility to talk to some taxi drivers, for example. Remember that they are often the first one to meet someone new interested in the region, the drivers are proud of the region and good ambassadors, so they give the newcomers more attention, letting them understand their importance and that they have made a good investment. So by spreading visions and strategies for the region also to the people in the street, a policy will go much further. Use local newspapers more in the process, let people know and get involved. A good PR work needs to be done!

### **Improve the system for following up and presenting the results**

- **Combine R&D investments with figures about results, find relations between patents and start-ups to find indicators to evaluate the whole system**

Again, the expert group saw a lot of process maps, but very little on results and over year development trends. More key figures have to be found and measuring systems set up for ongoing processes. A good idea is to use some indicators, (eg. R&D investments like numbers of patent combined with startups to evaluate your innovation system).

### **Choose a metropolitan perspective for the region Tampere to attract big companies' headquarters to Tampere**

- **Lobby for high speed railway to be linked to the Helsinki airport, think of Helsinki not as a competitor but as an attraction to be used**

Choosing Tampere as a position for your market, for an investor that comes from far abroad, probably would be more winning if this position could be considered part of the

Helsinki region (just a quick transport away), rather than competing with “the big brother” and always be the losing one, not big enough, not central enough, not metropolitan enough.

### Section 3: Education and Human Resources

#### (a) Key Findings

##### - **Connection between universities and the business environment**

There is a unique co-creative and collaborative atmosphere between universities and businesses. The educational level is a bit above the average Finnish one: about 70% with secondary or tertiary level education and there is a high level of higher education in the Region. Tampere is dominated by its universities and institutes, it has the feel of a ‘college’ town, where English is just about everyone’s second language. Triple-helix works well: there are 3 universities that collect around 35.000 students, even if being too small to compete with a global educational offer and the lack of multidisciplinary RDI made matchmaking competences/needs not so balanced.

The strong orientation towards technical disciplines makes students ready for the business environment, but the lack of education “in teaching” entrepreneurial culture and risk taking does not allow students to be self sufficient for their own business. An efficient use of new knowledge and academic expertise within the education system to support growth, new business model development and internationalization of existing companies are challenges.

Especially as regards the ICT sector, many tools are used to improve the matchmaking: a curricula database has been created, skills have been mapped, recruitment events organized, a “matchmaking arena” (working innovation platform for students) has been set up (Demola), but identifying the companies’ needs remains difficult (Tredea).

##### - **Instruments to support reconversion and lifelong learning**

Within the New Deal framework, the Region is trying to manage structural changes proactively. That kind of approach, as regards education, means supporting people to deal with their own professional profile, providing them a proactive support before becoming unemployed (SPIRIT ICT – Spirit is to found new ways to live in Tampere!). The region provides instruments to support reconversion and lifelong learning, through a double approach, towards company and towards people (Nokia Bridge, PROTOMO etc.), through the activation and training for individuals, students and researchers (short courses, degree programs, platforms etc.).

A very well structured and coordinated learning environment, open to all elderly people, care workers and young people, has being a big success, grouping more than 200 students (Sastamala Educational Consortium represents a good practice in this sense.)

##### - **Job demand and supply related to the regional market**

No data related to this topic were provided, but there seems to be no balance between job demand and supply. The unemployment rate of Pirkanmaa is higher than the national average and most of the employees of the region are employed by SMEs involved in trading. There is an oversupply of IT professionals, especially due to the Nokia and ICT sector crisis. IT professionals who are going to be out of work in the Pirkanmaa area and companies in the area who are in need of new ICT professionals are the main target group able to face the rapid decrease in employment and to create value.

But, in this uncertain global economic environment, TUT is trying to meet industry needs with a strategic focus on industry collaboration throughout its story, even activating transfer of research results and new technologies to industry through R&D projects. There is a sort of prudence in the culture that inhibits turning an idea into a business, due to the possibility of academic being discredited by business, if the idea fails.

- **Measures to limit the migration of the necessary workforce out of the regional territory**

The most important resources used to limit migration that were showed to the expert group are: interception of specific funds, professional training actions, "All bright" brand marketing. There is a business ecosystem which supports a co-creative and collaborative atmosphere between students and professors. There is a flow of young talent: even if Tampere universities are the most difficult to access, many students try to. The educational system tries to attract students from abroad (i.e. Nurses) and to support the process needed to become an entrepreneur by offering: professional training courses, facilitators and coaching support, mentoring, vocational training and campus, and involvement in ICT companies. People want to stay in Tampere, they like Tampere, so they try to find a way to remain, also because moving to Helsinki would be too expensive. As regards this topic, there is no updated monitoring of the migration data

- **Gender opportunities policy regarding employment**

There is not an equal opportunities policy regarding employment in the region even if the regional percentage of female unemployment (43,5%) is lower than the male one. The strong demand for specific skills and the lack of a multidisciplinary approach do not attract so effectively women, keeping them away from the profiles required by companies.

In addition, government grants for women entrepreneurs are not so frequent.

## **(b) Recommendations**

The expert group recommends to:

- **Introduce marketing and social oriented education** into existing engineering programs (E.g. TUT Entrepreneurial Module) and create new combinations of knowledge.

Need for multidisciplinary paths studies, including entrepreneurship, also because there is no entrepreneurial attitude or long tradition of entrepreneurship in the region. Need for working on culture to make people aware of the change, encouraging to do it themselves (If you need help, you are not going to succeed!)



- **Further promote the collaboration between universities and SMEs**

Do planning activities together with educational institutions, employment, authorities and companies on the future competence needs of the employees. Based on the existing knowledge, promote vocational training and other lifelong learning programmes directed to employees of companies and public sector. In order to facilitate the competences/needs matchmaking, a clearer system of job offers and requested profiles is necessary, based more and more on businesses involvement.

- **Encourage completion of studies through instruments designed with companies**

In particular after Nokia started recruiting people, the percentage of students graduating declined because students found a job in a short time. So in order to face the structural change, a kind of proactive approach could bring to a systematic and open discussion with companies, to balance educational system and company's needs.

- **Focus more on training startups to focus on their cash flow**

There is a lack in the services set up for startups, especially concerning matters such as "how to generate business". So it is necessary to focus more on cash flow, on being as cheap and cost effective as possible.

- **Continue and expand Team Tampere Program**

Creating intermediary practices that enable local small firms to connect with the global economy and creating more business and growth opportunities are among the main goals. It is necessary to replicate the good experiences (good practices we can say), like Team Tampere helping companies to recognize and test their own potential for growth and internationalisation through a special mentoring process.

## Section 4: Innovative Environment

### (a) Key Findings

There is a remarkable amount of large companies: 62,4% of SMEs but 37,6% are big companies. **See the figures presented in the Preliminary Questionnaire for Host Regions section 2.6. Comments.**

This is in our view a large percentage of big companies. The effect of this is the sharp rise and fall in employment when the large companies are successful or in decline.

The effect of this structural factor is that the area is relatively dependent on the well-being of these big companies. In times when a large company like Nokia prospers, the employment and innovation in the region is very high. But in times of decline a sharp fall is experienced. This also applies to the investments in research & development.

It is also good to understand that there is a difference in the economic structure of the Region between the city of Tampere and the rural areas. Innovation is present in both, but nearly all the major initiatives in this field are initiated from organisations located in the city. The expert group had no definite evidence, but the impression is that there is a division in wealth between the city and the rural areas: the cities' GDP per capita is above the national average, the GDP per capita in the rural areas is below. Officials stated to us

that the GDP in the city is above the average. Since the GDP of the whole region is only 94% of the national average, the rural areas must be behind.

The region has a diverse and extensive set of anchors for innovation such as The Baltic Institute of Finland (BIF), The Council of Tampere Region, City of Tampere, Centre for Economic Development, Transport and Environment, University of Tampere, the Technical University of Tampere, New Factory (Uusi Tehdas), Nokia R&D site.

From the angle of the Triple Helix the anchors come mainly from the public domain. Education is also represented but is more a following than a steering partner. Innovation by private companies is mainly an effort in the companies' own R&D. Companies are attracted, connected and bound to programs of innovation by the public sector.

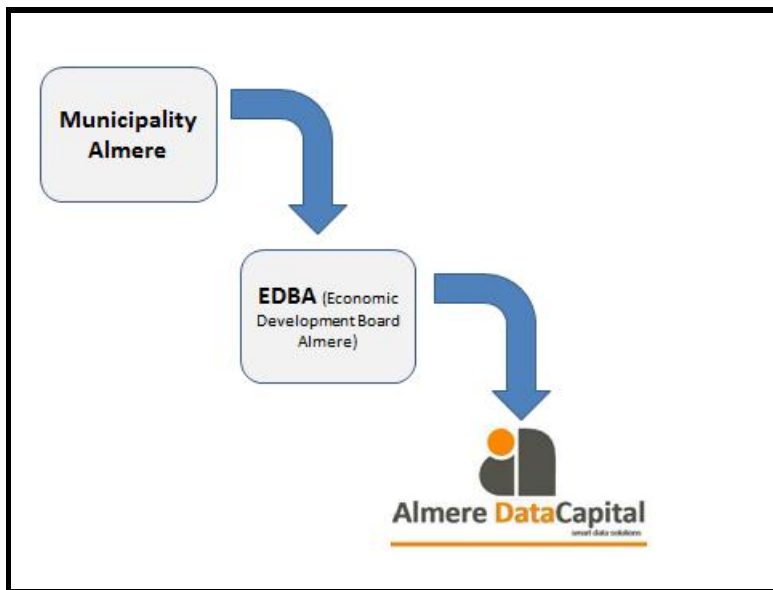
Throughout the peer review the expert group got an insight of the network behind the innovation initiatives.

It stems from the public anchors and (formerly) Nokia management and staff. It is important to assess that this network is effective on one hand, on the other hand it is tight and recurring. This brings a certain danger of overseeing the things the people in the network miss. Also the danger of putting emphasis on the same things over and over again, while other important factors are missed. It can be applied i.e. on the focus on R&D without a deep insight and sharp view of how the international market looks at the region and how communication and marketing are used to connect to this.

In terms of the Triple Helix the innovative environment is led by the public institutions just like in most other countries. It is an important fact that the thriving power comes from the public organizations themselves. I.e. in the Netherlands the lead is often taken by public organizations who cooperate with Big companies, SME's education and science in a special vehicle foundation. This is done to give the equality cooperation between the partners in the Triple Helix a formal basis.

Let us take for example Almere. Almere has 200.000 inhabitants and the national government wants this municipality to grow up to 350.000 inhabitants in the next 15 – 20 years. This means the municipality needs 100.000 new jobs. Only half of those – 50.000 jobs – will be an effect of the growth in inhabitants. More inhabitants mean more supermarkets, more schools, a larger hospital, etc. But we need 100.000 jobs, so something has to be done to create 50.000 brand new jobs, in new fields. Since – at least in Holland – there is no political support from the government to create these jobs on their own, help has to come from businesses (SMEs and big companies) and other non-governmental organizations, i.e. education and research.

In order to take the lead but also act on a basis of equality, the municipality finances a foundation in which the top people of the Triple Helix (companies, schools, hospitals, municipality) work together to create new jobs. This foundation is called the Economic Development Board Almere (EDBA).



EDBA works around themes like Health, Leisure, Logistics and IT. CEO's and managing directors of companies, board members of the hospital, board members in Higher Education and Mayor and Elderman of the municipality discuss which trends and topics could be successfully used to create jobs. One of the fields that were identified was Big Data. And so the EDBA started the Almere DataCapital programme (board decision) to become the Big Data Capital of Holland and actively develop new business activities in Almere which can lead to new jobs. Businesses, organisations and municipality all take an active role in the programme.

In the peer week the expert group found no evidence of a truly active role of Business Associations in the innovative environment. Innovations within companies are focused on their own R&D efforts.

In the past years the Tampere region has experienced innovation in clusters. The focus of the review was on IT. The Tampere region has now made the choice to convert to a more open innovation approach. We strongly support this choice because of the fact that IT nowadays is transforming and enabling force in all clusters.

Science parks and innovation hubs in Tampere are therefore not focus points of clusters, but more platforms for open innovation. It is very important that Tampere gave these platforms a physical location making open innovation tangible, stimulating meet & greet and fostering cooperation. New Factory and Hermia were the strongest evidences we experienced during our peer week.

As regards the extent to which the innovation initiatives lead to startup companies there was some contradiction in the statements given to the expert group. On one hand, there were statements that – in comparison with the vast R&D in the region, the actual number of startup companies is not that large. On the other hand another presenter stated that Finland is the country with the biggest startup figures in the world.

Perhaps both are correct. Peers got the strong impression that because of the

engineering culture and the vast amount of R&D in the area, there is not a strong effort on business skills and marketing & communication in connection with the world market.

Fact is that there is no very extensive and accurate statistical monitoring of startups. There are figures about the number of startups related to specific programs. But the number of people working there and how their growth or decline occurs during their life-cycle, is often not monitored for very long.

The expert group wants to state that it is very important for the region that startups grow and prosper and underline that it is more important for the region that a hundred startups grow from 5 to 50 people than having a new Finlayson or Nokia.

In the region there are ways and organizations (Accelerando Oy and Invest Management Finland) for private funding of startups. It is important to note that private funding in Finland is – just as in the majority of the European countries – different than in America. If a private investor invests in your company in the end you will get a cheque for 25 - 30.000 euros, not a million or 10 millions. This means that startups and expanding companies have to rely more on public funding and it is very important that startups have an intensive control of their own cash flow!

## **(b) Recommendations**

- Try to supplement the culture of engineering and R&D with a culture of **orientation to the international market and starting a business**. I.e. all university studies should give attention to business and marketing in their curriculum.
- Try to **actively make use of the icons of the region** and of Finland to act on the global market. Nokia, Angry Birds but also Kone, Suunto, Iltala are strong brands that represent Finland in the international market.
- Make use of the actual **core competences of the region** in which the world market will believe you as an expert. I.e. the paper industry, machine industry and automation of industrial processes, telecom.
- **Combine the traditional competences with innovative ones**. I.e. paper industry (2D) to 3D printing.
- Provide a **statistical system** to follow startups and evaluate them during their entire lifecycle. This can be called an Innovation Memory Database.
- Use the **Innovation Memory Database** to foster your main quest: to grow > 100 startups who develop from 1-5 to 20-50 employees.
- It would be very profitable for the region if **funding** could become more like the American way. For the long term this could be an aim. But we also realize this will not change in the short term and that it is very important to teach start-ups how to manage their funding and financing. The introduction of a course on cash flow management for start-ups would be advisable.

## Section 5: Partnership

### (a) Key Findings

*The expert group want to state the following: The expert group regards it as imperative to conduct further investigations and a much deeper analysis before implementing recommendations*

#### - Tampere's New Deal, - a call to arms?

Upon accepting the 1932 Democratic nomination for president, Roosevelt promised "a new deal for the American people". The New Deal's enduring appeal on voters fostered its acceptance across the political landscape. Franklin D. Roosevelt entered a contract with all US citizens in order to reshape America. Every American heard about the New Deal:

*Throughout the nation men and women, forgotten in the political philosophy of the Government, look to us here for guidance and for more equitable opportunity to share in the distribution of national wealth... I pledge myself to a new deal for the American people. This is more than a political campaign. It is a call to arms.*

#### - In Tampere the New Deal is a well-kept secret

The regional authorities' statistics and analyses show that more money spent on R&D do not directly return as new startups. Tampere is far above average in Finland in spending on R&D, on par on producing patents, and far behind the rest of Finland as regards startups. Tampere wants to find new approaches to creating startups, and innovation. That also means a fresh look at cluster-thinking. All this touches upon partnerships and strategies for partnerships. Assessing Tampere's New Deal is our approach to this.

After asking all presenters if they knew about «the New Deal», the expert group found out that it was virtually unknown. Some of the presenters referred to the New Deal as "them". On follow up questions about who "they" are, it became evident that there is a small group of around "10 influential people" that are associated with the New Deal. One of the presenters also said that the reason for keeping a low profile regarding "the New Deal" was to avoid envy or negative attitudes among those not included.

On question of whose picture the newspaper should put on the front page if something related to the New Deal was to be criticized, the respondents could mention nobody in particular. That indicates that nobody is perceived to be "in charge" in the general opinion.

#### - An homogeneous environment

The ICT sector is obviously the main target for the New Deal strategy. The expert group found, not surprisingly, a homogeneous environment for innovation dominated by former NOKIA employees, and by NOKIA itself. This is of course an opportunity to work with well-known, highly qualified people, and a transfer of knowledge. But it is a possible obstacle to other ways of thinking innovation and development. (A multitude of

partnerships makes it difficult to assess the impact and importance/influence of each of them).

- **Lack of cross disciplinary knowledge**

The expert group observed a lack of cross disciplinary knowledge, and recommends more focus on cooperation with social sciences, humaniora for example. Partnerships should be formed with such faculties in the Universities, to secure the social/societal dimension of innovation and regional development. There also seems to be a lack of marketing personnel with good market communication skills. That shows up in the presentations, and the lack of representation on the chart/cobweb of cooperating entities. A strategy would be to involve companies in advertising business and PR /communication strategy in the network as part of the environment targeted in the New Deal. "Demola" is an example. When asked, the young students said they had spent no time on setting up a market plan, or reflecting on marketing and needs for their project, because they were told by a supervisor that there was a market for their product. Everything was focused on product development.

- **R&D**

The expert group is not convinced that Universities produce entrepreneurs and risk-takers in large quantities. Universities are more conservative, and controlling environments fostering researchers. That is backed by the fact that investments in research do not seem to lead to start-ups. One should add that the statistics and the New Deal strategy are too recent to give an exact picture of the situation. We need to see a trend whether or not the production of patents leads to start-ups. As for now the production of patents is on par with the rest of Finland. One might later see that it takes a while for a patent to lead to a start-up. We have not seen the full impact of Tampere's New Deal yet. Still we have to relate to the statistics in this assessment.

**(b) Recommendations**

• **«Just call the professor»**

There is a close relationship between universities and companies in the ICT clusters. To leave the cluster approach means to rethink positions and strategies. The group suggests that there is a need to recognize that ICT is an industry underpinning all other industries, and a need to get more professors on the line. We recommend an approach towards cooperation with other sectors: i.e.: "What can ICT do for your industry"? In the Trondheim Chamber of Commerce there has been the same recognition of the need to redefine ICT as a part of other industries. That has led to seeking new partnerships.

• **Strengthen national and international collaboration**

Make partnerships for the development of networking with universities and research institutes and partnerships with foreign companies/ mediators that can link you to global markets. The attraction of foreign students and scientists can act as a catalyst to the innovation system through the creation of a favorable climate for opening up to people from "outside the circle", thus boosting the flow of innovative ideas. Creating a stable international network is a very important asset for the attraction of business in the region. You can build on regional strengths and unique cultural elements, such as

openness and cooperative culture, to attract people and maintain new jobs in innovative sectors.

- **Tampere's New Deal – a long term commitment?**

Tampere's New Deal is today not perceived as similar to Roosevelt's. It seems to only consist of internal guidelines at a top level, not intended to be communicated. The expert group considers it to be a good strategy in itself. But it deserves a more public life as a tool for mobilizing enthusiasm, and making cooperation available for a broader range of companies, not only the ICT sector. Our recommendation is therefore to communicate the New Deal publicly through the media to all companies/inhabitants, instead of keeping it exclusive for the "inner circle" of peers in the ICT world. It is necessary to view ICT as not only a cluster or sector, but also as a tool underpinning most sectors. It seems that other business sectors will benefit from such an approach, and Tampere might get a more diverse approach to innovation than the pure cluster-thinking.

Roosevelt's New Deal was a long term commitment, and so does the Tampere New Deal deserve to be. That means it should be widely communicated, and more people should be involved, so that the vulnerability of a plan known and administered by only 10-12 key people could be overcome, and be more sustainable. Partnership should revolve around the New Deal in a more pragmatic and wider sense, including more kinds of industries and people. Like, for example, advertising, marketing, PR industry, and all other industries where ICT is an underpinning part. This will change the perception of innovation from "ICT as industry" to "ICT for industry". A horizontal approach. The key players have the responsibility to share it.

Triple helix seems to work effectively, but needs to be more balanced and further developed to the societal sphere. There is a large and stable academic sphere, followed by a smaller business sphere, but local expertise and networks that constitute the sphere of state need to be enriched by external advisors and social scientists. Something else missing is bringing citizens and firms to the processes of finding solutions to the various challenges in order to unlock the innovation potential of the region. Make the private-public partnership a strategic priority for the effective management of ICT change and promote it in your branding strategy.

Therefore the expert group recommends to implement a "quadruple" helix approach: to enter into "a pact with the people" too.

## **Section 6: Sustainability of the jobs created by the innovative sectors**

### **(a) Key Findings**

The peer review team approached the regional dynamics on one more aspect, that of the sustainability of jobs created in innovation-based sectors. Sustainability is a core issue considering the specific focus of the peer review that is the proactive management of ICT sector. In this framework, the peer review team discovered sustainability issues related to the culture, physical environment and management of innovation system and highlighted

the following key issues:

### **Management of sustainable ideas and jobs**

- The problem of sustainability is twofold. There is an objective difficulty in maintaining existing jobs for a long time due to the crisis affecting the ICT sector. But it seems even more difficult for the region to develop and create new jobs, to transform new ideas into business.
- There is a proactive attitude to sustain jobs in the region and a problem solving culture in general. The peer review team identified many public initiatives and private as well (e.g. the Nokia Bridge program) in this direction.
- One of the core assets for a society is to know how to overcome crises. The history of the region reveals a successful reaction to changes over time; from the renewal of the basic metal industry, its transformation into automotive industry without losing the whole industry of the region, to the structural change into the IT sector managed without losing the capacity of highly skilled people in the region.
- Initiatives are spread all over the region and opportunities are given to rural areas as well.
- There is a difficulty in innovative ideas generation that is reflected in the low rate of patents, the slow growth of enterprises. There are many mechanisms to connect an idea with business, but there is a lack of tools for generating ideas, for making ideas better and for attracting more ideas in the region, nationally and from abroad.

### **National and international students attraction**

- Finnish students as potential entrepreneurs are too often employed at an early phase of their studies, and even abandon them for the sake of employment in firms like Nokia. The lack of marketing and entrepreneurial orientation in their studies is a factor that can affect the quality of innovative ideas in terms of sustainability. Therefore, the life of an idea outside a protective environment such as an incubator is not guaranteed.
- International students could stay in Tampere if they were aware that Tampere is proud of its certain advantages, such as the welfare system, equal opportunities given to women, the high-level innovation environment, the unique initiatives and opportunities offered to support their first steps, the physical environment (Nordic winter seemed to be a problem for attracting foreigners, but it is a mere detail if you consider the high quality standard of living). These advantages could be attractive for foreigners to come, study, create and remain. Tampere should be absolutely promoted in a branding strategy.

### **Scientific and market orientation**

- The peer review team identified a lack of entrepreneurial attitude and ambition.



The lack of such kind of education could be a main reason for this weakness. On the other hand a dominance of technical studies over social ones was observed. Interdisciplinary interaction does not seem to be effective in terms of combining skills and creating new ideas that could stay in the region.

- The orientation to technical education and engineering created also a gender unbalance. However, this paradigm is not dominant in cross-disciplinary educational programs (e.g. the joined courses with engineers and nurses in the context of Smart Home Learning Environment).

### **Dispersion of initiatives in the Region**

- During site visits conducted in the rural area of Tampere the peer review team found very important initiatives and programmes running, as well as many creative ideas implemented. Away from the dominance of the engineers of Tampere city, there is a
- Cross-sectorial production and education with evident societal impact and sustainable ideas in the rural area.
- Partnerships and initiatives existing in the rural area are a good asset for creating and managing sustainable jobs in the region.

### **Cultural advantages and barriers**

- The peer review team was impressed by some cultural features, such as openness experimentation, pro-activeness and collaborative attitude in problem solving. Those features are effectively managed to provide sustainability despite the structural change of the ICT sector.
- However, there are some factors limiting the potential of the region in attracting and maintaining more companies. There is a lack in consciousness and faith on the cultural, physical and innovative advantages of the region that is reflected in an introspective and modest attitude. There is also a limited entrepreneurial culture, probably as an outcome of the existence of large companies, like NOKIA, and the consequent security of labor supply.

### **(b) Recommendations**

Based on the above mentioned key findings, the peer review team introduces the following suggestions for the improvement of the regional policies for sustainable job-creation in innovative sectors.

#### **Define and promote the attractiveness of the region**

The innovative and physical environment of Tampere offers the potential of keeping young entrepreneurs in the region and attract more. It is critical for the sustainability of the jobs created in the region that citizens do not migrate. It is however challenging if the perceived attractiveness of the region is low, among both citizens and foreigners. Identify

the elements of the physical, cultural and innovative environment that could attract ideas and people in the region. Integrate these elements in your branding strategy and systematic marketing effort. Make Tampere a synonym for innovation and high quality of life by promoting assets such as the ranking of Finnish innovation system, the success stories of NOKIA, Linux, Demola and Angry Birds, the welfare system, the unique qualities of Scandinavian culture, the beauty of the physical environment, the high quality education and research system, the offer of initiatives for supporting start-ups.

These attraction mechanisms can act as magnets not only for foreign investors but also for students at national and international level to come and stay in Tampere. In particular for foreign students, strengthen partnerships, communicate your attractiveness, facilitating their flow, and make the innovation system even more favorable for them. Provide support and eliminate barriers such as language barriers to create start-ups.

### **Have a look from “outside the circle”**

Monoculturality is claimed to be a limitation for the region. When shaping strategies it can be a threat. The peer review team suggests to create an advisory board of objective people from abroad which can act as a catalyst through the exchange of experience and osmosis of cultures and ideas.

### **Support initiatives for sustainability of jobs**

If there is a good practice for proactive ICT change management, then you have it already: it is the Nokia Bridge initiative. Keep using and supporting structural change management operations to compensate job reduction with the renewal of skills and the creation of new business in the region. Connect this method to privileges for ex-employees/wannabe entrepreneurs in order to create companies in the region and avoid migration. Give also such privileges to students/wannabe entrepreneurs and to ex-incubates, offering an attractive and favorable climate for entrepreneurship. Maintaining the workforce in the region is critical for the innovative ecosystem.

As an example, Patras Science Park in Greece managed to exploit a dynamic situation created by the closure of the R&D centre of a high-tech multinational company. The Patras Science Park supported the “yeast” of ex-employed and hosted prospective entrepreneurs that carried not only high-tech skills, but also the habit of working in a global company. The result was the creation of more than ten new companies, which contributed to the sustainability of innovation-based jobs in the region. These firms are at the moment the core of the regional innovation effort, creating a good paradigm for other start-ups on how to sustain and evolve in the region.

### **Towards a more balanced focus of investments**

Sustainability is highly dependent on the focus of investments. It is evident that the technology-based industry is the innovation anchor of the region. In this framework the high standard education and R&D that is provided are considerable assets for the region. The peer review team recommends therefore to focus strongly on the further development of this orientation, in order to exploit the possibilities arising from

emerging sectors in the future (e.g. Smart Traffic succeeds in the challenging field of green energy). In this direction the strategic redefinition of the ICT sector is required to free itself from the funds framework because ICT is cross-sectorial and as such it can be combined with everything.

Apart from the diversification of jobs offered, this cross-sectorial balance can also benefit the region in terms of a more effective gender balance. Traditionally, technical areas such as the ICT sector are dominated by men and an interdisciplinary approach in education and practice could create more sustainable jobs for women too.

It is also important to maintain a balanced approach to basic and applied research at knowledge providers. Applied research is based on the foundations of basic research and as such, strategic planning and projected funding activities should aim to sustainable applied research activities in order to maintain on-going developments and innovations.

There seems to be, however, a balance in the initiatives devoted to rural areas and to the city environment, utilizing the advantages of both. Keep on this balanced interconnection and development of both.

## Section 7: Conclusions

It can be stated that Tampere has a well-coordinated developing strategy, even if it could be suggested to vitalize the existing culture of change and to involve in the “inner circle” persons from the social scientist field. The region has a really strong and interesting history that needs to be told, a big potential of telling different success stories when working with presentations for investors, establishments, new students or new inhabitants. And absolutely, the biggest local brand NOKIA should still be used. The development direction could be more and more towards a metropolitan perspective for the region Tampere, even in order to attract big companies’ headquarters to Tampere. Furthermore, combining R&D investments with figures about results, finding relations between patents and start-ups to find indicators to evaluate the whole system, could encourage in particular young people to be self-sufficient for their own business.

The expert group assessment on the topic of education and human resources revealed a strong attention towards the creation of high skilled work force, able to face not only the economic global crisis, the one of the Nokia industry and ICT sector in particular, but first of all the demands of the changing labor market. So, in order to fit in the regional labor market, the educational system should be updated through a multidisciplinary approach, introducing marketing and social oriented courses in the existing technical and engineering courses and further promoting the collaboration between universities and SMEs. It is therefore critical to implement a strong collaboration between educational institutions (Universities, Vocational, High schools) and enterprises and offer both all kinds of training and different types of coaching and mentoring.

Moreover, it can be stated that the expert group has seen a region with an innovative environment. There is much attention to proactively managed innovation, employability and startups. This is expressed by an active role of a lot of organizations and in the programs they implement. Although the Tampere region could learn a few things from

abroad, we like to state that the Tampere region is also very interesting for other European regions for learning how you can cope with the issues of innovation, employability and starting new businesses from that.

The innovation environment in the Tampere region is rather specific, in the sense that it has a culture of engineers, it is R&D focused, it is steered formerly by public organizations, it is city centered, with a tight personal network.

But, the Tampere's New Deal is not perceived today as similar to Roosevelt's. It seems to only consist of internal guidelines at a top level, not intended to be communicated. It deserves a more public life as a tool for mobilizing enthusiasm, and making cooperation available for a broader range of companies. Not only the ICT sector. Entering a quadruple helix approach to innovation work. It is necessary to communicate the New Deal publicly through the media to all companies / inhabitants, instead of keeping it exclusive for the "inner circle" of peers in the ICT world. It is necessary to view ICT as not only a cluster or a sector, but also as tools underpinning most sectors. Partnership should revolve around the New Deal in a more pragmatic and wider sense, including more kinds of industries and people. Like i.e. advertising, marketing, PR industry, and all other industries where ICT is an underpinning part. This will change the perception of innovation from "ICT as industry" to "ICT for industry". A horizontal approach. The key players have the responsibility to share it.

During the investigation of the dynamics of sustainability of jobs created in the region of Tampere the peer review team was both impressed and concerned about the existing management of sustainable ideas and jobs, the attractiveness of the region, the cross-sectorial and multidisciplinary potential of the region, the balance of innovative effort and cultural issues. Based on these dynamic elements of the cultural and innovative environment the team concluded that actions should be taken towards a more balanced focus of investments, support of existing initiatives for sustainability of jobs, the need for external advisors and systematic promotion and marketing of the attractiveness of the region.