Companionship and collaboration between growth companies and universities – the Tampere Region experience

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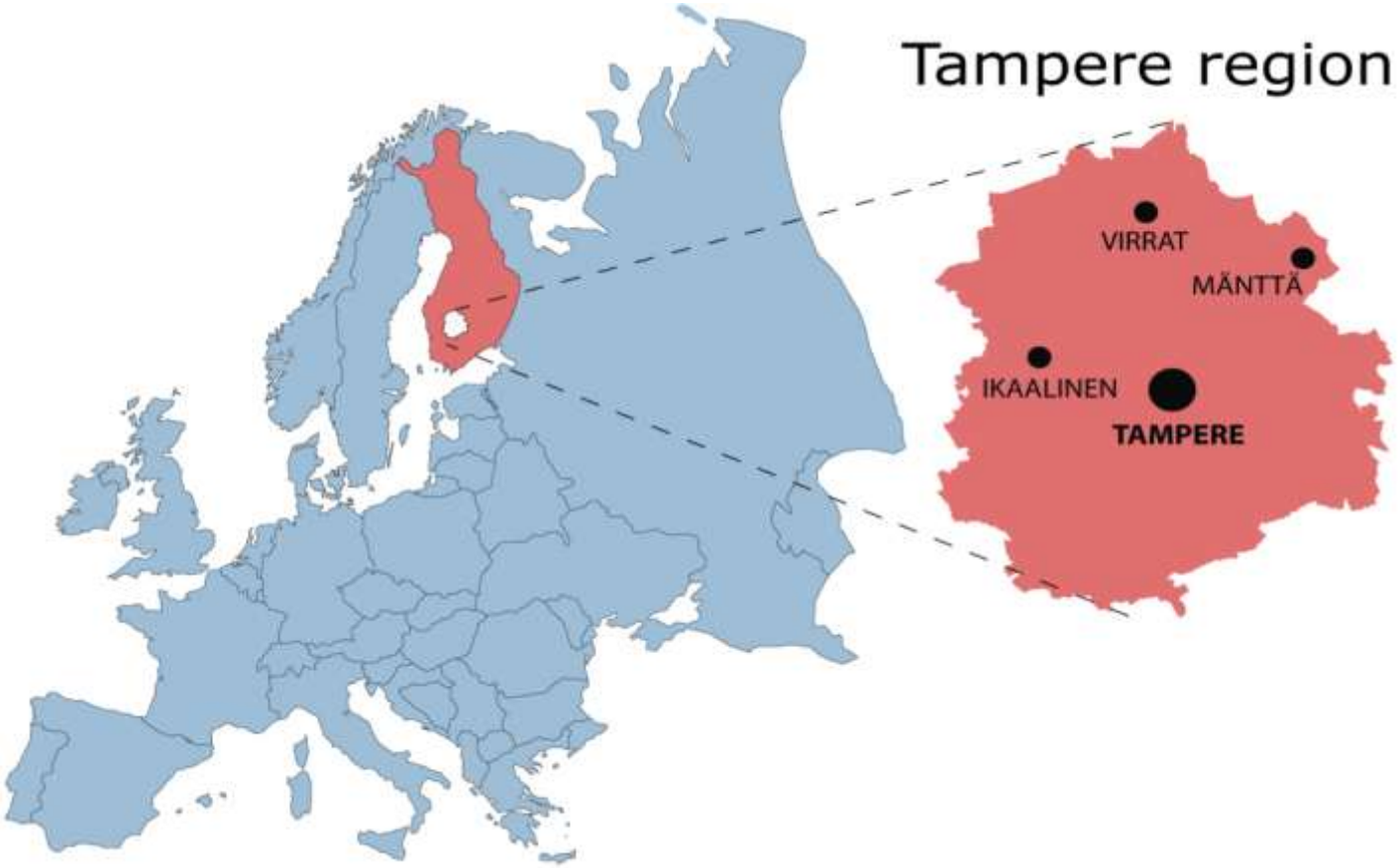
The Tampere Region



Tampere Region - One of Finland's fastest developing and most attractive regions

People

490,000 inhabitants

Education

the most important centre for research and education… some 40,000 students, two universities, three universities of applied sciences

Business

about 30,500 places of business… companies in the region include Nokia, Intel, Cargotec, Glaston, John Deere, Agco Sisu Power, Metso, UPM, Sandvik, Nokian Tyres, Santen, FIT Biotech

Leisure

Trade fairs, congresses, museums, events, theatre, sport, urban nature, positive flow

All Bright!
TAMPERE
FINLAND

Bright expertise

Mechanical engineering and automation

- intelligent machines, digital hydraulics

Health and biotechnologies

- human spare parts, vaccines and biosensors

Information and communication technologies

- mobile communication, open source, ubiquitous computing, games and gamification

Energy technologies

- boiler and gasification technologies, multi-fuel plants

Creative and experience industries

- roaring growth of new companies, theatre research, lighting design, communal online film production

TO BRING INNOVATIONS TO FRUITION!

New Factory has been established in Tampere to bring innovations to fruition.

It is open to all industries and players: businesses, universities, the public sector and citizens.

The factory comprises the Demola, Protomo, Suuntaamo and Startupstairs development environments.

New Factory provides faster, more agile and efficient processes to implement customer-driven and customer-oriented product and service development projects and pilots with a low level of risk and costs.

In 2010 there were almost 100 projects in the New Factory.

The factory is operated by Hermia Ltd.

www.uusitehdas.fi

TAMPERE UNIVERSITY
OF APPLIED SCIENCES

> internationally oriented multidisciplinary higher education institution in the Tampere Region, Finland

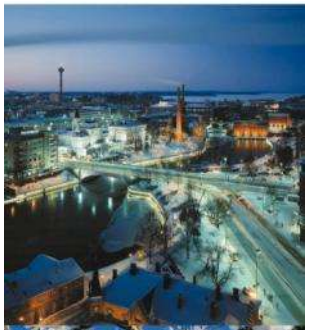
Focus

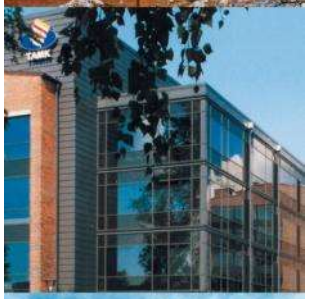
TAMK concentrates on promoting wellbeing and health, economy and production as well as learning and creativity.

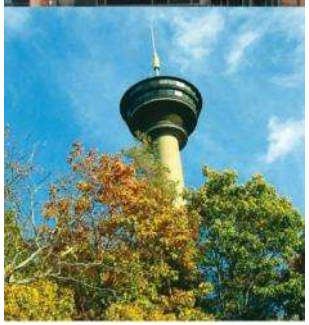
TAMK offers education and related research, development and innovation services in seven fields of study.

TAMK *in brief*

- one of the largest UAS's in Finland
- 10 000 students
- 2500 beginning students in 2010
- 7 fields of education
- 45 degree programmes,
  8 of which are taught in English
- 1000 visiting lecturers per year
- 800 members of staff
- annual budget 75 million euros







TAMK's main campus in Tampere

Background

Statistics Finland: 5% of all companies in Finland are growth companies, in Tampere Region this means about 1500 companies

We have technological development skills and know how, but market knowledge is missing, especially knowledge of global markets

- it is useless to support bad business ideas, it is important to appreciate market knowledge at least as much as technological knowledge (Risto Kalske, The Finnish Innovation Fund Sitra, 21.11.2010)

We are not taking advantage of the possibilities in service business

Research and development activities do not generate enough innovations, and therefore the processes need development

Funding from Tekes – the Finnish Funding Agency for Technology and Innovation allocated to Tampere Region was 34.3 M€ to companies and 29.6 M€ to research projects

Existing actors in the Tampere Region:

Unipoli Consortium (Tampere University of Technology, University of Tampere, Tampere University of Applied Sciences)

- SITR (Studying in Tampere Region), students from foreign countries can entry in any of the three universities and study also in the other two
- common career and recruitment services (coming)
- Workplace Tampere Region Project, supporting foreign university students to find practical training and working places
- Regional University Network helps companies outside the city of Tampere to get access to universities' further education and their R&D services

Existing actors in the Tampere Region (continued):

New Factory

- Demola, Protomo and Suuntaamo (living labs) ”machines”

The City of Tampere and other municipalities in the Tampere Region

- public procurement has to be used so that it supports innovations (like in USA)

Centre for Economic Development, Transport and the Environment (ELY) in Tampere Region, The Council of Tampere Region, Tekes - the Finnish Funding Agency for Technology and Innovation, Investors and Business Angels

- funding programs and funding instruments

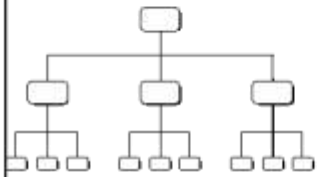
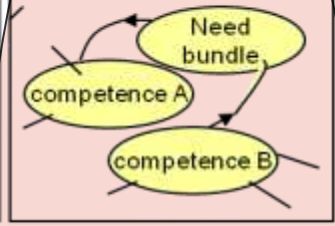
Finn-Medi, Hermia, Tredea

- Centre of Expertise Programs
- support services to companies

In conclusion:
We have many actors that work in the field of innovation generation and offer different support activities to companies. The problem is how to direct the fragmented activities to common goal which is the best possible support to growth companies.

Offered solution:
The companionship of growth companies and universities.

Target Level for Tampere Innovation Culture

The inventor (intra-organisational)	R&D department (intra-organisational)	Cross-functional teams (intra-organisational)	Focal innovation processese (inter-organisational)	Collaborative, distributed innovation (inter-organisational)
				
•Between brilliancy • and madness •Implicit knowledge •Of the individual	•Creation of •departments •Gate-Keeper problems •„non-braked Engineering“	•Networking to the inside •Market orientation •Increasing •complexity	•Networking to •the outside •Methods and tools •Technical complexity	• common creation of new knowledge •Innovation based on interaction • increasing borrowing requirement
⇨ Intuition	⇨ Innovations efficiency	⇨ variety of perspective	⇨ professionalism	⇨ bundling of ressources

Eschenbächer 2009

Companionship of growth companies and universities

”Collision system”

- Meeting places
  - research, development and innovation environments (to be used also as learning environments for students)
    - need further development and internalization (f. ex. Demola, Healthy Sleep Facilities etc.)
    - companies, researchers, specialists, consultants, teachers, students and especially product and service users (= market knowledge) are all involved
    - Finlabs (The Finnish Network of Living Labs), The Living Lab Network of Universities of Applied Sciences, ENoLL (European Network of Living Labs)
      - domestic and foreign partnership networks to create demand and user driven innovations and localize products and services from Tampere Region to different market areas

R&D&I environments
PractiCo®
Healthy Sleep Facilities

Demola as Innovation Platform Engine

Combines fresh ideas of students with needs and support from project partners

UUSI TEHDAS /NEW FACTORY

DEMOLA

- Focuses on creative action, does not produce papers!
- Turns needs, ideas and knowledge into demos of products and services
- Creates new jobs and business

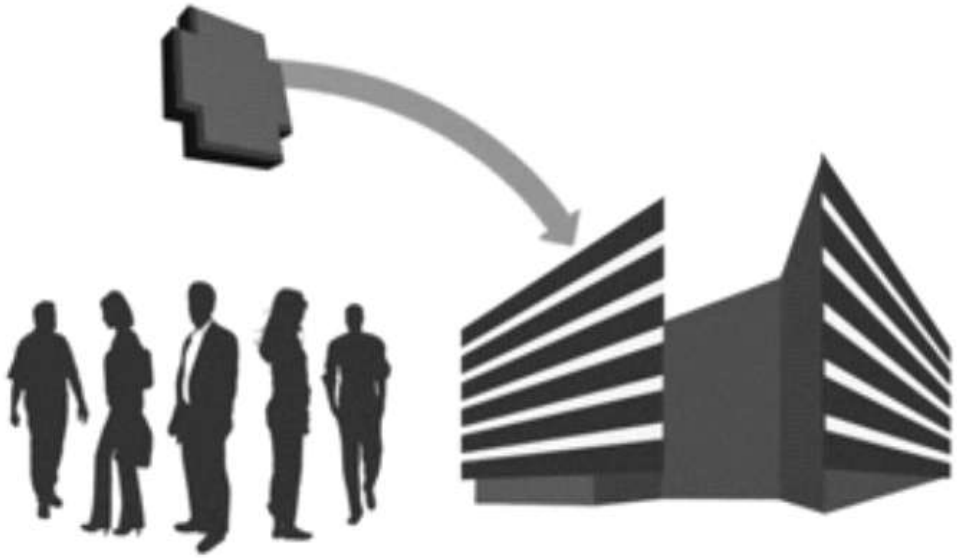
Initial concepts and guidance come from project partners

- Real market potential
- Interesting project topics and valuable experience

Students own the intellectual property and results created in the project!

- Possibility to start own business based on IPR created in demo project

Benefit for partners and teams!



- Project partner can buy a license to project results or become a shareholder

Results from 2009 to March 2011

- 500 + students
  - 30+ % international students
  - 72 % considers seriously to become an entrepreneur
- 100+ projects
  - 96 % of completed projects licensed by project partners
  - 10 + % of the students are headhunted
  - New start-ups (about 15)
  - 450.000 € rewards to students

Companionship of growth companies and universities

Companionship plans and agreements with growth companies including:

- companionship companies act as godparent companies to university students
    - multiple skilled students create a team to work with companies for 3 to 5 years
    - quick concept and prototypes generating innovation sessions (new product and service ideas/mock ups) are one service in the companionship agreement
        - these are further developed in r&d projects with researchers and specialists both from universities and companies

- International Summer School in Tampere
    - for foreign students that are not yet studying in Tampere Region
    - solving problems and cases arising from companionship companies and supports further development of the results from quick prototyping sessions mentioned before
    - supports international networking (we can also utilize the international contacts of HUB Tampere)

Companionship of growth companies and universities

Companionship plans and agreements with growth companies including:

- visiting professors and specialists from other universities (utilizing the already existing universities' international network)

- "innovation pioneers"
    - seeking systematically ideas and innovations and international co-operation possibilities to be utilized in companionship companies

All services are included in the companionship agreement and companies are paying a yearly fee to university consortium

What the committed companies get:

New, skillful and international workforce (tested and qualified in the 3 to 5 year common development activities)

International co-operation network which opens also new markets to the companies

- multiplies companies' knowledge of global markets

Common research, development and innovation "organization" is an extra resource to the companies

What the committed companies get:

The process refines systematically the ideas originated either from companies or from universities and students to innovations

- quick concepting and prototyping (from 2 to 3 weeks) -> Demola project -> living lab project (also outside funding available in this phase) -> the globalization of the product or service (f. ex. together with ENoLL network) -> product or service which is in balance with market needs -> growing and profitable business

- the process also integrates the activities of companies, universities, public sector and the product and service users (quadruple helix)

Organizations which are responsible (f. ex. Centre for Economic Development, Transport and the Environment (ELY)) for company development in the Tampere Region can advise their customers (potential growth companies) to use the services from universities and to utilize the international network of universities

Now

0-12 months

Product generation N
- revenue
- production
- searching new markets?

12-36 months

Producr generation N+1
- engineering
- take to the market
- conceptions, prototypes?

> 36 months

Product generation N+2
- companionship between companies and universities
- joint R&D&I environments

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