Submission of Abstract to key discussion issue 1c:
Communication strategies and media relations

# The Might of a Donut - University to Incubator

Technology transfer services as ambassadors for the STP/Incubator

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**Executive Summary**:
There is a need to more effectively exploit university-based research results and bring them into new products and services. At the University of Jyväskylä we wanted to increase the number of disclosed R&D –results and convey the R&D –staff of the importance and possibilities of technology transfer. A big activation campaign was planned to encounter the staff in their own environment. The technology transfer staff of the university, pre-incubator environment Protomo and outsourcing services from small innovative companies were responsible for the action. Nearly hundred interactive, creative and captivating events were organized in order to encounter the researchers in a positive atmosphere. The average budget of the activation campaign was ~90 000 €/yr. The operation model proved to be an effective way to inform, influence and move the scientific society towards transferring research results into the business life. The lesson learned was: "Go to the potential customer, the idea owner".

**Partners**: University of Jyväskylä
JAMK University of Applied Sciences
Protomo (innovation and entrepreneur environment coordinated by Jyväskylä Innovation Ltd)
Business Arena Ltd, together with Crazy Town network of small enterprises

This case is an effective example of public and private sectors working together.

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## 1. Background

The new University Inventions Act pertaining the Finnish universities came into operation 1st of January 2007. The Act provided universities with the rights to the inventions made in externally funded research. Earlier the rights to all inventions belonged to the academic inventors. The Act made it necessary to create a new way of action for the interplay of the university with the society and more importantly – a new way to work and interact with its employees - the researchers and inventors.
Since the change of the invention law, the university has organized the resources and the process for technology transfer and commercialization of research results. Yet, the challenge is to activate the research staff to disclose their research results to the innovation services, which is responsible for the technology transfer at the university. Without disclosed research results there is nothing to be commercialized and transferred to existing companies or to new start ups. The passiveness of the academic staff towards technology and knowledge transfer is not only a local issue or issue in Finland. According to the publication of the European Commission[1] on 10th of April 2008 "an effort should be made to better convert knowledge into socio-economic benefits. Therefore, public research organizations need to disseminate and to more effectively exploit publicly-funded research results with a view to translating them into new products and services." The commission recommendation encourages to support knowledge transfer and to enhance the awareness and skills of staff & students related to IPR, knowledge transfer and entrepreneurship. In the more recent communication[2] (October 2010), the European Commission Cooperation aims for the European Innovation Union. "Cooperation between the world of science and the world of business must be enhanced, obstacles removed and incentives put in place". Research and innovation systems need to be better linked up with each other and their performance improved. More innovation should be obtained out of research. Why don't research results find their way into new products and services?

[1] European Commission C(2008)1329
[2] European Commission SEC(2010) 1161

Where is the bottleneck of technology transfer? What are the means and tools to obtain more innovations out of research?

We at the university's technology transfer want to have more research results for evaluation, refinement and productisation. We strongly believe that universities have research results, inventions, software and expertise which have value to companies. Yet, relative to the significant amount of money put into research, too few research results find their way into business. Tekes is the most important publicly funded expert organization for financing research, development and innovation in Finland. It finances yearly almost 600 public research projects at universities, research institutes and polytechnics. In the year 2010 Tekes allocated 5.3 M€ to the university, research institutes and polytechnics in the Central Finland. Yet, before starting the action described in this paper, the number of reported disclosures and research results to be commercialized at the University of Jyväskylä was low: 44 disclosed ideas, from which only eight were invention disclosures. In addition, there was a persistent rumor circulating among the staff that since the new University Inventions Act, the university takes away the rights, gains all the profit and leaves the inventor with nothing. In reality, the inventors get 50 % of the profit that the university makes on the invention while the university carries all the risk and costs. The reality was that regardless of the new University Inventions Act, employees didn't disclose their new inventions or commercially exploitable research results. In order to get a better understanding of the situation, in January 2009 a survey was made to find out more precisely the reasons behind the passiveness of the research staff. It turned out that the scientists don't bring their research results to be commercialized because they:

- are not aware of the technology transfer service
- don't recognize or know their personal advantages for getting involved in technology transfer
- doesn't even think about putting research results into commercial use
- are used to publish not to patent ("open source" versus "right to ban the use")
- lack the time to go into commercialization of R&D
- have not gained entrepreneurial motivation, partly because success stories from their own social environment are missing
- don't know how to utilize their knowledge and research results effectively to respond to the existing needs of companies. There is the lack of well established way to use research results to answer the needs of companies.

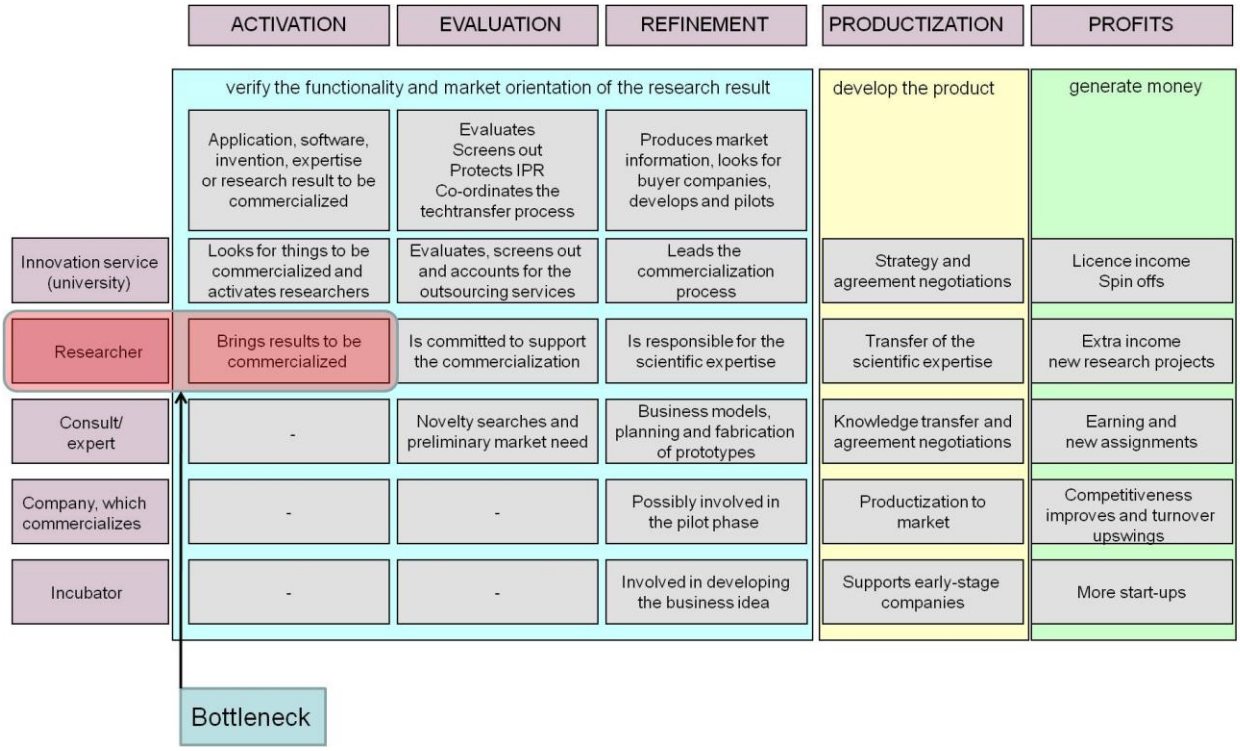



**Figure 1:** Technology transfer process, actors and responsibilities. Bottleneck of the process marked red.

The different stages of the technology transfer process at the University of Jyväskylä, the actors involved in each step and their responsibilities are sketched in the Figure 1. Of course there is room for development at each stage, yet, the main bottleneck at the moment is the lack of disclosed inventive research results. In order to have more cases to work on in the evaluation, refinement and development steps, we need to get the scientists on our side.
Something needed to be done to correct the misconceptions behind the passiveness of the researchers. Somehow the researchers should be motivated to consider commercial exploitation of research results. It should be made their thing – something that has to do with them. The idea how to tackle the problem originated from the staff of the innovation services of the university. The actors involved in the development of this new way of activating the research staff were the Business Manager Pasi Teräväinen and Innovation Manager Riikka Reitzer. The operation model was developed together with a network of small companies from Crazy Town and the model was successfully tested both at the University of Jyväskylä and the Jyväskylä University of Applied Sciences.

# 2. Objectives

The personal of the university's innovation services responsible for the technology transfer, decided to act in order to correct misunderstandings and to start activating the staff towards putting research results into commercial use. The crown idea was to take initiative instead of expecting the researchers be active and to find a way to converge the researchers in a positive atmosphere. A *culture can be changed only by setting an example and by doing: dominating attitude, values and opinions must change before people join the action and their way of doing can be affected*.

The objective was to initiate a cultural revolution at the university in the innovation activity and to:

- enhance the inter-organizational appreciation of innovation activities at the university
- increase the awareness of the staff related to knowledge and technology transfer as well as to entrepreneurship
- inform the staff about technology and knowledge transfer services and resources
- increase the number and quality of disclosed, research-based invention and business ideas
- intensify transfer of research results into business life and commercial applications

When measured inter-organization, the ambitious target of the staff of Innovation Services at the University of Jyväskylä is to be world's best known technology transfer services! Meaning - if e.g. 100 research staff members per university around the world are randomly asked 1) if they know that their university has technology transfer services and 2) which kind of support services are available – the University of Jyväskylä would be best known among its research staff.

# 3. Action

## 3.1. Actors

The chosen method of implementation was to combine the IPR and technology transfer expertise of the university's innovation services with the entrepreneurial approach and knowhow of innovative companies specialized in marketing, event organizing and communication. Significant resources were allocated towards the activation measures. Yet, the whole process starting from the initial commercializable research result through technology transfer and productisation to the consumer market was established (see Figure 1). This was ascertained by close collaboration with the local incubator Protomo and other regional business development organizations such as the Foundation for Finnish Inventions. Resources for the activation were gathered up and roles of actors planned according to their strengths. Accordingly, the role of the university´s technology transfer staff was to provide their expertise and services in technology transfer issues to the campaign. Six innovative companies from the Crazy Town network brought in their unique expertise in marketing,

communication and event organizing. Protomo served as a pre-incubator and business development environment.

### 3.1.1. University

The university´s innovation services has the resources and expertise for the IPR-protection and technology transfer. The job of the business development manager and innovation manager is to promote innovation activities in general, to counsel on industrial property rights and invention, to find and evaluate projects supporting invention, and to promote technical, productive, and commercial use of research-based inventions. Business development manager and innovation manager lead the technology transfer process and are engaged in business development. From the technology transfer office the business ideas, invention cases and contacts are shared with collaborators with the objective to bring them into new products, services and companies.

### 3.1.2. Business Arena Ltd & Crazy Town -network

The responsible producer for the outside team of expert was Business Arena Ltd (BA). BA is specialized in shaping and producing interactive learning events and also inventing and managing processes for universities, educational institutes and other public sector that help build and active different networks (internal or external).

Crazy Town is a network of small KIBS-companies and entrepreneurs (KIBS = Knowledge Intensive Business Services). At the moment, 35 companies belong to the network. Their branches of business vary between marketing, consulting, web-design, car rental etc. One common denominator for all the Crazy Town companies, regardless of their age or experience, is the creative madness. Six vibrant, young companies of the Crazy Town network specialized in outsourcing services were part of the actions presented in this paper.

### 3.1.3. Protomo

The multidisciplinary and social innovation and entrepreneur environment of Protomo prepares new service and product ideas for the market. Protomo serves the developers of entrepreneurial ideas of young talents and experienced professionals of different trades. The basic idea behind Protomo is to gather up skilful people and experts into teams that develop prototypes of various products and services. The development ideas come from companies, research organizations and private innovators. Protomo at Jyväskylä is coordinated by the local public development company Jyväskylä Innovation Ltd.

## 3.2. Chosen tools to reach the objectives

Since November 2008, the R&D –staff of the university has been a target group for a large scale information and activation campaign. The tools to inform and involve the R&D –staff are interactive, creative and participating events and happenings. In the two years 80 activities were organized. Over 3 500 personal, face-to-face contacts were gained. Social media such as website [3] and facebook-group[4] are used to support the action plan. Phone calls, emails, flyer campaigns, surprise visits at a night club and public media were used to inform and build the positive image – the total contact number in two years was around 10 000.

Here some of the tools in more detail:

1) **Idea Kiosk** - a mobile cart loaded with coffee, tea, donuts, mandarin and of course hearty load of information on innovation activities of the university. The idea kiosk cruses along the corridors and work space of the staff – unannounced, so the staff doesn't need to prepare in any way. We expect or require nothing at this stage before hand. Discussion is diverted towards the research work and resent best research results.

[3] www.ideastailmioksi.fi
[4] "Ideasta Ilmiöksi" – name of the facebook entry



2) **Idea Café** is a three hours workshop for about 15 – 25 people. The world café technique is applied[5]. The goal is to discuss about the possibilities of commercialization of research results and ponder what are the obstacles hindering scientist to get involved and how to remove them. The themes vary and as an introduction to the workshop a university or theme related entrepreneur opens up the discussion.

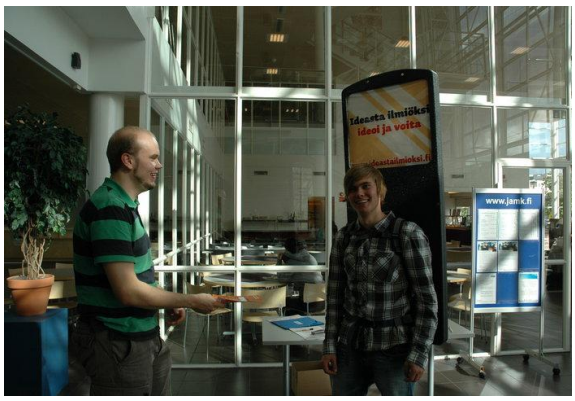

3) **Academic Business Club** (ABC) is what one could call a "peer group" for the R&D –staff. It is a community for those scientists at the university that are interested in and involved in commercialization of research results. Most of the participant already having some experience in innovation activities and technology transfer. The ABC has a very import role as an example setter and as an opinion leader at the university. The ABC meets about five times a year in the evening in casual settings. The get-together involves a guest speaker e.g. from a start-up company and the discussion is around a selected theme. The evening offered the surroundings for good conversations and nice, relaxed atmosphere – plus, of course, the change to go to sauna.

[5] http://www.theworldcafe.com

4) **Case-cocktail** is a social event where the works of the innovation services are presented openly for everyone to become acquainted with. Actual cases of technology and expertise transfer that either have been commercialized or are under work are presented. The R&D -staff has during this event a chance to get to know the commercialization/technology transfer process of the university. The event takes place in a restaurant and each case has their table. At each table there are at least two people from the following groups presenting the case and their own role in the technology/expertise transfer process:
   1) The scientist that has disclosed his/hers research results to the technology transfer services for commercialization
   2) The consult or expert of a company that has been involved in the case e.g. in the planning or construction of a prototype or conducting a market survey. Alternatively, at some tables
   3) The member of a start-up company (ex-university employee or student) and the university's pre-incubator services
   4) The expert from the Protomo as business developer

5) **Spring event** is a big happening to get together all those interested in the university innovation activities – it is the time to celebrate the achieved results. Those researchers distinguished in technology or expertise transfer are awarded. In the spring 2010 the Bridge Builder, the Innovator of The Year, the Culture Changer and the Most Active Participant were honored with the Golden Donut -award. The guest speaker was Mikael Jungner, the former CEO of the Finland´s national public service broadcasting company YLE. He initiated a cultural revolution at YLE. His speech on mandarins and lemons became a living legend of the coffee breaks and talks on corridors: a change is evoked by concentrating the resources to the mandarins, lemons one should ignore.


6) **Student campaign** had more clearly the objective of entrepreneurship. The action included walkboard campaigns for drawing student's attention and to market upcoming events. We organized also events like Think Tank of Entrepreneurship in a local music bar. A masterstroke was to spice up a student union party by dropping hundreds of orange balloons from the ceiling to the dance floor with our visiting card inside. An additional cause for the students and their enthusiasm to hunt for the balloons might have been the drink vouchers inside the balloons…



Here was presentation of some of the activities to reach our objectives. Many more were realized, such as the innovation year calendar, parking lot campaigns, awarding the most active department, etc. Yet, new plans are under work!

## 4. Impact

The groundwork to achieve the objectives was well established through the activation campaign. The topic of innovation activities and technology transfer was highlighted and brought broadly to the awareness of the scientific community. Because conversation and transparency was increased – space and possibilities were opened up for the groundings of the new innovation culture at the university. The change was achieved in close co-work with the local society.

In the course of the years 2009 and 2010, the awareness of the staff was monitored through two interview studies. The first survey was conducted in November 2009, nearly after one year of activation campaign. The initial state of awareness, before any of our activation events, must have

been even weaker than the survey from 2009 showed. For each study one hundred randomly chosen staff members were interview and asked e.g. (see Figure 2).

1) Do you know that the university has support services for technology transfer?
2) Has the information campaign of the innovation services affected your way of thing about how to exploit research results?
3) Do you know what could be a commercializable research result at the university?
4) Do you know that the inventor gets 50 % of the profit even when the university owns the rights?

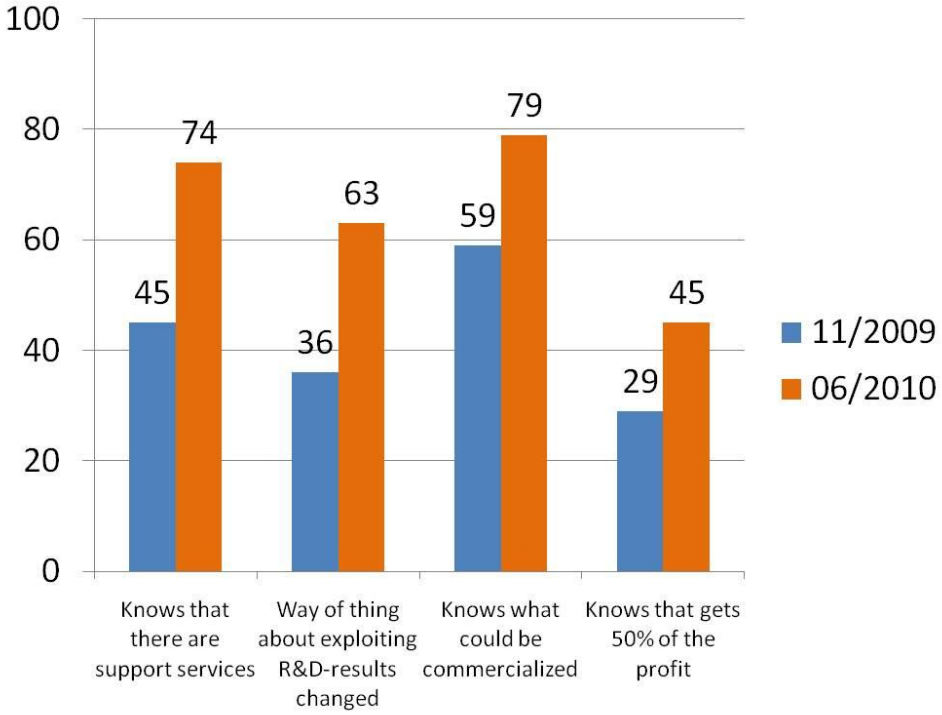



**Figure 2:** Results of staff interviews November 2009 and June 2010.

The effect of two years activation was clearly sensed in the short term impacts. The general atmosphere was communicating and the awareness of the staff was encouraging. Still, challenges remained and more work needs to be done. However, the results show that we are on the right track.

**Impact:** Short term impacts of the activation campaign have been:

- the R&D -staff has an better idea, what could be a commercializable research result
- the number and quality of invention disclosures increased (see Table 1)
- discussion and visibility of innovation activities at the universities increased
- creation of strong public image of technology transfer services among the university staff
- increased the number of personal contacts to scientist by factor of 100!

| | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|
| Invention disclosures | 8 | 14 | 7 | 25 |
| Disclosed ideas | 36 | 32 | 39 | 46 |
| | 44 | 46 | 46 | 71 |

Table 1: statics of disclosed inventions and ideas

This operation model effects in the long run a new way to build up growth in the region. Motivating the researchers to exploit R&D -results commercially strengthens innovations and knowledge build-up. The activation campaign has initiated an attitude change – researchers begin to take

commercial exploitation of research into account in the early stage of project planning and funding. The cycle is slow: 4 – 12 months for project planning and applying funding, plus 2 – 3 years for the actual research (Figure 3). Therefore we expect the number of disclosed research results, inventions and business ideas to grow further and the actual major change in technology transfer projects to happen in the coming years. This activation campaign and its impact support the rise of new generations of competitive companies, where naturally experts from different sectors are reasserting each other.

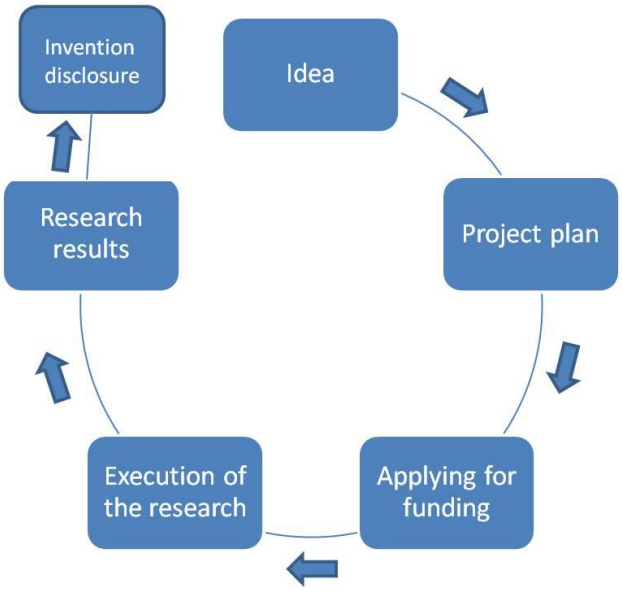



**Figure 3**: The way from the initial research idea to research results is a slow process.

## 5. Future plan

The operation model for activating and informing the research staff was proven to be effective. Yet, culture of an organization cannot be change in two years. Challenges remain. Still, the large part of the research staff doesn't recognize their personal advantages for getting involved in technology transfer. For example, 55 % of the staff doesn't know that they get 50 % of the technology transfer profit. At the same time, the belief that the university takes away all the rights and profit is one of the main obstacles for researcher to disclose their R&D –results. So, the activation campaign started end of 2008 must continue. We are realizing an intensive three year project to keep up the good work. The basic operation model is the same:

1) university supplies the IPR and technology transfer expertise of the university's innovation services
2) outsourcing services (KIBS-companies) supply the entrepreneurial approach and knowhow in marketing, event organizing and communication.
3) applicable disclosed inventions and business ideas are developed together with the local incubator

New part of the current operation model is to incorporate business aspect and commercialization tighter as starting point for the research projects already in the research planning phase. Disclosed R&D –results are evaluated and for chosen topics innovation services supply support for assembling research projects based on market needs. Also, at the university level barometers for rewarding and acknowledgment need to change in order to encourage the scientific community towards more effective commercial generation and exploitation of research results.

To change a culture of an organization is a time consuming process which requires patience, persistent work and success stories in order to lead to an attitude chance. This activation model has managed to bring in an amazing scale the innovation activities and the thematic of

commercialization of research results into the discussion among the scientific staff. It means well over 2500 personal contacts with the staff in two year! Scientists have started to think about innovating and their role in the process. Their willingness to talk about commercialization of research results, inventing and innovations has grown. When the players of the innovation process play together, we are on the right track heading towards the Innovation Union 2020.