



AAE 2014 – Innovation Support Process

Assessment panel report

2014-06-27

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Executive summary

Based on the Self-Evaluation report and the full day interview with internal and external stakeholders, our conclusion is that the Innovation Support Process at KTH is well functioning and overall highly regarded by idea-owners and external stakeholders. Furthermore, it is our conclusion that the output (new ventures, licenses, etc.) from the Innovation Support Process is of high quality and produces tangible, real potential for successful businesses, although the output volume could be higher. In addition KTH Innovation has succeeded in making the Innovation Support Process also an effective learning process for students and researchers.

To further develop the Innovation Support Process recommendations from the assessment panel are:

- Widen the funnel of ideas by decentralising idea-scouting to a part time assigned person at each school.
- Establish Innovation Dialogue every six-month with KTH Schools to make Innovation more visible at the School Management level.
- Spend more time on high priority cases and less time on slowly progressing cases.
- Enforce recruitment of external entrepreneurs to support research-based projects lacking a “champion”.

With that said, it was also made clear in the self-assessment report and from key external stakeholders that KTH top management is not viewing KTH Innovation as one of its key assets, nor is it giving it adequate attention and support.

Due to the changing international landscape for education and research as well as the increasing demand from research funding agencies to produce social impact, we recommend KTH to adopt Innovation as one of its primary tenets and to appoint a Vice President for Innovation.

Finally, it is our conclusion that KTH is doing great work with regards to the Innovation Support Process. However strategic leadership from KTH top management can significantly increase the output from this investment.

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1. INTRODUCTION

1.1. The Assessment process

The panel members were assigned by KTH to assess the Innovations Support Process (ISP) that was a part of the Administrative Assessment Exercise (AAE).

Our report is based on the Self-Evaluation Report compiled by KTH Innovation and on interviews performed during the site visit at KTH, 3-4 June 2014. During the site visit we met six different groups with representatives from:

- Internal stakeholders
- External stakeholders
- KTH Management
- School Management
- Idea-owners
- KTH Innovation Staff

ISP is one out of eight main processes at KTH Innovation and includes five sub processes; Initial contact; Idea Phase, Feasibility Phase; Project phase and the Close and evaluation Phase.

In the following assessment the five sub phases have been grouped into three:

- Initial contact
- Verification and development (Idea Phase, Feasibility Phase; Project phase)
- Closure and evaluation

1.2. Basis for the assessment

KTH has stated *“Hence modern research, especially that of our technical universities, needs to stand on factually sound and scientifically motivated legs, both in theory and in practice, so as to be fully justified. This applies to every kind of research project, whether it be basic, strategic or applied research.”* (<http://www.kth.se/en/forskning/forska/innovation-och-kommersialisering-1.4573>).

We base the following assessment on our own views:

- Highly ranked universities are often excellent in both research and innovation.
- A successful Innovation Support Process needs to be professional in identifying, creating and commercializing results from the academic environment.
- Most research funding agencies have an increasing demand on strategies for innovation and are less and less willing to fund research without demonstrated and credible subsequent utilisation of research results.
- To attract researchers that are creating cutting edge technologies a university needs a professional Innovation Support Process and demonstrated success stories.
- If the option to become a successful entrepreneur is seen as an additional career for students it makes the university more attractive for independent creators among prospective students.

2. ASSESSMENT OF THE INNOVATION SUPPORT PROCESS

2.1. Competence

2.1.1. Initial contact

Students and researchers participating in the interviews express their positive experience and highlight the professionalism of KTH Innovation in the initial contact phase.

School management points to the need of innovation to be more integrated and KTH Innovation to be more present in the research environment to increase the number of initial contacts between students/researchers and KTH Innovation.

2.1.2. Verification and development

Interviewees, inclusive stakeholders and idea-owners confirmed that KTH Innovation provides professional coaching during the ISP.

During interviews with internal stakeholders and KTH management it was clear that the critical mass of competence could be increased by closer collaboration between KTH Innovation and KTH Business Liaison Office, Legal department, Communications and International Relations department and last but not least with the Research Office.

ISP is well defined and structured thus making a professional impression. This also makes the organisation less vulnerable when someone leaves. A professional and demonstrable process also strengthens KTH Innovation's position in the innovation ecosystem and when applying for funding.

KTH Innovation has developed a number of practical templates and tools to be used in the Idea, Feasibility and Project Phases. The templates and tools are simple to use and helpful in the dialogue with idea-owners. The tools also allow the staff to get an overview of the status of the various projects in the portfolio. The assessors think that the tools are valuable assets and that they complement the structured process in a good way.

The competence of the staff is considered high and contains a mixture of start-up and business experience, IP competence and good insight of how the regional and national innovation system works. However, there is no one with a combined business and research experience who fully can understand the drivers and the challenges researchers are facing.

The "Innovation panel" is a web-based instrument where the network of alumni is used in a very interesting way. This tool was not so well described in the self-assessment but KTH Innovation provided the information during the site visit. The Innovation panel gives the idea owner access to a professional network comprised by experienced KTH alumni in different companies. This means that valuable feedback from potential customers can be provided early in the process. It also gives the idea owner an opportunity to make personal contacts and maybe prepare for future collaborations. This competence tool is however not exposed enough.

KTH Innovation has established collaborations with a number of actors in the innovation ecosystem giving the idea-owners access to competence and tools from for example: Stockholm School of Entrepreneurship, Venture Cup, Drivhuset, Connect and STING. However, there is no visible collaboration between KTH Innovation and the academic environments such as Stockholm School of Economics or the School of Industrial Economics at KTH, which could provide education and entrepreneurial students to the projects.

2.1.3. Close and Evaluation

External stakeholders find the quality of companies being delivered to be very high, yet too few in number.

The close collaboration with STING before, during and after the hand-over to STING means that coaching competence and network of the incubator is available early in the process.

The knowledge and insights transferred to the idea-owners during the process is an important contribution to increase innovation competence within the academic environment at KTH.

2.2. Service

2.2.1. Initial contact

All students and researchers are entitled to service from KTH Innovation and, based on the assessment, they get adequate support in the initial contact phase. However, information and inspiration work, in order to increase the number of initial contacts, is not as frequent as faculty and students would like it to be. Many do not know what support they can get. Information to students has been enforced during the last year but the awareness is still not sufficient. The team has reported that the goal is to spend 20% of their time to idea scouting. In reality it seems that the actual time spent in this phase might be lower because of other obligations.

2.2.2. Verification and development

The KTH team is very ambitious, highly motivated and eager to help their customers. Interviews with idea-owners confirmed our impression and some of them said, "I got all the help I needed".

However idea-owners in the Student Incubator call for explicit deadlines and more push from the coaches during the project phase to get the most out of the process before leaving. As mentioned earlier the tools are very useful and the web-based Innovation Panel makes a wide range of experienced people in industry available. The KTH alumni network reaches 500-1000 people and the response rate is 30-40%, which makes the Innovation panel a very valuable service for the idea owner.

KTH Innovation has just recently introduced a special track for "High Priority" cases where the coach can spend up to 20% of his/her time. This track was not included in the self-assessment report but was revealed when interviewing the staff. The assessors stress the importance of the need of this change.

The lack of entrepreneurs and the limited time that researchers can spend on the development of their ideas is a problem for the commercialisation process at all universities in Sweden. Thus, it still needs to be dealt with.

2.2.3. Close and Evaluation

The interviewees are clear about the criteria set for when a project should graduate from ISP. However, they still feel they can come back to KTH Innovation for advice if needed. The seamless handover for projects entering the STING incubator makes the transfer easier for the idea-owners and keeps the speed of development up.

2.3. Cost-Benefit Ratio

2.3.1. Initial contact

Although idea scouting is not a part of ISP, it is from the assessors point of view one of the most important phases. It is also a prerequisite to get high enough numbers of initial contacts and a critical mass of ideas to find high potential cases. Thus, the assessors consider that the budget for idea scouting and initial contact needs to be increased. A few good ideas could make a big difference and if they are not secured early, big opportunities might be lost.

2.3.2. Verification and development

Being a part of the university it is expected that KTH Innovation should give a certain support and feedback to all cases, regardless of their potential. However the cost and time spent on low priority cases in comparison with high priority cases has to be balanced in favour for high priority cases. In addition, some cases might be closed earlier not to waste time on projects with a very low potential to succeed.

Intelligent use of networks with interested and experienced people could be very cost effective. The Assessors consider the web-based “Innovation panel” to be a very good example of this.

VINNOVA demand that VFT funding should be spent on consultancy services. Today KTH Innovation has agreements with established consultants provided to the projects. Some idea-owners considered this not to be cost-effective. They call for complementary agreements with student consultancy firms to be used when appropriate.

Furthermore, the cost and time spent on finding out if each idea-owner have signed any agreements that may be in conflict with commercialisation of the idea, is far to high. This is due to the fact that the university does not have an overview of signed agreements and that collaboration between the Law Department and the Innovation Office is very restricted.

2.3.3. Close and Evaluation

The efficiency of the graduation process appears to be very high, especially for the cases handed over to STING.

The KTH innovation team involvement in the development of ideas is an important, valuable, effective and efficient part in the university’s activities to reach the goals for the “third mission”. The number of activities patents, licensing deals and start-up companies are tracked but the long-term effect on the society and the economic growth is not analysed.

2.4. Overall Innovation Support Process

2.4.1. Strengths

- A professional and ambitious staff
- A well-equipped toolbox
- A defined process for both breadth and high priority cases
- A strong engagement from KTH alumni
- Close collaboration and a seamless handover to STING

2.4.2. Weaknesses

- Low visibility and presence at campus
- To little time spent on idea-scouting
- Lack of combined research and business experience in the staff
- A shortage of entrepreneurs in research-based cases.
- A staff overloaded with work.

2.4.3. Problem areas

The problem areas pointed out by the assessors are not within the ISP but they highly affect the possibilities of KTH Innovation to succeed.

- Innovation is not one of the top strategic questions for KTH Management
- There is no collaboration between the Research Office and KTH Innovation in spite of the fact that most of the research funding agencies in Sweden and Europe demand a strategy for utilization/commercialisation.
- The communication about innovation and success cases is rather limited.
- The lack of collaboration between the Law Department and KTH Innovation.

3. RECOMMENDATIONS FOR FUTURE DEVELOPMENT OF THE INNOVATION SUPPORT PROCESS

3.1. Competence

- Use the available competence in the system even more. For instance by collaborating with Stockholm School of Economics and the School of Industrial Economics at KTH. If possible make high-level agreements.
- The Innovation Panel is a fantastic source of relevant and free competence offered to the idea-owners by KTH alumni. Expose this more.
- The team are now working together with STING to increase the number of available entrepreneurs that can speed up the process of developing business idea based on research results. This process needs to be enforced.
- Collaborate with the Research office in order to share competence and to make innovation strategy a natural part of research planning.

3.2. Service

- Establish “Innovation Dialogues” every six months with all KTH Schools, in order to enhance Innovation at School level.
- Increase the service to researchers and students by decentralising idea scouting to the KTH Schools and thus the funnel of ideas will widen. This needs to be decided by the top management and/or the school management. They need to appoint one person per school responsible to inspire and link researchers and students to KTH Innovation.
- The service to the high priority cases must be increased and time spent on low priority cases should be decreased.
- Establish collaboration with student consultancy firms.

3.3. Cost-Ratio benefit

- In order to get more effect out of money spent the team should spend more time on initial contacts and on high priority projects and less time on average or slowly progressing projects.
- The opinion of the assessors is that the team size and cost structure of KTH innovation is at the lower end of what is required to achieve a top position as a university successful in innovation

3.4. Overall

3.4.1. Opportunities

- If innovation becomes one of KTH’s primary tenets the work of KTH Innovation will get more attention among the internal and external stakeholders.
- A decentralised Innovation system with people responsible for Innovation in the academic environment at KTH will widen the funnel of incoming ideas.
- Collaboration with the Research Office can make integration of innovation strategies in research strategies more natural and thus increasing the number and the quality of future incoming ideas.
- More focus on high priority cases can shorten time to exit from the process and increase the competitiveness of the projects.

3.4.2. Threats

- Insufficient support from KTH Management
- Financing from VINNOVA and the Ministry of Education is withdrawn or decreased.

3.4.3. Proposals for Action

The assessors propose the following priorities for action:

- Widen the funnel of ideas by decentralising idea scouting to the schools.
- Establish 'Innovation Dialogues' every six month with all KTH Schools to make Innovation more visible at the School Management level.
- Spend more time on high priority cases and less time on slowly progressing cases
- Enforce recruitment of external entrepreneurs to support research-based projects lacking a "champion".

Although it is not a part of the assessment of the Innovation Support Process, the assessors have recommendations for the KTH management. The assessors consider it crucial for KTH to take action in order to get more output from investments already made.

- *Make increased Innovation output one of the top prioritized objectives.*
- *Appoint a Vice President for Innovation*
- *Schedule regular meetings between the President/top management and KTH Innovation.*
- *Appoint one person on part-time at each school to be responsible for idea scouting and to link researchers and students to KTH Innovation.*
- *Bridge the gap between the KTH Innovation and the Research Office.*
- *Create a better overview of agreements signed by KTH.*
- *Appoint a person responsible for communication about Innovation.*
- *Feed innovation knowledge into the system very early for example by mandatory courses in entrepreneurship and innovation.*