ARTIKEL 1

MIT setup for for innovation is like a Eco-System

Industries generally consider themselves better than academia in creating valuable innovations. However, the MIT structure for creating valuable research results might challenge this assumption.

Image text: MIT Labs in Boston. The place for the multi disciplinary projects.

MIT, a successful Academia innovation Eco-System

MIT (Massachusetts Institute of Technology) has, for an engineer like me, always had a strong brand name. Therefore, I was very pleased when granted the opportunity of visiting Boston in May 2015 to explore one of the most successful Academic Innovation Eco-Systems. Together with the Faculty of Engineering, at The University of Lund, as well as Vinnova, the innovation authority in Sweden, we learned that MIT has a decentralized & flat organizational setup. In contrast to the conventional structure of an organization, this makes the organization agile and adaptable.

Eco-System setup

I call it an Eco-System setup since there are many different organizations within MIT that are dependent upon each other, similar to an Eco-System in

nature. For example there are The Technology Licensing office, The Entrepreneurship Center , The Venture Mentoring Service as well as the Deshpande Center. In addition to these organizations there are also the Faculties of MIT. The different faculties consist of: professors, post- doc and students. James M Utterback, Professor of Management and Innovation at Sloan, describes the faculties' main objective as "Learning by doing". Although, within MIT it is known as "mind and hand" since the MIT founder William Barton Rogers created this motto in the 19^{th} century.
The faculties and organizations aim for projects with students from as many various disciplines as possible for maximized innovative results. They also encourage the students to create companies from these results for continued progress.

However, it is vital to promote these projects to the public. Therefore, to improve the commercialization of project results they have the Deshpande Center for Technological Innovation. The mission for the Deshpande Center is to move Technology from the MIT Labs into the world, as well as educate students and faculty in processes for commercialization of technologies. I believe that this dual purpose is important since it targets both the practical and theoretical knowledge, and simultaneously value the output of the projects. Leon Sandler (Executive Director) explains that they are there to **Select, Direct** and **Connect**. They **select** projects with high potential technologies that could impact the world through high potential markets. Then they **direct** the project by pushing for data and experiments that should interest and convince potential investors. Their network is also used for **connecting** the projects to different stakeholders for potential support and knowledge. They use experienced volunteers from all kind of industries to support the core team, which consist of only three people.

A decentralized network organization with a clear mission to impact the world brings together a lot of competent people. This makes the Deshpande center a highly productive ground for innovating new products and services for society.

Eco-System incentives

There are incentives for all stakeholders. For example, the professors can only stay in MIT as long as their research is world-class. Also, the professors at MIT cannot work in another company on the side. If you are a MIT professor you are obliged to dedicate your work hours solely to MIT. Nevertheless, they are permitted to invest. This motivates the professors to constantly produce rewarding results as well as world-class research.

Students and post-docs are provided the opportunity to work in front edge projects intended to impact the world. As well as the prospect of learning by doing, they also have the potential of creating new companies and possible wealth.

The volunteers get a chance to show gratitude to MIT through contribution in projects. They are granted a possibility to interact with interesting peers as well as discover new talents and influence the world. The volunteers are a very important component in the Eco-System setup, even from an economical perspective. Since the Deshpande Center is financed mostly by donations and from a small piece of the licensing fees from patents, volunteer work is equally rewarding for the volunteers as the organization. The donations can come from alumni; however, they also come from companies MIT helped start.

The circle of life in MIT from the economical perspective is fairly simple, and truly effective. When MIT files for a patent the income from the Intellectual Property licensing fees are divided equally between three groups: the MIT, the inventors, and the Faculty, who share the last third with the Deshpande Center. Since the most significant income derives from selling patents the endeavor to produce valuable results are prioritized, and that creates a greater income and so the circle is made.

What do you think?
Could this kind of setup be used in Swedish Universities?
What about company business development?

ARTIKEL 2

Could the MIT Eco-System help Swedish Universities support more innovation creation?

My experience is that in Sweden research is either knowledge driven or driven in cooperation with existing industry interests. Which means they are more focused on today's issues and therefore limiting their level of innovation due to a shorter time horizon. In contrast to MIT where they, instead of originating from what they strive to know, begin with what they wish to achieve. And an impact to the world takes a bit longer view something that we at GOOGOL believes strongly in. *A runner that only looks at his toes will have a hard time to adapt to a changing terrain.*

However, there is the educator exception that must be taken into consideration when discussing Swedish academia. The educator exception means that the school does not gain the right to the created IP. Instead it is the state employed educators, such as professors, who gain the right to the IP.

Innovation creation and the educator exception

Professor Ulf Petrusson at school of Business, Economics and Law in Gothenburg claims* that there are three major risks with having individuals responsible for the IP. Firstly, there is the risk that they simply sell the research results and therefore hinders further research at the university. Secondly, said individual could mismanage the IP by for example not protecting the result enough, which leads to inhibited research. Better, and more consistent, management can be supplied by the universities and is therefore, in my opinion, a better option. Of course the incentives must be adjustable to be able to motivate the educators to do the extra work if needed. Few people are capable to perform as both a Start-Up entrepreneur and a professor simultaneously. Thirdly, there is a risk that the research will be fragmented. By having multiple professors in charge of the research, they could sell the IP rights to different companies, obscuring the chances of the University gaining valuable research. A more profitable cause of action could be to create a more transparent university world where everybody could build on each other's research.

I am told that Sweden usually has more of a Yes and No approach. We set up a research project to verify if it works or not. My understanding from MIT is that they were open to set a new target during the exploration process. Their research aims to support projects that intend to impact the world. I feel that this is another approach than usual in Sweden.

Structure could inhibit innovation

My insight after the inspirational trip to Boston is that boundaries possibly exclude more radical ideas. Although, structure is important for a functional organization and innovation is built upon having the courage to think, and look, outside the box. In my opinion this issue is visible mostly in organizations with strong engineer-culture in Sweden. I have seen clear tendencies to design everything from the beginning so that anything not "designed-in" has a difficulty to get noticed. I.e. the funnel does not have a very wide entrance. I believe that a more open approach, such as the one we witnessed in MIT, could increase the possibility for new, more radical ideas, to evolve.

During my time at Alfa Laval I worked with LTH Industrial Management, amongst others, as well as with their students to involve new ideas in certain innovation activities. To interact with these bright students, their fresh minds and interesting insights is very profitable for both involved. However, incorporating a mix of students from different kinds of studies would increase the possibility of a more versatile innovation process in my opinion.

Maybe Swedish universities require something similar to a Deshpande Center of their own?

ARTIKEL 3

MIT Eco-System something for Corporate Business development?

Deshpande Center, not limited to universities

What if we created a Deshpande Center inside a company instead?
Some will probably claim that their Business development/venturing department is doing a similar job, and if so I would be delighted. However, it is not always functional and I know the importance of an organization functioning like the Deshpande Center.

Since I have worked at Alfa Laval for over two decades I have gained a lot of experience concerning profitable innovation processes. Similar to the Deshpande Center, Alfa Laval has a small organization that worked in this manner for a while, with the exception that it has not been connected to profit. Therefore, motivation has not been driven by profit and income. It has instead relied heavily upon intrinsic motivation from the people in the "core" team. This structure is, in my view, too dependent on people and their frame of mind. Substituting only one person could have a drastic impact on the results. Something similar to how MIT divides the IP licensing fee percentage might help with market focus, as well as showing the value of the initiatives. This is important since possible innovations in companies, outside incremental upgrades etc., need all the help they can get to show their value in a modern company.
A network setup similar to the Deshpande Center containing "volunteers" would also benefit knowledge exchange and transparency in the company. It would limit the risk of several different groups working on same thing without knowledge of each other. Also, it helps to tear down the “silos” within a company, which mostly counteracts the innovation process.

As a conclusion, the MIT Eco-System example shows a decentralized setup that produces significant innovations for the world. Fueled by committed people amazing results will be achieved. The aim to influence the world is much more engaging than inside goals like making the budget or pleasing your manager.

At Googol we have since our inception been advocates of networking and openness to increase and sharpen innovation capabilities. This is also why we have as a one of our core focus areas to establish and develop our clients Innovation Eco System.

Now, I recommend you to take a look at the MIT Eco-System setup and think about how you could use it for your organization. Maybe you have the power to go against the trend of more and more controlling systems?

I recommend a visit to the MIT innovation Eco-System in Boston. Both for the amazing experience, and also for the excellent seafood!

Klas Bertilsson
Googol Business Navigator
Sweden.

* Number 2-08 : http://web.archive.org/web/20100824224535/http://www.sulf.se/