

MGMT

of Innovation and Technology



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**IMIT – a major contribution
to research**

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By Christer Karlsson

IMIT, the Institute for Management of innovation and Technology, is an institute for applied research in the area of management of innovation, product development, production (including services), production processes, entrepreneurship and all related functions. IMIT's operations are characterized by integrating academic and practical perspectives to benefit research, businesses and other organizations. Concurrent knowledge development makes IMIT the ideal platform for applied research projects. IMIT has fulfilled this vital function for 40 years after being established by the representatives of some of Sweden's leading Universities. We can see that its mission is as relevant today as it was then, if not more so, when society is demanding research that leads to gains at all levels of society, organizations, businesses, groups and individuals, as well as academia. IMIT has become an effective link between research and businesses and offers research initiatives and supporting functions for the academic and business worlds to work in collaboration.

Mission

In addition to integrating the fields of management, innovation and technology; it is important to stimulate research, education, and the researchers at the universities. Effective project administration should be offered as well as effective organization for the collaboration between business and academia.

IMIT was designed to create value for three stakeholders; businesses, academia and researchers. Research is more valuable for business and organizations if it is integrated into, and leads to development, within their own organization. Universities receive more funding and interesting empirical research. Researchers will have more opportunities to get funding and to participate in interesting research projects.

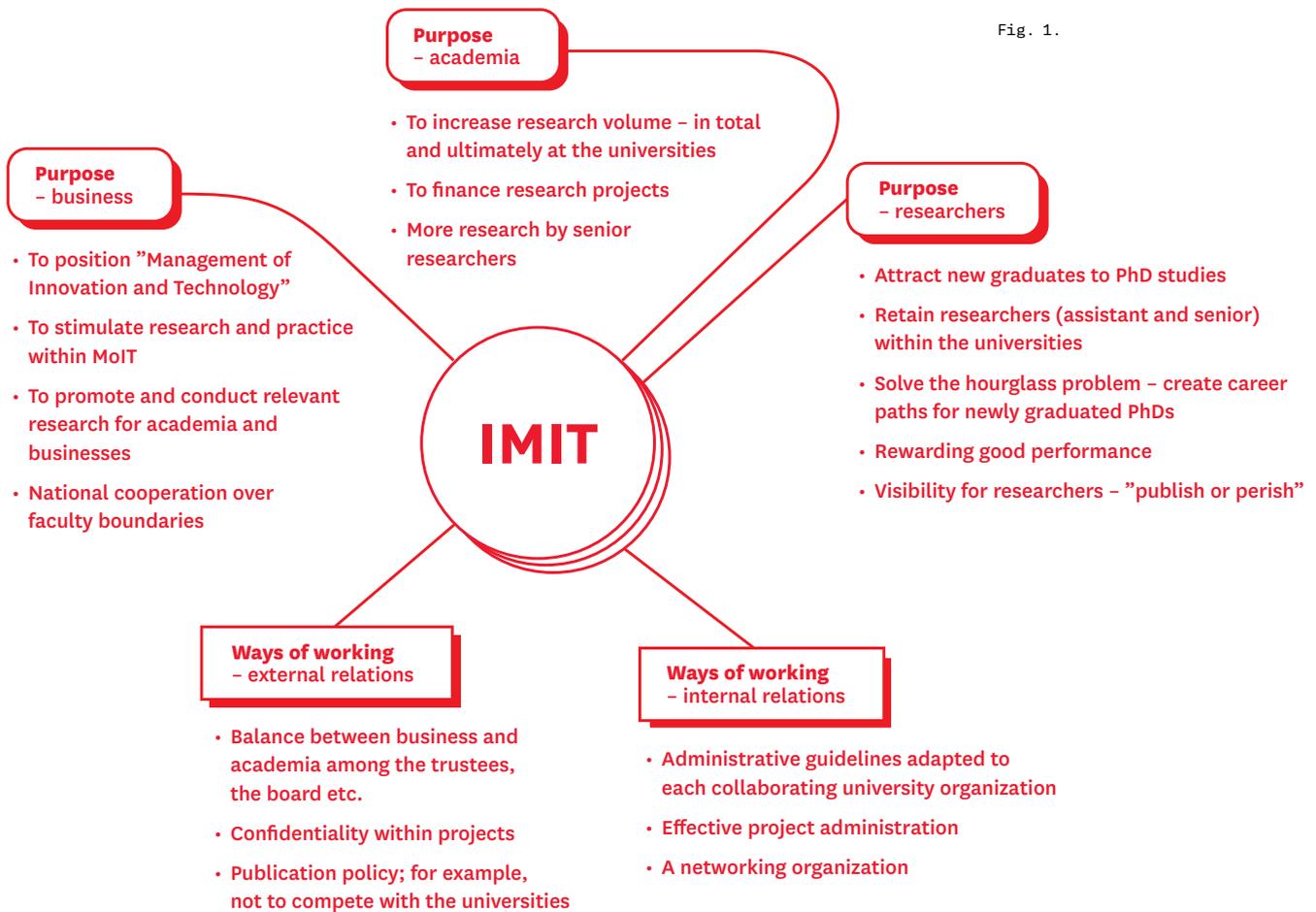
These purposes are vital in understanding IMIT's role and how it functions and are therefore presented in Figure 1, albeit, brief in point form.

Take a moment to reflect on these purposes and related

operating principles. They say a lot about what IMIT is and should be. Some may seem obvious, others are perhaps already well established and no longer necessary to express. For example, the area of MoT is now well established together with management of product development and production. It should be mentioned however, that when IMIT was founded there was only one professor in the world within the area of MoT, and that was Tom Allen at MIT. The fight is not over. At a lot of business schools, the subject is either non-existent or neglected.

Let me illustrate this with an example. In 1993 the CEO of ASEA wrote a letter to the Stockholm School of Economics to say the education on offer was probably fine for the finance sector but was not suitable for the manufacturing industry. I was then called back from the EIASM (European Institute for Advanced Studies in Management) in Brussels to the Stockholm School of Economics, to head up a new section called "Industrial Production". Welcomed by some colleagues who appreciated, amongst other things, my arranging

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fieldtrips to factories which was something entirely new. Marginalized by others however, who thought my subject was merely the application of their subjects. This story may be considered egocentric, but it illustrates something fundamentally important.

The area "Management of Innovation and Technology"

The area of MoIT, like other management areas, is interdisciplinary and overarching. It is built upon many disciplines such as organizational theory, finance, cost benefit analysis, marketing, amongst others. The narrow-minded professors were therefore partly correct. At the same time there was an explosion of interest from organizations and research financiers wanting to invest in research with both high academic content and practical relevance. IMIT entered into numerous contracts and could assign these research projects to the participating universities.

IMIT's role, organization and function - an organizational innovation

It was essential that IMIT should operate completely independently between organizations. IMIT was neither above, nor

below the universities, but between them. In today's management and strategy terms we could call it co-option, collaboration between competitors; for example, when two rival car companies collaborate to develop a new engine. New products of high quality are developed when knowledge and competences are combined in a resource-efficient way.

This could be achieved with a very small operation, supported by the collaborating organizations, the universities and businesses. As an example, Volvo's PR Director helped develop IMIT's first information sheet for business leaders; which we would now call a newsletter. The small administration team (1.5 people), were given two offices at Chalmers.

IMIT's organization has been talked about and described as an organizational innovation. The first obstacle was state-funded universities were not able to form independent research foundations. I looked into the legal and managerial aspects of foundations and came up with an idea. The founders and the governing body did not have to be one and the same. There are no shareholders in a foundation. So, the Swedish Institute of Management (IFL), the Stockholm School of Economics and Professors of industrial organization and economics from



the universities of Chalmers, KTH and Lund, came together as founders, and in accordance with statute, governing authority was transferred to the universities. IFL was able to donate a large amount of funding to IMIT, and Handel's Vice-Chancellor Per-Jonas Eliaeson, Professor Holger Bohlin from Chalmers, Professor Albert Danielsson from KTH, and Professor Hans Ahlman Lund from, as founders, all agreed to make a smaller, but still significant personal donation.

The principles for governing are also crucial. Business and academia were to have equal influence. A foundation does not have an owner, but instead the representatives from the governing organizations appoint trustees to form the board of trustees. Each University appoints two trustees from the business sector and one from their own University. They represent their organization at the highest level. The first chairman was the Chairman of the Confederation of Swedish Enterprise. Other company representatives were CEO, deputy CEOs and other business managers. This would prove to be very advantageous.

Operating principles

IMIT's operations should create simultaneous gains for both academia and the collaborating businesses. We can use the popular term business model, usually defined as consisting of value proposition, value creation and value capturing. The idea being that through research we can create value for the academic organizations, and at the same time, create value for the business or business. This is done through parallel knowledge development amongst the researchers and the employees in the business. Value can be realized through products; for the universities, this means published research, and for the companies it can mean improvements and innovation in their products and production. I have been stringent in adhering to the requirement for concurrent knowledge development, we are not consultants who sell solutions, nor academics in their ivory towers who fail to see what is relevant.

Ways of working

Based on the operating principles, we started discussing the approach we should take to ensure our principles were adhered to. In other words, we wanted consistency between our mo-

als and ethics. Hence, some 'guiding principles' were developed. Two such principles can be mentioned here concerning the sometimes-difficult role of complementing the universities operations, without it leading to conflict. First, IMIT facilitates the interface between the universities and is not a body which takes over the universities' identities. Therefore, a lot of material is published under each respective university's name, and when applicable, IMIT's name and that of the collaborating university or universities appear together on IMIT publications. Second, IMIT should serve as a complement to the systems within the collaborating universities, whilst at the same time promoting collaboration across boundaries. To avoid disrupting the systems in place at the respective universities, IMIT can therefore adapt rules or payments to reflect what is customary at each university.

Growth

It was not easy for a new, almost virtual organization, to be accepted and become established. However, the structure where trustees were appointed from companies, was a huge help, and IMIT received applied research projects from these companies. The trustees believed in the concept and sold it to their colleagues who, like themselves, were also at senior levels. It was hard to comprehend, but IMIT became known to businesses and other organizations both within Sweden and internationally. One assignment we had was to collaborate with a car manufacturer to develop a new production system. Not long after this I was contacted by a CEO of a large company in Southern Europe. In broken English he said, "Hello, is IMIT?" Soon afterwards I was flying out to meet them and tasked with developing a whole new production system. We made it clear we were not a consultancy, so we were allowed a lot of time for research which led to several published articles.

Fortunately, research does not demand huge investments. The board thought we should make a point of being project financed, it would show how good we were. We had little capital, so it was necessary for us to secure advantageous contracts, often with up-front payment and then invoicing as the project continued. We did not receive any further donations, but I applied for research grants for project development.

Extensive strategic projects in large companies improved our revenues and, having few overheads, our capital slowly grew. Companies provided us with better terms than research grants did. Projects started coming our way at an increasing rate. IMIT became known as the researchers for New Production Systems. An international conference which I started at EIASM (European Institute for Advanced Studies in Management in Brussels), derived its name from this (The International Product Development Management Conference).

It wasn't the subject area that was important. We became known, even famous, for how we integrated research with problem solving in collaboration with businesses. The methods we chose were not based purely on observation, instead we chose

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action research and clinical management research. We looked after and treated the patient (business) whilst studying them.

Then came the big breakthrough. I was working with an internationally renowned professor from MIT in Boston. When he was in Gothenburg he stayed at my home, and one evening he mentioned that MIT were planning a huge project in the car industry; it was talked about as being the biggest in the world, which proved to be the case. He thought IMIT would be a good fit for the project and he invited me to MIT. IMIT and many others, including myself, were involved and we became renowned as researchers in the car industry. For a while IMIT had 50 researchers working more or less full time on the project.

Continued expansion and building networks

IMIT underwent a generic development. More and more researchers wanted to work with IMIT, as did other universities. A faculty, perhaps we could term it a virtual faculty, with associated researchers was established. Local offices were acquired, and a researcher who represented IMIT was based there. It was all still simple, but things had moved on. New activities emerged, such as the PhD School.

It may sound like everything just runs smoothly, but things do not happen by themselves. IMIT has to constantly initiate and develop new research projects. The work takes place in universities, so this little organization needs to continuously demonstrate their academic entrepreneurship. Creating new projects and developing networks. Therefore, in addition to its continuously-creating Director, IMIT needs people with a real driving spirit. Sometimes people have been assigned specific roles for this purpose and called program managers. Occasionally new areas of research appear.

Challenges and the future

For research which is on the whole publicly financed, there is always a threat that government will make budget cuts and reduce funding to universities and related activities. The effects of which are not felt in the short term. I worry when I see businesses not investing in research and fear this reveals businesses no longer value their operations as much. A balance between public and privately financed research has been a strength.

Another challenge comes from changes within academia. Are the more traditional universities and their development programs losing out to the more virtual network-based organizations? Are some points in the Mission perhaps irrelevant now? IMIT must accept and react to new challenges, but with its flexible organization, this is achievable.

Continuous creation is necessary, but this is happening. Being able to achieve academic excellence and practical relevance are key, but this is also happening. It's all about "just" finding new all the time. Forever young makes forever new.



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Christer Karlsson is IMIT's creator and first Director. As a young researcher at Chalmers, he was assigned to investigate and plan IMIT, by Chalmers professor, Holger Bohlin and Per-Jonas Eliaeson, the Principal of the Stockholm School of Economics. At its conception in 1979 they saw Christer as being well qualified to become IMIT's first Director. IMIT's success lead to his becoming associate professor at Chalmers in 1981 and 1984 Professor at the European Institute for Advanced Studies in Management (EIASM), Brussels. In 1994 when the Stockholm School of Economics wanted a Professor in Industrial Management, it was Christer they appointed, and he also became the Director of IMIT for a second time, where he remained until 2004. He then became a Professor at the Copenhagen Business School, a role he holds currently. Christer is awarded Honorary Fellow at EIASM and European Operation Management Association and in 2019 Christer received the Product Development and Management Association (PDMA) Crawford Fellow Award.