



SHARING EXPERIENCE EUROPE
POLICY INNOVATION DESIGN

Case Studies in Design Policy & Programmes

This case study was developed as part of the SEE project. SEE is a network of eleven European partners sharing experience and stimulating debate on how to integrate design into innovation policies at regional, national and European levels.

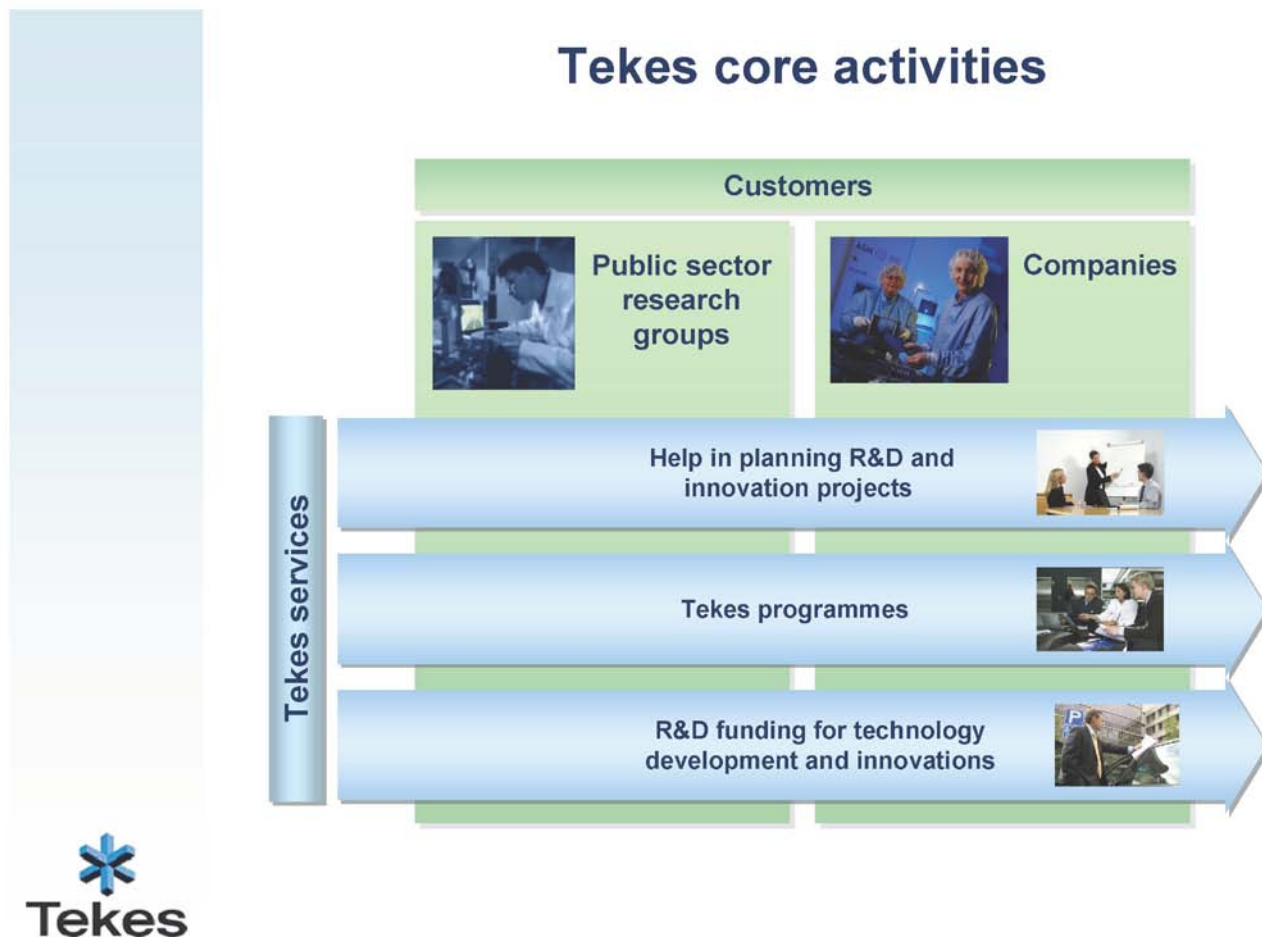
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TULI

Finland



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Innovation can be described as the act of turning ideas into profit. Many governments have recognised this potential and encourage collaboration between the public research institutions and industry in order to capitalise on their latent intellectual property. The success of this type of initiative is variable among different countries. The most significant challenges being; the initiation of the journey from bench to business, and, identifying the market demands of a new technology.

Tekes, the Finnish Funding Agency for Technology and Innovation, re-launched its TULI programme in April 2008 to encourage and support the initial stages of technology transfer from publicly funded research institutions to companies, or, to form spin-out businesses. TULI provides funds for researchers to evaluate the commercial potential of their work and, if it shows potential, assist in the commercialisation of the technology. In addition TULI provides business expertise and important contacts to the researchers, research groups or students wishing to commercialise their work.

Three stage technology evaluation process

TULI uses a three-stage technology evaluation model to ensure that technologies originating from publicly funded research are given every opportunity to be evaluated for commercial potential, and, to facilitate the strongest propositions into robust business cases.

An important part of the success of this type of programme is to encourage and teach researchers to think more about commercialisation. To do this TULI aims to make the programme as accessible as possible by empowering a contact person in every research institution and university with the authority to immediately grant funding for the first technology evaluation stage, worth up to €5,000. This first of three evaluation phases is a screening exercise that can take a few weeks to complete. It evaluates the preliminary commercial potential of a case.

Upon completion of the first stage, the technologies which prove commercially feasible, can apply for a second TULI evaluation fund up to €20,000. As with the first stage of funding, this application is also considered by the University and the assigned project group. To assist with their decision each application is subjected to a checklist of questions. The checklist asks questions similar to those venture capitalists would use when they evaluate cases and it allows TULI to decide what surveys might be needed to take the case further. This could include commissioning competitor analysis reports, purchase market surveys, hire expert advice and/or the preparation of the business model. The main purpose of this exercise is to further clarify the findings of the original report and verify the commercial evaluation of the technology and its potential market.

	Initial evaluation phase	Commercial evaluation phase	Refinement phase
Maximum funding per application	€5,000	€20,000	€30,000
Decision-maker	TULI contact person in research institutions	Project group	
Response time	Immediately	Within a month	
Duration	A few weeks	1-3 months	1-6 months

The third 'refinement' phase is to overcome critical commercialisation bottlenecks identified in the second stage of the evaluation process. At this point a new prototype could be developed, more laboratory work commissioned or more testing completed in order to prove the concept and guarantee the optimal development of the final product. Sometimes researchers are mostly interested in the third phase, proof-of-concept, because they can include laboratory work into the costs. The three phase approach is there to ensure the third stage is commissioned on the full understanding by the researchers of the commercial focus of the exercise.

The three stage approach is there to inform researchers what they need to know before they make the commercial leap. It provides a checklist of things they should consider in order to find the commercial potential of their research.

The three stage TULI approach can be flexible towards the requirements of some cases when it is regarded as beneficial to the progress of its commercialisation, i.e. the three steps do not determine the activities, but the assistance that the venture requires in order to progress. For example, one case may require a €10,000 market research exercise instead of a stage one €5,000 survey. This could be approved on the grounds that the dynamics of the potential market are known and that a more thorough research exercise is required. Such exceptions have to be well argued, however the three stage approach has provided the best results.

It is possible for a research group to have their technology fully developed into a feasible commercial proposition including market research, prototype development and business plan within a year. However it is often the case that it takes longer to reach commercialisation. In the process they can receive up to €55,000 towards the evaluation and development costs. TULI is one of many publicly funded tools to support such entrepreneurial activities and it is often the case that other such tools also contribute funds and expertise towards the projects.

Through the TULI initiative, research groups also have access to experienced business advisors, who in turn can make introductions to key contacts in industry.

Design cases

Although the TULI fund is intended to encourage the commercialisation of research work from laboratories, it is also receptive to applications from design lead projects. Non technological innovation originating from design projects apply for TULI funding in a more advanced state of market readiness than 'raw' laboratory research work. A good design concept will already have market and customer needs identified and addressed as part of the early stages of the design process and will invariably be at an advanced stage of development. Designers will be looking for support to attract manufacturers, identify distribution channels and buyers or assist in final prototyping or production costs. Compared to the task of commercialising technology from a research stage, the design led cases commercialise more easily.

In the national context of the TULI scheme, designers provide the minority of cases. This could be partly due to the amount of funding provided by TULI that sets a certain limit for the number of cases each university can submit. Universities are inclined to use the funds to develop raw technology further, e.g. to provide additional proof that the technology in question really works. In these cases designers are rarely used because the cases are still on a technical development level.

The recent formulation of the new Aalto University is intended to improve collaboration between the creative and science disciplines. The possibilities of design students working with engineer students will hopefully provide hybrid propositions to the TULI programme in the future.

Results to date

Financial support and expertise does not guarantee successful commercialisation, it is largely down to the quality of the idea or technology and the dedication of the research group to drive the project forward. Success is also determined by the strength of the collaboration between the academic and business partners to turn the technology into a profitable venture.

"Commercialisation is team work and we have to find the best players participating in it. It all starts with the idea; if the idea is not feasible there is no way anyone can build a viable business around it." Tiina Tolvanen, TULI

In order to monitor the programme, its deliverables and its progress, each University is reviewed on a yearly basis with a questionnaire. In addition the participating universities have to report to TULI about any income generated from licensing and spin off companies. In turn this data is relayed to TEKES, the funding agency and creates an impetus for the universities to focus their TULI efforts into commercialisation activities.

In the last three years of the programme a total of 1,830 applications received funding, of these the majority came from invention disclosures. The success rate of the projects establishing business start ups and licensing deals is approximately 2.3%. 26 such projects (in 2007 and 2009) created an annual turnover of €920,000; equating to 34% of all licensing and technology sales of their respective universities. It has to be noted that commercialisation requires a long time span and that reliable results can be collected three years after each venture starts trading.

In an earlier edition of the TULI programme from 2002 to 2006, over 1500 research-based inventions or business ideas were evaluated. Ninety nine projects advanced into licensing deals and 184 into founding a new business. This equates to a higher success rate of 18.9%, which could be accounted by the longer assessment period of the programme. The annual funding of the earlier edition of the TULI program was approximately €2,500,000 during 2002-2006, equating to an approximate average of €6,667 per application.

The TULI programme

TULI programme's history goes back to 1990's when the concept was first introduced. The current five year edition of the TULI programme was launched in April 2008 as part of the Finnish government's third mission strategy for Universities, i.e. to create new industries and improve competitiveness through greater commercialisation of university activities. TULI has four main objectives to be completed by 2014:

- to support the commercialisation of publicly funded research results,
- to increase commercialisation in 40 universities, polytechnics and research institutes
- to promote cooperation between research organisations and companies
- to create successful and viable businesses through start-ups, spin-offs and technology transfer

The total budget for TULI (2008-2014) is approximately €50 million, 60% of the funding comes from TEKES (The Finnish Funding Agency for Technology and Innovation) which is funded by the Ministry of Employment and the Economy. The remaining 40% is covered by the Universities, mainly financed by the Ministry of Education. In total the TULI programme is government funded.

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