

MP1



Keyfigures 2005

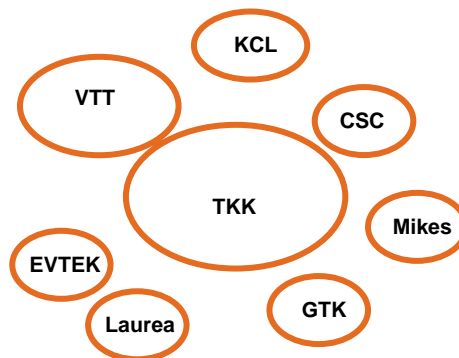


1 253	Degrees total
1 017	Master of Science (26.6% women, 6.9% int. students)
86	Licentiate of Science
150	Doctor of Science (women 30.7%, 9.3% int. students)
15 166	Students total
12 381	Undergrad. (19.9% women, 3.7% int. students)
2 785	Postgrad. (27.6% women, 10.5% int. students)
93	Open University
13 328	Adult Education

42% of Master of Science (Technology) degrees and 52% of Licentiate of Science (Technology) in Finland at TKK.

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MAIN ACTORS OF THE OTANIEMI SCIENCE COMMUNITY



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Sanan women sijasta sana female

Undergrad ja post grad sanat tulee muutta, koska Bolognan jälkeen undergrad=kandiopiskelijat ja post grad = MSc ja Dr-opiskelijat.

Siis: 12 381 Bachelor and Master Students

2785 Doctoral students

Ei lisensiaatin tutkintojen markkinaosuutta ole tarpeen esitellä, mutta tohtorien kyllä.

Kuvat varmaan vaihdetaan, nämähän on jo käytetty alussa

Matti Pursula; 16.06.2006



Otaniemi Network Model © HUT/OIIC

- Otaniemi Science Park was developed on the campus of Helsinki University of Technology (TKK).
- Otaniemi arean and concept is awarded by EU



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Continuing education as a university-industry link

Rector Matti Pursula
Helsinki University of Technology (TKK), Finland

Industry and Technical Universities: New and traditional modes of Collaboration
26th Conference of Rectors and Presidents of European Universities of
Technology
ETH Zurich July 5-6, 2007

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Lifelong learning in public policy

The role and importance of Lifelong Learning (LLL) has been stated in many [European Union](#) policy documents and in the communiqués of [the Bologna Process](#)

The [EUA](#) in Lisbon Declaration (2007) states

Universities understand the urgent need to make LLL a reality ... with regard to continuing education and training for well-qualified graduates

...engaging in LLL provides particular opportunities for strengthening local partnerships... and responding to the challenges of regional development

The [Finnish government](#) has in several development programmes emphasised the importance of LLL and CE

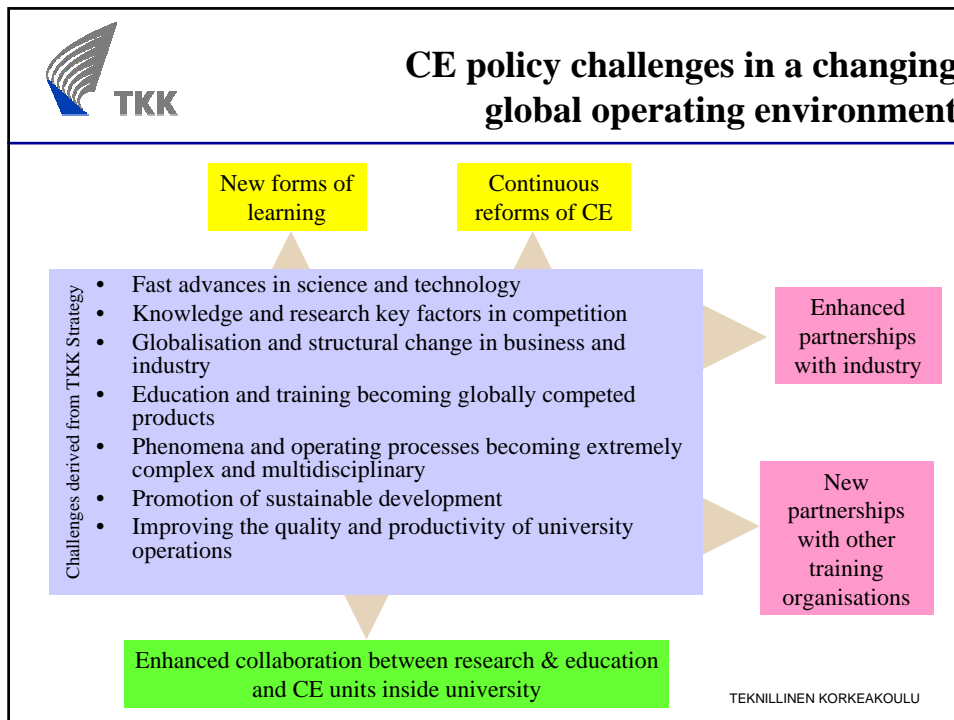
The Ministry of Education ordered all universities to develop a LLL strategy by the end of the year 2006

The Ministry has from late 1990's rewarded universities by a three year period nomination to a University of Excellence in Adult Education (TKK has got the nomination twice, for years 2001-2003 and 2007-2009)

The Ministry finances development projects for new approaches in university CE activities

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CE policy challenges in a changing global operating environment



TKK 2015 Strategy

- Four main lines of action
 - Internationalisation
 - Quality and renewal
 - Cooperation with society
 - Continuing education services are part of this action line
 - Digitalization



TKK Basic view in Continuing Education

The basic target group of TKK continuing education services are the TKK graduates (alumni), whose needs for continuous updating of knowledge during the whole professional career have to be served

LLL Center Dipoli has the main responsibility of the LLL activities of the university

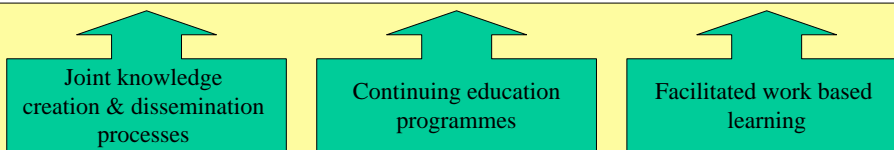
The tasks in organisation of continuing engineering education services:

- to organize university-level continuing education in engineering, management and other important fields in close connection to the industry and to the TKK units responsible for basic education and research
- to develop and maintain the dissemination, transfer and rooting mechanisms of knowledge created in the university, as well as knowledge management methods, so that new, visionary knowledge and applications are further developed and implemented extensively in working life
- To transfer knowledge of changes in working life practices and engineering business and learning paradigms from the society to the university
- to participate in the development of the university's 3rd mission activities in the way required by the society's development.

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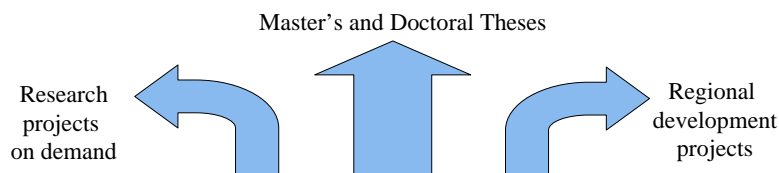


The 3rd mission



University – Industry cooperation. Universities need to have:

1. High level knowledge and know-how on competence development,
2. Deep understanding of ICT & industrial productivity,
3. Effective knowledge management & project management



**The basic missions of universities:
scientific research and higher education**



TKK LLL Strategic Principles

Principal policy 1:

- TKK will direct its activities so that it will be a forerunner and recognized developer of lifelong learning and continuing education.
 - At the moment, an international peer review of Dipoli's LLL activities is going on to benchmark the present situation

Principal policy 2:

- TKK's aim is to align all institutional policies and activities in a logical continuum supporting the education of engineers in such a way that attracts best students, ensures them as a result of studying a high motivation and readiness for LLL and supporting their professional development and high employability throughout their career.

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TKK LLL Strategic Principles (Cont...)

Principal policy 3:

- TKK will recognize working life development needs and derive actions from them. Continuing education activities pool their strength from TKK's teaching and research and in turn support strengthening TKK's position in the forefront of lifelong learning.

Principal policy 4:

- TKK's adult education services are financed, in line with the regulations, through attendance fees, agreements and other sources of funding. The aim is to increase the volume of commercially-priced continuing education, thus allowing to finance the major part of the development activities with the profit gained. TKK can, selectively, subsidize continuing education and its development when it is justified in terms of national education policy, and remunerated by the government or other funding source.

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Examples of successful CE courses in cooperation with industry

- Corporate Security (since 1991)
 - The CPD-programme for Security Management has been designed for those who have at least a college-level degree and have worked in the field of security and risk management for a minimum of five years
 - The Advisory Board
 - chaired by the Rector of TKK
 - consisting of representatives from industry, government, other organisations in the field
 - supervises and develops the programme
 - Several programme possibilities
 - Security Management 30 cr
 - Master of Security 90 cr
- Patenting in industry
- Project Management in Construction Industry

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Some numbers of TKK CE

- Continuing education units
 - TKK Dipoli, turnover in CE activities about 8 million €/year, part of the actions running on deficit
 - Private sources cover 45-50 % of CE turnover
 - Most of the activities are joint projects of public and private actors
 - TKK Executive School of Business (MBA programs), turnover 1 million €/year
 - profitable (organised as a company owned by the university)
 - TKK Center for Urban and regional studies
 - CE course activity in urban and regional planning is subsidised by the Ministry of Education as a national task
 - TKK Lahti Center, local CE for example in Quality management, Design Business management
 - course activities partly supported by local authorities and EU regional development funds
 - TKK Open University and ad hoc activities of the departments
- Altogether about 170 persons and 17 million €/year (including Dipoli Congress activities)
- The economy of the activities is a big challenge in ever tightening competition with private and public organisers of continuing education

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- The challenges and expectations towards engineering universities are high
 - CE is only one, and not the most important issue in meeting the objectives of the society
- CE has to be an integral part of the university strategy and actions
 - The university's own knowledge has to be the core of CE given by the university
 - The target group and goals of CE have to be defined
 - CE has to reflect the changes in the industry and working life
- CE also has the function to transfer knowledge from industry and society to the university to serve the renewal of the research agenda and curriculum development
- International networking is of high value in CE development
 - EU programs, international organisations and networks like SEFI, IACEE, EDEN
- The financing of CE is problematic, especially in the fully private education market
 - Tailoring and strategic CE partnerships with industry are one way to overcome the problem
 - Public funding (both national and EU) for universities is very often limited to additional costs and there is only a minor surplus for overheads
- In all, CE can be a valuable tool in the university strategy, but clear guidelines are needed to keep the focus and maintain economic sustainability

**TKK Lifelong Learning Strategy and
other useful information can be found on:
www.dipoli.tkk.fi/english**



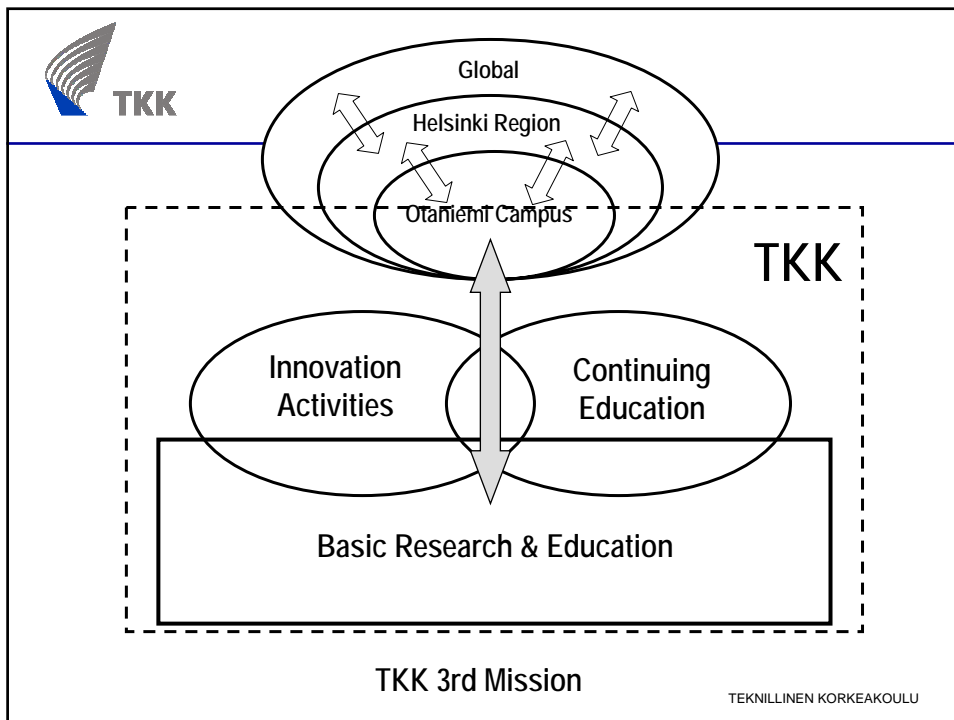
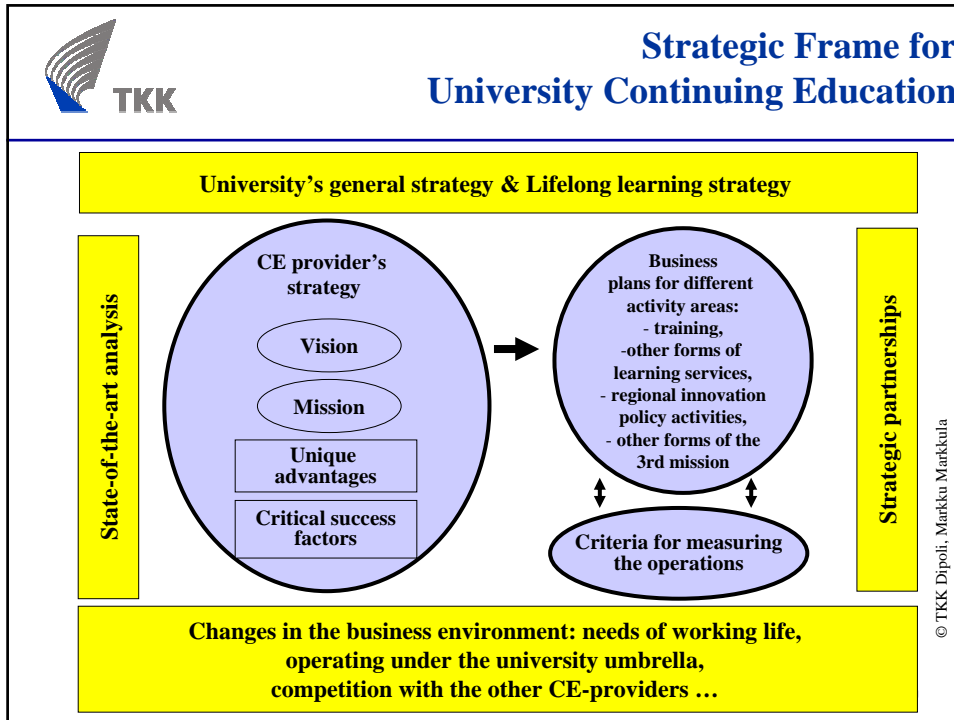
5th European Forum

State-of-the-Art – Continuing Engineering Education (CEE) and
Continuing Professional Development (CPD) – Challenging the Future

6–10 November 2007 • Rovaniemi, Lapland, Finland

SEFI – FEANI - IGIP

www.ceeforum2007.fi

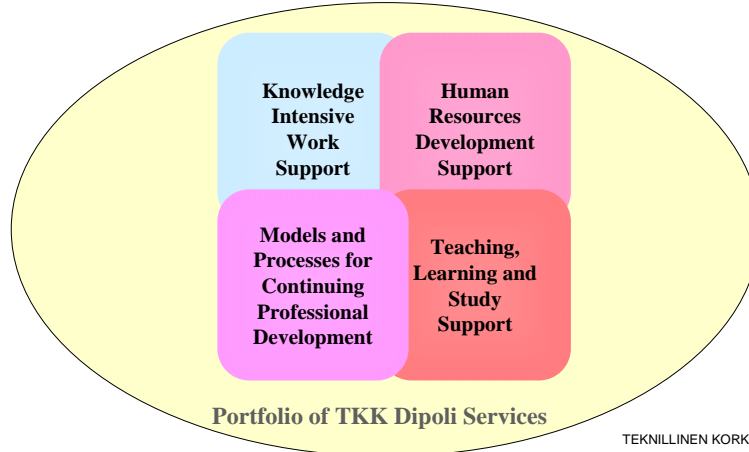




TKK Dipoli Services for Customers

Organizing traditional CE Programmes is a core, but not enough:

Categories of Professional Development Services
for Companies and Other Customer Organizations



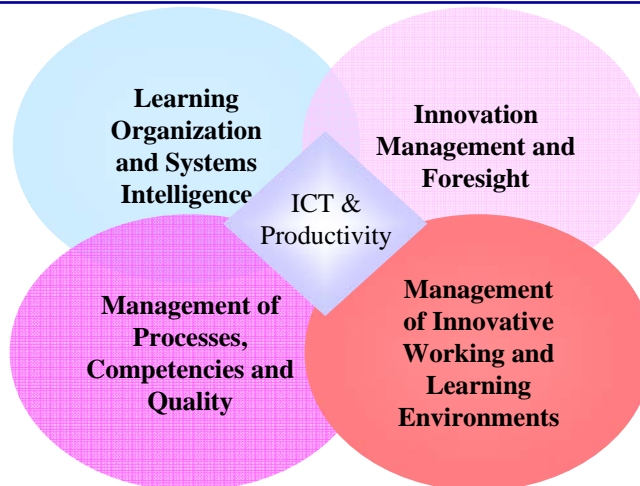
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TKK Dipoli's Organizational Core Competences

TKK Dipoli: Four core competencies
needed for managing change



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CE and the Universities of Technology

1. Technical universities play a pivotal role in helping EU to meet critical [Lisbon strategy](#) objectives (especially in university – industry cooperation).
2. [EQF European Qualifications Framework](#) (in practise the competence development framework) is important also for CE. In addition to the degrees based on the Bologna process we need to develop a system of Continuing Education (Masters & Diploma & Certificate level studies in CE). (London follow up meeting in 2007)
3. The EU eLearning and LLL initiatives look upon the pull-power of European technical universities.
4. The EIT initiative is the apex linked to all these endeavours with special focus to knowledge creation and knowledge management. (CE not included in the activities?)

Continuing education is only one of the activities needed in answering to the Lisbon strategy and the other timely challenges

The question is, how can we meet the increasing needs of the society in the ever tightening resource situation and global competition?

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TKK's Strategic LLL Development Targets

1. TKK will increase the readiness and motivation of degree students for lifelong learning.
2. TKK will introduce an adult education model and develop its continuing education so that most of it will fit into the credit system and that the supply will be accordant with the model.
3. TKK will develop its continuing education so that it will be, distinctively, producer of professional development services demanded by the graduate engineers and their organisations.
4. The role of continuing education as cooperation platform between working life, TKK's and international research community will be concretized.
5. TKK will selectively strengthen its role in international R&D of lifelong learning and, along with this, increase the volume of continuing education, and improve its quality.
6. TKK will develop, together with TEKES (Finnish Funding Agency for Technology and Innovation), other authorities and industrial organisations, foresight of working life development so that the TKK community will reach a comprehensive view of possibilities brought by technological development, and can better direct the training programmes to the needs of working life.
7. TKK will develop the cooperation and role division between the units involved in adult education, and define the financial footing of adult education, keeping in mind the universities' 3rd mission and other obligations set by the Ministry of Education.

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Implementing the TKK LLL Strategy

- The implementation is directed by the annual negotiation and agreement procedure between the rector and the units. TKK's departments, separate institutions and administrative units cover these strategic policy definitions in their action plans. The results and problems are noted in the Annual Report and in the interim reports.
- TKK's **Adult Education Committee** will monitor and steer the realisation of the strategy. It will also make suggestions to different organisations of actions that it thinks can improve the strategy's implementation.
- The strategy covers all TKK activities. TKK emphasizes extensive cooperation, task division and strategic partnerships within the University, and with the interest groups. Cooperation with other actors in Otaniemi is of vital importance.

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TKK Dipoli's Cooperation with TKK Departments and Other Units

TKK's departments and laboratories have knowledge needed in working life: research results, contents, materials...

TKK Dipoli is an effective organizer of knowledge transfer and knowledge creation in the following activity areas (different levels of cooperation):

1. **Organizing of continuing education**
2. **Organizing and marketing of tailored continuing education to target groups**
 - TKK Dipoli in the role of broker and facilitator
3. **Planning continuing education programmes together with the faculty**
 - methods, organization and marketing from TKK Dipoli
4. **Planning seminars, workshops and other learning and training activities**
 - steering group, methods, materials, management, marketing
5. **Organizing more complicated forms of cooperation projects to develop professionalism in the field**
 - development projects
 - continuing education entities
 - advisory board
 - administration, coordination, organisation, marketing

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Success Factors of TKK Dipoli

The following strengths form the basis of TKK Dipoli operations:

- credibility as an integral part of TKK,
- high-quality, university-level education programmes,
- pedagogically innovative planning and implementation,
- fast response to changes in the business environment based on close industrial cooperation,
- long-term cooperation with customers and other stakeholders,
- domestic and international networks,
- the premises Dipoli Building, a vivid, national and international meeting forum for the key operators of various fields,
- location within the Otaniemi science community.

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Not Just Traditional Adult Education

- TKK has been nominated as University of Excellence in Continuing Education for 2007-2009 (and previously in 2001-2003)
- According to the feedback received from the Ministry of Education & the Finnish Higher Education Evaluation Council:
 - Versatile and interesting development work in education and regional progress is being done in TKK's adult education by participating actively in different networks.
 - Cooperation with working life and interest groups is strong and diversified, both in Finland and abroad.
 - Predicting the changes in working environments and in competence needs is active and versatile.
 - TKK's adult education strategy is closely linked to the University's general strategy and the action plan deriving from it.

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