

The Grand Challenges – HUR?

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The Grand Challenges – HUR?

- Genom att göra vårt eget arbete så gott som möjligt för att kunna ta ansvaret och rollen som vägledare för utvecklingen mot en bättre värld
- För att lyckas måste vi se kritiskt på våra egna aktiviteter och attityder och omformulera våra mål, strategier och arbetssätt, där det behövs

Meeting the Grand Challenges

The Lund Declaration 2009

- Strengthening frontier research initiated by the research community itself
- Taking global lead in the developing of enabling technologies
- Bringing together supply side and demand side measures to support both business development and public policy goals
- Excellence and well-networked knowledge institutions
- The creation and maintenance of world class research infrastructures
- A risk-tolerant and trust-based approach in research funding

The areas of change

According to the Lund declaration the universities have to reassess

- their missions, management and structures
- their approaches to education and facilitating learning
- their pursuit of research
- their involvement in innovation activities and regional and national development

The internal needs for reassessment include

- A new multidisciplinary approach in teaching and research
- The new ways of learning
- Internationalisation

Tekniska högskolornas roll

- Vetenskap och teknik har traditionellt sett haft en avgörande roll i lösningen av de stora utmaningarna
- För att kunna ha en märkbar insats måste offentliga och privata organisationer samarbeta för att skapa en välfungerande kunskapstriangel
- Det är viktigt att förstå, att de stora utmaningarna är anknutna med människornas beteende och strävan efter ett bättre liv
- Därför behöver de tekniska högskolorna ett vidsynt och mångsidigt arbetssätt med samarbete mellan offentliga och privata organisationer och med andra vetenskapsområden, såsom beteendevetenskap, ekonomivetenskap, design, osv.

Aalto University

- Where *Science* and
Art meet **Technology**
and *Business*

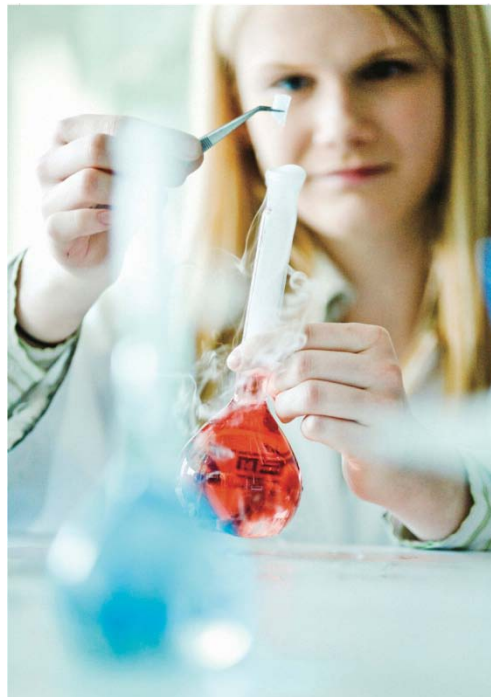
Aalto University: An example of change

A merger of three leading Finnish universities operative 1.1.2010

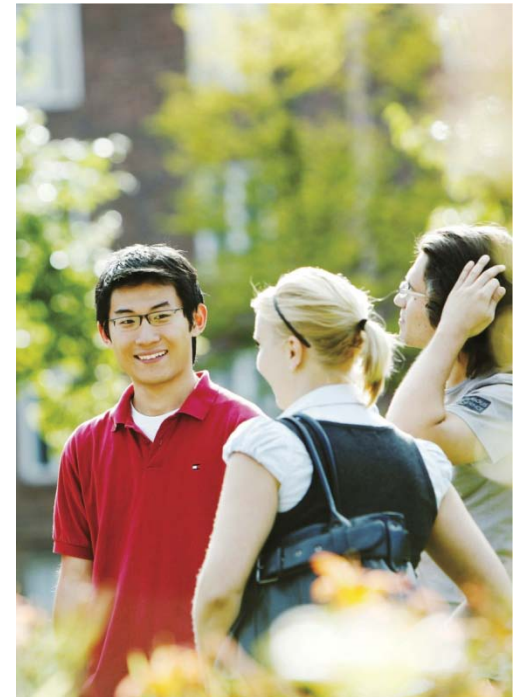
Art & Design
founded 1871



Science & Technology,
founded 1849



Economics,
founded 1911



Aalto University: Reassessing the Mission

Aalto University will strive to change the world through

- **top class interdisciplinary research,**
- **pioneering education,**
- **continuous renewal, and**
- **bold surpassing of traditional boundaries**

We will educate responsible and broad-minded experts with wide perspective to act as future visionaries in the society



Values

Passion to explore boundaries.

Freedom to be creative and critical.

Courage to influence and excel.

Duty to care, accept and inspire.

High ethics, openness, and equality



Aalto University

Reassessing the management and structures 1

- **Governance system**

- Aalto University is a foundation

- Capital of 700 million euro is given by the State (500 million) and the private industries and private persons (200 million)
- Increased yearly funding for 10 years to give a good start

- Strategic Board

- Seven members coming from outside the university
- The board nominates the President, Vice Presidents, Deans and Directors of service functions
- Board decides the yearly budget and strategic guidelines

- The board is nominated by the University's Committee on Academic Affairs

Aalto University:

Reassessing the approach to education and facilitating learning

- The goal is to create a new type of learning and student centered academic culture in research and education
 - Better commitment of students and personnel
 - Learning outcomes based approach
 - Strengthening the Bologna model
 - New approaches to teaching (Factories)
 - Increased involvement of students to research
- An international peer evaluation of teaching and learning (TEE) in all the six schools has been started now after the RAE

Aalto Factories

Multidisciplinary Opportunities

Expertise workshops and the first new platforms for collaboration within Aalto University

- Design factory
- Media Factory
- Service Factory

The factories are environments for learning, teaching, research and co-creation between universities, companies and society.



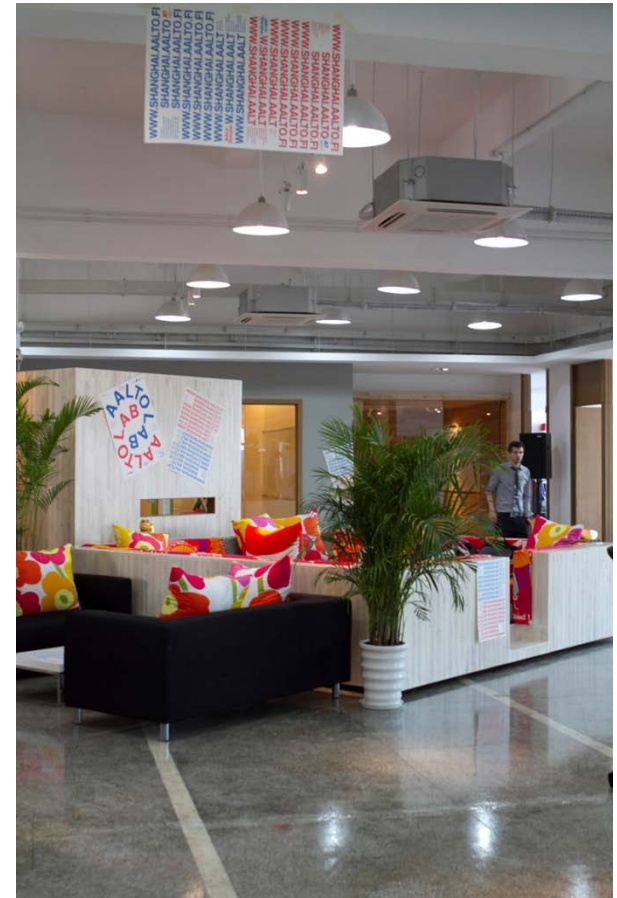
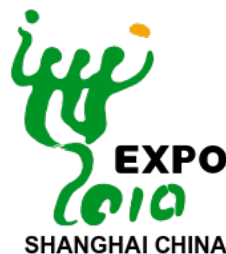
Aalto Design Factory

- An interdisciplinary product design and learning hub uniting students, teachers, researchers and industry (operating 24/7)
- An experimental platform (started in Autumn 2008), a constantly developing physical, social and mental environment (3 000 square meters), aiming to support interdisciplinary and international co-operation between parties interested in design and development.
- The Factory hosts a number of courses, research projects and start-up companies, as well as some other co-operation projects.



Aalto-Tongji Design Factory ATDF

- Joint project between Aalto University and Tongji University
- 1000 m2 of creative, transformable space bringing together students, research, industry & society
- Passion-based co-creation platform for interdisciplinary collaboration
- Opened 25.05.2010



**Aalto in Solar Decathlon 2010:
Zero energy wooden house Luukku
An example of multidisciplinary approach**

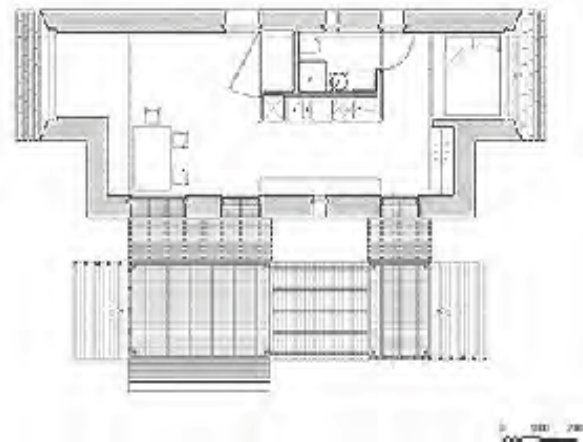


LUUKKU TALO

Solar Decathlon Europe 2010

18.-27. June 2010, MADRID

kilpailussa 5. sija
arkkitehti, energia-, talo- ja rakennetekniikan alan
opiskelijoista koostuvalle 5 hengen joukkueelle



vuoden puurakennepalkinto 2010

The Luukku house



Aalto on Tracks

An example of student enthusiasm

- Aalto on Tracks took 83 Aalto students (and a few members of staff) from Helsinki to Shanghai by train 14.5. - 24.5.
- Aalto on Tracks was a joint project of the **Aalto-community** : Aalto University, Aalto University Student Union, Aalto Design Factory in Shanghai ja Aalto Entrepreneurship Society
- The project was planned and realized by student volunteers
- The aim of the project was to make Aalto University, Finland and Finnish education known to the World, and to offer the participants cross-disciplinary learning experiences



Aalto University:

Reassessing the pursuit of research

- An international Research Assessment Exercise (RAE) was done in all schools in 2009 as a starting point for development
- Research strategy focuses on current strenghts and **areas seen important to the university and society**
- The university supports excellence and ambition
- A tenure track system is created as a central strategic tool in the creation of focus in research and education
- Creating strategic partnerships with universities and industry on a global scale
- Internationalisation of the staff and student population

Aalto University:

Reassessing the involvement in innovation activities

- Reorganisation the innovation activities and research support services of the former three universities
- Spontaneous self-organisation of students to Aalto Entrepreneurship Society with already more than 3000 members
 - Aalto Garage for start-ups
 - Boot Camps for students planning to start an enterprise of their own

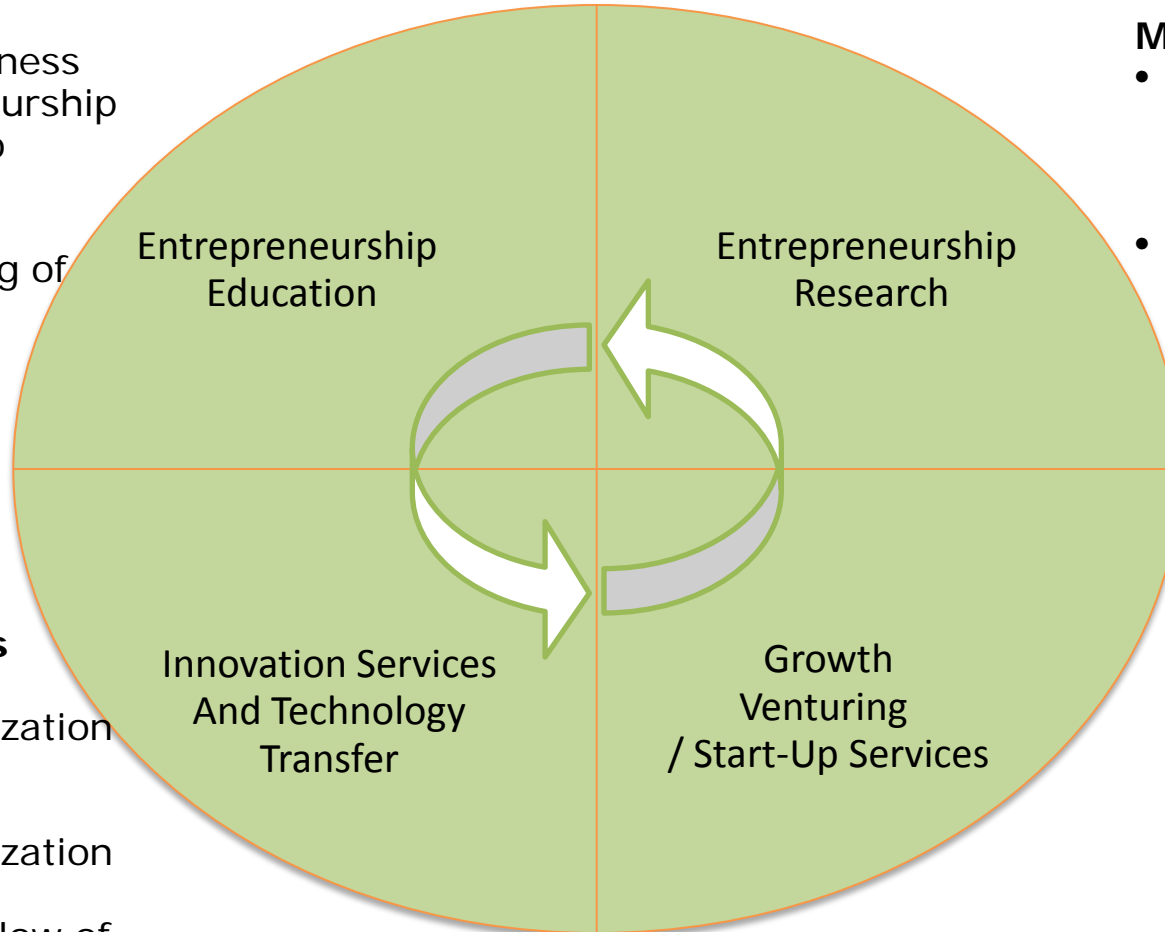
AALTO CENTRE FOR ENTREPRENEURSHIP (ACE)

Main Targets

- Higher awareness of entrepreneurship
- Willingness to establish a company
- Understanding of the market dynamics

Main Targets

- World-Class commercialization models
- World-class commercialization results
- Outside-In flow of capital and talent



Main Targets

- World-Class entrepreneurship research in selected areas
- Special focus on high-growth ventures

Main Targets

- World-Class venturing models
- World-class venturing results
- Outside-In flow of capital and talent



AALTOENTREPRENEURSHIPSOCIETY

“Community-driven growth entrepreneurship catalyst at Aalto University.”



Our Mission

Foster an entrepreneurial **culture** at Aalto University

Make **resources** available for Aalto startups

Grow Entrepreneurial **Leaders**



<http://www.aaltoes.com/>



<http://facebook.aaltoes.com/>



Aalto University

23.3.2010

Aalto Venture Garage for Startups

- Aalto Venture Garage is the hub for entrepreneurs and startups located on [Aalto University's](#) campus near Helsinki
- This 700 sq meter industry hall is an open work space where entrepreneurs gets support from the [Coaches](#) and work together to grow their businesses
- [Bootcamp](#), run four times a year, gathers up the best early stage startup founders to learn from the best serial entrepreneurs and investors from the region

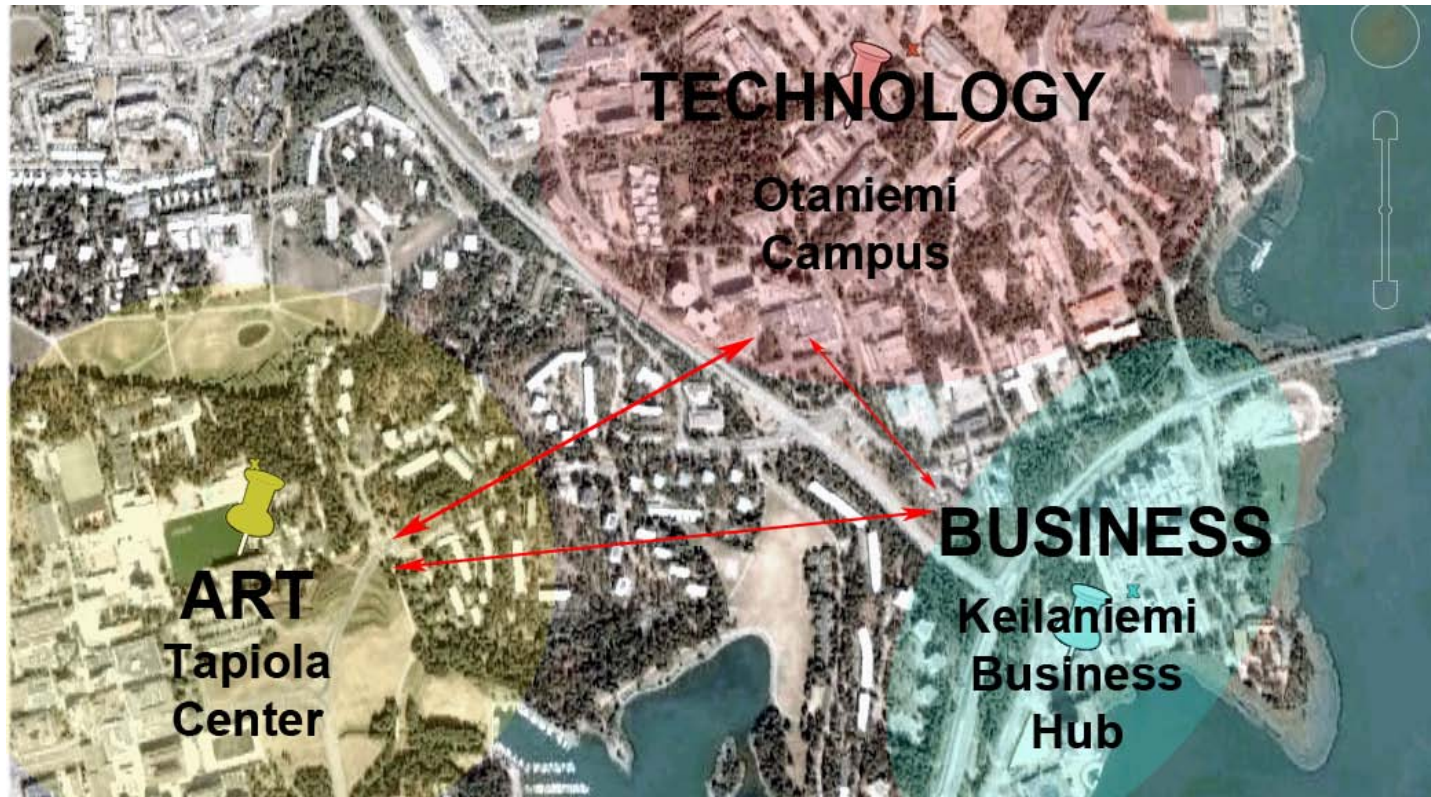
Aalto University:

Reassessing the involvement in national and regional development

- Active cooperation of the former three universities with regional and national organisations continues
 - Cooperation agreements with the cities in Helsinki region
 - Active partner in forming the Metropolitan development strategy
 - A shareholder in local and regional development companies
-

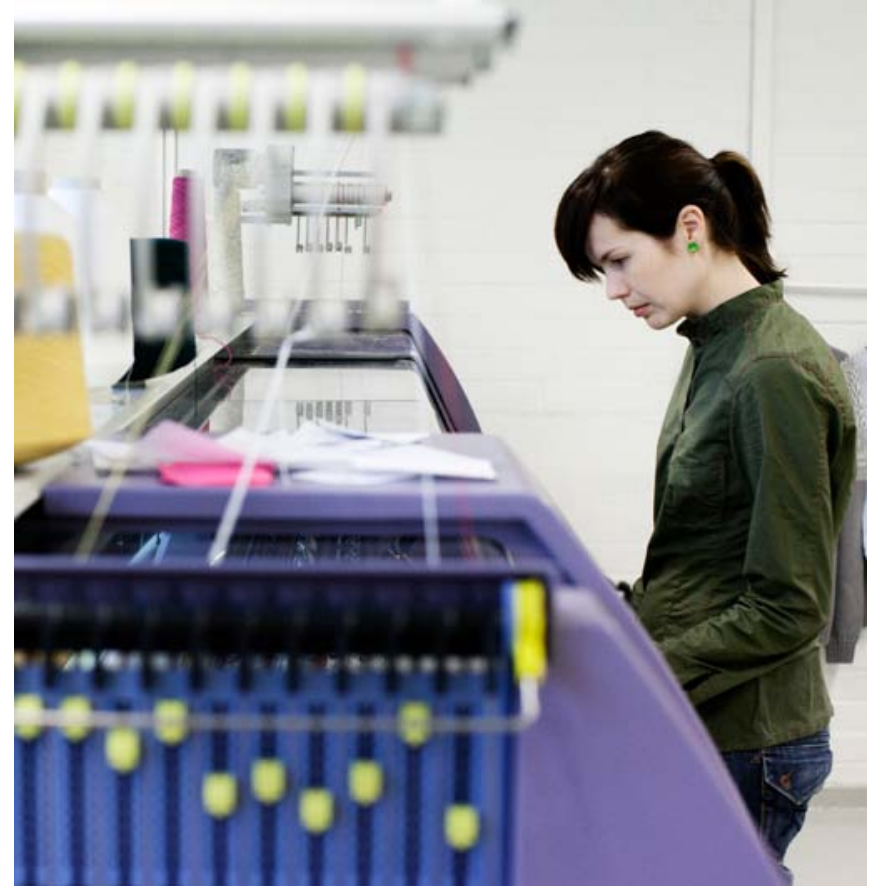
Espoo City strategy – “T3”

Inspired by the idea of Aalto University



University as a Value Co-creation Platform

- The goal of the T3 -project is to **connect** and **facilitate** interaction between the university, corporate research and living / commercial centers of Espoo.
- Aalto University is the value co-creation **platform** in city scale, facilitating the discussions and development through research and education, enabling new areal learning process to take place.



Summary:

Maintaining and raising the quality is the key issue for the future success of universities

- The external and internal challenges ask for new approaches in university education and research
- Renewal of governance, management, teaching and research are needed
- Focusing to the essential is needed
- Local and international networking are essential elements the development of research, education and the third mission
- There are different ways to make the change based on the cultural and institutional framework
- Aalto University is just one example of a total approach to maintaining and upgrading the quality in education and research

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