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SINGAPURI MAJANDUSE JA KÕRGHARIDUSE ARENDAMISEST



Kohtumised 26-30. oktoober 2009



Majanduse arendamine

- MTI Director of Strategy Keith Tan
- Singapore foresight community: MTI futures group, PM's Strategic Policy Office, National Security Coordination Centre
- NUS Entrepreneurship Centre, Director Wong Poh Kam
- INSEAD Professor Michael Witt
- Prof Anil K. Gupta lecture at LKY School: Getting China and India Right?
- National Health Promotion Board/Singapore Medicine
- Sonny Aswani

Kõrgharidus & talendid

- Ministry of Education, Deputy Director of Higher Education Sriven Naidu
- A*Star / Exploit Technologies & Graduate Academy
- LKY School of Public Policy, Director Administration and Strategy Sukhvinder Singh Chopra
- National University of Singapore, vice-provost prof Lai Choy Heng
- Nanyang Technology University, School of Physical and Mathematical Sciences, chair prof Ling San and assistant prof Edith Elkind

Meeldetuletuseks



Tänapäev

- Linnriik Malaisia poolsaare tipus u 700 km²
- Ligi 5 mln elanikku, hiinlased enamuses
- Rikkuselt 5. kohal
- Majanduse konkurentsivõimelt 3. kohal (WEF)
- Elukalliduselt 10. kohal
- Reserve ligi 174 miljardit USD

Ajalugu

- Sir Raffles/Briti Ida-India Kompanii 1918 kaubatee sõlmpunkt Hiina ja India vahel
- Briti olulisim kaubandus ja militaarpunkt Kagu-Aasias
- Jaapani okupatsioon II MS
- Britid uuesti
- Malaisia Föderatsioon 1963
- Iseseisvaks vabariigiks 1965

Lee Kuan Yew: suure pildi nägija



- Singapuri visionäär alates Malaisiast iseseisvumisest
- Pikaajaline PM
- Hetkel Minister Mentor



Singapuri kaasaegsele majandusele alusepanijaks peetakse hollandi majandusteadlast Dr Albert Winsemius't.

Oli 25 aastat (1961-1984) Singapuri majandusnõunik ja Singapuri majandusedu loomise taga.

Tema teadmised ja PM Lee Kuan Yew visioon moodustasid kuldse kombinatsiooni.

Tema soovitustel tugines kiire industrialiseerimine 60-ndatel, 70-ndatel hi-tech elektroonikatööstuse sissetoomine (tõi Philipsi Singapuri), finants-, mere- ja õhutranspordi keskuse loomine.

Riikliku elamuehitus programmi soovitaja (et luua FDI-le soodsat infrastruktuuri).

Mh kaitses Raffles'i monumendi allesjätmist kui Briti pärandiga leppimise sümbolit. Tulemuseks Shelli ja Esso investeeringud naftatöötlemistehastesse.



He Believed in Singapore's
future



MTI's Statutory Boards



Attracting FDI into Singapore
Developing Industry Clusters



Promoting Exports &
Internationalisation of Local Firms



Promoting Productivity & Innovation
Fostering a Competitive SME sector



Promoting Tourist Inflow
Developing Tourism Industry



Competition
Commission
SINGAPORE

Promoting Competitiveness
Enhancing Efficient Market Conduct



Responsible for statistics on the
Singapore economy and
population



Agency for
Science, Technology
and Research

Developing Scientific Manpower
& Capabilities



Planning Industrial Land Use
Facilitating Industrial Investments



Regulating Electricity Industry
Ensuring Security of Electricity Supply



“Think ahead, think again, think across”*

- Pika-ajalise vaatega poliitika tegemise traditsioon
- Regulaarne tulevikuvõimaluste ülevaatamine vastavalt muutunud olukorrale on ajendatud olnud kriisidest:
 - 1985 pärast 10 a kestnud kiiret kasvu ja sellele järgnenud järsku kukkumist Economic Committee
 - 1997 Aasia kriisi järgselt
 - 9-11 2001 järgselt Economic Review Committee (töötas aastatel 2003-2005)
 - 2009 mais maailma majanduskriisist ajendatult PM poolt käivitatud Economic Strategy Committee
- Aasia kultuurist lähtuv alusloogika: Kriis = oht + võimlus

* *Nii iseloomustatakse Singapuri le edu toonud riigihalduse süsteemi raamatus Dynamic Governance, 2009*

MAJANDUSE VÄLJAKUTSED (noppeid kohtumistelt)



90-ndate lõpus kriitika, et majandus liiga tööstuse ja eriti elektroonikatööstuse põhine - kuidas laiendada tööstuse baasi ja suunata teenuste poole?

Välismõjudest haavatavus suur - seega tuleb olla avatud, pidevalt jälgida trende ja muutusi ning muutuvast keskkonnast kiirelt oma võimalused leida ja välja mängida.

Kaubavahetus Aasia sees kiirelt kasvamas. Väljakutse: “to become more Asia-ready”.

Tööjõu struktuuris kiired muutused: 90-ndatel valgekraed 22%, nüüd 50%.

Peamine kriitika: domineerivad MNC-d (biomed, elektroonika, keemia), vaja juurde globaalse ambitsiooniga väikeettevõtteid.

Uued võimekused olemasoleva kogemuse pealt, nt elektroonikaseadmetest päikesepaneelide tootmine jms

Uued alad, kus valmistuvad läbilöögiks: digitaalne meedia, energia&vesi (urban solutions, kus tugevuseks linnaplaneerimise ja veemajanduse kogemus)

The downturn sparked a re-think of our economic strategies going forward...

Limitations to Continuity

- Foreign Workers (WPH)
 - Require physical infrastructure
 - Create social disamenities.
 - Negative impact on productivity
- Land
 - Current trajectory of land take-up may not be able to support the desired future size of industry clusters
- Carbon Constrained World
 - Singapore may have to undertake obligations in reducing carbon intensity should a global climate deal emerge

Opportunities of a New World Order

- Shift in Global Demand
- Rise of Asia
- Dislocation of Talent
- Ageing, health and wellness
- Push towards Energy Efficiency
- Urbanisation

"...After this crisis, the world is not going to be the same again. This is not just another cyclical downturn and recovery. The world's economy is undergoing a structural shift. "

**Speech by Prime Minister Lee Hsien Loong
in Parliament, 27 May 2009**

ESC's ToR

To develop and recommend strategies to grow Singapore's future as a leading global city in the heart of Asia

• To enable sustained economic growth, faster than other advanced economies

- Developing depth of talent and superior capabilities
- Seizing growth opportunities
- Optimising use of scarce resources

• So as to provide opportunities for all

- Creating quality jobs and real wage growth for the broad majority
- Making continued social investments for an inclusive, upwardly mobile society

Growing Singapore's future as a leading global city in the heart of Asia

6. Fostering Inclusive Growth

2. Developing A
Vibrant SME Sector
& Globally Competitive
Local Companies

Corporate
Resilience
& Depth

3. Attracting and
Rooting MNCs &
foreign SMEs

7. Ensuring Energy
Resilience and
Sustainable Growth

Resource
Optimisation

8. Maximising
Value from Land
as a Scarce
Resource

4. Growing
Knowledge Capital

Human &
Knowledge
Capital

5. Making
Singapore a leading
Global City

1. Seizing Growth Opportunities

SUSTAINED AND INCLUSIVE GROWTH

STRONG CAPABILITIES

HIGH PRODUCTIVITY

Some suggestions to keep the economy buoyant

3 TO 5
%
MANAGE
growth
expectations

INCREASE
lower-end
wage
levels




TARGET
recession-proof
industries



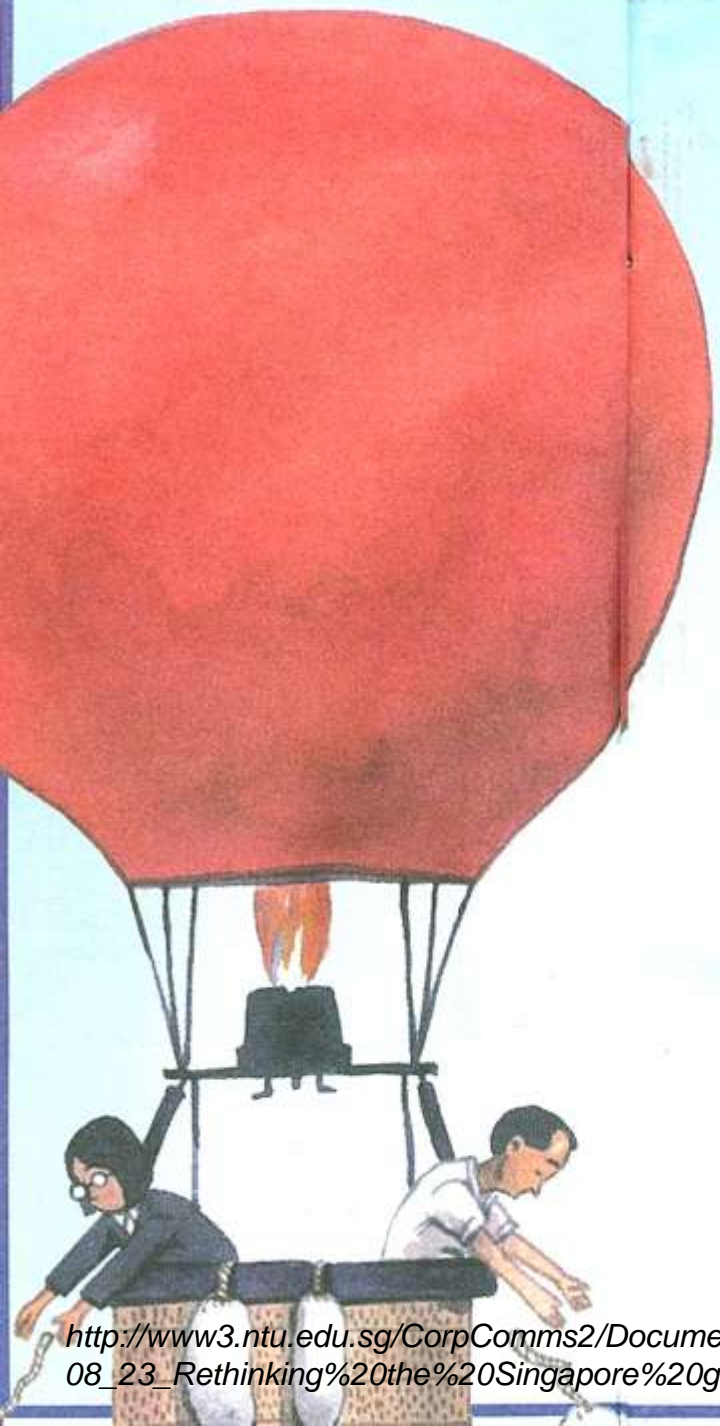
BOOST
local
consumption



DIVERSIFY
away from manufacturing



REDUCE
reliance on
foreign workers



Eestist pärit teadlane sai Singapuris teadusrühma loomiseks 1,5 miljonit USD



(19.02.09 15:17 ERR)

- Singapuri **prestiižne teadusuuringute** fond annab igal aastal kümnele noorele teadlasele kogu maailmast raha oma teadustöö edendamiseks Singapuris. Tänavu pälvis 186 taotluse hulgast ühe grandi **Eestist pärit Edith Elkind**, kes asus nüüd Singapuri Nanyangi Tehnikaülikooli, et luua algoritmilise mänguteooria uurimiskeskus.
- **Sai kolmeks aastaks 1,5 miljonit USA dollarit.** Elkind ütles, et see on tohutult hea võimalus luua keskus, kuhu koondada selle ala asjatundjad. Enne töötas Elkind Southamptoni Ülikoolis.
- Sündinud 1976. aastal Tallinnas. 1993. aastal siirdus ta matemaatikat õppima Moskva Ülikooli. Doktoritöö algoritmilise mänguteooria alal tegi ta Princetoni Ülikoolis.
- The National Research Foundation in Singapore alustas tegevust 2006. aastal. Tänavu oli kandideerijaid USAst, Euroopast, Kesk-Aasiast, Hiinast, Indiast ja Singapurist. Pretendenid tegutsesid tippülikoolides nagu Harvard, Cambridge, Yale, Caltech, Stanford, MIT ja Princeton.

S'pore kõrgharidussüsteem



- 3 riigi rahastatud ülikooli (NUS, NTU, SMU) + 1 uus loomisel (SU)
- Autonoomsed 2006 aastast
- Presidendi nimetab haridusminister tugevate juhiomaduste põhjal. Rektor on akadeemiline juht.
- Board of trustees – kõrgeim juhtorgan, koosneb eri eluvaldkondade esindajatest
- Lisaks palju erakoole toodud sisse EDB Global Schoolhouse programmi raames. Kvaliteedistandardid!
- Ministeerium teeb lõpetajate kohta uuringuid, kus töötavad, palju palka saavad. Sellele vastavalt kohandavad kõrgharidustellimust.

Ülikoolide rahastamine



- Ülikoolide peamine rahastaja riik
- Kokku SS 2.064 miljardit 2008 aastal
- Haridus, teadus rahastamine + sihtkapitali 1:1 erakapitalile vastupanemiseks

Õppemaksud ja stipendiumid



- Õppemaks 75% ulatuses kaetakse riigi poolt
- 25% omaosalust
- PR õppemaks 1.1* ja välismaalasel 1.5*, toetused aga samad
- Toetuse saanul kohustus pärast lõpetamist S'pores töötada 3-9 aastat
- Välistudengitele nõudmised kohalikest suuremad
- Riik suurendab järk-järgult kõrgharidustellimust, et ettevõtetele rohkem tööjõudu tekitada

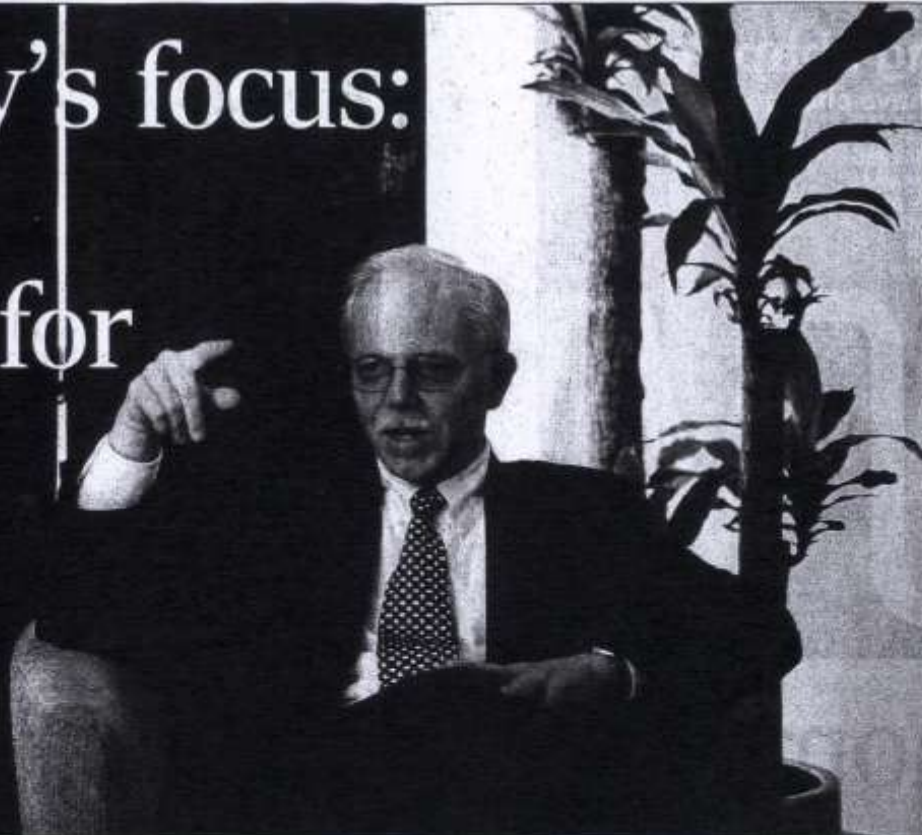
Rahvusvahelistumine



- Kaks teed: saata tudengeid välja või tuua sisse; luua haridusasutuste vahelisi partnerlussuhteid
- 10-20 a tagasi välja õppima saatmine peamine strateegia
- Samal ajal partnerluste põhjal oma hariduse taseme tõstmine: MIT Alliance, DUKE-NUS Medical School etc
- Tendents, et ei tulda tagasi
- Contact S'pore – asutus, mille eesmärk tuua välja läinud singapurlasi kodumaale tagasi
- 20% välistudengeid S'pore ülikoolides. Peamiselt Malaisiast, Indoneesiast, Indiast, Vietnamist.
- Täna kõrgkoolide soorituse hindamise üks põhiindikaator see, kui võimekad on parimaid kohalikke endale saama

New varsity's focus: Design and technology for innovation

Thomas Magnanti
named president;
classes will be small
for better interaction



Professor Thomas Magnanti, former engineering dean at the world-renowned Massachusetts Institute of Technology, will head the Singapore University of Technology and Design for three years, during which he will be on leave from MIT. He plans to recruit 50 faculty members, both local and international, by the time the university opens at an interim campus in 2011. ST PHOTO: JOYCE FANG

■ BY AMELIA TAN

THE fourth university here will be named the Singapore University of Technology and Design, or SU for short, and will take in the best and brightest students in the country and region when it opens in 2011.

It will start small, with a cohort of up to 500 undergraduates for the first three years, but this will gradually be increased until it reaches 4,000 undergraduates and 2,000 graduate students.

SU's president will be the former engineering dean at the world-renowned Massachusetts Institute of Technology (MIT), Professor Thomas Magnanti, 64.

Prof Magnanti is familiar with Singapore, having taught with the Singapore-MIT Alliance in the late 1990s. He was also the director of the Singapore-MIT Alliance for Research and Technology (Smart) Centre.

He will head SU for a three-year term,

during which he will be on leave from MIT.

The university will offer four degree programmes: Architecture and sustainable design, engineering and product design, engineering systems and system design, and information engineering and design. (see box) All will be four-year courses.

As their tentative names imply, design will be a common element taught in all four courses.

Learning will be inter-disciplinary, collaborative and hands-on. Students will be grounded in maths and science, as well as social sciences and humanities, and will collaborate on projects with undergraduates taking the other courses.

Instead of attending large lectures with hundreds of other students, they will attend classes in small groups of 50 to allow for better interaction.

To aid in inter-disciplinary teaching

Four degree programmes

■ Architecture and sustainable design

Students will study architecture, with a focus on environmentally-conscious design, to capitalise on the growing green building movement worldwide.

■ Engineering and product design

Designing, developing and bringing to the market electrical and mechanical products, such as planes and cars.

■ Engineering systems and system design

Students will analyse, manage, design and improve complex technical

systems, like urban transportation, manufacturing and energy systems.

■ Information engineering and design

Designing, developing and manufacturing information devices, such as digital music players and cellphones.

All students will also be exposed to design projects of increasing difficulty and scale, culminating in a final-year project which will have them drawing upon research in the university and what they have learnt in their four years there.

and research, the university will not be divided into traditional faculties.

Instead, teaching staff and students may be grouped into clusters according to technology and type of science.

Speaking at a press conference yesterday, Prof Magnanti said the search for faculty would begin next month.

He plans to recruit 50 faculty members, both local and international, by the time the university opens at an undisclosed interim campus in 2011. It will move to its permanent home in Upper Changi by 2015.

SU will also have a Chinese university as a second partner - the first being MIT - to be announced by the end of the year.

Explaining the university's focus, Prof Magnanti said: "Technology is an important driver for any economy, particularly a modern economy, and so is design, which permeates our world.

"If we can create graduates who will go out to that world and be leaders, if we can create curriculum and research which can enhance design and technology capabilities within Singapore, we believe it will add enormously to the Singapore economy and also to the social environment within Singapore."

He added that SU will teach the "full spectrum of design", from conceptualisation to implementation and manufacturing, and not just the expression of an idea.

Said Mr Ong Peng Tsin - one of 17 members of SU's board of trustees introduced to the press yesterday - on the importance of design in technology: "If you take a look at your favourite gadget, it is actually the design which enables you to appreciate it and helps a lot of people to adopt the technology. That is how SU is going to be different from other engineering colleges."

Mr Ong is the chairman of multi-million-dollar venture fund Infocomm Investments.

SU's board will be headed by Mr Philip Ng, the chief executive of property development and investment group Far East Organization.

Members of the board come from various fields, including law, banking, accountancy and journalism. Local business has a representative in Mr Sam Gol, executive chairman of food and beverage group Tee Yih Jia Food Manufacturing.

Speaking about the choice of Prof Magnanti to head SU yesterday, Mr Ng said: "In our discussions with MIT, one of the prospective partners, Prof Magnanti's name was put up and that excited us a lot. Tom is a very well known personality in Singapore... We felt that he had the credentials and certainly the passion and the understanding of what we wanted to achieve."

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Faktid



- Singapore University of Technology and Design (SU)
- Partnerluses MIT ja “tuntud Hiina ülikooliga”
- Asutavaks presidendiks nimetati MIT ühe instituudi juht prof Magnanti (3 aastaks), kellel kogemus Singapuriga 80-ndatest
- Visioon: 10-20 aastaga maailma tippülikooliks oma valdkonnas (Top design HUB)
- Kõrgeima juhtimisorgani Board of Trustees juht Philip Ng (CEO of Far East Organisation), eri alade ettevõtjad
- Esimesed 500 tudengit sügisel 2011, eesmärgiks saavutada 2500 sisseastujat aastas. 50 õppejõudu.
- 2015 aastaks ehitatakse oma campus, seni ajutises asukohas
- Neli 4-aastast programmi: arhitektuur ja säästlik disain, tootedisain, süsteemidisain, infotehnoloogia ja disain
- Esimesel aastal kohustuslik baaskursus matemaatikas, loodusteadustes ja humanitaarainetes

Mida teevad teisiti?



- Teadusülikool
- Interdistsiplinaarne haridus – puuduvad teaduskonnad. Õppejõud ja tudengid klasterduvad vastavalt teemadele.
- Disain on võtmesõna: kontseptsioon, rakendamine, tootmine
- Praktilise kallakuga – õppimine reaalse maailma kontekstis
- Väikesed grupid (max 50), et tagada interaktiivsus ja grupitöö
- Ettevõtlikkus ja tööstuse kaasatus
- Eesmärgiks ei ole areneda kogu skaalat katvaks ülikooliks. Jäabki väikeseks ja valivaks.

Miks Singapurile neljas riiklik ülikool?



- Olemasolevad ülikoolid liiga suured, keeruline muuta (traditsioonid, aeg, pinged)
- Kohalikud parimad keskkoolilõpetajad eelistavad välismaale õppimaminekut
- Tuua ihaldatud *brand* kohapeale
- Populariseerida S&T õppimist

- MIT huvi saada kasvava majanduse ja kõrgharidusturu lähedale
- Pole vettehüpe tundmatuses: Singapore-MIT alliance juba 80-ndatest

Plussid ja miinused lääne talendi jaoks



- + Talentide poputamine: hea tasu ja uusim infrastruktuur
 - + Multikultuurne inglisekeelne keskkond - tolerants
 - + Võimalused akadeemilise karjääri tegemiseks paremad kui Euroopas
-
- Bürokratia
 - Üleplaneerimine

S'pore needs to transform itself into a "whole brain economy"



Posted: 28 September 2009 2301 hrs

- the country had done well in developing its "**left brain**" economy, by building "hard" capabilities to become a leading technology, engineering and manufacturing hub in the world.
- going forward it is important to combine this with "**soft**" capabilities such as the arts, dance, and design. These capabilities are no less important than science or business.
- as part of efforts to build the creative industry, a **S\$1 billion** development fund has been set up to support the media and gaming industry.
- the Media Development Authority also aims to add some **10,000 new jobs** in the Interactive Digital Media industry by 2015.