



Communiqué from the 3TU chairmen

To all professors at the three Technical Universities

At the end of last year, the three Technical Universities (TUs) submitted proposals to the various ministries for the establishment of Centres of Excellence (CoE). Early this year, the Cabinet announced its intention to grant €50 million for this development. All kinds of activities have since been initiated to put these plans into effect and to spend the €50 million judiciously. This communiqué is intended to inform you of the progress.

The six Centres of Excellence

Intelligent Mechatronic Systems

Broadly speaking, this centre will be working on moving machinery. The core disciplines are robotics, microsystems, precision technology and computer control.

Sunlight Utilization for Novel Energy Technologies (SUNNET)

The research centre will be looking at new possibilities for collecting, storing and using sunlight as efficiently as possible.

Centre for Design, Analysis and Synthesis of Dependable Systems (CeDAS)

The aim of this CoE is to improve the reliability of ICT systems.

Multiscale phenomena in fluids and solids

The topic of study at this centre is the behaviour of materials at micro level and the consequences at macro level.

Bio-nano applications

This centre plans to develop nanotechnology designed to discover and treat diseases at an early stage or even to preclude them altogether.

Centre of Ethics and Technology

The sixth CoE, funded with resources provided by the three TUs, will focus on ethics and technology.

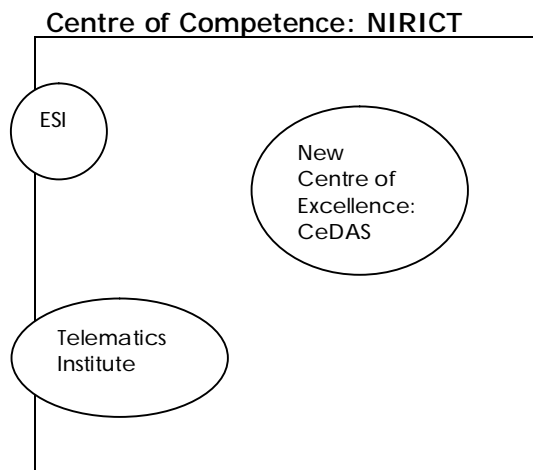
Focus and mass

The CoEs will create focus. And by making agreements on key elements within each CoE, per location, the researchers will complement one another and create mass. Centres of Competence have been set up to further facilitate the process of focus and mass. These will form the surroundings of a CoE.

A Centre of Competence (CoC) is a recognisable collection of professionals with a wide field of expertise. It is a multidisciplinary cross-section of the faculties at the three TUs that are most closely involved in a particular discipline (ICT, energy, nanotechnology etc.). The recognisability is clear from the logos and PO box numbers, which illustrate

that the centre is a strong player in the field comprising the Netherlands Organisation for Scientific Research (NWO), industry and 'Brussels'. NIRICT is an example and a forerunner.

A CoC is not just a fence around a discipline. Those involved act together and combine forces, and other universities and institutes can work with them as well. A CoC comprises a series of concentrations, a top research school or a Centre of Excellence. In so far as groups participate in Top Technological Institutes (TTIs), the same embedment exists, but TTIs are independent organisations with non-university participants as well.



The CoEs have their origins in the following CoCs:

- High Tech Systems
- University Research Group on Sustainable Energy Technologies (URGENT)
- Netherlands Institute for Research on ICT (NIRICT)
- Fluid and Solid Mechanics
- Applications of NanoTechnology

Three 'initiators' have been invited to further develop the proposals for each CoE:

	TUD	UT	TUE
Intelligent Mechatronic Systems	Paul van den Hof	Stefano Stramigioli	Henk Nijmeijer
SUNNET	Tim van der Hagen	Alfred Bliet	Hans Niemantsverdriet
CeDAS	Patrick Dewilde	Peter Apers	Kees van Hee
Multiscale phenomena in fluids and solids	Gijs Ooms	Detlev Lohse	Dick van Campen
Bio-nano applications	Huub Salemink	Albert van den Berg	Bert Koopmans

[TUD = Delft University of Technology

UT = University of Twente

TUE = Eindhoven University of Technology]

Activities of the IST

The **3TU.Federation of Technical Universities** in formation is a foundation whose general board of management comprises the three university executive boards. The executive board consists of the three chairmen of the executive boards. Four executive committees come under the federation executive board [See also www.3tu.nl]:

- a. for education: the Graduate School;
- b. for research: the Institute of Science and Technology [IST];
- c. for valorisation: the InnovationLab;
- d. for business operations [libraries, purchasing, ICT and property].

Once word was out that the Cabinet had promised €50 million to the five CoEs, the Institute of Science and Technology (the Research executive committee of the Federation in formation) started a number of activities.

The IST board consists of:

Hans van Duijn, chairman (Rector Magnificus of Eindhoven University of Technology)

Jacob Fokkema (Rector Magnificus of Delft University of Technology)

Henk Zijm (Rector Magnificus of the University of Twente)

Ton Langendorff (research policy at TUE) is the secretary. Deans Alfred Bliet (Science and Technology/UT) and Karel Luyben (Science and Technology/TUD) and emeritus and former dean Wim de Jonge (Applied Physics/TUE) are currently part of the IST board, but their formal membership ends when the CoC/CoE board members are appointed.

Four activities

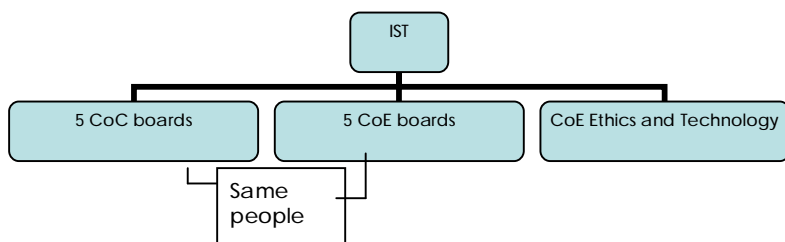
In the past few months, the IST has focused primarily on the Centres of Excellence. A number of plans had to be drawn up before the €50 million can actually be spent:

1. The Centres of Excellence (CoEs) are embedded in Centres of Competence (CoCs), so it is necessary to first clarify how the **governance of the CoCs and CoEs should be organised**. At the same time, the size and content of the CoCs will have to be determined. Until that time, the CoCs are still in formation.
2. An important task for the CoC boards is to draw up an **academic chair strategy**. The €50 million is allocated on a number of conditions. Apart from the usual reports, the grant will have to be accounted for by gathering information on the professors involved at the CoCs and CoEs and the changes in the composition of the groups (changes in teaching duties, succession, retirement, a new job elsewhere, etc.).
3. One of the first tasks of the CoE boards is to draw up the **business plans** for spending the €50 million. These plans will be submitted to the IST board after which the chairmen will make a decision.
4. Because the new professors will have to be able to start at the CoEs as soon as possible, it has been decided to compile the **profiles** sooner than planned. The 'initiators' of the CoEs have been asked to make a proposal to enable the CoE boards – once they have been appointed – to get off to a flying start. The IST sent a letter on this subject to the parties concerned on 2 May 2006. The profiles must be ready before the summer, so that the recruitment procedure can start on time. The appointment phase cannot begin until the business plans have been approved by the three chairmen.

1. CoCs

CoCs are multidisciplinary cross-sections of the 3TU faculties in question. They are custom made, so uniformity is not required. A CoC can comprise more than one CoE (and other institutes, TTIs, etc.).

The CoC board consists of three of the most closely involved deans. A CoC board is also responsible for running the relevant CoE. There is, therefore, no additional administrative tier in between. The boards answer to the IST individually, either as a CoC or as a CoE:



The CoC board appoints a scientific director (SD) to head up the CoC. The SD will formulate proposals for the demarcation of the CoC, new programmes for the new programmes for FES, SM, etc., as well as an academic chair strategy.

Phased plan for CoCs

1. Demarcation of CoC domains

The CoC boards are still in formation because a cohesive proposal first has to be submitted to the IST board regarding the nature, size, development and environment (technology platform) of the CoC domain. How is the CoC demarcated; what chair groups does it comprise?

2. Chair strategy

The CoC board monitors the joint expertise in a domain and is responsible for existing or future key elements and diversifications. The CoC board develops an academic chair strategy with this in mind.

A chair strategy is a CoC's policy on the preferred direction for all chairs. A strategy contains statements on 'more discipline x' and 'less discipline y'. What chairs are formed exactly is still the responsibility of the faculty, as is the appointment policy.

Generally speaking, an academic chair strategy consists of the following three elements:

- I. Strategy: a dynamic overview of the existing and required key elements within the CoC. Studies of scientific and social developments and the analysis of a CoC's own potential can be used as a basis for outlining the required changes: which main points have to be reinforced and expanded, which should be cut back or adjusted and which should remain untouched, and what strategic changes should be made? This also reveals the so-called 'displacement process'.
- II. An overview of academic chairs: the body of professors active at the CoC, their teaching and research mandate, their probable retirement date, the size of their group, the number of doctorates they have supervised and the extent of indirect government funding and the flow of outside funds.

- III. Monitor: the decision-making process of the various faculties regarding the changes that are actually going to be made and the relationship between the decisions and the dynamic overview referred to in I and the agreements made on this subject by the CoC board.

Composition of the board

As of 1 July 2006, the boards comprise the following deans, who are appointed in their respective capacities; they elect one of their own as chairperson:

	<u>TUD</u>	<u>UT</u>	<u>TUE</u>
CoC-NIRICT & CoE-CeDAS	J. van Katwijk	A.J. Mouthaan	K.M. van Hee
CoC-HTS & CoE-Intelligent Mechatronic Systems	M. Waas	F. Eising	D.H. van Campen
CoC-URGENT & CoE-SUNNET	K.C.A.M. Luyben	A. Bliet	J.W. Niemantsverdriet
CoC-Applications of NanoTechnology & CoE-Bio-NanoApplications	K.C.A.M. Luyben	A. Bliet	K. Kopinga
CoC-Fluid & Solid Mechanics & CoE-Multiscale phenomena in Fluids and Solids	M. Waas	F. Eising	D.H. van Campen

Once the CoC/CoE board members have been appointed, the current three deans can no longer be members of the IST board. They can, however, act as advisors, just like every other dean involved.

Scientific Director (SD) of a CoC

Each CoC has a scientific director (SD) who heads up the centre. The SD will formulate proposals for the demarcation of the CoC, new programmes for FES, SM, etc., as well as a chair strategy.

The CoC board answers directly to the IST board. The board and not the SD is the discussion partner of the IST, although the SD can act as an advisor.

As of 1 July, the following people have been appointed SD. The appointment lasts for two years and subsequent reappointment is an option:

Netherlands Institute for Research on ICT (NIRICT)	P.G.M. Apers
High Tech Systems (HTS)	M. Steinbuch
University Research Group On Sustainable Energy Technologies (URGENT)	T.H.J.J. van der Hagen
Applications of NanoTechnology	H.W.M. Salemink
Fluid and Solid Mechanics	G. Ooms

2. CoEs

Each of the CoEs is embedded in a CoC, with the exception of the 'sixth' CoE for Ethics and Technology.

Phased plan

The primary tasks of the CoE boards are:

1. Profiles

Profiles are drawn up for the recruitment of new professors in international competition. Where necessary, the CoE boards add proposals regarding the completion of appointment procedures. In any case, they ensure that the SD from the CoC in question and two representatives from the other two TUs sit on the advisory committees for the appointment of chairs (BAC). The IST board authorises the professor profiles; the chairmen approve the plans and adopt them.

When setting up the CoEs, the emphasis is on new professors. It is possible to deviate from this rule; the appointment of the professors and associate professors is one possibility, but more attention can be focused on that particular aspect in the further development of the business plans. In the initial phase, the recruitment of professors had priority, so the profiles were given priority as well. This is why the initiators have been asked to do some groundwork for the CoE boards by making proposals on the following points:

- the number of new chairs, related teaching duties and how these are to be divided among the three locations
- if the proposed number deviates from the original CoE proposal (December 2005): substantiation
- categorisation of the chairs according to scale (professor A or B)
- the budget required for it in the first year, assuming integral rates for 2007 (e.g. €147,000 a year for a full-time professor B, scale 18^{*})
- complete profiles for the new professors
- the relationship between the profiles and the key research elements for each location
- faculties where the candidates in question will have tenure

^{*} There is uncertainty about the levels of the integral rates of pay. These are rates that have been agreed with the Ministry of Education, Culture and Sport. The list is available from the IST secretary.

- willingness of the faculties to issue an embedment guarantee for after the period of five years
- apart from a central recruitment campaign conducted by the Federation in formation in Science, Nature and a few national newspapers, the CoEs will conduct an international campaign of their own. Which media are to be approached in the process? [The costs can be paid from the CoE budget]
- composition of the BACsat each location, including representatives from the two other TUs
- involvement in the recruitment campaign of foreign research groups referred to in the CoE (as a source for advice and/or recruitment)

The CoE boards submit the profiles to the IST board. The deadline is Friday, 14 July 2006. The IST board announces its findings on the profiles on 19 July, partly in relation to formation of key elements at the three locations. Existing vacancies will also have to be monitored, as will the way in which the faculties intend to fill them.

2. Business plans

The CoE boards are responsible for drawing up a business plan. The IST board adopts these plans (by September) and sends them to the chairmen with their recommendations.

Starting points for the business plan are the spending plan for the €50 million and an estimate of operating costs and income, as well as a forecast of the output. Later on, the finances required for embedment of the CoEs in the CoC will be estimated. The CoE boards will be notified of the exact format of the business plans.

Schedule for the outcome of the phased plan

1 July	Appointment of CoC/CoE boards and SDs
IST 19 July Chairmen 20 July	Adoption of new professor profiles and international recruitment Adoption of CoC domains
IST 6 September	Adoption of business plans
IST 12 October	Adoption of chair strategies