

## **Three TUs take first step towards Federation**

### **Co-operation and co-ordination of TUs boost knowledge economy in the Netherlands**

In order to create a single *Federatieve Technische Universiteit Nederland* (Federative Technical University of the Netherlands) by 2010, Delft University of Technology, Eindhoven University of Technology and the University of Twente will be co-ordinating their research, combining their educational programmes and enhancing their activities in the field of knowledge valorisation. With this comprehensive co-operation and co-ordination, the three TUs will boost the Knowledge Economy of the Netherlands, according to the *Slagkracht in Innovatie!* (Power in Innovation) sector plan formulated by the Science & Technology Sector Plan Task Force headed by former minister of Education, Culture and Science Loek Hermans.

Hermans and the three chairmen of the Boards of Management of the Technical Universities presented the Sector Plan to the State Secretary of Education, Culture and Science (abbreviated to OCW in Dutch), Ms A.D.S.M. Nijs, MBA, on Tuesday, 16 March 2004. During the press conference, the State Secretary announced how the Cabinet intends to support the plans of the TUs. More information can be found on the [OCW website \(in Dutch\)](#).

#### **Ambition**

In *Slagkracht in Innovatie!*, TUD, TU/e and UT indicate how they aim to create a single Federation of Technical Universities in the Netherlands by 2010. That federation will rank among the absolute top in Europe in terms of education and research. By supplying first-rate engineers, doctoral candidates and designers and by generating innovations, the Federation will add force to the dynamism and competitive position of the Dutch knowledge economy.

The motivation behind the drafting of *Slagkracht in Innovatie!* was the request of the State Secretary of OCW to the three TUs at the end of 2002. This request called for the establishment of a national, macro-effective palette of master's degree courses at the three TUs. In light of the ambition of the three TUs, the Science & Technology Sector Plan Task Force, consisting of Mr Hermans (independent chairman), Mr Van Luijk (chairman of TUD), Mr Lundqvist (chairman of TU/e) and Mr Van Vught (chairman of UT), extended its assignment to include research and valorisation. Knowledge valorisation refers to the practicable application of knowledge in business.

#### **Virtual Technical University of the Netherlands**

The three TUs will be introducing their innovations based on the concept of a single Virtual Technical University of the Netherlands, which will be developed into a Federation of Technical Universities in the Netherlands over the period until 2010. That Federation, in which the three TUs will co-operate extensively yet maintain their individual identity, will present a united front to the outside world and will formulate joint plans for education, research and knowledge valorisation. In September 2004, the virtual university will introduce a *3TU Graduate School* for the co-ordination of education, a *3TU Institute of Science & Technology* for the co-ordination of research, and a *3TU Innovation Lab* for the enhancement of knowledge valorisation. In addition, the three TUs will be taking a number of measures in these three areas.

## **Education**

The three TUs are the obvious parties to ensure that the Dutch economy has sufficient technical science graduates at its disposal. To that end, they have formulated the following objectives:

- efficient co-ordination of Master's degree courses by reducing the number of CROHO positions, setting a minimum limit of 20 new students per Master's degree course and establishing a number of shared Master's degree courses
- a 15% increase in the number of students starting bachelor's courses, for instance by attracting more foreign students
- an increase in the output of Bachelor's degree courses by approx. 50 to 70 per cent
- a 20% increase in the number of students starting master's degree courses and designer courses
- a 30% increase in the number of *international* students starting master's degree courses
- an increase in the output of the Master's degree courses by approx. 70 to 90 per cent.

## **Research**

The three TUs have formulated the following research objectives:

- a joint place in the absolute European top with their research spearheads
- a 20% increase in the number of PhD's
- a 20% increase in the secondary flow of funds (i.e. public resources for research, acquired in competition) and a 20% increase in the international flow of funds (e.g. EU resources)
- in order to enhance existing research spearheads and develop new ones, the three TUs will be reappropriating 12 to 15 per cent of their primary flow of funds in the period until 2010. This means that they will use a considerable portion of the research resources received directly from OCW for different purposes in order to boost research areas of importance to the Dutch knowledge economy.

## **Knowledge valorisation**

The three TUs will involve the business community – both large and small businesses, both existing and new ones – much more actively in the development and application of knowledge by increasing the tertiary flow of funds (i.e. money from the business community) by 20 per cent, the number of patents by 25 per cent and the number of spin-off companies by 25 per cent.

## **Boosting the knowledge economy**

This co-operation and the measures taken will lay the foundations for achieving an internationally recognised, leading position for the Netherlands in the global knowledge economy. Training engineers, developing and valorising knowledge, attracting highly educated knowledge workers and tapping funds for research will result in additional economic activities, investments and employment.

The concrete results of this sector plan will be:

- 30 additional patents a year for the three TUs
- 750 additional engineers a year (of the 3,000)
- focus and mass and higher quality research programmes and co-ordination with national research priorities
- transparent and macro-effective supply of Bachelor's and Master's courses
- larger tertiary flow of funds thanks to improved co-ordination with the business community

- improved knowledge utilisation owing to valorisation programmes.