

Speech ‘Triple Helix. Cooperation between Higher Education and Science, Industry and Government. Experience of Dutch Universities of Applied Sciences’

In stead of our chairman Thom de Graaf I will deliver his speech. I am a member of the executive board of the ‘Netherlands Association of Universities of Applied Sciences’. The Association was established in 1975 and is an independent body of all publicly funded Universities of Applied Sciences in the Netherlands. It represents the 38 Dutch Universities of Applied Sciences (39,000 employees and over 400,000 students) here today. We embody higher professional training in the fields of technology, healthcare, education, engineering, IT, business administration, communications & media, arts, music, among others. Our research – practical and applied – is directly related to this professional training and education.

Today I like to tell you something about the experience of Dutch Universities of Applied Sciences in their cooperation with industry and government. The Universities of Applied Sciences traditionally have close ties with the public and private sectors. The most important added value provided by the Universities of Applied Sciences is their close alignment to professional practice. Actually, many Universities of Applied Sciences were founded by the private sector. Tuition in our higher education in the Netherlands is given by lecturers, who have worked within the discipline in which they teach and still doing so, or are strongly related to that discipline. Representatives from the educational institutions and regional enterprises and social institutions closely work together to ensure the relevance of the curricula of our universities. Students implement our curricula in practice during their study. Students literally do their assignments on the ‘workfloor’. Examples of this are the students’ compulsory internships and applied research assignments.

Research at the Universities of Applied Sciences is still under development. For example, funding is increasing and each UAS is choosing its own focus. The research conducted is demand-driven due to the close ties with the public and private sectors. It is carried out in co-operation with stakeholders in the small and medium enterprises and public sectors. Our research is embedded in clear professional contexts and the transfer of knowledge is as direct as possible. An important aspect of this is that Research Universities and

Universities of Applied Sciences do not compete with each other but instead seek cooperation.

Fundamental research and knowledge, theoretical formulation, and applied research are each important steps in bringing knowledge and innovation to our society. They are certainly not separate islands and not in competition. They need each other in order to stimulate innovation. They are compliant.

As a new way of organising practice-based research, UAS recently founded 18 Centres of Expertise. Each Centre of Expertise is a collaboration of several partners which focus on one specific topic. These topics range from healthy ageing and water technology to the biobased economy and chemistry. The cooperation with small and medium enterprises and with the public sector is formalised within these Centres of Expertise. Each partner makes a contribution to the success of the Centres. Smart Mediumsized Enterprises are searching for innovation, formulate clear questions and deliver specific knowledge. Companies make an contribution in-kind by providing laboratory facilities or contributing funds. Our institutions provide money, but more importantly they provide researchers and students to conduct the research. This cooperation between Universities of Applied Sciences and industry is a fast track to innovation, stimulated and endorsed by national and regional authorities.

One of the examples is the Automotive Centre of Expertise, founded in 2010. The centre is a collaboration of:

- 3 Universities of Applied Sciences
 - HAN
 - Fontys
 - Hogeschool Rotterdam
- 1 Research University
 - TUE
- 18 companies
 - DAF
 - VDL
 - Bosch
 - TomTom

- And several small companies
- 2 cities
 - Arnhem
 - Helmond
- 2 regional governments
 - Brabant
 - Gelderland
 - And of course the national government

The partners conducted joint research resulting in innovation. This led to various results, for example the development of a tool for analysing the driving behaviour of bus and truck drivers. The analyses generated by this tool are correlated with the repair and maintenance data of buses and trucks. As a result truck and bus companies can reduce their repair and maintenance costs.

The research experience of Universities of Applied Sciences is not limited in scope to the regional and national level. One of the examples of the international approach is the concept of the Living Lab. A Living Lab is a collaboration of public-private partnerships in which multi-stakeholder coalitions (academia, enterprises, public and civic bodies, customers) co-create a collaborative development from idea to market deployment. This may involve new products, services, businesses and technologies in real-life environments. A Living Lab brings together industry, education and research, and government to work on real-life problems and solve them using innovative technologies, products and services.

Industry participants drive the agenda of applied research within the Living Lab community.

Currently there is even a Dutch-Russian Living Lab under development in the field of Energy. This living lab involves higher education institutions, enterprises and the governments of both countries. What does this mean in practical terms? As a starting point, two Dutch universities of applied sciences organised an exchange of lecturer-researchers between Dutch and Russian institutions. The period of this exchange was used to formulate a long-term research cooperation agenda. Besides staff exchanges, one of the future goals will be to have Dutch students conducting research in Russia with companies operating in Russia and Russian students conducting research in the Netherlands with Dutch companies.

To conclude, due to their close historical ties with the public and private sectors, Dutch Universities of Applied Sciences conduct demand-driven research that directly results in practical innovation. The institutions are increasingly looking for partners abroad in order to conduct research together. I am certain both Dutch and Russian institutions of higher education will benefit from this knowledge exchange.

Therefore, it would be good to organise more exchanges of teachers, researchers and students and to start investigating the possibility of conducting applied research together. In this way applied research can act as the linking pin between innovation and education and between our two countries.

And actually it was your former Tzar Peter the Great who already knew this. More than threehundred's years ago he went to the Netherlands. And he didn't came for the old (then much younger of course) universities of Leiden, Amsterdam or Groningen. But he went to where the work is really done and where he could learn from what we called nowadays applied sciences: the shipyards. He wasn't that wrong after all, was he? And what we can learn from this history is that he came to the Netherlands because of his close friendship with the mayor of Amsterdam, sir Nicolaas Witsen. This politician, entrepreneur and scientist had many contacts with Peter the Great. And from this unique and fruitfull friendship developed a succesfull cooperation between Russia and the Netherlands that still lasts in our days. And perhaps that is the secret receipt: Friendship. It started with that and, you know, we have to offer you a lot and certainly Friendship.

Thank you very much,