

# ‘Dig deeper for fundamental insights’

*“Technology is the only way to solve world problems in the fields of sustainability, energy and raw materials”, says KNAW president Robbert Dijkgraaf. “TU Delft is in a position to provide an important contribution.”*

Robbert Dijkgraaf, president of Royal Netherlands Academy of Arts and Sciences (KNAW) is amazed that the scientific world is still failing to dedicate all its efforts to researching how we can treat the earth responsibly. “We are happy to do everything we can to develop weapons or to put people on the moon. But we fail to apply the same urgency to search for fundamental solutions for world problems regarding energy, food, water and the climate. Here, I am not talking about short-term solutions. We need to be prepared for the long haul and really invest in fundamental research. “Therefore, we must dig deeper for fundamental insights. This is a responsibility that institutes such as TU Delft must not run away from.” According to Dijkgraaf, Dutch science is still doing very well. “Worldwide, we account for about three percent of the total scientific impact. That is a significant percentage and this gives us a great responsibility. A country such as China invests vast amounts of money to find solutions for problems that affect the world. The West and the Netherlands can do more.” According to Dijkgraaf, 2012 will be a special year, because it will then be twenty years since the UN Conference on Environment and Development was held in Rio de Janeiro. “Next year, we will look at how far we have come with answers to climatic, environmental and poverty issues and what science has done to help.”

## Cross-fertilisation

Dijkgraaf is positive about how Minister Verhagen of Economic Affairs, Agriculture and Innovation is tackling innovation. The government has designated nine top sectors in which the Netherlands has a strong position in the world. To further expand this position, entrepreneurs have formulated an action agenda per sector, together with a representative from science and a top civil servant. The plans were presented to the Minister in June. “It is good that he let representatives from the business world, government and science formulate plans together first. During the presentations of the top teams, scientists from the different sectors clearly indicated that, besides research with

practical and economic value, there must also be sufficient room for fundamental research. This demands a fine harmonisation from the government. Besides large-scale initiatives for innovations, it is important to maintain a long-term vision. We may not neglect creativity and good ideas. History has shown that these aspects are the feeding-ground for solutions.”

Dijkgraaf does not see the different viewpoints of business people, government and science as a confrontation, but rather as a cross-fertilisation. “If it is good, a chemical reaction will occur. Something must start to bubble, so that we can stimulate each other. Healthy science cannot thrive without the stimulus of government and business. We can only do our work if we have support from society.” (PW)



Photo: Henk Thomas

Robbert Dijkgraaf: “We may not neglect creativity and good ideas.”

*‘Worldwide we account for about three percent of the total scientific impact’*

## Who is Robbert Dijkgraaf

Robbert Dijkgraaf studied physics and mathematics in Utrecht, interrupted his study for a year at the Gerrit Rietveld Academy and then devoted himself again fully to science. In 1989, he was awarded his PhD under Nobel Prize winner Gerard 't Hooft. Since 1992, he has occupied the mathematical physics chair at the University of Amsterdam. He has been a university professor there from 2005. Since 2008, Dijkgraaf has been President of the Royal Netherlands Academy of Arts and Sciences. In addition, he is engaged in research in the fields of string theory, quantum gravity and the interface of mathematics and particle physics. In 2003, he was awarded the NWO Spinoza premium for this research, the highest scientific distinction in The Netherlands.