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Date
9 August 2018

The Minister of Education, Culture and Science
Ms I.K. (Ingrid) van Engelshoven

Cc: The Director-General of Higher and Vocational Education, Science and Emancipation (DGHBWE), Mr M.J. (Marcelis) Boereboom

Subject: CSR advice letter concerning the abolition of enrolment restrictions

Your Excellency,

To invest in knowledge is to invest in our future

The Netherlands is in an outstanding starting position to capitalise on the economic and social opportunities of digitalisation. Relatively speaking, our country's populace is highly educated, which gives us great potential for the future and was an important factor in the management consultancy McKinsey referring to us as one of the 'digital front runners' in Europe and 'ahead of peers in the use of robotics, machine learning and Artificial Intelligence'. The Dutch Digitalisation Strategy[1] and the Dutch National Cybersecurity Agenda[2] underline the need to continually maintain a high level of knowledge in order to realise the Netherlands' ambitions as a dynamic and secure digital economy. The digital future of the Netherlands must be secured. Only then will we be capable of truly capitalising on the economic and other opportunities available to us. The solution is predominantly education: we need a substantially higher number of well-trained IT professionals, we must properly develop our talented students and we have to invest sufficiently in achieving these goals. It is also vital that young people in the Netherlands are prepared for the digital future. In a previous advisory document, the Cyber Security Council (hereinafter referred to as 'the council')[3] strongly recommended that young people develop digital skills and that the number of cyberexperts be increased. Your ministry responded positively to this in a letter.[4]

No person left behind

By issuing this letter, the council is sounding the alarm on an urgent issue: a number of universities have said that due to capacity problems, they are unable to accommodate the growth in student numbers for their Artificial Intelligence programmes and related programmes, such as Data Science and Business Analytics. In the council's view, this is an undesirable and worrisome development,

[1] Dutch Digitalisation Strategy, by the Ministry of Economic Affairs and Climate Policy, the Ministry of Justice and Security and the Ministry of the Interior and Kingdom Relations, June 2018
[2] Dutch National Cybersecurity Agenda: A cybersecure Netherlands, Ministry of Justice and Security, April 2018
[3] CSR Recommendation (2015), Recommendation to the State Secretary for Justice and Security and the State Secretary for Education, Culture and Science regarding cybersecurity in the education and business sectors, The Hague
[4] Response to the 2015 CSR Recommendation, 'Recommendation to the State Secretary for Justice and Security and the State Secretary for Education, Culture and Science regarding cybersecurity in the education and business sectors', Ministry of Education, Culture and Science, 23 June 2016

especially as policymakers and academics have voiced major concerns about the EU's deficit in this area compared to the United States and China.[5] The rapid growth of the digital economy has resulted in a major shortage of IT specialists and related professionals. Demand from the government and business sector for innovative solutions and highly trained professionals is already high and will only continue to intensify in the future. For many years, public and private parties have been investing in initiatives like the Technology Pact, Smart Industry and various training funds in order to make technical and technological education programmes an attractive proposition. This policy is now visibly bearing fruit, as more and more young people are opting for degree programmes that focus on the jobs of tomorrow – a development that is diametrically opposed to the imposition of enrolment restrictions for various degree programmes. In the Council's view, it would be highly detrimental if the available pool of young talent dried up due to a lack of teaching staff and insufficient accommodation and resources.

Recommendation

The council wishes to emphasise strongly how vital an asset knowledge is to our country; after all, it's no accident that the Netherlands is considered one of Europe's digital front runners. Ensuring a sufficient supply of qualified professionals is a crucial factor in ensuring our country's digital security and economic position. If we fail to invest sufficiently in the jobs of tomorrow, organisations will increasingly have to rely on engineers and technologists from abroad and Dutch talent will seek employment opportunities elsewhere in the world, a trend that is already evident in the academic community.[6]

To ensure the Netherlands maintains and builds upon its status as a competitive knowledge economy and an open, secure and prosperous society, we must ensure universities can satisfy the demand for staff in a professional manner. Apart from close collaboration between the various universities and exploration of alternative teaching methods, this will also require the business sector, the government and politicians to play an active role. In the council's opinion, seeking solutions through the standard channels – such as the current funding system and sector plans – will take up too much time, and we cannot afford to fall behind on this issue. The council therefore believes a solution to this problem must be urgently sought. To fulfil the ambitions as formulated in the Dutch Digitalisation Strategy and the Dutch National Cybersecurity Agenda, the council recommends the following measures:

1. *Provide universities with emergency funding within a very short space of time for greater capacity (staff, premises and resources) to enable admission of all applicants for Artificial Intelligence degree programmes and related programmes, such as Data Science and Business Analytics, by September 2019. Actively involve the business sector through organisations such as VNO-NCW-MKB Nederland, Nederland ICT, FME, ECP and Cyberveilig Nederland.*
2. *Formulate a multidisciplinary team that actively supports universities in their search for qualified professionals and the necessary resources. Use the Acceleration Agenda for Innovation in Education by the Association of Universities in the Netherlands (VSNU), the Netherlands Association of Universities of Applied Sciences and SURF (2017) as the guiding principle during the application of new technological innovations.*

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[5] Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, 'Artificial Intelligence for Europe', April 2018

[6] Herbert Bos, Michel van Eeten, Bart Jacobs (November 2017), The need for Dutch self-reliance based on the national need for high-quality Dutch expertise, through knowledge development and circulation)
www.dcypher.nl/files/downloads/documents/cybersecurity-behoud-versterking-v2.pdf

3. *Ensure better insights into the dynamic demands of the job market and students' ever-changing study preferences to achieve a better balance between supply from the education sector and demand from the job market. The aforementioned organisations can play an important supporting and/or advisory role in this process as well.*

These measures, among other activities, can help us maintain our position on the international stage and fully capitalise on the opportunities to maintain and build upon the Netherlands' position as an open, secure and prosperous digital nation.

On behalf of the Cybersecurity Council,

Jos Nijhuis
CSR co-chair

Dick Schoof
CSR co-chair