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Joining Forces:
Collaboration in Dutch Higher Education

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3. The Netherlands

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In the Netherlands, the push for knowledge exchange (voiced in national and international policy agendas); increased levels of competition and demands for excellence; and the perceived necessity of establishing economies of scale and scope have encouraged HEIs to expand the number and types of collaboration with the hope of enhancing their competitiveness and achieving efficiency gains.

Given the large number and diversity of collaborations and time available for producing this paper was limited, this report is selective in focus. Nonetheless we will address most of the areas of cooperation and sharing of interest by focusing on the following themes: organisational cooperation (mergers and alliances), collaboration in research, collaboration in education (with an emphasis on online education), sharing of human resources and sharing of facilities. In most sections, the national Act on Higher Education and Scientific Research (Dutch acronym WHW), put into effect in 1993 and amended many times since then, will serve as a starting point for most of our descriptions.

As the Netherlands has a binary higher education system, we will examine cooperation among HEIs *within* the two subsectors of higher education and among HEIs *between* the two subsectors. With respect to some issues (e.g. staff and knowledge exchange) other public and private organisations will also be addressed (e.g. public-private partnerships).

3.1 System Overview

We begin by presenting a brief and general overview of the Dutch higher education system. The Dutch higher education system has fourteen publicly funded research universities (including the Open University), thirty-seven publicly funded universities of applied science (UAS), four publicly funded philosophical universities,[2] and some private higher education providers whose students receive public funding when the programmes of these private organisations are accredited by the national accreditation agency. In this paper, we focus on the first two types of institutions: research universities and the UAS.

Dutch research universities are research-led, offering education with a strong teaching-research nexus, and have the right to award doctoral degrees. The smallest university (in terms of student numbers) has about 10.000 students, the largest one just over 30.000. There are a number of old, comprehensive universities (e.g. in Leiden, Groningen and Utrecht) as well as more specialized universities (e.g. the three technological universities in Delft, Eindhoven and Twente, and Wageningen University).

[1] Harry likes to thank Thomas Weko of the OECD for his valuable comments on draft versions of this text.

[2] These four universities based on religious or philosophical grounds are: 1) Theological University of Reformed Churches, 2) Theological University of the Christian Reformed Churches in Apeldoorn, 3) Protestant Theological University, and 4) University of Humanistic Studies.

Since the 1970s, the universities of applied science (UAS) (Dutch acronym for HBO institutions) have become a well-recognised part of Dutch higher education. In 1986, the UAS sector became a subsector of higher education (1986 Act on HBO). In 1992, regulations concerning the UAS sector, like those for the university sector, were stipulated in the national Higher Education and Scientific Research Act (Dutch acronym WHW). The number of HBO institutions declined from 375 in 1983 to thirty-seven in 2017, due to a continuous 'merger reform'.

The UAS sector is very heterogeneous. There are, for example, ten UAS with more than 20.000 students (the largest UAS' have more than 45.000 students), but there also are ten institutions with less than 1.000 students (mainly in Arts and Teacher Training). The bachelor and master programmes of these UAS are vocationally oriented, rather than theoretically-focused. While teaching and learning remains their main focus, during the last fifteen years, the UAS have established a stronger research and knowledge exchange orientation. UAS institutions have a stronger local and regional focus compared to research universities.

In the Dutch binary system research universities and UAS sector are referred to as 'equal but different', indicating that they are both part of the higher education sector, but each having a different mandate, focus, history and culture. Within the two sectors stratification is rather modest - from an international comparative perspective - a likely consequence of the rather egalitarian principles that structure Dutch society. Differences in quality and reputation do exist among disciplines, departments and chairs, but arguably less so among institutions within each subsector. Compared to binary higher education systems in other nations, the Dutch system concentrates enrolment in its UAS institutions, with about 60%-65% of students in this sector.

The Dutch HEIs may be classified along public and private lines as well. Dutch legislation distinguishes between public ('*openbare'*) and private ('*bijzondere'*) institutions (where *'bijzonder'* is often but not always linked to a religious or philosophical base). Both public and private institutions are legal entities that have 'corporate capacity', but the first are public legal entities and the second are private legal entities.

From this legal perspective, ten research universities are public and three are private, while all UAS are private institutions. As a matter of principle, the ten public universities are 'state universities' (but not state-owned universities)[3], and they operate under a different legal framework than the private institutions (Louw, 2011). The legal organisational form differs: public universities are legal entities in public law, whereas private institutions draw their legal identity from being an association, a non-profit foundation, or a limited liability company.

For public institutions, the rules from the WHW are directly binding, while for the private institutions this Act stipulates the conditions they must comply with in order to qualify for funding and awarding degrees. This distinction between private and public institutions also has

[3] All ten universities could call themselves state universities, but only the university in Groningen continues to use this name, calling itself the 'State University of Groningen' (Rijksuniversiteit Groningen, RUG).

consequences for matters of personnel: labour agreements differ in public and private institutions, since staff from private institutions are not civil servants.

Although the legal statuses of Dutch public and private higher education institutions differ, in daily life these institutions function in a similar fashion. Private institutions must also comply with conditions set in the higher education law and are subject to the same higher education policies as public institutions. Therefore, it makes sense to approach the private institutions in most cases as 'public' organisations.

3.2 Policy Framework for Cooperation

The WHW (and decrees and regulations following from this Act) provides the higher education system's framework. It addresses the relationships between government, higher education institutions and some agencies. The topics covered in the WHW are as follows: types of institutions, funding, consultation structure, personnel matters, oversight, accreditation, education (e.g. degrees, titles, access, supply, registration, and exams), collaboration among higher education institutions, and internal institutional governance. The WHW contains provisions that *enable* collaboration among the Dutch HEIs, and others that limit or constrain collaboration. On balance, the former are more numerous than the latter, as we discuss below.

Apart from affecting cooperation among institutions through national legislation (the WHW), the Dutch government supports collaboration through communication, dialogue, policy initiatives and subsidies. Many of its white papers and communiques encourage institutions to strengthen cooperation, for instance in (applied) research and valorisation with the aim of advancing knowledge exchanges (increased knowledge circulation between knowledge providers such as universities, UAS, research institutes, industry and society). We will discuss some government initiatives, supported by funding arrangements, which have aimed to promote public-private partnerships in both the university and UAS sectors.

3.3 Organisational Cooperation

3.3.1 WHW Article 8.1

The WHW and the accompanying decrees set a number of rules and conditions that directly or indirectly establish the basis for cooperation among institutions. The key article in the law with respect to organisational collaboration is article 8.1, aptly titled, "Collaboration between publicly funded institutions of higher education." It reads as follows:

1. With respect to the collaboration between two or more publicly funded higher education institutions, the executive boards of these institutions must conclude a joint regulation ('*gemeenschappelijke regeling'*).
2. The joint regulation contains rules about adaptation, abolishment, access and exit.

3. The joint regulation can establish a joint institute. The regulation contains rules about the organisation and governance of such an institute and about the provision of information from the institute to the participating institutions.
4. The joint regulation can provide the transfer of certain authorities of governing bodies of the participating institutions to governing bodies of one of the participating institutions or to governing bodies of a joint institute.
5. With respect to decisions taken by the joint institute, which are based on authorities transferred from a public institution, the legal rules concerning suspension and annulment of decisions apply.

Article 8.1 allows for various forms of cooperation among publicly funded HEIs: between universities, between UAS, and between universities and UAS. Cooperation is intended to facilitate cross-fertilization —benefitting from each other's expertise— and to establish economies of scale as the result of pooling teaching and other facilities. Article 8.1 is broadly phrased, indicating a wide range of potential collaborations from educational cooperation to strategic alliances and even mergers. This implies that from a legal point of view many forms of collaborations between the different types of HEIs are permitted.

Cooperation as meant in WHW article 8.1 takes place at the initiative of the individual institutions. The supervisory boards of the partnering higher education institutions must approve the joint regulation, for instance when powers are transferred to governing bodies of a joint initiative. Because the national Act grants to the institutions the authority to establish these organisational collaborations, Ministerial consent for such collaborations is not required as long as the Higher Education and Research Act and its implementing provisions are not violated by the collaborating institutions.

One of the options is to establish a 'joint institute' (institute for cooperation - *samenwerkingsinstituut*), for which the partnering institutions bear the responsibility (WHW article 8.1.3) (e.g. see section on 'national research schools').

Mergers, however, particularly those between a university and a UAS, deserve further explanation. The law and its interpretations are not entirely clear on mergers between research universities and UAS. It is important to make a distinction between '**governance mergers**' – in which two separate institutions continue, but operate with one governing structure, e.g. one executive with representatives from the distinct institutions -- and '**institutional mergers,**' a comprehensive merger leading to a single and fully integrated institution. Governance mergers between research universities, between UAS and a research university, or among UAS institutions present no problems from a legal point of view. A university and a UAS can establish joint governance boards ('personal unions') that lead two separate institutions. With respect to institutional mergers the situation is more complex. It is legally not a problem to merge institutions of the same type (within the two sub sectors of higher education), but opinions differ when it comes to institutional mergers between a university and a UAS.

Louw (2011, 53) for instance, argues that institutional mergers are only possible between institutions that have the same legal mandate, in other words of the same type, which is not the case in a university-UAS merger. Institutional mergers between universites and UAS therefore are not allowed — the binary divide must be respected. Kwikkers (2017), on the other hand, argues that, from a legal point of view, the binary divide 'only' relates to educational programmes and degrees and does not concern the organisation such that legally it should be possible to merge a university and a UAS if they continue to offer fully distinct educational programmes and degrees. While Louw (2011) represents the most common view, the issue remains unclear, also because so far it has not been put to the test in a court of law.

3.3.2 Strategic Alliances Among Publicly Funded Institutions

There are several forms of institutionalized inter-organisational cooperation between HEIs, ranging from project-based cooperation (jointly providing a service or specialized programme without compromising the autonomy of each partner) to comprehensive mergers (combining separate institutions to have a single governance and management structure) (Ripoll, 2013). Many of these forms of inter-organisational cooperation apply to Dutch institutions; they are engaged in joint projects, networks, consortia, joint institutes (see section 'national research schools'), strategic alliances, and mergers.

Hundreds of mergers within the UAS sector have taken place since 1983. The degree of integration of the former institutions in these mergers varies, ranging from fully integrated institutions to merged institutions in which the former institutions still have a degree of autonomy and distinct identity (by and large a divisionalised or federal structure). Several of the merged UAS have become multi-campus institutions, located in different cities. Mergers of universities are permitted but have not occurred. Strategic alliances between universities and UAS, as many other forms of cooperation (e.g. sharing of (human) resources), are allowed.

The remainder of this section will address strategic alliances as a form of institutionalized inter-organisational cooperation. We use the definition of the Review Commission Higher Education:

> *A strategic alliance is a broad cooperation between two or more organisations, which comprises the whole organisation and is concluded and coordinated by the organisations' strategic apex. It has a long term focus and concerns the core tasks of the engaged institutions. In contrast to a merger, the engaged institutions retain their autonomy, even though some parts of the engaged institutions could be integrated.*

Most of the strategic alliances in the Netherlands are within-sector alliances; between two or more universities or between two or more UAS. There are a limited number of strategic alliances between universities and UAS. We will provide a few examples of these different types of strategic alliances.

3.3.2.1 Within the University Sector

Dutch universities cooperate in various ways. Many collaborations occur in education and research projects, which are jointly conducted, and staff expertise is shared. Institutional executives also meet each other in many venues, often coordinated through the Association of Universities. They also meet in smaller groups, where they may decide to intensify their collaboration in particular areas. For instance, the four universities in the Northeast of the Netherlands (University of Twente, University of Groningen, Radboud University Nijmegen and Wageningen University) work together in education and research with a view to enhance their competitiveness. The cooperation of these four universities is, however, loosely coupled and hardly visible, even after their goals were laid down in the "position paper universities Northeast Netherlands".[4]

In the remainder of this section we will examine three alliances that are more formal and more visible: the 4TU.Federation (the three technical universities (Delft, Eindhoven and Twente) and Wageningen University); the cooperation between the University of Amsterdam and the Free University of Amsterdam; and the Alliance of Leiden University, Technological University Delft and Erasmus University Rotterdam (LDE).

4TU.Federation[5]

In 2007, the executive board chairs of the Netherlands' three technological universities – Delft, Eindhoven and Twente – concluded the "Joint regulation 3TU.Federation", the start of a unique alliance in Dutch higher education, subsidized by the Dutch government. A fourth university – Wageningen University – joined the federation n 2016 even as the government subsidy ended.

The 4TU.Federation aims to combine the forces of Delft, Eindhoven, Twente and Wageningen in the field of education, research and knowledge valorisation. In this way, the federation contributes to the well-being of the Netherlands by strengthening, combining and utilizing knowledge and creativity in the technology sector.

To enhance the quality and attractiveness of education, the 4TU.Federation offers five joint Master of Science programmes and twenty post-master programmes, leading to a professional doctorate in engineering (PDEng). These joint programmes aim to facilitate the pathways from bachelor to (post-) master programmes, and to increase the mobility of students and exchange of staff among the four universities.

In 2006, five centres of excellence were launched, bringing together technological research on social issues. The Ministry of Education, Culture, and Science (*Ministerie van Onderwijs, Cultuur en Wetenschappen*, OCW) allocated €50 million over five annual instalments for these centres'

[4] http://www.rug.nl/about-us/collaboration/position-paper.pdf
[5] https://www.4tu.nl/en/

development. The universities made agreements on pooling their research and new professional chairs were established. Since 2006 the number of centres has expanded to nine.

The 4TU.Federation is established as a foundation. The executive committee, comprised of the presidents of the executive boards of the four universities, has operational responsibility for running the 4TU.Federation. It takes decisions on proposals and recommendations from the research, education, and valorisation management committees. On the advice of the management committees, it approves plans, budgets, and the accountability of the management of the operational sections of the 4TU.Federation. The general management board is made up of every member of the executive boards of the four universities. Based on proposals by the executive committee the general management board sets down the foundation's long-term plan, annual plan, and annual report. Furthermore, the federation has two management committees, one for education and one for research. The 4TU secretary general advises managers and the management committees and assists with the development of strategic policies, implementation, and evaluation. This secretary is also responsible for the 4TU marketing and communications policy, and has an important role in representing the federation externally. There is also a 4TU project manager, who supports the management processes in the 4TU federation and the management committees.

University of Amsterdam (UvA) and the Free University of Amsterdam (VU)

Although the University of Amsterdam and the Free University of Amsterdam are located in the same city, for a long time collaboration between the two universities was unthinkable because of their origins and identity (the latter being established as an institution separate from the state and established church). The first organisational cooperation was in 1988, when the two faculties of dentistry merged into the Academic Centre for Dentistry in Amsterdam (*ACTA*) as the result of a government imposed reform in Dutch higher education (the so-called 'Task Division and Concentration' reform), aiming for a more efficient allocation of services. In the following years a number of similar faculty-level mergers took place, including the offering of joint education programmes in the sciences (Hartgers, 2016).

Between 2000 and 2010 the municipality of Amsterdam - a strong advocate for joining forces of knowledge providers in the country's capital – advanced plans and policies to encourage the collaboration between the two universities. During this time collaboration between the universities intensified, with a strong focus on establishing joint research institutes. Later in the decade collaboration between the two universities in the area of education drew increased attention. One of the initiatives was the establishment of a university college in 2009, the Amsterdam University College, which was a 'joint venture' of the two universities. Students from this college receive a joint bachelor degree.[6] In 2009, the two universities combined their master programmes in the sciences in the Amsterdam Graduate School of Science (AGSS).

[6] A university college is a rather recent concept in Dutch higher education (the first one was established in 1997 as 'an experiment'). These three year Bachelor programmes, English taught Liberal Arts and Sciences programmes, are different from regular Bachelors programmes in terms of orientation (broad programmes combining humanities,

In 2011, the executives of the two universities argued that because of the number of joint projects and institutes in Dutch higher education, it was time to consider seriously a strategic alliance – rather than a merger of governing bodies – with an increased and intense collaboration in teaching and research. Four working groups (humanities, science, law and economics, and social sciences) started to explore the options. This idea, however, met opposition from the academic communities, including the students, of both universities. The process was further troubled by parallel discussions about intensified collaborations between the two academic hospitals, and the idea of establishing the Amsterdam Academic Alliance, creating an alliance among the UvA, VU and UAS Amsterdam.

Nonetheless, the humanities faculties of the two universities established a joint centre, Amsterdam Centre for Ancient Studies and Archaeology (ACASA), which now offers four joint master programmes. Other joint projects were also realized, such as the Amsterdam Centre for Contemporary European Studies and the establishment of joint degrees for some bachelor and master programmes in the sciences.

The science academies of UvA and VU continued working together to strengthen and improve their education and research by combining their forces, knowledge, specialist facilities and sharing of infrastructure. This created a substantively stronger science cluster in Amsterdam.

In 2017, part of Amsterdam's science cooperation is the joint housing of a number of disciplines, either at the Amsterdam Science Park or at the VU campus. There is also a planned collaboration with SRON (*Stichting Ruimteonderzoek Nederland*), which will be not only scientific in nature, but also will concentrate technologically superior facilities (workshops, clean rooms) in a special building: The High-Tech Instrumentation Facility (HighTif).

Thus, although the collaboration between the UvA and VU did not lead to a merger or federation, it did result in many joint initiatives, from joint institutes such as ACTA to a joint university college. In terms of our definition, it is not a strategic alliance, as it does not comprise an agreement between the governing bodies of the two universities that comprises the whole of both organisations. However, it certainly represents the strong bonds between the two institutions through many collaborative relationships among components of the two universities.

social sciences and sciences), tuition fees (double the regular fee in most cases), access (students are selected by the university) and housing (residential, at least for some time). At the time of the start of the AUC, joint degrees were legally not permitted.

LDE: the alliance of Leiden University, Technological University of Delft and Erasmus University Rotterdam[7]

The universities of Leiden, Delft and Rotterdam are located close to each other in the West of the Netherlands, 40 kilometres separate the most distant institutions. In 2012, they started a strategic alliance by means of concluding a joint regulation (WHW article 8.1). The alliance aims to further increase the quality of education and research through a stronger profile of the education offer and by strengthening the international positioning of their research.

The executive boards of the three universities together form the steering committee of the strategic alliance. The presidency of the steering committee rotates among the chairs of the three executive boards. The steering committee has an inspiring, coordinating and facilitating role for cooperation in the areas of education, research and valorisation. The LDE project manager coordinates the partnership between the universities and acts as the secretary of the steering committee.

The three universities work together on strengthen and broaden their programs, to make education better accessible to each other's students, and to contribute solutions to scientific, societal and economic challenges. The three universities have, for example, developed new joint multidisciplinary programs, minors, MOOCs and honours classes, responding to social problems and new developments in science.

With their research, the alliance partners aim to create synergy from complementarity, by intensive multidisciplinary and interdisciplinary cooperation. To do this, the alliance has established LDE Centres, which are multidisciplinary and inter-university thematic research centres. Currently there are eight LDE Centres. In addition, Medical Delta, a consortium for health and medical technology, has been established. In addition to the three universities, the medical centres of Rotterdam and Leiden as well as more than 150 companies, science parks and public-sector bodies participate in Medical Delta.

3.3.2.2 Within the UAS Sector

There are numerous strategic alliances in the UAS sector, many of which are collaborations at the regional level and/or in a specific domain. For example, Radiant Teacher Training Programmes is a cooperative initiative linking nine UAS with the aim to bundle their knowledge and expertise in pedagogics in close connection with their working domain.

Some strategic alliances evolve over time into a merger, as the example of the NHL-Stenden alliance demonstrates. In the North of the Netherlands, the NHL and Stenden, both medium-sized UAS, started in 2013 to explore the possibilities to enhance their collaboration with the aim to strengthen their contribution to the regional economy. One of the key issues concerned the alignment of educational programmes. After the initial phase to explore a more intensified

[7] http://www.leiden-delft-erasmus.nl/en/home

cooperation, the executive boards of the two UAS concluded that a merger would be preferable. In 2014, the first steps in this merger process were taken and in 2015 a declaration of intent was signed. After intense debates, amongst others with the representative bodies of students and staff, it seems that the merger will materialise in 2017 or 2018.

Not all strategic alliances have turned out to be successful. In 2012, the UAS Ipabo (Teacher Training) agreed to cooperate with the UAS Amsterdam, UAS Utrecht, Windesheim and Inholland in the field of teacher training. This was part of their agreement with the Ministry (OCW) in the process of the bilateral performance agreements. The Review Committee Higher Education, which coordinates and assesses the progress and outcomes of these bilateral performance agreements, observed after a few years that this cooperation did not succeed; there was no support at Ipabo to 'integrate' such a large governance structure.

3.3.2.3 Between Universities and UAS

In the Netherlands, efforts to establish alliances between research universities and UAS have not been very successful. In addition to the two cases that we have examined there is a third with the same outcome: a merger of Wageningen University and Van Hall Larenstein (UAS)[8]). Together they suggest that a solid and effective *governmental merger* (let alone institutional merger) between these two different types of institutions is difficult to establish. So far there has not been a successful cooperation of this kind in the Netherlands. It is most likely not external conditions or legal obstacles preventing successful intense cooperation (e.g. a merger) between the different types of HE institutions, but rather internal factors (different cultures, suspicions, acquired rights), unevenness between the partners, and the problem of getting 'quick wins or benefits'. Mergers between the same types of higher education institutions, troublesome as they may be, have been more successful.

Association Free University Windesheim

In 2005, the Free University of Amsterdam and the UAS Windesheim (located in the city of Zwolle) implemented a 'governance merger'. Four years in preparation, the Association Free University Windesheim was established to intensify and align the educational goals of the two institutions, which shared a Protestant religious identity. The initial aim was to create a comprehensive institution for higher education and research at two locations each with its own profile and identity. Thus, one governing body would serve both institutions, aiming for educational collaboration, for instance by offering programmes at more than one location.

The Association did not function as intended; it proved to be a short marriage. After about five years this merger of the two institutions' governing bodies was discontinued. The official account was that the merger prevented the two institutions from profiling themselves

[8] In the early 2000s, Wageningen University and the UAS Van Hall Larenstein decided to enter into a governance merger. This merger ended in 2012 when the academic communities voiced a lack of trust in the merger. Particularly the UAS staff had a feeling of not being heard by the governing boards.

sufficiently, limiting their ability to respond adequately to external developments and demands. Moreover, the offering of educational programmes at different locations (e.g. university programmes both in Amsterdam and Zwolle) did not bring the expected results. In 2012, the two institutions re-established their own separate governing boards; instead of one legal entity the Association Free University Windesheim, separate legal entities were re-established: Association Free University and the Foundation Christian UAS Windesheim.[9] In their eyes this 'de-merger' offered better opportunities to profile themselves and to adapt to external developments (*Jaarverslag Windesheim*, 2011).[10]

University of Amsterdam (UvA) and UAS Amsterdam

In 1994, in response to the dynamics in higher education at the time and through outspoken leadership in the two institutions, formal cooperation between the UvA and the UAS Amsterdam started with the collaboration of a number of educational programmes, aiming to open the pathways for students between the two types of higher education.[11] This cooperation was concluded in an informal "gentleman's agreement."

By the late 1990's it was clear that the results of the cooperation were modest, partly due to conflicting interests and cultures of the two institutions. While several faculties of the two institutions recommended that students switch from one institution to the other, the number of students who actually did so was limited with only about 100 doing so in the first year (Hartgers, 2016). Nevertheless, the executives of the two institutions decided that the collaboration should be intensified, because in their eyes the rigid divide between universities and UAS was part of the problem and they thought that the binary divide in the Netherlands would collapse in the near future. Collaboration instead of segregation and competition would benefit the students. The executives would have preferred an institutional merger, but they judged this to be legally impossible. Thus, they proposed instead to establish a joint institute to enhance efficiency and decisiveness ("University and UAS Amsterdam Higher Education," *UHA*).

Shortly after 2000 (and the introduction of the Bologna structure), the executives of the UvA and UAS Amsterdam published a declaration of intent advocating for the establishment of an *institutional merger* that would lead to one organisation with one governing board. They believed that a *governance merger*--leaving the two separate institutions intact joined by an integrated governing body -- was less preferable because it risked a top-down approach, while the real action of collaboration should take place at the operating level of the institutions.

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[9] Actually, three parties were involved. Besides the Free University and Windesheim also the medical school of the Free University.

[10] Windesheim (2012) *Kwaliteit is prioriteit. Jaarverslag 2011*. Zwolle.

[11] This sub section is based on "Berenschot (2016) De opbrengst van bestuurlijke samenwerking UvA-HvA. Een evaluatie van de periode 2000-2016 in opdracht van College van Bestuur UvA en HvA" and "Hartgers, R. (2016) Verschuivende allianties. Een onderzoek nar de (regionale) samenwerkingsverbanden van de Univeriteit van Amsterdam. In opdracht van de Commissie Democratisering en Decentralisering".

This merger idea was discussed with the Minister of Education, Loek Hermans, among others. In fact, Minister Hermans announced that he planned to put forward a bill to facilitate mergers, in which he made a distinction between governance mergers and institutional mergers. According to the bill, governance mergers would be allowed, and this would be clarified through revisions to the WHW. For institutional mergers, Minister Hermans envisioned establishing separate legislation to take account of the public and private law bases on which research universities and UAS institutions operated, and the consequences of this legal difference for employment relations with staff. In political debates surrounding the changes he proposed, concerns were raised that permitting research university-UAS institutional mergers would lead to a loss of the binary divide and the distinctive missions of the two types of higher education institutions. In the end, new legislation concerning institutional mergers was not put forward to parliament.

At the same time, academic staff and their representatives responded negatively to the idea of an institutional merger. As a result, the merger plans had to be adapted, leading to a governance merger: a single executive board with members from both institutions would lead both institutions. A peculiar aspect of this governance structure was the maintenance of two supervisory boards, headed by one chair; a compromise between the executives and the representative bodies of the institutions.

In 2006-07, when the higher education context had changed and the executives of the UvA, - who had been strong proponents of the merger – stepped down, the governance merger came under pressure. In 2010, voices supporting discontinuation of cooperation got louder. Based on an evaluation in 2016, the supervisory boards and the executive board, with the consent of the representative bodies of staff and students, decided to end the governance merger (apart from sharing some services) and on March 1st 2017, after more than a decade, both the University of Amsterdam and the UAS Amsterdam re-installed their own executive boards.

The disappointing results of this research university/UAS governance merger did not spoil the appetite for collaboration in Amsterdam. The UvA continued to intensify its ties with the Free University of Amsterdam. Additionally, in 2012 the Free University, the University of Amsterdam and the UAS Amsterdam signed a new declaration of intent, the “Amsterdam Academic Alliance’. The aim of the AAA was to make Amsterdam a hub for international competitiveness and academic excellence. However, the representative bodies of the Free University and the University of Amsterdam blocked the proposal. The status of the AAA is at this time not clear.

3.3.3 National Research Schools

An example of a ‘joint institute’, based on WHW article 8.1 and WHW article 9.23, is an inter-university (national) research school or research institute. The WHW allows for different types of research schools and institutes. There are intra-faculty research schools (within one faculty), intra-university research schools (within one university) and inter-university research schools (between two or more faculties from more than one university). In this section, we focus on inter-university research schools.

Article 9.23 of the WHW (titled: "Research institutes and research schools between two or more universities") reads as follows:

1. A research institute or research school between two or more universities will be constituted in consent with the deans of the participating faculties by means of a joint regulation as described in WHW Article 8.1. This joint regulation can set rules about the management tasks of the research institute or the research school.
2. If a research institute or research school has been established according to the previous section, then the executive boards of the participating institutions will provide the financial means to the board of the research institute or the research school.

The WHW Article 9.23 only refers to universities, even though article 8.1 applies to both universities and UAS. Article 8.1 therefore seems to assume that UAS could establish such research collaborations, but the fact that only universities are explicitly mentioned in article 9.23 suggests that UAS cannot do so. There are, to our knowledge, no research schools linking UAS institutions to one another, or to research universities.

There are many research schools linked research universities that are organized on disciplinary lines (humanities, arts, chemistry, and the like).[12] As stipulated in WHW article 9.23, an inter-university research school is a partnership of two or more faculties from different universities, most of which are aimed at offering modules for PhD candidates from the partnering faculties/universities, facilitating cooperation among PhD candidates and academic staff, and facilitating and supporting collaboration among staff of partner faculties/universities. One of the partnering universities acts as the secretary ('coordinator') of the research school. The partnering universities provide the budget for these research schools; the share of each university may vary from one school or institute to another.

For one example of such a collaboration, the Institute for Programming research and Algorithmics (IPA) is a national inter-university research school. Nine universities participate in this research school; TU Eindhoven acts as the coordinator. Its principal goal is to educate researchers in the field of programming research and algorithmics. It has a research and an educational programme and organizes several events.[13]

SENSE Research School, coordinated by Wageningen University, is a joint venture for integrated environmental and sustainability research. SENSE is a partnership that involves nine Dutch universities and two institutes. It is a school for disciplinary and multidisciplinary PhD training, a network for high quality environmental and sustainability research, and a bridge for sustainable solutions at the science-practice interface.[14]

[12] Each of the thirteen Dutch universities partners in such inter-university research schools; some of them in many.
[13] http://www.win.tue.nl/ipa/
[14] http://www.sense.nl

3.3.4 Universities and Hospitals

A joint regulation is also required for the establishment of a university medical centre (UMC - academic hospital — a collaboration between a university (medical faculty) and a hospital. In the Netherlands, there are eight UMCs. The type of collaborative organisation varies, ranging from integration to intense cooperation. These UMCs are not universities; medical education and research take place under the responsibility of the participating university. As with any other university education programme, the national accreditation agency must accredit the medical education programmes, at the request of the university. Professors are appointed by the university and not by the UMC. Medical students are enrolled at the university, not at the UMC. The UMC is responsible for further education (not leading to a university degree).

3.4 Collaboration in Research

3.4.1 Government Initiatives in the UAS Sector

There are a number of policy initiatives to further collaboration within the UAS sector. The first concerns the establishment of a special staff position (in 2001), the so-called 'lectors' or 'lectorates' (discussed below). The second initiative concerns the provision of grants to enhance the collaboration between UAS and industry. The third initiative is the establishment of the public-private partnerships, the so-called centres of expertise (since 2010).

Knowledge Circulation Grants

The aim of the knowledge circulation grants[15], first introduced in 2005, is to promote more intense collaboration between UAS and industry or public-sector organisations and thereby improve knowledge development, increase innovation in regional industries, and increase exchanges between UAS and industry or the public sector. To obtain a grant, consortia of public and private partners, coordinated by a UAS, must submit a proposal to an independent foundation (Innovation Alliance Foundation).[16] The maximum project length is two years with a maximum budget of k€300. Projects must be co-financed by at least 30%. In 2015, there were 464 completed projects and another 85 running. Since its inception, almost 4600 companies and 6000 professionals have been involved. In almost every project lectors are involved.

Centres of Expertise

UAS increasingly organize their research in centres such as centres of expertise (CoE). These centres are public-private partnerships,[17] partly subsidized by the government, in which UAS

[15] These grants are known as RAAK-subsidies (Dutch acronym for Regional Attention and Action for Knowledge circulation). There have been separate grants for the UAS for different targets: SMEs (RAAK-MKB), public organisations (RAAK-Publiek) and practice-oriented research (RAAK-PRO).
[16] These days this foundation has become part of the national research council.
[17] Also public-public partnerships are possible.

work together with partners from industry to enhance knowledge development and exchange, in most cases focused on regionally or nationally important research themes. In 2010, the first CoEs were established. In 2013, seventeen other CoEs were established as the result of a new component in the funding of universities and UAS. This new funding component in the national allocation scheme for higher education is known as the performance agreements: in the period 2012-2016, 7% of the total budget for education was allocated on the basis of mutual bilateral agreements between the government and the individual HEIs. For UAS, part of the performance agreement funding was allocated for CoEs – implying that the sixteen of the seventeen CoE established in 2013[18] received €1 million annually in the period 2013-2016.[19] In the following years, more CoEs were established, bringing the total to 32 in 2017.

The CoEs differ from each other in many ways: in focus, governance, funding and quality. Some CoEs are mainly funded through the performance agreement budget, some are established by the UAS themselves, and some are funded through the Ministry of Economic Affairs, Agriculture and Innovation. The number of private partners (companies), as well as their commitment to the centres, also varies considerably. Regional governments and public institutions are frequently involved in CoEs in the health domain, whilst the partners in CoEs in the technical domain are usually from business and industry.

While many CoEs are developing well, the Review Committee Higher Education has raised a number of concerns.[20] First, companies are reluctant to engage in long term commitments. Second, several CoEs are predominantly funded by education revenues, rather than business co-funding. Third, several CoEs place a strong emphasis on research but side-line education. Annually, for all CoEs, about 10,000 students, 1,000 UAS teachers and 200 lectors are involved. The total number of UAS students in 2017 is about 450,000 and the total number of teachers about 30,000, implying that about 2% of students and 3% of teachers are engaged in the CoEs.

The key point for this paper is that the CoEs are public-private partnerships of institutions (e.g. lectors and students) and companies. Companies and public-sector organisations engage through funding research projects, infrastructure supply, purchasing services (e.g. courses), guest lectures, or management support. Apart from companies (and regional governments and public-sector organisations) as 'private' partners, different education institutions participate in CoEs (at least in some cases) besides the one coordinating UAS, including universities, other UAS, and other vocational education institutions. The governance models, composition of the partnering institutions and the way in which they collaborate differ; there is not a blueprint.

There are a limited number of centres in which UAS and universities work together, crossing the borders of the binary divide. One of them is the centre of expertise TechYourFuture, an initiative for collaboration of two UAS (Saxion and Windesheim) and the University of Twente.

[18] One of the CoEs did not meet the requirements of the national Review Committee Higher Education, and was therefore not eligible for funding.
[19] The minister decided to continue the funding of €1 million for another year. It is not yet clear what will happen with the funding of CoEs after 2017.
[20] Reviewcommissie Hoger onderwijs en Onderzoek (2017) Stelselrapportage 2016. Den Haag: MOCW.

This centre functions as a network organisation connecting the three institutions, schools (primary, secondary and vocational) and companies, in which researchers from the three institutions work together on school-based or company-based projects. This CoE aims to increase the number of science, engineering and technology students, both in terms of enrolments and graduates. By its activities and research, it aims to contribute to the human capital agenda of the Netherlands.

In 2013, the three partners of TechYourFuture signed a contract, which stipulates among other things its governance structure. This CoE has a directorate, a steering group, an academic board and an advisory board. The UAS Saxion is the coordinator. The directorate consists of an academic director (from the university) and a managing director (from UAS Saxion). The three members of the steering group (directors/deans from the participating institutions) oversee the directorate and the CoE and it meets the directorate at least three times a year. At least twice per year, the directorate and the steering group meet the members of the executive boards of the two UAS and the university. The academic board, comprised of six professors or lectors from the three institutions, gives solicited and unsolicited advice about the research programme and activities, potential for new research endeavours, and the Centre's strategic direction. The advisory board, consisting of high level experts from the public and private sector, advise on public-private partnering and act as ambassadors of the CoE. The group of researchers involved in the Centre consists of staff from all three institutions.

3.4.2 Government Initiatives in the University Sector

Over the years, the Dutch government, particularly the Ministry of Education, Culture and Science and the Ministry of Economic Affairs, has taken several initiatives to encourage research and R&D collaboration among universities as well as between universities and industry (pubic private partnerships). We will briefly describe a number of such initiatives, where government subsidies led to the establishment of various consortia. The key message for this paper is that in the last decade the government has set priorities for certain research areas, accompanied with subsidies, and has encouraged the collaboration of knowledge providers such as universities and business and industry. In many of these initiatives, collaboration is a condition to qualify for funding.

Width and Depth Strategy

In the late 1990s, the Royal Dutch Academy of Sciences made subsidies available for universities to establish 'recognized' and accredited research schools. Under this so-called 'width strategy' (*breedtestrategie*), the research schools encourage cooperation within disciplines.

In 1999, a further fl.100 million was distributed to develop 'top research schools'. This is called the 'depth strategy' (*dieptestrategie*). With the advice of the National Research Council (*Nederlandse Organisatie voor Wetenschappelijk Onderzoek*, NWO), six strategic research areas were selected, with approximately fl. 50 million invested. The remaining 50 million were

distributed among universities as a renewal impulse, based on their relative share of research resources in the first money stream (basic operational funding grant). The six top research schools that were established (CBG - Genetics; Cobra - Communication Technology; ISES - Earth Sciences; MSC - Materials Science; NOVA - Astronomy; NRSC Catalysis - Chemistry) still exist in 2017. Nine Dutch universities participate in the last mentioned top research school (NRSC).[21]

Technology Top Institutions (TTIs)

In the late 1990s, new 'Leading Institutes' were formed on the basis of public-private cooperation in research: the Technology Top Institutions (TTIs). The first TTIs were set up in 1997 as virtual institutions aimed at cooperation between knowledge institutions and companies in sectors that are of great importance for economics and society, such as food, metals, polymers and telematics. Since 2005, they have been brought together in four TTIs in the fields of pharmacology, translational molecular medicine, green genetics and water technology. In addition, three leading social science institutes were established in 2006 (Social Top institutes), such as NETSPAR (Tilburg).

DPI, the Polymer Research program, is one of the technological top institutes.[22] DPI is an industry-driven international collaboration platform for pre-competitive research in the field of polymers. Participating in DPI is a cost-effective way for companies to meet their ongoing research needs while at the same time addressing challenges that extend beyond their individual research and innovation portfolios. By pooling resources, they can jointly work on research topics of common interest, both within and across value chain segments. DPI research projects are carried out by leading polymer science groups across the world. There are seven Dutch universities involved in this institute, next to many foreign universities and many (large) companies such as AkzoNobel and Bayer.

Smart Mix

The Smart Mix is a subsidy program of the Dutch government (part of second stream) intended to stimulate economic, social and cultural innovation. Announced in the governmental white paper "Scientific Budget 2004", it was especially meant for excellent scientific research that benefits the so-called key areas in innovation policy (ICT, nanotechnology, genomics / life sciences). The annual budget is €100 million, awarded to consortia of knowledge institutions and users of knowledge (companies, organisations and the like). The research proposals are assessed by an advisory commission and conducted by the national research council.

Gravitation program (Zwaartekracht programma)

With the Gravitation programme, the Dutch Government aims to encourage research by consortia of top researchers in the Netherlands. This programme is the successor of the 'width

[21] For more information, including the structure of this top research school: http://www.nrsc-catalysis.nl/?page=15
[22] http://www.polymers.nl/

and depth strategy' (see above). It started in 2012 and will be continued to 2026. Universities (consortia of researchers from different universities) can apply annually. Researchers must be carrying out innovative and influential research in their field. Only Dutch universities – not the UAS – can apply. The consortia belong to the world top in the field of research or have the potential to do so. A consortium is a collaboration between the best researchers in the Netherlands in a discipline or in several disciplines. Consortia can arise from Dutch research schools but also from influential top researchers and top research groups consolidating their strengths. The consortia can apply for new (and existing) personnel and material facilities, investments in equipment and infrastructure and other facilities as well as the costs of exploiting these up to a maximum of 25% of the requested contribution, and management costs for the consortium for a maximum period of 10 years.

The Gravitation Program has been in place since 2012 and is funded by the ministry of education, culture and research and is coordinated by the national research council.[23] It initially had an envisaged total budget of € 50 million a year. In 2016, about € 110 million are available for new commitments up to a maximum of ten years. In 2017, out of 37 proposals, six have been awarded a total subsidy of almost €M19 each.

3.5 Collaboration in Education

In the section on organisational cooperation, we already mentioned some examples of cooperation between institutions in the field of education. The strategic alliances such as the 4TU.Federation and the LDE alliance clearly show such collaborations. And there are many other examples of Dutch institutions that collaborate in education. Take for instance the collaboration of the University of Twente and UAS Saxion. In November 2015, the executive boards of these two institutions signed an agreement for cooperation ('declaration of intent') with respect to education, research, infrastructure and valorisation, particularly in the area of micro- and nanotechnology, aiming to encourage innovation and entrepreneurship, to strengthen their position, to advance pathways for students (including staff exchange) and to enhance to use of the existing infrastructure.

In the remainder of this section we will focus on two other (potential) forms of collaboration in education: joint programmes and online education.

3.5.1 Joint Degree Programmes

The national Act on Higher Education and Scientific Research (WHW article 7.3c) allows higher education institutions to establish joint degree programmes, both with Dutch institutions and foreign institutions. WHW article 7.3c.1 reads as follows:

> *An institution can offer a programme or a specialization ('final track') together with one or more Dutch or foreign institutions. In such a case the executive board of the involved*

[23] https://www.nwo.nl/en/funding/our-funding-instruments/nwo/gravitation/gravitation.html

Dutch institution is, or the executive boards of the Dutch institutions jointly are, responsible for the execution of the tasks and authorities (as stipulated in the WHW).

Here we only focus on joint degree programmes between two or more Dutch institutions. A joint degree programme leads to one degree (and not to a double degree, i.e. a degree awarded separately by each HEI). The education programme that leads to a joint degree does not necessarily have to be a full joint programme, it can also apply to a particular part (e.g. a special track or trajectory) within a programme. In the case of a joint programme, a student must be enrolled in both institutions. There are in other words, two types of joint degree programmes. Firstly, a completely jointly offered study programme; the joint degree studies. Secondly, a programme that is only partly offered jointly, e.g. in a graduation track.

Only joint degree studies require a separate registration in national register for educational programmes (CROHO). Looking exclusively at these, NVAO accredited programmes, there are 45 joint degree studies in the Netherlands, of which 30 are studies offered by two or more Dutch higher education institutions (see table 1). Most joint degree studies are on the master level, and universities offer more joint degree studies than the UAS. There is no further information available on the second type of (partial) joint degree programmes.

Table 1: Number of joint degree studies in the Netherlands

	Bachelor		Master		Total
	Dutch partners only	with international partners	Dutch partners only	with international partners	
UAS	1	1	6	1	9
Universities	10	0	13	13	36
Total	11	1	19	14	45

Source CROHO (3-7-2017) NVAO database accreditations (https://nvao.net/opleidingen/nederland)

Joint degree programmes between a university and a UAS are not permitted. Institutions may not grant degrees based on partly university and partly UAS programmes because this would violate the binary principle, a core feature of Dutch higher education.

There are no special or additional legal requirements for the institutions with respect to joint programmes. The two or more HEIs are jointly responsible for meeting the legal criteria to award the degree. The collaborating universities or the collaborating UAS have for instance the responsibility to acquire accreditation from the national accreditation agency (NVAO) for the joint programme and they also have the responsibility to meet the macro efficiency requirements (that is, having permission from the minister to offer the programme – see also the section on online education). Other joint tasks and responsibilities for the institutions regarding joint programmes (just as the ones single institutions have regarding their 'regular' programmes) are as follows: accreditation, macro efficiency assessment, registration in the

national register for higher education programmes, determining the study load, establishing the first year of a bachelor programme, organising a binding study advice for first year students, degree awarding, appointing members of exam committees, setting rules for teaching and exams, setting the seat of the programme (location where the programme is offered), rules for access, enrolment procedures, dismissing students and installing education committees.

3.5.2 Online Education and Cooperation

Online education in the Netherlands is booming. The ambition of the Dutch Ministry of Education, Culture and Science, expressed in its latest strategic plan "The value(s) of knowing"[24], is that by 2025 all educational materials should be available online. This is an ambitious goal that faces several barriers. SURF[25] (2016, 12) for example argues that current policies and rules addressing open and online education are complex, uncertain and too numerous. Pioneering institutions feel unsecure about the possibilities and limitations of new modes of delivery, including the potential for collaboration. Part of the confusion arises from variety of concepts related to the 'digitalized world of higher education' and a lack of shared definition of key terms, including open education resources, online education, open education, blended learning, MOOCs, SPOCs, distance education, and lifelong learning.

It has been argued that online education has many advantages such as increasing the quality of programmes (taking advantage of knowledge that is not available 'in house'), more effective use of class room hours, more flexibility for students (in pace and location), tailor-made programmes (composed by the user), enriched and international learning environment, larger accessibility (education for all), and opportunities for collaboration and co-creation. Others argue, in contrast, that (Dutch) institutions engage in online education in order not to miss the boat, for reasons of reputation, brand awareness and marketing, spotting talented students and the possibility for experimenting.[26]

Online education, defined as the offering of educational materials and programmes through the internet, takes three principal forms. Firstly, teachers may use online materials for their teaching as much as they wish, as long as this does not violate the coherence of the programme (see also 'unbundling') and preferably regulated in institutional teaching and exam regulations. Intellectual property rights cause concerns with respect to the use of online educational materials. In principle, in Dutch higher education intellectual property rights belong to the institution; knowledge obtained by staff on the institution's payroll 'belongs' to the institution and institutions have property right policies, in which among other things they stipulate under which conditions (e.g. licenses) educational materials will be made available for others. It is beyond the scope (time) of this paper to assess the different institutional policies on property

[24] Ministerie van Onderwijs, Cultuur en Wetenschappen (2015) *De waarde(n) van weten. Strategische agenda hoger onderwijs en onderzoek 2015-2025.* Den Haag: Ministerie van Onderwijs, Cultuur en Wetenschappen
[25] SURF is the collaborative ICT organisation for Dutch education and research.
[26] For example NVAO (2014) MOOCs en online HO. Een verkenning.

rights, but it is clear that the possibility of making knowledge online available for common use adds another aspect to the property rights discussion, a discussion that does not just include institutions, their academics and students but publishers as well.

Secondly, students can opt to follow online courses or modules from other institutions. HEIs can recognize such courses or modules through procedures for the assessment of prior learning. Students can also follow online courses or modules from other institutions while testing will take place at the home institution. In both cases the exam committee is plays an important role, since it is stipulated in the WHW that each programme or group of programmes has an exam committee. Finally, Dutch students may follow a 'free programme', an individual programme that deviates from the regular curriculum, if given approval from the exam committee. In its regulations with respect to parts of (online) programmes from other institutions the exam committees must take the national rules (WHW) into account. This free programme can have online modules.

When a student follows online education, offered by another (national) institution, the student must ask the exam committee permission for this, and consequently the exam committee decides if study credits for online education from other institutions are being awarded. In the Netherlands, only a limited numbers of credits for online courses from other institutions can be awarded (see 'one third rule' below). The exam committee must take this into account.

This is also the case when a student wants to use its credits from successfully completed online courses for access to master programmes (Dutch institutions select their master students). This procedure is also known as the EVC procedure (elsewhere obtained competences). This implies that an exam committee must assess the level, quality and content of the online courses from other institutions. In the case of MOOCs or other standalone (non-formal) courses, they must judge the trustworthiness on such courses (including its testing). One way of dealing with this issue is by means of an entrance exam by the institution itself to assess the student's knowledge and capacity on the matter at hand. Obviously, this 'one by one' approach has disadvantages in terms of scale.

A number of issues affect the potential for institutional collaboration in formal education using online materials and programmes. What are, for instance, the legal barriers for using online materials from other institutions in curricula? The coherence of curricula, contact hours between students and teachers, the 'seat principle', online testing, accreditation and recognition will all affect the use of online educational materials from others, or the delivery of joint (degree) programmes with online modules.

3.5.2.1 Unbundling

One of the issues discussed in the Netherlands concerns the possibility that online education may unbundle education, i.e. allow multiple organisations rather than a single supplier to offer components of the educational process. It also could mean that separate components of the education process are outsourced to other specialized organisations (e.g. regarding study

choice processes, study advice and supervision, content development and content curation, exam training, administration of examinations and proctoring, provision of new platforms (MOOCs), learning analytic services). In the Netherlands, decomposing the different parts in the education process faces legal barriers. The WHW stipulates that an educational programme is composed of a *coherent whole of educational units* (instruction, guidance, exams, and so on). Serious unbundling violates this principle and is therefore not allowed. The government wants to be clear about the responsibilities of the degree awarding institution: the institution is responsible for the coherence of its different components.

3.5.2.2 Study Load and Contact Hours

The WHW defines the study load, which is 60 ECTS (1680 hours) per study year. The WHW however does not regulate the number of contact hours and student guidance. Institutions have decided on these matters and as a result contact hours and guidance have differed from programme to programme, only in 2012 the Dutch ministry and institutions concluded bilateral performance agreements that set a norm for contact hours (12 hours per week) for first year Bachelor programmes. The definition of 'contact hours' is different for universities and UAS; for UAS these must be 'physical contact hours', whereas for universities they include 'other structured hours' (student project work, virtual contact between teacher and student). The implications of these contact hours requirements (particularly those for physical contact hours) for online education ('virtual contact') remain unresolved as of this point. For the other years of bachelor programmes and master programmes where no contact hours norms exist institutions may blend in online education as they choose.

3.5.2.3 Seat Principle and Macro Efficiency

The 'seat principle' (*vestigingsplaatsprincipe*) means that a programme has to be settled and offered at the physical location (municipality) that is mentioned in the central register for higher education programmes (CROHO: all Dutch accredited programmes have a CROHO code and are listed in this central register). Through the 'seat principle' the government has sought to ensure that the institution that is awarding the degree actually provides the curriculum, which is important for funding and quality assurance. Only a limited part of the total programme (no more than one third – see below) can be provided by other parties. However, in a digital world of higher education 'physical location' is taking on a different meaning. The seat principle, aiming for an efficient distribution of tasks and programmes, may require reconsideration, as online education is not location specific. The consequences for stretching the seat principle for efficient supply of programmes however are unclear and hard to predict.

In the Netherlands, new educational programmes, such as joint programmes, need ministerial consent. The Committee Efficiency Higher Education advises the minister on these matters, taking several criteria into account as per a ministerial decree (Efficiency Higher Education – *Beleidsregel Doelmatigheid Hoger Onderwijs)*. The decree regulates the supply of education programmes, the requirements for new programmes and the location of programmes ('seat

principle'). A new (joined) programme should undermine the efficient allocation of programmes across the country and should offer added value for the Dutch knowledge society.

The decree concerning Efficiency Higher Education further stipulates that no more than a third of UAS and research university programmes, including apprenticeships and thesis work, can be taken at a different place than the so-called "seat". This 'one-third rule' applies to programme components that are offered by other institutions (e.g. joint degree programmes). The legislation does not stipulate whether the 'one-third' rule applies *across* sectors -- e.g. whether a research university that is the host ('seat') could provide two-thirds of the instruction and a UAS programme one-third. As commonly understood, this would be inconsistent with the programme-level binary divide, and would not be a permissible form of collaboration.

Concerning open and online education the decree mentions that if an institution offers distance education, then this will be regarded as education that is catered from the seat (location) of the programme. If an institution makes use of distance education from another institution as part of its programmes, then this part will not be regarded as being catered from the seat of the programme (and for this reason it cannot exceed one third of the programme).

This implies that for UAS bachelor, university bachelor and UAS associate degree programmes respectively 80, 60 and 40 ECTS can be taken 'elsewhere'. For university master programmes this percentage is slightly different: 30 ECTS for a one-year programme (of 60 ECTS). If an institution wants to offer a programme that exceeds these numbers, then it has to apply for the 'macro efficiency assessment' (i.e. it needs ministerial consent).

The decree does not limit the amount of online education of the 'home institution' (seat), but it does limit the use of online education offered by others. The 'one-third' rule limits the potential of using comprehensive online courses from other institutions. In this way, it prevents an institution from offering a programme – and a degree – without the majority of teaching itself.

3.5.2.4 Online Testing (Proctoring) and Exams

New modes of educational delivery – such as online education – raise issues of testing and examination. Similar rules apply to single institutions or collaborating institutions (joint programmes): for joint programmes both participating institutions must meet the legal requirements. Institutional exam committees are responsible for testing and exams, including coordinating and regulating issues of quality, appointing examiners, and determining the type of testing. The WHW does not apply specific restrictions, but the Act on Privacy (*wet bescherming persoonsgegevens*) has important implications for online testing. One issue is the use of services from online proctoring organisations as personal data can only be stored in 'trustworthy' countries on this matter (European guideline). The US does not seem to be one of these countries, implying that online proctoring from a US organisation is not permitted.

3.5.2.5 Accreditation

The NVAO believes that the current accreditation procedures also work for online programmes and does not distinguish between regular and online education. Moreover, it promotes the development of instruments in the European context. For example, the E-xcellence instrument to assess online and blended learning is compatible with national systems of external quality assurance and the NVAO has advised institutions and programmes in using this instrument for their internal quality assurance (NVAO, 2014, p.5).

3.6 Sharing Human Resources

With due regard of other national regulation, the executive board of a higher education institution determines and implements personnel policies (WHW, chapter 4). The national representative organisations of the HEIs —VSNU and VH— act as the employers' organisations and negotiate with the labour unions on the labour conditions of university and UAS staff. These labour conditions are laid down in a Collective Employment Agreement that is binding for the institutions, although within this national framework the executive boards and locally organized unions can further decide on local labour conditions. Staff salaries are set at the national level and are based on staff position. For each staff position, there is fixed scale with minimum and maximum salaries. The various staff positions of universities are described in a national system, the so-called University Function Ordering system (UFO), in which job descriptions are linked to salary scales. The UAS has a similar type of national system to describe and reward jobs, the so-called FUWA-HBO or HAY system.

Thus, within this national frame the executive boards of the HEIs bear the responsibility for human resource management and policies. They appoint and dismiss their staff. This implies that the HEIs have ample room to establish joint appointments, as long as they respect the conditions of the general framework regarding labour conditions and the like.

A huge number of persons hold joint positions (e.g. having two or more part-time jobs). Many academics hold part-time positions at different HEIs or at a HEI and in industry. Many of these joint positions can be found in vocational driven disciplines, which have intense relationships with their professional fields (in teaching, research or valorisation). We give an example.

The Dutch National Institute for Public Health and the Environment (RIVM), with a total of about 1.500 staff, conducts research and provides scientific advice to governments and society in the field of public health. It works to prevent and control outbreaks of infectious diseases, promotes public health and consumer safety, and helps to protect the quality of the environment. Scientific research is fundamental to all work at RIVM, and cooperation — knowledge exchange— with other scientific organisations such as universities is essential. One way to achieve this goal is the establishment of personal commitments in the form of part-time professorships and double appointments. Currently the RIVM funds about 30 professorships. These professors are appointed at and paid by the RIVM (or through grants obtained by RIVM or the professor) and hold a part-time chair at a university. Such professors are called

'professors by special appointment' or an 'endowed chair', a position, usually a temporary one (e.g. five years), that is very common at Dutch universities.[27]

The RIVM website (Dutch version) gives the following goals for the establishment of these personal commitments: increase network, support reputation, increase scientific quality, increase possibilities to conduct research, contribute to scientific publications, increase potential for funding, increase number of students and apprenticeships, stimulate staff and recruitment, increase career possibilities and access to practical knowledge.

3.6.1 Lectors

The lector position at UAS is another good example of joint (or, double) appointments. In 2001, a new type of staff position was established at the UAS – the lector position, initially funded by the government by means of an additional budget.[28] The introduction of the lector position aimed to change the institutional culture and to develop a research orientation in UAS institutions, which had little prior experience in conducting research. Since 2001, the number of lectors has steadily grown and is, generally speaking, perceived as a successful initiative. In 2014, the total number of lectors was about 600 (head count) and 360 in FTE.

Lectors may hold fixed or temporary contracts, and work full or part-time.[29] The 'average lector' has a 0.7 position at the UAS (that is a 28 hour per week part-time position). Among those who are part-time lectors, 53% hold a position elsewhere (see table 2).

Table 2: Positions of part-time lectors elsewhere

own company	22%
university professor	6%
university researcher or teacher	11%
other UAS	4%
industry	6%
government	3%
public sector	12%

Source: de Jonge (2016)

Conflict of interests and impartiality pose potential general risks to joint appointments. For this reason, institutions must respect and be committed to the national Code of Scientific Integrity, and professors and other academic staff must comply with the code principles (honesty and care, reliability, verifiability, impartiality, independency, and responsibility). All universities also

[27] For example: the Faculty of Social Sciences of the Erasmus University Rotterdam has more than twenty professors by special appointment, while the University of Tilburg has 57 endowed chairs.
[28] Currently the funding of lectors is part of the UAS' basic operational grant from the government (part of the UAS lump sum). In addition, lectors are supposed to obtain grants (research council and third party funded research).
[29] De Jonge, J. (2016) *Praktijkgericht onderzoek bij lectoraten van hogescholen*. Feiten & Cijfers. Den Haag: Rathenau Instituut.

have rules for ancillary activities requiring reporting of activities by academics and universities must have a 'committee scientific integrity' to investigate (potential) scientific fraud. Problems concerning secondments may also arise when organisations have different salary levels and labour conditions.

In some cases, lector positions are funded by parties outside UAS. Some companies (co-)fund lector positions, which can result in close collaboration between the company and the UAS. Research universities or public research institutions may also (co-)fund lector positions. TNO, an independent public research organisation that aims to boost the competitive strength of industry and the well-being of society in a sustainable way, is funding fifteen lectors.[30]

3.6.2 Subsidies and Fiscal Measures

Sharing personnel between UAS and SMEs is, in principle, an effective way to exchange knowledge, but one that does not (yet) happen at a large scale in the Netherlands.[31] The 'knowledge worker regulation' has sought to encourage exchange through a government subsidy, in total €180 million for two years, for secondments of industry knowledge workers to public knowledge institutions for a maximum period of 1.5 years (such as universities and UAS) (*Kenniswerkersregeling*, 2009).[32] In total, 1900 industry knowledge workers participated in this programme, two-third of whom came from SMEs, collaborating with about 200 researchers. In total, 46 knowledge providers participated (mainly universities and research institutes for applied research), eight of which were UAS participating in nineteen projects. An evaluation report[33] stated the following effects of these collaborations: knowledge development and exchange (improvement R&D), larger networks (including new public-private contacts), the development of multidisciplinary approaches (otherwise beyond the scope of SMEs), facility sharing (stimulated the use and sharing of research facilities), and participation of industry knowledge workers in education (better fit of curriculum with professions).

Despite the positive experiences (both from industry and the institutions) the knowledge worker regulation was discontinued. Instead the government decided to further stimulate the mobility of knowledge workers between industry and public institutions through fiscal measures (additional fiscal innovation programme of €100 million).

3.6.3 Types of PhDs

Another interesting category of university staff from the perspective of collaboration are PhD candidates. In the Netherlands, there are two different types of PhD candidates[34]: internal PhD

[30] There are over sixty TNO employees linked to universities (52 professorships) and UAS (15 lectors) as professor or lector. In total, TNO has 2.600 employees (TNO, 2015).
[31] AWTI (2015) MKB en Hogescholen. Partners in innovatie. Den Haag: AWTI.
[32] Letter of the Minister of Economic Affairs, Agriculture and Innovation to Parliament on 13 September 2011.
[33] Ministerie van Economische Zaken, Landbouw en Innovatie. Agentschap NL (2011). *Hoe de Nederlandse economie haar kenniswerkers behield. Ervaringen uit kenniswerkers projecten.* Den Haag: M van EZLI
[34] VSNU: http://www.vsnu.nl/files/documenten/Feiten_en_Cijfers/Typering%20promovendi%202013-RH-def-

candidates (junior staff member with a university labour contract), and external PhD candidates (with a scholarship or other financial support without a university labour contract). A number of internal PhD candidates spent (much of) their time outside the university, for instance in industry. External PhD candidates may work in industry or a public sector organisation (which could be a UAS) and do their PhD work in free time or have an agreement with their employer to have some time off for PhD work.

There are no statistics about external PhD candidates. In 2016, the Royal Netherlands Academy of Arts and Sciences (Dutch acronym KNAW) estimates that the multinationals ASML, Philips and SHELL fund about 75 PhDs each.[35]

3.7 Facility sharing

Since the mid-1990s, Dutch HEIs have owned their buildings and property. They can decide how and with whom they wish to share the infrastructure. A detailed account of how properties are used and shared cannot be given, but there are several common approaches. Firstly, there are grassroots or local initiatives where an institution agrees that others can make use of its facilities, for free, in kind or by paying a fee or rent. Living and design labs, academic factories, and so on, as user-centred, open-innovation ecosystems where different actors meet, such as academics and students from different institutions, and companies, can serve as an example. Lab space is in some cases also rented out to companies for product development and testing.

Secondly, we already referred to the strategic alliances and centres of excellence, which usually include the use of facilities and infrastructure of other institutions.

Thirdly, the government and the research council have subsidy programmes that fund (large) institutional facilities and infrastructure, particularly at universities. We already mentioned one such programme, the Gravitation programme, but there are others. In many cases, only consortia are eligible for funding, another indication for sharing facilities among institutions.

Finally, we note that business and science parks, defined as locations where R&D and knowledge-related activities take place with the involvement of universities, UAS, other research organisations and companies, usually with support from local or regional governments ('knowledge ecosystems'). In the Netherlands, there are many of these business and science parks, and usually the universities, and to a lesser extent UAS, play a major in these.[36]

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[35] KNAW (2016) Promoveren werkt. Amsterdam: KNAW

[36] Buck Consultants International (2014), *Inventarisatie en analyse campussen 2014*. Den Haag: BCI

3.8 References

AWTI (2015) MKB en Hogescholen. Partners in innovatie. Den Haag: AWTI

Berenschot (2016) *De opbrengst van bestuurlijke samenwerking UvA-HvA.* Een evaluatie van de periode 2000-2016 in opdracht van College van Bestuur UvA en HvA.

De Jonge, J. (2016) *Praktijkgericht onderzoek bij lectoraten van hogescholen*. Feiten & Cijfers. Den Haag: Rathenau Instituut.

Hartgers, R. (2016) *Verschuivende allianties.* Een onderzoek nar de (regionale) samenwerkingsverbanden van de Universiteit van Amsterdam. In opdracht van de Commissie Democratisering en Decentralisering.

Hendriks, M. and Brunninkhuis, J. (2016), *Jaarverslag TechYourFuture*. Centre of Expertise TechniekOnderwijs.

KNAW (2016) *Promoveren werkt.* Amsterdam: KNAW

Kwikkers, P. (2017) *WHW Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek. Wetstekst. Toelichtend commentaar*. Editie 2017. Den Haag: SDU Uitgevers

Louw, R.G. (2011) *Het Nederlands hoger onderwijsrecht. Een thematisch commentaar op de Wet op het hoger onderwijs en wetenschappelijk onderzoek*. Leiden: University Press.

Ministerie van Onderwijs, Cultuur en Wetenschappen (2015) *De waarde(n) van weten. Strategische agenda hoger onderwijs en onderzoek 2015-2025.* Den Haag: Ministerie van Onderwijs, Cultuur en Wetenschappen.

NVAO (2014) *MOOCs en online HO. Een verkenning*. Den Haag: NVAO.

Reviewcommissie Hoger onderwijs en Onderzoek (2017) *Stelselrapportage 2016.* Den Haag: MOCW.

Ripoll Soler, C., & de Miguel Molina, M. (2013). University mergers: content analysis of their typologies and the factors that can determine their success or failure. A literature review. *REVISTA DE EDUCACION*, 313-337.

Schuwer, R. en Janssen, B. (2016), *Open Educational Resources en MOOCs in het Nederlandse Hoger Onderwijs. Een onderzoek naar de stand van zaken rond productie en hergebruik.* Eindhoven: Fontys Hogeschool ICT.

SURFnet (2015), *Perspectieven op ontwikkelingen binnen het Nederlandse hoger onderwijs*. Trendrapport open en online onderwijs 2015. Utrecht: SURFnet.

SURFnet (2016), *Verkenning: Opschaling van open en online onderwijs. Regelgeving en aandachtspunten.* Utrecht: SURFnet

TNO (2015) *De Impact van TNO*. http://digitalpages.tno.nl/de-impact-van-tno/

Windesheim (2012) *Kwaliteit is prioriteit. Jaarverslag 2011*. Zwolle.