Performance contracts of Universities of Applied Sciences

A comparative analysis of the UAS Münster and UAS Saxion in Enschede

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Summary

In the scope of this thesis, we will compare performance contracts in the higher education sector. Two agreements are studied, one from the UAS Münster in North-Rhine Westphalia, Germany and the other from the Dutch UAS Saxion in Enschede, Deventer and Appeldoorn in order to answer the following research question: What governance paradigms ranging from 'Traditional Public Administration', 'New Public Management', and 'Public Value Management' are represented in the performance agreements for the Dutch UAS Saxion and the German UAS Münster? A cluster of criteria deriving from the theoretical framework for each of the three public administration approaches is identified and operationalised in order to apply the two cases. Further, interviews with students and academic staff members from each of the institutions as important stakeholders are conducted. This aims at gathering information about the agreements on three different stages: their design, execution and conclusion. Useful insights for the field of higher education as well as the concept of performance contracts are produced. We study the agreements in order to detect which roles the different stakeholders play in the various phases. The involvement of stakeholders, in particular students, is one indicator we focus on in order to determine which of the three approaches is predominantly represented in the investigated agreements. Even though, only two cases are analysed, the developed method and insights may be used as a pilot method for similar future analysis of performance contracts in other cases.

Keywords: performance agreements, higher education, bureaucracy, New Public Management, Public Value Management, Universities of Applied Sciences, case study

1. Performance agreements in higher education

Performance agreements can exist and be used in any context in the public sector. They are always contracts between the state and an individual organisation. These organisations do not have to be public or private, but often are or originally have been operating in a field of high public interest such as social housing, the health sector or higher education. These agreements state particular goals that can be of quantitative or qualitative nature, that the institution strives to meet in the future within an appointed period of time. Regular evaluations based on pre-set indicators and other outcomes are conducted to ensure the institution's commitment. The resulting reviews of the agreements are normally linked to public funds. In the case of non-fulfilment of the contract, there can be financial rewards or sanctions (de Boer et al., 2015).

In this thesis, the phenomenon of performance contracts in higher education will be researched. Two cases are subject of investigation, one in the Netherlands and one in Germany. In both countries, the higher education sector is divided into research universities and Universities of Applied Sciences (UAS). The focus of the thesis is on the agreements of two UASs. The Dutch UAS is Saxion and is located in the cities of Enschede, Deventer and Appeldoorn. It operates under the authority of the Dutch national government. The UAS Münster is located in Germany and accountable to the government of the federal state (*Bundesland)* North-Rhine Westphalia (NRW). *Ziel- und Leistungsvereinbarungen* or *Hochschulverträge* are the names for these kind of contracts in NRW, which can be translated with 'target agreements' or 'higher education contracts'. The common label in the Netherlands is *Prestatieafspraken*, which means 'performance agreements'. Despite the different names, these contracts are individual agreements between the government and the individual higher education institution (HEI).

The current agreements in the Netherlands are relatively new, since the UASs as well as the research universities just completed the first round of agreements for the four years period between 2012 and 2015. Their initial goal was to create a dialogue between the institutions and the government resulting in concrete accomplishments. Through these, they expected to achieve quality improvements. But to realise significant changes, agreements with attached funding as incentive were needed. Further, a higher level of profiling amongst the HEIs is desired. Therefore the contracts were designed individually with each institution. Profiling is a strategic differentiation process to increase the institutional diversity in the higher education sector (de Boer et al., 2015). Saxion for instance strengthens its institutional profile with a focus on “Living technologies”.

Particular fields of research in this scope are “Area & Living”, “Health & Wellbeing” and “Smart industry” (Saxion, 2017).

In Germany, performance contracts were implemented within a comprehensive education reform in 2006 (de Boer et al., 2015). This reform also finished the transfer of competences in the field of education from the national level towards the federal states (Hepp, 2013). The individual agreements are concluded for two years and the latest round of performance contracts was the two year period between 2014 and 2015 (Fachhochschule Münster & Ministerium für Innovation, Wissenschaft und Forschung des Landes Nordrhein-Westfalen, 2014; from now on: UAS Münster & miwf, 2014). After that, the same conditions got extended for the year 2016 – solely the name changed from *Ziel- und Leistungsvereinbarungen* to *Hochschulverträge* (UAS Münster & miwf, 2014). The initial intentions of the agreements in NRW were to improve the quality of the higher education system in the federal state enabling it to compete on national and international levels. The former system was criticised as being too undifferentiated. As a response, one of the aims was institutional profiling (de Boer et al., 2015). The UAS Münster strengthens its profile by promoting research in some fields of focus. This is implemented by building up internal, interdisciplinary research associations and increasing the number of thematic fields, in which research is done. But also in the branch of education the amount of programs for 'non-traditional' students (e.g. dual study programs) are enlarged systematically (UAS Münster & miwf, 2014).

Scientific and societal relevance

Describing the Dutch and NRW performance contracts is relatively new. The focus on UASs, as well as the study of two contrasting national cases is of great interest. Comparing them, from the perspective of three different managerial concepts (TPA, NPM, PVM), is contributing knowledge to the field. Understanding these contexts in which performance contracts operate and studying them extensively allows us to determine similarities and differences. From this we hope to understand how the three approaches can help us analyse how the contracts were designed and experienced by the various stakeholders and learn about their intentional as well as (possibly) unintentional effects.

Furthermore, higher education is crucial for society. It creates educated human capital, which contributes to the production of public value (Bushfield, 2008). Furthermore, to improve the quality and performance of higher education is undeniably relevant in knowledge-based societies, such as the Netherlands and Germany (de Boer et al., 2015. Providing information on what the intention of these agreements are, is therefore crucial. Whether they prioritise the creation of public value or aim

at improving efficiency and accountability.

Outline of the thesis

The thesis will be structured as following: the first chapter will give detailed background information based on a literature review of performance contracts in general and in specific in the two contexts of the Netherlands and NRW. The second chapter provides a theoretical framework that will point out the crucial differences between the three management approaches in the public sector. In this part, these approaches are also linked to the context of higher education. The following operationalisation enables a cross-sectional comparison between the two investigated cases. This comparison is analysed and discussed at first in the general context and then applied on our two cases in the following section. Finally, we will conclude to answer the main research question:

> What governance paradigms ('Traditional Public Administration', 'New Public Management', and 'Public Value Management') are represented in the performance agreements of the Dutch UAS Saxion and the German UAS Münster?

To answer this research question, four sub-questions will be answered:

1. What are performance contracts in higher education and what is their rationale?
2. What does theory tell about the differences between the three approaches ('Traditional Public Administration' (TPA), 'New Public Management' (NPM), and 'Public Value Management' (PVM)) in governing public sector organisations?
3. To what extent are elements of the three approaches visible in the performance contracts in the Netherlands and in NRW?
4. What elements of TPA, NPM and PVM are reflected in the performance agreements of Saxion and the UAS Münster, in particular where this concerns the involvement of stakeholders?

In the following, we will answer our first research sub-question what performance contracts are and why they got introduced. Then, we will give some historical background on performance contracts in the two investigated contexts: the Netherlands and NRW.

Performance agreements in higher education

To properly define performance agreements, a distinction has to be made between performance-based funding and performance agreements. While the latter one links performance to expected outcomes in the future, performance-based funding is a more general term that describes a funding model that is linked to performance indicators. Performance that was achieved in the past can be funded by a formula for example. The more narrow concept of performance agreements is less common and quite a new tool in the field of higher education. In the case of the Netherlands performance-based funding is used since 1993, but individual performance contracts with each HEI were only introduced in 2012 (de Boer et al., 2015).

As indicated, performance-based funding models and performance agreements can include qualitative and quantitative goals. Across different countries the indicators used and how they are weighted vary due to different national and institutional contexts. Some indicators are more common to use – partly because they are easier to measure such as ECTS points earned, Bachelor, Masters, and PhD graduation rates, amount of third party funding or research productivity. Other indicators that are less common are student surveys that reflect the quality of education, the level of employability or the quality of research (de Boer et al., 2015; European Commission, 2014). According to de Boer et al. (2015), using the "number of enrolled students" (p. 9) as indicator – as it is the case in NRW –, does not exactly describe performance. The authors argue that it could still be seen as "market share" (p. 9).

It is crucial to specify how these indicators should be achieved, therefore the performance contracts should contain guidance on how to accomplish a goal. For example the indicator 'completion rates' can be achieved by lowering the difficulty of exams and assignments. This conduct would decrease the quality of education and would be an unintended perverse effect of performance contracts. Indicators such as graduate employment outcomes are less useful, since there are a lot of impacting factors such as the students' intrinsic motivation after graduating, the students' networks that might vary due to their familiar background and many more. The higher education institutions' performance cannot be measured isolated in this case (European Commission, 2014).

Performance is defined in different ways, therefore different indicators are used to measure this concept. This is also part of the debate what actually counts as performance agreement how we defined it previously. According to de Boer et al. (2015) this can "sometimes [be] even a matter of taste" (p. 13). The variety of different approaches and contexts result in limited knowledge about

the effects of performance agreements. Still, the authors depict performance contracts as “goal- or problem-oriented, results-based and measured against pre-set standards” (p. 13). Standards can be benchmarks or a result of negotiations between stakeholders or political actors.

Generally, performance agreements are used in combination with other funding models (e.g. formula-based funding). Further, they often draw on already existing systems to assure quality (e.g. accreditation processes) or data collection methods (e.g. satisfaction surveys). One down-side of this could be resulting overlap of indicators (de Boer et al., 2015).

Another dispute is the effect of performance agreements on the HEI's level of autonomy. The trend goes towards a growing level of institutional autonomy, but the introduction of this new tool might be perceived to be a steering instrument of the government, which might have the opposite effect. Still, whether this is the case depends on the context and on the individual performance contract. In theory, these contracts are negotiated by the ministry on an equal playing field together with the HEIs, which in turn include its direct stakeholders (managers, employees, students) into the contracting processes (design phase, execution and evaluation). The state is supposed to steer the negotiations by providing a framework of rules and procedures. From previous experiences, de Boer et al. (2015) state that students normally do not play a huge role, when it comes to the design process of the contracts. Nevertheless, they are included in their implementation in the day-to-day business in representative bodies. When it comes to the final settlement of the contracts, a general consent on the method is needed (e.g. indicators, frequency, data collection). In some cases an independent commission is present as part of the evaluation (de Boer et al., 2015).

Rationale of performance contracts in higher education

One common reason for introducing performance agreements for universities and UASs is to demand a higher level of diversity in the higher education system and to improve the quality of education to be able to compete on national and international levels. At the same time they are a tool to encourage HEIs to aim for outcomes that are aligned with priorities on the state's agenda. These improvements aim at a higher quality of teaching (e.g. study success of students) and research (e.g. level of productivity, outreach).

The introduction of performance contracts was embedded in an international trend of change in the policies concerning the HE sector. The new tool was supposed to fulfil three main functions:

- Communication is encouraged in terms of negotiation and information exchange as impulse for strategic planning and thinking between the HEIs and the government.
- Legitimisation is strengthened through binding contracts that state for what the tax payer's money is spent on. This depicts transparency towards the public.
- Incentives are created by providing funds or additional autonomy[1] as reward for high performance. Further, the agreements provide financial security for future planning and resource allocation.

Source: In der Smitten & Jaeger (2012), p. 2

De Boer et al. (2015) add that not only communication between the government and HEIs is encouraged. To achieve the pre-set goals, a constant dialogue with stakeholders is required. This means, the dialogue with students and academic staff is strengthened to 'act in concert' in order to fulfil the objectives.

Furthermore, performance contracts increase the level of transparency and accountability towards the public where the tax payer's money is spend on. Through this, the public is informed which institutional goals are prioritised and how extensively they are financed. This could be seen as guidance for financial and strategic planning (de Boer et al., 2015). The validity of the contract over several years supports the creation of a stable and predictable environment, which is less politicised (In der Smitten & Jaeger, 2012).

After answering the first research sub-question, we will continue with providing some background information on the history of performance contracts in the two investigated contexts: the Netherlands and North-Rhine Westphalia.

1.1 History of performance contracts in the Netherlands

Before the introduction of performance contracts the Dutch higher education system had and still has a good reputation referring to citation numbers and their impact as well as the amount of grants they receive. The introduction of the agreements rather aimed at the field of teaching.

1 Additional autonomy could be for example a change in a legal regulation or additional jobs financed by the state (In der Smitten & Jaeger, 2012).

Before performance contracts got introduced, the public funds for UAS as well as research universities were calculated on a formula funding combined with performance-based funding of 20 percent of the total grant (de Boer et al., 2015). This performance-based funding included grants based on input – such as the number of students –, but also partly output-oriented funding indicators (e.g. Bachelor and Masters graduation rates) were used. Nevertheless, the Dutch government was concerned due to fairly high numbers of drop-out and low completion rates and even more generally about the quality of higher education. According to the national government, one reason for this could be a lack of diversity (de Boer et al., 2015).

With this background, a trial of contracts got introduced between 2008 and 2011. These were different from the latest performance contracts between 2012 and 2015, since they were collective agreements between the Dutch Ministry of Education, Culture and Science and the research university and UAS sector. These type of contracts were not extended, because of the missing possibility to cater the various different goals of the individual HEIs. Consequently some universities and UAS were unchallenged by the collective aims, whereas others were not able to meet the national goals (de Boer et al., 2015).

Around the same time, in 2009, the Veerman committee was founded and named after the former education minister. It was also called Committee on the Future Sustainability of the Dutch Higher Education System. This board analysed the trial of contracts in the period of 2008 until 2011 and gave advise on how to handle the weaknesses of the collective agreements. Besides already mentioned concerns, such as high drop-out rates, the committee criticised a lack of flexibility in the higher education system. It was unable to meet the different demands of (potential) students and the labour market. To cope with this situation, their advice was to ask all individual higher education institutions to develop a strategic long-term plan. Its goal was to increase the level of diversity in the higher education sector as well as more generally the quality of education. To be precise, profiling was strengthened, which resulted in many more specific Bachelor and Masters programs – especially at UASs (de Boer et al., 2015).

For the transformation process, the Veerman committee proposed a gradual change in funding models. Input-oriented funding should be in steps reduced and replaced by so called mission-based funding. Missions were determined by the long-term strategic plan that stated the HEIs' ambitions. If their performance fits their mission, they are supposed to receive mission-based funding. To have a clear contract as basis for this type of funding, the first round of performance contracts was

concluded between 2012 and 2015 (de Boer et al., 2015).

The Veerman report published in 2010 by the same-named committee was perceived positively by all stakeholders in higher education. In reaction the Strategic Agenda of the Ministry of Higher Education, Research and Science has been made in July 2011. It included all points stated in the Veerman report (de Boer et al., 2015). In the same year, in December 2011, the Dutch Ministry of Education signed an agreement (Dutch: Hoofdlijnenakkoord; short: HLA) with two university associations as representatives for the two sectors of higher education. By doing that, the research universities and UAS accepted the new model of funding and the general terms, as well as the following overarching objectives (Vereniging van universiteiten, 2011; HBO-Raad, 2011):

- improving the quality of teaching
- increasing the completion rates and the hours of student-teacher contact
- decreasing the drop-out rates
- offering excellence tracks for over-average students
- widen the study programs on offer
- create better connections between the study programs and the labour market as well as the national and European scientific agendas
- sharpen the profile in the branch of research in order to make significant impact and to improve the reputation on the international level

Source: Vereniging van universiteiten, 2011; HBO-Raad, 2011.

These weaknesses were supposed to be addressed by the individual performance agreements, starting in the academic year of 2012 (de Boer et al., 2015). Although the creation of a strategic agenda was not mandatory for the HEIs, it was coupled to a conditional funding that was only received if a strategic agenda was formulated and evaluated positively.

In the HLA, the associations of the two HE sectors each agreed on seven indicators with the Minister of Education, Culture and Science Zijlstra (Vereniging van universiteiten, 2011; HBO-Raad, 2011):

- Participation in excellence tracks/programs
  (Number of excellence tracks/programs and level of participation)
- Drop-out rate
  (Percentage of students that drop out after their first year of studying)
- Switch
  (Percentage of students that switch to another program at the same university in their first year of studying)
- Bachelor graduation rates
  (percentage of students that obtain a degree after four years of studying)
- Lecturer quality
  (Percentage of lecturers with a 'Basic Teaching Qualification')
- Education intensity
  (Student contact hours planned in the program and outside the program with academic staff in the first year of studying)
- Indirect costs
  (three options for universities: 1. Overhead staff as a percentage of total staff; 2. Overhead in FTE of the entire organisation; 3. Overhead in relation to turnover;
  one option for UAS: ratio teaching staff/non-teaching staff)

  Source: Vereniging van universiteiten, 2011; HBO-Raad, 2011.

The HLA is taken as basis for the individual HEIs' contracts, in which they strengthen their individual profile and set their goals on the basis of the seven mandatory indicators.

1.2 History of performance contracts in NRW

After providing insight to the history of performance contracts in the Dutch context, we will continue with the equivalent in the North-Rhine Westphalian context.

As mentioned earlier, investigating the German context as a whole makes no sence when it comes to the policy field of education. Since education acts in the years 2000 and 2004 – but latest after the federalism reform in 2006 –, the power in the field of education has shifted from the federal level (*Bundesebene)* towards the German states *(Länderebene*) (de Boer et al., 2015;

Bundeszentrale für politische Bildung, 2015). This shifting power also included a shift in funding. But then the states were not able to pay all the expenditures that came with maintaining the education buildings, the research infrastructure, as well as running expenses. Consequently, the federal level made contracts with the states to balance the costs. The policy background was to handle the constantly growing number of students entering higher education. The Higher Education Pact 2020 for example was designed to fund all entrants into HEIs until the year 2020. Its first phase between 2007 and 2010 also intended to put some of the funding into research to build up its capacities. Unfortunately, the real number of new students exceeded the estimated number by 100%. In 2009, the contract was extended into the second phase between 2011 and 2015. Still, the states are the main funders and use performance-oriented funding (*leistungsorientierte Mittelvergabe)* such as contract steering, performance agreements and lump sum funding[2] (de Boer et al., 2015).

The legal background in NRW since 2006 until 2014 is the *Hochschulfreiheitsgesetz*, which sees all HEIs as *öffentlich-rechtliche Körperschaften* (bodies under public law). The law gives a fixed framework how a HEI is supposed to be structured and which organs are mandatory to include. Despite that, the management of the HEIs are relatively autonomous in financial, organisational and human resource decision-making. The political context for the *Hochschulfreiheitsgestz* was the aim to make the HEIs in NRW more competitive on a national and international level. This goal was to be achieved by developing individually distinct profiles, introducing quality assurance systems and to start an initiative for excellence tracks (de Boer et al., 2015). This law also includes a paragraph on performance contracts (§6 HFG). This newly introduced tool pushed the type of steering from input-oriented towards output-oriented. This means the government leaves the HEIs free space to implement the given goals with own discretion on how to use the provided money. To do so, performance-based funding was introduced. But greater autonomy also means a greater duty to justify all choices made. The HEIs has to report to the government peaking in a final evaluation. Infrastructure for reporting needed to be build up. During the final evaluation non-fulfilment of these legally binding contracts would lead to a loss of reputation or prestige in the public and as negotiation partner. The contracts have a politically binding impact, therefore the loss of prestige would be damaging for the HEI (In der Smitten & Jaeger, 2012).

The indicators used in the contracts have varied over time and were adapted from time to time

2 Lump sum funding means that the entire amount of money is invested at one point (e.g. at the beginning of the academic year) (The Economic Times, 2017).

according to new findings in the field of performance measures, but also caused by societal debates. For example during a public discourse in Germany on plagiarism in PhD theses, the indicator of doctoral graduates was not used any longer. Since the year 2007 the focus was on 'teaching', 'research' and 'gender equality', which was measured by 'graduates', 'third party funding' and 'female professors'. The different indicators were weighted differently per discipline, length of study, and type of degree. In the year 2013, 23 percent of the public funds were attached to performance indicators and performance-based funding models (de Boer et al., 2015). While at research universities a higher amount of the performance-based funding was assigned to the indicator of research (40%), this percentage was lower for UAS (15%). The percentage of UAS concerning the indicator of research was shifted towards teaching (UAS: 75%; research universities: 50%) (de Boer et al., 2015).

In October 2014 the parliament of NRW passed a new law called the *Hochschulzukunftsgesetz*. It was created in the context of the criticism that HEIs had too much institutional autonomy. Although the system was performing well, a lack of transparency was felt and it was not clear where the tax payer's money exactly went and what the actual performance was. Furthermore, the national strategic goals were not payed enough attention to. All of these circumstances were founded in the argument of having too much institutional autonomy. This new law is supposed to limit this freedom. The reactions of stakeholders differed. While according to de Boer et al. (2015) academics appreciated this change, managers disliked it. This culminated in the refusal of all higher education institutional leaders of NRW to sign the upcoming performance contracts (2014-2015). Beside other reasons, one was that they had no knowledge about the impact of the newly introduced law on the performance agreements, that were already ongoing since 2006 (de Boer et al., 2015).

The first period was between 2006 until 2008, hence the agreements of 2014 to 2015 were the fifth round of performance contracts – although they were not signed. However, the agreements are negotiated individually between the management level of the universities and the ministry. In 2016, the performance contracts from the previous two years were prolonged – and this time signed – for another year, but called *Hochschulverträge* instead of *Ziel- und Leistungsvereinbarungen* ('contracts of HEIs' instead of 'target agreements') (de Boer et al., 2015).

The topics covered according to de Boer et al. (2015) are:

- institutional profile
- public funding
- teaching

  (number of students per discipline, the intake capacity of institutions for new entrants, *Hochschulpakt*[3] agreements (Higher Education Pact), quality assurance, capacity for teacher training, supply for 'non-traditional' students)
- research

  (collaboration, profiling, PhDs, third party research)
- valorisation

  (patenting, collaboration)
- gender issues
- internationalisation

  (collaboration, mobility of students and staff)
- linkages with upper secondary education
- infrastructure and delivery of information and data

Source: de Boer et al. (2015), p. 77.

The concept of governance, meaning to include multiple stakeholders on different levels, is also present in the field of higher education. This means that actors such as businesses or third party funders are gaining importance (In der Smitten & Jaeger, 2012).

In comparison to the Netherlands, Germany as being in the fifth round of performance contracts was able to evaluate the agreements over a longer time. According to the higher education information system *(Hochschulschul Informations System GmbH (HIS))* there is no evidence that supports a correlation between the performance of HEIs and the funding linked to their performance contracts (In der Smitten & Jaeger, 2012). These agreements also brought positive change in terms of internal decision-making and planning. The universities and UASs discuss and set clear goals to follow their pre-set strategy (de Boer et al., 2015).

Performance agreements in NRW are criticised as being too homogeneous. The contracts depict a

3 The *Hochschulpakt* is an agreement between the federal state NRW and the HEIs about public funds to finance the high number of newly enrolled students (Ministerium für Innovation, Wissenschaft und Forschung des Landes Nordrhein-Westfalen, 2017).

quite fixed framework that is rather general including the same topics and indicators for all HEIs. Consequently, a homogeneous higher education sector might be encouraged instead of the desired diversity. Using the same indicators might simplify the process of measurement and evaluation, but critics demand more qualitative indicators that aim at quality and satisfaction. This would raise the complexity of the evaluation and its funds attached to it (de Boer et al., 2015).

2. Public management approaches: From 'Traditional Public Administration' to 'Public Value Management'

This chapter will provide a discussion of three different management approaches in the public sector in order to answer the second research sub-question: What does theory tell about the differences between the three approaches ('Traditional Public Administration' (TPA), 'New Public Management' (NPM), and 'Public Value Management' (PVM)) in governing public sector organisations?

In the field of governance and management exist several approaches which developed over time. First, the traditional approach is bureaucracy (say Traditional Public Administration, or TPA). This very much relies on hierarchies and top-down setting of goals and rules. In reaction to its weaknesses such as a lack of incentives the New Public Management (NPM) approach developed. This approach stresses the need for increasing efficiency by creating quasi markets in the public sector. The concept of Public Value Management (PVM), as the newest managerial strategy, came up as a response to the dominant utilitarian approach in the NPM paradigm. What makes these approaches distinct are different types of management, their intended goals and the understanding of the role and involvement of the individual citizens. The three approaches all have implications for efficiency, accountability, and equity. The development from TPA to PVM is not linear, however in reality we see a mix of all three. It all depends on the individual public sector organisation, its history, its context which produces very different individual performance contracts that can be located on different positions on the continuum between TPA, NPM and PVM (Stoker, 2006).

In the following, we will present an overview of the three approaches using a table inspired by O'Flynn (2007) and Stoker (2006).

Table 1. Management approaches in the public sector

	Traditional Public Administration	New Public Management	Public Value Management
Type of Management	Hierarchical, bureaucratic nature; top-down mannered	Competitive environment; top-down mannered; centrally organised	Post-competitive; bottom-up or network based organisation
Managerial goals	Orders get implemented in a top-down manner; Continuity of bureaucratic system of control	Results meet agreed performance targets	Creation of public value, encouraging networks and an environment for dialogue
Understanding of public interest	Defined by politicians and experts	Aggregation of individual interests	Highest public value creation
Stakeholder involvement	Solely state, elite democracy; citizen's political participation limited to voting	State and institution; other stakeholders seen as consumers with demands	High level of stakeholder involvement; dialogue desired
Provider of public services	State (agencies), bureaucracy; public sector ethos	Public or private providers possible; no public sector ethos	Any kind of organisation, choice of pragmatism; public service ethos
Monitoring and evaluating	Bureaucratic oversight; standardisation	State monitors with managers have met targets; efficiency analysis	Self-surveillance through networks (e.g. peer reviews, being both provider and purchaser, independent committees)

Source: O'Flynn (2007), Stoker (2006)

2.1 Traditional Public Administration

Max Weber is known for studying bureaucracy. His worldview strongly influenced the TPA approach (Stoker, 2006). Weber states that governance evolves around three institutions: political leadership, political parties, and bureaucracy (Held, 1987). He emphasised a democracy of representation in which representative bodies provide potential political leaders. Competition between those leaders within elections is seen as the core of the democratic process which ensures accountability within the TPA approach (Stoker, 2006). Elections are assumed to be the only way of political participation for the citizens. According to Saward (2003), these circumstances might encourage an elite democracy. The infrastructure for elections in turn is mostly provided by parties.

At first they mobilise, but once politicians are elected, not only electoral competition, but also this party infrastructure holds them accountable (Dalton & Wattenberg, 2002).

Bureaucracy is the essential organisational tool in TPA theory. Standardised procedures are introduced, to meet everybody's needs. These needs are systematically broken down into limited tasks to divide the labour and ensure efficiency. This allows a high level of specialisation. Furthermore, standardisation lowers the level of discretion of the individual civil servant, but also may counter possibly occurring favouritism (Beetham, 1987). Standardisation also ensures equity, but does not offer space for customised services. Further, TPA assumes a public sector ethos and therefore limits the provision of public services to the state as provider (Stoker, 2006).

The TPA paradigm is a hierarchically organised bureaucracy for the masses. Its public managers monitor governance processes to ensure bureaucratic oversight at all times, while overall aims are determined by inputs from politics, who define public interest in terms of what is on the agenda (Stoker, 2006).

When applying this to the context of higher education, universities are working in a bureaucratic way, steered by the state. University employees are therefore apolitical civil servants following procedures given in a top-down manner from elected politicians in ministries that work input-orientated with a focus on details. These processes may also include internal issues such as human resource management for academic staff, examination rules, and admission policies. Also external matters may be part of the regulations such as the universities' relations to partners and the industry (In der Smitten & Jaeger, 2012). This suggests that the HEI's autonomy is limited (Dobbins, Knill & Vögtle, 2011). Students and other stakeholders can make their voice heard by voting for a potential political leader, who gives input into the bureaucratic system in form of new procedures to follow. The typical standardised process ensures the continuity and functioning of the university for its students.

2.2 New Public Management

NPM has spread in the HE system in terms of marketisation reforms, such as using performance indicators, the introduction of tuition fees or the privatisation of HEIs (Dobbins, Knill & Vögtle, 2011).

Critique from advocates of this new NPM approach on the TPA paradigm is that service in TPA is

solely provided by the bureaucrats (as the supply side), instead of including the clients interests (the demand side). In the private sector, which is the NPM advocates' inspiration, the businesses are guided through demands of consumers or more generally speaking the market. According to NPM advocates, the TPA approach lacks of incentives that might result in an inefficient use of the tax payer's money and an unresponsive attitude towards the citizens (Stoker, 2006).

The approach of NPM argues to use a style of governance in the public sector that is heavily inspired by the type of management in the private sector. The “invisible hand of the market” was introduced and replaced by the “visible hand of the state”. This approach creates incentives to increase the efficiency in terms of value for money as the overall objective. A market-oriented structure is suggested to sensitise the provider of services to the citizens' demands and compares them with consumers in the private sector. The aggregated individual citizens' interests depict the public interest of the citizenry.

Performance-based funding models and performance agreements are typical tools for the NPM approach, since they create an incentive and ensure to spend the tax payer's money efficiently. These funding models go hand in hand with monitoring and evaluation systems. The NPM paradigm does not limit the role of the provider of monitoring tasks and evaluating activities to the state. Public as well as private organisations and businesses may take over these tasks. The only condition is that it has to be guided centrally. This suggests that advocates of the NPM approach do not believe in the concept of a public sector ethos. In comparison to the TPA approach, NPM seeks to create a higher level of responsiveness towards the citizenry by including the citizens' demands. This responsiveness is supposed to ensure equity within the NPM approach (Stoker, 2006).

According to advocates of the paradigm, political parties form and provide potential political leaders. The task of interpreting the public atmosphere is assigned to politicians. Giving input is not solely a political task anymore as it was the case in the TPA approach. Citizens can influence this input through their collective demands. The politicians' task is rather to push further and set more demanding targets as well as organising the budgets for their achievement. Their tool to do so can be performance-based funding or performance contracts. The sphere of politics is divided from the sphere of administration and its managers, which have full discretion over all tasks and responsibilities. This means, they are allowed to implement the targets given by political leaders with their own means and methods. In turn, this implies that managers are also held accountable to meet the targets.

Whether the managers succeeded to do so is examined on a regular basis by evaluating their progress using performance measures. Most of the time, these evaluations are conducted after an agreed on period of time. This replaces bureaucratic oversight as it was common in the TPA approach.

The evaluation criteria in NPM aim at answering the question whether the cost-benefit analysis shows positive results. Differently said, whether the inputs were used in the most efficient way to produce the highest value for money. The means to measure progress are preferably hard numbers (Stoker, 2006).

However, in the context of higher education, Jongbloed (2013) defines marketisation reforms as "policies that are aimed at strengthening student choice and liberalizing markets in order to increase quality and variety of services offered" (p. 113). Universities operate in a competitive environment. Students' demands are included to improve the quality and increase the number of programs and other services. This strengthens the university's positioning on the market (in relation to other universities). Performance-based funding and performance agreements as a tool for politicians are used in order to steer the HEIs from the distance. Whereas, the managers of the universities are held accountable to meet the targets agreed on in the contracts. This is monitored by the state itself or external committees on behalf of the state. It is about inputs per unit of output, where output is measured in a quite straightforward way. For example using number of graduates and publications or study length (Stoker, 2006). In some cases, the HEI charge a price (tuition fees) for their educating services, which might depict a relationship between university and students as supplier and consumer.

2.3 Public Value Management

PVM depicts a new upcoming managerial approach after Weber's bureaucracy and the market-oriented NPM paradigm.

The role of politics according to the PVM approach is different in comparison to the previous two paradigms. TPA and NPM define the space for politics in the context of party politics as source of input and final evaluator. In PVM, politics is supposed to create an environment for networking. This type of management encourages interaction and dialogue to determine and prioritise public

interest without discarding individual capacities (Stoker, 2006).

Public interest is also determined by what creates the highest public value. Moore is one of the first and important authors studying this field. He draws the strategic triangle to define what is needed for the creation of public value (Moore, 2012, 30). It depicts “Public Value” as being created and therefore also the performance improved, if two other components cooperate: “Organisational Capacity and Resources” and “Authorising Environment”. The former describes the need for money, knowledge and other kind of resources working together with organisational processes to create public value. The latter is about the environment, that must be supported by the authorities. This peak of the triangle is also called “Legitimacy and Support”.

Bozeman and Jørgensen (2007) criticise that there are only limited authors that established a systematic approach to public value and its definition. Since Moore (1995) focuses on public value in connection with public management improvements, this is not detailed enough for Bozeman and Jørgensen (2007). They provide besides various ways of classifying the many characteristics of public value “A Public Values Inventory”. It includes keywords such as “accountability”, “citizen involvement”, “dialogue”, “enthusiasm”, “ethical consciousness”, “friendliness”, “voice of the future” and “will of the people”, just to mention a few (Bozeman & Jørgensen, 2007, 377). Bozeman, Jørgensen and Moore's lowest common factor is that public value is what the citizens demand (Rainey, 2014).

Besides seeking for public value as the overarching key objective, interaction is crucial. For instance societal change cannot only be achieved on the political stage, but involves the citizen's participation. This focus on interaction produces partnerships for long-term aims (Stoker, 2006).

Another central argument within PVM is the belief that including multiple stakeholders from all levels into the decision-making process of all kinds is needed for their achievement. The question of legitimacy arises, since other stakeholders than officially elected politicians are not directly legitimised by the citizens. Whereas, PVM advocates would argue that a decision needs to involve all the stakeholders that have relevant knowledge or positions to ensure full legitimacy (Stoker, 2006). The concept of PVM encourages a political culture with a strong and active citizenry (Stoker, 2004). To achieve this, advocates of the theory favour mechanisms that make it easier and more attractive to vote and participate. The inclusion of all type of stakeholders into the target setting and monitoring is also PVM's answer to accountability (Stoker, 2006).

Not only a wider range of stakeholders giving their input is desired, but also pragmatism when it comes to deciding which institution may deliver a service as it is the case in NPM. This denies an ethos particularly for the public sector – instead a public service ethos is supported. Public service and managers in PVM seek to create public value without discarding the individual level. This individual capacity is the approach's answer to the question of equity concerning the people's rights and responsibilities (Stoker, 2006).

In the PVM context, the constant search to bring public value to the citizenry needs to be carried out by managers (Moore, 1995). Consistent communication and networking skills are needed, while ensuring the continuity of the system. PVM ideally results in continuous improvement by being flexible. This is the concept's answer to the question of efficiency. Challenging new situations and openness to changes are dominant and highly desired (Stoker, 2006).

In the context of higher education, politics seek to provide an environment for networking. Universities are especially interesting in this context, since new ideas often start growing in the scope of higher education programs or university networks. Universities are in contact among each other, but also in constant dialogue on all levels of the institutions: unions, shared housing and clubs create networks, but also after university within alumni networks, which root back to that possibility of building up contacts while studying. However, there is a need for communication between the different management levels as well as the students and employees to coproduce educated human capital as public value. Students and employees need to be included in decision-making processes concerning their education. This is formally already the case, since there are representative bodies and internal elections that provide direct legitimacy to student and employee representatives, that advise the executive boards.

3. Operationalisation and Methodology

After depicting the three theories on TPA, NPM and PVM in general and in the context of higher education, they will be operationalised to apply the data deriving from the contracts and the interviews. The operationalisation serves as the pilot method that is tested on two cases in different contexts.

Operationalisation

To fit the scope of the thesis, the involvement of stakeholders on each stage of the contracts (design, content, conclusion) is the focus of this paper. But also goals, types and frequency of measurement as well as consequences of non-fulfilment of the agreements are of interest. Of course more indicators could be taken into account, but deriving from the theoretical framework these are the clearest ones to determine which is the predominant management approach in the respective performance agreements. To be able to systematically analyse the performance contracts in higher education, we elaborate on the involvement of stakeholders at three different stages of the contracts: the role of stakeholders in the design process of the performance agreements, how they are considered and mentioned in the content of the contracts and their role when it comes to monitoring and evaluation. Stakeholders in higher education are the government, students, employees and the institution – meaning the research university or UAS. Students and institution's employees are the key stakeholders in this method.

The first indicator used is the involvement of students and employees in the creation process of the most recent performance contracts. Table 2. indicates important questions and also tabulates the typical answers or characteristics of each management approach.

Table 2. Involvement of students and employees in the design process of performance contracts

	TPA	**NPM**	**PVM**
Do students and employees have a formal say in the design process of the performance contracts?	Students and employees have no say in the design process of the performance contracts.	Students and employees have no formal say in the design process of the performance contracts	Students and employees have a say when it comes to designing the contract
Who designs the performance contracts?	Elected politicians decide on the content. The university is seen as an apolitical bureaucratic apparatus.	Elected politicians and the management level of the university design the contract	All stakeholders (government, employers as well as students and employee representatives) together design the contract
What possibilities do students and employees have to influence the design process?	Students and employees can only influence the input of these agreements by	Students and employees are seen as groups with demands (customers) that	Students and employees are seen as crucial stakeholders who have a say.

	voting for a politician of their choice or going to another university.	influence the supply by the university.

The second indicator is about the actual content of the contract. The focus is on the involvement of the students' and employees' interests in the contract. This indicator is harder to classify in comparison to the first one, since interests are rather specific and not classified within the theoretical framework of the three different public management approaches. Nevertheless, other contents such as goals can be classified in the management approaches (Table 3.).

Table 3. Content and monitoring of the contract related to the students' and employees' interests

	TPA	**NPM**	**PVM**
Which goals have priority according to the contracts?	Input-orientation: clear procedures that ensure the well-functioning of the university	Output-orientation: Efficiency demanded through competition (e.g. Expectation to be enrolled/teach in/at a reputable university in relations to other universities.)	Outcome-orientation: High quality of education, high level of student/employee satisfaction, trust in their university, employability
What is the method of measuring progress? Which indicators are used?	Constant input-oriented, bureaucratic oversight is used to monitor the procedures.	Solely hard numbers are used to monitor, typically aiming at efficiency. (e.g. average ECTS-points obtained, number of graduates, number of admissions, etc.)	Internal peer review processes are used besides student and employee satisfaction surveys. Another possibility is to survey stakeholders such as businesses.
Who participates in monitoring the contracts? Who monitors whether the contractual conditions are kept?	Solely the government or an inspectorate on behalf of the state monitors the procedures/contract.	The state or an organisation to which the task was outsourced	All stakeholders are involved in this process.
How frequently are meetings with stakeholders? Does the information go one-directional (top-down) or is it	Meetings with stakeholders are not obligatory. Information goes one-directional (top-down).	Meetings with stakeholders are not obligatory, but can be used to determine the students and employees demands.	Meetings are frequent on a regular basis. It is an exchange of information.

rather an exchange of information?	It is an exchange of information.

Furthermore, a question about the students' and employees' interests should be asked. Taking the answers and compare them with the content of the actual contract will give insight to what extent their interests are represented. If a lot of their interests are represented this suggests that the dominant approach is PVM, since students and employees are seen as equal partners. If their interests are partly represented, then this points at the NPM approach, since they are seen as a group that has demands. If their interests are not represented at all, TPA is most likely the predominant approach, since the students' and employees' interests are not included at all in the design process of the contract.

The third indicator aims at the evaluation of the performance contracts in relation to the involvement of students and employees at this stage. Table 4. indicates the questions asked and again classifies them within the three management paradigms.

Table 4. Evaluation of the performance contracts in relation to the involvement of students and employees during evaluation and the case of non-fulfilment of the contract

	TPA	**NPM**	**PVM**
Who participates in evaluating the contract?	Students and employees play no role in the process of monitoring.	Students and employees are not invited to participate in this process.	Students and employees are involved when it comes to monitoring and evaluating the agreement
Who evaluates whether the contractual conditions were kept?	Solely the government or an inspectorate on behalf of the state	The state or an organisation to which the task was outsourced	Stakeholders participate in this process.
How frequently are the contracts evaluated?	No regular evaluation after a given period of time, but annual bureaucratic oversight. Procedures are monitored and evaluated.	Regular monitoring and evaluation after the contract finishes after a pre-given period of time. Mid-term evaluation is also possible.	Regular monitoring and evaluation after the contract finishes after a pre-given period of time. Mid-term evaluation is also possible.
What methods are used to evaluate the contract?	Constant bureaucratic oversight monitors, while only the procedures are	Solely hard numbers are used to evaluate, typically aiming at efficiency.	Internal peer review processes are used besides student and employee satisfaction

	evaluated.		surveys. Another possibility is to survey stakeholders such as businesses.
What consequences follow on non-fulfilment of the objectives?	Change of procedures or additionally change of political leader who decides on the procedures.	Managers are held accountable, therefore a change of managers is possible. Financial penalties are possible. Worse position for next negotiation round for public funds of the follow-up agreement is possible.	Financial penalties are possible after a dialogue with the failing institution to hear story why they did not achieve their goals. Worse position for next negotiation round for public funds of the follow-up agreement is possible.

Methodology

To answer the research questions, we are going to use a mix of methods. It is a case study of two units of analysis in different national contexts. First, a policy paper analysis is performed to study the most recent agreements of the two UAS of choice that are valid for the year 2015. Second, qualitative methods are used by conducting interviews with a number of students and at least one academic staff member from each institution. Both students and academic staff member are selected by having a seat in a representative body. Further, we approach a representative from the management level for an interview.

In terms of the selection of cases, we decided on UAS Saxion and Münster as the two cases of analysis, because they both belong to the sector of Universities of Applied Sciences and are of comparable size and offer. Compared to research universities, UAS are somewhat more limited in scope. They focus primarily on education and do not carry out a large volume of research, making it more feasible to carry out our research. In addition, pragmatic reasons matter such as the easier access to UAS and its stakeholders than to research universities. But also the geographical location of the two investigated UASs close to each other is convenient. This simplifies the access and comparison of the two different organisations in different contexts. Interviews can be conducted face-to-face without the need for extensive travelling.

The research design depends on the response to interview requests from at least three students from each case university and one academic staff member from each to achieve a level of representation. The chance that some of these requests get accepted is high, since we have a larger pool of potential

candidates. As mentioned previously the choice of candidates is determined by a seat in one of the representative advisory bodies of the UAS. These candidates are representatives and know best about the interests and expectations of their interest group. In both our cases, they are elected in internal elections. Asking three students and one employee legitimised through internal elections, will give a broader picture than asking just any students and employees.

At the UAS Münster the representative body is called Senate. It is an institution uniting twelve professors, three academic and three administrative or technical staff members and six students. It is an advisory body to the executive board for all kind of topics, including future planning and contracting. We approach all six students for an interview. Further, we send interview requests to some academic staff members and professors. The objective is to speak at least with three students and one academic staff member or professor.

At Saxion, the representative advisory board is called *Medezeggenschapsraad* (Dutch abbreviation: CMR) that consists of twelve students and twelve members of staff. Again, we approach six of each with the goal to have the same minimum representation as in the other case: three students, one member of staff.

Additionally, we approach a middle level manager such as a dean of each investigated UAS. The goal is to speak with at least one. This is needed to also represent this group of stakeholders and to get enough background information on the topic. We cannot be sure that the students and employees were included in the contracts and know a lot about their performance contracts in detail, hence an interview with a manager is needed.

The interviews aim at collecting information that is not found in the performance contracts such as the involvement of stakeholders. Additionally, asking questions for which we already found evidence in the contracts is valuable to double-check on the divergence between the formal contract – how it is presented on paper – and how it is perceived and handled in practice. But also to counter the potential threat of subjective interpretation of the contracts.

Conducting the research according to this design is best suitable to answer my question. Both original documents of the contracts are publicly accessible and background information and opinions are best gathered in an interview with mostly open or semi-open questions. Large scale surveys for example are inconvenient, since most likely only informed, engaged stakeholders have

knowledge on performance agreements.

The small sample size of two cases, expectedly allows a low level of generalisability – especially since the investigated agreements are individual contracts. However, the intention of the research is not to aim for broad generalisability, but to check whether the approach taken here is useful as a research strategy: it is about developing a pilot method. It can be then applied on a larger sample size.

4. Dominant management approaches in Dutch and NRW performance agreements

After giving background information about performance contracts in the two investigated contexts and providing a theoretical framework on TPA, NPM and PVM, we are able to answer our third research sub-question: To what extent are elements of the three approaches visible in the performance contracts in the Netherlands and in NRW?

4.1 Visibility of the three management approaches in Dutch performance contracts

To be able to systematically analyse which management approach is visible on which stage or in which element of the last round of performance agreements in the Netherlands, we will structure the following part into the four categories: design, funding system, content and monitoring, and evaluation of the contracts. Three of the five categories depict the three stages we also used in our operationalisation.

Design process of the contracts

The design process in the Netherlands started in December 2011 with the general terms (*Hoofdlijnenakkoord* (HLA)) that the Ministry had negotiated with the two representative unions: the HBO-raad for the UAS sector and VSNU for the research university sector. In the two HLA, the seven mandatory indicators, as well as overarching objectives are stated (Vereniging van universiteiten, 2011; HBO-Raad, 2011). This depicted the basis for the individual agreements between each HEI and the ministry. Shortly after, in May 2012, the design process of the individual profiling documents was finished – that all Dutch HEI were invited to. These documents were

handed in as a proposal for their institutional strategic agenda including their specific goals for the time period of 2012 until 2015 and how high they seek to score on the seven mandatory indicators. These were used in order to measure and compare between primarily HEIs. Referring to the involvement of stakeholder, in the design and negotiation process of the individual contracts, solely the management and the government participated – other stakeholders did not at that point (Reviewcommissie Hoger Onderwijs en Onderzoek, 2017).

Students and employees have a say in the design process of the performance contracts, but this was merely formal. At the first stage, only the ministry and the unions of the two HE sectors have a say, at the second stage only the management level of the universities and the ministry actively participate. The contracts were formally discussed in the representative body for students and employees, but a real possibility to influence the content was not given. This points at the NPM approach, since in the TPA the students and employees would have not even a formal say. PVM does neither fit the circumstance, because in this case students and employees would need to be actively included in the design process – not merely formal. They would have the possibility to directly influence the process. This is not given in the Dutch case, because students and employees are rather seen as groups with demands. We would argue that the focus on the quality of education and teaching represents the students' demands, which have influenced the chosen indicators in that way.

To sum it up, the design process of the contracts in the Dutch context points at the NPM approach, since students and employees have a formal, but no actual say and the individual contracts are negotiated between the ministry and the management level of each UAS.

Funding system in the contracts

This new funding system in the performance contracts introduces, that 7% of the public funds are distributed on basis of performance. In the Netherlands, the government was able to approve additional funding in the period between 2013 and 2016 for this so called experiment at this point. There was an agreement on this status of seeing the first round of performance contracts as an experiment, which made it possible to not include it in the law straight away. These 7% are split up into 5% that are funds distributed under the condition of signing a performance contract. The still remaining 2% are funds that are distributed in a competitive way for the research universities and UASs with the best profiling proposals – including their institutional strategic agenda in terms of differentiation and concentration. After the first round of contracts, the payment of 5% will be

continued, if the individual higher education institution has fulfilled the agreement. In the opposite case, the HEI risks loosing a part or all of the 5% conditional budget for the following round of contracts (de Boer et al., 2015; European Commission, 2014).

An independent committee decided on the proposals, stating the institutional strategic profiling plans, on basis of three criteria: level of ambition, alignment with national and European scientific agendas and how feasible the ambitions were. Whereas the criterion of alignment was weighted double in their review. The historical and geographical backgrounds of the universities were also included in their assessment (Reviewcommissie Hoger Onderwijs en Onderzoek, 2012).

After the Review Committee evaluated all proposals, the assessments were given to the ministry of education. They translated the scores into budgets based on the 5% conditional budget – whether the higher education institution has made an agreement – and 2% on how well their proposal was. In the end, all publicly funded HEIs handed in a proposal, that was accepted by the independent Review Committee. Subsequently all of them signed an individual performance contract with the ministry and received the 5% conditional budget.

The funding system created a competitive environment which is an element of the NPM approach, especially by the use of the 2% selective budget that is primarily given to the best. What is 'best' is determined by the three criteria and the advise of the independent committee. These indicators push towards high ambitions that still need to be feasible and towards alignment with national and European scientific agendas. This might increase the HEI's ability to compete amongst others, which is an element of NPM. Although the fact that an independent committee decides on the winning proposal and also takes over monitoring and evaluation tasks later on points at the PVM approach. The Review Committee is put together as following: its chair is put in charge by the government, which in turn chooses other experts as members. Further, the commission solely advises the government, although the state normally follows this advice. These circumstances can be categorised between NPM and PVM, depending on the level of independence of the committee and how binding their advice is to the government.

We conclude that the funding system creates a competitive environment, which points at the NPM approach. The PVM approach is rather represented in the monitoring and evaluation activities of the Review Committee, which we will approach in the following.

Content of the contracts

We already mentioned the objectives that were desired to be achieved with the introduction of the performance contracts and the closely linked indicators in order to accomplish these objectives. We categorise the different goals one by one in our cluster of management approaches. The TPA approach favours input-oriented objectives, NPM output-oriented goals and PVM is outcome-oriented.

The objective to increase the quality of teaching is outcome-oriented, since it clearly aims at the quality of education, which is directly linked to the students' and employees' satisfaction. This objective fits in the PVM cluster.

The indicators to increase the completion rates or to decrease the drop-out rates can be classified as output-oriented and therefore are elements of the NPM approach. High completion rates as well as low drop-out rates aim at efficiency, which is NPM's credo. At the same time, we would argue that both also satisfies the students and could also be categorised as an element of PVM, which aims at high students satisfaction. Especially low drop-out rates after one year of studying fits in this argumentation. Student satisfaction is especially important in the beginning of a study program to find out if it is the right program for the individual student. Nevertheless, NPM is the predominant paradigm concerning these indicators.

The introduction of excellence tracks for over-average students is a way to increase the quality of teaching. This would be an argument to categorise it as an PVM element. Whereas, we would argue that the seek for excellence always pushes towards competition and a high reputation, which would suggest to be an element of NPM.

Widening the study programs on offer contributes to the students satisfaction to be able to pick the field they are particularly interested in. Having more programs that are possibly more focused might increase the quality of teaching. Both strings of argumentation point at the 'Widening of the study programs on offer' being an element of PVM.

To strengthen the connection to the labour market is an outcome-oriented objective, since it aims at employability of the students in their future live, which is closely linked to the level of student satisfaction as an element of PVM.

Putting a focus on the alignment of the institutional strategic agenda with the national and European scientific agenda is output-oriented and aims at efficiency, since higher third party fundings are possibly available. Further, research has higher impact if it is aligned with (inter)national agendas, because the level of interest is higher and the outreach wider. Making significant impact raises the reputation of the HEI. Both higher third party fundings, as well as a higher reputation and high impact research strengthens the HEI's position on the HE market. Being able to compete on this market is an element of NPM.

This closely links to the objective to sharpen the profile in research to make a significant impact and have a good reputation on the international level. This goal pushes the HEI to compete on the international level and be output-oriented with their research results. These are clear signs of NPM. Whereas, we could also argue that a good reputation might increase the employability and the trust in the HEI, which in turn would be an element of PVM. Although, this is a weaker string of argumentation.

To sum it up, the objectives stated in the contracts represent both the NPM and the PVM approach. Four objectives can be classified as NPM ('Increase the completion rates', 'Decrease the drop-out rates', 'Alignment of the institutional strategic agenda with the national and European scientific agenda', 'Sharpen research profile to make significant impact and have a good reputation on the international level'), two as PVM ('Increase the quality of teaching', 'Widening of the study programs on offer'), and one has equally strong arguments for both ('Excellence tracks'). Hence, the objectives represent predominantly the NPM approach.

Monitoring

As soon as the contracts were concluded, the Review Committee was assigned the task of monitoring the progress during the execution period of the agreements. Annually review reports were scheduled. This means after the introduction of the agreements in 2012, the first review was done by 2013. In the following year of 2014, a mid-term review was conducted. The results of this report had direct consequences on the 2% selective budget. The committee decided at that point whether this 2% budget will be continued to be paid or if another institution will receive this competitive budget for the remaining two years of the performance agreements. The student union criticised that their participation in the execution phase was limited (Reviewcommissie Hoger Onderwijs en Onderzoek, 2017).

The Review Committee and the management as well as the administration of HEIs are the main actors in the phase of monitoring. The HEI's administration provide the information and data needed to compare on the seven mandatory indicators, while the Review Committee writes a report to inform the ministry also on the basis of a individual meetings with executive boards of each HEI. We will go through the seven indicators one by one again and focus on how they are measured and what kind of data they produce – if they are rather quantitative based on hard numbers that aim at efficiency or if they are rather qualitative indicators that are translated into numbers.

The indicators for study success drop-out rate, switch and bachelor graduation rates are measured with pre-existing information infrastructure by the *Dienst Uitvoering Onderwijs* (DUO) as part of the Ministry of Education, Culture and Science (Vereniging van universiteiten, 2011). These are solely quantitative numbers that can be classified as hard numbers to assess efficiency, which is an element of NPM. The indirect costs indicator that is not part of the category study success is comparable, because it is also measured with solely hard numbers to seek for the most efficient conduct, which also points at NPM.

Qualitative indicators are lecturer quality and education intensity measuring qualitative elements by the use of a 'Basic Teaching Qualification' that determines the lecturers' quality and the number of contact hours in the first year of a study program. Even though, they are qualitative indicators, still no students satisfaction survey or internal peer review systems were used. We could argue that using the schedules to figure out how much contact hours were given might count as rather internal administrative review system. Still, qualitative objectives are measured, which are elements of PVM.

The indicator on excellence is measured in the numbers of academic excellence programs or specific tracks and the level of student participation (Vereniging van universiteiten, 2011). This also aims at quality, but also reputation. The indicator can be classified as both NPM or PVM.

The fact that the Review Committee and the management as well as administration of the individual HEIs play the most important role in the monitoring processes, points at the NPM approach. In this case an organisation on behalf of the state monitors. At the same time we have to mention that the Review Committee works independently of the state and is therefore an external peer review, which can be classified as PVM element. Whereas, in PVM all stakeholders would be included in the evaluation. We find a mix of NPM and PVM in the evaluation process.

The two most important facets of monitoring are: who monitors and what indicators are used. The Review Committee on behalf of the state monitors, which points towards the NPM approach. The used indicators also can be classified as either an element of NPM or PVM. Four indicators are element of the NPM approach ('Drop-out rate', 'Switch', 'Bachelor graduation rates', 'Indirect costs'), while two indicators point at the PVM approach ('Lecturer quality', 'Education intensity'). The NPM approach is dominant in the used indicators and the Review Committee as monitoring organ.

Evaluation

In the final evaluation in 2016, the Review Committee considered whether the goals stated in the agreements have been met by each institution. A non-fulfilment of the contract has a direct consequence for the following period of contracts. A HEI, which has failed to accomplish the contract on the seven mandatory indicators puts at stake losing a part of the conditional 5% budget or all of it in the next period of contracts (de Boer et al., 2015).

Referring to the mid-term evaluation in 2014, the Review Committee stated, that nearly all HEIs value the new innovative instrument of performance contracts. They do not only perceive it as a new funding tool that embraces differentiation and concentration, but also as a strategic planning instrument that exerts external pressure to achieve internal goals (Reviewcommissie Hoger Onderwijs en Onderzoek, 2014).

The performance contracts did not only help the HEIs to set their agenda, it also depicts an innovative tool for the government to steer the higher education sector in order to address the weaknesses stated in the Veerman report. At the same time these issues were to be addressed in bottom-up manner. This management style combined with the individuality of the contracts suggests the universities a certain level of ownership on the agreements (de Boer et al., 2015).

After the final evaluations of the first round of performance contracts were conducted, the Review Committee concluded: The attached funding at stake made the HEIs take the agreements seriously. Most of the executive boards, that met the Review Committee, stated positive effects for their HEI induced by the agreements. On the down-side, this tool limited their freedom to make their own choices due to the relatively fixed indicators and their serious commitment caused by the amount of funds at stake. This circumstance did not always serve the institutional priorities. The indicators were sometimes only amenable to influence to a certain level, but played a crucial role in the

evaluation process. Due to unpredictable circumstance and caused by the limited possibility to influence the indicators, some HEIs could not fulfil all of their goals. This lack of predictability was countered by the qualitative method of the Review Committee, which considered these circumstances in their advice to the ministry (Reviewcommissie Hoger Onderwijs en Onderzoek, 2017).

The student unions pointed out the down-sides of the agreements by stating that the performance measurements were the goal instead of the mean. Whereas they did like the focus on the quality of teaching (Reviewcommissie Hoger Onderwijs en Onderzoek, 2017).

The new tool did not cause too much additional administrative work, since it fitted with the HEIs' strategic planning. The seven indicators linked with the 5% conditional budget were quantified. Hence, the progress was measurable and easy to compare among the HEIs. This conditional budget showed a higher effect than the 2% selective budget. The HEIs stated that they liked the habit to reward the well-performing HEIs, but disliked the use of penalties (Reviewcommissie Hoger Onderwijs en Onderzoek, 2017).

The method of evaluating the performance contracts in the Dutch context points at being planned out of a PVM perspective. Financial penalties are indeed possible as it is the case in NPM, but the independent Review Committee gives the HEIs the possibility to tell their story why they failed, if they did. Failing was sometimes the case because they did not sufficiently know how to actually influence the indicators. The advise of the commission can make sure that a HEI still receives their full 5% conditional budget, even though they might have failed on an indicator. This confirms that the evaluation fits in the PVM approach. Also the frequency of evaluations fits in the approach, although this is not significantly different from the NPM paradigm. The indicators used are the same seven obligatory ones as we anticipated in the monitoring process. The indicators aiming at efficiency as elements of NPM outnumbered the PVM elements. The following qualitative method of listening to the individual HEI's story still weighs more than the NPM indicators used. Nevertheless, when looking at the involvement of stakeholders and especially students, this rather points at NPM than at PVM. Students are not very much involved if at all in the design and execution phase. The students' statement that they believe the performance measures are a goal instead of a mean conforms with the notion that not enough attention is given to quality improvement as the initial goal behind the indicators. The quantitative nature of the indicators might have led to just go after improving hard numbers to achieve the goals, instead of seeing them

as a mean to actually improve the quality of education.

We conclude that although the seven obligatory indicators used rather point at NPM, the conduct of Review Committee steers the evaluation process towards the PVM approach. The final evaluation is qualitative and considers the background of each UAS and weighs more than the quantitative indicators. This points at the PVM approach. Nevertheless a crucial element of the PVM approach is missing: the involvement of all stakeholders. Consequently the evaluation process is part of the PVM approach with elements of the NPM paradigm.

Now we are able to answer one part of our third research sub-question concerning the Dutch context: To what extent are elements of the three approaches visible in the performance contracts in the Netherlands (and NRW)? The NPM approach is predominant in the Dutch performance agreements with a strong tendency towards the PVM approach. PVM indicators and objectives in the content of the agreements are outnumbered by the NPM elements. In the process of monitoring and evaluating, the effort of the Review Committee to assess the performance of the HEIs in a qualitative way, strongly points towards the PVM paradigm.

4.2 Visibility of the three management approaches in NRW performance contracts

After depicting the visibility of the three management approaches in the Dutch context, we will follow the same pattern in the North-Rhine Westphalian context. We expect, according to In der Smitten & Jaeger's (2012) findings that the introduction of performance agreements in 2006 produced a shift from an input-oriented (TPA) approach towards an output-oriented (NPM) paradigm.

Design process of the contracts

The first rules and procedures are decided on between the state (in form of the ministry) and the HEIs in NRW all together (In der Smitten & Jaeger, 2012, p. 45). The second phase depicts the negotiation process between the individual HEI and the ministry. This design process is neither solely top-down, neither only bottom-up. It is based on constant exchange of information: the state is supposed to watch the overarching perspective and assure a minimal consistency of the entire picture, while the HEIs make the participation of various stakeholders possible in order to ensure

broad identification and resulting motivation for the pre-set goals. The Minister for Innovation, Science and Research of the federal state North-Rhine Westphalia and the presidency of the HEIs are in charge to negotiate on an equal level and finally enter the contract. The senate – the representative organ for employees and students – formally gives an advise and a statement. The contracts should only be entered if the senate agrees (In der Smitten & Jaeger, 2012). As in the Dutch case, we argue that this is merely a formal process, but the senate has no actual impact. Some authors such as Sandberg (2003) argue that negotiations on a level, meaning on an equal playing field, are hardly possible due to a structural hierarchy. The state provides the funding, therefore advocates of this argumentation state that the HEIs are dependent on them. To be able to work as equal actors, the state has to renounce its power and the HEIs have to rely on the states cooperative behaviour.

Despite Sandberg's (2003) argumentation, the circumstances how they were described previously point at the NPM approach. Formally all crucial stakeholders are included: the government, the HEI's management and the employees as well as the students represented in the senate. We argue that the only actors actively participating though are the government and the management of the HEI that includes the stakeholders demands.

Funding system agreed on in the contracts

In der Smitten and Jaeger (2012) argue among others that performance agreements are a funding tool. The type of funding is based on three columns:

- basic funding
- performance-based funding
- special funding for innovation

Basic funding is provided independent of performance indicators to ensure the continual functioning of the HEIs. In the case of performance-based funding a varying budget is provided to keep up the incentive for high performance scores. The last possible way of funding is for specific projects such as innovations and can be received when an application is filed. Funding that is linked to performance agreements is usually paid ex ante that the fulfilment of the goals is supported financially (In der Smitten & Jaeger, 2012).

The performance agreements are organised in such a way that if a HEI performs better, this does not automatically mean that they receive a higher amount of funds. Only if the HEI has higher scores on their performance than another HEI, they obtain additional resources (In der Smitten & Jaeger, 2012). According to de Boer et al. (2015), this might result in a lack of incentive, since always the same HEIs receive additional funds.

The part of the funding system that is performance-based suggests to be an element of the NPM approach. A real competition is created, because a fixed amount of funds are assigned to the best in absolute terms. The case if an individual HEI scores relatively higher, in comparison to their performance score in the previous period of contracts, is not rewarded.

Content of the contracts

The content of the contracts was already discussed earlier (section 1.2). Before we will take each topic of content and categorise it in our three management approaches, we will point out a few general terms in the NRW context. All goals stated need to be controllable that in case consequences may be possible. Further, the HEI has to be able to report their current status at any time – also independently of the performance agreement (In der Smitten & Jaeger, 2012). According to In der Smitten and Jaeger (2012) the goals stated in performance contracts of NRW mainly aim at common objectives of state and HEIs, but also on HEI specific goals. Strategic aims that are solely on the agenda of the state are predominantly not found. It is debated how precise the goals should be formulated to hold the balance between institutional autonomy and external steering.

Now we will come back to the predominant topics according to de Boer et al. (2015).

The strengthening of the institutional profile is an element of PVM. Having a sharp institutional profile results in more specific study programs which might raise the level of employability and the satisfaction of the students.

The topic of internationalisation fits in the PVM way of thinking. The mobility of students and staff as well as collaboration with partner universities encourages networks and satisfies students and employees. Moreover, we believe the possibility to go abroad increases the quality of the education.

The linkage between higher education and upper secondary education is another topic in the

contracts. We claim this is to be a component of PVM, since it contributes to the satisfaction of the students to have an easy start into the higher education system.

The different aspects summed up under teaching need to be assessed separately, since the management approaches vary. The number of students per discipline aim at a good supervision provided by the HEI for its students. This can be categorised as element caring about students satisfaction and enough contact-hours between students and teachers which is a component of the PVM approach. Closely linked to the number of students is the intake capacity of new entrants in time of an increasing number of students. We already mentioned the Higher Education Pact that is an agreement between the state and the HEI to fund the increasing number of new entrants. It depicts procedures and regulations on funds and is therefore and element of the TPA paradigm. Quality assurance systems and capacity for teacher training are both classified as PVM elements, since they aim at the quality of education. It is in the interest of students and employees and contributes to their level of satisfaction. Another point that contributes to their satisfaction is the supply for 'non-traditional' students (e.g. dual study programs or part-time study programs beside a regular occupation) and can therefore also be seen as an element of the PVM approach. We conclude that all objectives concerning teaching are part of the PVM approach, except 'Intake capacity of new entrants' regulated by the Higher Education Pact. This is rather classified as concern of public budgeting than of teaching.

An element of TPA can be seen in the various points regulating the public budget. This aims at top-down given procedures, which are according to In der Smitten & Jaeger (2012) supposed to increase the level of transparency and consequently legitimacy of public funding.

Gender issues can not easily be classified. We argue that this is rather a social and political topic. Including them into performance agreements can be seen as a procedure in order to make sure that a public institution follows the governing party's point of view. On the other side, we believe that this is also the general opinion, consequently these are procedures to make sure an institution funded by the tax payer's money functions according to the general principles. Still, this would be a procedure and therefore an element of TPA.

Infrastructure for the delivery of information and data is another point of interest in the agreements. This is an element of the TPA approach, since it solely aims at procedures that need to be developed.

In the field of research and valorisation, third party funding is a component of the NPM paradigm, since HEIs compete against each other to receive those kind of funds. Patenting is also a source of additional funding and can therefore also be categorised as relative to the NPM approach. Collaboration we classify as an element of PVM, since it suggests network-based interaction. All components of the field of research are elements of the NPM approach, except 'Collaboration', which represents the PVM paradigm.

To put it in a nutshell, all management approaches are represented in the objectives stated in the NRW performance agreements. The PVM paradigm is represented in the field of teaching, institutional profiling, internationalisation and the linkage between higher and upper secondary education. The TPA approach is predominant, when it comes to budgeting, the political topic 'gender issues' and concerning the infrastructure of information systems, while NPM is present in nearly all aspects of research.

Monitoring

As mentioned earlier, monitoring is only possible if the goals are measurable. Overarching goals should be broken down into several subgoals. This is also needed in NRW performance contracts. Although according to In der Smitten and Jaeger (2012) the NRW performance agreements vaguely operationalise their indicators. If they do so, only quantitative indicators aiming at efficiency are used. Beside these, other clearly operationalised indicators are concerning public funds such as the Higher Education Pact – an element of TPA.

The frequency of monitoring processes is in nearly all other federal states organised on an annual basis, but NRW is an exception in this case. HEIs only need to report if the ministry ask them to do so excluding the fixed dates for evaluation processes, which we will discuss in the following section. The HEI reports to the ministry using their internal information infrastructure (In der Smitten & Jaeger, 2012).

Due to some vaguely operationalised indicators, we argue that these are just trail signs for the HEIs where to develop without a consequence to their actual performance scores and funds. The other indicators which are operationalised are mainly quantitative indicators such as third party research, which points at the NPM approach. At the same time, we have to mention that the highest amount of funds is attached to procedural indicators such as 'Intake capacity of institutions for new entrants'

coupled to the Higher Education Pact, which clearly points at the TPA approach. The state monitors whether the contractual conditions, to which the highest amounts of funds are attached, are kept by the use of constant bureaucratic oversight. Monitoring of the performance contracts in NRW is predominantly regulated according to the TPA paradigm.

Evaluation

In comparison to the monitoring processes, there are indeed set dates for an evaluation. Coming back to the legal text, the paragraph on performance contracts states that besides performance agreements, accreditation processes as well as evaluations were introduced to ensure the quality of education. Beside some small conditions, evaluations are regulated within the HEI's internal procedures, but need to be published (§7(2) HFG). Next to these internal evaluations, the ministry is allowed to execute cross-HEI evaluations (informed peer review) to assess the different systems how quality is secured. Evaluations of the institutional structure and the research branch are also possible. The results need to be published. These are generated to be able to compare the different HEIs (§7(3) HFG). Furthermore, all members have the duty to participate in the evaluation and accreditation procedures (§7(4) HFG). Members are defined as managers, deans, full-time personal and (doctoral) students (§9(1) HFG).

If the agreements are not fulfilled, there is usually no financial sanction as it is the case in other federal states, but it is still an option. For instance, if a HEI put not enough effort in meeting the targets. Still, usually it is not used due to the high potential to demotivate by such a punishment. A reward in case of excellent performance in turn can be declared. This is not automatically money, it could also be a change in the legal regulations or an increase of posts for staff paid by the federal state. We can conclude that the correlation between the fulfilment of the goals and the financial consequences are still relatively weak in NRW.

According to the legal rules, all stakeholders are obliged to participate in the evaluation process. At the first sight, this conforms with the PVM approach. However, we also know that mainly the administrative staff of the university reports to the ministry via enclosing their data to the public. We claim that this part of the law should rather be interpreted in terms that all stakeholders need to agree to the general activity of evaluating (e.g. allowing to use their data in the report). Following this string of argumentation, a TPA approach is plausible, since procedures are followed by the institution without explicit evaluation procedures (e.g. external committee, etc.).

The indicators used in the evaluation are similar to the reports we described in the monitoring

section. Only hard numbers describing efficiency are used, if numbers are used at all. This indicates a mix of the TPA approach, which stands for constant bureaucratic oversight, and the NPM approach, which aims at numbers proving efficient managing. Concerning possible consequences that follow on non-fulfilment, we would argue that this is rather a weakly determining point, since these actual consequences are rarely the case. However, if sanctions are decided, this is only done if the HEI did not put enough effort in achieving the goals and has to bear the consequences. This is a weak sign for the NPM approach.

The evaluation process includes elements of the TPA and NPM approach. The indicators used are the same as in the monitoring processes: the highest amounts of funds are again attached to TPA indicators, but also some quantitative NPM indicators are used. A pre-set date for the evaluation is a sign for the NPM approach as the possible sanctions that follow on non-fulfilment. We conclude that NPM is the predominant approach in the evaluation processes. However, TPA elements are also present due to the highest amount of funds attached to budgeting procedures.

Now we are able to answer the second part of our research question concerning the North-Rhine Westphalian context: To what extent are elements of the three approaches visible in the performance contracts in (the Netherlands and) NRW? All management approaches are represented in the different stages. The design process follows the NPM paradigm. The funding system encourages a competitive environment and is therefore also created along the NPM point of views. The objectives of the contract include all three approaches: The field of research contains elements of NPM, while teaching seeks for higher quality and satisfaction and therefore this is part of the PVM approach. Budgeting is regulated through procedures agreed on in the performances agreements and is consequently an element of the TPA approach. Monitoring of the NRW contracts follows constant bureaucratic oversight and therefore the TPA paradigm. Evaluation is predominantly shaped according to the NPM approach.

5. Dominant management approaches in the performance agreements of UAS Saxion and UAS Münster

After answering our third research sub-question, in this chapter we will analyse the two investigated cases: the UAS Saxion and the UAS Münster by using the previously depicted operationalisation. This is done in order to answer our final sub-question: What elements of TPA, NPM and PVM are

reflected in the performance agreements of UAS Saxion and the UAS Münster in particular where this concerns the involvement of stakeholders?

5.1 Dominant management approaches in the performance agreements of UAS Saxion

The analysis of our first case, the UAS Saxion in the Netherlands will be structured in three consecutive stages: the design process, the execution (content and monitoring) of the contract and the evaluation. Each section will be builed along the different questions we posed in our operationalisation. We will assess the written performance agreement and the conducted interviews to answer these questions. The five interviews were conducted with different stakeholders including three students and one employee representative, who all have a seat in the representative body (CMR). Additionally a dean was interviewed to represent the management level. We will apply the operationalisation to determine which management approach is predominant.

Design process

Do students and employees have a formal say in the design process of the performance contract?

Concerning the design process, the contract does not reveal any information. In this case, we directly refer back to the interviews we conducted. The dean, as well as the employee representative stated that neither the employees, neither the students had a say in the design process (Dean, Employee, Saxion). The three students did not know, since this process lays too many years in the past. None of them was a member of the CMR by then or even studied at Saxion (Student I, II, III, Saxion). This finding points either at the TPA or the NPM approach.

Who designs the performance contract?

The design of the contract starts according to the employee representative (Employee, Saxion) in a cooperation between the ministry and the *Hogeschoolenraad* (association of UASs). He mentioned that also the head of Saxion has a seat in this council. Together, they decide on the content, meaning the indicators that were mandatory to include. At this stage it is not yet about the individual contract. The design of the contract specifically for Saxion takes place in the following stage, that is explained by the dean (Dean, Saxion). The *College van Bestuur* (CVB: the two headed presidency of Saxion), the deans from the various faculties and service staff from the *Bureau Kwaliteitsraad* (Office for Quality) and the *Bureau Control* (Office for Controlling in charge of the finances)

decided on the improvements they wished to achieve on the seven indicators. The students did not know about these processes (Student I, II, III, Saxion). The second part of the performance contract includes the profiling which was also decided without the CMR by the CVB and the deans, but the CMR was formally informed and appreciated this choice (Employee, Saxion).

The design of the performance contract fits the NPM approach. The government decides on the mandatory indicators, while Saxion's management level in cooperation with its offices set the targets they want to achieve concerning these indicators. The profiling was also performed by the management level. The CMR was informed about the profiling, but did not need to approve and therefore did not actively participate.

What possibilities do students and employees have to influence the design process?

The students did not have an active say in the design process, they are informed in the CMR meeting and by the enclosure of the results in the annual report and in public spaces of Saxion. One student stated that although they knew about the existence of the contracts, they did not automatically understand everything they got presented in the CMR meetings and in the informing documents (Student I, Saxion). All students agreed that they are rather able to influence matters that happen in the day-to-day business via giving feedback in the CMR. Their opinion is desired and valued by the managers in the meetings of the CMR (Student I, II, III, Saxion). The employee representative adds that the CMR needs to approve the budget plans, which gives them leverage in case they strongly disagree on an issue (Employee, Saxion). Further, we asked the dean how far she represented the students' and employees' interests in the design process. She stated that she is in frequent contact with students and employees or at least their representatives, but even she as a dean did not feel like she had a lot of influence on the content of the agreement. Even if she wanted to include the students' and employees' interests, she could not. In her opinion there were indeed not enough points that were really relevant for the students. The indicators were given top-down and were set and done. She was able to discuss with the CVB and try to influence them concerning the promises made for each indicator, but in the end she did not believe her influence to be very strong (Dean, Saxion).

The previously described circumstances are conform with the NPM approach, with some elements of tTPA. Students' and employees' interests are not discarded, but at the same time not sufficiently included either. These stakeholders are seen as groups with interests and demands. The fact that not even the middle management level had much influence and sees the indicators as set and done,

given from top-down, could be an element of TPA. If students would want to change the indicators, they need to address the political level or at least the central council for UASs. Taking a step back from the design process and assess the involvement of students and employees via the CMR in the day-to-day business, it is conform with the NPM approach.

The students did not know about the content of the contracts. Therefore, we asked them for the interests of their student community, which they represent. Their answers ranged from a higher level of internationalisation, additional space as well as funding for people who engage besides their study (e.g. in the CMR) (Student I, Saxion) to the demand to easier enrol in a masters program after completing a Bachelor program at the UAS (Student II, Saxion). Internationalisation is represented in the profiling section of the performance contract. The others are not, therefore we find a moderate representation of students' interests in the contracts, which is conform with the NPM approach.

According to our findings, the design process of the individual contract of the UAS Saxion is conceptualised according to the NPM approach. Students and employees have no active say and the contract is concluded between the management and the ministry. This is conform with the findings in the general Dutch context.

Execution of the contracts (including monitoring and content)

Which goals have priority according to the contracts? (input, output, outcome)

The contract builds up on the seven mandatory indicators (Appendix B). The goal is therefore to fulfil the predictions made in the design process. The objective of Saxion is therefore equal to the indicators, which are represented in all Dutch performance contracts in higher education. Consequently this is equal to the general section on the Dutch context concerning the seven indicators (section 4.1). 'Drop-out rate', 'Switch of study program', 'Bachelor graduation rates' and 'Indirect costs' were categorised as being an element of NPM, since they aim at efficiency and are therefore output-oriented. Whereas, qualitative indicators such as 'Lecturer quality' and 'Education intensity' point at the PVM approach, since they are outcome-oriented. However, elements of NPM are predominant.

What is the method of measuring progress? Which indicators are used?

According to the dean (Dean, Saxion) there are internal feedback loops, that are published in the annual report of Saxion. These are management reviews that take place every three months for each

faculty which are supported by figures and data from the office for quality. These reports also include information on the indicators used in the performance contract. The CVB centrally receives all assessments and sums up the results for each faculty in order to produce a review for the entire UAS Saxion. For instance, the 'National satisfaction survey' is used. Or the indicator on 'Education intensity' is measured by combining the data from the schedules and the information of the accountant. There was an update on the currant status every three month. 'Bachelor graduation rates' was the most difficult indicator to influence, since there was not sufficient knowledge on how to impact this indicator. New information infrastructure had to be developed and knowledge had to be gained (Dean, Saxion).

Internal feedback loops can be seen as an element of PVM. Although no internal peer reviews are used, but rather administrative internal reviews that monitor the progress. It depends on the indicator, whether this can be categorised as NPM or PVM component. The national satisfaction survey is clearly an element of PVM, although this tool was already used independently of performance contracting.

We conclude that NPM is the most dominant approach, since the administrative internal reviews as most important monitoring tool deliver information on the seven mandatory indicators, which are also predominantly NPM components.

Who participates in monitoring the contract? Who monitors whether the contractual conditions are kept?

In the management reviews, the deans of the different faculties, the CVB, the office for quality and the office for controlling is included (Dean, Employee, Saxion). The students are not actively included as they commonly state in the interviews and are also not explicitly informed about the procedures (Student I, II, III, Saxion). However, the CMR gets informed about the results (Employee, Saxion). Further, the Review Committee reports annually on behalf of the state.

In this case the PVM approach is present in the internal administrative reviews conducted by Saxion. The monitoring activities by the Review Committee on behalf of the state are an element of NPM.

How frequently are meetings with stakeholders? Does the information go one-directional (top-down) or is it rather an exchange of information?

The meetings with stakeholders (management level, student and employee representatives) are frequent on a regular basis. The CMR and representative bodies on faculty level function in such a way that the CVB as well as the deans are in constant contact with student and employee representatives (Dean, Student I, II, III, Employee, Saxion). It is a limited exchange of information, because according to all members of the CMR, the majority of information flows top-down (Student I, II, III, Employee, Saxion). The employee representative was able to explain why it is still an exchange of information: The management and the employees in the different offices are professionals and work the whole week to produce relevant information. Whereas members of the CMR generally work five hours a week on such issues (Employee, Saxion).

All conditions for the PVM approach are fulfilled in this case. The meetings between the CMR and members of the management level, including the highest managers, are taking place regularly. Further, the information flow was described as a constant exchange by all stakeholders, which also points at the PVM approach.

To sum it up, we showed that the content of the contracts is based on the mandatory indicators, which are mainly representing the NPM approach. Whereas in terms of monitoring of the contracts, PVM and NPM are represented.

Evaluation of the contracts

Who participates in evaluating the contract?

According to the dean (Dean, Saxion) the same persons from the second stage of the design process were involved in the evaluation: CVB, deans, office for quality, office for controlling. All of them worked together to provide all the needed data to be able to report the final results of the seven indicators on one pre-set date (Dean, Saxion). At the next stage of evaluation the Review Committee is the main actor (Employee, Saxion). The CMR and its members were not included in the evaluation (Student I, II, III, Employee, Saxion).

As it was the case in the design process, according to this information this is a component of either the TPA or the NPM approach, in which students and employees are not invited to participate in the evaluation. In the PVM paradigm, all stakeholders need to be involved when it comes to evaluating.

Who evaluates whether the contractual conditions were kept?

After all the information is provided by the management level in cooperation with its offices and in the end approved by the accountant, the Review Committee evaluates whether the contractual conditions were kept (Dean, Employee, Saxion). Students or the CMR do participate at this stage (Student I, II, III, Saxion).

The Review Committee is put in charge by the government. The task was outsourced to an organisation on behalf of the state. This points at the NPM approach. Whereas, we emphasise that the Review Committee is an independent commission uniting peers, which gives advice to the finally deciding ministry. Hence, the state is evaluating, which is conform with the NPM approach. According to the dean (Dean, Saxion) the Review Committee has a huge influence and it seems to be the actual commission which evaluates – not the state. Hence, the evaluation could also be seen as external peer review, which is an element of the PVM approach. We would argue that it is an NPM element which might develop towards the PVM approach.

How frequently are the contracts evaluated?

The contracts are evaluated two times: in a mid-term review and a final one. Both dates are pre-set (Dean, Saxion).

This fits in the NPM or the PVM approach, since in both cases, an evaluation is necessary after the contract finishes. Mid-term evaluations are also possible.

What methods are used to evaluate the contract?

In the evaluation the current status concerning the performance indicators is reported. In the following, an executive board of Saxion meet the Review Committee which listens to their story including all successes and difficulties. In the case of Saxion, three members of the management level – including the dean were interviewed and the head of Saxion were present in their meeting with the Review Committee in Zwolle. Saxion fulfilled all goals they wanted to achieve except 'Bachelor graduation rate'. After answering only few questions on profiling, the representatives of Saxion were able to explain why they failed on the indicator 'Bachelor graduation rate'. The dean stated the peers really listened and gave a good advice concerning the performance of Saxion to the ministry. The committee also considered the context such as geographical, demographical, cultural or historical influences (Dean, Saxion).

The methods used to evaluate the contracts were a mix of quantitative measures referring to the mandatory indicators and a qualitative assessment by the Review Committee. We already know that the indicators are predominantly elements of the NPM approach. However, some indicators were quantifying qualitative aims, which is an element of the PVM approach. Further, the qualitative assessment by the Review Committee is a PVM element that weighs more than the indicators used. Even if a HEI did not fulfil the target, they still get the possibility to convince the Review Committee that they did a good job and made progress. We conclude that the methods used to evaluate depict PVM.

What consequences follow on non-fulfilment of the objectives?

According to the dean (Dean, Saxion) the consequences could be financial sanctions, but also a loss of reputation, because there was a lot of medial attention. Saxion did not fulfil its promises on the indicator 'Bachelor graduation rate'. Anyway, Saxion did not lose any financial means or worsened their reputation, because they were able to explain the Review Committee why they failed and showed that they still made progress. However, the non-fulfilment of targets would cost prestige (Dean, Saxion).

This description conforms with the PVM approach. Sanctions are possible, but only if the failures are not explainable or caused by a lack of effort. The Review Committee listened to Saxion's story, which also fits in the PVM approach.

The evaluation stage has elements of the NPM and the PVM approach. Students and employees have no say, but the management level and the Review Committee are the most important actors. These are components of NPM approach. While the qualitative methods of the Review Committee to assess the performance is an element of the PVM approach. This paradigm is also reflected in the possible consequences that apply in the case of non-fulfilment of the contract. This is conform with other Dutch performance contracts.

We are able to answer our fourth-subquestion concerning the part of UAS Saxion. We conclude that the NPM approach is dominant concerning the involvement of stakeholders on all stages (design, content and evaluation). Mainly the managements level with its administrative staff, the Review Committee and the ministry are involved. Students and employees or their representatives in the CMR are rather seen as groups with demands. Whereas the method of monitoring and evaluation represents the PVM approach. Monitoring is organised by internal administrative reviews, while the

evaluation is finally determined by the qualitative assessment method of the Review Committee. In the national context we stated that the NPM elements still outnumber the PVM components. In the case of Saxion, we were able to find more elements that depict a shift from NPM to PVM.

5.2 Dominant management approaches in the performance agreements of UAS Münster

In the following we will investigate the second case, the UAS Münster. Unfortunately, we were not able to reach representatives from all stakeholder groups for an interview. Hence, we have to rely on one interview from an employee representative who has a seat in the representative body (senate), in which also students have a seat.

Design process

Do students and employees have a formal say in the design process of the performance contract?

The contracts do not reveal any information on how they are designed. According to the employee representative (Employee, Münster) students and employees are not involved in the performance agreements.

This fits either in the NPM or the TPA approach, in which students and employees are not invited to participate in the design of the contract.

Who designs the performance contract?

A dean refused an interview, because he stated that he is not involved and forwarded our interview request directly to the president, who is the only one involved from the UAS, when it comes to designing the contract. This is conform with the employee representative's statement (Employee, Münster). The contract is designed in cooperation between the ministry and the president (Appendix C).

The NPM approach conforms with these circumstances. Only elected politicians, in form of the ministry, together with the highest manager, the president of the UAS Münster conclude the agreement.

What possibilities do students and employees have to influence the design process?

The employee representative (Employee, Münster) did not state any possibilities, but pointed out the senate's trust to the chair. Furthermore, he emphasises the constant dialogue between the chair and the senate.

We argue that this information is insufficient to give a valid statement about which management approach is predominant. However, since student and employee representatives are exchanging information with the chair, we argue that their demands are heard. This is conform with the NPM approach.

We conclude that the design process is conform with the characteristics of the NPM paradigm. Students and employees have no say, but their demands are included, when the contract is concluded between the ministry and the management level. This is not conform with the general context of NRW. According to In der Smitten and Jaeger (2012), student and employee representatives have a formal say

Execution of the contracts (including monitoring and content)

Which goals have priority according to the contract?

There are a number of goals stated in the contract. Some are conform with the PVM approach, since they focus on quality and are therefore outcome-oriented. They aim at increasing the satisfaction of students and employees. Often, the contract reveals concrete plans how to implement this goal. For example by setting up a new position (e.g. study advisor, tutors, psychologic advisors). Some goals are connected to the creation or strengthening of networks that should be established or strengthened in the scope of the implementation of the contract (Appendix C). These goals that fit in this pattern:

- Guided entrance to the study program to ensure an easy start in the academic world
- Transition between secondary and higher education
- Network with the employment agency, chamber of trade, chamber of industry and commerce for students who drop out of their study program
- Accreditation to ensure quality
- Cooperative doctoral degree programs
- Creation of a start-up culture

- Cooperation with regional actors in the Münsterland
- Diversity policy concept
- Inclusion of disabled students and employees
- Internationalisation (such as mentoring for incoming and outgoing students or lecturer mobility)
- Increase the offer of dual study programs and part-time study programs
  (Source: Appendix C)

After depicting the goals that belong to the PVM approach, the following objectives could be assigned to be either an element of NPM or PVM:

- Extending monitoring systems to recognise barriers of success and to counteract by supporting programs to compensate deficits
  (Source: Appendix C)

This goal is in the interest of students and raises their level of satisfaction. This is the PVM component in the goal. At the same time it aims at efficiency and the rate of study success, which is in turn an element of the NPM paradigm.

- Intensification of cooperation between the UAS and the economy in the context of knowledge and technology transfer (e.g. patenting strategy, EU-agenda strategy)
  (Source: Appendix C)

These cooperations and networking are usually a component of the PVM approach. In the context of knowledge and technology transfer it is also about the university's patenting strategy and their alignment with the EU-agenda, which both is connected to third party funding. Being efficient having a good network increases these funds, which is conform with the NPM paradigm.

A few goals that are included in the contracts are part of the NPM approach. They all aim at efficiency or at having an advantage on the market in comparison to other universities and UASs:

- Strengthen the research programs and set profiling emphases
- Increase the innovation, patenting and valorisation activities

- Improve the rate of study success
- Sustainability strategy (long-term, economic, social, ecologic factors are considered in any decision)
  (Source: Appendix C)

A following goals can be categorised as TPA, in which mainly procedures are defined:

- Occupational safety and health protection
- Apprenticeship places at the UAS Münster
- Construction projects and its funding
- Gender issues (context: equality of chances): positions with gender-denomination, ability to combine family and profession, study programs on gender studies
  (Source: Appendix C)

The last goal on gender issues might be rather a political goal, in which procedures determine which actions have to be taken.

All management approaches are sufficiently represented in the content of the contract. The most goals can be categorised in the PVM approach. A few in the NPM and TPA approach.

What is the method of measuring progress? Which indicators are used?
Progress in measured by reporting data from the UAS to the ministry. The UAS needs to constantly improve their information infrastructure to be able to measure the data the ministry asks for. It is used to compare the progress across the HE sector of the federal state NRW. For some subgoals of the contract separate monitoring processes are established. Additionally there are annual internal evaluations, in which the students fill in a survey, which asks about their satisfaction among other topics. Further, there are satisfaction surveys for first year students to check on the indicator 'Entrance to the study program'. But most importantly, there are no fixed dates for monitoring activities, but the state asks for data (Appendix C).

The described method of measuring includes components of all approaches. The quantitative data that is reported to the ministry to be able to compare the different HEIs in the federal state seems like an element of NPM. Whereas in NPM, there would be fixed dates to monitor and such

activities would be mandatory. This is not the case and the ministry asks the UAS for their progress. This points at constant bureaucratic oversight, which is an element of TPA. Moreover, the internal students surveys are an element of PVM. The monitoring activities are organised along bureaucratic oversight using also PVM indicators.

Who participates in monitoring the contract? Who monitors whether the contractual conditions are kept?

INCHER (International Centre for Higher Education Research) conducts surveys with graduates on an annual basis. This is also done by HIS (University Information System) every four years. The ministry outsources the task to collect and analyse the data relevant in higher education for the entire federal state to INCHER. On this basis the NRW report is published which includes amongst other results benchmarking numbers. The ministry explicitly does not have access to any data from an individual HEI. This suggests that the work of INCHER takes place independently of performance contracting. The HIS evaluates the program of performance contracts, but since they conduct surveys only every four years, they neither monitor whether the contractual conditions are kept.

This leaves only the reports from the management level of the UAS with the use of its information infrastructure to the ministry, with which they compare the results across the federal state. According to the employee representative (Employee, Münster) the results are solely presented to the senate in the scope of the financial report. Although this is not fully comprehensible in this meeting (Employee, Münster). We conclude that students and employees or their representatives do not participate in this process.

We argue that constant bureaucratic oversight takes over the monitoring tasks, since there are no pre-set dates for monitoring activities. This points at the TPA approach. The government adduced the UAS's information infrastructure as source for their data.

How frequently are meetings with stakeholders? Does the information go one-directional (top-down) or is it rather an exchange of information?

According to the employee representative (Employee, Münster) the meetings of the senate are frequently on a regular basis. There is always an animated discussion in which criticism is taken benevolently and there is space to influence decisions (Employee, Münster).

The frequent meetings that take place regularly are an element of either the NPM or PVM approach.

We find that the content of the performance agreement includes all three management approaches with a slight majority of goals that fit in the PVM pattern. The method of monitoring is organised along the TPA approach using constant bureaucratic oversight.

Evaluation of the contracts

Who participates in evaluating the contract?

The senate is not included in the evaluation, since the employee representative did not know who evaluates the contract (Employee, Münster).

This fits either the TPA or the NPM approach.

Who evaluates whether the contractual conditions were kept?

The UAS Münster reports to the ministry, which evaluates (Appendix C).

The state evaluates, which can be again either an element of the TPA or the NPM approach.

How frequently are the contracts evaluated?

In the contract one final evaluation is mentioned. This takes place at the end of the contract period. In our case, it is the 31st of December 2016 (Appendix C).

An evaluation after the contract finishes points at being either an element of the NPM or PVM approach.

What methods are used to evaluate the contract?

The UAS Münster collects the data with its information infrastructure and reports to the ministry. In the next step the ministry evaluates and discusses the results and its review in a meeting with the management level of the UAS Münster. This takes place at the end of the contract period. In our case, it is the 31st of December 2016. One year later, the UAS Münster needs to publish a final report that includes information on the entire contract period. The responsible committee in the federal parliament is informed about the review from the ministry (Appendix C).

The collected data is both quantitative and qualitative which is a mix of NPM and PVM. The possibility of the UAS Münster to explain themselves to the ministry is a component of the PVM approach. Whereas, the state is conducting the evaluation, which is an element of NPM.

What consequences follow on non-fulfilment of the objectives?

The contract (Appendix C) does not include specific information on possible sanctions following on the non-fulfilment of the objectives. Except concerning the Higher Education Pact that is part of the performance agreements, there is a malus regulation. If the agreed on capacity for new students is not provided, a sanction is the consequence. Every university place that is not offered below the agreed on number, the UAS receives 20.000 euros less public funds (Appendix C).

Financial penalties are a possible consequence, but only referring to one part of the contract, which regulates additional public funds for more university places to increase the capacity for new entrants. The review by the ministry is discussed with the UAS Münster, but there are no agreements about actual financial consequences, besides the malus-regulation coupled to the Higher Education Pact. However, sanctions are possible and the UAS has the possibility to tell their story to the ministry. Together, these are components of PVM.

Concerning the evaluation of the contracts, the stakeholders involved point towards the NPM approach, whereas the methods used and the possible consequences are elements of the PVM approach.

Now we are able to answer our final research sub-question also concerning the UAS Münster. The performance agreement between the UAS Münster and the ministry represents all approaches. The stakeholder involvement at all stages point at the NPM approach, since students and employees are not actively included, but regarded as groups with demands. We determined this by the exchange of information that is taking place in the senate. However, actively participating are only the management level of the UAS Münster and the ministry. Further the NPM paradigm is visible in the evaluation process, in which solely the state evaluates. Whereas, in the methods of evaluation, the PVM approach is depicted. Besides that, the PVM approach is represented in a lot of the goals stated in the contract aiming at networking, quality and satisfaction. However, we emphasise, that funding and possible sanctioning is mainly attached to the Higher Education Pact, which is part of the agreement, but a clear TPA element. It aims at procedures and regulation agreed on in the contract concerning funding issues. This might turn the performance contract into a tool that rather

organises funding according to a funding formula than being an actual incentive to allocate funds based on performance scores. This clearly points towards the TPA paradigm.

6. Conclusion and reflection

To conclude, we are now able to answer our overarching research question: What governance paradigms are represented in the performance agreements of the Dutch UAS Saxion and the German UAS Münster?

At the UAS Saxion the predominant management approach is NPM with a strong tendency towards PVM. Whereas, at the UAS Münster the most important approach is TPA shifting towards NPM.

The involvement of students and employees was limited in the Dutch case, but their demands were heard and represented in the performance agreements. The main actors over all stages were the management level of UAS Saxion (including the CVB, the deans and administrative offices) and the government. This points at the NPM approach concerning the involvement of stakeholders. At the stage of monitoring and evaluation, the Review committee also played a crucial role.

In the German case, the involvement of students and employees was equally limited. An exchange of information between the key stakeholders and the management level was still given as in the Dutch case, therefore we conclude that the students' and employees' interests and demands were listened to. The main actors were, as in the Dutch context, the government and the management level. We conclude that NPM is the dominant approach concerning the involvement of stakeholders.

In the design process of the Dutch case, only the management level and the government participated and entered the contract. The first part of the agreement was open for individual goals concerning Saxion's institutional profiling. The second part was based on seven mandatory indicators that were given top-down by the ministry in negotiations with the associations of the university and UAS sector to be able to compare across HEIs. This fits the NPM pattern.
In the German case, the state negotiated and concluded the contract with the UAS Münster's management. This equally fits the NPM pattern.
In both cases, each representative body had a formal say, but in reality student and employee representatives had no influence on the design process.

The mandatory indicators in the Dutch case include both, NPM elements that aim at efficiency and PVM components that seek for quality and satisfaction. The NPM elements outnumber the PVM components.
In the goals and indicators of the performance agreements of the UAS Münster all management approaches were represented. However, most of them are not clearly operationalised and no funding is attached to them. Hence, we argue that they are rather trail signs. The highest amount of funds is attached to the Higher Education Pact that is part of the agreement. It aims at procedures in order to regulate the amount of new entrants and how they are financed. We claim that TPA is the predominant approach in the German case following the string of argumentation where the highest amount of funding is attached.

Monitoring is organised in two ways: Saxion conducts internal feedback loops that provide the current status on the seven indicators. This is a sign for the PVM approach. However, additionally the Review Commission publishes an annual report and conducts a mid-term review on behalf of the state. This is a NPM component.
The UAS Münster's performance is monitored by the ministry through constant bureaucratic oversight. The UAS's information infrastructure is used to report to the ministry. The TPA approach is depicted, when it comes to monitoring in the German case.

The evaluation in the Dutch UAS is conducted by the Review Committee that was put in charge by the state. Its review is based on the seven indicators, which are predominantly assessing efficiency. These are characteristics of the NPM approach. Nevertheless, the evaluation method is going towards the PVM paradigm. The UASs get the possibility to tell their story. The Review Committe's final advice to the ministry is based on a qualitative assessment including the context and the UAS's story – not based on solely their score on the mandatory performance indicators.
In the German case, the state evaluates the UAS Münster. In comparison to the monitoring process a pre-set date is given and the ministry meets the executives of the UAS Münster to discuss the results. The state as evaluator is an element of the NPM approach, whereas the evaluation method depicts the PVM paradigm.

Consequences on non-fulfilment of the contractual conditions in the Dutch case can be sanctions for the next period of contracts. This fits the NPM and the PVM approach.
In the German case, there is a malus regulation, which is a procedure concerning the Higher Education Pact. For each case of non-fulfilment of this contractual condition – to which the highest

amount of funds are attached – 20.000 euro less are paid.

We conclude that in the Dutch case NPM is the predominant management approach. The seven mandatory indicators are used as basis to compare the individual HEIs over time and across HEIs. Both NPM and PVM elements are represented in the indicators with a slight emphasis on efficiency-related components. The type of funding in the Dutch context creates a competitive environment across all HEIs, but also an incentive for an individual HEI to improve its own performance score independently of others. The Review Committee is an organ that can be located between the NPM and the PVM approach. They are put in charge by the government and fulfil the outsourced task of monitoring and evaluation. This acting on behalf of the state is an NPM element. The commission's qualitative assessment methods are determining their final advice to the ministry, which is a component of PVM.

In the German case, the most important management approach is TPA. The funding and therefore also sanctions are predominantly attached to procedures that regulate public funding such as the Higher Education Pact. The other goals that are classified as NPM or PVM are rather trail signs, because they are not clearly operationalised and no funds as incentive are paid. Performance agreements in the German context depict an instrument to regulate public budgeting. Of course the side effects such as better communication, a higher level of legitimacy and accountability is still encouraged. But incentives for higher performance scores through funds are weak.
We argue according to In der Smitten and Jaeger (2012) that the contracts in the German context have a politically binding impact. We find this for example in the component of 'gender issues'. It is a political topic and public organisations funded by the tax payer's money have to act according to the governing party's point of view. Procedures are determined by politics and concluded in a legally binding contract.
A shift towards NPM can be observed in the evaluation processes, but also in the inclusion of student and employee demands in the contract – even if no funds are attached to points that are directly relevant for these stakeholders.

The limitation of this study was the low responsiveness of stakeholders of the UAS Münster. We had to rely on only one interview, that is might be not representative and provided no background information. Whereas, we were able to vaguely determine the involvement of employees and students by the information gathered from that interview. However, the performance agreement also included no detailed information, especially not concerning stakeholder involvement. We conclude,

that the analysis of the German case is not as reliable as the Dutch case due to a low response rate on interview requests at UAS Münster.

In the Netherlands, politics did not pass a new round of performance agreements yet. If this would be the case, we believe that HEIs will be more decisive in their negotiations with the ministry. They might refuse to only choose on the menu of seven mandatory indicators, but want to decide on and influence the criteria they are reviewed on in the final evaluation. Another possibility might be that performance contracts serve as a real incentive that supports networking activities in order to coordinate with partners on different levels (such as business partners in the regions, other HEIs or the government). This could be implemented by encouraging the HEIs to get feedback from their stakeholders and develop on its basis an institutional strategic agenda for the next period.
Further, the different councils of the HEIs (including the CMR) are now informed about performance agreements and might want to influence the process or at least will put more pressure on the management level. Their interests to increase the quality of education might be predominant over efficiency-related objectives and indicators in the following period of contracts. Employees might want to impact the 'Lecturer quality' indicator with the argument that lecturers with a lot of teaching experience, but no Master's degree are as good as lecturers with a Master's degree, but no teaching experience.
We argue that the general trend is that UASs and its stakeholders strongly push towards influencing the process and the indicators in the contract directly and individually.

In the German case, the future of performance agreements might develop over time to an actual incentive pushing for efficiency and quality. This could be achieved by clearly operationalising not only the TPA elements of the contract, but the most important NPM and PVM objectives and indicators to be able to clearly measure the progress made in order to translate the results into performance scores. Further, these scores would need to be coupled to funding to have a significant impact. This might change the finding according to In der Smitten and Jaeger (2012) that supports no correlation between the performance of HEIs and the funding linked to their performance contracts. Further, the HEIs might push towards more heterogeneous indicators to achieve the objective of diversity in the higher education sector to be able to compete on the (inter)national level.

Future research in the field of performance agreements could study the newest approach 'Public Value Management' in further detail. To do so, the concept of public value in the field of education

or even more precise in higher education has to be determined. Further, the impact of performance contracts on the creation of public value needs to be studied. Besides that the limitation of our research could be addressed by conducting the same study in the NRW context with a higher response rate.

We assess our pilot method, that was developed and tested in this thesis, to be a helpful tool to classify performance contracts, respectively its different stages, in the three management approaches TPA, NPM and PVM.

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8. Appendix

A. Table of abbreviations

Abbreviation	Dutch/German	English
CMR	Dutch: Central Medezeggenschapsraad	Central representative body of UAS Saxion
CVB	Dutch: College van Bestuur	Two headed chair of UAS Saxion
DUO	Dutch: Dienst Uitvoering Onderwijs	Information infrastructure belonging to the Ministry of Education, Culture, and Science
HBO-raad	Dutch: Hogeschoolenraad	Dutch association for the sector of UASs
HFG	German: Hochschulfreiheitsgesetz	Law for higher education freedom
HIS	German: Hochschulinformationssystem	Information system for higher education (a company)
HLA	Dutch: Hoofdlijnenakkoord	Agreement with two HEI associations as representative for the two sectors in the Dutch higher education sector
NRW	German: Nordrhein-Westfalen	North-Rhine Westphalia (German federal state)
miwf	German: Ministerium für Innovation, Wissenschaft, und Forschung des Landes Nordrhein-Westfalen	Ministry for innovation, sciences and research of North-Rhine Westphalia
vsnu	Dutch: Vereniging van universiteiten	Dutch association for the sector of research universities

BIJLAGE 1

CENTRE OF EXPERTISE

HIGH TECH SYSTEMEN EN MATERIALEN

2012
2016

saxion.nl

SAXION

1. Expertise in HTSM

Saxion en Windesheim zetten in op de toekomst van technologische innovaties door het gezamenlijk ontwikkelen van hét Centre of Expertise voor High Tech Systemen en Materialen (HTSM). De focus ligt op het uitvoeren van excellent praktijkgericht onderzoek. Hiermee wil het Centre verdieping van praktijkgerichte HTSM-kennis bewerkstelligen, die bijdraagt aan verrassende proces- en productinnovaties voor het regionale bedrijfsleven en de versterking van de (regionale) economie. Het Centre heeft de volgende hoofddoelen:

- vergroten van het innovatief vermogen van bedrijven;
- bijdragen aan het oplossen van maatschappelijke thema's;
- vergroten van de in- en uitstroom van studenten in het technisch onderwijs.

De beide hogescholen investeren hiermee in de kwalitatieve technologische kennis en kunde van de nieuwe generatie bachelor studenten. Deze investering is noodzakelijk om te kunnen blijven voldoen aan de toenemende vraag uit het bedrijfsleven naar hoog gekwalificeerde kennisdragers. De Human Capital Agenda's van de Topsectoren, het Masterplan Bèta en Technologie, het Kabinetsbeleid Aanpak arbeidsmarkttekorten techniek, het economische beleid van de provincie en de innovatieagenda van het regionale bedrijfsleven, onderschrijven dit volledig. Het regionale werkveld heeft een steeds grotere behoefte aan technische bachelors met een creatieve inslag, die de vertaling kunnen maken naar toepassing, die ervaring hebben met het zelfstandig doen van praktijkonderzoek en die weten welke innovatiewaarde zij kunnen toevoegen.

De partners gaan onder penvoerderschap van Saxion, dit Centre opbouwen als Expertisecentrum HTSM Oost (ECHO). De officiële opening van ECHO vindt in 2013 plaats tijdens het nationale HTSM-congres.

2. Waarom een Centre of Expertise HTSM?

Voor een duurzame economische ontwikkeling moet (Oost-)Nederland het vooral hebben van een voorsprong in kennis, het vermogen kennis bijeen te brengen en die kennis in de vorm van nieuwe producten en processen voldoende snel naar de markt te brengen. Vanuit zijn praktijkgerichtheid heeft het hbo een vanzelfsprekende initiërende en verbindende rol, mede gezien zijn brede kennispositie en centrale rol in het netwerk van maatschappelijke stakeholders, tussen theorie en toepassing. Een Centre of Expertise heeft hierin een belangrijke coördinerende en initiërende waarde.

Vraagarticulatie van het bedrijfsleven

De concrete vraag van het bedrijfsleven onder dit initiatief ligt in het organiseren van multidisciplinaire, praktijkgerichte, business gedreven kennisverdieping naar de toepassing van hightech mechatronica, nanotechnologie, smart materials, kunststoffen en ICT in nieuwe producten en systemen. Het antwoord zit in het combineren van (wetenschappelijke) inzichten uit verschillende bronnen (bedrijven, kennisinstellingen, onderzoeklabs, open innovatiecentra) en het vertalen naar praktische toepasbare kennis voor het MKB. Die kennis kan het MKB niet zelfstandig ontwikkelen, hetzij vanwege beperkte faciliteiten, hetzij vanwege het bedrijfsoverstijgende kenniskarakter. Samenwerking in de keten is derhalve noodzakelijk. Met de kennis die wordt opgedaan in deze samenwerkingsverbanden kan het MKB wél verder richting nieuwe businesskansen, nieuwe productmarktcombinaties en innovatieve ontwikkelrichtingen. Het MKB heeft het hbo nodig om de een volgende stap in de innovatiesprong van HTSM te maken.

De regionale zwaartepunten

Oost-Nederland is op dit moment een van de belangrijkste motoren van de Nederlandse kenniseconomie. Dankzij een forse groei van het kennisintensieve bedrijfsleven op het gebied van HTSM ontwikkelt Twente zich met grote snelheid tot Top Innovatie Regio in Nederland. Regio Zwolle behoort daarnaast al jaren tot de best presterende economische regio's

van Nederland. De kracht van Oost-Nederland zit in de bijzondere samenwerking van het bedrijfsleven (MKB en grootbedrijven), onderwijs-, onderzoekinstellingen en de overheid.

Bedrijven als Demcon, Boeing, Fokker, Ten Cate, Wavin, DSM en Akzo Nobel investeren fors in de regionale kennisontwikkeling, omdat zij een meerwaarde zien in kennisintensieve samenwerking. De provincie Overijssel, het Innovatieplatform Twente, het Nederlandse hightech bedrijfsleven alsook de landelijke Topsector HTSM herkennen dat Oost Nederland geldt als een majeure innovatieregio voor HTSM. Het hightech bedrijfsleven wil deze uitgangspositie benutten door een gezamenlijke impuls te geven aan de HTSM-ontwikkeling en heeft gekozen voor de regionale zwaartepunten: Healthcare, Safety/Security, Sustainability, Production Technology en Building & Construction. Dit betekent dat het initiatief voor ECHO past in de strategie van zowel de overheden (regionaal, provinciaal als nationaal) en de onderzoeks- en onderwijsinstellingen, als het bedrijfsleven.

Economische validatie

In Oost-Nederland zijn circa 87.000 medewerkers werkzaam in 5.575 HTSM-bedrijven. Het aandeel R&D-personeel van 3%, ligt ruim boven het landelijk gemiddelde. Alleen al in Twente is in 2010 194 miljoen euro aan loonkosten voor R&D-activiteiten toegekend (in het kader van WBSO) 5,5% van het Nederlandse totaal. De R&D-intensiteit in Oost-Nederland ligt daarmee boven het landelijk gemiddelde. Economische groei in dit segment levert tevens belangrijke toegevoegde waarde aan andere sectoren in de regionale economie, zoals de bouw, logistiek, dienstverlening en horeca.

In de afgelopen jaren heeft de regio een erkende positie opgebouwd op de HTSM kennisdomeinen. Door het uitvoeren van gezamenlijke onderzoeksprojecten heeft het hbo hierin een forse kennisbijdrage geleverd. Met een groot aantal Raak-projecten hebben Windesheim en Saxion een impuls gegeven aan de ontwikkeling van innovaties in Oost Nederland. Ook hebben beide instellingen geinvesteerd in toegankelijke onderzoekinfrastructuur als het Innovatief Materialen Platform Twente, PolymerSciencePark, FabLab en eigen onderzoekslaboratoria in Zwolle en Enschede. Vanuit deze kennispositie speelt het hbo een belangrijk rol in de kennisfundatie voor de HTSM-industrie in Oost Nederland.

Nationale validatie en verbindingen met andere regio's

ECHO fungeert als een kenniskatalysator tussen HTSM -bedrijven en kennisinstellingen in de regio. Het Centre neemt een centrale positie in binnen het goed ontwikkelde HTSM-ecosysteem in Nederland. Er bestaan goede banden naar innovatieve consortia en kennisdragers in andere regio's als Eindhoven (HTSM, Automotive), HAN (Automotive), Delft (Materialen), Leeuwarden (Water), Assen (Sensoren), Münster (Nanotech) en Osnabrück (Materialen). De basis ligt in de co-creatie door innovatieve OEM'ers, flexibele hightech MKB-bedrijven en vooraanstaande kennisinstellingen.

3. Onze ambitie in HTSM

Ambitie & doelstellingen

Saxion en Windesheim hebben de ambitie om dit onderzoekscentrum uit te laten groeien tot hét Centre of Expertise voor High Tech Systemen en Materialen in Oost-Nederland. Onze focus ligt op het genereren van hoogwaardige kennis door excellent toegepast onderzoek. Deze verdiepingsslag in praktijkgerichte HTSM-kennis, leidt tot verrassende proces- en productinnovaties voor het regionale bedrijfsleven en versterking van de (regionale) economie.

Het Centre heeft de volgende hoofddoelen:

- vergroten van het innovatief vermogen van bedrijven;
- bijdragen aan het oplossen van maatschappelijke thema's;
- vergroten van de in- en uitstroom van studenten in het technisch onderwijs.

We realiseren dit door:

- excellent onderzoek, met focus in de programmering;
- superieure samenwerking tussen excellent onderwijs/onderzoek en innovatief bedrijfsleven, maar ook samenwerking op expertgebieden binnen het onderwijs (tussen en in verschillende onderwijsinstellingen als ROC's, UT, Saxion en Windesheim);
- veeleisend, uitdagend en aantrekkelijk onderwijs met een hoog toegevoegde waarde. Gebaseerd op hightech onderzoek in ingezet in real-life praktijkcases.

Saxion en Windesheim, ondersteunt door kennis- en onderzoekspartners, geven invulling aan de vraag van het bedrijfsleven naar een HTSM-kennis-combinatie door het oprichten van een expertise-centrum dat initiërend en faciliterend is voor een businessdriven kennisontwikkeling. Bedrijven brengen concrete technologische vraagstukken in vanuit hun eigen (maatschappelijke) context, vertaald naar researchthema's. In samenwerking met het bedrijfsleven, voeren studenten, docenten en lectoren onderzoek uit in toepassingsgerichte technologie- en businesscases. Door de directe interactie tussen kennisleveranciers en het bedrijfsleven leidt ECHO tot snellere adaptatie van de technologie in het MKB en creëert ECHO technologische doorbraken met het MKB.

Netwerkorganisatie

ECHO wordt gevoed door de regionale thema's vanuit het bedrijfsleven. De thema's brengen verschillende disciplines in onderzoek en onderwijs bij elkaar, uitgeoefend op verschillende locaties. We benutten de gebouwen van Saxion en Windesheim of opereren op locaties waar dat nodig is. Het onderzoeksnetwerk wordt gecreëerd in het hart van het HTSM-ecosysteem in Oost-Nederland. Door het bundelen van meerdere experts vanuit verschillende kennisinstellingen, realiseren we uniek multidisciplinair toegepast onderzoek. Het open innovatieconcept mét de HTSM-focus zorgt voor uitwisseling van kennis en mensen tussen instellingen, kennisdomeinen en bedrijfsleven, waardoor optimale kruisbestuiving binnen HTSM vorm krijgt.

Vertrekpunten voor de besturing

Het Centre heeft een onafhankelijke signatuur, waarbij het (praktijkgericht) onderzoek wordt uitgevoerd in researchgroepen met meerdere lectoren, onderzoekers, onderzoekdocenten en studenten van de betrokken kennispartners en bedrijfspartners. Elke groep heeft eigen middelen ter beschikking, die vanuit een centraal researchprogramma in competitie wordt verdeeld naar projecten op basis van de volgende criteria:

- resultaatgericht excellent onderzoek, met economische/maatschappelijke impact (valorisatie);
- te implementeren door externe partijen;
- aantrekkelijk voor externe funding (o.a. bedrijfsleven).

Programmasturing gebeurt onder opdrachtgeverschap van de directies van beide hogescholen, geadviseerd door een Industriële Adviesraad en Programmaraad.

4. HTSM in onderzoek

Researchthema's

ECHO werkt vanuit een businessdriven focus van technologie naar applicaties. ECHO creëert hiervoor een technologieplatform om technologische kennis naar de praktijk te brengen. Het bouwt voort op datgene wat beide hogescholen reeds hebben opgebouwd. Op basis van trackrecord en vraagarticulatie zijn vooralsnog zes researchthema's benoemd: medische sensoren, digitaal printen, nano applicaties, recycling en ontwerp, robotica in zorg & welzijn en industriële procesoptimalisatie. Ze sluiten aan bij applicatiegebieden in de regio. Binnen deze researchthema's zijn door het bedrijfsleven businesscases ingebracht. We starten met één businesscase per researchthema; de komende jaren worden nieuwe cases en mogelijk researchthema's vraag gestuurd toegevoegd (zie tabel).

Regionale Thema's	Onderwijs & Onderzoek	Products & Know How
Healthcare & Wellbeing Biomedisch, nanotechnology, smart & intelligent materials, ICT & diagnostiek, mechatronica, medical imaging	Lector ICT innovatie in de zorg telemedicine (w) Lector ICT innovatie in de zorg EPD (w) Lector Smart Functional Materials (s) Lector Nanotechnologie (s) Lector Mechatronica (S)	Telemonitoring Nieuwe game -zorg- concepten in cure & care Clinical datawarehousing Revalidatie-robotica
Sustainability Energie opwekking, distributie en opslag, biopolymeren, digital proces technology, scheidingstechnology oppervlakte/ coating technolog	Lector Kunststoftechnologie (w) Lector Watertechnologie (s) Lector Smart Funtional Materials (s) Lector Nanotechnologie (s) Lector Duurzame energie (s)	Bio-plastics Gerecyclede materialen Duurzame energieopwekking Printing on demand
Building & Construction Smart & intelligente materialen, functional en self healing materialen, biobased materials, energy harvesting	Lector Area development (w) Lector Kunststoftechnologie (w) Lector Brandveiligheid in de bouw (s) Lector Smart Functional Materials (s) Lector Ondernemen in de bouw (s)	Product- en proces optimalisatie Simulaties Slimme bouwmaterialen
Safety & Security Slimme, functionele & intelligente materialen, ICT, surface treatment, sensoring & monitoring	Lector Kunststoftechnologie (w) Lector Ambient Intelligence (s) Lector Risicobeheersing (s) Lector Nanotechnologie (s)	Engineering plastics Zorgalarmeringsdiensten Sensoren & actuatoren Oppervlakte activering
Mobility Smart en intelligente materialen, ICT systemen, energy harvesting, materialen en composieten	Lector Ambient Intelligence (s) Lector Smart Functional Materials (s) Lector Mechatronica (s) Lector Duurzame energie (s)	Elastomeren Nano materialen ICT track & trace systemen Energie-efficient transport
Production Technology Mechatronica, hightech machinebouw, semiconductors, sensoren, embedded systems	Lector Mechatronica (S) Lector Nanotechnologie (S) Lector Kunststoftechnologie (w) Lector Ambient Intelligence (s)	Digital printing Cure & care robotics productiesystemen

R&D vraag

Researchthema's ECHO					
digitaal printen en finishen	recycling en ontwerp	robotica in zorg & welzijn	nano applicaties	medische sensoren	Industriële proces -optimalisatie

1. Digitaal drukken & functionaliseren van textiele substraten (digitaal printen & finishen)

Het nauwkeurig, gericht en lokaal functionaliseren van verschillende types textielsubstraten met hoogwaardige inkten (kleur, metaalstructuren, coating, nanodeeltjes, kunststoffen, 3D-vormen, finishers). Onderzoeksvraag ligt in het kunnen controleren van het fysisch-chemisch hechtingsproces van inkt op substraat. Kennis over de wijze hoe deze drie factoren samenhangen en stuurbaar zijn, leidt tot nieuwe functionaliteiten van textiel en nieuwe productmarktcombinaties.

2. Duurzame (kunststof)ontwerpen (recycling & ontwerp)

Recyclen betekent het omzetten van het (kunststof) materiaal waaruit het product is opgebouwd naar een recyclaat, dat als grondstof moet dienen voor een ander product. Het onderzoek richt zich op de relatie tussen productontwerp van virgin materiaal, het recycleproces en het productontwerp van recyclaat (kunststof, textielvezels). Daarnaast wordt de invloed van het productieproces geanalyseerd tezamen met de toepassing van biopolymeren in relatie tot duurzaamheid, hergebruik en productontwerp.

3. Mechatronic systems for care and cure applications (robotica in zorg & welzijn)

Hoe kunnen mechatronische systemen bijdragen aan de menselijke zorg en welzijn? Eén aspect hierin is de ontwikkeling van een revalidatierobot, waarbij met name de sturing in fysieke interactie tussen mens en techniek centraal staat. Een ander aspect vormt de toepassing in minimaal invasieve chirurgie, waarbij microsturing van beweging op basis van verschillende sensoren het voornaamste onderzoekkader bepaalt. Onderzoeksvraag ligt in het kunnen beheersen van complexe beweging op basis van interactie met de omgeving.

4. Nano on demand (nano applicaties)

Lab-on-chip maakt het mogelijk om op zeer kleine schaal, heel unieke processen te realiseren. Het 'bouwen' van chips uit glas is kostbaar en nauwelijks toegankelijk voor het MKB. Het zou vervangen kunnen worden door silicone chips (PDMS, polydimethylsiloxaan), waarmee de potentie van lab-on-chip enorm wordt vergroot. Tegelijkertijd wordt dan wel de vraag naar het medisch effect van nanodeeltjes belangrijker: wat doen nanodeeltjes in het menselijk lichaam, wat is het risico en is dat (on)vergelijkbaar met asbest of fijnstof? De onderzoeksvraag is tweeledig: toegankelijkheid lab-on-chip voor het MKB en ontwikkel tegelijkertijd kennis over de risico's van nanodeeltjes op de mens.

5. Telemonitoring & -sensing (medische sensoren)

Bij de zorg ontbreekt het nog aan telemonitoringsdiensten die gebruik maken van high-tech sensoren. In deze business case gaat het om het verder toepasbaar maken van de sensortechniek voor deze diensten en de inbedding in de zorgomgeving. Ondernemers geven aan dat juist hier het probleem zit en producten niet of nauwelijks worden toegelaten als dit niet goed gerealiseerd is.

6. Flexibiliseren en versnellen (Industrieel proces optimalisatie)

De regio kenmerkt zich door veel MKB-bedrijven die hoogwaardige kleine productseries kunnen maken. De onderzoeksvraag is hoe zij de productieprocessen kunnen flexibiliseren en versnellen om zo een betrouwbare en interessante partner te zijn voor nieuwe product ontwikkeling. Hierbij gaat het om het automatiseren van de productieprocessen, systeemintegratie en modificatie van bestaande productiestraten met inachtneming van de vereiste kwaliteit.

5. HTSM in onderwijs

Vanuit de businesscases wordt onderzoek vervlochten met HTSM-gericht onderwijs. Onderwijs moet immers de kennisbasis verzorgen die studenten in staat stelt mee te werken aan het onderzoek. Dat vergt co-creatie, een forse investering in het focussen van curricula en een investering in de kennisontwikkeling bij onze docenten. Daarnaast maakt ECHO (bèta-)onderwijs aantrekkelijk door techniek te gebruiken als bouwsteen voor het oplossen van maatschappelijke thema's. Het expliciteren van de maatschappelijke relevantie maakt van techniek toegankelijker voor jongeren. Validatie vanuit de HRM/Human Capital agenda in het kader van de hightech systems roadmap betekent immers dat de hele innovatie- en onderwijsketen hierbij betrokken wordt. Het Centre voor Innovatief Vakmanschap HTSM (ROC van Twente, Deltion College) heeft hierin een belangrijk aanvullende rol.

Door actieve participatie van studenten en docenten in HTSM maakt onderzoek onlosmakelijk deel uit van het onderwijs. Dat heeft grote consequenties voor het onderwijs, zowel qua inhoud als qua vormgeving. Ook buiten de technische opleidingen dienen studenten inzicht te krijgen in de basale achtergronden van HTSM. Daarnaast moet elke opleidingsrichting een eigen relatie leggen tussen HTSM en het werkveld. Als ook deze opleidingen basiscursussen gaan aanbieden over de relevantie van HTSM voor hun vakgebied, ontstaat een open toegang tot ECHO. Een toegang zonder technische exclusiviteit, gericht op toepassingen. Voor de student biedt ECHO een unieke kans om kennis in te brengen in een creatief denkraam, betrokken te zijn bij multidisciplinair grensverleggend onderzoek en bij te dragen aan de innovaties van morgen.

ECHO doet een beroep op de flexibiliteit in het onderwijssysteem en de ruimte die de opleidingen hierin (kunnen) creëren. Langlopende onderzoeksprogramma's vergen een langdurige inzet van studenten, docenten, lectoren en ondernemers. Als hogescholen zijn wij in staat om, door vervaging van grenzen tussen onderzoek en onderwijs, het Centre ondernemend te laten optreden. In samenspraak met besturen van partners en verantwoordelijke (onderwijs)managers wil ECHO onderwijsexperimenten ontwikkelen, die deze ruimte optimaal benutten. De pilots voldoen uiteraard aan onderwijskwaliteitsnormen, worden strak gemonitord en geëvalueerd.

6. Businessmodel ECHO

Partners binnen ECHO

ECHO is een samenspel van verschillende actoren, waarbij de focus ligt op co-creatie in HTSM. Saxion en Windesheim vervullen als founding fathers een voortrekkersrol in de realisatie van het Centre. Het bedrijfsleven, overheden, zorginstellingen en andere maatschappelijke stakeholders, participeren evenals kennisorganisaties in onderzoek, kenniscirculatie, valorisatie en/of projectinitiatie. Daarmee heeft het bedrijfsleven dus direct invloed op zowel de onderzoeksprogrammering, als de ondersteunende onderwijsvisie van de kennisinstellingen.

Binnen ECHO onderscheiden we de volgende partners:

- Kernpartners: partners die de intentie tot actieve (onderzoeks)deelname en confinanciering hebben uitgesproken (Provincie Overijssel, Demcon, VDL, DSM, Wavin, Siemens, Thales, Ten Cate en Apollo Vredestein);
- Onderzoeks- en onderwijspartners: co-creators van onderzoek en onderwijs (UTwente, DPI, Novay, ROC van Twente, Deltion, Centrum voor Innovatief Vakmanschap HTSM, Sensornetwerk Assen);
- Netwerkpartners: (bedrijfs)partners die actief deelnemen in het onderzoeksprogramma en de genoemde businesscases (zoals: D'Andrea&Evers, JBTextiles, CampoPrint, Vlisco, Verosol en Print Unlimited, AKG Polymers, Van Gansewinkel, Schoeller-Arca Systems, Texperium, Carint, Solis, Deventer Ziekenhuis, Hankamp Rehab, Assistive Medical, Bronkhorst HighTech, PhoenIX, Encapson, LioniX, Medimate, Micronit, Indes, PCV, Eaton, PANalytical, Enrichment Technology, Norma, WWINN Group, AWL, IJsseltechnologie, Masévon, Teijin Aramid, Suzlon Wind Energy, Norit Pentair, XSens, Micronit Microfluidic);
- Netwerkorganisaties: intermediaire organisaties en netwerken (OostNV, Syntens, VMO, IDC, Kennispark, Kennispoort en IPT 2.0). Zij faciliteren het Centre actief in kennisdisseminatie en kenniscirculatie, stellen hun netwerken open en werken mee aan de verankering van het Expertisecentrum in de regio en de (inter)nationale kennisinfrastructuur.

Begroting

Om ECHO goed in de markt te zetten richting het industriële bedrijfsleven, is een initiële investering noodzakelijk. Hierin is de huidige inzet in de researchthema's gebundeld, aangescherpt en geïntensiveerd. De begroting van ECHO neemt toe met de omvang en het aantal businesscases van € 5 mln. in 2013, tot ruim € 10 mln. in 2016. ECHO groeit naar een onderzoekscentrum waarin ruim 40 onderzoekers en 10 promovendi, samen met jaarlijks 300 à 400 studenten onderzoek verrichten naar praktijktoepassing van HTSM-technologie, resulterend in 20 valorisatietrajecten met bedrijven. De financiering van de benodigde € 30 mln. voor de komende vier jaar, komt van de kenniscentra (15 mln.), bedrijfsleven (5 mln.), provincie en regio (5 mln.) en rijk (5 mln.).

BIJLAGE 2

CENTRE OF EXPERTISE

TECHNIEKONDERWIJS, TSE-CTO

2012 2016

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SAXION

1. Doelstelling

Industriële groei vraagt om grote aantallen goed gekwalificeerde technici. Maar ook innovatie en onderzoek, zoals onder meer opgezet in het Centre of Expertise HTSM Oost Nederland, hebben bètageoriënteerde studenten, docenten en andere kenniswerkers nodig. Ondanks vele initiatieven, stimuleringsprogramma's en promotieacties, neemt het aantal afgestudeerde bètajongeren niet toe. Sterker nog: er is een groot tekort ontstaan. Hoewel meer vo-leerlingen kiezen voor een natuurprofiel, leidt dat niet automatisch tot een technische vervolgopleiding.

Het TSE-Centre of Expertise Techniekonderwijs (TSE-CTO) ontwikkelt kennis om dit tij te keren. Dit Centre is een samenwerking van Saxion (penvoerder), Hogeschool Edith Stein, Windesheim, Universiteit Twente, Expertis Onderwijsadviseurs, het regionale vve, bo, vo en mbo, en het bedrijfsleven en brengt succesfactoren en leermomenten van initiatieven en programma's naar boven, op basis waarvan effectieve(re) sturingsmechanismen ontwikkeld worden.

De initiatiefnemers bundelen kennis uit de industrie, de gehele onderwijskolom (van vve tot ho) en alle vormen van didactische opleiding (eerstegraads, tweedegraads, basis- en beroepsonderwijsleerkrachten) met kennis over implementatie, borging en verankering van (wetenschappelijke) kennis in het onderwijsveld. Oost-Nederland is een perfect startpunt voor een centrum voor techniekonderwijs om de volgende redenen:

- aanwezigheid van zeer betrokken ondernemers;
- voorhanden zijnde kennis op bètagebied;
- beschikbare didactiek op zowel wetenschappelijk als praktijkniveau;
- directe aansluiting tot het techniekdomeinen van HTSM (Energie, Bouw en Gezondheid);
- reeds bestaande samenwerking van de onderwijskolom bo-vo-mbo-hbo-wo in het Bètasteunpunt Oost.

2. Validatie

De Human Capital Agenda's van de Topsectoren van het Ministerie EL&I en het Masterplan Bèta en Technologie onderschrijven de noodzaak voor een structurele aandacht voor techniekonderwijs binnen de hele onderwijskolom. Het kabinet heeft in zijn brief van 16 april jl. een forse impuls gegeven aan de aanpak van de arbeidsmarkttekorten in techniek. In de agenda's en de reactie van het kabinet wordt benadrukt dat het bedrijfsleven hierin een belangrijke sturende en uitvoerende taak moet krijgen. De aanzuigende werking van het bedrijfsleven moet leidend zijn, want hier ligt de feitelijke behoefte aan meer technisch onderlegd personeel.

Voor de doorlopende lijn van basisonderwijs tot en met 'werk in de techniek' zijn investeringen nodig in de onderwijsbrede structurering van techniek. Daarmee creëren we een onderwijsomgeving die jongeren aanspreekt op hun (latente) interesse voor techniek en die interesse ontwikkelt tot talent en competentie. Een onderwijsomgeving die er niet alleen voor zorgt dat deze jongeren een keuze maken voor een technische (vervolg)studie, maar studiesucces faciliteert waardoor ze hun studie ook tot een goed einde brengen. Op elk niveau en voor elke doelgroep moet aandacht zijn voor het maken van de juiste keuze van een studierichting, qua inhoud en niveau. Hierin ligt een taak van zowel het onderwijs als het bedrijfsleven en de overheid.
De basis van het Centre ligt in de jarenlange samenwerking binnen TSE, het Kenniscentrum Wetenschap en Techniek Oost en het Bètasteunpunt Oost. In de (onderzoeks)projecten, activiteiten en programmering wordt nauw samengewerkt met de pabo van Gereformeerde Hogeschool, de Katholieke Pabo Zwolle en het ROC van Twente. Andere partners zijn (platform)vertegenwoordigers van het bo, vo en mbo en kennisplatforms als KWTO. De partners bestrijken een breed kennis- en onderzoeksdomein, met veel praktijkervaring over de ontwikkeling van techniekdocenten van basis- tot hoger onderwijs. Partners zijn betrokken bij zowel de ontwikkeling van kennis als de implementatie en verankering binnen school (bijvoorbeeld door middel van Technasia, mbo-vakcolleges en activiteiten vanuit het steunpunt Bèta-Oost).

TSE-CTO richt zich op een drietal aspecten, die bepalend zijn voor bèta-talentontwikkeling. Ten eerste de invloed van maatschappelijke beeldvorming op keuzes, waarin we onderzoek doen naar best practices in bèta-promotie en bèta-talentmaximalisatie. We onderzoeken de effectiviteit en duurzaamheid van initiatieven en initiëren en adviseren op basis van deze best practices. Daarnaast doen we onderzoek naar de netwerken, de wijze van samenwerking, efficiency en synergie en adviseert over verbeteringen. Ten tweede doen we onderzoek naar effectief bedrijfsgericht techniekonderwijs. De vraag is onder welke voorwaarden het bedrijfsleven structureel betrokken wordt in de vormgeving van het (techniek) onderwijs, van vve - wo. Daarbij kijken we ook naar de bèta-professionalisering van het onderwijs in algemeenheid en docenten en leraren in het bijzonder.

3. Ambitie

Het Centre vormt het centrale kennisknooppunt waar de belangen van onderwijs en bedrijfsleven elkaar ontmoeten. Enerzijds is er de wens van het onderwijs om jongeren een brede kennisbasis te geven, anderzijds vraagt het bedrijfsleven om state-of-art kenniswerkers. Onze visie is dat technische kennis en kunde steeds meer cruciale en onderscheidende aspecten worden in het economisch innovatievermogen van het bedrijfsleven. Jongeren met een bètatechnisch (top)talent, geënt op een state-of-art kennisbasis en gekoppeld aan bedrijfsrelevante onderwerpen, zijn de ankerpunten voor de economische groei in de komende decennia.

Het strategisch doel van het TSE-CTO is het opleiden van techniek-enthousiaste (vak)docenten, die het bètatalent in jongeren weten aan te spreken. Deze docenten weten samen met het bedrijfsleven een bedrijfsgerichte, gecoördineerde, doorlopende (techniek)leeromgeving te creëren die bètatalent activeert en stimuleert. Het Centre kiest voor zowel de pabostudent, de masterstudent eerste-/tweedegraads, de zittende (hbo-/mbo-) docent als de enthousiaste bedrijfsmedewerker die voor de klas wil gaan staan, dwars door alle schooltypes en niveaus heen.

In de uitwerking van deze doelstelling zijn het inspelen op 'bètamentality' en de differentiatie naar type jongeren en technische keuzerichting essentieel. Om jongeren te stimuleren tot keuzes, moeten we aansluiten bij hun gedachtegoed. Aangezien er een grote verscheidenheid aan jongeren is, moeten we rekening houden met verschillen in achtergronden, kennis- en opleidingsniveau, geslacht, verwachtingspatronen, interesse en begaafdheid. Tegelijkertijd realiseren we ons dat er grote verschillen zijn tussen technische routes: Milieukunde heeft een ander gevoelsniveau bij jongeren dan Technische Informatica of Ruimtelijke Ordening en Planologie. We moeten daarmee terdege rekening houden.

Het Centre werkt coördinerend en voorwaardenscheppend, waardoor we bij een uitrol in Nederland een multipliereffect genereren op ontwikkelde kennis en ideeën. Andere activiteiten leiden tot nieuwe vormen van onderwijs, didactiek of educatie, andere opzet en vormen van leermiddelen en nieuwe organisatievormen en samenwerkingsstructuren, waardoor effecten pas op langere termijn zichtbaar worden. De validatie van de ambitie van TSE-CTO beschouwen we aan de hand van vier indicatoren:

- verhoging van de hoeveelheid potentieel bètatalent dat met goed gevolg uitstroomt van een technische opleiding (streven is een verhoging van 40% bèta-uitstroom nu naar circa 60% eind 2025);
- verhoging van het percentage bèta-afgestudeerden mbo/ho naar 40% in 2025, mede door verminderde uitval gedurende de studie;
- verbetering van de efficiency van bètapromotie in Nederland;
- de open kennisbank bij TSE-CTO, die inzicht geeft in het praktijkgericht onderzoek naar optimalisatie van bètatalent, de daarmee gepaard gaande kennis en de wijze waarop deze kennis is geïmplementeerd in de praktijk.

4. Onderzoeksthema's

Uitgangspunt van het onderzoek van TSE-CTO is het bouwen van een effectieve onderwijsbasis in het leerproces van 2-22 jaar, met een maximale leeropbrengst. De basis van taal- en rekengevoel moet al op jonge leeftijd goed ontwikkeld zijn, wil de interesse voor bèta en techniek zich kunnen ontwikkelen. Basisschool en voortgezet onderwijs acteren als een aaneengesloten onderwijsketen; ieder vanuit een eigen onderwijskundige opdracht, maar samen gefocust op talentmaximalisatie van elk individuele jongere. Dit vereist een scherp didactisch inzicht van leerkrachten, onderwijskundig leiderschap van het management en betrokkenheid van beide in een uitgebalanceerd leerproces.

Vanuit deze filosofie werkt TSE-CTO aan een achttal actielijnen:

Actielijn 1: onderzoek naar keuzemomenten en -argumentatie van verschillende doelgroepjongeren en de correlatie naar actieve sturing van maatschappelijke beeldvorming over techniek (bètapromotie). Doel is inzicht te krijgen in welke aspecten de bètainteresse van verschillende doelgroepen jongeren triggeren. Op basis van dit inzicht wordt geadviseerd over de aanpak van nieuwe publieke en/of doelgroepgerichte activiteiten.

Actielijn 2: maatschappelijke ontwikkelingen relateren aan techniek, mede door reële voorbeelden te benutten in de onderwijsprogrammering, waardoor inhoud (beter) gerelateerd wordt aan de omgeving van de jongere. Uit de praktijk zijn goede voorbeelden bekend van bedrijfsleven-onderwijs-interactie. TSE-CTO verricht evaluerend onderzoek naar best practices en de wijze waarop de interactie bijdraagt aan het ontwikkelen van (latent) bètatalent.

Actielijn 3: organiseer en vereenvoudig de toegankelijkheid van het onderwijs voor het bedrijfsleven en visa-versa, vanuit een wederzijdse toegevoegde waarde. Hbo/wo-studenten met een technische opleiding zijn na hun studie zeer nuttig als (deeltijd) vakdocent in het onderwijs(bo-ho). Om deze groep te vergroten moet de (bestaande) minor aantrekkelijker worden, een parallel scholingstraject ontwikkeld worden (analoog aan het Honours Programme) of een andere studiemodel gebouwd worden dat studenten (of aio's) interesseert voor de eerstegraads bevoegdheid.

Actielijn 4: vanuit bedrijfsperspectief op positieve wijze integreren van techniek als basiskennis in de opleiding van eerstegraads en tweedegraads docent en leraar basisonderwijs. Integratie van techniek in de basiskennis van leraren bo/vo door het koppelen van techniekvakken aan die van de technische opleidingen. Daarnaast richten we ons op de mogelijkheid tot structurele inzet van bedrijfsmensen in de pabo/lerarenopleiding, als kennisdragers en als (vrouwelijke) rolmodellen.

Actielijn 5: integratie van het bedrijfsleven bij het ontwikkelen van bètaleerprogramma's in het onderwijs, mede in het licht van de ontwikkeling van ondernemerschapscompetenties. Het werken in het technische bedrijfsleven vraagt meer dan alleen technische kennis, maar ook om vaardigheden op terreinen als ondernemerschap, communicatie, internationalisatie en creativiteit. TSE-CTO verricht evaluerend onderzoek naar bestaande onderwijsprogramma's en hun relatie met techniekonderwijs.

Actielijn 6: onderzoek bedrijfsleven-onderwijs-interacties in duale onderwijsprogrammering en het dissemineren van best practices op dit gebied. Door ontwikkelingen in het onderwijs zal de animo voor duale trajecten kunnen verminderen, waardoor meer nadruk op andere vormen van leerwerk-trajecten komt te liggen. TSE-CTO doet evaluerend onderzoek naar andere vormen van praktijkleren.

Actielijn 7: onderzoek naar de wijze waarop ontwikkeling van bètadidactiek invloed heeft op behoud van bètatalent in de onderwijskolom. Op basis van deze kennis evalueren we bestaande professionaliseringprogramma's en doen we voorstellen voor nieuwe vormen van coaching, ondersteuning, bètadidactische scholing en onderwijsrichtingen.

Actielijn 8: onderzoek naar de wijze waarop versterking van de betrokkenheid van het onderwijs en het bedrijfsleven leidt tot behoud van bètatalent. TSE-CTO onderzoekt verschillende samenwerkingsmodellen en organisatievormen in de onderwijskolom, waarmee het bedrijfsleven beter inzicht krijgt in het kennispotentieel van de studenten en bètatalent kan scouten.

Voornoemde actielijnen, (onderzoeks)producten en resultaten bouwen aan een onderwijssysteem waarin bètatalent zich optimaal kan ontwikkelen, de omstandigheden optimaal zijn om jongeren met een interesse voor techniek te identificeren en gedurende hun schoolcarrière optimaal te volgen en te ondersteunen. Dit wordt vastgelegd in het 'bètamodel' dat het onderwijssysteem beschrijft vanuit de keuzemomenten van jongeren, hun drijfveren en beweegredenen en hoe deze keuzes terug te voeren zijn tot in de opleiding van docent/leraar, de maatschappelijke omgeving van de jongere en het wereldbeeld van jongeren. Het beschrijft de wijze waarop de verschillende schakels in de onderwijskolom op elkaar ingrijpen en obstakels die er kunnen zijn in de keten, mede vanuit aanzuigende kracht die de arbeidsmarkt heeft op de onderwijskolom.

Dit Bètamodel geeft, gecombineerd met de analyse van best practices op het gebied van bètapromotie en inzichten hoe 'afzwaaien' voorkomen kan worden c.q. hoe positieve prikkels sturing kunnen geven aan een vaste keuze voor techniek, een beeld van de wijze waarop onderwijs direct of indirect invloed heeft op de (bèta)studiekeuze van jongeren, de achtergronden, de argumenten en de invloedrijke actoren op de keuzes van jongeren gedurende hun schoolcarrière, van 2-22 jaar.

5. TSE-CTO en Onderzoek

Het fundament van het TSE-CTO ligt in de samenwerking van de onderwijs kenniscentra van de betrokken partners. Op het gebied van onderzoek hebben de partners complementaire onderzoekslijnen, leerstoelen en lectoraten. Tezamen vormen ze een breed kennisnetwerk, met een uitgebreide trackrecord in wetenschappelijk en praktijkgericht onderzoek. Dankzij de kennisinteractie tussen het hightech bedrijfsleven, de Universiteit Twente, de verschillende (technische) opleidingsroutes, de lerarenopleidingen, de ROC's en de samenwerkende onderwijskolom is in Oost Nederland een ecosysteem opgebouwd met kennis en ervaring op het gebied van bèta-talentontwikkeling.

Onze focus ligt op het onderzoeken en expliciteren van kennis, ervaringen en best practices op dit gebied en deze te vertalen naar programma's, curricula, onderwijsbouwstenen en organisatiestructuren, alsmede op het toetsen van deze kennis op validatie en effectiviteit. We vertalen ervaringen uit Platform Bètatechniek, KWTO, Bètasteunpunt Oost en andere gremia naar de schoolpraktijk en realiseren een daadwerkelijke versnelling in de bèta-agenda. Daarin sluiten we naadloos aan op andere initiatieven als het aanvalsplan vmbo-mbo techniek van het ROC van Twente, in het kader van Toptechniek in bedrijf.

6. TSE-CTO en Onderwijs

Als 'toeleverancier' van kennisdragers aan het onderwijs staat TSE-CTO voor de opdracht deze leraren en docenten zó op te leiden dat ze in staat zijn om, als intrinsiek onderdeel van hun onderwijstaak, jongeren te interesseren en enthousiasmeren voor techniek. Parallel daaraan heeft TSE-CTO de opdracht om de rol van het bedrijfsleven in de maximalisatie van bètatalent efficiënt(er) te structuren en deze te koppelen aan de onderwijstaak van de school. De uitdaging ligt in het creëren van een bètavriendelijk onderwijsklimaat en het betrekken van het bedrijfsleven hierbij.

Deze uitdaging heeft direct effect op de opzet van het onderwijs voor leraren basisonderwijs, als docenten met een eerste- en tweedegraads lesbevoegdheid. Enerzijds moet in het curriculum meer aandacht zijn voor het scouten en ontwikkelen van (latent) bèta-talent, door pabo-studenten meer gevoel en enthousiasme te geven voor techniek, anderzijds moet er dieper ingegaan worden op verschillende aspecten van bètadidactiek. Tegelijkertijd is er verdere structurele interactie met het bedrijfsleven door (meer) ondernemers uit de technische sector te laten doceren op pabo en lerarenopleiding, hen directer te betrekken bij curriculumontwikkeling en docentenontwikkelteams, lessen op bedrijfslocatie te verzorgen en de pabo/lerarenopleiding te koppelen aan techniekopleidingen in het hoger onderwijs.

Ondernemers moeten didactisch (bij)geschoold worden om les te kunnen geven op een bo- of voschool. Ook hier volgen we twee sporen. Ten eerste door techniekstudenten te stimuleren een didactische aantekening te halen tijdens hun studie of hun vervolgmaster. Het levert een versterkte uitstroom aan eerste en tweedegraads bètadocenten op. Bovendien zijn deze studenten, mochten ze geen baan in het onderwijs nemen, makkelijk in deeltijd of als gastdocent inzetbaar voor het onderwijs. De tweede lijn betreft het bijscholen van ondernemers in didactische vaardigheden, zodat zij hiermee (grotendeels) zelfstandig les kunnen geven in bo en vo (structureel als deeltijddocent of incidenteel als gastdocent).

7. Businessmodel TSE-CTO

De kosten van het Centre zijn begroot op € 2 mln. per jaar, oplopend tot ca € 5 mln. per jaar in een periode van vijf jaar. Daarmee is TSE-CTO in staat om een substantiële onderzoekscapaciteit op te zetten, met een landelijk profiel. De partners, het bedrijfsleven en de onderwijskolom staan garant voor cofinanciering, verankering en continuïteit. De provincie Overijssel heeft een startbijdrage van € 1,5 mln. voor de eerste drie jaar toegezegd. Ondersteuningsintenties zijn afgegeven door het regionale vve, po en vo. Vanuit de prestatiemiddelen OCW wordt voor het Centre een bijdrage gevraagd van minimaal € 1 mln. per jaar voor de komende vijf jaar.

PRESTATIEAFSPRAKEN

SAXION EN OCW

2012
2016

saxion.nl

SAXION

Verplichte prestatie indicatoren [1]	Resultaten		
T.b.v. de voorwaardelijke financiering	2011	2015	Ambitiesprong (relatief)
Onderwijskwaliteit en studiesucces			
1. Studiesucces: Uitval [2]	26%	26%	stabilisatie
2. Studiesucces: Switch [2]	13%	13%	stabilisatie
3. Studiesucces: Bachelorrendement	63%	68%	8%
4. Kwaliteit/excellentie: Studentenoordeel	65%	68%	5%
5. Docentkwaliteit: Docenten met master / PhD	61%	71%	16%
6. Onderwijsintensiteit: Bacheloropleidingen met <12 contacturen p/w in het 1e jaar	4%	0%	-
7. Indirecte kosten: Ratio OP / OOP [3]	1,38	1,50	9%
T.b.v. het selectieve budget			
Profilering			
Saxion als UAS (toegelicht in hoofdstuk 2.1)			
1. Driejarige vwo-tracks (hoofdstukken 2.1 en 3.2).			
2. Masteropleidingen (hoofdstuk 2.1).			
3. Honours Programmes via Sirius (hoofdstukken 1 en 3.2).			
4. 'Bolognaproof' (hoofdstuk 3.2).			
5. Saxionbreed internationaal netwerk (hoofdstuk 3.2).			
6. Ondernemerschap (hoofdstuk 3.3).			
7. Afstudeeropdrachten voor de onderzoeksagenda (hoofdstuk 3.3).			
8. Onderzoeksvaardigheden als continue leerlijn (hoofdstuk 3.4).			
9. De Saxion Academia Vitae als University College (hoofdstuk 3.4).			
HTSM als inhoudelijk zwaartepunt (toegelicht in hoofdstuk 2.2)			
1. Technologische innovatie via het Center of Expertise HTSM (hoofdstukken 2.2 en 3.3).			
2. Leeromgeving voor technisch talent (hoofdstukken 2.2 en 3.3).			
3. Onderzoeksprogramma's hebben verbinding met profilering (hoofdstukken 2.2 en 3.3).			
4. Bijstelling onderwijs- en onderzoeksaanbod (hoofdstuk 2).			
Onderzoek			
1. Relevantie en bruikbaarheid voor het werkveld en de samenleving (hoofdstuk 3.3).			
2. Goede match met het HTSM-profiel (hoofdstuk 3.3).			
3. Goede verbinding van het onderzoek aan het onderwijs (hoofdstuk 3.3).			
4. Vergroting van de beschikbare kennis in de beroepsuitoefening (hoofdstuk 3.3).			
Valorisatie			
1. Koploper aan de A1 i.h.k.v. valorisatieprogramma EL&I (hoofdstuk 3.3).			
2. Participatie in sociaal-economische agenda van gemeenten/regio (hoofdstuk 3.3).			
3. Saxion spin-offs en groeiers (hoofdstuk 3.3).			
Zwaartepuntvorming			
1. Saxion en Windesheim realiseren het Centre of Expertise HTSM in Oost Nederland (bijlage 1).			
2. Saxion realiseert samen met Universiteit Twente, Windesheim en Edith Stein het Centre of Expertise TechniekOnderwijs ten behoeve van de partijen in de onderwijskolom (bijlage 2).			

[1] In dit overzicht onder 'Onderwijskwaliteit en studiesucces' zijn de prestatie indicatoren opgenomen die Saxion gaat hanteren voor de periode 2012-2016. Hierbij worden de door OCW / Reviewcommissie opgestelde definities gehanteerd.

[2] Voor deze indicator gaan we een inspanningsverplichting aan en maken hierover geen prestatieafspraak.

[3] Saxion streeft naar een zuivere generieke overhead (fte) volgens de Berenschotmethodiek die ongeveer gelijk is aan de zuivere generieke overhead van vergelijkbare grote hogescholen.

Ziel- und Leistungsvereinbarung V (2014 - 2015)

zwischen

der Fachhochschule Münster

und

dem Ministerium für Innovation, Wissenschaft und Forschung des Landes Nordrhein-Westfalen

Fachhochschule Münster University of Applied Sciences

Ministerium für Innovation, Wissenschaft und Forschung des Landes Nordrhein-Westfalen

Präambel

Die Fachhochschule Münster und das Ministerium für Innovation, Wissenschaft und Forschung des Landes Nordrhein- Westfalen (MIWF) schließen die folgende Zielvereinbarung in einem gemeinsamen Verständnis der folgenden Prioritäten ab. Mit dem Ziel eines chancengerechten und leistungsfähigen Bildungssystems soll für die steigende Zahl von Studierwilligen ein ausreichendes Angebot von Studienplätzen bereitgestellt werden, ohne die anerkannten Qualitätsmaßstäbe zu gefährden. Die Bedingungen für anwendungsbezogene Forschung sollen im Zusammenwirken von Land und Hochschule weiter verbessert werden. Bei der Erfüllung der Kernaufgaben der Hochschulen in Forschung und Lehre sollen gesellschaftliche Belange besondere Berücksichtigung erfahren.

Abschnitt 1 - Allgemeines

§ 1 Profil der Hochschule und Weiterentwicklung

Profilgebend für die Hochschule ist ihr aktuelles Leitbild, das den Hochschulentwicklungsplan 2011-2015 einleitet:

Die Hochschule stellt sich mit ihrem Bildungsangebot und ihrer Forschungsarbeit in den Dienst der Menschen unserer Gesellschaft.

LEISTUNGSSTARK: In Lehre, Forschung und Wissenstransfer verbinden wir Sachverstand mit methodischer und sozialer Kompetenz. Unterstützt durch ein Netz von lebendigen Partnerschaften bauen wir unsere Spitzenposition unter den deutschen Hochschulen aus.

NEUGIERIG UND INITIATIV: Wir haben ein vorausschauendes Verständnis für die sich wandelnden Berufs- und Lebenswelten. Dies gilt auch für die Hochschullandschaft, die wir durch innovative Ideen aktiv mitgestalten. Offenheit für die Vorschläge und Impulse anderer sehen wir dabei als grundlegende Prämisse unseres Handelns an.

NACHHALTIG: Heute schon an Morgen zu denken, ist für uns gelebte Realität. Denn bei all unseren Entscheidungen berücksichtigen wir stets die langfristigen wirtschaftlichen, sozialen und ökologischen Wirkungen und sind uns der Verantwortung für künftige Generationen bewusst.

Das Leitbild drückt das Selbstverständnis der Hochschule aus. Seine Umsetzung erfolgt auf allen Ebenen und in allen Handlungsfeldern. Ein kooperativer Führungsstil ist dabei Ausdruck unseres demokratischen Selbstverständnisses. Auf dieser Grundlage verfolgt die Hochschule im Bewusstsein ihrer sozialen Verantwortung die fünf Maxime Anwen-

dungsnähe, Interdisziplinarität, Interkulturalität, Chancengleichheit und Serviceverpflichtung.

§ 2 Finanzierung durch das Land

Das Land NRW stellt eine auskömmliche und verlässliche Finanzierung der Hochschule nach Maßgabe des Landeshaushalts zur Verfügung. Mit den Mitteln des Haushaltes verwirklicht die Fachhochschule Münster die in dieser Zielvereinbarung getroffenen Vereinbarungen.

Die Hochschulvereinbarung NRW 2015 ist Bestandteil dieser Zielvereinbarung.

Abschnitt 2 - Lehre und Studium

§ 3 Maßnahmen zum Studienbeginn

(1) Vereinbarungen im Rahmen des Hochschulpaktes II

Die Vereinbarungen sind Bestandteil dieses Vertrages.

Die mit der Hochschule in den Vereinbarungen zum Hochschulpakt II 2011 - 2015 vereinbarte Basiszahl als normierte Aufnahmekapazität, die sich auf das erste Hochschulsemester bezieht, wird am Ende der Laufzeit der Ziel- und Leistungsvereinbarung auf Grundlage der dann aktuellen Kapazitätsberechnung (Studienjahr 2015/2016) überprüft. Hierbei wird vorausgesetzt, dass die für die Festlegung der Basiszahl relevanten Bedingungen im Wesentlichen konstant bleiben. Die Hochschule hat die Möglichkeit, sowohl aus strategischen / strukturellen Gründen als auch nachfrageorientiert in Abstimmung mit dem MIWF ihre Angebotsstruktur zu verändern.

Wird die mit der Hochschule vereinbarte Basiszahl nicht erreicht, kommt eine Malus-Regelung zur Anwendung. Pro nicht mehr angebotenem Studienanfängerplatz unterhalb der Basiszahl werden der Hochschule aus den Zuschüssen für den laufenden Betrieb (Titel 685 10) 20.000,--€ abgezogen. Die Hochschule erhält über die Höhe und den Zeitpunkt des Abzuges eine gesonderte Mitteilung.

(2) Übergang Schule - Hochschule

Nennung bestehender oder Schaffung einer neuen Stelle zur Studienorientierung
Die FH Münster hat sowohl dezentral als auch zentral Personalressourcen eingesetzt, zu deren Aufgaben die Studienorientierung für Studieninteressierte gehört. Während dieser Stellenanteil dezentral nicht gemessen werden kann (häufig Aufgabe der professoralen Studiengangsleiter/innen), gilt für den zentralen Support: In der zentralen Studienberatung sind Stellenanteile von ca. 0,3 (finanziert aus Qualitätsverbesserungsmitteln

bis 09/16) und ca. 0,5 (finanziert aus Landesprogramm „Servicestelle für den doppelten Abiturjahrgang“ bis 12/14) speziell mit Beratung von Studieninteressierten beschäftigt. Dazu kommen 1,25 Stellen aus dem „Team duale Studiengänge“ (finanziert aus FH-Ausbauprogramm, unbefristet) und 0,73 Stelle aus dem Schulnetzwerk (finanziert aus Zuschusshaushalt, unbefristet).

zdi
Die Fachhochschule Münster ist, zusammen mit der Westfälischen-Wilhelms Universität Münster, Träger des zdi-Zentrums „m³ (MINT I Münster I Münsterland)“. Außerdem ist sie Kooperationspartner beim zdi-Zentrum Kreis Steinfurt.

Kooperation mit den Arbeitsagenturen
Die Hochschule unterhält eine seit Jahren etablierte Kooperation mit den Arbeitsagenturen der Umgebung auf dem Gebiet der Studienorientierung; sie führt diese aktiv fort. Ein Kooperationsvertrag mit der Agentur für Arbeit Münster wurde im Juni 2012 abgeschlossen.

Teilnahme der Hochschulen am Arbeitskreis Studienorientierung
Die Hochschule entsendet einen Vertreter/ eine Vertreterin in den Arbeitskreis Studienorientierung. Der Arbeitskreis tagt im Durchschnitt dreimal jährlich. Der Vertreter, die Vertreterin ist berechtigt für die Hochschule in Bezug auf Studienorientierung zu sprechen.

(3) Einstieg ins Studium

Die Fachhochschule Münster begleitet die Studierenden entlang ihres Student Life Cycle mit - der jeweiligen Studienphase entsprechenden - Beratungs- und Betreuungsangeboten. In der Studieneingangsphase erfahren die Studierenden eine besondere Begleitung vor allem mit Propädeutika, Tutorien und auf diese Studienphase zugeschnittenen Informationen und Workshops. Die Maßnahmen und die Studieneingangsphase insgesamt werden regelmäßig evaluiert.

Die Hochschule schreibt ihr systematisches und erfolgreiches Konzept fort und passt es den Entwicklungen im Bedarf der Studierenden laufend an.

§ 4 Erfolgreich Studieren

(1) Qualitätsstrategie

Die Hochschule hat sich als bisher einzige Hochschule in NRW erfolgreich der Systemakkreditierung gestellt. Im Planungszeitraum verfolgt sie die mit der Akkreditierung verbundenen Qualitätsanforderungen konsequent weiter.

Die Hochschule kooperiert hinsichtlich der Vermittlung von Studienabbrecherinnen und -abbrechern in den Arbeitsmarkt eng mit der Agentur für Arbeit, der Handwerkskammer

sowie der Industrie- und Handelskammer. Vermittlungskonzepte externer Anbieter, wie z.B. die Initiative „Und morgen Meister“ der Agentur für Arbeit werden in die Studienberatung in der Hochschule integriert. Die Agentur für Arbeit führt regelmäßig Sprechstunden in der Hochschule durch und steht in engem Austausch mit der Zentralen Studienberatung und dem Schulnetzwerk der Hochschule.

Die Hochschule baut ihr studienerfolgsbezogenes Monitoringsystem aus, um Erfolgsbarrieren frühzeitig erkennen und entsprechende Maßnahmen rechtzeitig einleiten zu können. Sie unterhält – teils in Kooperation mit externen Anbietern – besondere Beratungs- und Unterstützungsangebote für Studierende, um Studiendefizite auszugleichen, wie z.B. eine psychologische Beratung, und bietet spezifische Workshops an. Die Studierenden können sich bei Problemen an ein Beschwerdegremium wenden. Die Studiengänge werden laufend auf ihre Studierbarkeit hin überprüft.

(2) Studienerfolg

Es ist das gemeinsame Anliegen von Landesregierung und Hochschulen, die hochschulweite Studienerfolgsquote, insbesondere in den Bachelor-Studiengängen, signifikant zu verbessern. Zwischen beiden Seiten besteht Einvernehmen darin, dass zum Prüfungsjahr 2016 (WS 2015/16 + SS 2016) messbare Erfolge im Vergleich zum Prüfungsjahr 2012 (WS 2011/12 + SS 2012) vorliegen müssen.

Das MIWF und die Hochschulen werden im Verlauf des Jahres 2014 gemeinsam eine Methodik zur Berechnung einer Studienerfolgsquote vereinbaren, die der Erfolgsmessung zugrunde gelegt wird.

Das Ziel der Landesregierung, in der laufenden Legislaturperiode die Schwundquote auf Landesebene um rund 20% zu reduzieren, sollte durch die hochschulweiten Studienerfolgsquoten erreicht werden.

(3) Weitere Öffnung der Hochschulen

Die Verwirklichung des lebenslangen Lernens ist entscheidend für die Perspektive des Einzelnen und die Zukunft der Gesellschaft. Aus diesem Grund hat die Fachhochschule Münster in ihrem HEP der Weiterbildung und der Öffnung der Hochschule für nicht traditionelle Studierende eine entsprechende Bedeutung gegeben. Aus diesem Grund hat die Hochschule ihr Angebot an dualen Bachelorstudiengängen in den letzten Jahren systematisch ausgeweitet. Das Angebotsspektrum umfasst hier die Betriebswirtschaftslehre, die Elektrotechnik und Informatik, den Maschinenbau, die Pflege und das Therapie-/Gesundheitsmanagement, die Technische Orthopädie sowie das Wirtschaftsingenieurwesen. Die Hochschule plant zudem die Zahl ihrer Studiengänge mit dem Fokus auf berufsbegleitende Teilzeitstudiengänge zu erhöhen. In Planung sind momentan:

- Masterstudiengang „Maschinenbau“ berufsbegleitend

- Masterstudiengänge „Elektrotechnik und Informatik“ berufsbegleitend
- Masterstudiengang „Betriebswirtschaft“ (Arbeitstitel), berufsbegleitend
- Bachelorstudiengang „Bauen im Bestand“, berufsbegleitend

Darüber hinaus hat sich die Fachhochschule Münster am BMBF-Wettbewerb „Aufstieg durch Bildung: offene Hochschulen“ beteiligt. Der Antrag widmet sich speziell dem berufsbegleitenden Teilzeitstudium im Masterbereich und fokussiert auf Gruppen, denen ein Vollzeitstudium nur unter erschwerten Bedingungen oder gar nicht möglich wäre. Bei Genehmigung des Antrags wird die Hochschule im Jahr 2014 die Entwicklung speziell zugeschnittener Masterstudiengänge aufnehmen.

Abschnitt 3 - Forschung und Entwicklung

§ 5 Profilschwerpunkte

Als eine der drittmittelstärksten Fachhochschulen Deutschlands hat die FH Münster in ihrem Zielfindungsprozess das strategische Ziel „Forschung stärken“ definiert. Hierbei verfolgt die Hochschule die folgenden konkreten Ziele:

Profilschwerpunkte stärken: Die Hochschule hat in den letzten Jahren gezielt leistungsfähige, interdisziplinäre Forschungsverbünde innerhalb der Hochschule aufgebaut, deren Wissenschaftlerinnen und Wissenschaftler national und auch international etablierte Expertinnen und Experten sind. Dies erfolgte oft unter Einbindung von externen Partnern aus Wirtschaft und Wissenschaft. Die Gründung der In-Institute „Institut für Konstruktions- und Funktionsmaterialien (IKFM)“, „Institut für Optische Technologien (IOT)“, „Institut für nachhaltige Ernährung und Ernährungswirtschaft (iSuN)“, „Institut für Praxisentwicklung und Evaluierung (IPE)“, „Corporate Communication Institute (CCI)“, „Institut für Wasser • Ressourcen • Umwelt (IWARU)“, „Institut für Prozessmanagement und Logistik (IPL)“ sowie „Institut für unterirdisches Bauen (IuB)“ diente deutlich der Profilbildung im Forschungsbereich. In diese Institute hat die Hochschule in den letzten Jahren auch die Aktivitäten der Kompetenzplattformen des Landes NRW, an denen die Hochschule beteiligt ist, überführt und somit den Impuls der KOPF-Jury umgesetzt. Für das neu initiierte IWARU konnte erfreulicherweise eine Förderung durch das MIWF-Programm FH-Struktur erzielt werden. Im Hinblick auf die Forschungsstrategie "Fortschritt NRW - Forschung und Innovation für nachhaltige Entwicklung" diskutiert die Hochschule aktuell die Schwerpunktthemen „Energie“ und „Gesundheit/Leben im Alter“. Sollten entsprechende Forschungsprogramme aufgelegt werden, ist davon auszugehen, dass die Hochschule sich entsprechend beteiligt. Zudem ist das gerade angelaufene Ressourcenkolleg.NRW (Graduiertenkolleg mit der RWTH Aachen aus dem Wettbewerb NRW.Forschungs-kooperationen) Bestandteil der Fortschritt-NRW-Initiative; dieses wird im Berichtszeitraum planmäßig weiter entwickelt.

Forschungsbasis verbreitern: Der Forschungserfolg der Hochschule der letzten Jahre basierte stark auf ihrem diversifizierten Forschungsprofil. Professorinnen und Professoren aller thematischen Säulen sind forschungsaktiv. Nur so kann die Hochschule ihrer Rolle als Innovationsmotor einer von KMU und Branchenvielfalt geprägten Region gerecht werden. Um dies zu sichern, sollen die Forschungsbedingungen und Anreizsysteme beibehalten und weiter spezielle Unterstützungsmaßnahmen für Neuberufene und bisher wenig forschungsaktive Lehrende angeboten werden. Damit die Forschungsaktivitäten aller thematischen Säulen gefördert werden, wird die Hochschule weiterhin gezielt drittmitteladäquate Forschungs- und Transferleistungen wie beispielsweise Publikationen honorieren.

§ 6 Kooperative Promotionen

Seit Jahren unterstützt die Hochschule Promotionsvorhaben in vielfältiger Weise. Die Zahl der Promotionen stieg stetig und liegt derzeit bei über 100 laufenden und 50 abgeschlossenen Verfahren. Hierbei ist die Hochschule bestrebt, dass gesamte Spektrum ihrer Fachbereiche einzubeziehen. Als Anreiz hierzu und zur Förderung von Promotionsvorhaben insgesamt wird die Hochschule auch in 2014 mehrere Qualifizierungsstellen schaffen.

Zur Unterstützung der Forscher und der in den Forschungsprojekten beschäftigten Promovenden akquiriert die Hochschulleitung aktiv neue Partner für kooperative Promotionen. In 2013 konnten die Universitäten Wuppertal und Twente (NL) als Partner gewonnen werden. Für 2014 sind Verhandlungen mit der Bauhaus Universität Weimar und der University Latvija (LV) geplant.

Die Hochschule hat im Jahr 2008 ihr Promotionskolleg gegründet und setzt damit den dritten Abschnitt des Bologna Prozesses um. Begleitend zu den Promotionsverfahren bietet das Promotionskolleg den Promovenden Fortbildungsveranstaltungen in den Bereichen Fach-, Kommunikations- Forschungs- und Führungskompetenz an. Es ist geplant, die Themenbreite der Veranstaltungen zu erweitern. Darüber hinaus sollen über das Promotionskolleg Reisekostenzuschüsse für die aktive Teilnahme an Fachkongressen gewährt werden. Hierzu stellt die Hochschule die erforderlichen Mittel zur Verfügung.

Abschnitt 4 - Wissens- und Technologietransfer

§ 7 Entwicklungsziele im Bereich Wissens- und Technologietransfer

(1) Intensivierung der Kooperationen zwischen Hochschule und Wirtschaft

Die Fachhochschule Münster verfügt bereits seit vielen Jahren über eine hochschulweite Transferstrategie, die unter Einsatz ausgereifter Methodenkompetenz auf drei Hand-

lungsebenen umgesetzt wird: analytisch-wissenschaftlich ("Denken"), beispielsweise durch den NRW-Forschungsschwerpunkt Science Marketing, strategisch ("Lenken") durch die Hochschulleitung (Vizepräsident für Transfer und Partnerschaften) sowie operativ ("Handeln"), beispielsweise durch die ausgegründete Transferagentur Fachhochschule Münster GmbH (TAFH). Hierfür wurde die Hochschule 2007 im gemeinsamen Wettbewerb "Austauschprozesse zwischen Hochschulen und Wirtschaft" vom Stifterverband für die Deutsche Wissenschaft und dem Bundesministerium für Bildung und Forschung ausgezeichnet. Die Hochschule nimmt für sich eine enge Verzahnung mit der regionalen und überregionalen Wirtschaft in Anspruch. Grundphilosophie beim strategischen Ausbau des Wissens- und Technologietransfers ist „Partnering“ und somit eine intensive, verbindliche und für beide Seiten gewinnbringende Verflechtung mit Dritten. Basierend auf der zentralen Transferstrategie wurden Teilstrategien für die diversen Aufgabenbereiche abgeleitet und von der Hochschulleitung formal verabschiedet: Patentstrategie (2006, 2012), Beteiligungsstrategie (2007, 2011), EU-Forschungsstrategie (2012) sowie Existenzgründungsstrategie 2013.

Die Hochschule wird die Umsetzungserfolge in den ZLV-Berichten darstellen.

(2) Steigerung der Erfindungs-, Patent- und Verwertungsaktivitäten

Die Hochschule hat als eine der NRW-Pilothochschulen bereits 2006 eine Patentstrategie entwickelt und setzt diese in einer 2012 überarbeiteten Version in ihren Prozessen qualitätsorientiert um. Insbesondere die Installation eines PatentScouts durch die Fördermaßnahme des Landes NRW hat zu einer erhöhten Beratungskompetenz geführt. Neben der Bearbeitung von Erfindungsmeldungen und der damit verbundenen engen Kommunikation mit den Erfindern fungiert der Scout auch als Bindeglied zur Gründungsberaterin der Hochschule. So können potenziellen Gründern verlässliche Informationen rund um das Thema Schutzrechte geboten werden.

Durch Sensibilisierungs- und Unterstützungsmaßnahmen wird durch den Scout die Basis für einen sensiblen und nachhaltigen Umgang mit Schutzrechten geschaffen und insbesondere durch eine intensive Beratung die Qualität von Erfindungsmeldungen gesteigert. Auch kann im Vorfeld zwischen Erfindungen und bloßen Ideen differenziert und letztere so schneller einer adäquaten alternativen Verwertung zugeführt werden. Eine Herausforderung bleibt es aber, in den kommenden Jahren eine hochschulinterne Finanzierung der Patentierungskosten zu gewährleisten. Denn noch immer stehen diesen Kosten keine Lizenzeinnahmen in vergleichbarer Höhe gegenüber.

Umsetzungserfolge dieser Sensibilisierungs-, Qualifizierungs- und Unterstützungsmaßnahmen werden in den ZLV-Berichten nachgewiesen.

Die Hochschule ist bestrebt, die Zahl von Erfindungsmeldungen, die von PROvendis GmbH zur Inanspruchnahme empfohlen wurden, wie auch die Zahl der Verwertungsabschlüsse (und damit der Lizenzeinnahmen) bzw. das mit diesen Inanspruchnahmen in

Zusammenhang stehende Drittmittelvolumen durch Kooperationen mit der Wirtschaft zu steigern.

(3) Schaffen einer „Kultur der Selbstständigkeit“, Entrepreneurship-Education

Auf Basis der zentralen Projekte „FHDurchStarter" und "Initiative Unternehmerin" ist ein Strategiepapier „Existenzgründung“ entwickelt worden. Es wertet die Ergebnisse der beiden Vorhaben aus, beleuchtet anhand von Leitfragen das Arbeitsfeld „Stimulierung von Existenzgründungen“ und gibt Hinweise, wie sich die Hochschule auch im Benchmark mit anderen Institutionen aufstellen kann.

In den Jahren 2009 bis 2012 konnten insgesamt 49 Gründungsvorhaben begleitet werden. Zwei Gründungen wurden über das EXIST-Gründerstipendium und eine über EXIST-Forschungstransfer erfolgreich im Gründungsprozess unterstützt.

Die Hochschule finanziert aus Qualitätsverbesserungsmitteln zunächst bis 2015 eine Gründerlotsin. Sie arbeitet hochschulintern eng mit dem PatentScout aber auch mit dem Netzwerk PLUSPUNKT zusammen. In PLUSPUNKT werden zentral alle Veranstaltungen für Studierende zur Ausbildung von Schlüsselkompetenzen in Studium und Beruf gebündelt. Mit den regionalen Gründungsnetzwerken in Steinfurt und Münster bietet die Lotsin den Studierenden umfassende Coaching- und Schulungsmaßnahmen in Form von z. B. Seminarwochen an. Ein umfassendes Beratungsangebot ist so gesichert und wird stetig ausgebaut.

Ob und wie eine wirkliche Nachhaltigkeit geschaffen werden kann, hängt auch hier davon ab, welche Mittel langfristig durch die Hochschule oder Dritte zur Verfügung gestellt werden können. Veranstaltungen und Umsetzungserfolge werden in den ZLV-Berichten dokumentiert.

§ 8 Spezifische Transfer-/Vernetzungsprojekte der Hochschule

Die Hochschule nimmt ihre Rolle als regionaler Innovationsmotor sehr ernst. So engagiert sie sich sowohl an den Standorten Münster und Steinfurt als auch den Studienorten Coesfeld und Ahlen/Beckum/Oelde mit teilregionalen Transferprojekten, die gemeinsam mit den dortigen Innovationsakteuren aufgebaut wurden. Weiterhin ist die euregionale, grenzüberschreitende Zusammenarbeit in Innovationsprojekten mit den Niederlanden ein wichtiges Profilelement für die Hochschule. Die Fachhochschule Münster wird sich auch in der Förderperiode 2014-2020 (INTERREG 5) intensiv einbringen.

Darüber hinaus engagiert sich die Fachhochschule Münster sehr aktiv bei der Entwicklung einer regionalen innovationsbasierten Regionalentwicklungsstrategie für das Münsterland und hat hier in den letzten Monaten viele konzeptionelle Impulse gegeben und moderierende Aufgaben übernommen. Dieses Engagement wird sie auch im Zeitraum 2014 bis 2015 fortführen.

Abschnitt 5 - Querschnittsthemen

§ 9 Gender Mainstreaming

(1) Profil und Weiterentwicklung der Gleichstellung

Die im Leitbild der Fachhochschule Münster für den Zeitraum 2011 bis 2015 formulierte Handlungsmaxime zur Chancengleichheit wird weiterhin verfolgt. Sie bildet mit dem Rahmengleichstellungsplan und den im Jahr 2013 formulierten Gleichstellungsplänen der Fachbereiche und Verwaltungsbereiche den Rahmen für eine abgestimmte Strategie zu Gender Mainstreaming. Die kommenden Jahre werden zur Umsetzung genutzt; durch das „Jahr der Gleichstellung“ 2014 wird besonderes Augenmerk auf dieses Thema gelegt.

(2) Steigerung des Anteils an Wissenschaftlerinnen

Für die dem MIWF vorliegenden Gleichstellungspläne wurden eine Bestandsaufnahme und Analyse der vorhandenen Stellen durchgeführt. Der Ist-Zustand ist somit dokumentiert. Die jeweils aufgeführten Maßnahmen der einzelnen Bereiche müssen zukünftig greifen; zentral wird das Promotionsstipendium für Frauen weitergeführt. Zudem sollen verstärkt Schülerinnen für die MINT-Fächer angesprochen werden, z.B. durch regelmäßige „Schülerinnen-MINT-Camps“.

Die Fachhochschule Münster bemüht sich, den Frauenanteil bei Vertretungsprofessuren zu erhöhen.

(3) Festschreibung von Professuren mit Gender-Denomination bzw. Einrichtung solcher Professuren

Die Fachhochschule strebt an, das Thema Genderforschung und Genderinhalte sichtbarer zu machen. Zunächst soll eine Bestandsaufnahme und Analyse der vorhandenen Aktivitäten im Bereich Lehre und Forschung zum Thema Genderforschung und Gleichstellung erfolgen. Die Ergebnisse werden entsprechend ausgewertet und öffentlich dokumentiert.

(4) Genderaspekte in der Lehre

Die Fachhochschule Münster setzt sich insbesondere bei der Entwicklung neuer Studiengänge und bei der Reakkreditierung von Studiengängen für eine Berücksichtigung von Genderaspekten in der Lehre ein.

(5) Vereinbarkeit von Familie und Beruf

In den letzten Jahren hat die Hochschule eine Vielzahl von Maßnahmen ergriffen, um für ihre Studierenden und Beschäftigten die Vereinbarkeit von Familie und Beruf zu för-

dern. Beispielhaft seien hier genannt: Einrichtung eines Familienservicebüros mit umfangreichen Beratungs- und Organisationsaufgaben, Notfallbetreuung für Kinder und zu pflegende Angehörige im eigenen Haushalt, Still- und Wickelräume an allen Standorten im Münster und Steinfurt, Eltern-Kind-Räume ebenfalls in Münster und Steinfurt etc.

Die Fachhochschule Münster beabsichtigt den Aufbau und die Inbetriebnahme einer Großtagespflegestelle für die Kinderbetreuung. Außerdem soll überprüft werden, inwieweit ein eigenes Ferienbetreuungsprogramm für Kinder von Beschäftigten und Studierenden konzipiert werden kann. Das Thema „Dual Career“ wird verstärkt in Beratungsprozesse aufgenommen.

§ 10 Diversity

(1) Die Fachhochschule Münster schafft in ihrer Organisationsstruktur eine Instanz, die den Prozess des Managing Diversity konzeptionell vertritt, die Umsetzung von Diversity-bezogenen Maßnahmen vorbereitet, unterstützt und in Kooperation mit anderen Akteuren umsetzt.

(2) Die Fachhochschule Münster beabsichtigt, sich an einem Diversity-Audit zu beteiligen.

(3) Die Fachhochschule Münster hat alle erforderlichen Maßnahmen ergriffen, mit der das Thema Diversity als Querschnittsaufgabe fest in die Prozesse beim Personalrecruiting, der Personalauswahl und Personalentwicklung der Hochschule sowohl bei dem lehrenden als auch bei dem administrativen Personal integriert wird. Dies wird an entsprechenden Stellen an der Hochschule deutlich gemacht.

(4) Das hochschuldidaktische Konzept der Fachhochschule Münster berücksichtigt die Diversität/Heterogenität auf Seiten der Studierenden. Dies wird in den verschiedenen Publikationen unseres *Wandelwerks, Zentrum für Qualitätsentwicklung*, deutlich. Zahlreiche Angebote des *Wandelwerks* und des neuen Netzwerks *Pluspunkt* belegen diese unterschiedlichen Aktivitäten.

§ 11 Inklusion von Studierenden und Beschäftigten mit Behinderung

(1) Die Fachhochschule Münster bemüht sich in besonderem Maße um die Belange der Studierenden und Beschäftigten mit Behinderung, um ihnen durch geeignete Maßnahmen die gleichberechtigte Teilnahme am Leben in der Hochschule zu ermöglichen.

(2) Die Fachhochschule Münster wird bis zum Ablauf dieser Zielvereinbarung ein Konzept zur vollständigen Inklusion behinderter Studierender im Studium einschließlich der Studienaufnahme und des Prüfungswesens erstellen.

§ 12 Internationalisierung

Die Hochschule hat im Jahr 2013 am HRK Audit „Internationalisierung“ mit sehr gutem Erfolg teilgenommen. Die Ergebnisse wurden in den verschiedenen Gremien, wie Projektgruppe „Internationalisierung“, Hochschulrat, Kommission für Lehre Forschung und Weiterbildung, Senat und Fachbereichskonferenz sowie Präsidium diskutiert. Basierend auf der vom Leitbild abgeleiteten Handlungsmaxime „Interkulturalität“ hat die Hochschule sich dabei auf drei strategische Handlungsfelder verständigt, die 2014 und 2015 im Vordergrund stehen. Diese beziehen sich im Bereich Studierendenmobilität auf die „Outgoings“ und „Incomings“ sowie bei den Dozenten auf die Professorenmobilität. Ein neuer Schwerpunkt der zukünftigen Arbeit wird das Thema „Internationalization@Home" sein. Darüber hinaus wird die Hochschule weitere Anstrengungen zur Erhöhung der Dozentenmobilität unternehmen. Ausschreibungen im Ausland von vakanten Professorenstellen sind weiterhin geplant.

§ 13 Arbeits- und Gesundheitsschutz

(1) Die Fachhochschule Münster strebt an, den Arbeits- und Gesundheitsschutz in ihren Prozessen deutlich sichtbar zu verankern (Ausbildung der Studierenden, Forschung, Arbeitsabläufe).

(2) Die Möglichkeiten der Verringerung arbeitsbedingter Gesundheitsgefährdungen, Erkrankungen und psychischer Belastungen werden bei der Gestaltung der Arbeitsplätze von den hierfür Verantwortlichen genutzt.

§ 14 Lehrstellen für Auszubildende an Hochschulen

(1) Der Fachhochschule Münster stehen Mittel zur Vergütung von Auszubildenden im dualen System zur Verfügung. Im Hinblick auf die Sicherstellung der Ausbildungsbedarfe der geburtenstarken Jahrgänge verpflichtet sich die Hochschule, diese Mittel in dem mit dem Haushalt zur Verfügung gestellten Umfang zweckentsprechend zu verwenden.

(2) Die Fachhochschule Münster verpflichtet sich, Bewerbungsverfahren um Ausbildungsplätze so durchzuführen, dass durch den Rückgriff auf objektive Auswahlkriterien oder die Einführung anonymisierter Bewerbungsverfahren Diskriminierungsfreiheit sichergestellt ist.

§ 15 Nachhaltigkeitsstrategie der Hochschule

Die Fachhochschule Münster hat unter Berücksichtigung der gemeinsamen Erklärung der Hochschulrektorenkonferenz und der Deutschen UNESCO-Kommission "Hochschulen für nachhaltige Entwicklung" eine hochschulweite Strategie für nachhaltige Entwicklung erarbeitet. „Nachhaltigkeit“ ist bereits seit Jahren fest im Leitbild der Hochschule verankert. Damit bekennen sich die Mitglieder der Hochschule dazu, bei allen Entscheidungen stets die langfristigen wirtschaftlichen, sozialen und ökologischen Wirkungen zu

berücksichtigen. Im Jahr 2012 lenkte die Hochschule deshalb verstärkt den Blick auf dieses gesellschaftlich äußerst relevante Thema und machte das Thema „Nachhaltigkeit“ zum Jahresmotto. Seitdem unterstützt die Hochschule die Aktivitäten des ständigen Arbeitskreises „Nachhaltigkeit und Ethik“ bei seinen vielfältigen Aktivitäten, z.B. bei der Durchführung seiner Ringvorlesungen. Diese Aktivitäten sollen auch über das Jahr 2013 hinaus fortgeführt werden.

Über die nachhaltige Ausrichtung der Lehre gibt in einigen Fällen bereits der Name Auskunft wie „Nachhaltige Chemie“ sowie „Nachhaltige Dienstleistungs- und Ernährungswirtschaft“. Aber auch in vielen anderen Studiengängen beschäftigen sich Lehrende aus ganz unterschiedlichen Perspektiven mit dem Thema Nachhaltigkeit. Auch zukünftig wird die Hochschule bei der Einführung neuer und Überarbeitung bestehender Studiengänge darauf achten, dass Thema Nachhaltigkeit bei der Curriculumsentwicklung zu berücksichtigen.

Unter Berücksichtigung der Forschungsstrategie „Fortschritt NRW“ fanden schon 2013 eine Strategiesitzung mit externen und internen Experten sowie zwei hochschulweite Workshops unter dem Motto „Wir denken Zukunft“ statt. Dabei wurden insbesondere Maßnahmen und Initiativen auf den Feldern Forschung, Lehre und wissenschaftliche Weiterbildung, Personal und Infrastruktur diskutiert, um Bildung und Forschung für eine nachhaltige Entwicklung zu einem konstitutiven Element in allen Bereichen zu entwickeln.

§ 16 Baumaßnahmen

(1) HSEP

Die Fachhochschule Münster verpflichtet sich, innerhalb der Laufzeit dieser Zielvereinbarung gemeinsam mit dem BLB NRW eine Hochschulstandortentwicklungsplanung (HSEP) zu erstellen oder eine bereits vorhandene HSEP - soweit erforderlich - zu aktualisieren und den Ministerien zur Kenntnis zu bringen. Eine Aktualisierung ist spätestens alle 5 Jahre nach Erstellung einer HSEP erforderlich.

(2) HMOP

Die Fachhochschule Münster hat mit dem Land und dem BLB NRW eine Vereinbarung über die Modernisierung und Sanierung von Hochschulliegenschaften bis zum Jahre 2015 getroffen (HMOP I). Die Landesregierung beabsichtigt, weitere Maßnahmen zum Abbau des Modernisierungs- und Sanierungsstaus zu ergreifen.

(3) Infrastrukturelle Investitionen

Forschungsbauten einschließlich Großgeräte, die auf der Grundlage des Art. 91 b GG finanziert werden, werden vom Land in besonderer Weise berücksichtigt. Dabei ist die

Übereinstimmung der Forschungsprogrammatik im Projektantrag mit den Programmzielen der Forschungsstrategie "Fortschritt NRW" von besonderem Gewicht.

Auch nach Beendigung der Gemeinschaftsaufgabe Hochschulbau werden investive Maßnahmen der Hochschulen (Bau und apparative Ausstattung) zur Umsetzung ihrer jeweiligen Hochschulstandortentwicklungsplanung vom Land gefördert. Die Prioritätensetzung der Einzelvorhaben erfolgt auf Vorschlag der Hochschule.

(4) Fachhochschulausbau

Das Land wird Bauvorhaben der Hochschule, die im Zusammenhang mit dem Ausbau der Fachhochschullandschaft stehen, in besonderer Weise berücksichtigen, wenn die erforderliche räumliche Kapazität nicht auf andere Weise geschaffen werden kann.

Abschnitt 6 - Durchführung der ZLV

§ 17 Berichtspflichten

(1) Kontinuierliche Verbesserung der Datenqualität

Die Fachhochschule Münster verpflichtet sich, im Rahmen der bundes- und landesrechtlichen Regelungen zur Lieferung von Daten für Zwecke der Statistik und der Kapazitätsberechnung die Qualität der Datenlieferungen regelmäßig zu prüfen und erforderlichenfalls Maßnahmen zur Verbesserung zu ergreifen.

(2) Kontinuierliche Lieferung von Vergleichsdaten

Die Fachhochschule Münster erkennt das allgemeine Interesse an landesweit vergleichbaren Daten im Bereich Statistik und Kapazitäten an und gewährleistet deshalb ordnungsgemäße und fristgerechte Datenlieferungen nach den Vorgaben des MIWF.

(3) Incher Absolventenstudien

Zu Vergleichszwecken beteiligen sich alle Universitäten und Fachhochschulen des Landes weiterhin jährlich und hochschulweit am Kooperationsprojekt „Absolventenstudien“ des Internationalen Zentrums für Hochschulforschung der Universität Kassel (INCHER). Zur Vermeidung von Doppelbefragungen der Absolventinnen und Absolventen können die Hochschulen für den Jahrgang, der im Rahmen der bundesweiten HIS Absolventenstudien (alle vier Jahre) befragt wird, ihre Befragung im Rahmen des Kooperationsprojektes aussetzen. Das MIWF beauftragt INCHER mit einer landesweiten Gesamtauswertung für NRW und der Analyse hochschulpolitisch relevanter Metafragen ("NRW-Bericht"). Zudem werden entsprechende Analysen für die beteiligten Hochschulen erstellt und den Hochschulen "Benchmarking"-Ergebnisse zum Vergleich ihrer

hochschulspezifischen Ergebnisse mit den Landesergebnissen zur Verfügung gestellt. Das MIWF erhält ausdrücklich keinen Zugang zu den hochschulspezifischen Daten oder Auswertungen.

(4) Überprüfung dieser Vereinbarung

Die Fachhochschule Münster berichtet dem Ministerium schriftlich zum 31. Dezember 2014 hinsichtlich der Umsetzung der vereinbarten Maßnahmen und der Erreichung der Ziele. Das Ministerium wertet den Bericht aus und erörtert die Ergebnisse seiner Bewertung in einer Besprechung mit der Hochschule. Zum 31. Dezember 2015 legt die Hochschule einen die gesamte Vertragslaufzeit bilanzierenden schriftlichen Abschlussbericht vor. Die Bewertung des Abschlussberichtes wird dem zuständigen Ausschuss des Landtags zur Kenntnis gegeben.

§ 18 Geltungsdauer

Diese Ziel- und Leistungsvereinbarung tritt zum 1. Januar 2014 in Kraft. Sie gilt bis zum 31. Dezember 2015.

Düsseldorf, den 17. Februar 2014

Fachhochschule Münster
Die Präsidentin
In Vertretung
Der Vizepräsident für Lehre,
Forschung und Weiterbildung

Prof. Dr.-Ing. Richard Korff

Fachhochschule Münster University of Applied Sciences

Ministerium für Innovation,
Wissenschaft und Forschung des
Landes Nordrhein-Westfalen
Die Ministerin

Svenja Schulze

Ministerium für Innovation, Wissenschaft und Forschung des Landes Nordrhein-Westfalen