UNIVERSITY OF AMSTERDAM

Profile of the University of Amsterdam

MAY 2012

The UvA's response to the White Paper on Higher Education, Research and Science, entitled *Kwaliteit in verscheidenheid* (Quality in Diversity), issued by the Dutch Ministry of Education, Culture and Science in July 2011, and the *Hoofdlijnenakkoord* (General Agreement) agreed between the Ministry and the Association of Universities in the Netherlands in December 2011.

Contents

Purpose of this document

In July 2011, the Dutch Ministry of Education, Culture and Science published its White Paper on Higher Education, Research and Science, entitled *Kwaliteit in verscheidenheid* (Quality in Diversity). All of the Dutch universities were invited to indicate by spring 2012 how they would respond to the major themes included in the White Paper: improvement of their Teaching and Learning performance, enhancement of their teaching and research profiles, and alignment with the future's grand challenges and the needs of business and society.

In December, the Association of Universities in the Netherlands and the Ministry of Education, Culture and Science signed an *Hoofdlijnenakkoord* (General Agreement), in which the Dutch universities pledged to sharpen their respective profiles and enter into contracts on their Teaching and Learning performances based on these profiles. The Ministry subsequently appointed a Review Committee to compare and reflect on the profiles and contracts submitted. The task of the Committee is to evaluate the level of ambition in these submissions, together with the viability of their proposals and the anticipated contribution of these proposals to national policy goals.

The Ministry made 5% (€ 105 million) of the annual teaching grant conditional upon agreement having been reached on the White Paper targets. A further 2% (€ 38 million) was withheld and will be assigned selectively to the universities on the basis of their profiles.

This document describes the process and choices made by the University of Amsterdam (UvA) and offers a data-driven portrait of the University as a whole. As well as a proposal for an agreement with the Ministry, it includes a description of the initiative of the UvA and the VU University Amsterdam (VUA) to develop the Amsterdam Academic Alliance (AAA).

Included with this Profile is a copy of the Letter of Intent concerning the proposed UvA-VUA Academic Alliance. Numerical data on the UvA are publicly available on www.uva.nl/facts and in the Annual Accounts.

To some extent this document amends the *Strategic Plan 2011-2014: An Eye for Talent*. However, it specifically addresses the issues in the White Paper and does not constitute a new or revised Strategic Plan. Nor can it be seen to cover all the policies currently in effect at the UvA.

1. Characteristics of the UvA

1.1. History

The University of Amsterdam (UvA) traces its roots back to 1632, when its predecessor, the *Athenaeum Illustre*, was initiated by the city council to enhance the reputation of the city and its merchants. On 8 January of that year, two internationally acclaimed scholars, Gerardus Vossius and Caspar Barlaeus, gave their inaugural addresses. In 1815, `*The Athenaeum Illustre* was recognised by law as an institution of higher education and, in 1877, granted the right to confer doctoral degrees. Funded by the city of Amsterdam, it was named the Municipal University of Amsterdam. In 1961, after being designated an independent public entity, it was given its current name, the University of Amsterdam. By that time, the UvA had achieved considerable fame in science, with three Nobel prizes to its name: Jacobus Henricus van 't Hoff (Chemistry, 1901), Pieter Zeeman (Physics, 1902) and Diderik van der Waals (Physics, 1910). The student population grew from around 1,000 in 1900 to 5,000 shortly after World War II, and eventually to more than 30,000 by the year 2000.

Today, the University of Amsterdam is one of the leading research universities in Europe, and a member of both the League of European Research Universities (LERU) and the global research university network Universitas21. A comprehensive institution with firm roots in Science and Medicine, it is equally strong in its engagement with society. Its Humanities and Social Sciences faculties are the largest in the Netherlands and both are among the top of their league in Europe. According to the German Centre for Higher Education Development (CHE), the UvA was one of just seven European universities to reach the Excellence Group in all seven fields assessed by them in 2009 and 2010[1].

Figure 1. The weekly 'Room for Discussion' in the main hall of the Faculty of Economics and Business

1.2. Strategic Plan 2011-2014: An Eye for Talent

In the UvA's Strategic Plan 2011-2014: An Eye for Talent, the mission statement reads thus:

The University of Amsterdam is a broad, research-intensive institution rooted in the history of Amsterdam, an internationally oriented academic community that can compete with leading universities in the Netherlands and around the world. The UvA provides academic training in all areas of science and scholarship and welcomes students and staff – from all backgrounds, cultures and faiths – who wish to devote their talents to the development and transfer of academic knowledge as a rich cultural resource and foundation for sustainable progress.

In addition to being known for its extensive and highly cited (MNCS[2] = 1.24) academic publications, the UvA, whose mission it is to be pioneering, determined and engaged, has a reputation for being a fertile breeding ground for academic training and development and

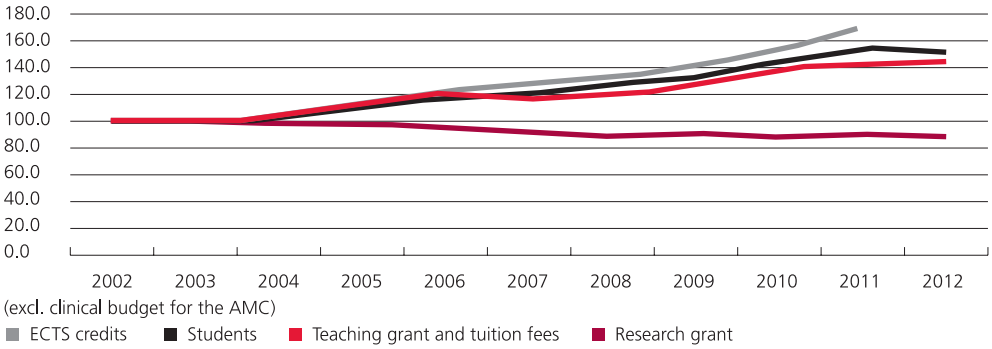
[1] Together with Oxford, Manchester, UCL, München, Leuven and Bristol. The seven fields assessed were Mathematics, Physics, Chemistry, Biology, Psychology, Economics and Political Science. CHE, The CHE ExcellenceRanking, October 2010.
[2] MNCS = Mean Normalized Citation Score in the Leiden Ranking 2011-2012, CWTS.

societal debate. It is the natural home and meeting place for enthusiastic scholars keen to take themselves, their organisations and their disciplines to the highest possible level. It is a community of independent and self-organising people whose shared purpose is to do what higher education and research are meant to do, namely, shape the future.

The Strategic Plan 2011-2014 and the subsequent Teaching and Learning policy document, adopted in the autumn of 2011, represent a logical next step in the development the UvA has embarked upon since the year 2000. More than ever, quality is the driving force and, despite state-imposed budget constraints, the UvA sees a clear potential for quality enhancement, specifically by developing an ambitious Teaching and Learning mindset, a stronger link between (graduate) teaching and research and a more competitive research profile.

Meanwhile, the rapid increase in student numbers since 2002 (+11,000, or 50%) has put great pressure on the inherent link between teaching and research: firstly because the research budget has not matched the increase in student numbers, and secondly because (undergraduate) student growth does not in itself imply a focus on the research priorities. The growing discrepancy between the teaching and research budgets is reflected in Figure 2.

Figure 2. Growing discrepancy between the teaching and research budgets since 2002
Student numbers, ECTS credits and the government grant (incl. tuition fees, without inflation)



The UvA had thus already to make distinct choices in its research profile. In doing so, it has achieved a substantial increase in productivity, as the table below shows with a number of key figures. This suggests there is every reason to have confidence that the UvA can fulfil its ambition of both retaining its international standing and strengthening that standing within the context of its immediate economic surroundings, the Amsterdam metropolitan region.

Table 1. Key performance indicators since 2002

Key production figures	2002	2011	growth
Master's degrees	3,039	5,586	84%
Academic publications	6,460	8,713	35%
PhD degrees	335	405	21%
Student satisfaction scores	7.2	7.6	5%
Enrolment (regular programmes)	21,468	32,165	50%
Staff (FTEs, excluding the AMC)	3,865	4,288	11%
Turnover (excluding contract research at the AMC)	€ 483 million	€ 634 million	8%*)

*) after allowance for 21% inflation over the period

2. The Amsterdam Academic Alliance

2.1. Global trends in higher education: the main rationales for collaboration

The University of Amsterdam (UvA) and VU University Amsterdam (VUA) are both located in the capital city, but they have distinct institutional histories and profiles. As research universities, they both demonstrate strong research performance and growth in the student market. Yet they believe the global changes in higher education require greater collaboration if they are to continue to compete in the international top.

Joining forces seems particularly necessary since:

- The impact of globalisation in higher education leads to increased competition for financial and human resources.[3] The capacity to attract R&D funding and the most talented academics at the international level is a key to growth in academic performance and competitiveness.
- Global challenges such as health and the quality of life, energy sustainability and food security put new demands on universities, as does the Knowledge Economy's need for innovation in order to spur the creation of jobs and economic growth.[4] Global challenges require them to develop interdisciplinary approaches and to interact more effectively with key stakeholders in industry and government.
- A further differentiation in the mission and provision of higher education is needed in order to better respond to the increasingly diverse needs of students, employers, business and industry, and society at large.

The need for further differentiation in higher education systems is recognised in Europe.[5] The OECD found the Dutch higher education system to have an insufficient level of differentiation, where excellence in particular is underrepresented and the international dimension needs to be enhanced.[6] Consequently, advice was obtained from the Veerman Committee,[7] on the basis of which the Ministry of Education, Culture and Science published its White Paper entitled *Kwaliteit in verscheidenheid* (Quality in Diversity)[8] and launched its new policy to stimulate diversity in the higher education sector.

The OECD review of the higher education sector in Amsterdam[9] provided a closer look at the issues listed above. It concluded that:

- By making targeted investments in human capital, the Amsterdam region can greatly enhance its innovative potential. A large supply of highly skilled workers will help attract and retain firms and investment in the region.
- In that respect, higher education institutions should be considered as major agents of economic growth and a driving force for the creation of new products and new companies.

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3 Marginson, S. & M. van der Wende (2009). *The New Global Landscape of Nations and Institutions*. In: OECD. Higher Education to 2030, Vol. 2: Globalisation.
4 Horizon 2020. *The EU Framework Programme for Research and Innovation*.
5 Van Vught, F.A. (2009). *Mapping the Higher Education Landscape: Towards a European Classification of Higher Education*. Springer. And: European Commission (2011). *The EU Strategy for Modernising Higher Education*.
6 OECD (2008). *Reviews of Tertiary Education – The Netherlands*.
7 *Differentiëren in drievoud. Advies van de Commissie Toekomstbestendig Hoger Onderwijs Stelsel*.
8 OCW (2011). *Kwaliteit in verscheidenheid. Strategische Agenda Hoger Onderwijs, Onderzoek en Wetenschap*.
9 OECD (2010). *Review of Higher Education in Regional and City Development: Amsterdam, The Netherlands*.

- Moreover, the higher education sector should be seen as a key to growth and sustainable development, and Amsterdam, with its strong global image, can be seen as an education hub with the city as its central attraction.
- To that end they should also amplify their internationalization strategy in order to resonate with the global city formation process, and intensify their relations with business and industry through knowledge clusters and technology transfer activities.

More specifically, with respect to the UvA and the VUA it stated that:

- The research universities must continue to aim for focus and to build centres of excellence in the fields of their research activity. Individually they are not strong enough to be world leaders, but collectively they can make a significant impact in selected areas.

These observations and recommendations resulted in the creation of the Amsterdam Economic Board (AEB), which concentrates on seven knowledge clusters and has adopted the Triple Helix model[10] (see chapter 4).

2.2. The Amsterdam Academic Alliance: aims and ambitions

The concentration of academic institutions in Amsterdam provides a unique infrastructure. Amsterdam has two well-known research universities, both with large University Medical Centres. In addition, Amsterdam is home to a large number of publicly funded research institutes belonging to the Netherlands Organisation for Scientific Research (NWO) and the Royal Netherlands Academy of Arts and Sciences (KNAW), as well as to several medical research centres such as the Netherlands Cancer Institute (NKI) and Sanquin, the blood research foundation. Together these institutions employ some 7,500 scientists, or – if one includes the teaching staff of the art academies and universities of applied sciences *(hogescholen)* – nearly 10,000.

The UvA and the VUA will endeavour to mobilise this potential through the Amsterdam Academic Alliance (AAA). The aim of the AAA is to make Amsterdam a hub for international competitiveness and academic excellence.[11]

The results envisaged are:

- Attracting more highly talented students and academics from around the world;
- Attracting more competitive research funding from European and other external sources;
- Providing a stronger knowledge base for the region, in terms of relevance for the innovative potential of business and industry, i.e. the creation of new products, companies and jobs;
- Delivering a larger and better-qualified supply of higher education graduates to the regional workforce to attract and retain firms and investment in the region.

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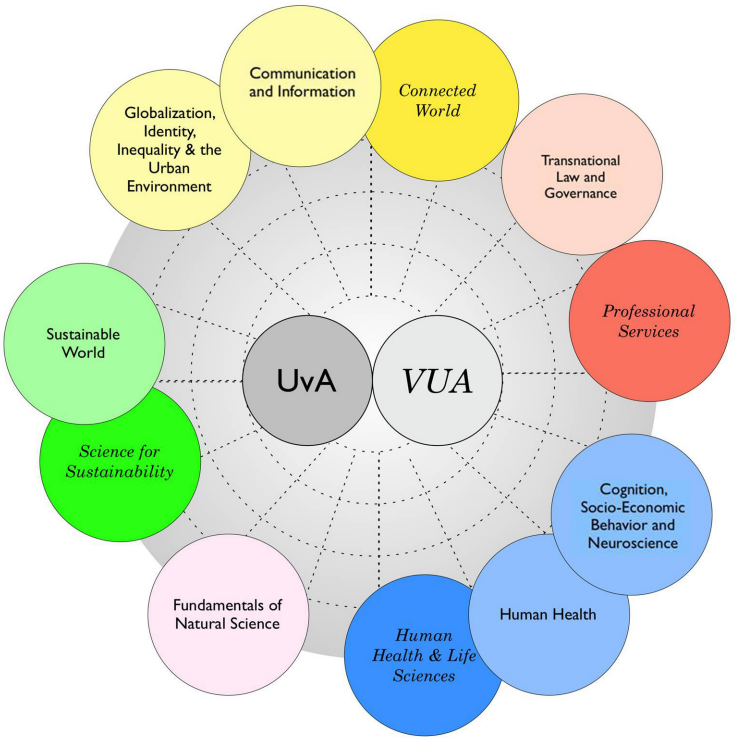
[10] See: http://www.iamsterdam.com/nl/economic-development-board/over-edba.

[11] A 2009 CWTS analysis of the Bibliometric Benchmarking of the Amsterdam Universities indicated positions among the top 50 of the world universities in a range of fields, including clinical medicine, biological sciences, geosciences, economics and various other social sciences.

The profiles of both universities are complementary, as shown in Figure 3. It illustrates the breadth of the AAA's knowledge base, and thus how it provides a natural basis for joining forces as well as possibilities for further focusing, for instance in (grand challenges) areas such as health and sustainability. The cooperation envisaged within the AAA will support this.

Figure 3. Complementary research profiles of the UvA and the VUA



2.3. The scope of the AAA

Collaboration within the AAA will directly involve the UvA , the VUA , their respective University Medical Centres, the AMC and the VUmc (the latter two of which have already explored their joint potential) and the Amsterdam university of applied sciences, the *Hogeschool van Amsterdam* (HvA). The other partners are the Amsterdam-based research institutes of the NWO and the KNAW, the other Amsterdam universities of applied sciences and several medical research institutes such as the Netherlands Cancer Institute and Sanquin.

The Alliance in no way excludes partnerships with university departments elsewhere. On the contrary, it strengthens the position of Amsterdam in such (inter)national research programmes. For example, with respect to the Humanities and for reasons of complementarity and effectiveness, cooperation is being sought with Utrecht University, particularly where research and teaching in the fields of Media Studies, Languages and Culture is concerned.

In launching the AAA, the two universities have indicated it is not their intention to prepare a merger. Both are large and comprehensive institutions which, especially at

the level of undergraduate education, have too many students to expect a qualitative advantage as a result of a merger. But they have already shown that selective Bachelor's programmes designed to promote excellence, such as the Liberal Arts and Sciences programme offered by the Amsterdam University College, are best done together.

It is a different matter, however, at the graduate level. Here, the complementary profile in research provides a natural basis for joining forces. Students should have easy access to courses from both institutions, and thus benefit from a broader range of choices. There are already many examples of successful collaboration between research groups. Today, the two institutions should look very closely at where more formal collaboration might offer opportunities for true improvement. This will most likely be at the level of joint Graduate Schools and, occasionally, the integration of faculties. The UvA and the VUA already have past experience in both modes of collaboration, and have demonstrated their ability to achieve international excellence, for example in:

- the Tinbergen Institute, a graduate school involving the UvA, the VUA and Erasmus University Rotterdam, which has been able to attract a large number of excellent students from abroad to take their research Master's and PhD programmes in Amsterdam;
- ACTA, the joint UvA-VUA dentistry faculty, which now is one of the most prominent in Europe.

The UvA and the VUA will build on this experience and, in the coming five years, expect to undertake more such joint ventures. To stimulate the rapid international positioning of such institutions, they will provide Triple A Fellowships to attract young faculty members from abroad.

The first concrete steps in AAA cooperation will involve:

- The intended integration of the Science faculties, which step represents a key pillar of the AAA. The integration will create unity among strong disciplinary nuclei that will feed interdisciplinary research and teaching within and outside the realm of Science and that will prevail at the top end of the value chain ('from idea to artifact'). This new joint venture, the Amsterdam Faculty of Science (AFS), will involve 9,000 students, 3,000 staff and an annual budget of about € 250 million. This budget is an estimate, based on the status quo of the current faculties of the UvA and the VUA. The AFS will be the largest Science cluster in the Netherlands and thus well-positioned to build alliances with the best Science centres in Europe. Size is not a goal in itself, but in Science size matters. Size makes it feasible to perform and sustain top-class research over the broad range of disciplines in Science (Physics, Chemistry, Biology, Ecology, Geology, Informatics, Mathematics, Astronomy) and of the 'grand challenge' themes (such as Sustainable Earth, Astroparticle Physics, Cognitive Science, Human Health and Life Sciences, Globalisation and ICT, Connected World). The AFS will benefit from premium locations near the Academic Hospitals and the Amsterdam Science Park, where connections can readily be made with existing NWO research institutes. From a unified view of nature in the 19th century, the different Science disciplines diverged in the 20th century. But in the 21st century they will again focus on the mutual exchange and benefit between the disciplines. Biochemistry and Medicine, Behavioural and Brain Research, Language and Computational Logic are all growing towards each other. The AFS will strengthen the relations with other fields, such as Medicine, Behavioural Science, Humanities and Economics. Its aim is to become a comprehensive

cluster of the fundamental sciences that will have an impact on all disciplines and partners in the value chain.
At the undergraduate teaching level, the size of the AFS will enable it to offer the best programmes in all of the Science subjects as well as interdisciplinary programmes such as Biomedical Sciences, Health Sciences, Psychobiology, Earth Sciences & Economics, and Science Business Innovation. With these programmes, the AFS will benefit not only the regional market but also the human capital agenda of the Netherlands as a whole. With largely English-taught graduate programmes, the AFS aims to play a strong role in Europe based on its extensive research. Located in Amsterdam and cooperating with partners across Europe, the AFS will be highly attractive to international graduate students. Hence, establishing the AFS will lead to an efficiently adjusted educational profile for the science disciplines in Amsterdam.
The critical success factors of the AFS will be: to establish a strong, research-driven management and budget structure under one dean; to connect to the needs of business and government in the Amsterdam Economic Board (AEB), 'top sectors' and European roadmaps; and to devise a support structure which bridges the existing differences between the UvA and the VUA with respect to their IT systems and internal organisational structures. The extremely positive experience with the implementation of the national 'Sector Plan' for Chemistry & Physics, whereby the UvA and the VUA proposed an integral plan for both research and study programmes in these two major disciplines, suggests that the creation of the AFS will be a milestone in the development of these two Amsterdam universities.

- In order to strengthen the health cluster, the AMC and the VUmc agreed, in a Memorandum of Understanding (MoU) on 14 September 2011, on an innovative agenda for collaboration allowing them to focus on a competitive advantage that will result in a concentration, lateralisation and coordination of tertiary clinical care and the inherent research and teaching. In terms of size , the AMC and the VUmc together are unrivalled in the Netherlands and can compete with the best academic medical centres in Europe. The AMC-VUmc alliance will concentrate on three principal objectives:
  - The creation of thematic centres of excellence in research and top care, building on existing mutual and complementary strengths and specialisations so as to attract the best national and international talents to the PhD programmes;
  - The enhancement and sustainability of the quality, accessibility and efficiency of the highly complex but low-volume segments of medical care;
  - The intensification of the coordination in acute care for the northwestern region of the Netherlands, taking into account the preconditions regarding availability and security.

  The 2011 MoU identified 13 focus themes around which their cooperation will be further explored and intensified. Between now and 2015 this may lead to different forms of cooperation or coordination or to the start of a joint venture, depending on each theme's characteristics.
- In other fields of interest, the AAA will facilitate the establishment of joint graduate or research programmes in those areas where a leap in quality seems to be within reach. By thus creating several joint graduate schools we will ensure that Amsterdam continues to offer a first-class teaching and learning experience to both national and international students, and also in particular represents a clear contribution to the national Human Capital Agenda. These graduate schools will be characterised by a strong link between research and teaching, an international dimension and a transparent admissions policy. Wherever KNAW and NWO research institutes contribute to a leap in quality, they will be invited to join. The development of these joint graduate schools may vary

in tempo and organisation per discipline.

- The creation of a postgraduate Amsterdam School of Business and Law, incorporating the existing Duisenberg School of Finance, will be an asset to Amsterdam's position as the city hosting the most corporate headquarters in the Netherlands.
- As part of the AAA, the UvA and the VUA will set up an AAA Fellowship Programme. The purpose of the Programme will be to provide up to three or four years' worth of start-up funding to talented and promising research leaders from abroad, thus enabling the Amsterdam Faculty of Science and other joint UvA-VUA AAA initiatives to give new impulses to their research in Amsterdam. The AAA Fellows will be expected to take part in research as well as excellence tracks in undergraduate and research Master's programmes. This would require a Programme in the order of € 15-20 million per annum, based on an average of five 3-to-4-year fellowships, averaging € 1 million per annum.

2.4. Directions and challenges ahead

In the coming period, the UvA and the VUA will take the results of the bottom-up process carried out over the past year in cooperation with the faculty deans, to the next stage.[12]

Key activities will be guided by the Letter of Intent and the AAA's mission, vision and strategic narrative. These will include:

- The establishment of a programme management structure;
- The development of governance arrangements;
- Continued consultation with internal and external stakeholders (including the assessment by the Review Committee on Higher Education and Research);
- A review and revision of the present proposal and the business case;
- Internal and external approvals;
- A final implementation plan (short-medium term), including provisions for monitoring and evaluation.

In this process, the bottom-up involvement of faculty deans will be continued through participation in joint working groups, which will function under a Steering Group consisting of the two university boards, supported by advisory and executive members of the programme management.

The complexity of the process is acknowledged and will require special attention. The AAA process will consist of different projects (e.g. AFS, joint graduate schools), each with their own scope and pace. At the same time, cohesion and transparency will need to be ensured. A partly incremental approach will allow for differentiation between the different projects and for developing greater focus in, for instance, research themes. Synchronised approaches will be necessary to achieve a timely integration of financial, HR and IT systems, and to allow for a rationalisation of the education provision, e.g. through joint degree procedures.

[12] This process will follow the lines of a process that develops CAM activity (HEFCE: *Collaborations, Alliances and Mergers in Higher Education*, March 2012, p. 61).

2.5. Financial implications

During the past year, the UvA and the VUA analysed and concluded that their combined production and impact is sufficient in size and breadth to assure that Amsterdam can claim a position among the top institutions of the European knowledge society, providing three conditions are met:

- The complementarity of the UvA and the VUA will be exploited in the AAA to achieve a leap in quality;
- The cooperation will extend to other scientific partners in the region; and
- Adequate funding will be available.

A comparison with the funding available to top universities across Europe reveals that the AAA must set for itself the following targets for extra future funding:

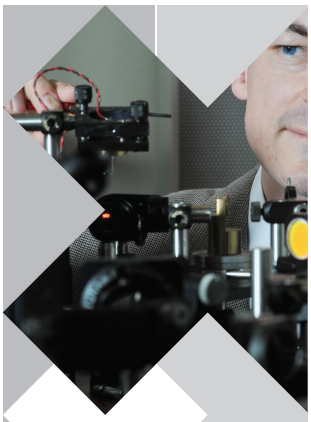
- A considerably larger return from private tuition fees (*bovenwettelijk collegegeld en contractonderwijs*), in the order of € 25 million per annum;
- An increase in its share of EU funding, in the order of € 5 million per annum;
- A pro rata share in the increase of EU research funding under Horizon 2020, in the order of € 10-15 million per annum;
- A fair share in funding from the NWO, in the order of € 5 million per annum;
- A considerable increase in the income from joint research with industry, in relation to the Strategic Plan's vision of value creation from research, in the order of € 20 million per annum.

However, the teaching and research base of the universities depends on the direct government grant. To make the above targets possible, the direct funding will have to increase by about € 25 million per annum. The UvA and the VUA are therefore applying for:

- € 20 million from the 2% selective budget available under the White Paper;
- A matching grant of € 10 million per annum from the City of Amsterdam and the province of North Holland, for at least the period 2013-2016.

If granted, these monies will constitute a solid basis for achieving the aims set by the AAA. Initially, a portion of the funds will be needed to cover the costs of transition, integration and upgrading, and for positioning the Amsterdam Faculty of Science, the joint graduate schools and other structural UvA-VUA initiatives. However, these costs are estimated at € 50-60 million in total, so that half of the extra investments will be covered by the Ministry of OCW, the City of Amsterdam and the province of North Holland, while the other half will be covered by both universities. From the outset, a significant proportion of this budget will be invested in the AAA Fellowship Programme, in new facilities to attract AAA Fellows and in the support of research consortia which also receive EU and/or industry funding. This estimate does not include investment in new buildings.

As the founding partners of the AAA, the UvA and the VUA are confident that this exciting venture will be successful in ensuring that Amsterdam, and thus the Netherlands, retains its position in the academic top league.



3. The research profile of the UvA

3.1. Establishing the research profile

The first step taken to create a research profile for the University of Amsterdam in response to the White Paper involved combining the UvA's existing research (priority) areas into broad but coherent themes. In doing so, the UvA in fact continued with the restructuring of its research portfolio that was set in motion four years ago. Solving the societal challenges (of Europe) demands the collaboration of the best researchers if sustainable solutions are to be provided. Future research solutions will need to transcend and expand traditional views, and innovative transdisciplinary research will be of the utmost importance. Research themes stimulate and encourage collaboration between research communities. The solutions to societal challenges cannot be sought in a European context alone, as the nature of most of the problems is global. Research collaboration with the best teams around the world brings better, faster and cheaper solutions through sharing and collaboration. The UvA's research themes can provide the platform and framework, and initiate the necessary global research collaboration that will help secure Europe as a prosperous and sustainable region. Bachelor's and (research) Master's programmes related to the research themes have been identified. The UvA focuses on research-intensive teaching and learning at both the Bachelor's and Master's levels.

The process went on to take into account the development of future funding programmes at the regional, national and European levels. The steps taken and the resulting picture are described below.

Four years ago, the UvA identified a number of research priority areas with which to improve its global competitiveness while at the same time remaining locally relevant and engaged. To consolidate its standing as a research-intensive university, scarce resources were directed to targeted areas of opportunity. In this way, the UvA sought – and still seeks – to support and sustain excellence in a number of selected research areas. Based on this, the UvA identified a number of areas in which its current activities are very promising and where a substantial nucleus of interest, expertise and results is present. Each research priority area is set up so as to address major questions, and practice-related issues, challenges and opportunities in its particular field. The value of (inter)disciplinary, multi-faceted collaboration is recognised as being instrumental to increasing global competitiveness, as it effectively addresses the increasing complexity of research questions, leverages more and better funding, increases the mobility of researchers and creates exchange opportunities for postdoctoral fellows and (post)graduate students.

By combining its research priority areas into broad, coherent themes, the UvA will continue to nurture and develop the depth of expertise already present in its traditional fields of inquiry. This in-depth expertise is a fundamental precondition for enabling students and researchers to engage in the kind of meaningful, coherent and interdisciplinary collaboration that will produce the major research breakthroughs needed to understand and solve the global challenges of our time.

The UvA's choice of the seven themes described in this document was made in such a way that the research base will be successful and globally competitive for the next 20 years. In line with the Strategic Plan 2011-2014, the percentage of tenured staff involved in the 7 themes will be increased from about 40% in 2011 to more than 50% in 2014.

3.2. Transnational Law and Governance

In a wide range of policy areas, cross-border activities, transactions and practices are subject to an increasingly dense – though far from complete or coherent – web of transnational rules, norms and standards. Some of these are embodied in traditional forms of international public or private law based on binding treaties and agreements between sovereign states and subject to the jurisdiction of international or national courts. Others are produced, contested and enforced by varying combinations of public and private actors, including not only national states, whose own regulatory authority they circumscribe, but also international organisations, regional blocs, business and professional associations, multinational firms, expert bodies, NGOs and advocacy networks. This body of rules, norms and standards not only seeks to regulate activities and transactions across borders, it also empowers new players to perform acts that were previously carried out by states exercising their sovereign authority (such as peacekeeping, regulating financial markets or addressing social and environmental problems).

These proliferating forms and the expanding scope of transnational law and governance raise far-reaching questions about their dynamics, effectiveness, accountability and legitimacy. Key research issues include: how should contemporary processes of transnational rulemaking be conceptualised? How do such rules emerge and how do they exercise authority? Under what conditions does transnational rulemaking produce effective public-regarding outcomes? What are its consequences for different groups of actors – states, businesses, individuals – as well as for global society more generally? To whom are transnational rulemaking processes accountable, and through what channels and mechanisms? Are established forms of accountability adequate to grasp these developments or must new ones be designed? Can rulemaking beyond the democratic nation-state be considered legitimate, and if so, according to what normative criteria?

These overarching questions are fundamental to enhancing our understanding of novel developments, such as the role of international institutions, which at the global level increasingly exercise authority in such areas as environment, development and human rights, yet which are largely immune to traditional legitimising processes of international law. The questions are also fundamental to understanding the emergence of the European Union, which is at once a post- national lawmaker, a laboratory for experimentation with new forms of governance and a normative power seeking to export its own rules, norms and standards to the Member States and their authorities but also to the wider world, including a large number of non-state actors. Additionally, they are crucial to understanding governance of transnational economic transactions and its impact on society. The governance of business organisations and the regulation of market transactions are critical determinants of social and economic progress in modern economies. Corporate governance, competition policy, contract law and the regulation of financial markets and institutions all determine which organisational forms and contracts will be recognised by legal systems in ways that fundamentally shape economic and social life and that have an impact on social justice and sustainability. The broad questions applied to this economic realm point to the importance of legal and political analysis being combined with a deep understanding of how markets function and business actors operate in a transnational context.

Research on the theme of Transnational Law and Governance requires an interdisciplinary approach integrating legal scholarship, political science, business studies and economics. Lawyers, political scientists, business scholars and economists can and do collaborate

to provide interdisciplinary perspectives on how transnational rulemaking processes and governance not embedded in familiar normative systems of democracy, authority and legitimacy work and how they should be evaluated. Together they investigate participation in rulemaking, compliance, balancing of public and private interests, sources of authority, accountability mechanisms and normative legitimacy, as well as their effectiveness.

Selection of award winning researchers: Curtin (Spinoza), Nollkaemper (ERC Advanced Grant), De Vreese (VICI), De Goede (VIDI, ERC Starting Grant)

3.3. Human Health

The challenge of the UvA Human Health theme is to respond effectively to the current and future needs of pathology in an increasingly diverse population of patients. Research in this theme covers the entire spectrum, from fundamental biomedical research to translational and clinical research to the evaluation and validation of innovations in actual clinical practice, diagnostics, therapy and care. Health risks have never solely been an issue for hospitals or healthcare systems, nor are they confined by national boundaries. An international global and multidisciplinary perspective in health is increasingly needed to meet the challenges resulting from the expansion of international traffic and globalisation. Research therefore also examines the organisation, availability and accessibility of healthcare worldwide. Based on research strengths and the recognition of societal needs, this theme focuses particularly on the following areas: cardiovascular diseases, infection and immunity including oral inflammation, public health and epidemiology, oncology, gastro-intestinal diseases, neurological and psychiatric disorders, metabolic disorders and reproductive health.

Selection of researchers: Büller (Academy Professor), Geijtenbeek (VICI), Medema (VICI), Tan (VICI), Berkhout (VICI), Van den Brink (ERC Starting Grant), Sanders (ERC Starting Grant), Ten Cate (Academy Professor), Mol (ERC Advanced Grant), Kuipers (ERC Starting Grant), Grunow (ERC Starting Grant)

3.4. Cognition, Socio-economic Behaviour and Neuroscience

Cognition involves the mental skills and tools that allow humans to adequately adapt to and improve their (social) environment. The study of cognition involves perception, information processing, consciousness, emotion and behavioural actions. Brain and Cognitive Sciences focuses on the way the human brain sustains, facilitates and enables these various processes. By bringing together scientists from various disciplines such as medicine, psychology, linguistics, neurology, biology and economics, it covers the entire spectrum from brain cell to social behaviour. Triggered by empirical results which, on a regular basis, contradict traditional economic theory with selfish rational agents, economists have started to integrate insights from psychology and sociology into their neo-classical economic models. This has led to a new branch of economics called Behavioural Economics. Its foundation lies mainly in data gathered in laboratory experiments, but this has recently been expanded to include evidence from the internet and field experiments. An important question is how non-rational individual behaviour and interactions affect the fragility and resilience of complex socio-economic systems.

Selection of researchers: Van Benthem (Spinoza), Bögels (VICI), Van der Molen (KNAW Professor), Wiers (VICI), Lamme (ERC Advanced Grant), Wagenmakers (ERC Starting Grant), Crone (ERC Starting Grant), Ridderinkhof (VICI), Kindt (VICI), Geurts (VIDI), Slagter (VIDI), Boersma (VICI), Pennartz (VICI), Smidt (VICI), Hommes (Pionier), Schram (Pionier), Van Winden (Pionier), Honing (KNAW Müller Chair), Van Lambalgen (Pionier)

3.5. Globalisation, Identity, Inequality and the Urban Environment

Globalisation can be understood as transnational exchanges in all possible forms. It encapsulates socio-economic, educational, political and cultural dimensions of contemporary society.

Globalisation leads to profound social and cultural changes, in which old and new media play a crucial role. In the Humanities, the study of globalisation focuses on the ways that cultural practices – including literature, film, new media and the visual and performative arts – engage with the increasingly transnational organisation of contemporary society, particularly in urban settings. These dynamics call for an approach that engages with the way cultural practices and cultural heritage are created, used, framed, portrayed and re-interpreted. Museums and archives worldwide along with all other cultural heritage institutions are currently embracing a 'second life' in the new virtual biotope that raises urgent issues for heritage institutions, namely the valorisation of cultural heritage as well as long-term digital preservations and their effects. Globalisation is affecting systems of representation in our contemporary world in dramatic ways, through the creation of new spaces, new media forms and new reasons for communicating. The continuous transformation of cultural forms poses urgent questions about the way past and present affect group and individual identity today, at the social, economic, cultural, religious and political levels.

In the Social Sciences, globalisation is understood to be both material and ideational, and to operate in multiple interdependent spheres of human existence (e.g. finance, culture, migration, communication, education, labour markets) and in constant dialogue with local dynamics. For example, as a result of human mobility, identity, belonging, solidarity and citizenship have become prime concerns in the context of increasingly pluralised societies. The Social Sciences are interested in how local, national and transnational institutions take shape in globalised societies, and how they affect individual life courses, educational and labour market careers, political choices and living arrangements. What kinds of global developments change or reproduce international inequalities between countries and regions? What are the consequences of new social inequalities in terms of education and ethnicity both of which are embedded in a globalised world? How does globalisation affect forms of solidarity within and between nation-states?

Globalisation is closely entwined with processes of urbanisation. 'World cities' have emerged as the key nodes of a global system characterised by accelerated flows of capital, commodities, people, ideas and even pathogens. We are in the midst of an urban revolution unprecedented in the history of the world in terms of massive rural-urban migration (especially in China, India and other parts of the non-Western world). This has far-reaching social and political consequences and brings fundamental changes to the global economy. More than half of the global population now lives and works in cities; 70% is expected to do so by 2050. More than ever, social processes are shaped in urban contexts and the global-urban interface is increasingly salient. Social questions become, increasingly, urban questions.

Of common concern to both the Humanities and the Social Sciences are the ways in which everyday engagements with globalisation and the urban environment are generating new expressions of identity and citizenship. The theme foregrounds both a Humanities focus on the ways that innovations in information technologies contribute to changes in cultural practices, and a Social Sciences focus on the way that globalisation operates in different spheres of human existence and on different scales, from large-scale transnational institutions to the details of ordinary people's everyday lives.

Selection of researchers: Leerssen (Spinoza, Academy Professor), Bal (Academy Professor), De Kloet (VIDI), Velthuis (VIDI), Koinova (ERC Starting Grant), Krul (ERC Starting Grant), Ronald (ERC Starting Grant), Zigon (VIDI, ERC Starting Grant), De Wilde (ERC Starting Grant), Van der Werfhorst (VIDI), Engelen (VIDI), De Goede (VIDI, ERC Starting Grant)

3.6. Communication and Information

Our society has witnessed profound transformations based on information technologies and the new cultures of communication created by them. Information and communication have become omnipresent and influence all aspects of daily life. In a short period of time, the quantity, accessibility and diversity of information in our society have undergone such drastic changes that our cultural and economic development is increasingly dependent on our ability to access and understand massive streams of information, whether encoded in language or images or distributed on the internet. And with this change, new modes of use have come into being, from internet sessions to media culture, from education to entertainment, sometimes with radically new styles of human behaviour. At the same time, information and communication have become powerful drivers of new fundamental research, unifying academic disciplines along new themes such as communication and human behaviour, the essence of meaningful information, computational views of language use and strategic intelligent interaction. As an economic good, its production, distribution and use are the driving forces of the emerging information economy. As a legal concept, information is subject to a range of complex and often conflicting legal regimes that regulate the emerging information society.

Media and communication

The development of ubiquitous media and communication has gone hand in hand with important societal developments, such as globalisation, democratisation, individualisation and decreases in social coherence and trust in institutions and government. As more and more of everyday life is being digitised, the media environment has become more complex: print and broadcast have paved the way for digital multimedia that provide new means of communicating or arguing while transforming older ones and posing new questions on how to govern media and safeguard privacy. One key trend here is 'entertainisation', a new theme within the Social Sciences. It denotes the inclusion of entertainment elements (emotions or dramatic conflict) in the information on offer: news has become more sensational, education has embraced 'edutainment'. Nevertheless, we still lack even basic knowledge about the effects of entertainisation as a way of merging information and emotion – on informing, educating and persuading audiences.

Digital humanities

The emerging discipline of E-humanities promises interdisciplinary/overarching insights in the entire range of humanities disciplines.. Digital methods and digital

corpora now allow researchers to discern new patterns and concepts in language, arts, music, literature, and other visual, textual and auditory data that lead to new scientific questions. Developments in linguistics offer a good example of the possibilities of digital humanities. Language is the principal system of human communication, and despite their tremendous variety in structural, semantic and pragmatic features, natural languages show a large degree of fundamental similarity. The cross-linguistic search for the 'language blueprint', the basic layout of any system of human communication, is the main linguistic research task today, transforming traditional views of grammar. Algorithms and tools from computational linguistics play a key role here.

Information and computation
In all of this rapid development, traditional questions concerning the fundamental qualities of information are being asked with a new sense of urgency. What is information? How does it come about? What is its fundamental structure and what are its carriers? How is it stored and used, and how can it be learnt most efficiently? Philosophy and mathematics have addressed such issues, but 'information theory' is far from a closed intellectual chapter. In particular, new logical and statistical models of language use, communication, learning and strategic interaction between information users are emerging that take modern realities as their point of departure. Information technology rests ultimately on the tools provided by computer science, as well as the deeper understanding of information flow provided by its fundamental concepts. Computer science seeks an algorithmic and model-based understanding of content, interaction, context, use and experience. In the design of fundamentally new search engines at the level of human cognition, a key quest is to develop new algorithms for aligning the interpretation of image and text with human and social institutions.

Information law
The production, marketing, distribution and use of information goods and services is subject to information law. Information law addresses a broad range of legal issues at the crossroads of intellectual property, media law, telecommunications law, freedom of expression and right to privacy. It is about the development of a legal framework that takes into account and integrates economic, political, social and cultural information policy objectives.

All of the above questions call for a transdisciplinary apporoach, combining input from the Social Sciences, the Humanities, Computer Science and Logic. The UvA has a long tradition of innovative research around communication and information which has been internationally agenda setting. The answers that these collaborative groups are coming up with may well have far-reaching academic, societal, economic and legal repercussions.

Selection of researchers: Valkenburg (Spinoza, ERC Advanced Grant, VICI), De Vreese (VICI), Kuijpers (ERC Starting Grant), Crone (ERC Starting Grant), Bod (VICI), Venema (VICI), De Rijke (Pionier), Gevers (VICI), Van Benthem (Spinoza), De Goede (VIDI, ERC Starting Grant), Sima'an (VIDI), Endriss (VIDI), Smets (ERC Starting Grant), Kamps (VIDI)

3.7. Fundamentals of Natural Science

This theme analyses complex systems at different levels, from the astronomical to the organism to the cell, molecule and subatomic level. A common question is: what are emergent properties that arise from interactions among parts?

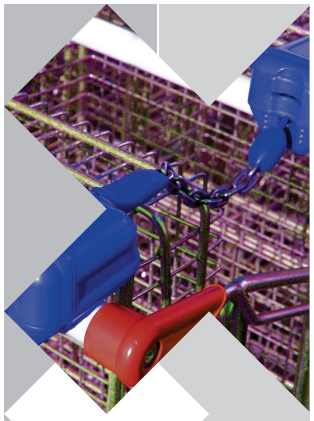
Common approaches include: hypothesis-driven research, starting from chemical and physical properties, and data-driven research, starting with the immense information from radars, LHC detectors, various biological systems including cellular systems, (genome-wide) DNA analysis and visual systems such as MRI, microscopy or spectroscopy. How did the Universe come into being? What are the fundamental laws governing it? How did these basic laws cause very simple ingredients to give rise to the complex world we see today? How did life arise on our blue planet, and did it also arise elsewhere? Can we rigorously derive from first principles the behaviour of a superconductor or of a living cell or organism? Can all complex systems eventually be computed? How do molecular, cellular, metabolic or other pathways contribute to the development and differentiation of tissues and organs, as well as to normal biological functioning and disease? These are some of the deep questions that arise when we try to describe the many phenomena we see around us in terms of universal basic principles. It is clear that in addressing these questions, we need to try to reduce systems to their bare essentials and understand the smallest parts in detail, and to try to understand how very complex phenomena can arise even when only a few simple ingredients interact with each other. And uniting all of these efforts is the quest to discover the patterns underlying natural phenomena and the laws that may give rise to these patterns. The understanding gained in this quest helps us to turn Nature from a capricious foe into a predictable ally.

Selection of researchers: Verlinde (Spinoza, ERC Advanced Grant), Van der Klis (Spinoza, Academy Professor), Wijers (ERC Advanced Grant), Bentvelsen (VICI), Schoutens (Pionier), Opdam (ERC Advanced Grant), Sabelis (KNAW Professor), Schrijver (Spinoza), Caux (VICI), Aerts (ERC Advanced Grant), Wanders (ERC Advanced Grant), Medema (VICI), Versteeg (VICI), Geijtenbeek (VICI), Bolhuis (VIDI en VICI), Verschure (VIDI), Stokman (VIDI), Taylor (VIDI), Colijn (VIDI), Shall (VIDI), Vulpen (VIDI), Ensing (VIDI), Markoff (VIDI), Woutersen (VIDI, ERC Starting Grant), Shadrin (VIDI), Postma (VIDI), Watts (VIDI), Skenderis (VICI) Oomens (VICI), Buma (Descartes)

3.8. Sustainable World

Human society faces an unprecedented challenge in having to create a sustainable future for generations to come. Science needs to be directed at research related to realising a more secure food and water supply, more sustainable energy and mobility, less use of natural resources, a transition to green products and services, and the accompanying legal, political, socio-economic and technological frameworks that enable and encourage different behaviour in individuals, organisations and societies. Challenges range from how to produce chemical commodities in a sustainable way to how to produce food without depleting resources or irreversibly polluting the globe, to how to develop new approaches to transportation and consumption, given that, in the end, all activities of government, business, NGOs and individuals to improve sustainability must add up to a global, sustainable ecosystem.

Selection of researchers: Rep (VICI), Sabelis (KNAW Professor), Rothenberg (VIDI), Munnik (VIDI), Stam (VIDI), Testerink (VIDI), Dubbeldam (VIDI), Schranz (VIDI), Reek (VICI), De Bruin (VICI, ERC Starting Grant), Van der Vlugt (ERC Starting Grant), Brouwer (Descartes)



4. Connecting to business and society

4.1. Relation to the (inter)national research agenda

It goes without saying that the UvA's seven research themes reflect the way its research profile has been developed over recent years. The themes are therefore well linked to national and international research priorities. For example, several research groups at the UvA have been involved in drawing up national 'Innovation Contracts' between science and business under the auspices of the Ministry of Economic Affairs, Agriculture and Innovation (EL&I). This involvement has resulted in the submission of several Letters of Intent, in which UvA research groups pledge their interest in participating in these initiatives. Furthermore, the UvA has informed EL&I about its position with regard to the national innovation policy and expressed its interest and willingness to contribute to the further development of the research agendas for the so-called 'top sectors'. Research groups from the UvA and the VUA have also participated in round-table sessions organised by the business clusters of the Amsterdam Economic Board (AEB). The UvA and the VUA were among the initiators of the AEB, founded in 2010 to facilitate collaboration between regional government, the business community and knowledge institutions (UvA, VUA, InHolland University of Applied Sciences and the HvA, University of Applied Sciences) and, in particular, to aid in establishing a joint strategy for bolstering the economic development and innovative capacity of the Amsterdam metropolitan region (given the OECD conclusions in 2010). The AEB works to promote collaboration in research and to synchronise education supply and job-market demand. Over the next few years, this collaboration will be scaled up and fleshed out with concrete projects in seven key clusters. These Amsterdam-based clusters closely parallel the EL&I 'top sectors'. The table below summarises the mutual connection between the seven research themes and the current economic and societal agendas at the EU, national (EL&I) and regional (AEB) levels. The relations indicated in the table will develop over time as more details on funding from the EU (Horizon 2020), from national and regional sources and from interested partners in industry and business become available.

Table 2. Connection of UvA research themes to regional, national and European challenges

Horizon 2020	EL&I top sector	Economic Board Amsterdam	Transnational Law and Governance	Human Health	Cognition, Socio-Economic Behaviour and Neuroscience	Globalisation, Identity, Inequality and Urban Enviroment	Communication and information	Fundamentals of Natural Science	Sustainable World
Climate action, recourse efficiency and raw materials	Chemistry								
Secure, clean and efficient energy	Energy								
	Water								
Food security, sustainable agriculture, marine and maritime research and bio-economy	Agriculture and food	Flowers and food							
Health, demographic change and wellbeing	Life Sciences	Red life Sciences							
Inclusive, innovative and secure societies									
	High Tech	ICT							
Smart, green and integrated transport	Logistics	Logistics and trade							
	Creative industry	Creative industry							
	Financial sector	Financial and Commercial							
		Tourism and congresses							

A first, and doubtlessly incomplete, survey of present collaboration of the UvA with industry and with scientists elsewhere in the world and in the Netherlands is provided below. Each entry represents a contract or other structural form of collaboration with the external party named. It gives a good impression of the way UvA research is involved with today's challenges and of the knowledge transfer involved.

Research theme	Scientific collaboration	Collaboration with industry and society
1. Transnational Law and Governance	Tinbergen Institute (EUR en VU) UCLA Columbia University	Duisenberg School of Finance
2. Human Health	Landsteiner Laboratory at Sanquin Research AIID (with VUA) MOVE (at VUA) Institute QuantiVision TNO Kwaliteit van Leven 242 not-for-profit partners of AMC (Annex 1)	Landsteiner Laboratory at Sanquin Research Colgate GABA Unilever Oral-B Philips 270 business partners of AMC (Annex 1)
3. Cognition, Socio-economic Behaviour and Neuroscience	Spinoza Centre (with AMC, VU, VUmc, KNAW) Cognitive Science Centre Amsterdam Graduate School Neurosciences Amsterdam (ONWA)	Internationale Stichting Alzheimer Disease (ISAO) Stichting Epilepsie Instellingen Nederland Nationaal Epilepsie Fonds (NEF)

Research theme	Scientific collaboration	Collaboration with industry and society
	EU Marie Curie PhD Graduate School Neurodegeneration in Alzheimer's disease (NEURAD) Dutch Neurofederation Tinbergen Institute (with VUA and EUR) Centraal Planbureau TIER IMF ACM De Nederlandse Bank	Parkinson Foundation Rijksmuseum Beeld en Geluid Eye Film Museum European Commission Ministerie van Financiën Ministerie van EL&I Philips, Corcept Inc, TNO, TI Pharma, BBB Technologies BV, UCB Elsevier, ANP, NRC Handelsblad, Wegener, IBM, Logica, TomTom, Hyves, Yahoo!
4. Globalisation, Identity, Inequality and the Urban Environment	Internationaal Instituut voor Sociale Geschiedenis (IISG, KNAW) NIOD (KNAW) Meertens Instituut (KNAW) Netherlands Institute for Cultural Analysis Huygens ING (KNAW) Nederlandse wetenschappelijke instituten in Athene, Rome and St. Petersburg Instituut voor Erfgoedstudies/CLUE (VUA) Rijksdienst Cultureel Erfgoed Koninklijk Instituut voor Taal-, Land- en Volkenkunde (KNAW) International Institute of Asian Studies (IIAS) Landelijke onderzoeksschool CERES N.W. Posthumus Institute, Research School for Economic and Social History in the Netherlands and Flanders International partners: centres of excellence in Europe, Asia, Africa, Australia and the Americas Netherlands Institute for City Innovation Studies (NICIS) Netherlands Graduate School for Urban And Regional Research (NETHUR) Center for Urban Studies, City University of New York Cornell Center for the Study of Social Inequality Stanford Center for the Study of Poverty and Inequality Wetenschappelijk Onderzoek en Documentatie Centrum (Ministerie van Justitie) Nederlands Studiecentrum van Criminaliteit en Rechtshandhaving (NSCR) Nederlands Instituut voor Forensische Psychiatrie en Psychologie (NIFP) Curium (academisch centrum voor kinder- en jeugdpsychiatrie) De Bascule Amsterdam Centre for Inequality Studies (UvA, VUA) Hogeschool Leiden/HVA/Fontys Hogeschool/Saxion	Cultural organisations in the Netherlands Non-governmental developmental organisations Associations and media organisations of migrant communities in Europe Governmental organisations, including City of Amsterdam, Centraal Bureau voor de Statistiek, Planbureau voor de Leefomgeving, Ministeries van Volksgezondheid, Welzijn en Sport, Veiligheid & Justitie, Onderwijs Cultuur en Wetenschap Inspectie van het Onderwijs, PO-Raad, VO-Raad, Kennisnet, SLO, Nederlands Studiecentrum van Criminaliteit en Rechtshandhaving (NSCR)

Research theme	Scientific collaboration	Collaboration with industry and society
5. Communication and Information	Annenberg School of Communication European Advertising Academy (EAA) European University Institute Foundation for Scientific Research on Organizational and Brand Communication (SWOCC) Nivel Institute for Science and Technology Information of China Network of European Political Communication Scholars Centrum voor Wiskunde en Informatica (NWO) Meertens Instituut (KNAW) Berkeley Center for Law and Technology (UC Berkeley) Berkman Center for Internet and Society (Harvard) Max Planck Institute for Intellectual Property Center for Intellectual property and Information Law (Cambridge University) Institute for Information Science and Media Studies (University of Bergen) Stichting Economisch Onderzoek (SEO)	Commissariaat voor de Media Dance4Life TNS NIPO NICAM Sesamstraat Stivoro Trimbos Intomart GfK Stimuleringsfonds voor de Pers Rijksmuseum Algemeen Nederlands Persbureau NRC Handelsblad Elsevier Science NFI Yahoo! Research TNO FIOD Hyves
6. Fundamentals of Natural Science	Centre Européen de Recherche Nucleaire (CERN) Nationaal instituut voor subatomaire fysica (NIKHEF, NWO) Nederlandse Onderzoekschool voor Astronomie (NOVA) Low Frequency Array consortium (LOFAR) Centrum voor Wiskunde en Informatica (NWO) Instituut voor Atoom- en Molecuulfysica (AMOLF, NWO) Delta Institute for Theoretical Physics (DITP) Dutch Research School for Theoretical Physics Nederlands Instituut voor Systeembiologie NGI Netherlands Genomics Initiative Netherlands Consortium for Systems Biology Netherlands Bioinformatics Centre NGI Netherlands Metabolomics Centre (NMC) Nederlands Kanker Instituut (NKI) Leeuwenhoek Centre for Advanced Microscopy Stichting Academisch Rekencentrum Amsterdam (SARA) Vrije Universiteit	TNO Stuchting Ruimte-Onderzoek Nederland (SRON) ASTRON European Space Agency (ESA) Shell Unilever DSM Eastman BASF Pioneer Rhodia Avantium Seed Valley Bedrijven CBSG Bedrijven Numico Merck Sharp and Dohme NIKON Europe Lambert Instruments
7. Sustainable World	Dutch National Research School Combination Catalysis (NRSCC) Nederlandse Instituut voor Onderzoek in de Katalyse (NIOK)	Energie Centrum Nederland (ECN) Technologisch topinstituut Green Genetics (TTI-GG)

Research theme	Scientific collaboration	Collaboration with industry and society
	Dutch Polymer Institute (DPI) Graduate School Experimental Plant Sciences (EPS) Netherlands Genomics Institute (NGI) NGI Centre for Bio Systems Genomics (CBSG) AMOLF VUA Centre for Bio Systems Genomics (CBSG) Nederlands Centrum voor Biodiversiteit Naturalis (NCB) LifeWatch consortium New Food Safety Authority (nVWA) Nanonext NL EU FINSYS Nederlands Instituut voor Ecologie (NIOO) European Space Agency (ESA)	Rijksinstituut voor Volksgezondheid en Milieu (RIVM) Deltares Gegevensautoriteit Natuur (GaN) DSM Eastman BASF, Pioneer Rhodia, Avantium Seed Valley and Flower Valley bedrijven CBSG gekoppelde bedrijven Unilever Numico

4.2. Relevance in the regional context

As stated in section 2.2, the Amsterdam Academic Alliance's third main goal is to interact more effectively in the regional context, with business, industry and government. Building on the initiatives of the AEB and guided by the Triple Helix model, this will primarily be supported by more collaborative technology transfer (TTO) activities. Universities have a major impact on their region's economy.[13] In the recent BiGGAR report on the Leiden region,[14] it was estimated that every Euro spent on scientific research brings a fourfold economic benefit to the region.

The UvA maintains a high public profile, as is testified to by its many publications in newspapers, books and magazines, the presence of its professors in national committees and planning bureaus such (as the SER and the CPB) and the participation of its professors in public debates. Generally speaking, the UvA has a strong tradition in extending relevant and high-quality knowledge to public and private causes for free or at below (marginal) cost.

Apart from scientists' time, a substantial amount of money (about € 11 million) is invested annually to make knowledge available through the University Library, the Open Access Publishing in European Networks project (OAPEN), the Allard Pierson archaeological museum, some 40 other museum collections, and public debating and lecturing venues such as Spui25 and the Amsterdam Academic Club.

In the Strategic Plan 2011-2014, the UvA identified the creation of (economic) value from its research base as a second important means of knowledge transfer, in addition to the more traditional dissemination of knowledge. This will involve exploring opportunities to create income from its research results, which may be done by selling licenses and

[13] See, for instance, *The Impact of Research Universities on Regional Economies: The Concept of University Products*, Iryna Lendel, http://edq.sagepub.com/content/24/3/210.
[14] BiGGAR Economics, Economic Impact of Research & Commercialisation at Leiden University & Leiden University Medical Centre, 2011, op http://www.lumc.nl/rep/0002/att/110927032411221.pdf.

patents, helping researchers to start up a business or setting up joint spin-off companies and public-private partnerships with existing companies, depending on the amount of investment needed and the expected scientific returns to further fundamental research. Creating value from research serves both the quality of teaching and research and the innovative capacity of business and society, including the creation of new jobs.

For the Strategic Plan period, five main policies were identified for enhancing the creation of value from research. These are institutional level policies in addition to, and in support of, the connection made to the 'top sectors' and other initiatives by individual research groups.

(1) The AAA, the collaboration between the UvA and the VUA, and the AMC and the VUmc, has expressed the ambition to bring all the present technology transfer offices of these institutions, with in total a substantial annual budget (about € 1.5 million from UvA/AMC), into a pan-Amsterdam Technology Transfer Office. This will be done jointly with the Hogeschool van Amsterdam, University of Applied Sciences (HvA) and with the City of Amsterdam, and should be operational in the course of 2013. The new TTO, with offices on all the major campuses in Amsterdam, will be the channel to connect researchers to business and society and help them create value. It will also have the task of identifying and developing value opportunities and assisting scientists in their bids for EU and industry contracts. The creation of the Amsterdam TTO will provide the regional business community with a portal to 6,500 researchers at four academic institutions, thereby giving it a prominent position in the European arena. This bundling of efforts will pave the way for synergy, and improve the means for attracting highly qualified TTO staff to cover all domains, including the Humanities and Social Sciences.

(2) Analogous to the TTO strategy, the strategy of UvA Holding BV will be revised in 2013 and aligned with that of the Amsterdam universities. UvA Holding BV is the holding company through which the UvA holds stakes and shares in spin-off companies, usually for a restricted period of time, and which helps researchers to draw up their business plans. The current holdings are listed in the UvA Annual Accounts.

(3) Together with the City of Amsterdam, the UvA will further develop its land holdings in the borough of Watergraafsmeer, within the existing Amsterdam Science Park, where its new Science Faculty building was opened in 2009. Amsterdam Science Park is aimed at business in the Life Sciences, Sustainable Development and IT sectors, and has one of world's largest internet hubs. It houses the e-Science Research Centre and adjoins the national research institutes of the NWO (CWI, Nikhef, Amolf and, from 2013, possibly SRON[15]). For emerging small and medium-sized businesses, ready-to-use space has been made available through the Matrix Innovation Centre, a joint venture of the UvA, the VUA, the City of Amsterdam and the NWO. The Amsterdam Science Park is not the only physical location available. In the current renovation scheme for the Roeterseiland Campus, which will house the UvA's Social Sciences faculty from 2015, space will be reserved as a breeding ground for small

[15] In January 2012, SRON, the national organisation for space research, indicated its preference for the combined profile of the UvA (in Physics) and the VUA (in Earth Sciences) above other options in the Netherlands and announced its plan to move from Utrecht to Amsterdam Science Park.

spin-off businesses. And at the AMC Medical Business Park, facilities will increasingly be made available to companies working with AMC researchers.

(4) By 2014, the UvA and the VUA's human resources policies will have been adapted to reflect a greater emphasis on societal impact, after experimental pilots in 2012 and 2013. These pilots will result in best practices on how to make value creation an integral part of the system of staff evaluation, and how to promote entrepreneurship in the research institutes. The existing regulations on intellectual property rights, revenue sharing and conflicts of interest will be revised (within the framework of the VSNU Codes of Conduct).

(5) The Amsterdam Centre for Entrepreneurship (ACE) – a joint initiative of the UvA, the VUA, the HvA and InHolland University of Applied Sciences – will be involved. It provides opportunities for students from all backgrounds to receive training in entrepreneurship. The ACE organises and contributes to regular teaching activities at the UvA and the VUA (including a minor in entrepreneurship, a Master's specialisation, and Master's thesis and PhD thesis programmes) and also organises extracurricular activities. The Centre also supports entrepreneurial start-up's by providing facilities (incubators) and connections in local business networks.

(6) The Strategic Plan 2011-2014 defines as key progress indicators: societal impact according to NWO ERiC criteria; cooperation agreements with business and authorities on the Amsterdam Economic Board's agenda; and the effectuation of the all-Amsterdam TTO. The score on some of the KPIs proposed by the Review Committee are included in the data annex. However, only during 2012-2014 will it become clear what measurements will best describe the performance of the UvA in value creation. These will be included in the next Strategic Plan.

The results envisaged by 2014 are therefore:

- The pan-Amsterdam TTO will be up and running and working to the benefit of the Triple Helix in Amsterdam, and the UvA Holding BV will be focusing on value creation from spin-off companies.
- The Amsterdam Science Park complex will be running to professional standards and welcoming Life Sciences, Sustainable Development and IT-oriented businesses. The Matrix Innovation Centre will offer ready-to-use space for small and medium-sized research business initiatives.
- The UvA will have adapted its human resources policies to reflect a greater emphasis on societal impact.
- In cooperation with the Amsterdam Economic Board, the focus in value creation activities will have resulted in the selection of a set of key progress indicators.

5. The education profile of the UvA

5.1. Establishing the education profile

The first step taken to create an education profile for the University of Amsterdam in response to the White Paper consisted of linking the existing Bachelor's and Master's programmes to the UvA's seven research themes. As would be expected from a research university that places high value on research-intensive teaching in its Teaching and Learning policy and the exit qualifications of its study programmes, such a link already exists for the majority of the 59 Bachelor's programmes and the 125 regular and research Master's programmes currently on offer at the UvA. The results appear in the list below.[16] In addition, the UvA currently offers 23 different Master's programmes in initial teacher training which can be taken after completing the related study programme in the same subjects (for economic reasons, the UvA is considering regrouping some of these programmes and therefore reducing their total number).

Table 4. Connection of study programmes to the seven research themes

Research theme	Bachelor's programmes	Master's programmes
1. Transnational Law and Governance	Economie en bedrijfskunde Fiscaal recht Fiscale economie Notarieel Recht Politicologie Rechtsgeleerdheid Sociologie	Accountancy and Control Business Economics Business Studies Conflict Resolution and Governance European Private Law Fiscaal recht Fiscale economie International and European law International Criminal Law Politicologie Public International Law Social Sciences Sociologie
2. Human Health	Biomedische wetenschappen Culturele antropologie en ontwikkelings-sociologie Geneeskunde Sociologie Tandheelkunde	Culturele antropologie en sociologie der niet-westerse samenlevingen International Development Studies Medische antropologie en sociologie Geneeskunde Biomedical Sciences Social Sciences Tandheelkunde
3. Cognition, Socio-economic Behaviour and Neuroscience	Actuariële wetenschappen Bèta-gamma Biologie Biomedische wetenschappen Econometrie en operationele research Economie en Bedrijfskunde Informatica Informatiekunde Kunstmatige intelligentie Liberal Arts and Sciences Muziekwetenschappen Psychobiologie	Actuarial Science and Mathematical Finance Artificial Intelligence Biomedical Sciences Brain and Cognitive Sciences Econometrics Economics Gezondheidszorgpsychologie Information Studies Linguistics Logic Muziekwetenschappen

[16] The list is based on the current CROHO registration of UvA study programmes (as of April 2012) and does not reflect changes that will be made for the year 2012-2013. In September 2012, several programmes in the Humanities will be combined, resulting in a reduction in their number by about 20. The intended regrouping is included in Annex 2 to this document.

Research theme	Bachelor's programmes	Master's programmes
	Psychologie Sociologie Taalwetenschap	Psychology Tinbergen Institute Master of Philosophy in Economics
4. Globalisation, Identity, Inequality and the Urban Environment	Algemene cultuurwetenschappen Algemene sociale wetenschappen Arabische taal en cultuur Archeologie en prehistorie Culturele antropologie en ontwikkelings-sociologie Duitse taal en cultuur Engelse taal en cultuur Europese Studies Franse taal en cultuur Geschiedenis Griekse en Latijnse taal en cultuur Hebreeuwse taal en cultuur Italiaanse taal en cultuur Latijnse taal en cultuur Literatuurwetenschap Media en cultuur Nederlandse taal en cultuur Nieuwgriekse taal en cultuur Onderwijskunde Pedagogische wetenschappen Politicologie Roemeense taal en cultuur Scandinavische taal en cultuur Slavische taal en cultuur Sociale geografie en planologie Sociologie Spaanse taal en cultuur	Algemene cultuurwetenschappen Amsterdam Master's in Medical Anthropology Archeologie Contemporary Asian Studies Cultural Analysis Cultureel erfgoed Culturele antropologie en sociologie der niet-westerse samenlevingen Duitse, Engelse, Scandinavische, Franse, Italiaanse, Spaanse, Roemeense, Slavische, Nieuwgriekse, Arabische, Hebreeuwse taal en cultuur Educational Sciences Geschiedenis Griekse en Latijnse taal en cultuur International Development Studies Kunstgeschiedenis Kunstwetenschappen Latijnse taal en cultuur Literary Studies Literatuurwetenschap Media en cultuur Media Studies Metropolitan Studies Museumconservator Nederlandse letterkunde Nederlandse taal en cultuur Onderwijskunde Pedagogische wetenschappen Planologie Politicologie Preservation and Presentation of the Moving Image Religiestudies Social Sciences Sociale geografie Sociologie
5. Communication and Information	Algemene cultuurwetenschap Communicatiewetenschap Culturele Informatiewetenschap Economie en bedrijfskunde Informatiekunde Kunstmatige intelligentie Liberal Arts and Sciences Media en cultuur Politicologie Sociologie Wijsbegeerte	Archiefwetenschap Artificial Intelligence Business Studies Communicatiewetenschap Communication Science Cultural Analysis Culturele Informatiewetenschap Europese Studies Informatierecht Information Law Journalistiek en media Logic Media Studies Politicologie Rhetoric, Argumentation Theory and Philosophy Social Sciences Sociologie Software Engineering System and Network Engineering

Research theme	Bachelor's programmes	Master's programmes
6. Fundamentals of Natural Science	Aardwetenschappen Bèta-gamma Biologie Biomedische wetenschappen Natuur- en sterrenkunde Scheikunde Wiskunde	Astronomy and Astrophysics Biological Sciences Biomedical Sciences Chemistry Earth Sciences Grid Computing Life Sciences Mathematical Physics Mathematics Physics
7. Sustainable World	Aardwetenschappen Biologie Biomedische wetenschappen Economie en bedrijfskunde Natuur- en sterrenkunde Scheikunde	Biological Sciences Biomedical Sciences Business Studies Chemistry Earth Sciences Physics

Table 5 provides a complementary list of those study programmes[17] which are not identified in the seven research theme descriptions above. For all of these, a decision has not yet been made about whether to continue or terminate the programme. Two criteria are important if a programme not closely linked to one of the research themes is to be continued:

- First, despite the fact that a programme may not be closely linked to a UvA research theme it can be of great importance to the human capital agenda and to the needs of business and the labour market, in particular those of the Amsterdam Economic Board's business clusters. For the same reason, programmes within a research theme may be continued if they have much higher enrolment than is required for the research base itself.
- The second criterion is economic viability. State funding levels for higher education have declined significantly over past decades, even when statutory tuition fee levels are taken into account. The UvA holds the view that it can sustain – by itself or in collaboration with the VUA – cost-effective teaching only when the majority of subjects taught have a certain minimum attendance, unless specific external funding is available (as, for example, with the Master's programme in Conservation and Restoration of Cultural Heritage).

Before 2015, a decision will be made on all the programmes in the complementary list. The decision could result in programmes being combined under broader, more viable labels in the same way as the UvA has decided to reduce the number of Humanities programmes by about 20 as from September 2012. It should be clear that all the programmes that will be continued will be subject to the overall UvA Teaching and Learning policy, which is premised on activity-based and research-intensive teaching and learning. For this reason, the UvA will continue to maintain selected basic research programmes in the relevant areas outside the seven research themes.

[17] Again, taken from the April 2012 CROHO registration.

Table 5. Study programmes not intrinsically related to the seven research themes

Bachelor's programmes	Master's programmes
Bio-exact *)	Arbeidsrecht
Kunstgeschiedenis	Archeologie en prehistorie
Medische informatiekunde	Conservering en restauratie van cultureel erfgoed
Religiestudies	Dramaturgie
Theaterwetenschap	Forensic Science
	General Linguistics
	Mathematics and Science Education *)
Research Master's programmes	Medical Informatics
	Nederlands als tweede taal
Geschiedenis	Notarieel recht
Religiewetenschappen	Operations Research
	Privaatrecht
	Publiekrecht
	Redacteur/editor
	Stochastics and Financial Mathematics
	Tekst en communicatie
	Theaterwetenschap
	Wijsbegeerte

*) this programme is already closed to new entrants

5.2. Differentiation, excellence and internationalisation in teaching and learning

As stated in section 2.2, the second main aim of the Amsterdam Academic Alliance is to further differentiate between study programmes, in order to build stronger ties between excellence in research and teaching and to enhance the international dimension in teaching and learning. The underlying vision of the UvA and the VUA regarding differentiation was already established in their joint SIRIUS project for excellence in higher education (2008-2012). The three main principles of that project were that that a strategy of developing excellence:

- Requires an integral approach between excellence in research and teaching;
- Requires an integral approach between the orientation and the level of and criteria for admission to excellence teaching programmes;
- Should allow for the most talented and motivated students and faculty to interact intensively under the best conditions.

In the past, the UvA-VUA Honours Committee (consisting of the presidents of the UvA's and the VUA's individual Honours committees, the AUC dean, and students) supported and monitored the development of Honours programmes at the undergraduate level, including mobility between the UvA and the VUA (incl. AUC) Honours modules.

The AAA will continue to build on this vision, and the successful policy [18] will be extended over the next few years throught the following actions:

[18] The progress in the SIRIUS project received an 'A' rating in 2011.

- The Honours tracks will be further integrated, i.e. instead of them being longer (30 extra ECTS credits), they will be intensified, resulting in more advanced exit qualifications *(hoger eindniveau)*.[19] Students will continue to qualify on the basis of their GPA (> 7.5) and nominal study progress after year 1. Entry into Honours tracks will be extended to freshmen with a > 8 GPA secondary school certificate and, by invitation, to other promising students. The level of advanced exit qualifications will be expressed through more comprehensive (Honours) thesis requirements (enhanced length, research component, interdisciplinary scope, English language, etc.).
- As more options become available under the Higher Education and Research Act (WHW), individual faculties at the UvA and the VUA will explore other choices for excellence tracks or programmes, including options for the selective admission of students and higher learning levels and outcomes. This will better equip and prepare students for admission to graduate schools.
- The number of selective research Master's programmes will be expanded, supported by the establishment of joint graduate schools. These selective programmes will be characterised by the strong link between research and teaching, whereby they prepare students for a PhD training and participation in research programmes, and by a strong international dimension, as reflected in the composition of the student body, the faculty profile and English as the language of instruction. A sound admissions policy in accordance with internationally recognised and respected methods and standards will be applied as a basis for increasing the enrolment of top students from both the Netherlands and abroad.

5.3. Educating for Amsterdam

The UvA and the Hogeschool van Amsterdam, University of Applied Sciences (HvA, 45,000 students) both have a stake in preparing the next generation for the labour market of the Amsterdam region. They collaborate to widen the choice of learning paths available to students in higher education. Since 2003, the UvA and the HvA have been governed by a joint Executive Board, following a staff merger. The original purposes of this close collaboration were and still are:

- To offer a comprehensive spectrum of excellent professional and academic study programmes;
- To determine, as early as possible and preferably right at the start of the student's academic career, which programme is best suited to him or her;
- To identify Bachelor's students with the ambition and competences that will allow them to go on to obtain an MA or MSc degree without loss of time and with a greater success rate.

The first purpose will be considerably enhanced by the White Paper, since the Paper announces that the application deadline will be set at 1 May instead of 1 September. This will allow students to be matched with the appropriate programme before they actually start their studies. So far, the most progress has been made in reducing the loss of time for students who go on to obtain an academic MA or MSc degree after completing a HvA professionally oriented Bachelor's degree. The key policy followed here has been to

[19] In line with announced changes in the WHW (letter from the OCW Secretary of State, dated 12 April 2012), expected to come into force in the academic year 2013-2014.

include UvA (academic) deficiency courses as minors within HvA Bachelor's programmes and to reduce most of the remaining deficiency programmes to 30 ECTS credits. For the cohorts between 2004 and 2008, the two-year success rate of HBO Bachelor's students enrolled in one-year UvA Master's programmes increased from 52% to 76%. The UvA-HvA collaboration offers a specific competitive advantage to selected VWO-prepared students with a professional rather than an academic inclination. The White Paper creates the opportunity for VWO students at the HvA to complete a professionally oriented programme of 240 ECTS credits in three, more-intensive years (for example, of 80 ECTS credits each), so that (selected) VWO school leavers in a professional programme no longer lose a year and a negative career choice is in fact turned into a positive one. In each HvA programme, one or more of the following options are open to VWO school leavers:

- The opportunity to complete the programme in three, more-intensive years of 80 ECTS credits each;
- The opportunity to complete an excellence track in addition to the regular programme;
- The opportunity to take a combined UvA-HvA programme leading to a double Bachelor's degree, as, for example, in initial teacher training for primary education;
- The opportunity to complete an integrated academic minor as a qualification for direct enrolment in the related UvA Master's programme.

Through these options, the UvA-HvA collaboration holds the key to aligning the programming of the two institutions with the economic agenda of the region. It also adds value to research: both institutions already participate in research programmes relating to, for example, healthcare, information technology, the creative industries and urban studies, each from its own perspective. In the Amsterdam metropolitan region, the UvA and the HvA are joining forces in several Triple Helix initiatives.

The metropolitan economy benefits greatly from the presence of higher education institutions where maintaining and enhancing the educational level of the labour market is concerned. In particular, with respect to the demographic development and the human capital and labour market needs of the Amsterdam region, the OECD (p. 19) pointed to the importance of making greater use of the potential of non-Western minorities and of improving not only their participation but also their completion rates. This is an area of special attention. From prior experience and international partners we have learned that diversity matters, that excellence needs diversity and that this resonates with the global city formation process. Amsterdam hosts over 180 nationalities, which is key to its cultural richness and global attractiveness.

By 2014, the UvA and the HvA, together with the VUA, will be:

- Providing a stronger knowledge base for the region in terms of its relevance to the innovative potential of business and industry, i.e. the creation of new products, companies and jobs;
- Delivering a larger and better-qualified supply of higher education graduates to the regional workforce which in turn will attract and retain firms and investment in the region.

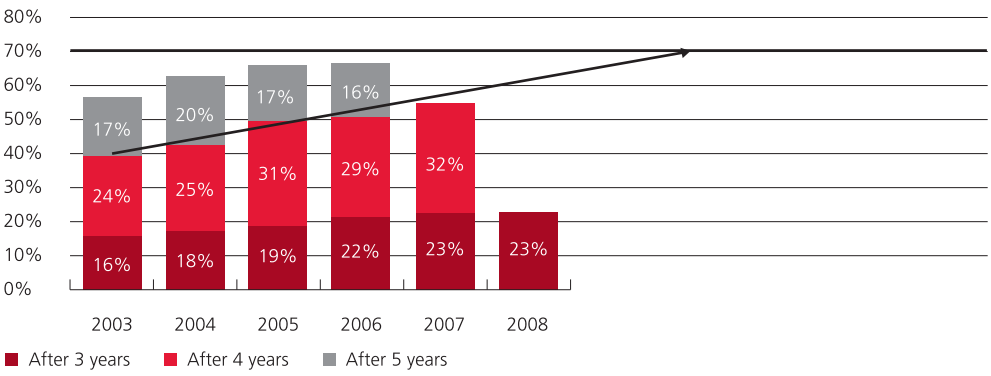
6. Teaching and learning performance

6.1. Improvement of the undergraduate success rate

Located in Amsterdam, the UvA tends to receive many students who have yet to make up their minds about their future but who feel attracted to the big city and the prospects of its labour market. An important task for the UvA is therefore to help these students at the start of their academic career with finding their orientation and choosing the best possible study programme to match their talents and interests. Within the study programmes, the UvA also offers a vast range of courses to choose from, which presupposes a certain competence on the students' part to make the right choice and plan appropriately. Such factors contribute to the fact that many students require more than the nominal number of years to complete their programme and that many decide to switch programmes or abandon their studies altogether. The legal impossibility of pre-selection (except in the case of numerus fixus programmes) limits the policy options for improving success rates.

Nevertheless, the UvA promotes an ambitious mindset in its teaching and learning. The 2011 Teaching and Learning policy document advocates a stronger emphasis on (research-)intensive and activity-based teaching models, with more stringent requirements per semester and fewer resits. Such expectations are deemed fitting for a leading research university. In its Strategic Plan 2011-2014, the UvA reaffirms its pledge to continue improving the success rate in undergraduate programmes[20] by 4% per annum (on average), until it reaches 70% at the end of the period. In 2009, some 20 measures were identified to help attain that goal, referred to internally as the '20 measures of the study success group'. These range from curriculum reform to examination methods, to promoting active participation and improving the quality of tutoring. The graph below shows that the UvA is making good progress, but also, by extrapolation, that an annual increase of 4% is an ambitious goal to achieve with the 2011 cohort, given the nature and characteristics of UvA enrolment.

Figure 4. Study success of post-propaedeutic students
(KUO cohort)



[20] Defined as the percentage of the KUO (*Kengetallen universitair onderwijs*, University Education Indicators) cohort that is granted a Bachelor's degree within 4 years after first enrolment. The KUO cohort refers to those students who, for the first time, enrol in higher education on the basis of their VWO degree and who are still enrolled after one year.

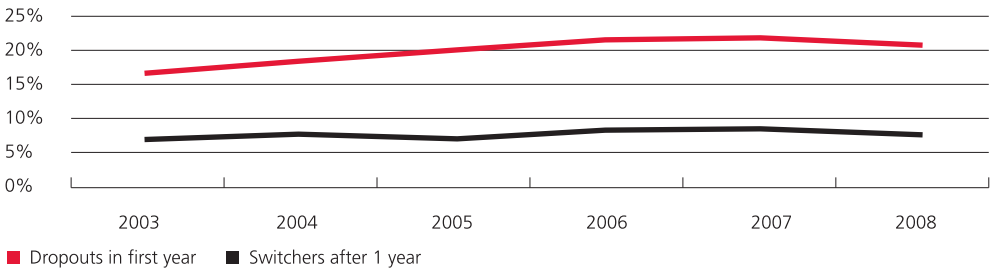
To promote an ambitious attitude towards teaching and learning, by 2014 the UvA will introduce a consilium abeundi (binding study advice concerning the continuation of study, BSA) at the end of each first-year programme, based on a minimum of 42 or 48 ECTS credits. Data show that students who obtain less than 48 – or in some faculties 42 – ECTS credits in their first year are unlikely to obtain their Bachelor's degree within 4 years. This BSA measure expresses the consensus that was reached at the UvA regarding the minimum goal that the students and their teachers are expected to achieve with the aid of the 20 measures developed since 2009.

6.2. Reduction in the number of reversed study programme choices

A new feature in the White Paper is the mandate to reduce the number of students who reverse their choice of study programme. Such changes lead to a loss of time and money to the individual, to the UvA and to society. They also lead to the best brains becoming available to the economy later than was actually possible.

At the UvA, the first year traditionally serves to help students make the best choice for his or her study programme, even if this means having to switch to a different programme or a different type of higher education. Making the wrong choice – students who stop within the first year or who decide to switch to a programme at another faculty – is a persistent problem at the UvA, as the graph below indicates. The White Paper therefore requires that the UvA rethink the intake procedure before the start of the first year, so as to shift at least part of the student's orientation process to a moment before his or her enrolment. Each Faculty will develop and test intake measures that may best suit the student body it attracts, and implement them by 2014. These could range from organising immersion weeks before September to pre-university classes at VWO schools, to web-based testing, with a preference being given to procedures that give the prospective student a realistic impression of what the chosen study programme will imply. To meet the extra cost of these measures, the freshmen parameter in the internal budget allocation will be set at a higher level than the current € 770 per student.

Figure 5. Dropouts in and switchers after the first year of (undergraduate) study – switching meaning to continue at another faculty (Higher Education and Research Plan field, HOOP-gebied)



Because these measures have yet to be developed and tested, and because of insufficient analysis on the cause of reversed choices, the UvA cannot yet set a specified numerical target for the effects in 2014 and thereafter. Moreover, legislative changes regarding tuition fees and state scholarships may also affect the way students will study in future. But the failure percentage in the first year of the 2014 cohort and the percentage choosing to switch between faculties (Higher Education and Research Plan fields,

HOOP-gebieden) will be significantly lower than the present 22% and 8%, respectively. When restricted to students dropping out or switching programmes after 1 February, these figures will be reduced to less than 10% and 4%, respectively.

6.3. Quality and intensity of teaching

According to the White Paper, more ambitious efforts on the part of the students call for more transparent university policies regarding the quality of teaching. The view expressed in the White Paper reflects recent incidents at several Dutch universities of applied sciences, whereas the quality at the Dutch research universities is generally considered to meet world-class standards. Nevertheless, in the eyes of OCW, it stands to reason that the requirements of the White Paper should be fully applicable to research universities as well. The requirements are primarily concerned with the didactical quality of the teaching and the intensity of the teacher-student interaction, especially in the first year.

Regarding the didactical quality, the UvA's Strategic Plan 2011-2014 has already designated the share of teaching staff with a BKO qualification as a key progress indicator. The KPI refers to all teaching staff who are on a contract for more than one year, with the exception of student tutors. By the end of 2011, about 22% of teaching staff had acquired the BKO certificate (40% at the AMC). Because the UvA feels that teaching should generally be done by fully qualified staff, the Strategic Plan target is 90% by the end of 2014, and the UvA feels confident that this goal will be reached. All new teaching staff is required to possess or acquire the certificate.

Good teachers, however, must be seen by students to be effective. The White Paper therefore calls for a minimum average of 12 contact hours between teacher and student each week during term. The UvA is of the opinion that 12 lecture hours strike a good balance between taught classes and self-study, except for study programmes in, for instance, Science and Medicine, where practical and laboratory training will require more taught hours. At the present level of funding, providing 12 lecture hours a week requires that a significant part of the teaching be done (a) in larger groups and (b) by less senior staff.[21] In undergraduate teaching, the UvA will rearrange first-year curricula according to the 12-hours-per-week norm, and earmark for this goal about € 2 million of the 5% conditional teaching grant. Half of the programmes already provide 12 hours or more. The other half provide less than 12 weekly contact hours in the first year, with 20% providing between 8 and 10.

[21] It seems odd that the White Paper norm is 12 contact hours for both HBO and WO, in spite of HBO receiving significantly better funding per student.

7. Proposal for an agreement UvA-OCW

Further to the White Paper 'Quality in Diversity' and the VSNU-OCW 'General Agreement', the University of Amsterdam and the Ministry of OCW agree as follows:

Obligations undertaken by the UvA

Regarding the undergraduate success rate:

(1) The percentage of the KUO (Kengetallen universitair onderwijs, University Education Indicators) cohort[22] that will have been granted a Bachelor's degree before October at the end of their fourth year, will increase by (on average) 4% annually, until it reaches 70% in 2015. As a measure to promote an ambitious teaching and learning mindset, all undergraduate programmes will adopt a consilium abeundi (BSA) based on a minimum of 42 or 48 ECTS credits, at the discretion of the individual Faculties.

(2) In 2014, each Faculty will offer immersion weeks or other pre-term programmes designed to give prospective undergraduate students a realistic understanding of what their study programme will entail, and to help them choose the most appropriate programme. The failure percentage in the first year of the 2014 cohort and the percentage choosing to switch between Faculties (Higher Education and Research Plan fields) will be significantly below the present 22% and 8%, respectively. When restricted to students who drop out or switch programmes after 1 February, these figures will be reduced to below 10% and 4%, respectively.

Regarding quality and diversity:

(3) The UvA and the VUA will continue to pursue the 2009-2012 targets of the Sirius programme through 2015. Every excellent undergraduate student (average grade > 7.5 in year 1 or VWO exam grade > 8) will be offered a place in an Honours' track or other excellence programme (though other promising students may be invited as well). The UvA will extend the number of places in broad undergraduate programmes from the present 280 (at the Amsterdam University College and the Institute of Interdisciplinary Studies) to 400 by 2015. The number of places in two-year research Master's and Science Master's programmes will be extended from 410 to 500.

Regarding staff and funding:

(4) By the end of 2014, 90% of teaching staff will possess a BKO qualification. This applies to staff who have a permanent position or a contract for more than one year. In Medicine, this applies to all permanent teaching staff on a UvA subsidy (full professors, associate professors (UHDs), assistant professors (UDs) and academic medical specialists).

[22] Meaning the students who, for the first time, enrol in higher education on the basis of their VWO degree and who are still enrolled after one year. The 2015 statement applies to the cohort that started in 2011.

(5) In their first year, all undergraduate students will receive at least 12 scheduled hours (breaks included) of teaching and tutoring per week on average, during the two 20-week terms (excluding examination weeks). At the end of term 1, each student will be given a frank assessment of his/her chances of successful graduation, as perceived by his/her teachers.

Regarding the support structure:

(6) In 2013, the UvA will undergo the Institutional Audit (*Instellingstoets kwaliteitszorg*) conducted by the NVAO. Possible issues will be rectified before the end of 2014.

(7) After a massive reduction in UvA indirect costs of € 23 million over the period 2005-2012, support staff will be kept at the present level of 21% of the total FTEs (first '*Berenschot*' definition), which has been adjusted to meet the UvA's current challenges, particularly in IT and Housing. Decisions for the long term will be taken in about 2015, after completion of the greater part of the current € 620 million Building and Rebuilding Plan, which runs from 2005 to 2020.

(8) From 2012, the UvA will publish in its Annual Accounts which monies were spent on teaching and research, respectively, per Faculty, in accordance with its EU Certificate on the Methodology of full costing.

Obligations undertaken by the Ministry of OCW

Regarding the research profile

(9) The Ministry acknowledges that the description of the UvA research profile included in this document satisfies its expectations as set out in the White Paper.

Regarding the legal conditions, the government grant and the tuition fees:

(10) The amendments to the Law (WHW) agreed upon in the *Hoofdlijnenakkoord* (General Agreement) will take effect as from September 2014. In addition, the agreement under (2) above is conditional upon the application date being set at 1 May for the academic year 2014-2015 and onward.

(11) The agreement under (5) above is conditional upon the price per student[23] keeping pace with CPI inflation from the 2011 level.

(12) The Ministry will make the 5% 'conditional' teaching grant available to the UvA for the period 2012-2015 on the signing of this agreement. It will be used, in a traceable way, towards the costs of this contract, mainly the pre-term measures in clause (2), the 220 extra excellence track and research Master's places in clause (3) and the curriculum intensification in clause (5).

[23] Meaning the sum of 4 times the statutory tuition fee *(wettelijk collegegeld)* plus the government grant pertaining to a full, low-price *(laagbekostigd)* 4-year curriculum plus the fee for the Bachelor's and Master's certificates issued.

(13) The Ministry will also contribute € 15-20 million from the 2% 'selective' teaching grant towards the Amsterdam Academic Alliance (AAA), initially to cover the costs of establishing the Amsterdam Faculty of Science and other structual AAA initiatives, structurally to support the AAA Fellowship Programme and to enable it to establish 5-10 new fellowships each year.

(14) The Ministry will not apply budget cuts to the annual government grant to the UvA/AMC and the VUA/VUmc on account of actual or alleged efficiencies arising from collaboration within the Amsterdam Academic Alliance.

Annex 1
Envisaged reduction of CROHO labels by September 2012

Old CROHO programmes	New CROHO programmes with CROHO code
Algemene cultuurwetenschappen	Kunst- en cultuurwetenschappen 60087
Kunstgeschiedenis	
Muziekwetenschap	
Theaterwetenschap	
Dramaturgie (duaal)	Kunst- en cultuurwetenschappen 60828
Cultural analysis	Kunst- en cultuurwetenschappen (rm) 60829
Kunstwetenschappen (rm)	
Wijsbegeerte (rm)	Filosofie (rm) 60128
Wijsbegeerte	Filosofie 60822
Wijsbegeerte van een bepaald wetenschapsgebied	Filosofie 60823
Archeologie (rm)	Archeologie (rm) 60133
Archeologie en prehistorie	Archeologie 60805
Europese studies	Europese studies 60284
Conservering en restauratie van cultureel erfgoed	Conservering en restauratie van cultureel erfgoed 60335
Culturele informatiewetenschap	Erfgoedstudies 60808
Archiefwetenschap (duaal)	Erfgoedstudies 60835
Cultureel erfgoed (duaal)	
Preservation and presentation of the moving image (duaal)	
Museumconservator (duaal)	Erfgoedstudies 60836
Literatuurwetenschap	Letterkunde 60813 Taalwetenschappen 60815
Duitse taal en cultuur	
Engelse taal en cultuur	
Franse taal en cultuur	
Italiaanse taal en cultuur	
Scandinavische talen en culturen	
Slavische talen en culturen	
Spaanse taal en cultuur	
General linguistics	
Literary studies (rm)	Letterkunde (rm) 60814
Nederlands als tweede taal	Taalwetenschappen 60816
Linguistics (rm)	Taalwetenschappen (rm) 60817
Griekse en Latijnse taal en cultuur	Oudheidstudies 60821
Latijnse taal en cultuur	
Religiestudies	Theologie en religiewetenschappen 60824
Religiewetenschappen (rm)	Theologie en religiewetenschappen (rm) 60827
Media en cultuur	Mediastudies 60830
Journalistiek en media (duaal)	Mediastudies 60831
Media studies (rm)	Mediastudies (rm) 60832
Tekst en communicatie (duaal)	Communicatie en informatiewetenschappen 60833
Rhetoric, argumentation theory and philosophy (rm)	Communicatie en informatiewetenschappen (rm) 60834
Arabische taal en cultuur	Midden-Oosten studies 60842
Hebreeuwse taal en cultuur	
Nederlandse taal en cultuur	Neerlandistiek 60849
Redacteur/editor (duaal)	Neerlandistiek 60850
Nederlandse letterkunde (oz)	Neerlandistiek (rm) 60851
Geschiedenis	Geschiedenis 66034
Geschiedenis (rm)	Geschiedenis (rm) 66034
Nieuwgriekse taal en cultuur	---
Roemeense taal en cultuur	

Annex 2
Draft Memorandum of Understanding UvA-VUA

1. De Universiteit van Amsterdam, gevestigd te Amsterdam, hierbij rechtsgeldig vertegenwoordigd door dr. L.J. Gunning-Schepers, voorzitter van het college van bestuur,

hierna te noemen: UvA;

en

2. De Vrije Universiteit, uitgaande van de Stichting VU-VUmc, gevestigd te Amsterdam, hierbij rechtsgeldig vertegenwoordigd door drs. R.M. Smit voorzitter van het college van bestuur,

hierna te noemen: VU,

Overwegende dat:

1.

UVA en VU zelfstandige organisaties zijn met een eigen identiteit en een eigen, herkenbaar profiel, die al een aantal jaren op diverse terreinen succesvol met elkaar en met de andere Amsterdamse kennisinstellingen samenwerken;

UVA en VU die samenwerking altijd hebben verwezenlijkt met inachtneming van ieders verschillende juridische positie en bijzondere status en deze ook in de toekomst willen behouden;

het streven naar een intensievere samenwerking de zelfstandigheid van beide organisaties onverlet laat;

de UvA nauw samenwerkt met de Hogeschool van Amsterdam (HvA) en de Colleges van Bestuur van UvA en HvA sinds 2003 een personele unie vormen;

de VU een bijzondere universiteit is die waarde hecht aan de eigen identiteit en in de samenwerking de eigen identiteit zal behouden;

de OECD in haar Review of Higher Education in Regional and City Development (2010) voor de Amsterdamse regio heeft vastgesteld dat de regio meer profijt kan hebben als de instellingen van hoger onderwijs beter samenwerken met elkaar en met het bedrijfsleven en de overheid;

deze Review voor UvA/HvA en VU aanleiding is om deze mogelijkheden verder te exploreren, in het perspectief van de Metropoolregio Amsterdam, in de “triple helix” (kennisinstellingen, bedrijfsleven, overheid);

zij daartoe onder meer in 2010 een convenant Amsterdam Economic Board hebben gesloten met de overheden en het bedrijfsleven;

zij tevens van mening zijn dat verdere bundeling van krachten hen een sterkere positie kan geven in de (inter)nationale onderzoekswereld en daarmee de basis van een kwaliteitssprong kan vormen voor onderwijs en onderzoek, omdat:

- kwaliteit en reputatie belangrijk zijn bij het aantrekken en binden van talent;
- grote (EU) onderzoeksprogramma's vragen om voldoende massa, internationaal gezien;
- deelname aan het interdisciplinair onderzoek van de toekomst de aanwezigheid in een ruim spectrum van disciplines vergt;
- hun gezamenlijke omvang het investeren in research-infrastructuur beter rendabel maakt;
- zij samen (en samen met tal van andere onderzoeksinstituten in Amsterdam) Amsterdam kunnen versterken als naam in de wetenschappelijke wereld;

de beide academische ziekenhuizen, AMC en VUmc, op 14 september 2011 met een intentieverklaring een nauwe samenwerking aankondigden, die niet alleen in de zorg maar juist ook in onderzoek en onderwijs gericht is op versterking van het geheel aan wetenschappelijk potentieel in Amsterdam;

2.

de staatssecretaris van OCW in zijn Strategische Agenda (2011) de universiteiten heeft opgeroepen te komen tot meer profilering en differentiatie in hun onderzoek en hun onderwijsaanbod, teneinde Nederland te laten blijven aansluiten bij de wereldtop en de grote onderzoeksvragen van de toekomst (grand challenges);

in de regio Amsterdam sprake is van een bijzondere situatie ten opzichte van andere regio's door het binnen korte afstand naast elkaar bestaan van twee grote, brede universiteiten en twee universitair medische centra, alsmede een concentratie van zelfstandige onderzoeksinstellingen van onder andere NWO en KNAW;

UvA en VU samen met AMC en VUmc een betekenisvolle bijdrage willen leveren aan de groeiende maatschappelijke behoefte aan meer bèta- opgeleiden (human capital agenda);

profilering op bovengenoemde en andere relevante wetenschapsgebieden met zich mee zal brengen dat in Amsterdam krachtenbundeling tot kwaliteitsverhoging op het gebied van onderwijs en onderzoek kan leiden;

UvA en VU samen met de HvA en andere kennisinstellingen in Amsterdam willen aansluiten op de grote behoefte aan hoger-opgeleide kenniswerkers die de economische structuur van Amsterdam genereert, voor onder meer het bèta- en medische domein (inclusief life sciences), (zakelijke) dienstverlening, de logistiek, ICT en de creatieve industrie, waarin de stad als centrum van Nederland fungeert;

Verklaren als hun intentie

Artikel 1. Intentie en doelstelling

1.1 VU en UvA hebben, als twee zelfstandige organisaties, de intentie om samen een aantal wetenschappelijke samenwerkingsverbanden (hierna te noemen de Initiatieven) te vormen. De Initiatieven zullen bestaan uit de krachtenbundeling tussen Partijen, en zo mogelijk met andere wetenschappelijke instituten in Amsterdam, op het gebied van verschillende wetenschapsgebieden, en zullen nader uitgewerkt worden in een of meer gemeenschappelijke regelingen. In het kader van de gemeenschappelijke regeling(en) zullen in ieder geval de aspecten inhoud, structuur, services, governance en financiële consequenties nader zijn uitgewerkt.

1.2 Met het vormen van de Initiatieven beogen Partijen:

- een sterke uitgangspositie van "Amsterdam" in (inter)nationale onderzoeksconsortia en bij de toedeling van onderzoeksgelden;
- versterking van de aantrekkingskracht van Amsterdam op wetenschappelijk toptalent, zowel onder studenten als onderzoekers;
- aantoonbare vergroting van de kwaliteit van onderwijs en onderzoek in hun instellingen;
- afstemming en behoud van de breedte in onderwijs en onderzoek die passend is voor de positie van Amsterdam als centrum van cultuur, creatieve industrie en zakelijke dienstverlening;
- een kwaliteitssprong van "Amsterdam" in de wereld van de wetenschap.

1.3 De UvA en VU samenwerking zal zich richten op alle disciplines waar zij tot voordeel strekt, en worden gedreven door het onderzoeken van de mogelijkheden om te komen tot :

- gezamenlijke programmering van onderzoek op terreinen waarop zij elkaar kunnen aanvullen en versterken;
- de vorming van gezamenlijke Amsterdam Graduate Schools voor initieel en postinitieel masteronderwijs;
- de vorming van een geïntegreerde bètafaculteit.

1.4 Met de initiatieven onder 1.3 en met de oprichting van een pan-Amsterdams Technology Transfer Office draagt de samenwerking bij aan het topsectorenbeleid van het rijk en van de Amsterdam Economic Board, en aan de human capital agenda.

1.5 Partijen maken met de staatssecretaris van OCW afspraken over de meerjarenbekostiging van de gevormde samenwerkingsverbanden en dragen langs deze weg actief bij aan de wens uit het Hoofdlijnenakkoord OCW-VSNU dat universiteiten meer dienen samen te werken en tegelijk in die samenwerking zich scherper ten opzichte van anderen dienen te profileren.

Artikel 2. Uitwerking

2.1 De verdere uitwerking vindt plaats onder leiding van een stuurgroep bestaande uit de Colleges van Bestuur van Partijen (verder te noemen Stuurgroep). Deze

Stuurgroep heeft tot taak (de uitwerking van) de samenwerking te sturen en te begeleiden. Daartoe richt de Stuurgroep een programmaorganisatie in.

2.2 Voor elk der domeinen alfa, bèta, recht, economie, gedrag en maatschappij stelt de Stuurgroep in overleg met de betrokken decanen een structuur vast waarin voor het betreffende domein de reeds geïdentificeerde mogelijkheden van samenwerking verder worden onderbouwd en gerealiseerd. De decanen wijzen voor die structuur een programmamanager aan, die tevens verbinding houdt met de programmaorganisatie.

2.3 De domeinen werken binnen de kaders die de Stuurgroep aangeeft en houden de Stuurgroep, via de programmaorganisatie, op de hoogte van hun voortgang en de belemmeringen daarin.

2.4 Partijen verbinden zich tot het slechten van barrières in procedures, bekostigingswijze, toerekening van kosten en systemen die de realisatie van de doelstellingen bemoeilijken, met onder meer als uitgangspunt dat onderwijs en onderzoek, wat gebouwgebonden faciliteiten betreft, gebruik maken van de dienstverlening van de Partij die dat gebouw beheert, zoals zij dat ook voor ACTA en AUC hebben afgesproken.

2.5 Iedere Partij draagt de voor hem uit de samenwerking voortvloeiende kosten, behoudens indien en voor zover zij kosten aanmerken als gezamenlijk en ieder voor de helft te dragen.

Artikel 3. Communicatie

3.1 De communicatie over de onderhavige Intentieverklaring en het verdere traject binnen de organisaties van Partijen (bijvoorbeeld met ondernemingsraden, studentenraden en raden van toezicht) wordt in goed onderling overleg gecoördineerd en afgestemd.

3.2 Ook de communicatie naar derden (bijvoorbeeld zusterinstellingen, toezichthouders en overheid) wordt in goed onderling overleg gecoördineerd en afgestemd. Een Partij zal geen mededelingen doen aan derden zonder voorafgaande instemming van de andere Partij, tenzij zij daartoe op grond van een wettelijk of statutair voorschrift verplicht is.

Artikel 4. Samenwerking met derden

4.1 De samenwerking waarop deze Intentieovereenkomst ziet, staat op geen enkele manier de wetenschappelijke samenwerking met andere universiteiten en onderzoeksinstituten in de weg, doch beoogt het creëren van focus en massa waarmee Partijen een betere positie in zulke samenwerking kunnen verwerven.

4.2 Gedurende de looptijd van deze Intentieverklaring zullen Partijen alleen in onderling overleg met derden onderhandelen over geïnstitutionaliseerde vormen van samenwerking, samenvoeging of samengaan van (een deel van) hun organisatie met een derde partij. Deze bepaling is niet van toepassing, voor zover de derde een van de met Partijen verbonden academische ziekenhuizen of verbonden partijen is.

4.3 Gedurende de looptijd van deze Intentieverklaring ondernemen Partijen geen acties

die afbreuk kunnen doen aan de doelstellingen van Partijen zoals geformuleerd in artikel 1.

Artikel 5. Tijdpad

5.1 Partijen streven ernaar per 1 september 2012 een bestuurlijk voorstel gereed te hebben over de juridische, organisatorische en bestuurlijke vormgeving van de beoogde samenwerking in de in artikel 1.3 genoemde typen van Initiatieven. Dat voorstel richt zich, wat de op grond van artikel 1.3 geïdentificeerde samenwerking in het onderwijs betreft, op samenvoeging van opleidingen, liefst met ingang van studiejaar 2013-2014.

5.2 Partijen streven ernaar in 2013 een samenwerkingsovereenkomst gereed te hebben waarin een nadere uitwerking van de gezamenlijke uitgangspunten en randvoorwaarden wordt vastgesteld.

5.3 Alvorens over zal worden gegaan tot feitelijke tekening van de samenwerkingsovereenkomst zullen Partijen binnen de organisaties de reguliere adviestrajecten doorlopen.

5.4 Partijen zullen zich er voorts van vergewissen dat de samenwerking en de gekozen samenwerkingsvorm passend is binnen de relevante wettelijke kaders, waaronder die van mededingingsrecht.

Artikel 6. Duur van de Intentieverklaring en ontbinding

6.1 Deze Intentieverklaring wordt aangegaan per 16 mei 2012 voor een periode van een jaar. Een eventuele verlenging van de duur van de Intentieverklaring wordt uitdrukkelijk schriftelijk tussen partijen overeengekomen.

6.2 Partijen gaan de Intentieverklaring aan onder de uitdrukkelijke voorwaarde van bevestiging van de zijde van OCW dat de samenwerkingen bedoeld in artikel 1.3 geen grond vormen, noch zullen vormen, voor het toepassen van een doelmatigheidskorting op de rijksbijdrage van Partijen of voor het verminderen van hun gezamenlijke aandeel in de tweede geldstroom.

6.3 Partijen gaan de Intentieverklaring eveneens aan onder de uitdrukkelijke voorwaarde dat OCW en EL&I bewerkstelligen dat de voorgenomen samenwerking op geen enkele wijze in strijd is met het Nederlandse en communautaire mededingingsrecht.

6.4 Deze Intentieverklaring is, tenzij partijen dit uitdrukkelijk anders overeenkomen, met onmiddellijke ingang en zonder nadere rechterlijke tussenkomst ontbonden, indien:

a) partijen op 31 december 2013 geen samenwerkingsovereenkomst zoals bedoeld in artikel 5.2, of geen verlenging zoals bedoeld in artikel 6.1 zijn aangegaan, of

b) vóór 31 december 2013 voor de in deze verklaring omschreven beoogde vormen van samenwerking niet is verkregen:

- de instemming of goedkeuring van de bestuurlijke en toezichthoudende organen, indien vereist, en/of
- een uitspraak van de Ondernemingskamer strekkende tot instandhouding van

de genomen bestuursbesluiten, indien de medezeggenschapsorganen negatief zouden adviseren en daarover een uitspraak van de Ondernemingskamer zouden vragen.

6.5 Indien één of meer van bovengenoemde omstandigheden zich voordoet en het onderhavige traject wordt beëindigd, zijn Partijen over en weer niet gehouden tot vergoeding van enige schade.

Annex 3
Partners of the AMC in society and in industry

(Semi-)overheidsinstellingen

Agentschap College ter Beoordeling van Geneesmiddelen
Agentschap NL
AMC
amfAR
Amstel Academie VU Medisch Centrum
Arkin Academy
BBMRI-NL
C.V.Z. afdeling Onderzoek
Cardiovascular Research Group, Univ. of Manchester
Centrale Commissie Behandeling Heroïneverslaafden (CCBH)
Centre Clermont-Theix-Lyon INFRA-SFC
Civiele Griffie van de Rechtbank 's-Gravenhage
Cognitieve Neuroscience Group
Conseil de L'Europe
CTC Maastricht
CTMM
De Bascule
Dir.Gen. of Higher Education, Ministry of National Education
Dutch Cochrane Centre
Erasmus MC
European Association of Urology
European Science Foundation
Europese Unie
Fondazione IRCCS Policlinico San Matteo
Fundació CREAL
Gemeente Amsterdam
Gemeente Den Haag
Gemeente Eindhoven
GGD Amsterdam
GGD Nederland
Ghent University
Hogeschool INHOLLAND
Hovon Centr Bureau p/a/ VU MC
ICIN
Indraprastha Apollo Hospitals
Innovatiefonds Zorgverzekeraars
Inserm Transfert SA
INSERUM U 700 – Epidemiologie
Institut Municipal d'Investigacio Medica
Institute of Child Health, UCL
Institute of Food Research
Integraal Kankercentrum A'dam
Johns Hopkins University
K.N.A.W.
Karolinska Instituet Fakturor
Leids Universitair Medisch Centrum
LRCB
LSCA (Life Sciences Centre Amsterdam)
Maatschap R&D Cardiologie, St. Antonius Ziekenhuis Nieuwegein
Maxima Medisch Centrum
Mc Master University Medical Centre
Medical University of Vienna
Medisch Centrum Leeuwarden
Ministerie van Defensie (Kerkrade)
Ministerie van VWS
Montreal Hearth Institute Research Coordinating Centre
NKI
Ned. Vereniging voor Obstetrie en Gynaecologie (NVOG)
Nederlands Forensisch Instituut (NFI)
Nederlands Vaccin Instituut
Nederlandse Federatie van Universitair Medische Centra
Nederlands Genomics Initiative
Netherlands Proteomics Centre
NWO
NOW MAG bedrijfsbureau
Productschappen Vee, Vlees en Eieren
Righospitalet, Copenhagen University Hospital
RINO Nascholing en Opleiding GGZ
RIVM, Centrum voor Zorgonderzoek
Senter Den Haag
Slotervaartziekenhuis
Spaarne Ziekenhuis
St. Isala Klinieken
St. Sophia Ziekenhuis
Stichting BioMedical Materials
Stichting Top Institute Pharma
Sunnybrock Health Sciences Centre
SURFfoundation
Swiss Cardiovascular Centre, University Hospital Bern
Swiss Tropical and Public Health Institute
Technologiestichting STW
Trimbos Instituut
UMC Groningen
UMC Maastricht
UMC St. Radboud
UMC Utrecht
Università degli Studi di Milano-Bicocca
Universite D'Auvergne Clermont Ferrand 1 European Office
Universiteit Antwerpen
Universiteit Leiden
Universiteit Maastricht
Universiteit Twente
Universiteit Utrecht – FSW
Universiteit van Amsterdam
University Hospital Zurich, Inst. of Clinical Chemistry
University of Birmingham
University of British Colombia
University of California Los Angeles
University of Cambridge School
University Tor Vergata
UWV, AMS-G1
Veiligheidsregio Kennemerland
VMS Veiligheidsprogramma
VU Faculteit der Psychologie & Pedagogiek
VU Medisch Centrum
William Harvey Research Institute
WOTRO
ZonMw

Stichtingen/collectebusfondsen/charitatieve instellingen

Ass. Decl. Assoc. Sec. Les Templiers
Augeo Foudation
BHN Registratie
Brijder Verslavingszorg B.V.
Cardiovascular Research Foundation
De Hoge Dijk
Deutsche Morbus Crohn/Colitis ulcerosa Vereinigung Bundesgeschaeftsstelle
Diabetesfonds Nederland
EAES, Euro-Notes Foundation
ECMT
EDCTP
Egbers Stichting
ELA (Ass contre le leucodystr.)
Europ Renal Association EDTA
European Academy of Allergy and Clinical Immunology
Fonds NUTS-OHRA
Fonds Psychische Gezondheid
Gesch.f.Biotechn.Forschung mbH
Graduate School Neurosciences A'dam Rotterdam (ON-WAR)
Hans Mak Instituut
Hersenstichting Nederland
Human Frontier Science Program
Infectious Disease Research Institute (IDRI)
Johanna Kinderfonds
KEK
Kennemer Gasthuis
Keystone Symposia
KNCV Tubercolosefonds
Kon. Nederlandse Organisatie van Verloskundigen (KNOV)
Koningin Wilhelmina Fonds
Land.Stichting voor Blinden en Slechtzienden
Landsteiner Stichting voor Bloedtransfusie Research
Leernetwerk (LNW) – Verslavingszorg
Maag, Lever, Darm Stichting
NVOS
Nationaal Epileptie Fonds
Nationaal ICT Instituut in de Zorg
Nationale Hoorstichting
Nederlands Astma Fonds
Nederlandse Brandwonden St.
Nederlandse Cystic Fibrosis Stichting, NCFS
Nederlandse Hartstichting
Nederlandse Internisten Vereeniging
Nederlandse Stichting Leprabestrijding
Nederlandse Vereniging MDL
Nederlandse Vereniging van Graves Patienten
Nederlandse Vereniging voor Gastro-Entrologie
Nederlandse Vereniging voor Haematologie
Netherlands Foundation for Cardiovascular Excellence
Nierstichting NederlaND
Norwegian PSC Research Centre
Nuffic
NVHVV
NVVC (CCPH)
NVZ
ODAS Stichting
Pacific Northwest Gastroenterology Society
Parelsnoer Initiatief
Pink Ribbon
Portuguese Science and Technology Foundation
Prinses Beatrix Fonds
Stichting Vasculair Research Network
Stichting Villa Joep
Stichting WOK
STIVORO
The Cochrane Collaboration
The Int.Federation of MBE
The Korean Society for Molecular and Cellular Biology
PSC Partners Seeking a Cure
Reumafonds
Sanquin Blood Supply Foundation
SBOH
SMA Europe, Assoc. Famiglie SMA Onlus
Societa Italiana di Nefrologia
Société Luxembourgeoise de P'diatrie
St. Rotterdams Kinderrevalidatie Fonds Adriaanstichting
Stichting Instituut Innovative Therapies
St. Wetensch. Onderzoek Chirgurgie en Vaatchirurgie OLVG
Stichting 1ste Lijn Amsterdam
Stichting Aero
Stichting Aidsfonds/SOA AIDS Nederland
Stichting AMC Foundation
Stichting Amsterdams Universiteitsfonds
Stichting Amstol
Stichting Anna Fonds
Stichting Aquamarijn
Stichting Arbouw
Stichting Ars Donandi
Stichting Astma Bestrijding
Stichting ATA Visser-Edel
Stichting Beek Donner
Stichting Benevolentia
Stichting Bewegingsstoornissen AMC
Stichting Blindenhulp
Stichting Centraal Fonds RVVZ
Stichting Cure for Cancer
Stichting CVOI
Stichting Europees Post Graduate GS School
Stichting GEKHVO
Stichting Haemophilia
Stichting Hart en Longen
Stichting Heinsius-Houbolt Fonds
Stichting Hematologisch Oncologische Wetenschap
Stichting HIV Monitoring
Stichting Jim Reekers
Stichting John.L.Emmett Fonds
Stichting KIKA
Stichting Kindergeneeskundig Kankeronderzoek
Stichting Kindermotiliteit
Stichting Kinderoncologie Nederland
Stichting Kinderpostzegels Nederland
Stichting KIR
Stichting Leveronderzoek
Stichting Nationaal Fonds tegen Kanker
Stichting Nationale Computerfaciliteiten
Stichting NBIC
Stichting Nederlands Jeugdinstituut
Stichting Nephron
Stichting NICE
Stichting Onderweg
Stichting PCD Belangengroep
Stichting Perinatale Registratie Nederland

Stichting Pl.&, R. Handchirurgie
Stichting Sonura
Stichting Steun Orthopedie AMC
Stichting Steunfonds Huisartsgeneeskunde
Stichting tot Steun EKZ-AMC
Stichting Transfusie Geneeskunde
Stichting Vanderes
The Michael J. Fox Foundation for Parkinson's Research
The Stolp ALD Foundation
The Waterloo Foundation
Thrombosis Research Institute
Trombose Stichting Nederland
Vereniging ZiZo
Wetenschappelijk Fonds Bloedtransfusie Onderzoek

Bedrijfsleven

AAIPharma
AAIPharma Deutschland GmbH & Co KG
Abbott BV
Abbott Healthcare Products BV
Abbott Laboratories
Abbott Laboratories USA
Abbott Vascular (Diegem)
AbD Serotec
Abiomed Europe GmbH
Abiomed Inc.
ABN AMRO Bank NV
Academic Pharmaceutical Productions BV
Actelion Pharmaceuticals Ltd.
Actelion Pharmaceuticals Ned. BV
Actelion Pharmaceuticals Inc.
ADIR
Agis Zorgverzekeringen
Am,bulance Oost, Cluster Actute Zorgdiensten
AMCAS
Amdix BV
Amgen BV
Amsterdam Innovatie Motor
Amsterdam Molecular Therapeutics BV
Anadys Pharmaceuticals Inc.
AngioCare BV
Apeptico Forschung und Entwicklung GmbH
Arthrogen BV
Assissa Consultancy Europe
Astellas Pharma BV
Astellas Pharma Europe BV
AstraZeneca
AstraZeneca BV
AstraZeneca Pharmaceuticals LP
Axcan Pharma Inc. Canada
BaroSence, Inc.
Barrx Medical Inc.
Baxter B.V.
Baxter Healthcare Corporation
Baxter Innovations GmbH
Bayer BV
Bayer Schering Pharma AG
BEGETU
Benecke Consultants BV
BIOCLINICA
Biolex Therapeutics
Biomarin Pharmaceutical Inc.
Biomet Nederland BV
Blackwell Publishing Ltd.
BMEYE
Boehringer Ingelheim BV
Furness Car Amsterdam BV
Furore
Galapagos BV
GE Healthcare Diagnostic Imaging
Genactis SAS
Genmab A/S
Genzyme Corporation
Genzyme Europe BV
Given Imagine GmbH
GlaxoSmithKline BV
GlaxoSmithKline Ltd.
GlaxoSmithKline Research & Development Ltd.
Boston Scientific Nederland BV
Bracco Imaging BV
Braun Medical BV
Bristol Meyers Squibb
Bristol Meyers Squibb BV
Bristol Meyers Squibb EMEA SARL
Bristol Meyers Squibb Int. Co
Bureau STZ
Care Cure & More Communication Services
Celera Corporation
Cellerix S.A.
Chiesi Farmaceutici SpA
Chiltern International BVBA
Clinsys Clinical Research Inc.
Cochlear AG
Cochlear Europe
Conva Tec Nederland BV
Cook Medical Ireland Ltd.
Cordis Johnson & Jonhson Belgium
Cougar Biotechnology, Inc.
Covance Inc.
Crucell Holland BV
CSL Behring BV
CSL Behring GmbH
CuraTrial SMO & Research BV
Cure & Care Development
Daiichi-Sankyo Development Ltd.
Daiichi-Sankyo Pharma Development
Daiichi-Sankyo Nederland BV
Danone Research
Danone Research BV
Debiopharm SA
DJO UK, Ltd.
Dr. Falk Pharma GmbH
Dr. Falk Pharma GmbH, c/o ClinResearch GmbH
Eisai Inc.
Eli Lilly Nederland BV
ESPN
ESTAV-Centro
Ethicon Endo Surgery
Ethicon Endo-Surgery (Europe) GmbH
Ethicon Endo-Surgery, Inc.

Eurcongress Conference Management
EoroVasc Ltd
Exencia Pharma Academy
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F. Hoffman-La Roche AG
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Medsim BV
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Medtronic Trading NL BV
Menarini Farma Nederland
Merck & Co. Inc.
Merck BV
Merck Research Laboratories
Merck Serono SA, Conpany reg.in CH- 1267 Coinsins
Merck Sharp & Dohme BV
MicroScan BV
Miracor Medical Systems GmbH
Molnlycke Health Care AB
Movetis NV
MSD BV
Nederlandse Vereniging van Audicienbedrijven
NIPED / NDDO Institute for Preventions and Early Diagnostics
Novadic-Kentron
Novartis Pharma AG
Novartis Pharma BV
Novimmune SA
Novo Nordisc A/S
Novo Nordisk Farma BV
NS Reizigers

GlaxoSmithKline Service Unlimited
GlaxoSmithKline, GSK US Processing/Genpact AP
Greensplash Ltd.
Guerbet Nederland BV
HAL Allergy bv
Hamilton Health Sciences Co
Harrison Clinical Research Benelux
Héma-Québec
HepArt Medical Devices BV
Hilton Worldwide
HMP Communications, LLC