

Deloitte.

Researchers' Report 2013

**Country Profile:
Netherlands**



TABLE OF CONTENTS

| | |
|--|-----------|
| 1. KEY DATA | 3 |
| <i>National R&D intensity target</i> | 3 |
| <i>Key indicators measuring the country's research performance</i> | 3 |
| <i>Stock of researchers</i> | 4 |
| 2. NATIONAL STRATEGIES | 4 |
| 3. WOMEN IN THE RESEARCH PROFESSION | 5 |
| <i>Measures supporting women researchers in top-level positions</i> | 5 |
| <i>Measures to ensure a representative gender balance</i> | 6 |
| <i>Maternity leave</i> | 6 |
| 4. OPEN, TRANSPARENT AND MERIT-BASED RECRUITMENT | 6 |
| <i>Recruitment system</i> | 6 |
| <i>Open recruitment in institutions</i> | 6 |
| <i>EURAXESS Services Network</i> | 7 |
| 5. EDUCATION AND TRAINING | 7 |
| <i>Measures to attract and train people to become researchers</i> | 7 |
| <i>Doctoral graduates by gender</i> | 8 |
| <i>Funding of doctoral candidates</i> | 8 |
| <i>Measures to increase the quality of doctoral training</i> | 9 |
| <i>Skills agenda for researchers</i> | 9 |
| 6. WORKING CONDITIONS | 10 |
| <i>Measures to improve researchers' funding opportunities</i> | 10 |
| <i>Remuneration</i> | 10 |
| <i>Researchers' Statute</i> | 10 |
| <i>'European Charter for Researchers' & the 'Code of Conduct for the Recruitment of Researchers'</i> | 10 |
| <i>Autonomy of institutions</i> | 11 |
| <i>Career development</i> | 11 |
| <i>Shift from core to project-based funding</i> | 11 |
| <i>Social security benefits (sickness, unemployment, and old-age)</i> | 11 |
| 7. COLLABORATION BETWEEN ACADEMIA AND INDUSTRY | 11 |
| 8. MOBILITY AND INTERNATIONAL ATTRACTIVENESS | 11 |
| <i>Measures aimed at attracting and retaining 'leading' national, EU and third country researchers</i> | 11 |
| <i>Inward mobility (funding)</i> | 11 |
| <i>Outbound mobility</i> | 11 |
| <i>Promotion of 'dual careers'</i> | 12 |
| <i>Portability of national grants</i> | 12 |
| <i>Access to cross-border grants</i> | 12 |

1. Key data

National R&D intensity target

“In 2000-2010, R&D intensity has fluctuated between a minimum of 1.77% (2008) and a maximum of 1.94% (2000). In 2011, the Netherlands had an R&D intensity of 2.04%. The Netherlands set the target to increase R&D intensity to 2.5% by 2020. R&D intensity will have to increase at an average annual growth rate of 3.2% over the current decade if the 2020 target is to be reached. Meeting that target constitutes a challenge, considering recent trends.

The research system in the Netherlands is characterized by a relatively low R&D intensity in the private sector and a relatively high R&D intensity in the public sector. In this context, it was worrying that in the 2011 and 2012 public budgets, R&D investment decreased by 3.7% and 4.1% respectively. A further decrease of 3.3% is planned for the 2013 budget. This decrease is concentrated within the category of applied research, due to a negative trend since the last four years. This however reflects at least partly a shift from direct to indirect funding of R&D, with a stronger weight given to tax incentives for enterprises performing R&D. If we add foregone tax revenues to the budget expenditures, the variation in respect to the previous year is indeed much more positive (2011: -0.2%, 2012: +0.7%; 2013 foreseen at -2.3%) Other measures include specific schemes for SMEs and support for public-private partnership in key technologies.

These measures respond to the most outstanding challenge for the R&I system in the Netherlands, namely falling business R&D investment, which in 2010 stood at 0.87% of GDP, well below the EU average of 1.23%. This gap has been addressed by successive governments during the last decade through R&I policies with the aim of creating an attractive climate for R&I intensive firms, including firms from abroad. The Netherlands has a very large services sector and a relatively small manufacturing sector, oriented predominantly towards medium technology intensive industries. Furthermore, business R&D investments are concentrated in a limited number of large multinational firms. Over the last decade research and innovation has become increasingly international and EU Member States having a concentration of R&D in MNEs are particularly affected by an outsourcing of R&D activities in global value chains.

The Netherlands has been successful in its participation in FP7 with an EC contribution of EUR 1.8 billion up to mid-2012, representing 6.8% of total EC funding. The success rate was 25.65%, which is the second highest among the Member States. The Netherlands is ranked the 5th Member State in numbers of participants and in the 6th position in budget share. The top collaborative links in FP7 are with Germany, the United Kingdom and France. For the 2007-2013 period, the Netherlands has been allocated nearly EUR 818 million of ERDF Structural Funds for R&I and entrepreneurship (almost half of the ERDF funds) and plans to invest some EUR 214 million to support business and in particular SMEs¹.

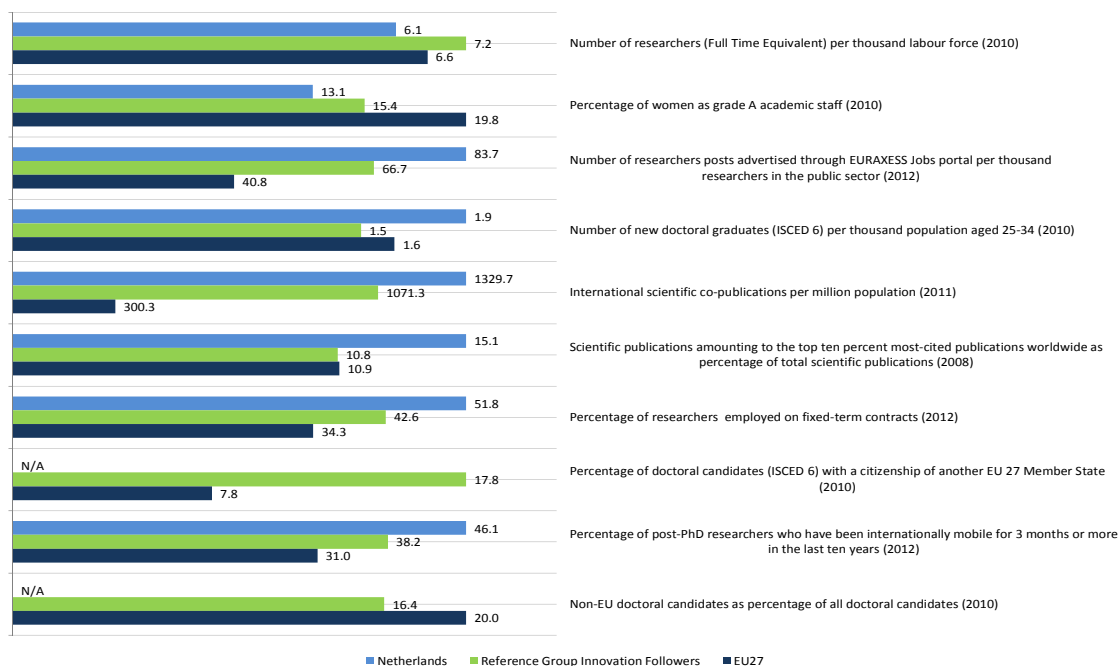
Key indicators measuring the country's research performance

The figure below presents key indicators measuring the Netherlands' performance on aspects of an open labour market for researchers against a reference group and the EU-27 average².

¹ European Commission (2013), “Research and Innovation performance in EU Member States and Associated countries. Innovation Union progress at country level 2013”

² The values refer to 2012 or the latest year available

Figure 1: Key indicators – Netherlands



Source: Deloitte

Data: Eurostat, SHE Figures, EURAXESS Jobs Portal, UNESCO OECD Eurostat education survey, Innovation Union Scoreboard 2013, MORE2

Notes: Based on their average innovation performance across 25 indicators, Austria, Belgium, Cyprus, Estonia, France, Ireland, Luxembourg, Netherlands, Slovenia and the UK show a performance close to that of the EU-27. These countries are the Innovation followers³.

Stock of researchers

The table below presents the stock of researchers by Head Count (HC) and Full Time Equivalent (FTE) and in relation to the active labour force.

Table 1: Human resources – Stock of researchers

| Indicator | Netherlands | EU Average/Total |
|---|-------------|------------------|
| Head Count per 1 000 active labour force (2010) | 7.40 | 10.17 |
| Head Count (2010) | 64 829 | 2 435 487 |
| FTE per 1 000 active labour force (2010) | 6.13 | 6.64 |
| Full time equivalent (FTE) (2010) | 53 703 | 1 589 140 |

Source: Deloitte

Data: Eurostat

2. National strategies

The Dutch Government has put in place a range of measures aimed at training enough researchers to meet its R&D targets and at promoting attractive employment conditions in public research institutions. The table below presents key programmes and initiatives intended to implement the strategic objectives to train enough researchers to reach the Netherlands’ R&D targets, to promote attractive working conditions, and to address gender and dual career issues.

³ European Commission (2013), “Innovation Union Scoreboard 2013”

Table 2: National strategies

| Measure | Description |
|---|--|
| Agenda for Higher Education Policy: Quality in Diversity (2011) | <p>In July 2011, the Ministry of Education, Culture and Science published a Strategic Agenda for Higher Education, Research and Science for 2011-2015. The agenda aims to strengthen the quality of education, focus on specific economic sectors (such as water, energy etc.), and strengthen curiosity-driven (fundamental) research.</p> <p>The priorities in higher education and public research focus on:</p> <ul style="list-style-type: none"> – A quality investment (reallocation of money) in higher education of EUR 230 million; – A different way of financing higher education, i.e. more quality-driven and with a focus on specific economic sectors; – Specific targets for the universities with regard to quality, focus and exploitation of results which should result in a reduction of the number of university courses, a strengthening of the labour market and a greater focus on research; and – Support from universities for the policy of the Dutch government to strengthen certain top sectors. |
| Growing Through Knowledge - NWO Strategy 2011-2014 | <p>The Netherlands Organisation for Scientific Research (NWO) funds top researchers at universities and institutes, and steers the course of Dutch science by means of subsidies and research programmes. The main objective of the NWO is to invest on a greater scale in world-class scientists and excellent research. NWO has chosen the following six priorities for its policy over the next few years:</p> <ul style="list-style-type: none"> – Strengthening investment in talent and in response-mode research; – Investing with partners in themes inspired by society's needs; – Encouraging and facilitating knowledge utilisation; – Strengthening international cooperation within and outside Europe; – Promoting access to high-quality research facilities; and – Strengthening the national role of NWO institutes. |
| Strategic Agenda for Higher Education and Science Policy (2011-2015) | <p>The Strategic Agenda produced by the Social and Economic Council presents its views on the position and role of higher education and research in the Netherlands. This advisory report set out the direction for higher education, and science and research policy for the four-year period. It focused on a number of socio-economic themes from the education-labour market perspective in particular. The report pointed out the need for basic quality in higher education as well as quality in the teaching staff, in particular at universities of applied sciences. Finally, the Council expressed its belief that the funding system for higher education should focus less on numbers of first-year students and total student numbers, and more on quality and excellence, and be simple and transparent.</p> |

Source: Deloitte

3. Women in the research profession

Measures supporting women researchers in top-level positions

In 2010, the percentage of women grade A academic staff was 13.1% in the Netherlands compared with 15.4% among the Innovation Union reference group and an EU average of 19.8%⁴.

In the Netherlands, the representation of women in science remains low, especially in leading positions. Gender equality in science has not been a political topic in the Netherlands in recent times; issues related to the position of women are of secondary policy interest, whereas realising the full potential of labour force participation, including of women, is promoted.

The only programme promoting an increase in the number of women in leading research positions is Aspasia. The Aspasia programme was launched in 1999 by the Netherlands Organisation for Scientific Research and is designed to alleviate the under-representation of women in the upper echelons of academia. The aim of Aspasia is to encourage the promotion of female academics to senior lecturer (or professorial) level.

Aspasia is linked to two of the NWO's competitive grant schemes⁵: Vidi (for experienced researchers) and Vici (for researchers of professorial quality). Vidi and Vici are part of the NWO's Innovational Research Incentives

⁴ See Figure 1 "Key indicators – Netherlands"

Scheme. To qualify as an Aspasia candidate, a female applicant for a Vidi or Vici grant must either have been awarded such a grant, or – starting from 2010 – have had her application judged worthy of a grant following the interview procedure, but been unsuccessful in obtaining one because of resource constraints. Executive Boards that promote such applicants to senior lecturer or professor within a year of the Vidi or Vici grant award decision may, subject to certain conditions, qualify for a premium. The premium available for the promotion of each grant recipient is EUR 100 000. The premium offered for the promotion of a grant-worthy but unsuccessful candidate is EUR 200 000.

The Aspasia premium may be used in a number of ways. However, a condition of grant is that the Board must use at least EUR 50 000 of the premium to fund more generic diversity policy measures by the university or faculty to increase the upward movement of female staff within the institution.

Following the Vidi and Vici award decisions, the NWO contacts women Vidi and Vici recipients and grant-worthy but unsuccessful applicants, who are not senior lecturers or professors, and if the candidate agrees, the NWO will propose to her Executive Board that she should be promoted under the Aspasia scheme.

Measures to ensure a representative gender balance

The Government of the Netherlands has no quotas and/or national targets and/or other measures in place to ensure a representative gender balance for researchers (at any level of the career ladder, or on selection/evaluation committees).

Maternity leave

The Netherlands has no legislation dealing exclusively with the possibility of interrupting and extending a grant’s validity because of maternity leave. Public funders have autonomy to take their own decision, but generally follow the Anti-discrimination Act (1999).

Maternity leave is fully paid; parental leave is voluntary and partly paid for by the parents themselves. Parents can work full time or part time while receiving parental benefit. Accordingly, parental benefit can be considered a form of care benefit.

4. Open, transparent and merit-based recruitment

Recruitment system

In the Netherlands, each institution is an autonomous employer with its own personnel and recruitment policies and no legal instrument exists to influence the autonomy of the institution. There is in some cases a statutory obligation to publish a job vacancy on relevant national online platforms.

Open recruitment in institutions

The table below presents information on open recruitment in higher education and public research institutions.

Table 3: Open recruitment in higher education and public research institutions

| Do institutions in the country currently have policies to ...? | Yes/No | Description |
|--|----------------|--|
| – publish job vacancies on relevant national online platforms | To some extent | In some cases, there is a statutory requirement to publish job vacancies on relevant national online |

⁵ The Innovational Research Incentives Scheme targets individual researchers at various stages of their careers. It includes three forms of grant:

- Veni: for researchers who have recently completed their doctorates to allow them to continue to develop their ideas (funding: EUR 250 000);
- Vidi: for experienced researchers who want to develop their own innovative line of research and appoint one or more researchers (funding: EUR 800 000); and
- Vici: for researchers of professorial quality to build their own research group (funding: EUR 1.5 million).

The Scheme was set up in 2000 by NWO, KNAW and the universities jointly. The aim is to promote innovation in academic research. The scheme is directed at providing encouragement for individual researchers and gives talented, creative researchers the opportunity to conduct their own research programme independently and give a boost to talented researchers to enter and remain committed to the scientific profession. It targets both international top talents and excellent national researchers (men and women) who are among the best 10-20% of their age group.

| Do institutions in the country currently have policies to ...? | Yes/No | Description |
|--|----------------------|--|
| | | platforms. |
| – publish job vacancies on relevant Europe-wide online platforms (e.g. EURAXESS) | To some extent | In some cases, there is a statutory requirement to publish job vacancies on relevant Europe-wide online platforms. |
| – publish job vacancies in English | Yes | Institutions publish job vacancies in English. |
| – systematically establish selection panels | Yes | Institutions have policies to systematically establish selection panels. |
| – establish clear rules for the composition of selection panels (e.g. number and role of members, inclusion of foreign experts, gender balance, etc.) | Yes | Institutions have policies to establish clear rules for the composition of selection panels. |
| – publish the composition of a selection panel (obliging the recruiting institution) | No | Institutions do not have policies to publish the composition of selection panels. |
| – publish the selection criteria together with job advert | No or to some extent | Institutions may publish the selection criteria together with job advert ⁶ . |
| – regulate a minimum time period between vacancy publication and the deadline for applying | No | Institutions do not have policies to regulate a minimum time period between vacancy publication and the deadline for applying. |
| – place the burden of proof on the employer to prove that the recruitment procedure was open and transparent | No | Institutions have no policies on the burden of proof to prove that the recruitment procedure was open and transparent. |
| – offer applicants the right to receive adequate feedback | Yes | Institutions offer applicants the right to receive adequate feedback. |
| – offer applicants the right to appeal | No | Institutions do not have policies to offer applicants the right to appeal. |

Source: Deloitte

EURAXESS Services Network

In 2012, the number of researcher posts advertised through the EURAXESS Jobs portal per thousand researchers in the public sector was 83.7 in the Netherlands compared with 66.7 among the Innovation Union reference group and an EU average of 40.8⁷.

Information on entry conditions, transfer of social security and pension contributions, accommodation, and administrative assistance is available at the national EURAXESS portal.

The EURAXESS Netherlands portal cooperates intensively with the Ministry of the Interior, the Ministry of Foreign Affairs and the Ministry of Social Affairs and Work. Representatives of EURAXESS NL are involved in strategic working groups and committees of the Ministry of Education, Culture and Science dealing with relevant issues (human resources in R&D, mobility, visa conditions, health and social security etc.)

EURAXESS NL is also linked to ‘Academic Transfer’ (which is linked to the EURAXESS Jobs portal). This portal makes it possible for research organisations to register, to submit job vacancies and to search for researchers in the Netherlands and other countries.

5. Education and training

Measures to attract and train people to become researchers

The Government of the Netherlands aims to stimulate the interest in and enthusiasm of children, talented young pupils and students in (a career in) research. This has been embedded in the policy for science communication (former policy of public understanding of science). The Ministry of Education, Culture and Science funds the Netherlands Centre for Science and Technology and its NEMO Science Center to implement policies for science communication.

⁶ For example, if Dutch as language is required for academic staff (Dutch language and culture), the potential candidate needs to speak and write Dutch

⁷ See Figure 1 “Key indicators – Netherlands”

The Dutch government, education and business sectors commissioned the National Science & Technology Platform to ensure sufficient availability of people who have a background in scientific or technical education. This approach was formulated in the *'Deltaplan Bèta Techniek'*, a memorandum on preventing shortages. The memorandum aimed to achieve by 2010 a structural increase of 15% more pupils and students in scientific and technical education and to use existing talent more effectively in businesses and research institutes. The increase of 15% more pupils and students in scientific and technical education was achieved in 2008/2009.

The Platform continues to target schools, universities, businesses, ministries, municipalities, regions and sectors to ensure that the future supply of knowledge workers will meet future demand.

However, the government has neither put in place measures to stimulate master's degree students to take up a science or research career at doctoral level nor to increase the number of doctorates in science, technology, engineering and mathematics (STEM) subjects.

Moreover, in 2008, the Ministry of Education, Culture and Science established the Sirius Programme which is intended to generate insight into successful innovation and other strategies for the enhancement of excellence in higher education. The Sirius Programme has a double focus: on the one hand, on the goals, vision and performances institutions wish to achieve, and on the other hand, on the learning function of the programme as a whole. Overall, the programme aims to build up a community of participating and interested institutions oriented towards the gathering and sharing of knowledge. In this way, the institutions can learn both from themselves and from others.

The Ministry invited all higher education institutions (research universities as well as universities of applied sciences) to submit a plan for the promotion of excellence, either independently or in collaboration with other institutions. The largest portion of the Sirius budget was earmarked for the Bachelor's programme launched in 2008 (EUR 48.8 million). Five institutions started implementation in their Bachelor programmes in late 2008. In 2009, fourteen others followed. The Master's programme, with a budget of EUR 12.2 million, started in the spring of 2010 with six universities implementing their programmes in the Master track. These funds provide the first incentive aiming to inspire the top 5% of the students to achieve excellence. These budgets are for the whole period and are not allocated on an annual basis.

By 2011, universities had reached a level of almost 5% of Bachelor students participating and universities of applied research had reached a level of 1.5-2% of Bachelor students participating; in total around 7000 students have participated in excellence programmes.

An overall audit report submitted in early 2012 indicated the following mid-term results: first, a cultural shift from offering the same education to everyone towards more diversification, with a positive effect on the overall quality of education; and second, the higher education institutes involved have agreed to achieve a participation level of 5%, and to continue offering excellence Programmes when Sirius runs out in 2014.

Doctoral graduates by gender

The table below shows doctoral graduates in the Netherlands by gender as a ratio of the total population cohort.

Table 4: Doctoral graduates by gender

| Indicator | Netherlands | EU Average |
|--|-------------|------------|
| New doctoral graduates (ISCED 6) per 1 000 population aged 25-34 (2010) | 1.9 | 1.5 |
| Graduates (ISCED 6) per 1 000 of the female population aged 25-34 (2010) | 1.6 | 1.4 |
| Graduates (ISCED 6) per 1 000 of the male population aged 25-34 (2010) | 2.2 | 1.6 |

Source: Deloitte

Data: Eurostat

Funding of doctoral candidates

The table below presents the two different funding paths accessible to doctoral candidates in the Netherlands.

Table 5: Funding opportunities for doctoral candidates

| Funding scheme | Description |
|----------------------|--|
| Employment contracts | Until recently, all PhD candidates in the Netherlands were considered to be employees, ensuring that certain rights and obligations laid down by law were provided via Collective Employment |

| Funding scheme | Description |
|----------------|--|
| | <p>Agreements (CAOs). However, some universities currently appoint PhD candidates on the basis of a grant. In doing so, these universities are attempting to provide a place for more PhD candidates for the same amount of money, thus improving productivity at the expense of the employment benefits of PhD candidates. Accordingly, these grant-PhD candidates are not entitled to social benefits, such as the right to maternity leave, pension benefits and sick pay. This could make a PhD project less attractive than functions in the private sector.</p> <p>The current PhD system, including a fixed salary scale, contract periods, and an education and supervision plan, was introduced in 2005. Universities have started looking for alternative methods of appointing PhD candidates so as to decrease costs:</p> <ul style="list-style-type: none"> - First flow of funds: each university receives a lump sum from the government for all activities which can be categorised internally as teaching and research. The lump sum is based on a funding model comprising various teaching and research parameters, with the aim of distributing the sum total of funds to the universities. Some of these parameters are based on the universities' performance in teaching (degrees) and research (PhDs); - Second flow of funds: this flow of funds is made up of the funding that the universities receive from the NWO (in the form of subsidies for appointing researchers) and the Royal Netherlands Academy of Arts and Sciences (KNAW) (in the form of funding for Academy Professors). The second flow of funds focuses specifically on the research activities of the universities and research facilities; - Third flow of funds: this flow of funds comprises additional funding from public and private sources, both national and international. It comes from contract work for both research and teaching; and - Fourth flow of funds: tuition fees, which are paid directly by students. <p>Finally, universities offer opportunities for applicants who are not hired to do a PhD. Highly talented and motivated applicants gain admission to a PhD programme:</p> <ul style="list-style-type: none"> - On a scholarship, for example from a foreign government, an international organisation or a Dutch fund for foreign PhD candidates; - As an employee of another employer, for example as an employee of a university of applied sciences who has been given a PhD voucher; and - As an external PhD candidate. These candidates work on a dissertation in their own time under the guidance of a university professor. They need to find a supervisor themselves. Once a supervisor is found, the supervisor develops and agrees a plan of work. |

Source: Deloitte

Measures to increase the quality of doctoral training

In 2009 and 2010, NWO developed a programme to strengthen the Dutch PhD system at the request of the Minister for Education, Culture and Science and in collaboration with the VSNU (Association of Universities in the Netherlands) and the KNAW.

Following the advice of an evaluation committee on the design of the first two rounds, the NWO decided to continue the graduate school programme. It is a structural programme that offers schools a funding opportunity for the appointment of four PhD students. These PhDs form part of a school that, possibly in collaboration with an educational establishment, provides a coherent educational and research programme covering both the master's and PhD routes.

If an application is honoured, then the submitting inter-university or local research school or graduate school university is awarded a block grant of EUR 800 000. The grant is solely intended for the personnel costs of the PhDs to be appointed, with a limited amount available for the associated research costs. The budget was EUR 15 million in 2012; it will be the same for the coming years.

Skills agenda for researchers

There is neither 'Skills Agenda' nor any other strategy in place in the Netherlands to improve researchers' employment skills and competencies.

6. Working conditions

Measures to improve researchers' funding opportunities

The government's funding for scientific research carried out in the Netherlands is provided in a number of different ways:

- Provision of a fixed contribution to institutions ('institutional funding' or 'basic funding'), for which there may or may not be management responsibility;
- Funding of research via intermediary organisations (such as NWO, KNAW, and Agentschap NL);
- Funding of research via the ministry's own knowledge institutes, for example at the Ministry of Justice and the Ministry of Health, Welfare and Sport; and
- Direct funding of policy-oriented research.

The Netherlands has a large number of organisations carrying out research, either as their main assignment or in support of their main task. The differentiation generally made and the rough spread of research funds among them is:

- Universities (including university hospitals) (25%);
- Research institutes, including private non-profit (PNP) institutes (15%);
- Companies (60%).

Remuneration

There is a uniform job classification system at universities and research institutes. Each employee is informed of the job profile and the job level that applies to his/her position. This is linked to a salary level. The employee is provided with information about:

- The job profile(s) applicable;
- The result areas applicable;
- The levels of the classification criteria that apply to his or her duties;
- The job level determined on the basis of the classification rules;
- The salary scale that is linked to the job level and that is determined in accordance with the CAO.

In 1986, the Dutch Ministry of Education created the position of (Research) Assistant in Training, or AiO (*Assistent in Opleiding*), a specific salaried position with the objective of producing a PhD within (generally) four years. AiOs are regarded as members of staff, and not as students, but they are also supposed to devote some part of their time to specific post-graduate training.

Researchers' Statute

The Government of the Netherlands does not provide a 'statute' or equivalent for researchers. Universities are autonomous in their HR strategies. However, under the CAOs, employers are required to commit to certain rights, obligations, codes of conduct, ethical rules etc.

The VSNU⁸ represents the interests of the universities in their role as 'employers' vis-à-vis their employees, political and community organisations in relation to working conditions and labour relations, and also establishes the Collective Employment Agreement for the sector⁹.

'European Charter for Researchers' & the 'Code of Conduct for the Recruitment of Researchers'

The Ministry of Education, Culture and Science provides the universities and large companies with information about the 'Charter & Code' principles. The VSNU and some universities have signed and adopted the 'Charter & Code'.

⁸ Other VSNU activities are:

- Promote maximum personal development of employees;
- Contribute to the improvement of working conditions;
- Be a centre of knowledge and expertise for universities as employers;
- Promote professional human resources management;
- Provide instruments for the control and management of salary costs.

⁹ The new Collective Employment Agreement (CAO) of the Dutch Universities is valid from 1 January 2011 till 31 December 2013

Autonomy of institutions

Within the framework laid down in the Higher Education and Research Act (of 1993 - amended in 2002), universities enjoy a high level of autonomy. Universities and public research institutes are autonomous in defining recruitment policies, job profiles and career grades in combination with remuneration. They are also responsible for the quality assurance of their teaching and research activities.

Career development

Clear career development provisions are negotiated individually throughout the recruitment process between the researchers and the university/public research institute. Some universities offer the possibility of a tenure track.

Shift from core to project-based funding

In the Netherlands, project-based research funding has a direct impact on the contracts of researchers; if the project ends, the contract also comes to an end, thus entailing an unstable situation for the researchers.

Social security benefits (sickness, unemployment, and old-age)

Researchers with employment contracts are entitled to social security coverage, including health insurance, unemployment benefits and supplementary pensions, and old-age benefits. Contributions are automatically deducted from researchers' pay, regardless of their nationality. PhD candidates receiving a grant have minimum or no social security rights (including no pension benefits).

7. Collaboration between academia and industry

Universities, research institutions and industrial partners cooperate closely to create or support different tools (e.g. short-term implementation projects) to develop partnerships between academia and industry.

For instance, the issue of encouraging researchers to move from the public to the business sector and vice-versa has been embedded in the Strategic Agenda for Higher Education and Science Policy and the National Innovation Strategy of the Netherlands (letter of industry of the Ministry of Economic Affairs, Agriculture and Innovation). An example of inter-sectoral mobility being encouraged as a result of the Strategic Agenda and the National Innovation Strategy is the Dutch government's "Top sector policy", which aims to boost the innovation climate and collaboration through the creation of public-private partnerships. In April 2012, the government, companies and knowledge institutes signed innovation contracts for nine top sectors¹⁰. However, it is too early to report any impacts from this measure.

8. Mobility and international attractiveness

Measures aimed at attracting and retaining 'leading' national, EU and third country researchers

The Government of the Netherlands has no policy measures in place to attract and retain leading national, EU and third country researchers.

Inward mobility (funding)

The Government of the Netherlands does not provide funding for inward mobility, including the return of Dutch researchers from abroad.

Outbound mobility

The NWO runs bilateral exchange programmes (for instance with Belgium, Germany, China, India, Japan, South Korea, etc.) encouraging scientific collaboration and mobility of researchers. The NWO's Rubicon Programme aims to stimulate young recently graduated PhD students to acquire international experience. The Programme offers researchers, who have completed their doctorates in the previous year, the chance to gain experience at a top research institution outside the Netherlands for a maximum period of two years.

¹⁰ The nine top sectors are: Agro food, Horticulture and propagating stock, High Tech systems and materials, Energy, Logistics, Creative Industry, Life Sciences & Health, Chemicals and Water

Promotion of 'dual careers'

The Government of the Netherlands does not (nor do institutions) actively promote policies/measures supporting researchers' dual careers.

Portability of national grants

In the Netherlands, publicly funded grants are portable to other EU countries to some extent.

Access to cross-border grants

The majority of grants (including those granted by the NWO) are open to Dutch and foreign candidates regardless of their nationality. As a general rule, the research conducted based on the grant should contribute to the Dutch research system.