

EURAXESS LINKS INDIA

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EURAXESS Links India Newsletter is a quarterly electronic newsletter, edited by EURAXESS Links India, which provides information of specific interest to European and non-European researchers in India who are interested in the European research landscape and conducting research in Europe or with European partners.

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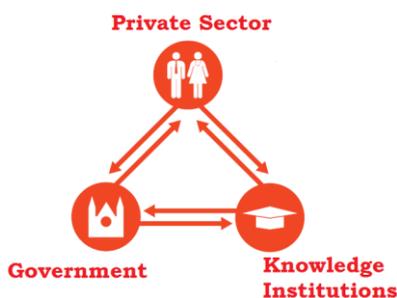
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[Note: Country briefing on the Netherlands originally published on EURAXESS Links India I Quarterly Newsletter I Issue 2 \(June 2016\)](#)



EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development. This pan-European effort is currently supported by over 40 countries, of which we will profile one in each of our quarterly EURAXESS Links India e-newsletters. In this edition, we will zoom in on the Netherlands.



The Dutch government follows a top sector approach where nine sectors have been identified as priority areas including Agri-Food, Horticulture, High-Tech, Energy, Logistics, Creative industries, Life Sciences & Health, Chemicals, and Water. The Government, private sector and academia together form a 'Golden Triangle' also known as 'Triple Helix' model, in which interactions among each other are highly encouraged. In the Netherlands, the private sector is a major contributor to overall R&D expenditure and there exist strong linkages between academia and industry.

1 Briefing | EURAXESS members: The Netherlands

The Netherlands, often referred to as Holland, was created by the Dutch in the delta where three large rivers flow into the North Sea. Due to its strategic location, the country is known already for centuries for its international traders and the world's first multinational corporation, which originates from the 17th century. Presently ranked 5th on both Global Innovation Index and Global Competitiveness Report 2015-2016, the Netherlands offers a truly innovative and creative environment.

The Dutch research environment stands amongst the best in the world. All 14 Dutch universities are ranked in the top 200 of Times Higher Education Rankings. A [study commissioned by the European Commission](#), in relation to the Europe 2020 strategy, places the Dutch research system among the very best in terms of openness, excellence and attractiveness.

1. Netherlands' Research, Development & Innovation System

Public Sector research institutions in the Netherlands consist of 14 universities, 18 KNAW Institutes¹, 6 Netherlands Organization of Scientific Research (NWO) Institutes, 5 Large Technological Institutes (GTIs)², 14 TNO³ Institutes, and a number of other state owned research and advisory centres. All Dutch universities are ranked in the top 200 of Times Higher Education Rankings. Together, these universities and institutes form the backbone of the research and innovation landscape in the country.

In 2014, Dutch institutions published 72,000 publications, ranking 5th in the world. In terms of excellence (share of highly cited publications, top 10%), Clinical Medicine, Biomedical Sciences, Basic Life Sciences and Physics & Material Science were top research areas. The total number of European patents with Dutch origin in 2015 stood at a total of 1998.

1.1 Research Excellence in The Netherlands

The Netherlands is very successful in securing European research funding both from the [Marie Skłodowska Marie Funding program \(video\)](#) and [ERC funding \(video\)](#). In order to promote research excellence, NWO offers two types of funding – 'Innovation Research Incentive Scheme' for talented, creative researchers who engage in innovative research, which provides three types of grant ([Veni, Vidi, Vici](#)) geared to different stages in a researcher's career and '[Spinoza prize](#)' which is offered yearly to 3 or 4 excellent researchers, who stand out with groundbreaking research conducted in the Netherlands.

1.2. Recruitment Opportunities

¹ So called because KNAW acts as the umbrella organization for these institutes

² Conducting applied research in aerospace, water management, hydraulic engineering, maritime research and energy research

³ TNO stands for Netherlands Organization for Applied Scientific Research which is an independent organization focusing on applied science



A large part of R&D in the Netherlands is carried out by **private companies** and they often recruit researchers at varied levels. Many of these companies are located in organised hubs such as 'Brainport' in Eindhoven is well known as Europe's leading High-tech region, and 'Health Valley' which is a network of 700 health related organisations working on innovation in healthcare space. (Note1)

There are various **funding agencies** in the Netherlands – The Netherlands Organization for Scientific Research (NWO), Dutch Technology Foundation (STW), The Netherlands Organization for Health Research & Development (ZonMW) and The Royal Netherlands Academy of Arts and Sciences (KNAW), which offer various grants and fellowships for individual researchers. (Note 2)

FactCards

Academic Transfer has set up a great tool to accommodate international researchers coming to the Netherlands.

Visit: [Fact Cards](#)

1.2.1 Public Sector Recruitment Opportunities:

The Netherlands offers various recruitment opportunities for international candidates. All university research positions that are open to international researchers, are listed on the job portal www.euraxess.eu and www.academictransfer.org. One can also visit [FOM Research vacancy](#) page, which lists vacancies available at FOM research institutes. Individual institutes also list such opportunities on their websites, further details can be found [here](#).

PhD position

The Netherlands is a very attractive destination to pursue PhD degree where it is not regarded as study but as serious research and PhD candidates are often paid. A PhD from Dutch university is highly regarded because of high academic standards. The Netherlands has an excellent international ranking for number of publications per researcher (2nd) and for the impact of research publication (4th). Almost all PhD positions are linked to a university, but PhD-candidates may find place at other institutes or even in industry. More information can be found here: <https://www.studyinholland.nl/education-system/degrees/phd>.

1.2.2 Private Sector Recruitment Opportunities: (see Note 1)

Many Dutch companies, both large MNCs as well as SMEs, such as Philips, ASML, Xelvin, Cosine and OctoPlus among others are continuously looking for Bachelors, Masters and PhDs with specialist knowledge. To give an example, Cosine, which is high-energy optics specialist, recruits PhDs in physics from time to time. To apply, candidates should hold a PhD degree in physics related to high-energy optics with 3 years of experience in development and testing of high-energy optics during or after his/her PhD. For more information regarding this position, please contact [Dipl.-Ing. Max Collon](#).

1.3 Funding Opportunities (see Note 2)

NWO provides [71 grants](#) for researchers, from PhD candidate level onward. [Veni](#) is a very attractive grant for international researchers, which allows those who have recently obtained their PhD to conduct independent research and develop their ideas for a period of three years. KNAW has 15 funding [instruments](#) amongst which are the NIAS Individual Fellowships. These fellowships are provided to senior scholars with at least three years of post-PhD degree academic experience, who have already made a considerable contribution to their field. The aim is to carry out advanced research in humanities and social sciences through individual projects, lasting one or two semesters at the institute.

1.4 Important information for incoming researchers

The Netherlands belongs to the EURAXESS initiative that provides support to researchers and their families when coming to the Netherlands (in key areas such as visas, housing, schooling, etc.). EP-Nuffic is the national coordinator of the Dutch network. Additional information can be found at www.euraxess.nl. The Netherlands has easy residence permit procedures (see on next page).

2. Research Cooperation with India

India is an important partner for scientific collaboration for the Netherlands. While access to large markets, availability of scientific and engineering pool and cost reduction opportunities remain the core reasons for India's popularity as an R&D destination, the Netherlands is recognised globally for its knowledge and



Easy residence permit procedures

The Netherlands has a very flexible immigration procedures system for researchers and highly educated persons. Your host institution will take care of your residence permit application; it will be dealt with swiftly and includes a free work permit for your research activities. Your possible spouse will also be taken on in this procedure and will receive a residence permit which allows him/her free access to the labour market (no work permit required).

If you want to come to the Netherlands but have not found a job yet, you may be able to use an [orientation year](#). This allows access to the Netherlands and the Dutch labour market for a year to people who received a Master or PhD at a university in the top 200 of the rankings.

expertise in each of the top sectors and offers world class infrastructure to Indian researchers.

There exist strong bilateral ties between the two countries in research and innovation. The NWO runs bilateral calls with Indian funding agencies such as Department of Science & Technology (DST), Department of Biotechnology (DBT) and Department of Electronics & Information Technology (DEITY).

2.1 Department of Science & Technology

DST is an important stakeholder for the Netherlands in India. So far, there have been three calls for proposals between NWO and DST, themes for which were: New Medical Devices for Affordable Health, Smart Grids and Functional Materials, under which a total of 11 research projects have been funded.

Under the joint call for medical devices, one project is worth mentioning – “An eye tracker perimeter – intuitive tool for affordable glaucoma diagnosis and screening”, where Sankara Nethralaya from Chennai and Erasmus Medical Centre from Rotterdam were granted funds.

The project has led to an improved prototype for fast screening of visual field defects, which can quickly test a visual field, has zero learning curve and is easy to operate by diagnostic personnel. The patient satisfaction has been reported high, both in Europe as well as in India. The success of the collaboration has not gone unnoticed, the Rotterdam – Chennai team has been approached by a multinational European consortium of industry and academia to participate in the development of eye tracker technology for a broader range of clinical applications.

2.2 Department of Biotechnology

DBT is another important stakeholder for the Netherlands in India. Apart from the joint call on plant sciences with NWO, where three joint projects were awarded, there exist several other collaborations with DBT in areas such as vaccines, neurosciences and HIV among others.

One innovative example of collaboration with DBT is the recent collaboration between the Dutch Technology Foundation (STW) and DBT on “Water for Health”. The idea is to set up an Indo - Dutch “Water Lab”, which will be a hands-on demonstration project that will help with the development of innovative, scalable, low cost technologies to clean one of the dirtiest drains going into Yamuna River in Delhi. A consortium of experts from academia and industry from India and the Netherlands will come together for this project to look at all aspects of reuse of water in areas such as agriculture, sanitation and healthcare. This is an ideal example of combining the Indian low cost innovation with the Dutch multi-disciplinary approach. For further information, please click [here](#).

For information on Indo – Dutch collaborations in Life Sciences & Healthcare space, please click [here](#).

2.3 Department of Electronics & Information Technology

DEITY and NWO have collaborated together in an interesting manner. The joint call between the two funding agencies on Big Data Analytics and Internet of Things was launched in the year 2013, with participation from industry as a mandatory condition. Under this call, five joint projects were launched in 2015. This is the first time that DEITY has launched a joint call with industry involvement, together with an international partner. The Dutch government is



looking forward to replicate this model with DEITY and other funding agencies in the future.

3. Important Case Studies

Case Study I: Shell India Pvt. Ltd.

Royal Dutch Shell is one of the largest and most diversified international investors in India's energy sector among all global integrated oil companies. After the company's two R&D centres located in Amsterdam and Houston, it opened its third global R&D centre in Bangalore in India known as Shell Technology Centre Bangalore (STCB). India's large talent pool has been one of the drivers behind Shell's decision to open its global technology centre in India.

NWO and Shell have come together for a joint fund (a PPP construction) where NWO funds 21 million Euro while Shell funds 24 million Euro. The aim is to attract 75 top students from India to do their PhD on different topics in the field of computational science for energy. NWO invites universities to propose PhD research within this knowledge domain. Shell then offers the graduates a job at their R&D centre in Bangalore. In this way excellent research is focused on actual needs of private companies.

Case Study II: "Developing and Implementing Smart Grids in India"



PRE

power developers



In 2014 NWO opened a call in the field of responsible innovation to encourage scientific research on topics where ethical and societal issues play a role. "Developing and implementing smart grids in India" is the project that resulted from this call.

Two research institutions, TU Eindhoven from the Netherlands and TERI University from India are working together with Dutch companies Rural Spark and PRE in order to investigate how smart grids can successfully be developed and implemented in rural India. In India, about 400 million people have no access to electricity. One of the measures of the Indian Government to address the energy poverty problem is the implementation of smart grids. While smart grids may not be new, this smart grids project funded by NWO is special: it is an interdisciplinary collaboration of scientists, businesses and societal stakeholders, both in India and the Netherlands. The focus of the project is not a matter of getting only the technology right: social embedding, ethical acceptability and institutional support are at least as important. By bringing the private sector, science and other stakeholders together, the consortium is able to develop innovative solutions which do not only have a business potential and can be commercialised in the future, but also have a high societal relevance.

4. Conclusion

If you are interested to learn about research opportunities or would like to have more information about the R&D landscape in the Netherlands, please contact the Dutch Embassy in India at delhi@nost-india.org.

Article prepared by the Dutch Embassy in India and EURAXESS in the Netherlands.



Case Study I



Case Study II



The Netherlands is maintaining a strong position in Horizon 2020, with 7.6% of the budget flowing to Dutch participants. The private sector is taking its proper share with 28% of all funds flowing to the Netherlands. In [EUREKA cluster projects](#) and [Eurostars SME innovation projects](#), the Netherlands is a strong contributor in budget and in private sector participation. This is important to maintain its #5 ranking in the World Economic Forum list of most competitive and innovative nation in the World.