

A future for future scientists

A statement on doctoral researchers in Germany



Science thrives on the free circulation of individuals and their knowledge in an international network. Germany has the opportunity to establish itself as *the* centre of innovation for the future and to maintain its leading position in fundamental research. Under the right conditions, young scientists can make a decisive contribution to this effort.

In recent years, many programmes have been put in place that will help to strengthen Germany as one of the central designers of the international science landscape: deepening and expanding cooperation between the Federal Government and the *Länder* (federal states), the pact for young scientists, amendment of the *Wissenschaftszeitvertragsgesetz* (law on fixed-term contracts in science) and reformation of financial support for doctoral researchers. Furthermore, substantial improvements of structured PhD programs have been implemented at universities and non-university research institutions.

On the basis of these progressive decisions, the targeted promotion of young scientists can help establish Germany as *the* innovation centre with a strong foundation in basic research. As the nation's largest representative body of national and international young scientists, who are researching at non-university institutions and striving for a university doctorate, we consider the following measures to be the key to success in this endeavour:

Promote mobility and strengthen diversity

From combination of different perspectives on the complex scientific and societal challenges of our time, new and decisive solutions are emerging. Different forms of socialization and cultural diversity are catalysts for successful scientific work. A diverse work culture can only arise if it is easier for national and international scientists to pursue a career in science. **Family responsibilities must not become a disadvantage for young researchers.** In order to achieve this, a **pact for diversity in science** is needed, similar to the pact for young scientists. This pact must necessarily include financial support **for the high mobility** that is expected from young scientists, on the national as well as the international level. Funding must also be provided for an effective **diversity management**, to enable a profound and sustained **cultural change in science**.

Wide-open career paths

More than 80% of the doctoral researchers leave science, but are not adequately prepared for professional careers outside the scientific community during the long phase of doctoral research. A practical **phase of intersectoral mobility** can meet this challenge through internships in non-scientific organisations such as foundations, private companies and public institutions. Alternative career paths can be demonstrated and tested directly during the doctoral phase. At the same time, this promotes the exchange between science, business and the public whilst also increasing the innovative power of Germany as a centre of science. In addition, universities and non-university research institutions must develop and coordinate initiatives to highlight **different career paths** for doctoral researchers.

Financially secure research

The majority of the doctoral researchers in Germany are paid at 50 % of a full-time equivalent, while still working full-time. In most major cities, such an income makes renting an apartment or paying for day-care an ever increasing challenge. The situation is aggravated by the fact that doctoral researchers with scholarships have to cover their social insurance from their stipends. In plain numbers, one in eight graduate students is at risk of poverty. This obviously requires a redress in order for Germany to remain attractive as an innovative top-level scientific location. As an appropriate framework for a doctorate, we advocate **full-time positions for four years** for all doctoral researchers. Scholarships should be fully transferred into **working conditions subject to social insurance**.

Adaptive management for science

At the level of scientific leadership, flexible and modern management is often lacking, leaving considerable potential unused. We see a great opportunity for science to use these dynamic potentials more efficiently by **separating the professional supervision and disciplinary leadership**. For this to be realised requires continuous management by qualified scientific staff, in addition to the strategic management at the level of the professorship. In this context it is therefore essential that measures be developed to integrate young scientists into science management at an early stage.

Social change lives through innovation. However, innovation requires structures that combine scientific freedom with simultaneous financial security. It is the responsibility of federal and state governments as well as science management to lay reliable foundations from which innovation and research can arise in the future. As the nation's largest representation of doctoral researchers, we offer our expertise in a dialogue for this purpose.

N² [Nsquared] unites more than 14,000 doctoral researchers of the non-university doctoral research networks: Helmholtz Juniors, Leibniz PhD Network, and Max Planck PhDnet. In order to discuss the current and future scientific environment - in terms of working conditions, career perspectives and societal impact - their current and former spokespersons composed the above statement. To promote exchange with the public, N² is organising a science festival, which will take place during the Berlin Science Week in November 2017 at the Naturkundemuseum Berlin and will focus on science communication. Contact: N2board@lists.gwdg.de

