

The Advancement of Junior Scholars at TU Berlin

Creating the right conditions for best possible career prospects

presented by

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This Strategy for the Advancement of Junior Scholars at Technische Universität Berlin
was passed by the Academic Senate of TU Berlin

18.07.2018

Introduction

Dear Junior Scholars and Colleagues,

The objective of this strategy is to coordinate the **advancement of junior scholars** (R1- R3) at TU Berlin, and in so doing create the opportunity to systematically and purposefully implement and develop the advancement of junior scholars in the areas of research, teaching, academic self-management and project management on the basis of participatively developed measures. The Strategy for the Advancement of Junior Scholars is embedded in TU Berlin's general strategy, and as such firmly rooted within the University's **future-oriented staff development policy**.¹

Each year approximately 500 doctoral candidates successfully complete their dissertations at TU Berlin. Some 400 postdoctoral researchers are pursuing academic careers, seeking to adapt these to the requirements of the future. Our junior scholars make a fundamental contribution to the innovative development of research at TU Berlin as well as the University's international profile.

Junior scholars largely acquire their skills and competences through the direct experience they gain of **research and teaching**, working in teams within their chairs and under the academic stewardship of their professors who also act as mentors and supervisors of their work, as well as through participation in national and international academic networks. In addition to the classical approach of the individual doctorate (whereby a doctoral candidate completes their doctorate under the supervision of an advisor), further options for achieving a doctorate are provided by the DFG Research Training Groups and the Graduate Schools of the Excellence Initiative. As a matter of principle, all support measures aimed at the doctorate phase are to be available to all junior researchers in the first phase of qualification, whether or not their aim is to acquire a doctorate (R1). Furthermore, access to programs, such as graduate programs, is to be guaranteed, when possible, on the basis of a transparent and open selection procedure. A concept for **post-graduate education** at TU Berlin (**PGE@TUB**) was developed in 2018 as part of an interdisciplinary action initiated by the Executive Board in order to be able to successfully coordinate the existing organizational structures and measures for the advancement of junior scholars in all target groups, as well as to provide a modern and transparent basis for the acquisition of skills and competences to be pursued throughout the entire University. This focuses on the existing centralized and decentralized range of measures and programs for junior scholars in the first qualification phase after completion of a university degree, whether or not their goal is to pursue a doctorate (R1), but also includes options for requirement-driven supplementary measures in later phases of academic careers (R2-R3).

An organizational structure which is internationally compatible and applied throughout the entire University raises the profile of our programs and measures for junior scholars and thus supports TU Berlin's expressed intention to recruit junior scholars internationally. The PGE@TUB is open to 'external' doctoral candidates and post-doctoral researchers, in other words those who are not employed at TU Berlin but who are gaining and developing their knowledge and skills at our university, to established junior researchers, as well as to junior researchers from the Berlin University Alliance, namely the Humboldt-Universität zu Berlin, Freie Universität Berlin and the Charité-Universitätsmedizin Berlin.

The Strategy for the Advancement of Junior Scholars can build upon the numerous projects for reform which have been initiated at TU Berlin over the last decades as well as the **established organizational structures for providing support**. In addition to the Family Services Office and the numerous centralized continuing education services available to junior scholars for acquiring research-related and teaching-related skills and competences throughout their entire academic career (Center for Scientific Continuing Ed-

¹ TU Berlin's integrated Strategy for Staff Development is currently in the process of being elaborated and focuses on three target groups : 1) Junior scholars (R1-R3), 2) university professors (R4) and academic staff with full contracts of employment and 3) administrative staff / academic support staff.

ucation and Cooperation (ZEWK), the Modern Language Center (ZEMS), the personnel department's continuing education program, the Berlin Center for Higher Education), a central point of contact has been provided for doctoral candidates (R1) and post-doctoral researchers (R2) by **TU-DOC** since 2009. Together with the Research Department and the Office of International Affairs, TU-DOC will in the future extend this service to established researchers (R3). There are also a number of excellent programs for female and international junior scholars in all qualification phases, such as the STIBET program for international doctoral candidates or the workshop programs for female junior scholars provided by the Office of the Main Women's Representative (ProMotion, IPODI or the Berlin ProFiL program) in addition to the programs offered by TU-DOC. There are also contact points for issues relating to doctorates and junior scholars within the faculties as well as the individual institutes and chairs, while the faculty service centers provide support in administrative matters for all junior scholars in all career phases.

In the competition to attract national and international junior scholars, TU Berlin seeks to present itself as an **attractive employer**, both in comparison with other universities as well as within the non-academic and global job markets. TU Berlin's range of responsibilities also includes providing junior scholars in all qualification phases with professional guidance on a wide range of **career opportunities**, both within and beyond the scientific system, as well as helping each junior scholar gain a full understanding of their options.

Additionally, a structured network of programs is to be established within the Berlin University Alliance. Quality standards in research and teaching are to be jointly established within the Alliance to ensure that doctoral candidates receive a high-quality education and continuing education, commensurate with the standards of excellence associated with Berlin as a unique science location. TU Berlin is already working very closely with its partners within the Alliance via graduate colleges, graduate schools and doctoral programs. Berlin's universities increasingly view the advancement of junior scholars as a joint undertaking to be expanded and developed within the Alliance.

Essential to this process will be an **implementation plan** for the Strategy for the Advancement of Junior Scholars. The transfer of strategic goals, in other words the development and prioritization of concrete measures for the advancement of junior scholars, is to include the involvement of the relevant target groups as well as the central institutes, faculties and chairs regarding individual guidance measures, and is to be conducted in consultation with the Berlin partner universities. The essential cross-cutting concerns for the advancement of junior scholars of international affairs, equality of opportunity, gender equality and diversity are to be systematically integrated into all measures and programs. The Executive Board assumes overall responsibility for the implementation of the Strategy for the Advancement of Junior Scholars as well as for the accompanying monitoring of this process.

Target groups and career stages

The advancement of junior scholars at TU Berlin focuses on the phase following the completion of an academic university degree or registration for a PhD project (R1) through to the taking-up of a tenured professorship or an alternative career within or outside of academics. It addresses those working at TU Berlin as junior scholars in the first qualification phase, whether intending to do a doctorate or not (R1), as PhD holders (R2), including those involved in short-term projects, as junior research group leaders as well as junior professors and tenure-track-option professors (R3).²

In order to be able to develop the advancement of junior scholars according to the different needs of different groups, an academic career can be divided into the following phases³:

1) Doctorate phase (First Stage Researcher, R1)

The largest group of junior scholars is made up of those in the first qualification phase, including those who do not plan to do a doctorate. This group researches at universities, research institutes or in the private sector under TU Berlin supervision. It thus covers all junior scholars in the first qualification phase at TU Berlin, irrespective of whether their financing is based on budget funds, third party funding, scholarships or other sources.

2) Postdoc phase (Recognized Researcher, R2)

Those in the post-doctoral qualification phase (including those intending to do a habilitation) have completed their PhD but have not yet achieved full academic autonomy. This phase primarily serves to acquire academic skills and autonomy, and upon successful completion enables a scholar to progress to the R3 phase, where they will undertake responsible tasks in the area of academic management as well as in non-academic areas of activity.

3) Pre-Professorship phase (Established Researcher, R3)

Those at this stage in their careers display a high level of academic autonomy and already have their own research programs and have established national and international networks. They also acquire management skills through conducting collaborative research projects with colleagues and project partners. This category includes junior research group leaders, participants in the Emmy Noether and Heisenberg programs, as well as junior professors and tenure track professors.

TU Berlin programs, such as those for the advancement of newly appointed professors and continuing education for professors, are also available for this group.

² cf. EURAXESS research profiles: <https://euraxess.ec.europa.eu/europe/career-development/training-researchers/research-profiles-de-scriptors> (18.07.2018).

³ cf. Qualification profiles. Stages of an academic career. [Link to follow]

Fields of action for the advancement of junior scholars

The advancement of junior scholars at TU Berlin is divided into the following four interdependent fields of action:

- 1) ***Career planning and guidance***
- 2) ***Qualification***
- 3) ***Networking***
- 4) ***Infrastructure and conditions***

These fields of action are interconnected with the four central qualification areas of *research*, *teaching*, *academic self-management* and *project and research management* which are to be pursued as part of the advancement of junior scholars at TU Berlin.

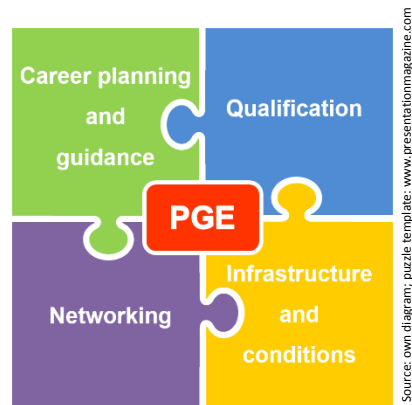


Fig. 1: The four fields of action for the advancement of junior scholars at TU Berlin

I. Career planning and guidance

I.1 Multiple career paths

An important goal of our Strategy for the Advancement of Junior Scholars is to present the entire spectrum of possible career paths both within and beyond academics, and not just the classical academic career, as well as to support junior scholars early on in the orientation phase of their careers and to assist them with their career planning. Clearly-defined and comprehensible career stages as well as the clear communication of the challenges that need to be met at each of these stages is essential in this regard. To achieve clarity, TU Berlin will draw up qualification profiles for junior scholars in research, teaching and academic self-management as well as project and research management based on the internationally compatible classifications used by the European Commission. This is also intended to achieve quality assurance concerning the acquisition of qualifications, skills and competences for our junior scholars and to help them achieve the best possible start to their academic or non-academic careers.⁴

Goals

- ➔ To present career stages and their respective qualification profiles in research, teaching and academic self-management as well as in project and research management for the purposes of career planning
- ➔ To make junior scholars equally aware of opportunities for university and non-university career paths

I.2 Academic career

TU Berlin provides its junior scholars with the best possible opportunities for a successful start to an academic career and can draw upon special funding and advisory measures which are particularly useful for making the transitions from one career stage to another. Programs for academic continuing education and for acquiring skills and competences are available to all junior scholars, irrespective of their career goals.

Goals

- ➔ To provide guidance programs and measures to support junior scholars in top level research, teaching and academic self-management as well as in project and research management
- ➔ To provide guidance programs for intersectoral mobility
- ➔ To connect programs for junior scholars at TU Berlin developed within the Berlin University Alliance with those of non-university institutes

I.3 Non-academic careers

TU Berlin sees itself as an institute that prepares its junior scholars for a range of different career options, and therefore provides junior scholars at all career stages with expert advice also on non-academic career paths so as to facilitate a career start in the private sector or within non-academic institutes.

Goals

- ➔ To develop and raise the profile of existing advice, continuing education and networking programs and measures for non-academic career options

4 cf. Qualification profiles. Stages of an academic career. [link to follow]

- ➔ To expand the TU Berlin alumni network to include management from the private sector and non-academic institutes and involve them in the advancement and networking of junior scholars
- ➔ To involve network contacts and TU Berlin partners from the private sector in the process of providing guidance and information for junior scholars regarding non-academic career options
- ➔ To involve teaching staff with excellent contacts to the private sector and to non-academic institutes in the process of providing guidance, information and networking opportunities for junior scholars regarding non-academic career options
- ➔ To reflect faculty and subject requirements in the process of providing guidance to junior scholars regarding non-academic career options and networking with relevant partners from the private sector and non-academic institutes

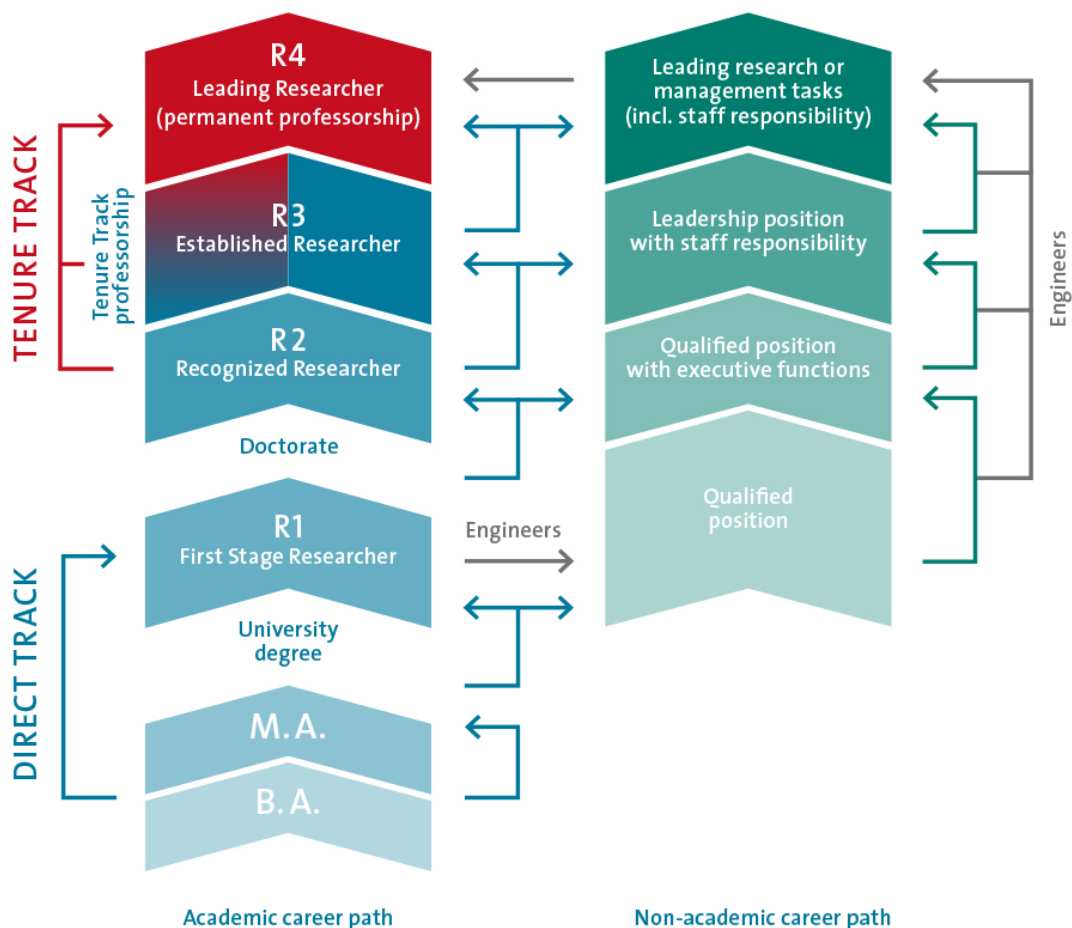


Fig. 2: TU Berlin supports multiple career paths. Engineers often select a non-academic career path as a way to acquire skills and competences before finally returning to academics at R4 stage.

II. Qualification

II.1 Specialist and interdisciplinary qualification

In addition to working closely with their supervisors, junior scholars at TU Berlin benefit from numerous specialist and interdisciplinary programs for acquiring skills and competences in research, teaching and academic self-management as well as project and research management. TU Berlin lays great value on individualized and customized support at all career stages in such programs. Many of these programs are, therefore, available to junior scholars in all phases of their career development. Interdisciplinary programs are conceived and implemented both centrally and in the decentralized institutes, partly in cooperation with the other Berlin universities.

Goals

- ➔ To create flexible, specialist and interdisciplinary continuing education programs for acquiring skills and competences in research, teaching and academic self-management as well as project and research management for all career stages, both in terms of content and method
- ➔ To expand the range of courses on good academic practice
- ➔ To raise the profile of programs and program providers, as well as create options for obtaining information about the programs offered for junior scholars by Berlin University Alliance partners

II.2 Acquiring competences for societal challenges

TU Berlin is particularly strong in terms of the breadth of its areas of research and disciplines and the range of courses it offers. This results in research findings and curricular offers of particular relevance to society - especially when they reflect interdisciplinary and transdisciplinary discourses. TU Berlin has always demonstrated commitment to its responsibilities towards society, as the early decision taken by the Academic Senate to dedicate itself purely to civil research⁵ and the guiding principle of the University Strategy 2018-2025 ("Responses to Global Challenges")⁶ both attest. The integration of research, teaching and social responsibility is something that is also very strongly reflected in our programs for junior scholars. As our junior scholars will go on to assume a multiplier role regarding social responsibility with their future employers in academic and non-academic institutes, we always seek to address current issues of social politics and research ethics in our specialist programs.

Goals

- ➔ To make junior scholars aware of their social responsibility
- ➔ To include social and ethical aspects of research and teaching within our training and educational programs

5 cf. [Zivilklausel der TU Berlin \(TU Berlin Civil Clause\)](#) (18.07.2018).

6 The new University Strategy 2018 – 2025 is to be approved by the end of 2018.

III. Networking

III.1 The advancement of junior scholars in (research) cooperation

TU Berlin maintains a number of bilateral and institutional research cooperation arrangements with partners from Berlin, the Berlin region, Germany and abroad. Joint initiatives for the advancement of junior scholars are being increasingly developed and implemented as part of these cooperative arrangements, which can then be linked to effective structures operated by our cooperation partners. These include the joint supervision of doctoral candidates, guest stays and joint summer schools.

These activities focus on strategically selected partners excelling in research, non-university academic institutes and partners from industry, as well as the possibility of cooperative doctoral studies with supervisors from Berlin's universities of applied sciences.

Goals

- ➔ To develop the advancement of junior scholars in suitable research and teaching cooperation arrangements with university and non-university institute partners as well as with partners from the private sector
- ➔ To develop models for joint doctoral projects with universities of applied sciences and provide information about the possibility of cooperative doctorates

III.2 Communication within the advancement of junior scholars

Successful communication and a high level of transparency are key elements for the successful implementation and (external) presentation of a Strategy for the Advancement of Junior Scholars. First of all, it is important that junior scholars are provided with complete information and are regularly involved in a dialogue concerning goals, requirements and the general conditions for the advancement of junior scholars. Professional marketing of the advancement of junior scholars at TU Berlin, targeting a national and international audience, will, moreover, ensure that future outstanding junior scholars will be targeted globally, thus raising the profile of TU Berlin as a university and an employer.

Goals

- ➔ To provide regular information on the advancement of junior scholars, tailored to the specific target groups
- ➔ To develop an information portal for internal and external target groups
- ➔ To raise awareness of successful doctorates and habilitations as well as grants and scholarships, both within the University and beyond
- ➔ To develop international marketing for the advancement of junior scholars at TU Berlin

IV. Infrastructure and conditions

IV.1 Good working and employment conditions

Good working and employment conditions are the basis for a successful, future-oriented relationship built upon trust between TU Berlin and its junior scholars. As part of this working relationship, the individual personal circumstances and previous experience of each junior scholar are to be given consideration throughout the entire qualification phase, and their academic and professional development supervised and supported.

Goals

- ➔ To create transparent and structured personnel selection procedures
- ➔ To establish a culture of welcome and provide introductory phases targeted to specific groups for all junior scholars
- ➔ To systematically integrate all junior scholars at the University not in possession of an employment contract with TU Berlin (e.g. scholarship holders, visiting scholars) into the organizational structures for the advancement of juniors scholars
- ➔ To prevent any qualification goals being discontinued at any qualification phase, and provide support for decisions taken to pursue individual career paths
- ➔ To support work-life balance and the compatibility of family and career
- ➔ To ensure freedom from discrimination and unfair treatment
- ➔ To ensure compliance with the standards of good academic practice in dealing with junior scholars and their research

IV.2 Gender equality and diversity

Due to the emphasis on STEM subjects at TU Berlin and the underrepresentation of female scholars associated with these disciplines, equality of opportunity for all genders is a particularly important objective for the advancement of junior scholars at our university. The proportion of women within the various qualification stages through to tenured professorship is continuously declining. As such, it is essential to have a working and organizational culture which is sensitive to gender and diversity issues and linked to the relevant skills of all stakeholders, as well as a recruitment policy which offers equality of opportunity for junior scholars of all genders.

Daily academic working life must reflect the fact that all members of the University, irrespective of their gender, age, physical capabilities and beliefs as well as their ethnic and social origins or sexual orientation are valued and supported to the same degree. Support is to be provided in particular to those academic chairs which face the strongest competition from the external job market regarding the recruitment, retention and re-employment of female staff.

In line with the Gender Equality Strategy of 2015, TU Berlin supports a structural shift in the advancement of junior scholars to help achieve greater equality of opportunity.⁷ As such, structural framework conditions are to be taken into consideration alongside measures for the individual advancement of women (e.g. via a postdoc qualification program, the job program for international female postdocs (IPODI) as well W1 professorships with tenure track option). Processes and elements of governance (e.g. awarding of jobs) are further to be adapted. Furthermore, support is to be provided in particular to those academic chairs which face the strongest competition from the external job market regarding the recruitment, retention and re-employment of female staff. To ensure long-term success, processes of change relating to gender mainstreaming are to be integrated into the content of all programs and monitored at all structural levels.

Goals

- ➔ To ensure equality of opportunity in the advancement of junior scholars by means of control and monitoring tools which are sensitive of the issues of gender and diversity
- ➔ To include gender and diversity-relevant skills in all training programs

7 cf. [Gender Equality Concept for TU Berlin \(2015\)](#) (18.07.2018).

- ➔ To raise the profile of the work of female junior scholars
- ➔ To intensify the recruitment of women as well as take active measures to win women back to the University
- ➔ To provide individual support to female junior scholars, particularly in those areas with a marked female underrepresentation (<30%)

IV.3 Internationalization in the advancement of junior scholars

Achieving internationalization in the advancement of junior scholars is a key objective for an internationally networked university such as TU Berlin. This internationalization embraces both the recruitment and advancement of international junior scholars as well as the integration of working stays abroad and global research contents as mandatory elements in the qualification process of junior scholars.

Our goals regarding internationalization are very closely linked to the measures of the German Rectors' Conference Re-Audit "Internationalization of Universities", which were introduced at TU Berlin between 2015 and 2018. Internationalization will be taken into consideration in the development of all measures relating to the advancement of junior scholars. Additionally, we will support the acquisition of intercultural competences for all members of TU Berlin to improve guidance and support for international junior scholars.

Goals

- ➔ To establish internationalization as a core element of the advancement of junior scholars at TU Berlin
- ➔ Create internationally networked opportunities for qualification
- ➔ Raise the international profile of TU Berlin as an employer as well as that of its junior scholars
- ➔ Raise awareness of diversity as well as intercultural competence in the advancement of junior scholars (also for guidance and advisory programs)

IV.4 Organizational structures for the advancement of junior scholars

TU Berlin sees the successful advancement of its junior scholars as a cross-cutting concern affecting all areas of research and administration. In addition to the TU-DOC office for doctoral and post-doctoral services founded in 2009, we have a wide-ranging network of institutes undertaking work related to the advancement of junior scholars. As part of the repositioning of the advancement of junior scholars, a superordinated framework (e.g. PGE@TUB) will be created to achieve the best possible fine-tuning of measures as well as the effective coordination of their implementation. This cross-faculty organizational structure will simultaneously raise the profile of the advancement of junior scholars at TU Berlin and improve networking with stakeholders beyond TU Berlin (research institutes, businesses, partner universities, society in general).

Goals

- ➔ To establish a transparent organizational structure for the advancement of junior scholars and develop this both strategically and sustainably
- ➔ To strengthen the collaboration of all stakeholders to support the advancement of junior scholars
- ➔ To create opportunities for junior scholars to be actively involved in the relevant governance structures

IV.5 *Direct track options*

The Strategy for Advancement of Junior Scholars at TU Berlin supports junior scholars with clear potential in the pursuit of a successful career, within or beyond academics. It is already possible for students of particular ability wishing to do a doctorate to research and work at TU Berlin upon completion of their bachelor's degree. The option to pursue a direct track process, a particularly attractive option for international bachelor graduates, is to be integrated into structural support programs and measures in a way that reflects subject-specific requirements and that achieves transparency as well as a high profile. Bachelor students are to be informed in good time of this option and the conditions which apply.

Goals

- ➔ To present direct track as a career option and a tool for the advancement of junior scholars at TU Berlin which reflects the requirements of the specific disciplines
- ➔ To inform suitable students in good time about the possibility of direct track and the conditions which apply, and provide them with targeted support both before and during the process
- ➔ To establish guidance programs to provide information about the special features and challenges of the direct track qualification model

IV.6 *Development of the tenure track process*

TU Berlin's tenure track model is being developed as an effective and sustainable tool for the internationally compatible advancement of junior scholars in order to establish a plannable route to a tenured professorship. This represents a way for *Strukturprofessuren* (professorships established in the TU Berlin budget) to be refilled (possibly through an early reappointment of the professor holding the chair) in order for these professorships to become firmly established as an alternative career path to achieving a tenured professorship at TU Berlin. Additionally, TU Berlin will establish tenure track professorships, on the basis of external funding programs, which will result in a permanent increase in the number of *Strukturprofessuren*. As is already the case for the established groups of junior scholars, TU Berlin will create the best possible conditions to enable the long-term success of tenure track candidates. Faculty-specific planning for the introduction of tenure track professorships is to be a part of the development discussions which are to be held on a regular basis. In keeping with a Strategy for the Advancement of Junior Scholars which is compatible with universities both within Germany and abroad, our long-term goal is to assign approximately one quarter of the *Strukturprofessuren* to tenure track professorships, taking account in the process of the various specialist and faculty-specific requirements.

Goals

- ➔ To establish tenure track as an alternative career path to achieving a tenured professorship
- ➔ To develop support and guidance programs to help prepare for appointments or appointment negotiations in the R3 phase

IV.7 *Monitoring the success of the advancement of junior scholars*

In order for the Strategy for the Advancement of Junior Scholars to be adapted in response to changing needs and to maximize the effectiveness of its measures, it is important for TU Berlin that an ongoing dialogue take place with its junior scholars and their supervisors concerning the effective implementation of the strategy in respect of the University's future science policy and internal development. Consequently the implementation process will be thoroughly monitored. A five-year rhythm is planned for this monitoring process (analogous to the WM Study).

Goals

- ➔ To carry out regular evaluations and to adapt the Strategy for the Advancement of Junior Scholars on the basis of the evaluation results
- ➔ Define monitoring approaches and conduct the monitoring of the implementation of the strategy