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FWF doc.funds Evaluation

Final Evaluation Report

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1 Introduction and Background

1.1 Introduction to the FWF *doc.funds* Programme

The *FWF doc.funds programme* ('*doc.funds*') replaced the FWF doctoral programme *DK – Doktoratskollegs* in 2016/2017. The main objective of the *doc.funds* program is to support outstanding academic or arts-based education and training of doctoral students within the framework of existing doctoral programs. The program is intended to assist in the development of structured doctoral programs in accordance with international standards at Austrian doctoral research institutions. In the long term, the programme intends to contribute to reinforcing research orientation and to consolidating existing education and training structures for highly qualified junior researchers. The programme has already funded more than 30 such projects in a wide range of disciplines, of which at least five have already been completed.

The *doc.funds* programme provides additional funding for the further development of structured doctoral programmes in the arts and sciences. To be eligible for funding, the programmes must have already been established for at least two years at universities or institutions with the right to award doctorates.

Eligible programmes should offer structured doctoral training, i.e. they should provide team supervision, (international) mobility opportunities for doctoral researchers, and an education and training programme that also imparts transferable skills to complement the research training. As such, the programmes are expected to apply international standards such as the *Salzburg II Recommendations* or the *Principles for Innovative Doctoral Training*. In line with these standards, *doc.funds* requires these doctoral programmes must be embedded in a clearly defined institutional framework with transparent responsibilities and procedures. Also, t the *doc.funds* project should be embedded in supportive and attractive environment that allows for collegial exchange among researchers.

doc.funds also functions as a research funding programme: doctoral training is embedded in a funded research project, enabling doctoral researchers to collaborate among each other and with a team of supervisors while addressing a defined research question as part of their dissertation. The project provides the central link between doctoral researchers and supervisors and, at the same time, supports the ongoing development of the doctoral training framework.

Due to its dual orientation – funding excellent research and supporting the further development of structured doctoral training – applications for *doc.funds* must include several elements: a detailed research project, concepts for the advancement of structured doctoral training and supervision, information on working and employment conditions

for doctoral researchers, and strategies for enhancing supervisors' skills in mentoring, counselling and guidance.

Emphasising these features – excellence in research, the further development of structured doctoral training, and the supervisory relationship as a core process – positions *doc.funds* within the broader international and national debates on doctoral training.

1.2 International trends in doctoral training

Over the past two decades, doctoral training in Europe has undergone a fundamental transformation. Calls for reform were prompted by concerns about high drop-out rates, limited career prospects and deficits in the quality of doctoral education (Ahola et al., 1999; Enders & Kottmann, 2009). Criticism centred on a lack of research excellence and transparency in assessment, as well as power imbalances in supervision. These issues were seen as limiting the innovative capacity of European nations (Kottmann, 2011; Jørgenson, 2011; Sadlak, 2004).

In response, European policymakers initiated a series of reforms. The *Salzburg II Recommendations* (EUA, 2010) and the *Principles for Innovative Doctoral Training* (European Commission, 2011) established widely recognised benchmarks. These emphasised structured doctoral programmes, research excellence, skills training for careers inside and outside academia, international mobility and quality assurance throughout the doctoral lifecycle. These standards were complemented by frameworks such as the *European Charter for Researchers* (European Commission, 2005) and the recommendations of the *League of European Research Universities* (LERU, 2007, 2010).

Together, these initiatives have led to the widespread adoption of structured doctoral programmes, graduate schools and training elements such as transferable skills, research integrity and data management (Kottmann, 2011; Kehm, 2020; Cutri et al., 2021). Despite this progress, significant challenges remain. Universities across Europe identify securing funding and improving supervision quality as their top strategic priorities (Hasgall & Peneagiu, 2022; Alves et al., 2024), while issues of diversity, inclusion, internationalisation and career preparation continue to shape the debate (Hillebrand & Leysinger, 2023; McCulloch, 2021).

1.3 National trends in doctoral training

In Austria, nearly all universities have established structured doctoral programmes over the past decade (Geppert et al., 2024). This development reflects the influence of European-level reforms (LERU, 2014) and domestic initiatives to align doctoral training with

international standards. Important drivers included recommendations from the *Hochschulkonferenz*, *UniKo* and the *Austrian Science Council*, as well as the integration of structured doctoral training into university performance indicators through the *Universitätsfinanzierung NEU* and the *Wissensbilanz* (BMBWF, 2023).
Recent evidence shows that these reforms have produced notable changes (Geppert et al., 2024).
Austrian structured programmes are, in quantitative terms, characterised by a growing share of international doctoral researchers, higher completion rates, and shorter times to degree. However, challenges such as brain drain and a rising number of external doctoral researchers persist. Qualitatively, structured doctorates have broadened stakeholder involvement in doctoral training—bringing in graduate schools, training providers, and external examiners—while their design continues to vary across disciplines, reflecting different academic cultures. (Geppert et al., 2024)

At the same time, strengthening supervision has been identified as a central challenge. While team supervision enhances the quality and diversity of support, it represents a cultural shift and requires substantial staff resources, particularly in programmes with large cohorts (Geppert et al., 2024, p. 72).

In summary, Austria has experienced a significant expansion of structured doctoral training, driven by supranational and national reforms. Currently, institutions are challenged to make these structures sustainable, ensuring adequate supervision and funding, and maintaining the international competitiveness of doctoral education.

1.4 Guiding questions

Against the international and national trends described above, the question of the innovation potential of the *doc.funds* programme arises. The main question guiding our evaluation is:

> *To what extent has the FWF doc.funds programme influenced the further development of structured doctoral training in Austria?*

The evaluation of the FWF's predecessor programme, the *Doktorandenkolleg* (Ecker et al., 2014), showed that it had no leverage effect for the broad implementation of structured doctoral programmes in Austria. Rather, observable effects were located in niches and in doctoral training practices, particularly in the development of training elements such as guest lectures or courses open to all doctoral researchers. However, the earlier evaluation also highlighted pronounced disciplinary differences across the programmes, linked to how well structured doctoral training aligns with established research and supervision cultures. For example, the collaborative structures of the DKs aligned more strongly with the life sciences than with the more individualised cultures of the social sciences.

While the DK-programme was implemented in a phase where changes at the landscape level were still consolidating, the current *doc.funds* programme operates under conditions

where structured doctoral training has become institutionalised as a recognised regime standard at Austrian universities. This change also has an effect on the way the *doc.funds* has an impact on the further development of doctoral training, rather than supporting the establishment of a new doctoral training regime, *doc.funds* projects became more of niche-level initiatives that contribute to the development of specific elements of structured doctoral education, such as supervision or career development, while not specifically aiming for a broader system change.

To capture these dynamics, the evaluation applies Geels' *Multi-Level Perspective* (MLP) as its analytical lens. The MLP provides a way to study how innovations at the programme level interact with broader institutional practices and international policy trends. It distinguishes between three levels: the landscape (long-term contextual pressures such as the European recommendations for doctoral training), the regime (the dominant institutional structures, norms and practices—in this case, the Austrian doctoral education system), and niches (protected spaces where new practices can emerge, such as within the *doc.funds* programmes). Transitions occur when innovations emerging in niches reshape established regime practices, mostly in response to landscape-level pressures.

Transitions occur when innovations emerging in niches begin to reshape established regime practices, often in response to broader landscape-level pressures.

2 Methodology

2.1 Framework and objectives

We centred our analysis around the following key questions to capture the impact of the *doc.funds* Programme:

- **RQ1: Which forms of structured doctoral education exist in Austria? (section 4)** *(Regime level: mapping the configuration of existing forms and practices across institutions.)*
- **RQ2: What innovations can be attributed to the *doc.funds* programme and how relevant are they for Austrian doctoral education? (section 5 and 6)** *(Niche level → Regime: identifying doc.funds-driven innovations and their diffusion/upscaling potential.)*
- **RQ3: Which international standards have been implemented in Austrian doctoral education? (sections 3 and 7)** *(Landscape → Regime: assessing alignment with supranational standards and external pressures.)*
- **RQ4: How could the *doc.funds* programme be developed further? (section 8)** *(Transition pathways across levels: implications for programme design and system change.)*

These evaluation questions were answered using the multi-level perspective (MLP - Geels and Schot (2007)). The MLP was originally designed for the analysis of transformation processes in socio-technical systems, e.g. to illustrate social changes through the use and dissemination of technical innovations at various levels, including the behavioural and normative/regulative levels of societies. The MLP allows to analyse transition pathways of larger social systems stimulated by niche-innovations. A special focus of the framework is on the factors that promoted or hindered these developments. As part of the evaluation, it will be used to reconstruct the spread of selected doctoral training practices and to assess their influence on doctoral training in Austria. We chose this framework because the *doc.funds* programme is explicitly designed to strengthen existing structures for doctoral training. This may include a stimulation of innovation in doctoral training in parallel to the Salzburg II recommendation.

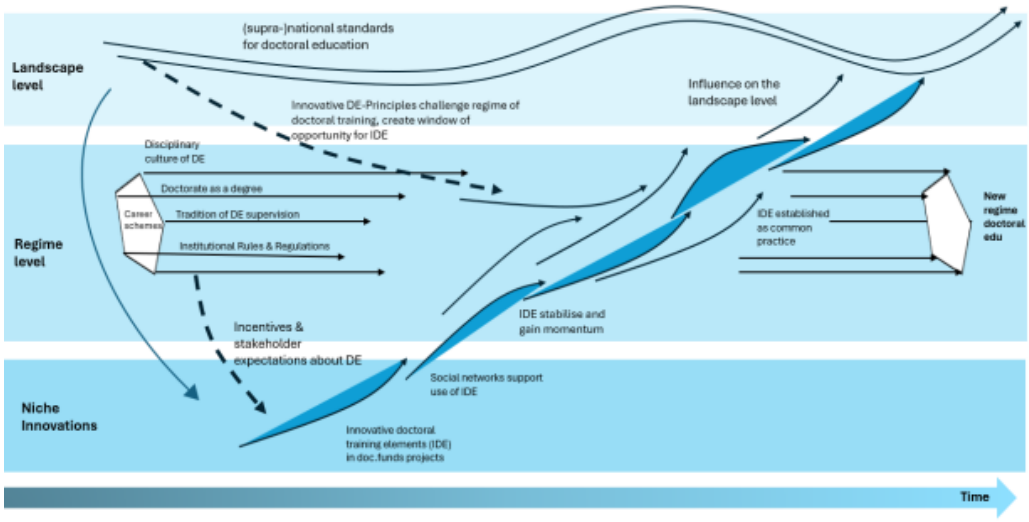
In the multi-level perspective, social systems are depicted at three levels. The **first level** represents **niches** in which innovations emerge that could potentially change existing structures. Applied to the subject of the evaluation, the FWF *doc.funds* projects can be understood as niches in which innovations in doctoral training are developed as good practices.

The **second level** is the **regime-level**, which refer to institutionalised patterns of practices or 'how things are done or used'. In the case doctoral education, these regimes refer to the structures, practices and institutions that determine current doctoral training. In

general, regimes are quite stable, i.e. difficult to change, because they protect the interests of various stakeholders or are deeply rooted in cultural traditions. Many innovations do not succeed because they are perceived by actors as a violation of their interests or traditions. In the case of doctoral training, disciplinary cultures might be a strong hindrance for implementing new forms of training.
The **third** is the **landscape** level, which can be understood as normative-legislative environment, that defines the overall framework for the regimes and niches. In the case of doctoral training, these are primarily the European standards of doctoral training, such as the *Salzburg II recommendations.*

The figure below sets out our perspective on the transition pathways linked to the innovations developed in the *doc.funds* projects.

Figure 2.1: Transistion Pathways for doctoral training innovations.



IDE = Innovative Doctoral Training Elements; DE = Doctoral Education, figure adapted from Geels and Schot, 2007, p. 401

2.2 Data collection

For the study, a mixed-methods approach was implemented, combining desk research, quantitative surveys, and qualitative interviews to obtain a comprehensive understanding of Austrian structural doctoral programmes, with a particular focus on the *doc.funds* initiative.

First, **desk research** was conducted to review and analyse existing documentation, policy frameworks, and evaluation reports related to Austrian structural programmes in higher education and research. This provided an essential contextual foundation and informed the design of subsequent data collection instruments.

Desk research also covered the information of the mapping of the Austrian structured doctoral programmes in higher education institutions and intermediary organisations. The mapping covers not only the programmes and institutions, but also innovative

practices for doctoral programmes if this information was easily accessible on university and institutional websites.

Second, two **online surveys** were implemented to capture the perspectives of participants involved in *doc.funds* and comparable control groups. The first survey targeted *doc.funds* doctoral researchers and a control group of doctoral candidates not participating in the programme. A total of **191 responses** were received, comprising **136 *doc.funds* students** and **40 control group participants.** 11 responses had to be omitted for the analysis, as they did not identify themselves as belonging to either group, and 4 were too incomplete to be considered (for more information about the control group see 2.3 limitations, and the Annex).

The second survey addressed *doc.funds* **coordinators** and a corresponding control group of coordinators from non-*doc.funds* projects, yielding **43 complete responses** in total (**36 *doc.funds* coordinatorss** and **7 control group members**). As the control group is not sufficiently large, comparisons with other doctoral programmes were only possible to a very limited extent

Third, a series of **qualitative interviews** and **focus groups** were conducted to gather in-depth insights from key stakeholders in *doc.funds* projects. The interview sample included **4 external stakeholders** (3 representatives from research management in universities and 1 representative of a non-university research institution funding own doctoral programmes), **12 coordinators**, and **19 *doc.funds* students**. These interviews explored experiences, perceived outcomes, and contextual factors that could not be fully captured through quantitative methods. In addition to these interviews, specific information on research funding at universities and the development of doctoral programmes was obtained during a workshop of around 20 university stakeholders (mainly rectorate level) and 7 external stakeholders (from research organisations with close connections to the university sector organised by Joanneum Research and 3s in the course of an evaluation of the existing university financing system by the Austrian Ministry of Women, Science, and Research in February 2026.

To ensure the robustness and validity of findings, the study employs **triangulation of data**, integrating results from desk research, survey data, and interviews. This approach facilitated the identification of converging and diverging evidence across sources.
Both **quantitative and qualitative analyses** were undertaken. Quantitative data from the surveys were analysed using descriptive and comparative statistical methods to identify trends and differences between *doc.funds* participants and control groups. Qualitative data from interviews were coded and thematically analysed to reveal key patterns, perceptions, and narratives. Together, these methods provided a rich, multidimensional understanding of the structure, implementation, and impacts of the *doc.funds* programme within the Austrian research landscape.

2.3 Limitations

The evaluation study faced limitations related to sample size and group composition, which must be considered when interpreting its findings.

Both the 'intervention group' – the target group under investigation (former, current and future coordinators and PhD students within *doc.funds* projects) and the control group (coordinatorss and PhD students outside of *doc.funds* projects) were relatively small in size, which poses methodological and analytical challenges that affect the robustness, representativeness and generalisability of results.

The control group participants had been contacted through the coordinators, who had been asked to pass the student survey on to *doc.funds* students and to other doctoral students in their institutions. It was meant to create a control group in a similar academic environment as *doc.funds* students, but in the end this approach caused issues that have to be taken into account when comparing answers from *doc.funds* students with those from the control group:

- Some control group students could not say if they were *doc.funds* students or not. These (11) students were not used in any comparisons between *doc.funds* students and the control group (limited reliability).
- The control group was meant to provide a better picture about doctoral students in the same academic environment; but as we do not know who was contacted by the coordinators, we only can assume this (limited embeddedness in the same academic environment).
- With smaller samples, it is overall more difficult to ensure that the control and intervention groups are well balanced in terms of key characteristics (e.g. age, gender, country of origin, type (size) of doctoral programme enrolled in, field of studies, ...). As a result, any observed differences between the groups may partly reflect pre-existing disparities rather than the true effect of the intervention being evaluated (limited validity in findings in comparisons).
- In the case of very small control group sizes, not all of the characteristics can be compared at all (limited result comparability).

Additionally, small group sizes restrict the use of advanced statistical methods that rely on larger datasets for reliable estimation, such as multivariate regression, propensity score matching, or subgroup analysis. This limits the study's ability to explore the influence of contextual factors, mediating mechanisms, or interaction effects. Consequently, our analysis relies more strongly on descriptive statistics and qualitative interpretation, which are equally valuable given the small size of the 'total population', but which naturally reduces the generalisability of conclusions.

Another limitation of the study, which is circumvented by focusing on the niche-level, concerns the difficulty in disentangling programme-specific effects from broader external influences. The evaluation looks at a timeframe (2019 – 2025) during which the doctoral education landscape across Europe was affected by the Covid-19 pandemic and severe mobility restrictions. Parallel developments, which had already started earlier—such as the implementation of the principles established in the Salzburg II Recommendation, and the emphasis on transferable skills and international collaboration—created a dynamic context that inevitably influenced all participating institutions, regardless of their direct involvement in the programme being evaluated.

In Austria, in parallel to the start of *doc.funds* (since 2019), the new university financing regulations (*Universitätsfinanzierung NEU*) were implemented, which had severe effects on the structure and development of doctoral training as such; one of the key indicators in pillar 2 of the new university financing regulations was the number of university-employed PhD students, which led to the development of structured doctoral programmes in all universities.

As a result, it is challenging to attribute observed changes solely to the intervention under study, since similar developments occurred in non-participating institutions as part of wider systemic shifts. For instance, improvements in supervision quality, research training, or international mobility could reflect the broader modernisation of doctoral education rather than being a direct consequence of the evaluated programme. This overlap between internal and external drivers complicates causal inference and risks overestimating or underestimating the true programme impact. Nevertheless, the following chapters will try to identify the specific 'add on' that distinguishes *doc.funds*.

Furthermore, the simultaneity of reforms and policy incentives at both national and European levels means that many stakeholders were exposed to comparable stimuli—such as funding opportunities, quality assurance frameworks, and institutional performance indicators—which likely influenced outcomes across the board. In this context, establishing a clear counterfactual (i.e., what would have happened in the absence of the programme) becomes inherently difficult. The evaluation therefore faces a structural limitation: while it documents correlations between participation and positive developments, it cannot fully isolate the unique contribution of the programme from the wider policy environment that shaped doctoral education during the same period.

3 Policy developments in doctoral training

In the MLP framework (Geels & Schot, 2007), the landscape level refers to long-term, external developments that exert pressure on existing regimes. These can include, for example, political reforms, demographic change, globalisation and societal debates on quality and efficiency. For doctoral training in Europe and Austria, the last three decades have been marked by such landscape pressures as criticism of inefficiency, questions of research and supervision quality, and concerns about global competitiveness. These pressures have created conditions in which supranational reforms and national policy frameworks, such as the *Salzburg Recommendations* and the *Principles of Innovative Doctoral Training*, have driven change at the doctoral education regime level.

The following section investigates the international and national evolution of doctoral training reforms, addressing the research question 'Which international standards have been implemented in Austrian doctoral education'. Additionally, current priority areas and challenges of Austrian doctoral education are identified, highlighting areas of ongoing regime transformation.

3.1 International Trends

Over the past two decades, doctoral training in Europe has undergone tremendous transformation. As early as the late 1980s, inefficiency in doctoral training was the subject of political discussion across Europe (Ahola et al., 1999). High dropout rates, lengthy completion times and limited employment prospects for those with doctorates, particularly those trained for very specific purposes, raised questions about the value of existing training models. These concerns were not confined to academic communities, but were embedded in wider societal debates about knowledge economies and Europe's capacity to compete in an increasingly globalised innovation landscape.

In the 1990s, some countries responded with national initiatives. One of the first systematic attempts to structure doctoral education beyond the traditional 'master–apprentice' model was the *German Research Foundation's Research Training Groups* (*Graduiertenkollegs*), introduced in the early 1990s (Enders & Kottmann, 2009). Similar initiatives emerged in other European countries, representing early niche innovations that challenged the existing doctoral training regime (see Ahola et al., 1999). Also FWF's Doktoratskolleg (DK), the predecessor of *doc.funds*, was initiated in its later form in 1997 (FWF, 2007)

At the turn of the millennium, the debate shifted towards what was described as a quality crisis in doctoral training. This crisis was evident in several areas. From an academic perspective, there was increasing criticism that many dissertations lacked originality and

made little contribution to independent research. Equally problematic was the lack of transparency in doctoral assessment procedures, which, in some cases, permitted arbitrariness and undermined trust in the process. Furthermore, doctoral researchers were frequently not properly integrated into collaborative research structures, which limited their exposure to broader academic debates and networking opportunities (Kottmann, 2011; Jørgenson, 2011; Sadlak, 2004)).

The traditional master-apprentice model of supervision came under scrutiny because of the strong dependency relationships it created. Doctoral candidates who were closely tied to a single supervisor were in a structurally weak position, which sometimes resulted in abuse of power and poor working conditions. This made doctoral training precarious and hindered the development of academic independence among doctoral researchers (Hemer, 2012; Lee, 2008).

Ultimately, the doctoral system faced strong societal and economic criticism. Excessive specialisation and weak integration into labour markets outside academia meant that those with doctorates often faced poor employment prospects. Critics argued that this weakened the innovation capacity of European countries as a whole, creating a competitive disadvantage in a globalised economy (Jørgenson, 2011; Sadlak, 2004).

Against this backdrop, the *Bologna Process* and its extensions played a central role in reshaping doctoral training. Milestones included the *Salzburg I and II recommendations* (2005 and 2010), which established doctoral training as the 'third cycle' of higher education, introducing basic standards and quality benchmarks (European University Association, 2010). These were followed by the *European Commission's Principles for Innovative Doctoral Training* (2011 – see Box 1), which still form the current landscape level.

Box 1: Principles of Innovative Doctoral Training

1. **Research Excellence** – Doctoral candidates should be trained in excellent research environments with access to high-quality supervision, facilities, and resources.
2. **Attractive Institutional Environment** – Universities and research institutions should provide good working conditions, transparent recruitment procedures, and career development opportunities for doctoral candidates.
3. **Interdisciplinary Research Options** – Doctoral training should allow candidates to cross disciplinary boundaries and engage with multiple fields of knowledge.
4. **Exposure to Industry and Other Relevant Employment Sectors** – Candidates should gain experience in non-academic sectors (e.g. industry, public sector, NGOs) to improve employability and promote knowledge transfer.
5. **International Networking** – Mobility and collaboration across borders should be encouraged through joint supervision, cotutelle arrangements, and international research networks.
6. **Transferable Skills Training** – Doctoral training should include structured opportunities to develop transversal competences such as communication, project management, teamwork, entrepreneurship, and leadership.

7. **Quality Assurance** – Transparent and accountable quality assurance mechanisms should cover admission, supervision, progression, and final assessment throughout the doctoral lifecycle.

The principles called for a comprehensive reshaping of doctoral training. First, they highlighted the importance of embedding doctoral researchers in excellent institutional and research environments, which was seen as a precondition for research excellence. Second, they stressed the stronger integration of doctoral candidates into both international collaborations and intersectoral partnerships, so that training would better reflect the global and interdisciplinary nature of contemporary research and make them aware of labour markets outside academia. Third, they called for a more holistic conception of training, one that included the acquisition of transferable skills that could be applied in a variety of later careers. Fourth, the principles underscored the need for attractive and transparent working conditions, aligning with the *European Charter for Researchers* (European Commission, 2005), and thereby strengthening the position of doctoral candidates within universities and against their supervisors. Finally, the principles made clear that robust quality assurance mechanisms had to be implemented across the entire doctoral lifecycle, from recruitment and supervision to assessment and completion, in order to guarantee transparency and fairness.

These landscape-level interventions, in particular the *Salzburg II recommendations* did not remain abstract but were reinforced and operationalised by other European actors. The *League of European Research Universities* (LERU), for example, published recommendations in 2007 and 2010 that further emphasised the need for systematic quality assurance, interdisciplinary training, and stronger partnerships with external stakeholders (LERU, 2007, 2010).

As a result, across Europe, doctoral training structures changed significantly. Many universities created graduate schools as institutional anchors for structured doctoral programmes (Kottmann, 2011; Kehm, 2020). Curricular reforms brought mandatory training components into the doctoral phase, often up to 30 ECTS, covering a wide range of skills. These included training in research integrity and data management in response to plagiarism scandals, as well as training in transversal competences such as communication and presentation skills (Cutri et al., 2021). Assessment procedures were reformed to ensure a clearer separation between supervision and evaluation, thereby reducing the dependency of doctoral candidates and improving fairness (Elmgren et al., 2024). Alongside this, mobility opportunities were expanded, enabling doctoral candidates to spend time abroad and build international networks (Horta et al., 2021), while collaborations with non-university partners supported intersectoral integration (Peck, 2023).

Studies conducted by the *European University Association* confirm that these reforms have been widely implemented across European universities (Hasgall et al., n.d.; Hasgall & Peneoasu, 2022). However, the extent and depth of institutionalisation vary. While some universities have developed cross-organisational graduate schools overseeing all doctoral programmes, others have retained more fragmented, department-based approaches. Interdisciplinary doctoral schools focusing on societal challenges remain comparatively rare, and some institutions continue to operate traditional apprenticeship-style doctorates.

Despite this broad transformation, persistent pressures remain from the landscape level. The quality of supervision continues to be highlighted as the most important determinant of doctoral success. Institutions increasingly recognise that professionalisation of supervisors is required, including training in mentoring, intercultural awareness, and inclusive practices. LERU's recent advice paper reinforces this view, describing supervision as the very core of the doctorate (Hillebrand & Leysinger, 2023). Funding stability represents the second major pressure. Sustainable financial support for doctoral candidates is essential not only to reduce dropout risks but also to ensure equitable access to doctoral education and to strengthen universities' ability to attract international talent (Hasgall & Peneoasu, 2022; Alves et al., 2024).

3.2 National Trends

Austria has strongly been influenced by these European-level developments, while at the same time developing its own policy instruments and reforms. Structured doctoral training has expanded significantly across Austrian universities over the past decade, replacing the previously dominant apprenticeship model.

This expansion was facilitated by both political commitment and financial incentives. The *Hochschulkonferenz*, the *Austrian Science Council*, and *UniKo* have consistently supported structured formats. A major institutional driver was the introduction of the *Universitätsfinanzierung NEU*, which embedded structured doctoral training into performance-based funding indicators in the 2019 *Intellectual Capital Report* (*Wissensbilanz*). For the first time, doctoral training structures such as public project presentations, dissertation agreements, and team supervision became measurable competitive indicators in performance agreements (BMBWF, 2023). Structured doctoral programmes and the number of employed doctoral researchers within these programmes present one out of several key indicators for the new financing system (established in 2019). In a workshop with representatives from universities and extra-university research institutions, the establishment of structured doctoral programmes was described as being "saturated".

Recent analysis shows that these reforms have led to significant quantitative and qualitative shifts in Austria. On the quantitative side, structured doctorates are associated with higher completion rates and shorter average durations of study. They have also contributed to the internationalisation of Austrian higher education, with a rising proportion of doctoral candidates coming from abroad. At the same time, the number of external doctoral researchers, who are not directly employed by universities, has increased, raising questions about institutional affiliation and integration. (Geppert et al., 2024)

On the qualitative side, structured programmes have broadened the range of actors involved in doctoral education beyond the supervisor and the doctoral researcher. Graduate schools and training providers now complement the role of supervisors, while external examiners add an additional layer of quality assurance. Supervisory processes have been formalised, often through dissertation agreements, and adapted to the specific disciplinary cultures of different fields. While the spread of team supervision has created opportunities for more balanced support, it also requires cultural change and significantly

more staff resources, particularly in disciplines with high numbers of doctoral researchers. (Geppert et al., 2024). As a result, a variety of structured formats have emerged, where training elements are distinct concerning their relevance in different disciplinary contexts. Doctoral training programmes often combine international standards with discipline-specific practices.

Funding is another key issue. The *Österreichische Hochschulkonferenz* (2024) has highlighted the need for sustainable models that ensure programme stability and strengthen Austria's ability to recruit international doctoral researchers. Internationalisation, while an indicator of success, also carries the risk of brain drain if graduates leave Austria after their studies.

Intersectoral collaboration represents another area of development. In line with the Salzburg II principles, doctoral training in Austria is expected to forge stronger links with non-university labour markets, preparing graduates for diverse career paths and demonstrating the societal relevance of doctoral research.
Governance debates also continue to shape the national context. *UniKo* has consistently argued that the right to award doctorates should remain with universities and not be extended to *Fachhochschulen*, pointing to differences in infrastructure, research orientation, and quality standards.

The development plan for Austrian universities (*"Gesamtösterreichischer Universitätsentwicklungsplan 2025-2030"*) asked for a strengthening of doctoral programmes at universities, to make them competitive in international recognised funding structures, and explicitly mentiones the FWF *doc.funds programme* as one of these. From a quality perspective, universities should offer structured doctoral programmes on a broad basis, using several elements of the Salzburg II recommendations to underpin what quality in doctoral programmes means (BMBWF 2022).

In summary, Austria's doctoral education regime has been shaped by landscape pressures from international and European reforms, combined with newly structured national funding policies and governance instruments. Structured doctoral programmes are now widespread, and doctoral training became increasingly standardised while still adapted to disciplinary needs. Nevertheless, important development areas remain. These include the professionalisation and resourcing of supervision, the creation of sustainable funding models, the management of international recruitment and the risk of brain drain, the strengthening of intersectoral collaboration, and the continued balancing of standardisation with disciplinary diversity (addressed in more detail in section 5 – Innovations and Emerging practices).

4 Programmatic and Institutional Dynamics

The regime level represents the interplay of actors, institutions, norms and routines found in doctoral education systems. Institutional dynamics refer to the rules, regulations and government structures which organise the 'regime' (in this case, the Higher Education system and its institutions). Examples include changes in policy frameworks or regulatory incentives, or evaluation criteria. Regime stability is maintained through established institutional frameworks, funding mechanisms and supervisory cultures. This section/chapter offers an overview of structured doctoral programmes in Austria and how the *doc.funds*-projects relate to these.

4.1 Types of structured doctoral programmes

To analyse how structured doctoral training has spread across Austrian HEIs, we mapped the current provision at universities and extra-university research organisations and categorised programmes by their degree of institutional embedding (methodological comments in Annex 1).

A previous survey of all rectors of Austrian universities identified 131 doctoral programmes (Geppert et al., 2024) Most of these were located at the faculty level, where larger universities typically operated at least one structured programme, while smaller universities usually offered at least one institution-wide programme. In addition to these faculty-based formats, the rector survey also noted the existence of specific doctoral programmes connected to major research projects or excellence schemes. These were frequently embedded in, or closely linked to, the broader faculty-based structures but provide additional training elements for their doctoral candidates.

While this earlier survey provided a valuable overview, it excluded programmes offered by extra-university organisations such as the Ludwig Boltzmann Institutes or the Austrian Academy of Sciences, and it only partially captured industry-driven doctoral initiatives organised by intermediary organisations. As a result, the picture remained incomplete.

Our mapping addressed these limitations by extending the scope beyond the university sector to include extra-university research organisations and intermediary providers. Taking these additional actors into account, we identified approximately 230 structured doctoral programmes in Austria. This broader mapping thus delivers the first comprehensive view of structured doctoral training programmes in Austria.

The evolution of structured doctoral programmes at Austrian universities was also driven by the Austrian HE policy, namely the new university financing regime and the overall university strategy. At university level, this evolution is widely seen positive; at TU Graz for instance, an interviewee stated that the now fully established structured doctoral programmes especially influence the university's strategy for a targeted funding of young researchers.

Figure 4.1 below illustrates the distribution of structured doctoral programmes across Austria. Almost 50% (110 out of 230) of programmes are concentrated in the natural science fields1, where structured training elements have long been established as part of the research culture. However, structured formats have also become standard in the arts, humanities, and social sciences, reflecting their diffusion across the full disciplinary spectrum. Institution-wide doctoral schools remain the exception, with faculty-based programmes being far more common.

These programmes present a wide range of different approaches to doctoral training. To get a better presentation of the current landscape, we have developed four types that make it possible to show the major differences with regard to their institutional embedding. These types represent the embeddedness of structured doctoral programmes into the environment of institutions dedicated to provide a PhD title. The types as such do not reflect specific structures within the single doctoral programmes or specific innovative aspects. But they do reflect funding structures at secondary level, as these funding structures do influence the institutional embeddedness. In short:

- Type 1 represents broad programmes at faculty level,
- Type 2 represents specific aspects as embeddedness in a large research project (or a series of research projects from a specific group of researchers)
- Type 3 represents the embeddedness in a specific form of co-operation between different higher education institutions
- Type 4 represents the embeddedness in a specific form of co-operation between a university and a private research organisation

Type 1 – structured doctoral programmes at faculty level:
These programmes are broad frameworks to cover a broad range of doctoral researchers within the universities. Larger universities offer these programmes in different faculties, and some faculties even offer several of these broad programmes so that large research fields within the faculty are covered by one "doctoral school". The faculty-based structured doctoral programmes included in this mapping are mostly broad in scope (following the scientific disciplines within the faculty) and large in numbers (students, involved staff). In total, we identified 99 faculty-based structured doctoral programmes in the mapping.

Examples for faculty-based structured doctoral studies (type 1):
__ Doctoral School of Historical and Cultural Studies, University of Vienna

1 For the purpose of this evaluation, we included the following fields of study under 'natural science:: Medicine (32, including Medical-Theoretical Sciences and Oncology), Engineering (43, including Electronic Engineering, Machinery Engineering, Building and Construction Engineering), Information Technology (15), Natural Sciences (10, including Mathematics, Physics, Earth and Space Sciences), Life Sciences (9, including River System, Sustainable Development, Agriculture, Hazards and Risks in Alpine Regions), Biotechnology (7), and other STEM fields (4, including Veterinary Medicine)

- Vienna Doctoral School of Social Sciences, University of Vienna
- PhD Programme "Finance", Vienna University of Economics and Business
- Doctoral Programme in Engineering Sciences, TU Wien
- Doctoral Programme in Natural Sciences, TU Wien
- Doctoral School Geosciences, TU Graz

In contrast, **Type 2** represents structured doctoral programmes that are **linked to smaller research groups focussed on large research projects**. Frequently, these programmes are embedded into the faculty-based programmes. In total, we identified 107 doctoral programmes linked to research projects. *This type includes all doc.funds projects.*

Examples for specific doctoral programmes defined by large research projects (type 2):

- Thematic PhD Programme "Malignant Diseases", Medical University of Vienna
- Thematic Doctoral College "CO2 Refinery", TU Wien
- Thematic Doctoral College "Wasserwirtschaftliche Systeme", TU Wien
- Doctoral Programme Human River Systems in the 21st Century, BOKU Vienna
- UniVie Doctoral School Computer Science DoCS, University of Vienna
- Doctoral Programme "Bilateral AI", TU Graz

Type 3 programmes represent inter-institutional cooperation models. These programmes are jointly organised by more than one higher education institution and may involve collaborations between universities, or between research universities and universities of applied sciences. In our mapping, we identified eight such programmes. *This type includes doctoral programmes based on projects financed by the FWF-funded doc.funds connect programme (which are not covered in this study).*

Examples for specific doctoral programmes defined through inter-institutional cooperation (type 3):

- Doctoral programme "*Bilateral AI*", co-operation of six universities (*Johannes Kepler University Linz, University of Klagenfurt, Graz University of Technology, Vienna University of Economics and Business, Technical University of Vienna, Institute of Science and Technology Austria*)
- CeMM International PhD Program in Molecular Technologies and Systems Medicine, *Austrian Academy of Sciences*
- Special doctoral programme "STEAM – STEM – stART", co-operation between *TU Wien* and *University College of Teacher Education in Vienna*
- *Thematic Doctoral College* "Digiphot", co-operation between *TU Wien* and *FH Campus Wien*
- Doctoral College "Mature Tissues", co-operation between *TU Wien* and *FH Technikum Wien*
- Doctoral College "Sciences4Free", co-operation between *TU Wien* and *FH Wiener Neustadt*

Type 4 – Doctoral programmes hosted by extra-university research organisations. These programmes are organised outside the university sector but usually maintain close institutional and supervisory links with universities. They are typically found in large research organisations, such as the *Ludwig-Boltzmann Institute*, where doctoral training is

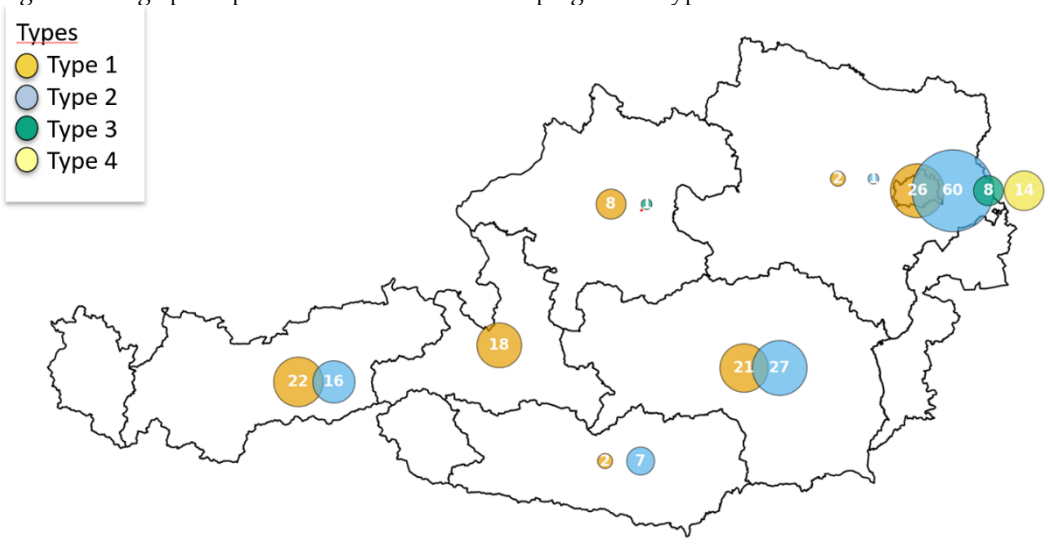
integrated into the organisation's research agenda and often serves as part of staff development. Our mapping identified 14 such programmes.

Examples for doctoral programmes carried out by extra-university organisations and intermediary organisations (type 4):

- LBI research group "Molecular Basis of Organ Failure and Regeneration", *Ludwig Boltzmann Institute*
- AIT PhD Programme, *Austrian Institute of Technology*
- ISTA PhD Programme, *Institute for Science and Technology Austria*
- Doctoral College of the *Institute for Advanced Studies (IHS)*, Vienna

The types described are not completely distinct, and may overlap or overlay. Nevertheless, each of them fulfils a specific function and can therefore not be omitted, even in case of overlay. For example, most of the type 2 doctoral programmes are (at least partly) embedded in a type 1 environment, with the distinction of being more specifically defined through a research topic. In this case, while doctoral researchers have to follow the broader type 1 faculty regulations, they also have to abide by the specific terms within their type 2 programmes. This interplay was also mentioned in interviews, and will be referred to in more detail in Chapters5 and 6. These different "layers" of structured doctoral programmes have to be kept in mind when looking at the following map illustrating the geographic spread of structured doctoral programmes in Austria, based on the types described above.

Figure 0 Geographic spread of structured doctoral programme types across Austria

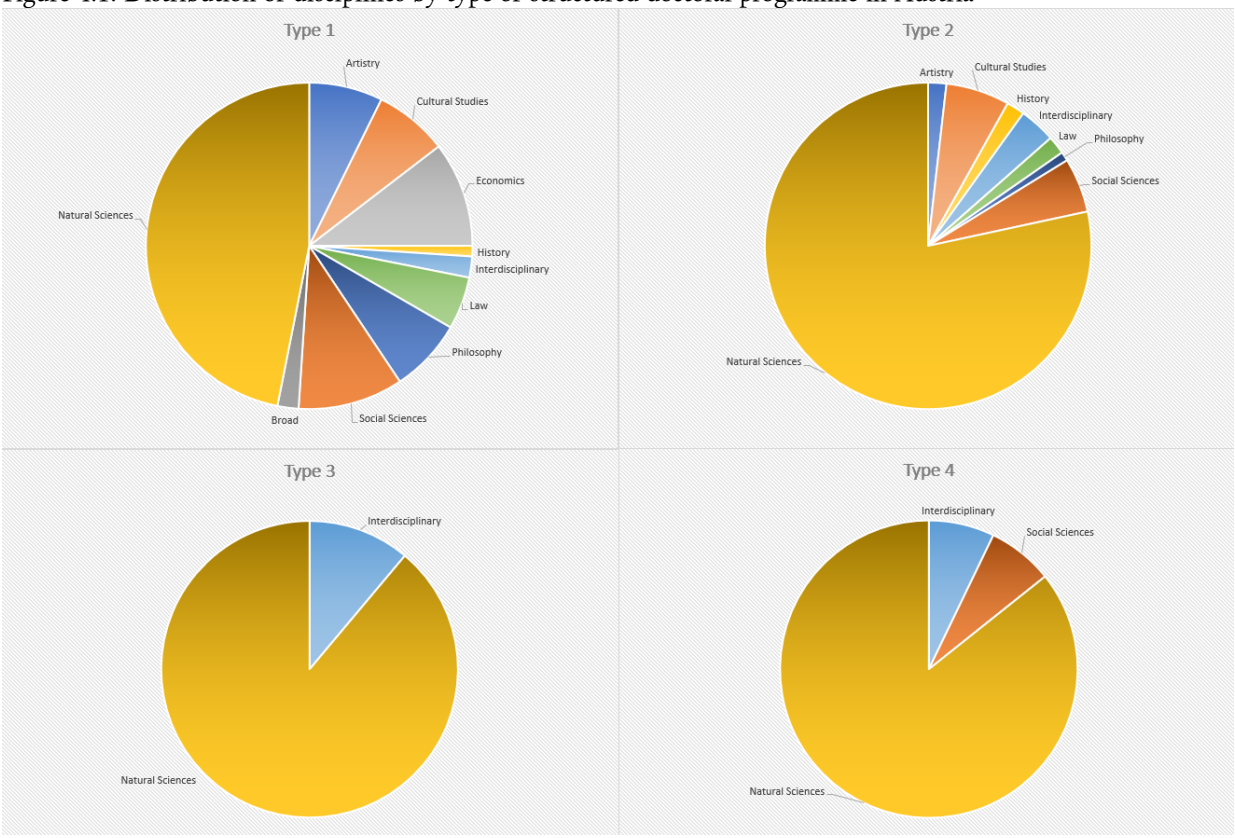


In terms of geographic distribution, the highest concentration of structured doctoral programmes is found in Vienna, reflecting the dense university landscape that combines both large comprehensive universities and highly specialised institutions. The second-largest cluster is located in Styria, centred around the major universities and research institutes in Graz, followed by Tyrol. By contrast, Salzburg, Upper Austria, and Carinthia host comparatively fewer structured programmes, which corresponds to the smaller size of their universities and the more specialised range of study programmes offered. Lower Austria, with only a limited number of research institutions, has just a handful of structured programmes.

Among universities, it is not surprising that large institutions such as the *University of Vienna* host the highest number of structured doctoral programmes. Yet the overall number is even greater at certain specialised universities, notably *TU Wien* and the *Medical University of Vienna*. This is closely linked to the diversity and intensity of their research funding. In particular, universities in Natural science fields have a long-standing tradition of securing substantial third-party funding, which has strongly shaped their research landscape. Research at these institutions is frequently organised through collaborative projects involving multiple partners, including external funding bodies. As a result, project-based structured doctoral programmes have been established in significant numbers.

In total, Natural Sciences programmes represent around three quarters of the structured doctoral programmes mapped, while all other scientific areas and disciplines are represented by the remaining quarter of programmes mapped (see figure 4.2).

Figure 4.1: Distribution of disciplines by type of structured doctoral programme in Austria



Source: Own desk research

In the past 15 years the landscape of doctoral programmes in Austria has changed profoundly. Especially the development of structured doctoral programmes including the "Principles of innovative doctoral training" (European Commission, 2011) happened in parallel to the development of the DK programme (the predecessor of the *doc.funds* programme) and the *doc.funds* programme itself. As part of the overall development taking place, the *doc.funds* programme also played a role in the further development of structured doctoral studies, especially regarding the focus on research groups and cooperation between departments and universities, which, according to stakeholder consultations,

have in some cases led to a stronger embeddedness of structured doctoral training within their departments.

4.2 Funding of doctoral programmes and positions

4.2.1 Funding of doctoral programmes

Over the past decade, funding sources for doctoral training in Austria have diversified: nowadays funding includes sources coming from industrial partners, foundations or private donors. This is particularly strong in the STEM disciplines, where the share of university-industry collaborations has been increasing in the past two decades to become an essential pillar of the Austrian research, technology and innovation strategy (Österreichische Bundesregierung 2020: FTI-Strategie 2030).

While the large faculty led structured doctoral programmes (Type 1) all receive basic institutional funding from their host universities, the funding structure in other types of programmes differs substantially. Some of the specialised programmes receive institutional funding, but most of them rely on third-party funding (either national or international). Around 80-90% of all structured doctoral programmes include – at least to some extent – European funding.[2] Industry funding is mainly associated with very specific programmes, in most cases in collaboration with intermediary organisations. Foundations and private donors provide funding in about a third of the mapped programmes.

The funding of doctoral researchers also differs substantially between the different types of structured doctoral programmes. A substantial share of the costs of doctoral training involves the salaries for doctoral researchers. These are either covered by the university's budget, or by external sources, mostly third party project funding, which includes the *doc.funds* programme.

4.2.2 Funding of doctoral researcher positions

The "Knowledge Balance Reports"[3] of universities provide a basic estimate of employment of doctoral researchers: From the approximately 20,000 doctoral researchers who are currently enrolled in doctoral programmes less than one third (around 6,000) are

2 While no valid statistical figures do exist to this item, it was asked in several interviews with stakeholders, who confirmed the strong institutional base of European research funding that ranges from a small proportion (e.g. through a small European project funding or European funding for mobility) through dedicated project funding (e.g. through the Horizon programme) up to large scale funding (e.g. European University Alliances). Also interviews with coordinators proof the figure, that some European funding is at least to some extent used in most of the doctoral programmes at Austrian universities.

3 The Knowledge Balance Reports have to be produced by universities in Austria as part of the governance system in the Austrian HE system. They usually include key indicators on "intellectual property", "key processes", "key outputs and effects". The design of the reports is regulated through a ministerial by-law.

employed, of which 80% are employed at university, and 20% are employed in a non-university context.

Through its dedicated funding of doctoral researchers involved in research projects, embedded into university research structures, the *doc.funds* programme promotes the growth in numbers of doctoral candidates employed at university level. It can therefore be described as an active contribution to the FTI-Strategy and the promotion of university research, as the growing number of employed doctoral researchers is at the heart of the "performance agreements" (Leistungsvereinbarungen) between the Ministry of Science and the universities as basis for performance-based funding of universities.

Besides employed doctoral researchers at universities there is still a significant number of doctoral students not employed as universities, as the "free university admission" is still in place (workshop with university stakeholders concerning university financing in February 2026).

5 Implementation of *doc.funds*

In order to identify paths for the further development of doc-funds, it is essential to understand its implementation in practice. Data from the surveys, focus groups and interviews with students and coordinators is triangulated in this chapter, structured along the timeline of a *doc.funds* project, starting with the proposal writing and application process.

5.1 Application process – coordinators' perspective

Data from survey and focus groups suggest that the way applicants develop proposals to meet the *doc.funds* requirement is itself a response to the wider regulatory and institutional environment. This suggests that the proposal development process functions as an adaptation and learning mechanism influencing how doctoral programmes are conceptualised and planned. Respondents mentioned that the process shaped their awareness of key aspects such as interdepartmental cooperation, gender balance, and structured design in general, thereby helping to embed these principles at the niche level.

In general, survey data reveals an appreciation of the application process. With regard to challenges encountered during the application process more than half of coordinators reported the low success rate at the first submission attempt, and negative funding decisions despite excellent evaluation results. This made it hard for them to understand the negative decision, while at the same time increasing the motivation to resubmit. Coordinators also mentioned that clearer communication between FWF and coordinators regarding the expectations could improve the feedback process and manage expectations about the hearings. Concretely, according to an interviewed coordinator, in his, and many hearings by colleagues, there was a notable discrepancy between the hearings' communicated purpose by FWF beforehand, and its execution: while according to the coordinator, applicants were explicitly informed that the hearing would focus on organisational and governance aspects, given the existing academic evaluations (Gutachten), in reality, the hearing predominantly featured subject-matter inquiries, contradicting the perception of the guidance received prior to the hearing. Coordinators received quite detailed questions about the content of their project, and were especially surprised to receive these from experts 'far away from the research topic' leading to 'somewhat strange' questions. He suggested that either the information conveyed beforehand would be changed to 'any type of question may be asked, also content specific, or – if the indention is indeed to focus on organisational questions in the panel – to brief panel members more thoroughly about their expected role in the panel, i.e. focusing more on organisational and governance aspects. However, the guidance documents sent out by FWF beforehand, explicitly mention that the hearings 'are designed to give the Jury an opportunity to get to know the

consortium, the existing doctoral programme for which additional funds are requested as well as the research conducted and planned in the programme'.

Overall, the accessibility of the application process was perceived positively. More than 90 % reported that it was very or rather accessible in terms of meeting the prerequisites, more than 65 % say the procedure has been very or rather user-friendly.

Nevertheless, more than 50% of coordinators (22 of 40 Survey participants) mentioned that they had to resubmit their initial proposals (i.e. revise and submit in the same call), and some even had to reapply in subsequent calls (in a different year). While a revision was requested for 2/3 of the SHAPE**4** proposals, only 1/3 of the Natural Sciences proposal were asked for revisions, pointing to a higher experience in this field.

On a more positive note, many coordinators highlighted that the application requirements, such as the need for interdepartmental or interinstitutional cooperation, or the provision of innovative and structured training components, served as a constructive stimulus during the planning phase of their programmes. These requirements encouraged coordinators to engage in more strategic design processes, prompting them to consider key structural, pedagogical and organisational dimensions in advance. As a result, the process not only strengthened institutional and disciplinary networks, but also fostered intersectoral cooperation and a more cohesive programme development. In one of the focus groups, coordinators reported that they did use the established network for other types of cooperation as well.

The perception of the application procedure differed slightly across disciplines, with social sciences representatives expressing that they found the procedure to be more aligned to the natural sciences. This was in particular mentioned with regard to the requirement of defining concrete topics for PhDs already in the application. Participants mentioned that this rigid starting point might have had a negative impact on the number of received applications as it is not a common practice in the social science to determine PhD topics in such a way. A coordinator stated that in his view, this poses a strong limitation for possible candidates, as they are used to following their own research interests. In the natural sciences, on the other hand, the gender quota - a 30% participation of the underrepresented gender - was perceived as challenging. Both examples show that the application procedure already provoke the status quo in both natural and social sciences.

From a social science perspective, we found it very uncommon to include short sketches of individual PhD projects in our project proposal. Typically, identifying a clear research gap, developing their own research question [...] is an essential part of writing a PhD in social sciences and we only included individual project proposals in our application because it was obligatory.

coordinator statement on the application process

4 SHAPE: Social Sciences, Humanities, Arts; in the case of *doc.funds*, this includes Social Sciences, Historical Sciences, Linguistics, Health Sciences, Philosophy/Theology, Economics, Law and Arts-based research

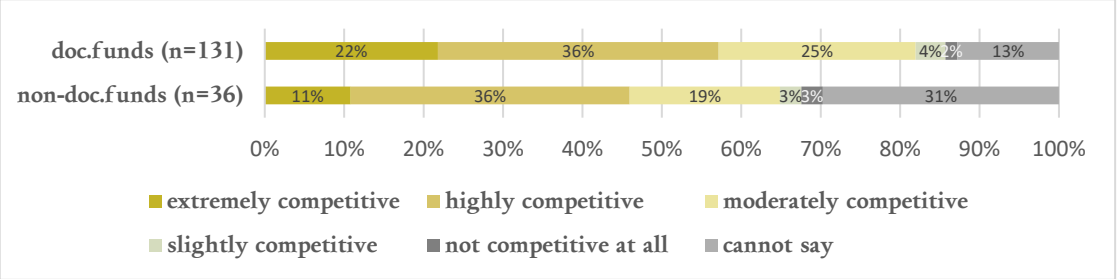
5.2 Application process – doctoral researchers' perspective

Although the application process is not managed directly by FWF, doctoral candidates were asked about their experience in order to compare its competitiveness with other programmes. An external stakeholder welcomed *doc.funds* approach of carefully selecting candidates as a 'good exercise' for the Austrian doctoral landscape in general, which is still characterised by a high number of self-financed 'part time' doctoral students.

The *doc.funds* projects attracted a large number of applications for the positions, reaching around 40 applications per position, on average. This number appears to be slightly higher than for comparable programmes, although the numbers may be influenced by other factors such as the general prospects on the labour market, and a limited control group. Another limitation is the fact that *doc.funds* programmes employ differing numbers of doctoral candidates, and the applications cannot in be broken down to individual positions. Even within *doc.funds*, the number differ widely, with some programmes receiving less than 10 and some up to 400 applications.

The survey of doctoral candidates indicates that the application to the *doc.funds* programme was perceived as more competitive in other programmes, with twice as many respondents indicating that it was 'extremely competitive'.

Figure 0-1 competitiveness of the application, *doc.funds* vs. non-doc funds doctoral candidates



Source: Survey among doctoral students (doc.funds and other)

Results from focus groups and interviews further underline that the selection of PhD candidates was competitive.

When asked about their motivation to apply, many PhD candidates answered that they were approached by their future coordinators to apply for the positions, while others found the positions through regular job search. Two students present in focus group mentioned that they specifically applied for a *doc.funds* PhD position because it would not include any teaching obligations.

5.3 Coordination and Communication with FWF

Once the projects were approved, communication with FWF staff was generally evaluated positively. Respondents commended the generally straight-forward and clear reporting requirements.

However, the overall coordination of the individual *doc.funds* projects was consistently identified as a major challenge by coordinators. The administrative workload associated with coordination responsibilities was considered as disproportionately high, relative to the available resources and institutional support. Several coordinators reported that the funding structure did not sufficiently account for administrative needs, leaving them unable to recruit dedicated support staff, forcing them to rely on existing institutional staff – resources that were not equally accessible across projects. Evidence from focus groups indicates that these limitations created disparities in project management capacity and created additional stress for coordinators. Consequently, while many participants expressed continued interest in contributing to future *doc.funds* projects in a different role, a notable share indicated reluctance to assume coordination roles again, citing the imbalance between administrative demands and available institutional and financial support.

5.4 Funding

There was also a noticeable difference between research sectors relying on funding for consumables vis-á-vis those able to use these funds in other areas. It was also mentioned that the lack of adequate funding for consumables required cross-financing and represented an obstacle to younger *doc.funds* coordinators (i.e. being 'in the initial phase of their independent research') to apply.

From the perspective of coordinators, these hurdles slow down the emerging of new 'lighthouses', as there is usually no funding to continue such large research groups, and the 4-year cycle was deemed too short for real progress to be made and lighthouses to emerge. It also emerged that not all coordinators were aware of the possibility of 'budget-neutral' extensions of their projects, even though this information is laid out in the contract.

Lack of funding of consumables requires cross-financing and makes it difficult for principle investigators in the initial phase of their independent research to apply

coordinator statement on application process

The funding was in general perceived as a great opportunity for introducing innovative elements in doctoral education. Different institutional conditions – especially whether there was extra budget available – influenced how far coordinators could use the budget for additional, innovative activities such as retreats or expert talks, or if they had to use it for increased staff costs, for additional administration or facilitation.

Furthermore, as many interviewed coordinators noted, different disciplines need different equipment, and the acquisition of larger amounts of consumables or more extensive mobility expenses posed hurdles in light of inflation and subsequent wage increases.

Finally, notwithstanding inflation, the majority of coordinators mentioned difficulties financing the required salary increase of doctoral researchers after three years. This is not sufficiently accounted for in the current budget. Also owing to the recent inflation rates and subsequent increases of wages in collective bargaining agreements, coordinators were often forced to find "creative" solutions like a reduction of weekly contract-hours of doctoral researchers. Furthermore, the limited time frame of the budget of 4 years for each project, was mentioned by a small number of coordinators as a limitation for the projects to reach their highest potentials.

With regard to the funding program, I feel the most significant limitation is that funding is only available for one cohort, as there is an enormous momentum created within the doc school, but there is hardly any opportunity to continue with the same momentum after 4 years, and you have to apply [with] a new proposal. Furthermore, the integration of PostDocs (based on additional funding) could leverage the publication of findings and strengths in scientific terms in the long run.

coordinator statement on funding

In the focus groups, coordinators also called for a stronger focus on (financial and administrative) sustainability at the application stage, including clearer institutional commitments from universities to provide specific additional support as a condition for funding. At present, the data indicate that both the administrative support and the continuation of innovative elements in doctoral programmes beyond the funding period depends heavily on pre-existing institutional structures. For example, coordinators operating their *doc.funds* project within a type 1 programme ('doctoral school'), were more likely to receive administrative support, for bookkeeping, or organising events and supporting the doctoral students. Those who did not have this structure in the background, often struggled to 'make ends meet'. This was also due to miscommunication or unclear expectations on the use of the co-funding provided by universities in some cases, e.g. when a coordinator reported that the university gave additional funding which was used for consumables, but then was not willing to support an administrative aid:

Thankfully, the secretary of the department helped a lot, even if she had to work extra hours, because she was doing an additional job [...]. I was [...] left to dry from the university, when it came to administration. [...] When I asked, they said 'Well, we gave you co-funding so you can hire somebody'. However, this is not how it works, because we need the co-funding for consumables.

coordinator statement on university support, type 2 'stand-alone'

This statement was one of many going in a similar direction, either citing the need to pay for consumables or the need to pay for the increasing wages (especially in the 4th year) with the co-funding received, and not having enough funding left for administrative support.

Funding for administrative purposes seemed to be less of a problem in doc.funds projects embedded in type 1 programmes.

We have this [...] doctoral school [...] and they had basically one person, of course not full time, but she helped a lot with organising their summer schools [...] organising the retreats, you know the non-scientific programme for the retreats, like career coaching and these things. So this was quite helpful.

coordinator statement on university support, type 2 embedded in type 1

6 Innovations and Emerging Practices

Niches make up a central part of transformational and innovative processes. This layer of the MLP describes spaces and opportunities for innovations to build and grow, partially independent from an existing regime – although the creation of niches can also be influenced by the regime, and be developed on purpose. (Smith & Raven, 2012). Niches provide higher flexibility and potential for change, which can in turn influence the regime and lead to changes there. *doc.funds* can be understood as a niche of a series of projects, which provides room for innovations to develop, with the potential to change the regime.

This section presents a comprehensive overview of the mapping of doctoral programmes carried out through desk research, and insights on the implementation of *doc.funds* programmes gathered through all stakeholder consultation activities (surveys, interviews and focus groups), conducted between May and July 2025. The consultations encompassed a range of qualitative and quantitative methods, including surveys, semi-structured interviews, and focus group discussions, to ensure a multidimensional understanding of stakeholder perspectives.

The analysis focuses in particular on the perceived value and impact of the *doc.funds* programme, as articulated by principal investigators (coordinators), doctoral candidates, and, where sufficient data is available, from the respective control groups. By integrating insights from these respondent categories, the chapter seeks to capture both institutional and individual experiences, highlighting areas of strength, benefits, and challenges in implementation.

To identify the innovations we used the principles established in the Salzburg II Recommendations. In the mapping exercise carried out for this study, we linked the innovations to the four types of structured doctoral programmes, where *doc.funds* projects are included (among other programmes) in Type 2. The results in Table 2 below, clearly show that Types 2 and 4 frequently have established innovative practices, as both cover all practices at least to some extent.

Table 0-1: Innovative practices in different types of structured doctoral programmes[5]

	Type of programme*			
Innovative practice	**1**	**2**	**3**	**4**
Joint supervision				
Affiliation to a research group				
Interdisciplinary / interinstitutional collaboration				
Internationalisation				
Customised skills training				
ECTS above average				
Mentoring				
Employability support				

*) Types of programmes: 1 faculty led, 2 research project-driven, 3 inter-institutional co-operation, 4 intermediary organisations

High coverage within the respective type (80% - 100%)
Medium coverage within the respective type (40% - 79%)
Low coverage within the respective type (10% - 39%)
(Nearly) no coverage within the respective type (less than 10%)

6.1 (Joint) Supervision and affiliation to a research group

Across all Austrian structured doctoral programmes, joint supervision – a prerequisite for any *doc.funds* project (*doc.funds* Application Guidelines, 2024) – is becoming more common. Especially in the smaller, specialised structured doctoral programmes, supervision is provided by a team (approx. 10-15% of the mapped programmes). This means that the traditional 'master-apprentice' approach with only one supervisor is replaced by a team of supervisors, taking different supervisory roles.

A recent study carried out to analyse innovative doctoral programmes in Austria (Geppert et al. 2024), focusing more on the larger faculty-led programmes, found that already 84% of programmes separate staff in charge of supervision and staff for support for the dissertation project, and 81% of programmes provide advice and support from a team. The study also found a positive effect on doctoral research because of exchange and teamwork with different groups of researchers (either students or teachers). This helped doctoral research to receive multifaceted feedback, which seemed to raise the quality of research. At the same time, team feedback reduced dependence on a single supervisor.

It is noteworthy at this point, that according to the survey carried out for this study, a major stimulus for coordinators to apply for a *doc.funds* project was the opportunity to attract highly skilled doctoral researchers, and to train them as a team. Further to the quality of supervision, *doc.funds* coordinators report that they all conclude written

5 This mapping counted, how often innovative practices were mentioned in the doctoral programme descriptions identified through desk research. Coverage means the frequency of mention within each type.

supervision agreements with their doctoral researchers, and meet up with them on a regular basis, most of them at least several times per semester, many also more frequently – especially those assigned as 'daily supervisors'.

Affiliation to a research group and embeddedness in a team, often also within a cohort, can therefore be considered a central aspect of *doc.funds*. This was also mentioned as a central defining element by an external stakeholder consulted. Those *doc.funds students* who worked more in a group setting, all showed high levels of satisfaction with their supervision. Overall, 92% of the surveyed *doc.funds* students reported feeling very well or somewhat integrated into their research groups, compared to 85% in the control group. *Doc.funds* students of Natural Sciences reported a 9 percentage points higher 'inclusion rate' than their SHAPE counterparts.

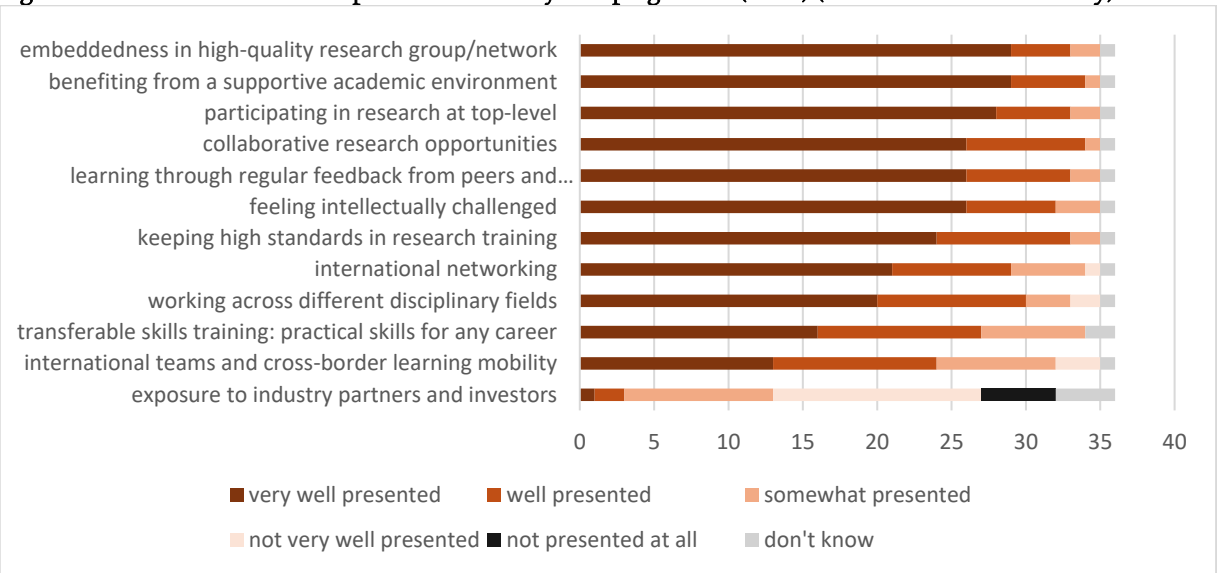
This shows that a small number of the interviewed and surveyed *doc.funds* doctoral researchers still feel somewhat excluded, or feel that their supervisors have not been sufficiently responsive, especially at the start of their doctoral programmes, when more support would have been needed. This was especially reported by students not embedded in a specific research team structure, e.g. not sharing office with any other research team members.

Peer exchange takes place not only in daily work, but also officially through public presentations of the dissertation project and other group formats, such as research colloquia, and – rather specific to a number of *doc.funds* projects - in retreats, where the whole research group, students as well as coordinators, take a certain time 'off' to focus on discussing the progress of their research. This also raises the quality of research; students are less at risk of becoming isolated and they benefit from better networking opportunities within the scientific community. If the study programmes are run in cohorts, a higher group identification can also be the case, which also may affect the quality of research. Many of the *doc.funds* students report positively on the peer group aspect, especially in the field of arts.

Institutions see the advantages of team supervision and teamwork in a better developed research profile, a greater international reputation, and increased visibility of research. Particularly the expectations of international peers regarding Austrian research development are met by structured doctoral programmes in research teams, especially in the fields of quality assurance and quality development. Collective processes and standards can be established more easily in structured doctoral programmes compared to traditional doctoral studies.(Geppert et al, 2024)

doc.funds coordinators also report that their projects are embedded in high-quality research groups and networks, benefit from a supportive academic environment, allow for participating in research at top level, create collaborative research opportunities and learning through regular feedback from peers and senior scientists. All of these were deemed very well or well presented by the majority of coordinators, as shown in Figure 5.1.1 below.

Figure 0.1 - Innovative elements present in the *doc.funds* programme (n=36) (Source: coordinator survey)



Source: Coordinator survey

Comparing survey responses of *doc.funds* students and non-*doc.funds* students, the most pronounced differences in their perception of innovative elements in their doctoral training were related to collaborative research opportunities, which more than 30% of *doc.funds* students found very well represented, compared to slightly more than 15% of other students.

6.2 Inter-institutional and Interdisciplinary Collaboration

Another trend in Austrian doctoral education is the growing importance of interdisciplinary and inter-institutional collaboration. Most of the mapped PhD programmes take one of two forms: (a) cooperation between departments within the same university, or (b) cooperation between departments at two or more universities.
Both forms are built into *doc.funds*: applicants must form a collaborative group of researchers in order to apply for funding.

In model (b), geographic proximity often supports day-to-day cooperation. One example outside *doc.funds* is CeMM**6**, which is located on the campus of the Medical University of Vienna and Vienna General Hospital (AKH), Austria's largest medical research complex. This proximity facilitates close collaboration between basic researchers and clinicians. One of many examples from within the *doc.funds* programme is „SHIELD: Securing Host Immunity – Elimination versus Destruction", between the Medical University of Vienna and the Veterinary Medicine University of Vienna.

6 The Austrian Research Center for Molecular Medicine

Another *doc.funds*-related example is the *doc.funds connect* instrument , which funds structured doctoral programmes jointly run by universities (with the right to award doctorates) and universities of applied sciences (without doctoral awarding rights). Examples include the FWF Doctoral College Visual Analytics and Computer Vision Meet Cultural Heritage (*TU Wien* and *St. Pölten University of Applied Sciences*) and the FWF Doctoral College Precision Livestock Farming (*TU Wien, University of Veterinary Medicine Vienna,* and *University of Applied Sciences Upper Austria*).

Overall, *doc.funds* appears to play a central role in strengthening collaborative approaches in doctoral training. Many principal investigators reported that collaboration—already during the application process—had a positive effect on their research. They also identified collaboration as one of the areas of *doc.funds*' biggest impact, also in the long-term: one coordinator explicitly states that the network created during the *doc.funds* project led to more cooperation within the university beyond the project's lifetime. Other coordinators mention fostered interaction through interdisciplinary courses with professors from different disciplines being present, and overall a higher frequency of in-person meetings than would otherwise have taken place.

Our doctoral training stands out for its highly interdisciplinary approach, equipping students with a comprehensive perspective on the field.

coordinator statement on interdisciplinarity

Furthermore, the student survey showed that *doc.funds* students are slightly more engaged in collaboration with external scientists than their peers, adding evidence of the pronounced collaborative nature of the programme.

Regarding the interdisciplinary aspect, also minor concerns were voiced, both by coordinators and by students. Students lamented the additional workload in order to 'translate' findings in one's own discipline to peers from the other disciplines, which, from some of the coordinators' and an outside perspective, may also turn out to be a crucial transversal skill in the long-run. 2 coordinators noted that the importance of interdisciplinary collaboration is not fully acknowledged during the application process, however. One coordinator even reported that their first two proposals were rejected, because the evaluators of either discipline thought it would not go into enough depth, while there was no 'bonus' for looking at the topic from interdisciplinary angles. According to him, when the interdisciplinary aspect was taken out, the proposal was later accepted. It could therefore be considered, whether *doc.funds* wants to put a stronger or a lesser focus on this aspect, and the decision should then be communicated openly, also to evaluators.

6.3 Internationalisation

Across Austria, internationalisation is reflected in various forms and influences structured doctoral programmes at all levels:

- International (mainly European) research funding influences the number of dissertations and the development of research activities at universities. (this point is omitted

in the comparison below due to the nature of *doc.funds* constituting a national funding mechanism)

- Many programmes (especially the *doc.funds* programme funded doctoral trainings) implicitly intend to raise the proportion of international students (e.g. by offering programmes in English and advertising the positions internationally) Specific development of students within their respective research communities, either through activities around international conferences or through partnerships with international research organisations and universities also reflects internationalisation.
- Mobility opportunities for PhD students have been increased widely by the European mobility programmes.

Regarding the first point, while internationalisation was not particularly evident in desk research, this may be owed to the broad internationalisation strategies adopted by all Austrian universities over the past 30 years, making it a standard practice rather than an exception worth highlighting.

At the same time, funding has also become very international, with around 90% of the mapped programmes (outside *doc.funds*) relying – at least partially – on European funding[7], indicating that in this aspect, internationalisation does indeed play a significant role, even if European funding for projects often is not explicitly mentioned in online descriptions, but is often directly linked to international cooperation.

Within *doc.funds* programmes, the second to fourth of the above mentioned points are well-covered, without being explicitly mentioned as a goal.

Regarding international students, only one of the programmes, according to coordinator survey data, had a majority of applicants with Austrian citizenship. The highest numbers of applicants, based on self-reporting by coordinators, came from India (mentioned among the top 3 nationalities by 18 coordinators), Germany (mentioned by 13) and Pakistan (8). China, Iran and Italy were mentioned by 6 coordinators. In total, more than 20 countries were mentioned explicitly. There was a stark contrast between Natural Sciences (including Medicine) and Social Sciences, Arts and Law – with Indian and Pakistani nationalities only mentioned in the Natural Sciences, and USA, Brazil, and Eastern European countries only mentioned by the latter. The control group is too small for meaningful comparison on this aspect (n=4)

When looking at the student admitted to the programmes, based on survey data, it becomes visible that *doc.funds* doctoral students are indeed more international: While theAustrian "Universitätsbericht 2023"[8], mentions that around 53% of new PhD students are not Austrian citizens, or 61% in the study field "Natural sciences, Mathematics and Statistics", in the *doc.funds* survey nearly 75% of responding doctoral students were not Austrian citizens, which is a much higher proportion and therefore a hint for higher international attractiveness of *doc.funds* in comparison to other doctoral programmes in Austria. The proportion of non-EU citizens in *doc.funds* programmes is especially high: more than 31%, compared to 16% in the control group.. The control group data also

7 An estimation that was mentioned in a workshop with university stakeholders for the evaluation of the university financing in Austria.
8 https://unibericht.bmbwf.gv.at/2023/97/ - visited 10.02.2026

confirms the findings of the 2023 report, with 58% of respondents indicating non-Austrian citizenship. Meanwhile two coordinators mentioned in focus groups that all of their doctoral students were international.

There is also evidence that internationalisation does play animportant role in *doc.funds* programmes when looking at the aspect of international exposure during doctoral studies. The survey carried out among doctoral researchers shows that *doc.funds* students, compared to non-*doc.funds* students, are almost twice as likely to have experienced internationalisation through international teams and cross-border learning mobility, than their non-*doc.funds* peers: almost 30% of *doc.funds* students mention that this element is very well represented, compared to around 15% of non-*doc.funds* students. On the other end of the scale, 20% of non-*doc.funds* students report that internationalisation is not at all represented, compared to around 15% of *doc.funds* students).

In focus groups, the aspect of mobility was discussed controversially, with the majority of coordinators stating that they offered and encouraged international mobility, but often lacking the funds to support students in their endeavours.[9] As international mobility, especially for a short period of time, comes with additional cost which is not fully covered by *doc.funds*, many students seemed reluctant to take up the opportunity. For example, students in pursuing their PhDs in cities with relatively high housing cost, with the potential to spend their time abroad in an evenly expensive city, stated they were held back by the difficulty of financing two places at the same time[10]. A good practice example was presented by one coordinator, who explained how they encouraged and supported doctoral researchers in applying for additional funding to finance their stays abroad, thereby enhancing their transversal skills at the same time.

6.4 Customised skills training

An important aspect of structured doctoral programmes is the high-quality customised skills training offered to doctoral researchers. Students in structured doctoral programmes often also attend courses with a higher amount of ECTS credits than their peers in "traditional" doctoral studies. *doc.funds* often creates additional learning opportunities for students in addition to the universities' existing offers: 89% of coordinators report that additional ECTS are available to their *doc.funds* students. While in a third of projects, up to 25% of ECTS are linked to *doc.funds* funding, for half of the projects it is more than 25% of ECTS and for almost a quarter it is more than half of the ECTS which are linked specifically to *doc.funds*. In interviews, coordinators reported a high dedication to creating meaningful and relevant courses and seminars for their *doc.funds* students.

Employability skills (presenting research findings, writing research proposals, conducting research itself) and employability support are also provided in some of the structured doctoral programmes, including in many of the *doc.funds* projects.

9 Doc.funds covers a sum of € 5.000 per year per doctoral student, for a period of 4 years, adding up to € 20.000 in total.
10 Additionally, an interviewee mentioned that subletting an apartment was often either not legally possible or not feasible for a short amount of time.

However, this is also a point of critique by many coordinators: the exclusiveness of course provision to only *doc.funds* students is perceived as limiting. Many coordinators report that in cases where the quality of training provision would not be diminished through the participation of 'external' students, e.g. in a guest lecture, funding should not be made available solely for the relative share of *doc.funds* students.

Beyond traditional academic instruction, we place strong emphasis on the development of soft skills through a specially tailored program designed to support students in integrating their expertise into future professional pursuits. This is particularly valuable given that many of our alumni choose to continue along the academic path.

coordinator statement on customised skills training

Currently, according to Geppert et al. (2024) only few programmes offer mentoring (approx. 5-10%), and the same seems to be the case within *doc.funds* projects: in focus group interviews, some students praised their university's offer regarding additional counselling and mental health support, while other voiced the wish to receive more of these customised offers.

One aspect which was heavily debated during focus groups, both among coordinators and among students, was the teaching practice: *doc.funds* stands out as one of the few doctoral programmes without teaching obligations, as FWF is not allowed to fund teaching. While both coordinators and students were aware of the trade-off between teaching and conducting research within a limited amount of time, all coordinators agreed on the importance of teaching experience for students, both for personal and for career development. Among students, diverging views emerged, with some students reporting that they particularly applied for a *doc.funds* programme because they would not have to teach, while others lamented the difficulty of getting teaching practice without support from their supervisors. External stakeholders consulted also mentioned the importance of teaching practice as a transversal skill.

Best practice examples to allow doctoral candidates to develop their teaching skills include supervising master students, teaching during mobility periods abroad, or teaching in group settings:

It was not easy, but we tried to make sure they were able to teach, because it is important for their future career to have teaching experience. We created a course they [the doctoral candidates] can teach together, and it is a lot of fun and a learning experience for them – working together, preparing the course together, under the supervision of faculty members.

coordinator statement on teaching skills

7 International Comparison

This section summarises the findings of the Swedish and Finnish country studies (see the full reports in the annex) to inform the evaluation of the Austrian FWF *doc.funds* programme. Both countries have recently implemented funding programmes that can be used for comparison with the *doc.funds* programme. These include the Swedish programme 'Centres of Excellence', which provides funding for excellent research infrastructure, including additional educational offerings for doctoral training, and the Finnish programme 'Doctoral Education Pilot', which aims to increase the number of doctoral graduates while advancing collaboration in doctoral education across higher education institutions and different industry sectors, including the public and non-profit sectors.

The results of the two country reports are examined using a multi-level perspective (MLP), enabling meaningful comparisons to be made between *Sweden's Centres of Excellence*, Finland's *Doctoral Education Pilot* and the Austrian context.
The objectives of the international comparison are as follows:

- to identify how landscape-level policy priorities and systemic pressures have shaped the development of structured doctoral education in Sweden and Finland over the last two decades;
- to characterise the prevailing regime-level arrangements — laws, organisational routines, and quality assurance — governing doctoral training in both systems.
- to examine niche-level initiatives where programmes promote innovations in doctoral training and early-career development, with a particular focus on *Sweden's Centres of Excellence* (including the *Stockholm Centre on Global Governance* and the *Centre for Art and the Political Imaginary*) and Finland's *AI Doc consortium.*

In the final section, we present a few ideas for inspiration and options for further developing the FWF *doc.funds* scheme.

The report draws on different data sources. Besides policy documents and scientific papers, interviews with representatives of funding authorities and doctoral funded by the two programmes were conducted. A full account of the resources used is included in the two full reports as an annex to this report.

7.1 Sweden

Landscape level: Policy developments and the programme „Centres of Excellence"
Since the late 1990s doctoral education in Sweden has undergone a phased transformation, which included the implementation of guiding national regulations for doctoral education, internationalisation and a steady extension of quality assurance. The 1998 reform was an important driver for the transformation: it required guaranteed full funding for doctoral researcher, while requiring that doctoral researchers should at least work part-time (50%) on their study, annual *Individual Study Plans* (ISPs) agreed by doctoral candidates and their supervisors, and stronger institutional responsibility via Directors of Studies and doctoral programme boards (Geschwind, 2018).

The completion of the Bologna "third-cycle" reforms around 2007 (Eurydice, n.d.) aligned Swedish doctoral education with a European effort to make PhDs clearer, comparable and easier to navigate. In practice, universities implemented learning outcomes and ECTS credits while strengthening quality-assurance routines. Internationalisation advanced at the same time. More programmes were offered in English, and mobility became simpler.

Policy discussions in the early 2000s also emphasised efficiency and standardisation. A 2004 government report proposed shortening doctoral study and tightening common rules across universities (*En ny doktorsutbildning*, 2004). Not every proposal was adopted at institutional level, but these supported institutions in reducing unnecessary variation of doctoral education regulations, make requirements explicit, and support timely completion. Overall, these reforms made Swedish doctoral education more structured, more transparent to the outside world, and better connected to European and global research networks.

As an effect of the reforms, the employment status of doctoral candidates changed from the mid-2000s onwards: they increasingly held regular employment contracts, thereby gaining social security, pension rights and parental leave. This shift was driven by a combination of institutional reform and national expectations of fair employment conditions. The 2011 autonomy reform (Geschwind, 2018) transferred greater responsibility to universities for programme design, thematic profiling and admissions, prompting creation of topic-specific research schools and strengthening internal accountability. Quality assurance was tightened through the Swedish Higher Education Authority (*Universitetskanslersämbetet*, UKÄ), with the power to evaluate and—if necessary—withdraw rights to award doctoral degrees. In addition, via internal committees overseeing ISPs and the progress of doctoral candidates were established (Universitetskanslersämbetet & Lindenskoug, 2018).

In the mid-2010s, internationalisation also became important, with universities recruiting non-EU doctoral candidates. In the early 2020s, employability and broader labour-market relevance rose on the agenda. Surveys indicate that roughly 50–60% of doctoral graduates pursue careers outside academia (Swedish Higher Education Authority, 2025). Policy attention turned to transferable skills, career services, mentoring and external networks - aspects now recognised by UKÄ as quality indicators (Universitetskanslersämbetet & Lindenskoug, 2018). The integration and retention of international doctoral candidates also came into focus, with calls for improved university support and more enabling residence and labour market regulations (Regeringskanseliet, 2024).

In parallel, Sweden introduced *Centres of Excellence (CoE)* to build internationally visible, long-term excellent research environments. Policy framing envisaged dual contributions to research excellence and to training environments that span doctoral, postdoctoral and even lifelong learning opportunities, thereby strengthening human capital for future societal needs (Utbildningsdepartement, 2020). The *Swedish Research Council* operationalised the scheme with a first call at end-2022 and first projects selected in 2023. Fifteen *Centres of Excellence* started in 2024, each receiving around SEK 30 million (currently equivalent to approximately EUR 2.84 million) over 2024–2028 as operational grants to build sustainable research structures. Universities provide in-kind support; salaries for doctoral candidates must be financed from complementary projects.

In MLP terms, the landscape level in Sweden features importance of: legal structuring and quality assurance; internationalisation and global visibility; a better link of doctoral education and non-academic labour markets. The *Centre of Excellence* programme is a landscape-driven response that moves funds into profile-building environments expected to host training activities alongside excellent research (Utbildningsdepartement, 2020; *Swedish Research Council* calls and decisions cited in "Websites used").

Regime level: Doctoral education at Swedish higher education institutions

The Swedish regime level of doctoral education is characterised by clear rules. Doctorates comprise 240 ECTS with at least 120 ECTS for the dissertation; programmes commonly include courses in methods, ethics and transferable skills, typically 60–90 ECTS in practice. The ISP is the binding steering instrument, reviewed annually by faculty bodies, with supervisors bearing academic responsibility and collegiate committees monitoring the progress of the doctoral candidate. External quality assurance by UKÄ and internal committees (including student representation) provide a dual layer of oversight (Universitetskanslersämbetet & Lindenskoug, 2018; Geschwind, 2018).

Admissions are decentralised: institutions with the right to award doctoral degrees admit candidates contingent on previous achievement (normally at least 240 ECTS including 60 ECTS at Master's level), specific subject prerequisites and a statement that their supervisors have capacity to supervise their work.

Employment is a central regime feature: doctoral candidates generally hold regular employment contracts with associated social security provisions. Supervision rules require at least two supervisors. Many universities have instituted compulsory supervisor training; and the *UKÄ* recommends the provision of these courses.

The Swedish understanding of "graduate schools" differs from the understanding in other countries. Here it does not denote a central, university-wide institution for all doctoral candidates, but generally refers to a temporary, thematically focused research consortium. The term "Research School" is also frequently used. Such structures are in many cases funded by third-party resources and bring together doctoral candidates from different disciplines to work on a specific research topic. They provide additional courses, workshops, and networks that complement the regular course of doctoral studies. In some cases, access to these opportunities is restricted to selected participants.

This regime configuration – accompanying education programme, employment, binding individual planning, dual supervision, routinised quality assurance, and thematic research schools—underpins throughput and transparency, and creates a common template that accommodates institutional diversity while stabilising expectations.

Niche level: the implementation of the Centres of Excellence programme and their innovation potential

The *Centre of Excellence* programme provides resources which allow the profiling of research and (though, to a lesser extent) of training innovations for different educational levels. The call required applicants to include plans for "educational activities" and internationalisation strategies, offering three principal formats: targeted recruitment of early-career researchers, visiting scholars, and graduate schools. The interim reports indicate that many centres implemented conventional training formats (courses, transferable skills, structured programme modules), while a smaller number pursue more

experimental approaches to curriculum and learning design. Two case studies illustrate contrasting interpretations of the educational component and its innovation potential.

Stockholm Centre on Global Governance

The *Stockholm Centre on Global Governance* at *Stockholm University* fosters interdisciplinary collaboration across humanities and social sciences on themes such as conflict and conflict resolution. Funding (from January 2024) is used mainly for coordinators, senior researchers and postdocs, catalysing further externally funded projects hosted at the Centre. Doctoral salaries are not financed by the Centre; instead, the Centre offers courses (7.5 ECTS) through a *Graduate School on Global Governance*, primarily for about 15 affiliated doctoral candidates but open to all Stockholm University doctoral candidates.

The Graduate School does not itself award degrees; candidates remain embedded in their home doctoral programmes (As such, similar to type 2 of structured doctoral programmes in Austria identified in the previous sections). Course provision concentrates on academic content aligned with Centre themes, delivered mostly in traditional seminar and discussion formats.

Early implementation suggests limited innovation impact on doctoral education, given the short operating period. Needs identified include enhancing career development and preparation for diverse career paths, and the interview partners indicated that in both areas neither the Centre nor the wider university currently provide full support.

Overall, the Stockholm Centre illustrates a niche that strengthens research environments and adds topic-aligned coursework, but does not yet represent a significant departure from standard doctoral training formats or career development practices that are pushed for at the Swedish landscape level.

CAPIM – Centre of Art and Political Imaginaries

CAPIM (located at HDK-Valand and the Royal Institute of Art) pursues a more experimental niche logic. It links artistic research with social and political issues, using artistic forms to interrogate political imaginaries, and positions art as a medium for social and political reflection. Alongside collaborative research projects and international partnerships, CAPIM offers varied networking, training and exchange opportunities (e.g. workshops, summer schools, residencies with international guests).

Training targets doctoral and Master's students and is deliberately designed to enrich existing curricula with experimental formats. Examples include "walking courses" that use collective walking as a space for learning and reflection, and the articulation of "artistic learning objectives" that emphasise creative, process-oriented goals over traditional exam requirements. CAPIM explicitly seeks to institutionalise doctoral education in the arts and strengthen the role of research within artistic training.

The intentions also lead to some tensions: the formalisation of training is perceived by some as constraining artistic freedom; structured components are found to limit experiential learning; a shift towards collaborative models challenges master–apprentice traditions; and the notion of "exceptional talent" is questioned for its exclusivity. These frictions can be understood as a typically associated with niche innovation processes that attempt to reconfigure regime norms in disciplines with strong master-apprenticeship traditions.

In comparison to other Centres of Excellence - whose interim reports indicate largely traditional training activities - CAPIM stands out for testing creative, interdisciplinary and process-centred approaches. It reveals how they can stimulate novel pedagogies even under resistance.

Conclusion for Sweden

From an MLP perspective, Sweden's doctoral education has been shaped by a landscape of stability-oriented reforms (legal structuring, quality-assurance, internationalisation), with more recent pressures to enhance employability and the social integration of international talent (Elmgren, 2016; Geschwind, 2018; Eurydice, n.d.; Regeringskanseliet, 2024; Swedish Higher Education Authority, 2025; Universitetskanslersämbetet & Lindenskoug, 2018). The regime has matured around employment contracts, the ISP as a binding steering instrument, dual supervision and multi-level quality assurance. Within this regime, graduate/research schools add thematic and networked layers of structured training.

At niche level, the CoE scheme primarily reinforces research excellence and visibility. The educational dimension is present but often more conservative in format. CAPIM demonstrates the potential for bolder curriculum experimentation (artistic learning objectives, research orientation, collective learning), while the *Stockholm Centre on Global Governance* exemplifies the Centres where educational innovation might run behind research ambitions, and where employability measures (particularly beyond academia) remain underdeveloped. The Interim reports of the Centres suggest that, across centres, transferable-skills courses and academic network opportunities are common, but systematic measures for non-academic career pathways are rarer. The overall innovation yield for doctoral education is therefore uneven, while being promising in niches where doctoral training is developing (such as in art), while being more modest in areas where doctoral is already mature.

For Austria, Swedish practice underlines the value of binding individual planning instruments with annual cross-faculty checks; compulsory, standardised supervisor training; international recruitment and English-language provision; and eventually selective experimentation with new pedagogies in (inter-)disciplinary areas where doctoral training needs to be developed. These lessons cohere with *doc.funds'* aspirations to combine excellence with structured, high-quality training and enhanced international attractiveness.

7.2 Finland

Landscape level: Policy developments and the programme „Doctoral education pilots"

Finland's trajectory of transforming doctoral education features two phases at landscape level. First, since the mid-1990s, graduate schools were created to shorten the overly long time to the doctoral degree and improve quality via structured, interdisciplinary coursework and institutional monitoring (Ahola et al., 1999; Aittola, 2017; Kivistö et al., 2017). By the mid-2010s, these reforms had largely institutionalised the Salzburg Principles and other European standards. The changes also led to critique in particular the increasing standardisation and limited doctoral researcher participation were seen as threads to academic freedom, accompanied the implementation of these policies (Aittola, 2017).

More recently, and due to the low numbers of doctoral degrees completed in Finland being a threat to the national innovation capacity, and also responding to demographic and economic pressures, Finland set a national ambition to raise R&D expenditure to 4% of the GDP by 2030 (OECD, 2022) and to increase the R&D workforce by 9,000 per year from which 5,000 positions should be in the private sector and 4,000 in the public sector - including more than 2,000 doctoral graduates annually (Finnish Government, 2023). This reframed doctoral education as a lever for strengthening the human capital base and innovation capacity. With Finnish doctoral researcher numbers declining by 11% between 2014 and 2023 (with a compensating increase of international students since 2022), the policy narrative emphasised recruitment and retention of international talent and more labour-market-oriented training and mobility.

The *Doctoral Education Pilot Programme* (2024–2027) emerged as a flagship implementation instrument, with €255 million to fund 1,000 fully funded doctoral positions in the coming years. The pilots test shorter, three-to-four-year pathways that are both research-intensive and labour-market-oriented training, promote intersectoral and international mobility, and embed external partners in supervision and training. 800 of the funded doctoral positions were allocated to flagship areas (e.g. AI, quantum, cancer, photonics) of the *Academy of Finland*, and 200 positions were distributed to thematic pilots such as software engineering, sustainability transformations and social services. UNIFI (2024) endorsed for the doctoral training the need for closer alignment with societal needs and proposed system-level measures: binding standards for supervision and monitoring; full-time reliable funding throughout doctoral study; flexible entry routes; employability-relevant curricula; and defined study rights to limit duration.

This landscape developments have positioned the doctoral education as a strategic policy instrument for workforce development, while strengthening the importance to attract international students and creating structured bridges into non-academic sectors.

Regime level: Doctoral education at Finnish higher education institutions

At regime level, Finland's universities have central graduate schools hosting a portfolio of doctoral programmes. The doctorate consists of four years of full-time study (240 ECTS), with 30–60 ECTS of taught components or programme and a doctoral thesis (monograph or cumulative) evidencing independent research capability (Eurydice, 2023). Only universities award doctorates, though collaboration with research institutes and industry is common.

Admissions generally require a completed Master's degree, a research plan, identification of an approved supervisor and proof of language competencies; and the proof of supervisor's capacity to supervise (Ahola et al., 1999). Graduate schools frequently coordinate admissions while decision rights may sit with programme or faculty committees.

The training programme typically includes:

- basic courses (e.g. research data management, scientific integrity);
- research-related courses (methods, theory); and
- transferable skills (project leadership, communication, entrepreneurship).

Supervision is increasingly team-based; master–apprentice models have become less frequent (Aittola, 2017). Supervision agreements set milestones and expectations for students and supervisors; graduate schools have the task of monitoring progress (Kivistö,

Pekkola, et al., 2017). Universities have invested in supervisor qualification through pedagogical and supervision-specific training programmes. This regime embeds transparency and accountability, with institutional monitoring complementing academic supervision.

Niche level: the implementation of the programme and its innovation potential: AI Docs
Within the pilot framework, *AI Doc* (Finnish Doctoral Program Network in Artificial Intelligence) illustrates niche experimentation aligned with national objectives. With €25.5 million (2024–2027) and 100 positions across ten universities and multiple research and industry partners, *AI Doc* attracted 3,300 applicants worldwide; 70% of those selected are from abroad, signalling strong international interest.

The training model explicitly integrates six principles:

1. Inter- and transdisciplinary. Projects couple technological development with societal applications and responsible AI, encouraging collaboration between technology, natural sciences, social sciences and humanities.
2. Cooperative supervision teams. Each doctoral candidate has an academic team augmented—wherever possible—by industry or application-sector mentors, promoting early transfer between basic research and application.
3. Quality assurance in supervision. Each supervisor may supervise at most one AI Doc-funded project, committing to high-intensity engagement.
4. Modular curriculum. Alongside research, candidates complete method-oriented modules (machine learning, data ethics, quantitative methods) and transferable skills (science communication, innovation and project management, entrepreneurship, legal and ethical foundations of AI).
5. Career orientation and development. Structured exposure to non-academic careers via mentoring, internships and application support.
6. International and sectoral mobility. Internships in companies and research institutions (in Finland and abroad) build networks and employability for the doctoral researchers.

In the implementation *AI-Doc* faced some typical challenges, including constraints supervision capacity constraints especially with recruiting external mentors (from industry, public sector). The heterogeneous university rules and doctoral school procedures make the rapid scale-up requirements (harmonisation of doctoral education) difficult. To current burning labour market demands for AI specialists there is also the risk of early industry recruitment before PhD completion.

AI Doc has also a number of measures planned to support the retention of international doctoral candidates in Finland after completion of their degree. These include language and integration supports, housing and administrative assistance, and community-building to consolidate networks and social integration in Finland.

AI Doc therefore exemplifies niche-level reconfiguration pressure on the regime - normalising intersectoral supervision, capping per-supervisor loads, embedding mobility and employability into the core curriculum - and operationalises landscape imperatives (workforce, innovation, internationalisation).

Conclusion for Finland
Finland's landscape has shifted from structural consolidation (graduate schools, standardisation and monitoring) to human-capital mobilisation for RDI expansion (Ahola et al., 1999; Aittola, 2017; Kivistö et al., 2017; OECD, 2022; Finnish Government, 2023;

UNIFI, 2024; Eurydice, 2023). The regime is stable: four-year programmes with 30–60 ECTS of coursework, team supervision, supervision agreements and graduate-school monitoring. The niche pilots—especially *AI Doc*—test regime-compatible but stretching innovations: explicit labour-market orientation, formalised co-supervision with external partners, modular skills portfolios, and mandated mobility. The pilots also confront system bottlenecks (supervision capacity, cross-university coordination, retention of international talent). Overall, Finland's niche experiments are more overtly designed to re-purpose the doctorate as a bridge into diverse sectors, aligned with an explicit national headcount target for doctoral-level R&D personnel.

8 Inspirations for the further development of the *doc.funds* Programme

In this chapter we first circle back to the research questions posed at the beginning of the process and answer them based on the analysis of this report and the central findings from the international comparison.

In the second part we develop recommendations based on these findings to inform the further development of the programme.

8.1 Findings from a programme perspective

_ To what extent has the FWF doc.funds programme influenced the (further) development of other structured doctoral training in Austria?

The major driver for the current innovation in structured doctoral programmes was change at landscape and consequently at regime level: international developments towards more structured doctoral programmes and international competitiveness in doctoral education shaped Austria's approach to doctoral education since before the programmes' existence. A major development coinciding with the start of *doc.funds* in 2019 was the new university financing. This strongly influenced the development of structured doctoral programmes strongly, as the indicator "number of doctoral researchers employed by university" put pressure on faculties to establish structured doctoral programmes as a standard, sharply increasing the number of doctoral researchers employed by universities.

Nevertheless, FWF's *doc.funds* programme has had tangible impact on the doctoral "playing field" as well as the research environment in Austria: for one, the high number of "Type 2" programmes certainly can be in part attributed to *doc.funds*, funding more than 30 of these programmes over the last years. This also had a direct effect on financing the employment of doctoral researchers, through which *doc.funds* has – albeit at a small scale – helped universities increase this important indicator for Austria's FTI (R&D) strategy.

In interviews it was also underlined that *doc.funds* played an important role in the qualitative development of structured doctoral programmes at universities, first and foremost by strengthening interdisciplinary cooperation both within and among universities beyond project lifecycles.

On the question whether project-based funding for PhD positions is enough to initiate institutional changes, the question may be affirmed, but only within limits: while project-based funding definitely has the potential to initiate sustainable changes, institutions need to be highly committed. A change in culture towards lasting interdisciplinary cooperation was reported by several coordinators.

_ *To what extent and in what way have innovative practices emerged?*

Furthermore, the extent of impact differed between the scientific disciplines, with natural sciences being more accommodated to the structure, which shows in the lower number of resubmissions necessary. For coordinators from the social sciences, the programme frequently also served in the first experience with structured doctoral programmes of this kind, with a specific research focus already at the beginning of the process, rather than as a part of it.

At the same time, *doc.funds* opened new possibilities of collaboration and research especially in the social sciences and arts, which are slightly over-represented within *doc.funds*, compared to the overall doctoral landscape according to the mapping undertaken for this study.

Project-based funding for PhD positions can stimulate institutional change – however only to a limited extent. While such funding provides strong incentives and resources, sustainable effects depend on a high level of institutional commitment and on additional institutional support that institutionalises the new structures beyond the project period. External stakeholders mention a positive effect of *doc.funds* through helping institutions becoming more selective about their doctoral students.

Regarding the specific innovative aspects, *doc.funds'* main impact has been on inter-institutional collaboration, including joint supervision (often from different institutions) and interdisciplinary, followed by the provision of a multitude of customised skills trainings, many of which have spilled over into other areas of research.

_ *Which factors have promoted or hindered the spread of innovation and good practices?*

The spread of innovation, as mentioned above, was broadly contingent on the institutional setting and commitment to adopting (and continuously funding) innovative practices. *Doc.funds* fulfils the main points from the Salzburg II recommendations for high quality doctoral programmes: competitive admission, work in project groups, attractive institutional environments, interdisciplinary research options, transferrable skills training, etc. The limitation of a 4-year funding has in most cases led to an only very limited continuation of the programmes, with few exceptions, where funding from various sources and cross-financing from the institution helped to maintain the innovative settings. The 4-year period was thus perceived as a hindering factor to lasting innovation.

What might be missing so far is a clear and valid statement of research strategy beyond the *doc.funds* project financing, including possible further research pathways, commitment from embedding universities and integration into international research networks. Although these aspects are already included in *doc.funds* proposals, they seem sometimes too weak to have effects after a *doc.funds* project ends.

8.2 Findings from an international perspective

Drawing on *Sweden's Centres of Excellence* and *Finland's doctoral education pilot*, two lessons emerge:

The Swedish Centres show that concentrating resources in a few priority research areas can build durable institutional platforms – shared teams, infrastructure, and visibility – that attract partners and international talent, and can sit alongside theme-focused doctoral education where appropriate. The Finnish pilot is explicitly about doctoral training: it seeks to expand national RDI capacity by employing doctoral researchers in cohort-based, theme-driven consortia co-designed with societal stakeholders, supporting timely completion and opening pathways beyond academia.

To further develop *doc.funds*, one potential approach based on the Swedish experience would be to carefully consolidate around a limited number of priority research themes with demonstrable scientific potential and societal relevance. However, this option was not favoured by any of the coordinators participating in the focus groups and the validation workshop.

Formalising engagement with societal stakeholders across the programme cycle could be another area of importance, following the Finnish example. This could take the form of contribution to agenda-setting, opportunities for co-taught activities or short secondments, and participation in dissemination by stakeholders in industry and other societal sectors.

Internationalisation could be embedded in routine practice through co-supervision with foreign partners, periodic international review and targeted mobility aligned to thesis milestones. Retention of international doctoral researchers could be supported by an integrated skills pathway pointing to diverse postdoctoral careers within and beyond academia but also strengthening the social integration of candidates.

In summary, the Swedish and Finnish examples point to doctoral programmes that:

- build capacities in research areas of future relevance,
- rely on university commitment,
- consider societal needs through the participation of stakeholders,
- practise internationalisation as part of daily work, and
- support doctoral candidates in developing ideas for careers in a variety of labour markets.

These can also be potential development areas for the *doc.funds* programme, however with modest adjustments: a clearer focus on priority areas, firmer institutional co-investment, structured stakeholder engagement, embedded international practices, and a coherent pathway for supervision, progression, and careers.

8.3 Recommendations

Based on the results of the research conducted, elements to inform the further development of the *doc.funds* programme may include proposals in the following areas:

Stay open for all different academic fields (programme level)

- Although international comparison shows that in comparable countries respective research funding is targeting specific areas to develop, the vast majority of university delegates found the open disciplines approach in *doc.funds* very important for funding real innovation. Innovation areas cannot be planned ahead and innovation should not only be assessed by fitting into target areas, but being really innovative research in new areas (especially where several universities cooperate on one specific topic).

Sustainability and Institutional Support (programme level)

- Strengthen sustainability by incentivising universities to provide the necessary research environment – including administrative support – to reduce the burden coordinators without sufficient institutional support currently face in *doc.funds* projects. This could also take the form of clarifying the different areas of support.
- Strong institutional commitment from participating universities is crucial. Long-term support from university leadership – both financial and strategic – helps ensure seamless implementation, generates positive spillover-effects across the institution and is the basis for a sustainable embedding of *doc.funds* relevant research structures with the university. For example, application requirements for groups of researchers could be amended by embedding a guarantee by the participating universities, asking them to demonstrate sustained institutional commitment in terms of both finance and organisation, so that doctoral training structures are more likely to endure beyond a single funding period, more easily enabling follow-up projects where relevant.

Communication (administration level)

There are several documents existing to accompany the administration of the *doc.funds* project in the project life cycle (from the application phase to the finalisation phase). Although these documents are clear and concise there are misunderstandings and misinterpretations especially concerning the handing in of follow-up projects and the handling of inter-institutional projects.

- Communicating the fact that interdisciplinary of a submitted project proposal is not per se an advantage or disadvantage, in order to avoid misunderstanding among the applicants.
- Criteria, possibilities and risks of continued project-based funding should be communicated very clear. It is not allowed to ask for a prolonged funding for the same project, but follow-up projects (e.g. argued through new research questions as consequence of the existing project) are allowed. The criteria of this distinction needs to be clearly communicated.
- Communication and expectation management accompanying the proposal and decision-making phase is crucial, especially in project proposals handed in by more than one university – in these cases speakers from all involved universities should have the possibility to present the proposal, as the inter-institutional approach would be explicitly respected (as already stated in the invitation letters to the jury meetings).

Internationalisation and Collaboration (programme level)

- Prioritising internationalisation with the programmes through earmarked funding for targeted measures, such as international research cooperation and exchange schemes, or participation in European networks, to further strengthen the visibility and competitiveness of Austrian doctoral education.
- Encouraging inter-university collaboration especially within city borders to provide day-to-day collaboration possibilities within research groups could further foster synergies across the Austrian research landscape and promote the sharing of expertise and infrastructure in certain research areas.

Funding Models and Flexibility (programme level, policy level)

The administration of public funding for research projects can be described as oscillating between strictly following evidence in using funding in specific cost-categories on the one hand and lump-sum allocation on the other hand. Introducing flexible and diversified funding models, such as lump-sum allocations, or matched funding with university contribution could increase programme adaptability and encourage institutional co-ownership of the projects, but the commitment from universities would probably be less with this kind of funding.

- Flexible funding could diminish administrative burden and possible disadvantages of opening up *doc.funds* courses to other doctoral researchers, while at the same time not affecting the quality of provision.
- Future-proofing the funding: factoring in possible inflation and foreseeable changes in collective bargaining agreements (such as salary increases in the 4th year).
- Communication of funding in cooperation with the Austrian Ministry would also be useful - make the specific funding for overheads (from the Ministry) visible which now is hidden in the overall university budget.

Career Development and Retention (programme level)

- A focus on retention and future career development of doctoral graduates may be further strengthened through targeted career counselling provided by the universities participating in *doc.funds*. This would contribute to a more sustainable research landscape in the light of Austria's FTI / R&D strategy.
- Acknowledging that *doc.funds* is public funding, a strategy to enable *doc.funds* graduates to develop a research career in Austria (either university of private sector) or in international acknowledged research institutions with the assumption that a network with the Austrian research landscape would exist through *doc.funds*. Career counselling would be important to support these career developments.
- Measuring relevant employment after completion of the doctoral training would be helpful for the argumentation of *doc.funds* programme relevance in the future. Collecting the social ID numbers from all *doc.funds* programme funded doctoral researchers would be necessary for a respective collaboration with ATrack from Statistics Austria.[11]

11 See also: https://www.statistik.at/statistiken/bevoelkerung_und_soziales/bildung/hochschulabsolventinnen/absolventinnen-tracking (15. December 2025)

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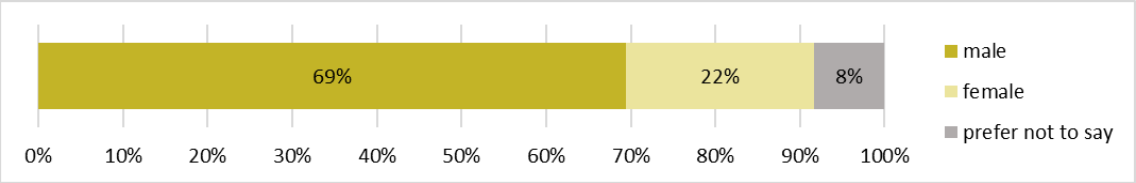
10 Annex I: PI Survey Results

Block 1: Sample features

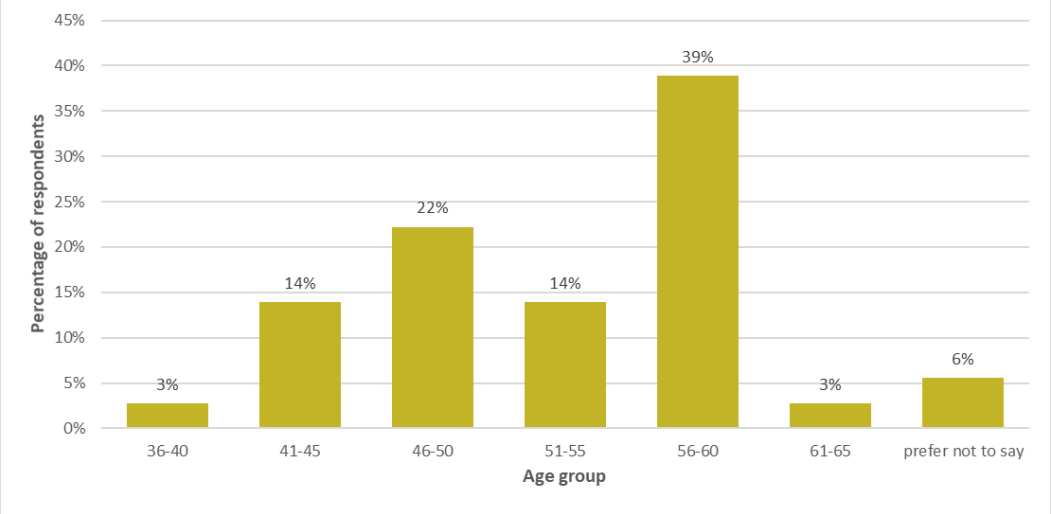
Almost 70 % of respondents of the PI survey described themselves as male, 22 % as female with most respondents (40 %) in the age category of 56-60 years. Regarding the scientific discipline, most Principal Investigators surveyed work in Biology (42 %) followed by Physics/Astronomy (8 %). The Majority reported Austrian (39 %) or German (33 %) citizenship with also the majority having been employed in one of these countries before. Most of the PIs who responded (27) are full university professors, 50% started their current position before or in 2015 and 50% completed their doctorates in or before 2002.

Figure 2: Q 1.1: How would you describe yourself? (n= 36)



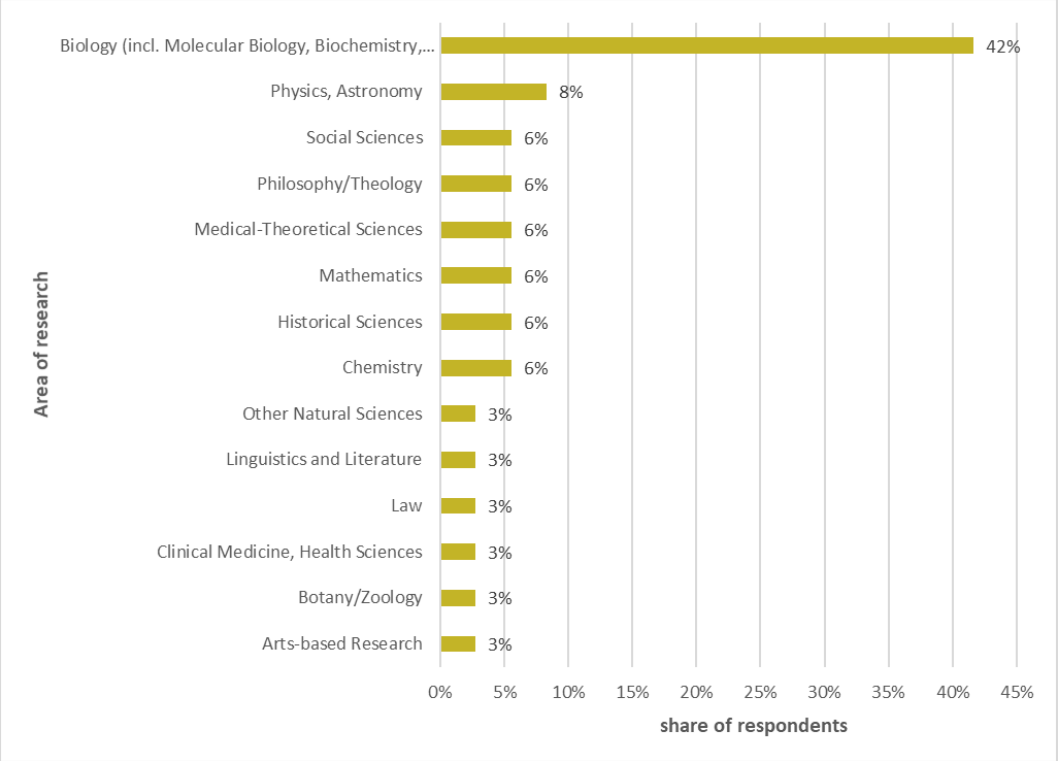
Source: PI-Survey by 3s.

Figure 2: Q 1.2: How old are you? (n=36)



Source: PI-Survey by 3s.

Figure 3: Q 1.3: Which of the scientific disciplines below best matches your current area of research? (n=36)

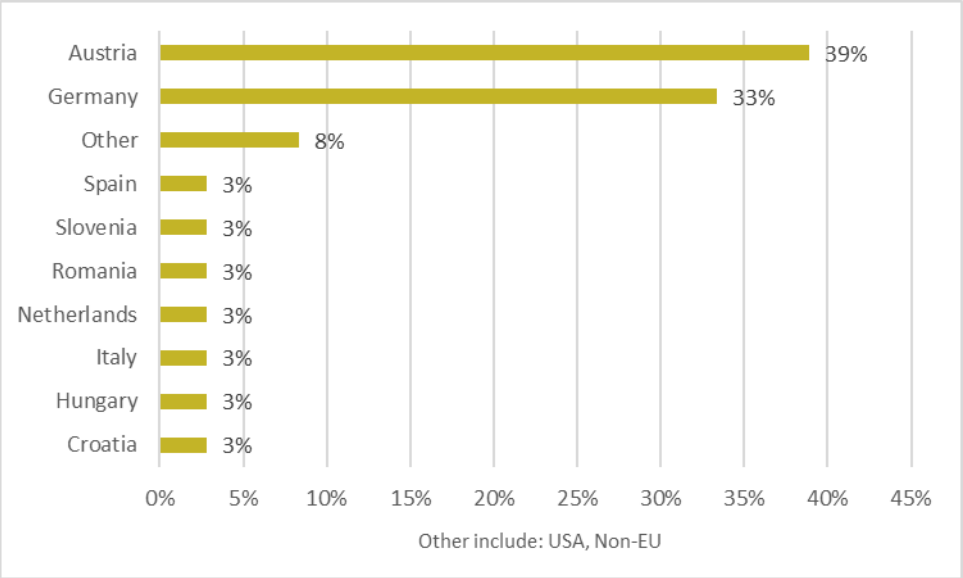


Source: PI-Survey by 3s.

Table 2: Q 1.3: Area of research by programme status (n=36)

Area of research	Total	%
Biology (incl. Molecular Biology, Biochemistry, Structural Biology, Biomedicine)	15	42 %
Physics, Astronomy	3	8 %
Social Sciences	2	6 %
Philosophy/Theology	2	6 %
Medical-Theoretical Sciences	2	6 %
Mathematics	2	6 %
Historical Sciences	2	6 %
Chemistry	2	6 %
Other Natural Sciences	1	3 %
Linguistics and Literature	1	3 %
Law	1	3 %
Clinical Medicine, Health Sciences	1	3 %
Botany/Zoology	1	3 %
Arts-based Research	1	3 %
	36	

Figure 4: Q 1.4 Please indicate your nationality (n=36)



Source: PI-Survey by 3s.

Table 3 Q 1.5 Country of previous employment (n=36)

Austria	14
Germany	10
USA	5
Switzerland	2
UK	1
Spain	1
Hungary	1
Italy	1
	36

Table 4: Q 1.6 Organisation Main Employer (n=36)

Public University	35
Business/Industry Sector	1
	36

Q 1.6.1 What public university is your main employer? (n=36)

University of Vienna	13
Medical University of Vienna	3
Leopold-Franzens University of Innsbruck	2
BOKU University	2
University of Salzburg	1
TU Wien	1
Johannes Kepler University Linz	1
Medical University of Graz	1
Graz University of Technology	1
Academy of Fine Arts Vienna	1
Medical University Innsbruck	1
WU Vienna	1
University of Klagenfurt	1
University of Veterinary Medicine Vienna	1
no answer	6
	36

Table 5: Q 1.7 Current role (n=36)

University Professor (Universitätsprofessor:in)	27
Associate Professor (Assoziierte:r Professor:in)	5
Assistant Professor (Assistenzprofessor:in)	1
Other: Principle Investigator	1
Other: Senior Scientist	1
Other: blank	1
	36

Table 6: Q 1.8 start of current role / Q 1.9 doctoral studies completed (n=36)

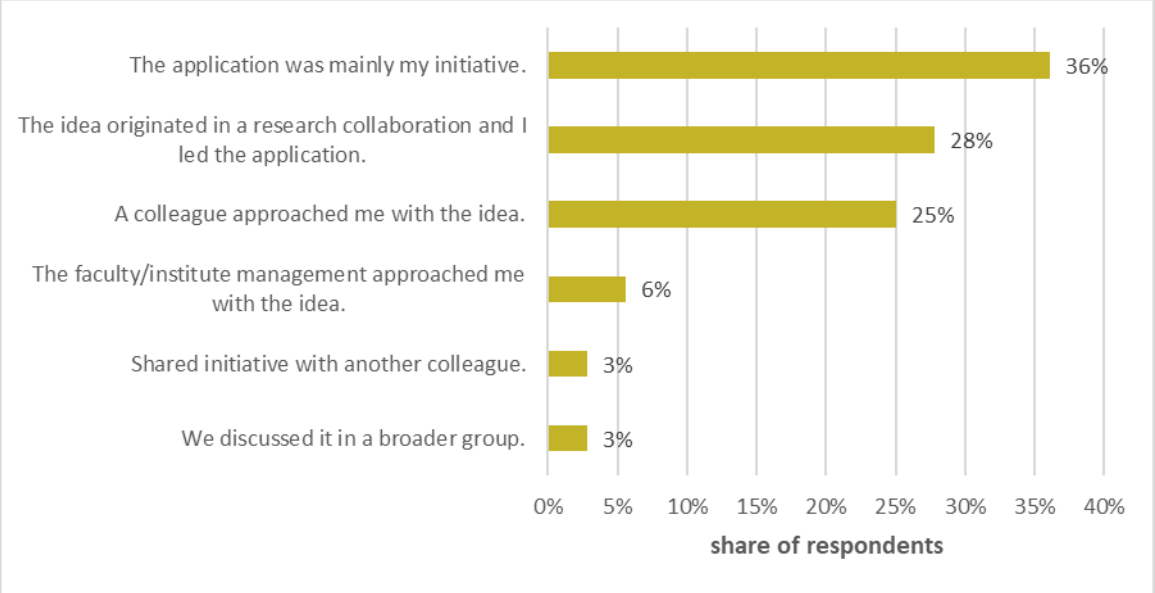
start of current role in year		doctoral studies completed in year	
before 2000	2	before 2000	11
2003	1	2000	2
2004	2	2001	3
2005	2	2002	2
2007	1	2003	3
2008	1	2004	2
2009	1	2005	1
2011	2	2006	1
2012	3	2007	3
2014	2	2008	3
2015	1	2009	2
2016	1	2011	1
2017	5	2012	1
2018	4	2015	1
2019	2		
2020	4		
2021	2		
	36		36

Block 2 – Application and Admission

Block 2 of the Survey deals with the initial proposal of the project and the hiring of PhD Students. In Most cases, the initial application was through the initiative of the respondents themselves (13 of 36) or as the result of a planned research collaboration (10). Mostly mentioned as motivation for the proposal of a doc.funds project at the FWF were the possibility to attract highly skilled doctoral students, the possibility to train doctoral students as a team and the promotion of cutting-edge scientific research and of an innovative doctoral education. These numbers show how much PIs' motivation is centred around the education of future scientists. Further frequently mentioned motivations were the support for and promotion of structured doctoral education as well as the support for innovative, structural doctoral programs. Exactly 50 % also applied for additional funding through their respective university, around 40 % for other FWF opportunities. Overall, the accessibility of the application process was perceived positively. More than 90 % stated that it was very or rather accessible in terms of meeting the prerequisites, more than 65 % found the procedure to have been very or rather user-friendly.

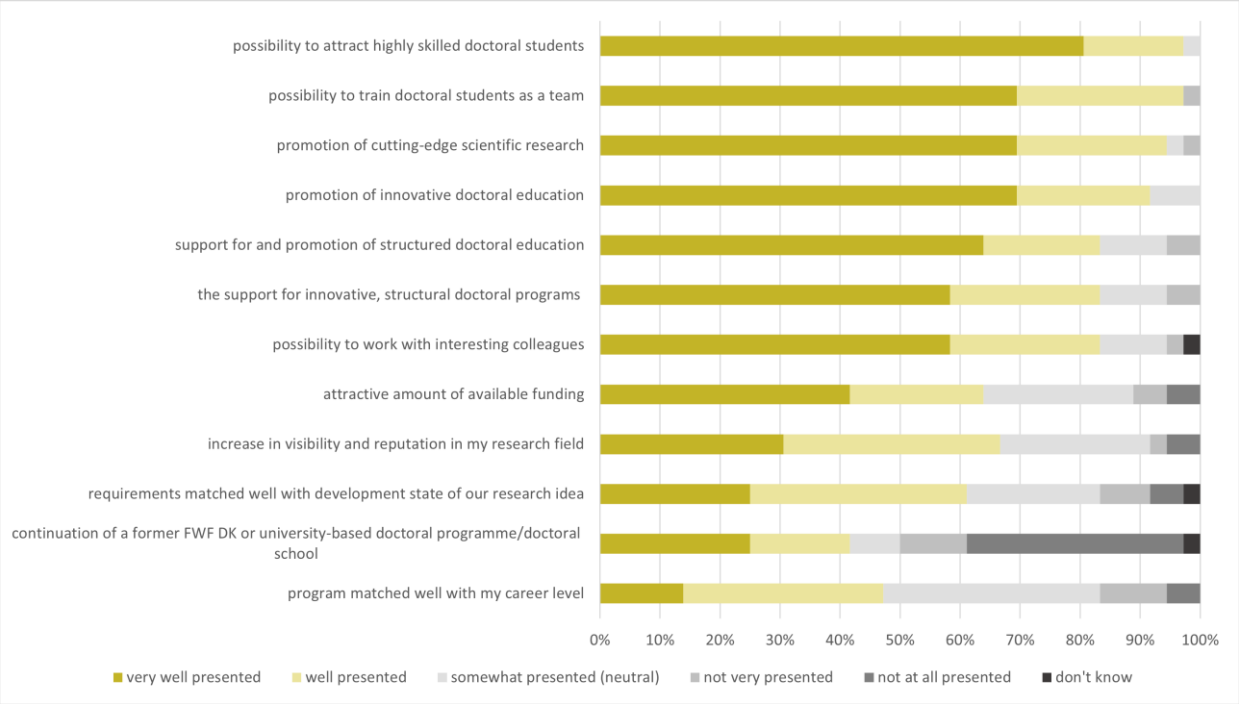
Organisers promote open PhD-Positions mostly through their academic networks and receive on average more than 10 times the applications than they have open positions. Most of the applicants hold degrees outside of Austria while reporting non-Austrian citizenships. Principal investigators selected the PhD-Students for the positions mostly in regard to following aspects: enthusiasm for the research topic, ability to solve problems independently and think analytically as well as willingness to deal with complex issues over the long term.

Figure 5: Q 2.1 Who initiated the application for the doc.funds project? (n=36)



Source: PI-Survey by 3s.

Figure 6: Q 2.2 To what extent have the following reasons motivated the application for a doc.funds project? (n=36, multiple answers possible)

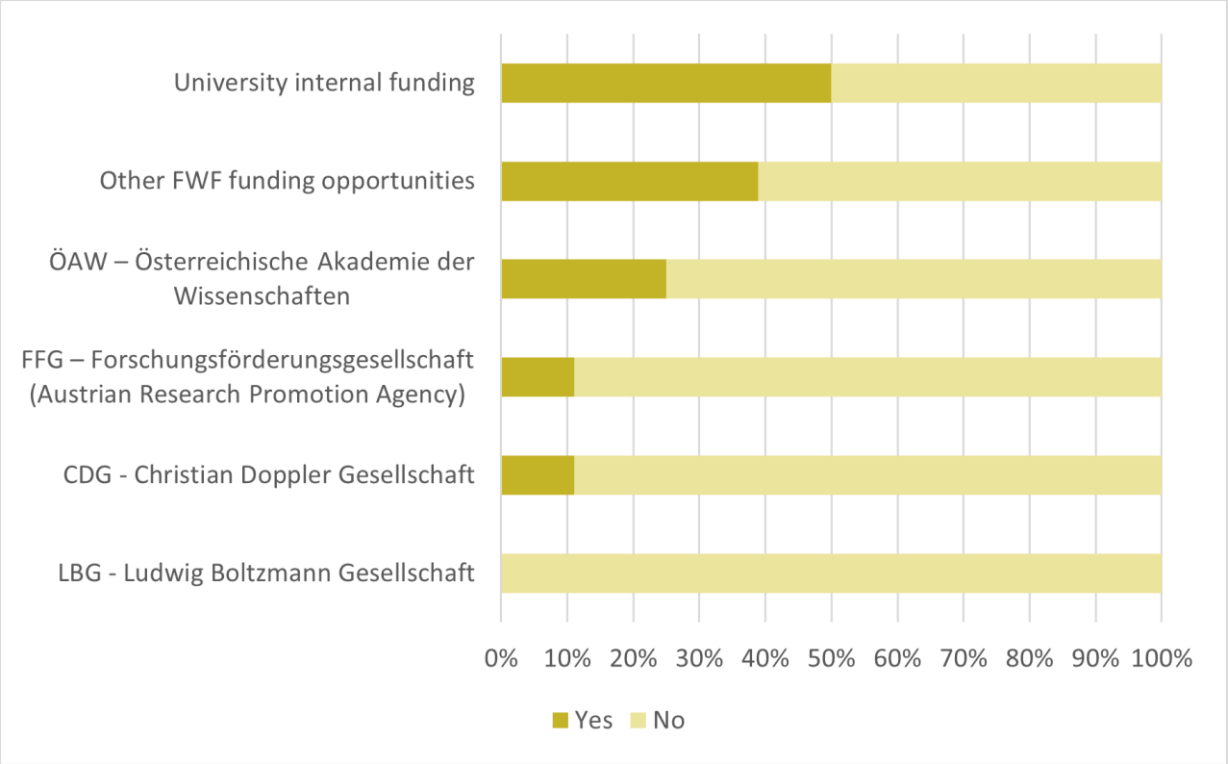


Source: PI-Survey by 3s.

Table 7: Q 2.3 What other reasons motivated the application for a doc.funds project?

Build an international team of PhD candidates at the university
This application built on an existing PhD programme of international visibility -- the positions were advertised along with other funded positions; hence we can also provide only estimates for the # of applications per job offer.
Performance at the interview.
Funding for a thematically focused PhD program

Figure 7: Q 2.4 Have you also applied to other research funding organisations which support doctoral training (in addition to the doc.funds program)? (n=36)

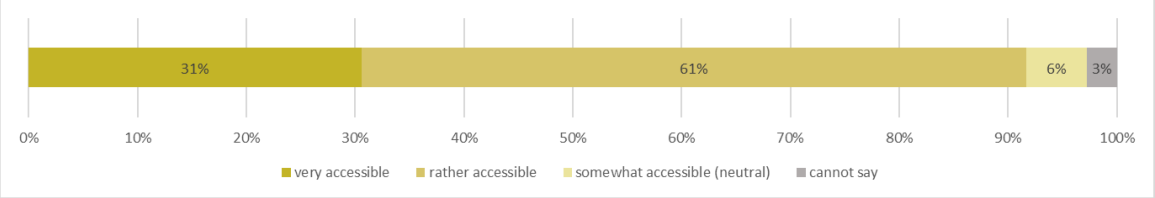


Source: PI-Survey by 3s.

Table 8: Q 2.4 Other

EU's Marie Curie Network	3
EU Co-funding	2
Leducq [Foundation]	1
Land Steiermark (co-funding for approved doc.funds projects)	1
The VBC umbrella PhD program provides soft skills courses and basic training	1

Figure 8: Q 2.5 From your perspective, how accessible do you find the doc.funds program in regard of meeting the prerequisites? (n=36)



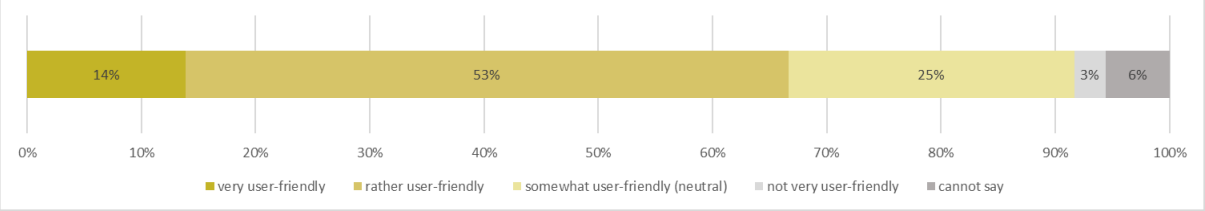
Source: PI-Survey by 3s.

Table 9: Q 2.5.1 Please provide more information about your concrete experience with the accessibility of the program.

30% of female researchers is challenging in some areas, but we managed to do that.
As we all know, females are under-represented at a Faculty level; reaching 30% was not easy.
f/m ratio sometimes difficult to achieve as topics and content should drive the compostion of the consortium and not gender balance
Finding scientifically fitting professors of underrepresented gender can be difficult.
Gender balance in some fields may be hard to reach.
I am not sure if this belongs to "accessibility": - As so often, we found that interdisciplinarity was not promoted by the selection procedures. On the hand, satisfying the standards of reviewers from different disciplines is very challenging. On the other hand, we had the impression that nowhere during the process was there a "bonus" for interdisciplinarity. Eventually, we gave up our interdisciplinary approach and only applied for a political science programme in our second - successful - revision. - From a social science perspective, we found it very uncommon to include short sketches of individual PhD projects in our project proposal. Typically, identifying a clear research gap, developing their own research question, etc. is an essential part of writing a PhD in social sciences and we only included individual project proposals in our application, because it was obligatory.
I am not sure what you mean by accessibility, If you mean how easy it was to assemble the team, it was "rather accessible". I chose the perhaps unusual decision to assemble a large team (13 PIs), to reach a critical mass of students and PIs.
In some technical disciplines, the gender requirements are not easy to achieve, and the inclusion of younger scientists would help here to support their career path and achieve a more equal distribution.
lack of funding of consumables requires cross-financing and makes it difficult for PIs in the initial phase of their independent research to apply
The fact that there must be pre-existing structural training to which the doc.funds program is added certainly presented something of a hurdle, though in our case it fortunately wasn't because of the existence of such structures at the university.
The main problem is the university's commitment to additional funding for consumables and administration (> 1 million euros).

With the underrepresented gender making up only 20% of the professor-level faculty at our university, putting together a doc.funds faculty with 30% represents a positive bias.
to reach the target of 30% of the underrepresented gender in the consortium was a challenge
being forced to include 30% of the underrepresented gender often comes at a cost, and is not always ideally suited to form the strongest teams.
In my opinion the programs should not be restricted to only one location. I am aware that for a proper training of the students, being all in one city makes things easier. But, it is not necessary anymore considering all the online tools available. Expanding the PhD program to different cities would be very beneficial for the students as well as the science. The students would have access to methods and expertise not available in their own university. Additionally, they would attend lectures and practical courses from PIs who are not directly their supervisors. For the science would also be very beneficial since it would bring research in Austria together. I can easily imagine having a PhD program together with researchers in Graz, Linz, Vienna or Krems. // One major drawback of the doc.funds applications is that it is limited to one city. I am aware that the doc.funds are designed as PhD program that should allow all the students to take part in person at all seminars and practical courses. But nowadays when everything is online, it would be very easy to spread the PhD program over several cities in Austria. All our seminars and presentationas are always online. Even if we are all in the same city, some students and faculty members participate online, depending on the schedule, experiments, teaching etc. Spreading the PhD program over several locations would have several major advantages both for the consortium as well as for the students. I could easily incorporate in our PhD program laboratories from Linz, Graz, or Krems working on related questions but using very different methods and having a different expertise. This would be fantastic for science but also for the students. They would have access to courses and labs outside of their own university.
We are striving to achieve an inclusive environment; gender balance in our organization is an aspect important to us irrespective of the prerequisites of the doc.funds program. Meeting the eligibility criteria was not problematic in any way. / We are striving to be an inclusive environment; gender balance in our organization is an aspect important to us irrespective of the prerequisites of the doc.funds program. Meeting the eligibility was very accessible to us.

Figure 9: Q 2.6 How user-friendly is the application procedure for the doc.funds program from your experience? (n=36)



Source: PI-Survey by 3s.

Table 10: Q 2.6.1 Please provide more information about your experience with the application procedure.

the decision making process is too slow and multidisciplinary juries panels tend to make non-specialist decision. Installing specialist juries will refocus the program putting more effort on scientific excellence.
I don'tdon't recall anything being too complicated.
All went very smooth.
This was already a while ago, but I remember that I would have wished to find all the relevant information on formal requirements in one document at one place and not scattered across various documents, e.g. how to label the submitted files, which font size to use, etc.
It was fine. Putting all the individual doctoral candidates into elane is a bit silly.
Rules and roles in (online) hearing were not totally clear.
redundant information and not clearly outlined requirements within the guidelines
The guidelines, together with the person of contact from FWF provided enough support and resources to guide our application.
It was user-friendly enough from an administrative perspective. It wasn't though regarding the review process, where the requirement of a parallel evaluation of the pre-existing structures and the proposed doc.funds program proved too complicated for one of the reviewers, who then produced a negative but ultimately meaningless review.
The application was too lengthy and somehow redundant. Could be much more straight forward. For example, PI-publications had to be provided in several instances.
The number of forms seems excessive.
Some content takes quite some effort to elaborate. Such as the CV documentation and additional descriptions.
The guidelines were meaningful, and helped to formulate the concept of an advanced doctoral training program.
There are minor problems I remember: for every consortium member, there is a form to be filled in the system and this had to be done 17 times in my case. Also, the publications of the last 5 years had to be given and because we submitted in March 2024, FWF asked us to check for all publications in 2019 whether they appeared before March or not. I found that a bit too pedantic, also because it is not always so easy to tell the exact publication date. I guess this is not just a doc.funds issue but more general.
At the time the registration process was different from now (paper/CD submission via postal service)
our program was rejected on the first hearing because our former rector was present and criticized the program while external reviewers were in favor. When he wasn't present the second time, we passed much more easily. This was very awkward for us. We were happy that the role of the Rector changed.
The application procedure is straightforward

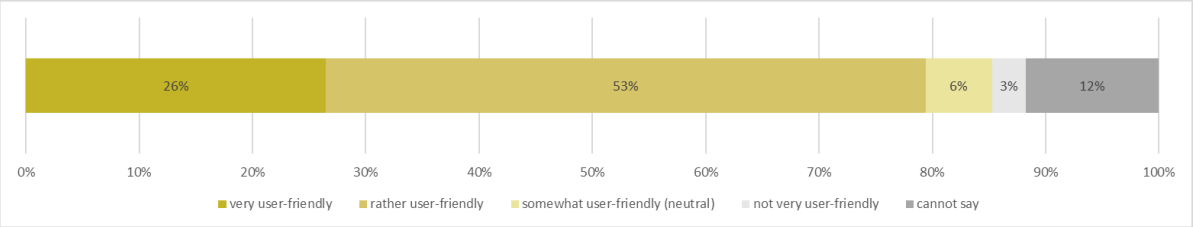
Table 11: Q 2.7 Was your application for the doc.funds program accepted by the FWF at the first attempt? (n=35)

Yes – first attempt.	13	37 %
No – revision - resubmission.	16	46 %
No – subsequent year.	6	17 %
	35	

Table 12: Q 2.7.1 Please specify how many resubmissions were needed before acceptance (n=14) Comparison Natural Sciences vs. SHAPE

	Natural Sciences	SHAPE	Total
1 resubmission	3	4	7
2 resubmissions	6	1	7
	9	5	14

Figure 11: Q 2.8 How user-friendly do you find the administrative and reporting requirements during the implementation of the doc.funds program? (n=34)

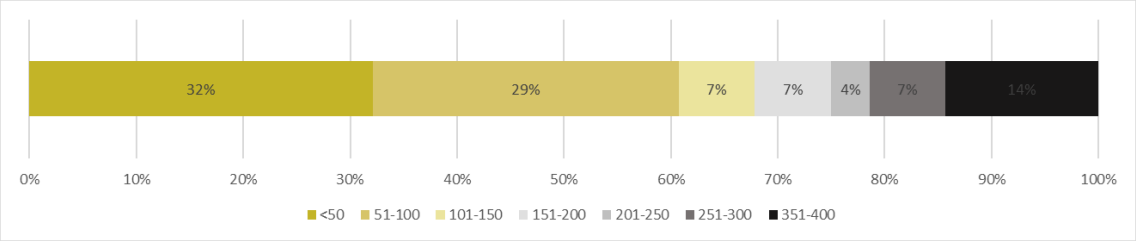


Source: PI-Survey by 3s.

Table 13: Q 2.9: How many positions and how many applications?

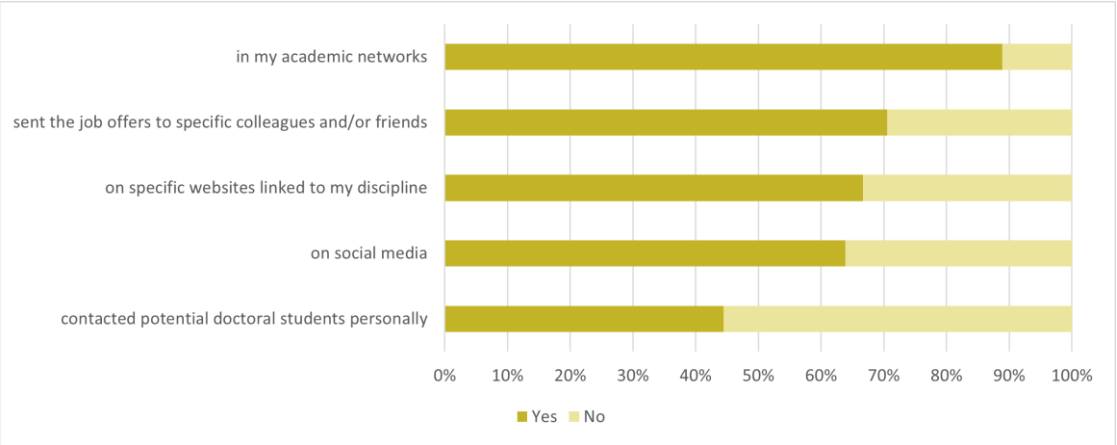
Total number of positions offered	313
Total number of applications received	4380
Ratio applicant / position	13.99

Figure 12: Q 2.9.1 How many applications have you received in total for the doctoral positions in your doc.funds project? (n=28)



Source: PI-Survey by 3s.

Figure 13: Q 2.10 Besides the official announcements of your research institution, where have you advertised the open doctoral positions? (n=36, multiple answers possible)

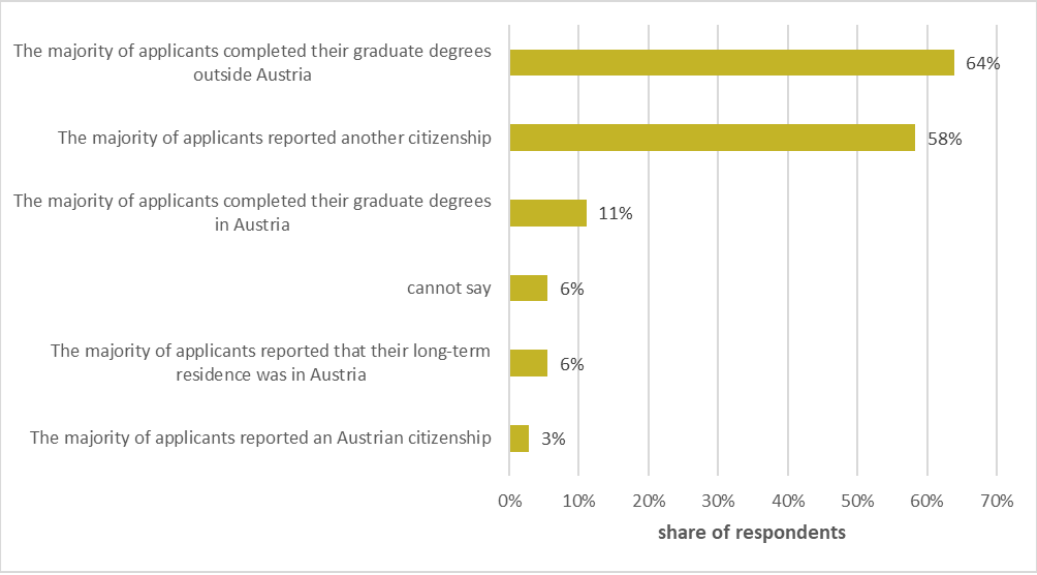


Source: PI-Survey by 3s.

Table 14: Other

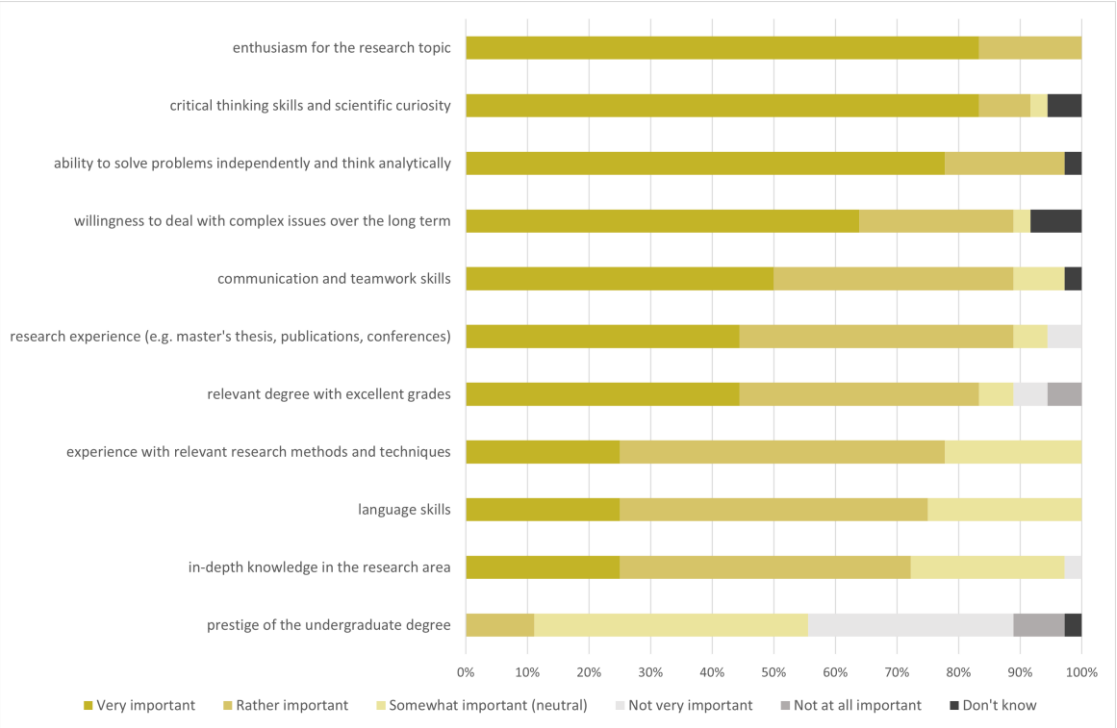
FWF Jobbörse	2
International mailing lists	2
PhD recruitment websites	2
Advertisement in Nature and Science	1

Figure 14: Q 2.11 How international were the applicants? (n=36, multiple answers possible)



Source: PI-Survey by 3s.

Figure 15: Q 2.12 How important were the following aspects when selecting doctoral students for the doc.funds project? (n=36, multiple answers possible)



Source: PI-Survey by 3s.

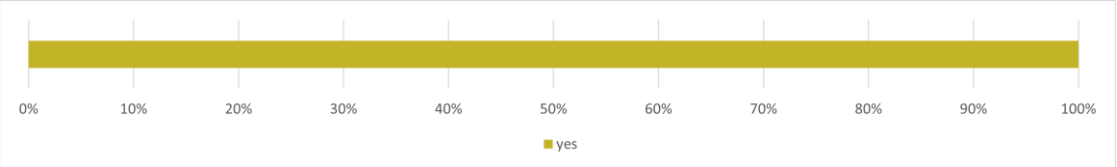
Table 15: Q 2.12: Other aspects

Interest in curiosity-driven research
Letter of Commitment
Presentation of research paper
Quality of writing sample and research proposal, along with ability competently to debate both in interview.

Block 3 – Supervision

Not surprisingly, all PIs fulfil the legal requirements to act as official supervisors for doctoral students. The time since fulfilling these requirements ranges from 1992 to 2019 with an even distribution. The majority of PIs are responsible for 10 or less doctoral researchers, with five being the mode. In the majority of cases, only one of these is a *doc.funds* student, while the majority of students are funded by other sources.

Figure 16: Q 3.1 Do you fulfil the legal requirements to act as the official supervisor for doctoral students? (n=36)

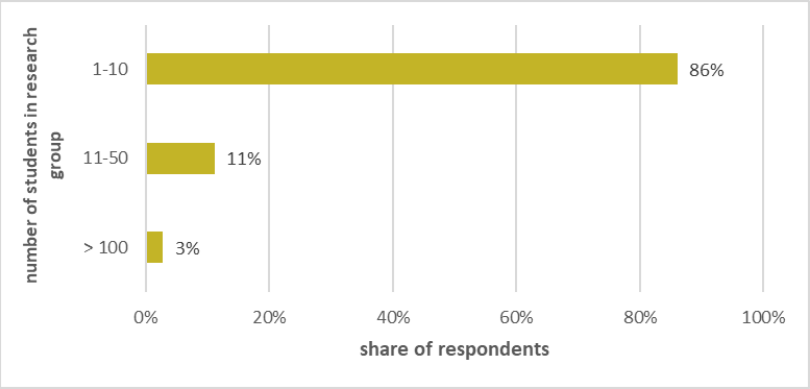


Source: PI-Survey by 3s.

Table 16: Q 3.2 Since when do you fulfil the legal requirements to act as the official supervisor for doctoral students? (n=36)

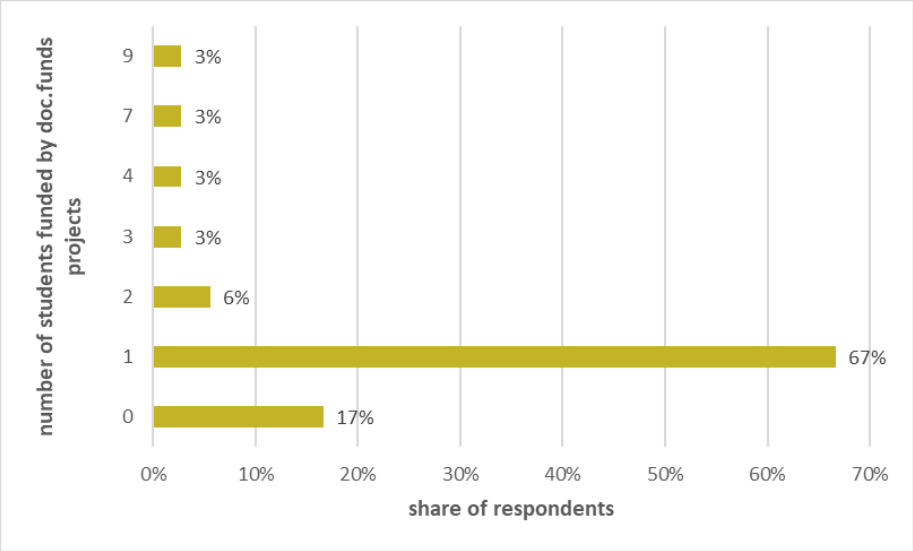
1992	1
1997	1
2001	1
2002	2
2003	2
2004	2
2005	3
2007	1
2008	1
2009	3
2010	4
2012	4
2013	1
2014	2
2015	3
2017	1
2018	2
2019	1
no answer	1
	36

Figure 17: Q 3.3 How many doctoral students are in your research group? (n=36)



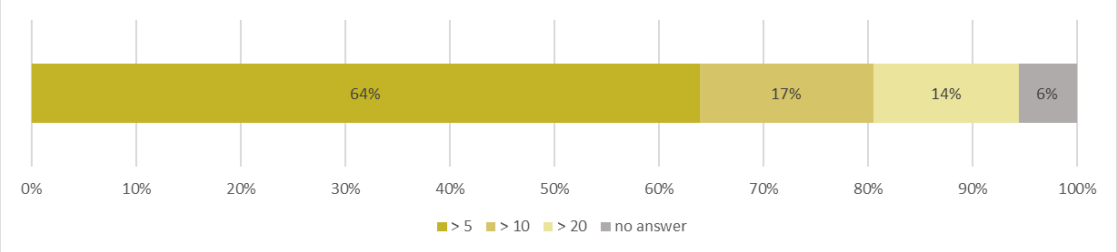
Source: PI-Survey by 3s.

Figure 18: Q 3.4 How many of these doctoral students are funded by the doc.funds project? (n=36)



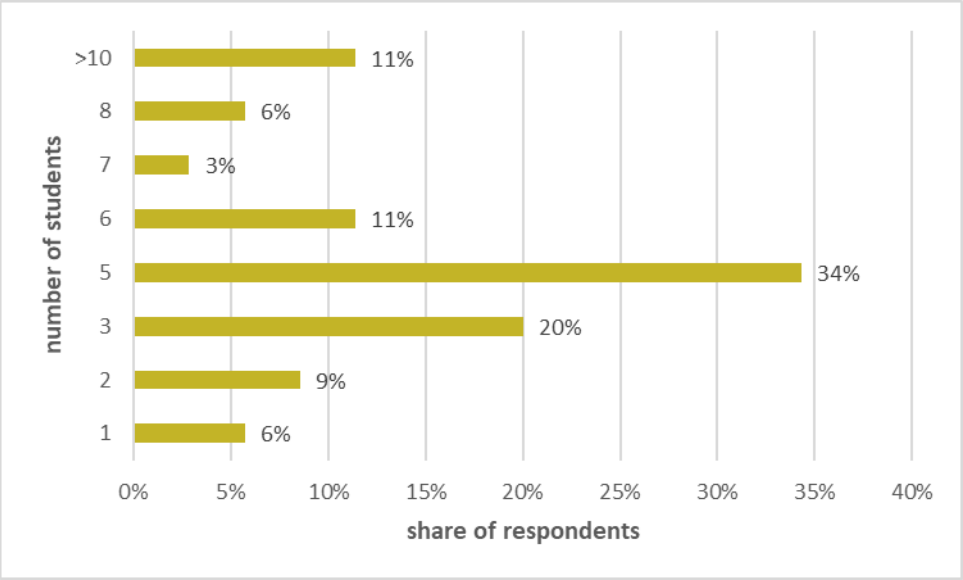
Source: PI-Survey by 3s.

Figure 19: Q 3.5 How many are funded by other sources? (E.g other project-related funds, funded by the university) (n=36)



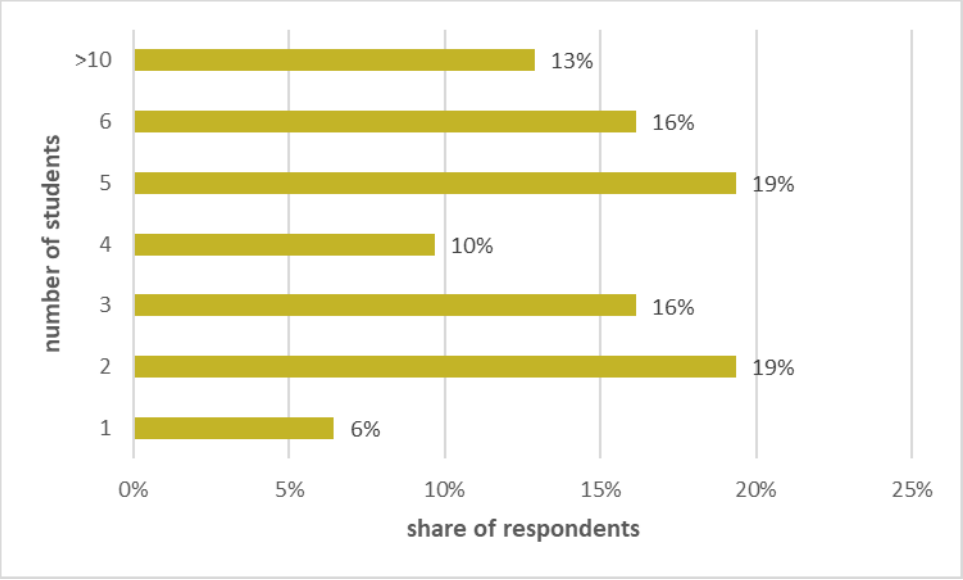
Source: PI-Survey by 3s.

Figure 20: Q 3.6 For how many doctoral students do you currently act as an official supervisor? (n=35)



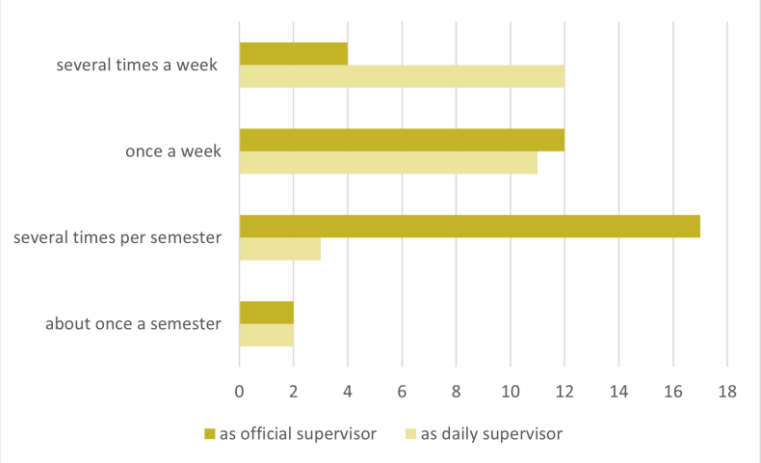
Source: PI-Survey by 3s.

Figure 21: Q 3.7 For how many doctoral students do you act as daily supervisor? (n=31)



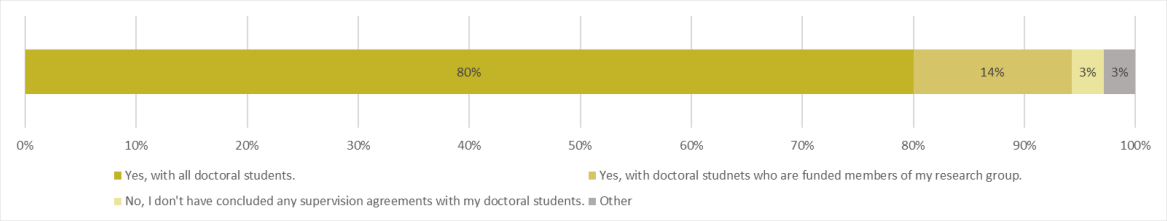
Source: PI-Survey by 3s.

Figure 22: Q 3.8 On average, how often do you have meetings with your doctoral students? (n=36, multiple answers possible)



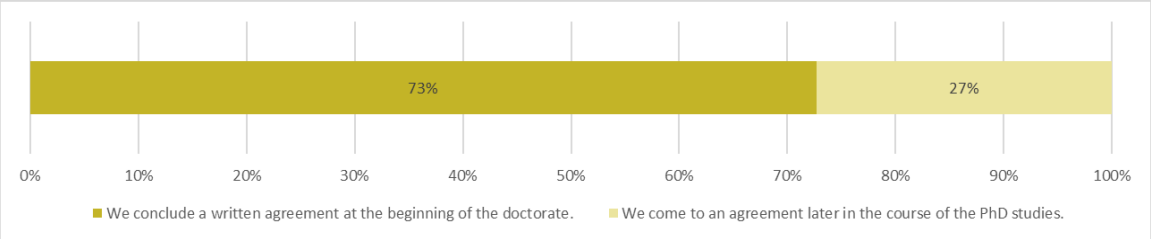
Source: PI-Survey by 3s.

Figure 23: Q 3.9 Do you conclude written supervision agreements with your doctoral students? (n=35)



Source: PI-Survey by 3s.

Figure 24: Q 3.10 When do you conclude the supervision agreement with your doctoral students? (n=33)

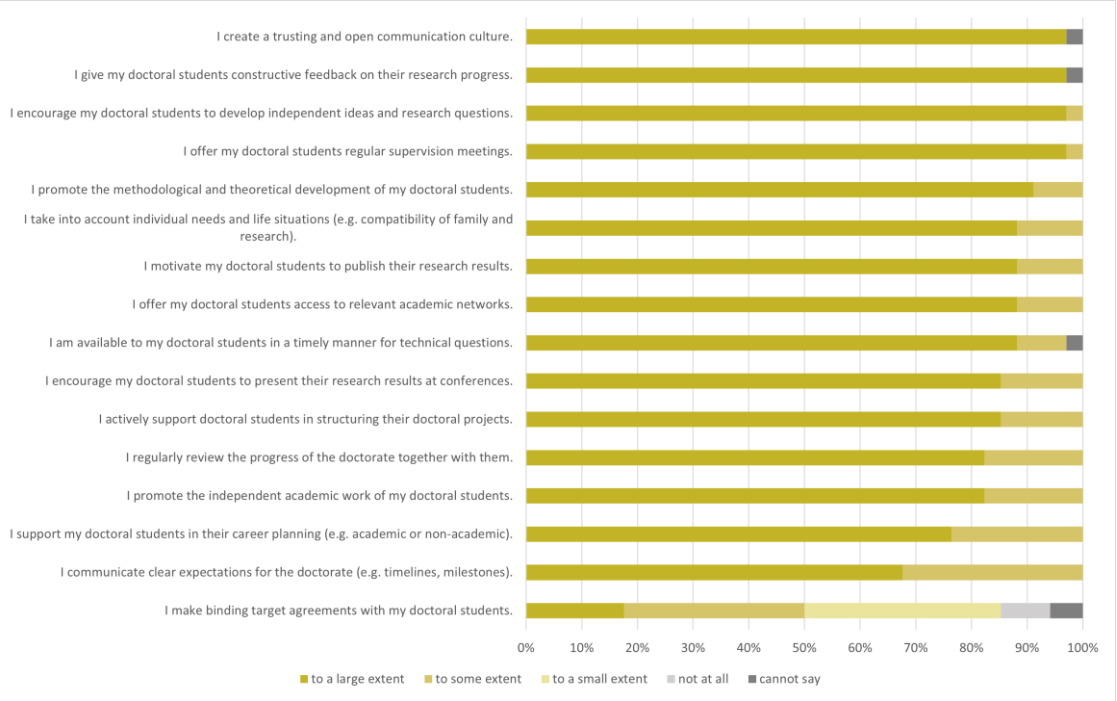


Source: PI-Survey by 3s.

Table 17: Q 3.10.1 If you come to an agreement later in the course of the PhD studies, please describe the process:

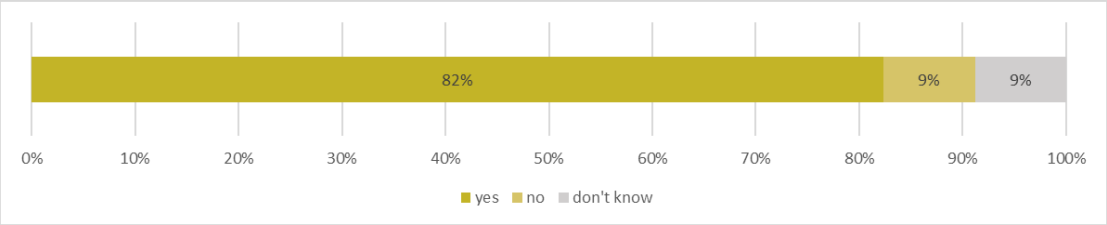
The agreement is concluded after the successful presentation of the doctoral project after the first year.
The students' educational level, abilities, strengths and aptitudes need to be assessed first, which usually takes one year.
The research proposal needs to be passed by the board of studies first, which usually happens after one year.
MUW protocol is being followed.

Figure 25: Q 3.11 To what extent do the following statements apply to your supervision work? (n=34)



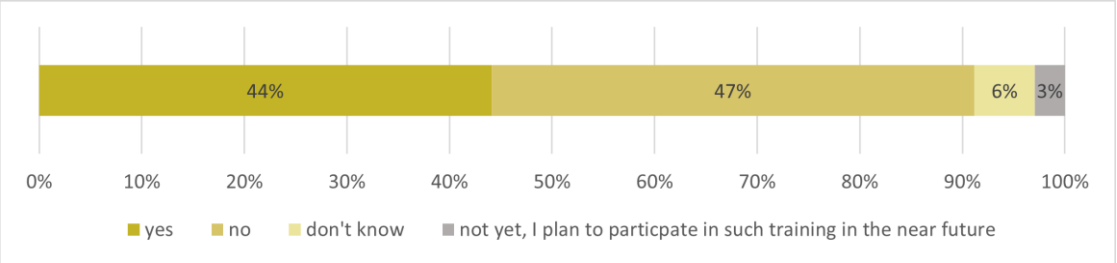
Source: PI-Survey by 3s.

Figure 26: Q 3.12 Does your institution support training for supervisors of doctoral students? (n= 34)



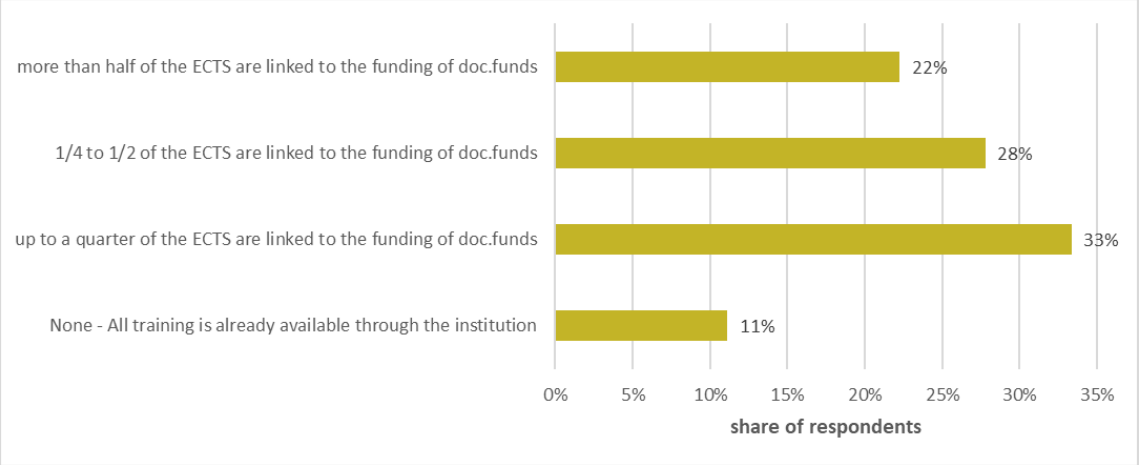
Source: PI-Survey by 3s.

Figure 27: Q 3.13 Did you attend any training on how to supervise doctoral students (even at a different institution)? (n=34)



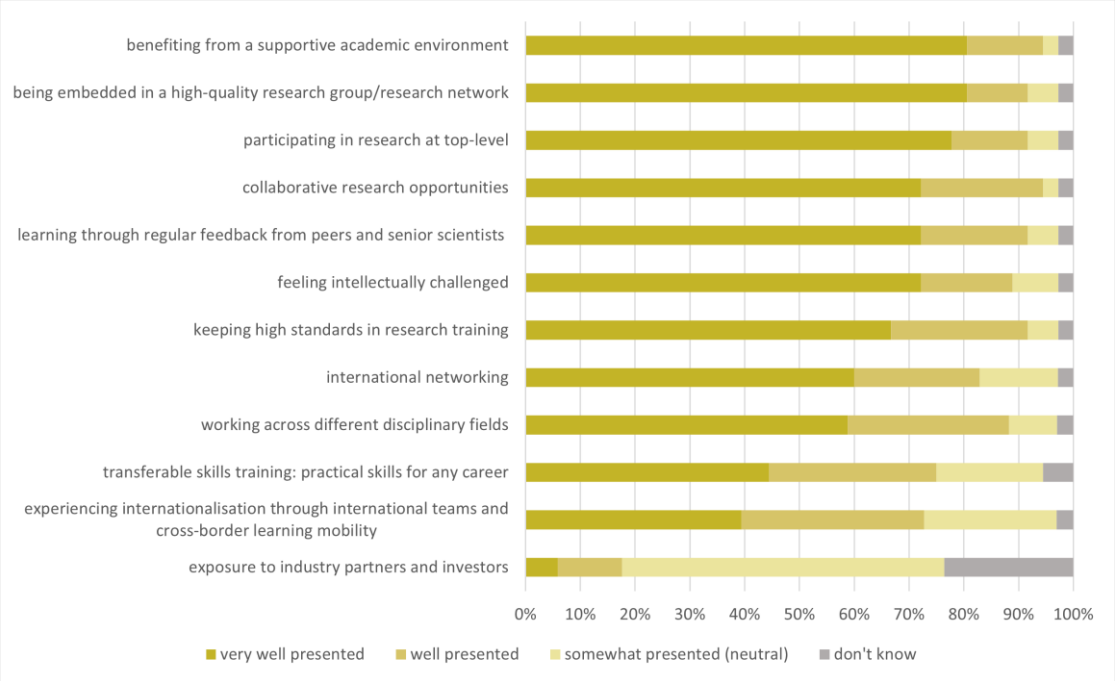
Source: PI-Survey by 3s.

Figure 28: Q 3.14 How much of the training of students in the doc.funds project is only possible because of the doc.funds funding, and not already offered by your institution? (n=36)



Source: PI-Survey by 3s.

Figure 29: Q 3.15 To what extent do you find the following elements of innovative doctoral training represented in the doc.funds project? (n=36)



Source: PI-Survey by 3s.

Table 18: Q 3.16 Which elements of the doctoral training in your doc.funds project do you in particular consider as innovative and unique?

We implemented a Tandem supervision concept where MDs and PhD co-supervise our PhD students.
Yearly thesis committee meetings where the committee members can talk with the PhD student in the absence of the supervisor and vice versa. These meetings are very useful and efficient in detecting conflicts and problems early enough that they can still be solved.
The doc.funds project offered a unique opportunity to bring a critical mass of doctoral students together around one specific topic / research framework, which allowed cooperation and synergies, we could not have had with our smaller number of regular PhD positions.
Combination of basic course, instructional courses, seminars
The possibility to setup a focused training network within a research field is unique. The doc.funds program allows groups to build on a critical mass of PIs, train PhD students in a focused research area and strengthen and expand this research area an collaborations sustainably, The PhD candidates on the other hand benefit from the complementary expertise of the PIs, and the close networking and interactions between the PhD candidates. Such strong focus on a topic and building a collaborative research and training environment of PhD candidates is only possible within the doc.funds programs.
We brought mandatory thesis advisory committees, lab rotations, mandatory literature seminars
Cooperation between involved groups, development of joint experiments and joint use of field sites
A special, 2-semester course on the topic of the doc.fund designed and taught specifically for doc.fund students by the doc.fund faculty.
Preprint journal club with written reviews to authors. Gender and sex in research workshop. Biweekly lunches for the students.
Our doctoral training stands out for its highly interdisciplinary approach, equipping students with a comprehensive perspective on the field. Beyond traditional academic instruction, we place strong emphasis on the development of soft skills through a specially tailored program designed to support students in integrating their expertise into future professional pursuits. This is particularly valuable given that many of our alumni choose to continue along the academic path.
Strong focus on consistent writing assignments - not very common in continental European PhD training Cohort building around a concept, rather than a topic Genuinely interdisciplinary setup of the group
Coaching for chalk talks (have done it already) The possibility to exchange labs to learn a particular technique Short internships at RNA companies Academic writing with coaching
frontier-research, students taking ownership of projects; offering students the chance to develop their own projects
cannot say

Joint supervision, student selection hearings, retreats
Explicit methodological reflection and training. Career mentoring.
collaborative research opportunities, semester abroad
A set of interdisciplinary courses to promote understanding of concepts of different disciplines and apply this knowledge to real-world problems.
Collaborative research projects. Collaborative training.
interdisciplinarity of the group
Interaction with international experts in thesis committees
artistic research methodology
thematically focused PhD projects training a (interdisciplinary) cohort of students strengthen collaboration within Austrian institutions and enhance international visibility
Retreats with trainers for transferrable skills Research done in teams with members from different research groups
Working within a network of peer, junior and senior scientists, regular feedback from not just the supervisor but also other PIs and peers, unique training opportunities (student-tailored), to-level research.

Table 19: Q 3.17 Do you have any suggestions for improving the doc.funds program? If so, please specify:

In [my] view, the development of PhD programs is life science is complete. It even appears that many PhD [programmes] become acutally overboarding with training, loosing focus on the actual most important value of the PhD training: Making discoveries and doing excellent science.
1. Extend the program to more than one location. Allow doc.funds to bridge science in Austria. 2. Give money for consumables. Without money for consumables the doc.funds PhD programs depend on the university or other FWF grants. 3. Force the universities to provide administrative help. If the universities want structured PhD programs, they should also support them. However, when I asked the university for a half-time secretary, they told me that I can use the "co-financing" to hire someone. This I cannot do because that money we need as consumables for the students. Running a PhD program is a lot of work. From organizing interviews and visa application forms for students coming from abroad, work contracts, to organizing weekly seminar rooms, lectures, send reminders, find location for retreats, organize invited speakers etc. Instead of spending time for science and supervising students I have to be a secretary. Honestly, if someone asks me if they should apply for a doc.funds, I will tell them to think twice!
We struggled with inadequate funding for the PhD positions, which only became clear during the project (due to inflation, but also because FWF calculations ignore the higher 4th year salaries according to collective agreements), and this created a lot of uncertainty and forced us to be quite restrictive regarding "Sachkosten", which would have been very useful for the project.

The organisation of a doctoral school requires a lot of effort. We were able to secure other funding for an administrative coordinator for the programme, which is extremely important. Please, reintroduce the possibility to use the doc.funds to pay for a highly qualified administrative coordinator!
The funding of the doc.funds program needs to be increased. In particular, the number of doc.funds projects financed by the FWF should be increased. Moreover, the education costs (currently 5 k€/PhD/year) need to be increased substantially to cover the costs for consumables, conference visits, research stays etc.
Part of the grant money should be dedicated for international research stays for PhD students;clear statement by the FWF if basic research is supported, or, in case of natural sciences only if collaboration with industry or clinicians are required. Don't waste time of researchers writing applications for grants or prepare for hearings that won't be funded. Time between information on the hearing and sending the actual files (one week before the hearing) is very short since this is typically peak teaching-season.
Automated valorisation of personnel costs, i[n]crease of material/travel costs for PhD projects (e.g. in natural sciences), clear rules for structural PhD programs at universities (prerequisite for application)
Organize meetings between program coordinators to share ideas.
We would like to see greater customizability in the reporting platform Researchfish. The current preset options are too limited, especially considering the diverse disciplines and focus areas across accepted doctoral programs. A more flexible approach to reporting would be highly beneficial. One suggestion is to include an "Other" field, allowing respondents to provide details on aspects that may otherwise be misrepresented or overlooked by the existing categories.
Since we are in the first year of the program, it's a bit early to say. The interdisciplinary setup was challenging, but that's not because of the doc.funds program but because of the institutional difficulty universities have in enabling genuinely interdisciplinary cooperation. Ask me again in a year and in two years' time and I will be able to tell you more.
We recently got to know that there is no chance to extend it for another 4 years, and this is very disappointing because of the effort in implementing the application and the re-submission. Also, we do not think that the funding – basically a single PhD position, some extra money and no administrative support – parallels the effort and the requirements for cutting edge research in life sciences.
encourage the relevant studies programs to offer teaching opportunities for FWF-funded doctoral students
More freedom in start of positions (not all positions could be filled in first round). Better support in organizational aspects.
The funding rules, in requiring that funds can be spent only directly on PhD researchers (which is understandable), often make it practically complex to integrate the project activities into the activities of the doctoral school (which is a desideratum that the FWF should be aiming to promote). It should be made possible, for example, that PhD-students invite a visiting speaker to give a talk and for this talk to be open to everyone in the department, while the expenses (travel and accommodation) is covered by the project. Currently we have been told that opening the talk to the department means that the expenses can be covered only proportionally by the project. The consequence of this is that the PhD-students cannot organise regular scientific talks within the project. Please revisit the funding rules in this respect. It's absolutely fine to want to prevent the funds from being used for ends from which the PhD-researchers do not

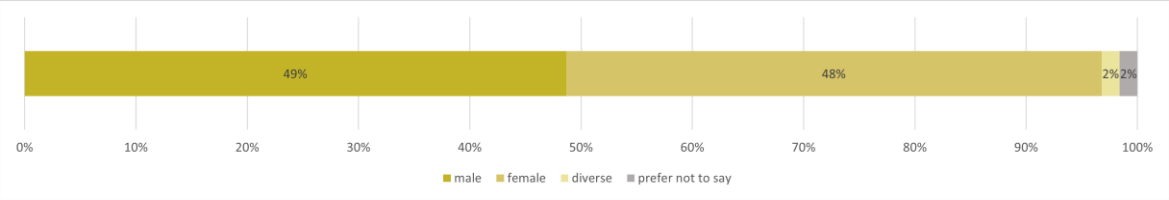
benefit. But this should be done differently so as not to spill the baby with the bath water.
Full funding over a longer period would be great (i.e. back to the original funding scheme: with coverage of consumables, administrator, 12 years)
With regard to the funding program, I feel the most significant limitation is that funding is only available for one cohort, as there is an enormous momentum created within the doc school, but there is hardly any opportunity to continue with the same momentum after 4 years, and you have to apply a new proposal. Furthermore, the integration of PostDocs (based on additional funding) could leverage the publication of findings and strengths in scientific terms in the long run.
There should be more communication with the funding agency through the project to allow information exchange on the way.
while 48 months salaries are funded, the total project period might be extended to 60 months to increase flexibility of hiring and finalization of project.
Compared to previous doctoral programmes funded by the FWF, the doc.funds scheme requires substantial additional financial commitment from the host institutions. The funding provided in the doc.funds projects is insufficient to carry out innovative research projects in the life sciences and thus requires a considerable co-fund from the host institutions. Running a doctoral program without administrative support is impossible; the lack of funding for this from the FWF requires a commitment for additional resources from the host institution. The requirement to exchange 50% of the faculty for follow-up doc.funds projects prevents a long term effects of thematically focused PhD training and the collaboration between faculty members, somewhat counteracting the original goal of the programme.
The proprated billing is challenging. For some activities (e.g. summer schools) some costs do not depend on the number of participating students. For instance, in the case of summer school, the cost for the invited speakers does not depend on the number of participating students. Nevertheless, costs cause by the invited speaker can only covered by the doc.funds program in proportion to the number of doc.funds supported students. If no other funds are available, this leads to the restriction of the school to the doc.funds students even if additional students could benefit at no extra cost. This should be discussed for future doc.funds projects. Also the fact that the participation of the PIs in activities of the doc.funds program cannot be funded by doc.funds does not make sense and should be changed.
The only problem with the doc.fund program is that it does not cover benchfees (e.g. for consumables) for the student and that these have to be separately negotiated with the University or funded by other sources.

11 Annex II: Student Survey Results

Block 1 Sample features

The distribution of male and female respondents is even, with most respondents (58 %) in the age category of 26-30 years. Regarding the scientific discipline, most students surveyed work in Biology (32 %) followed by Other (11 %) and Mathematics (9 %). The Majority reported Austrian (28 %) or German (22 %) citizenship with also the majority having been employed in one of these countries before. Most student's main employer is a Public University (87 %) with they're research location being in Vienna (63 %). Almost 80 % were in a FWF doctoral program, while pursuing a structured doctoral program with predefined course work and supervision (55 %).

Figure 30: Q 1.1 How would you describe yourself? (n=187)

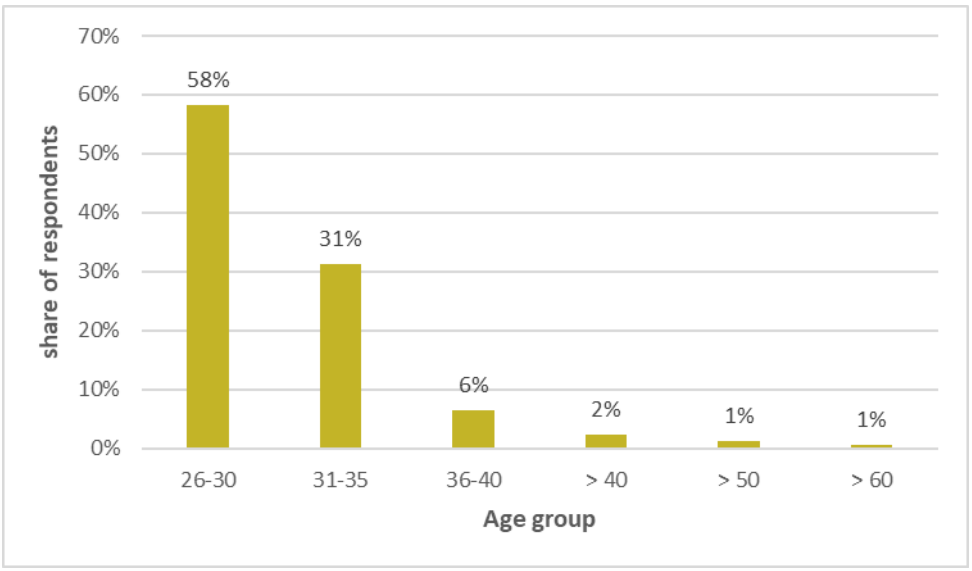


Source: Student-Survey by 3s.

Table 20: Q 1.1 Gender (n=187, by programme status)

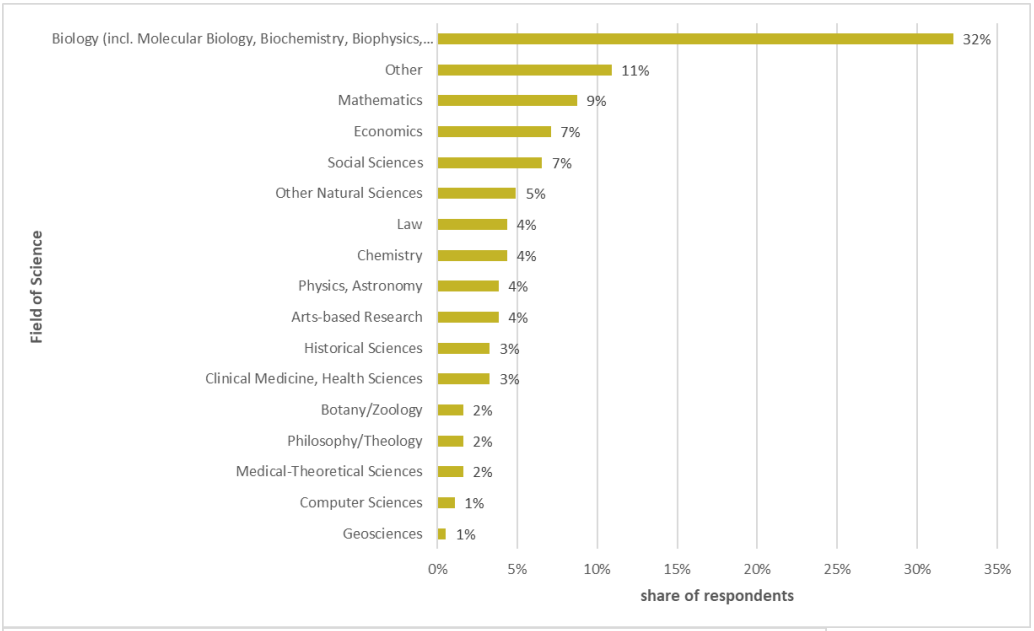
	female	male	diverse	prefer not to say	# of responses
FWF doc.funds PhD candidates	68	64	2	2	134
not doc.funds PhD candidates	16	24	0	0	40
not sure'	6	3	1	1	11
Total	90	91	3	3	187

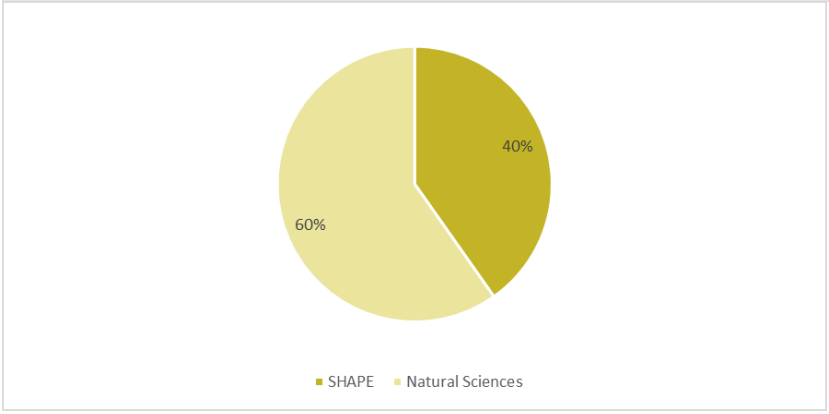
Figure 31: Q 1.2 How old are you? (n=170)



Source: Student-Survey by 3s.

Figure 32: Q 1.3 Which of the scientific disciplines listed below best matches your current area of research? (n=184)



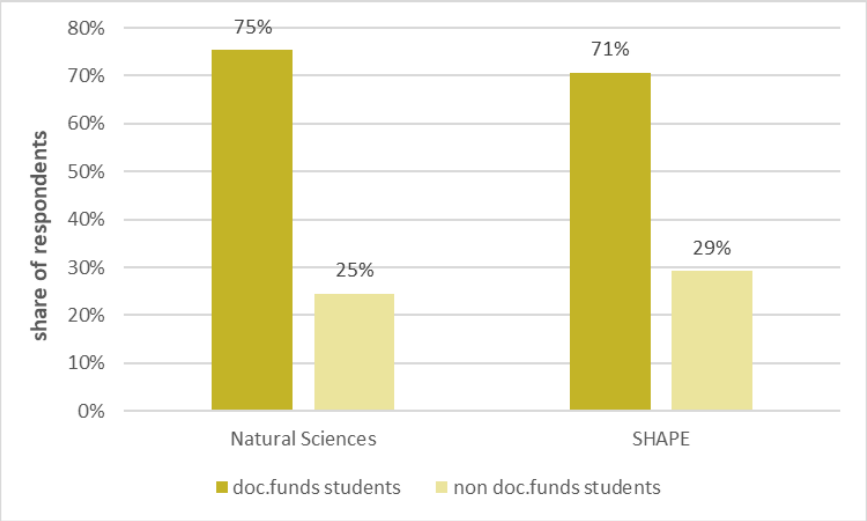


Source: Student-Survey by 3s.

Table 21
Q 1.3 Field of Study by programme status
(n=187)

	Natural Sciences	*SHAPE*	*Total*	*% NatSc*	*% SHAPE*
FWF doc.funds PhD candidates	*83*	*53*	*136*	*61%*	*39%*
not doc.funds PhD candidates	*18*	*20*	*40*	*45%*	*50%*
not sure'	*9*	*2*	*11*	*82%*	*18%*

Figure 33: Comparison of doc.funds students vs. non doc.funds students by field of study (n=184)

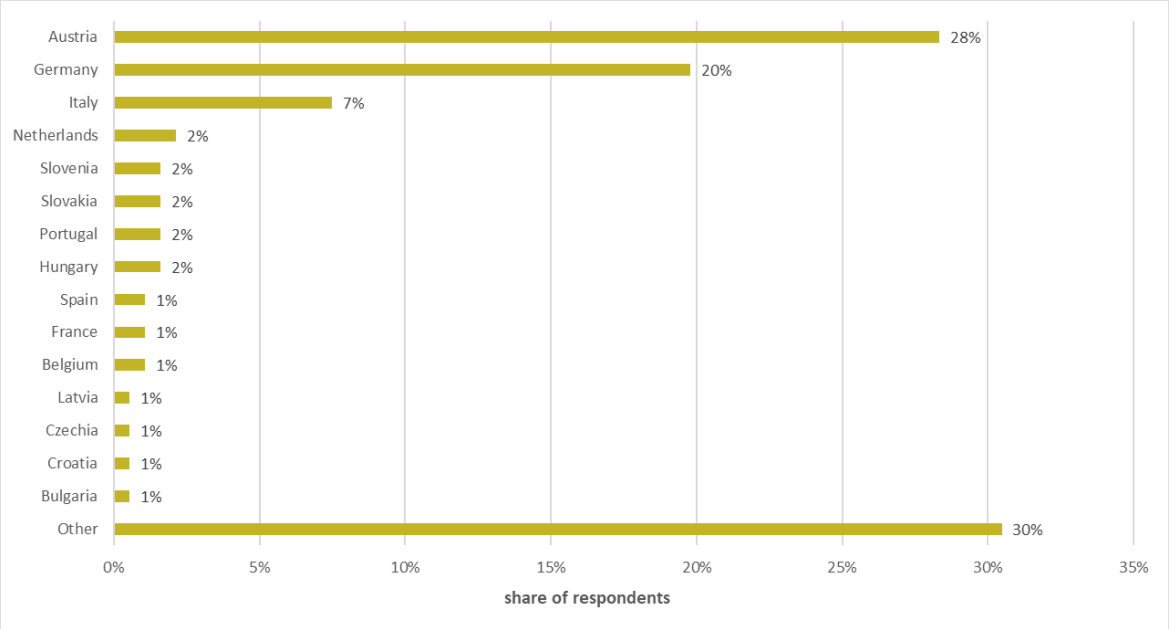


Source: Student-Survey by 3s.

Table 22: Field of Study: Other

Field of Science	# of responses
Finance	11
Taxation	2
Business Administration	1
Cancer Research	1
Electrical Engineering	1
Immunology and Oncology	1
Materials Sciences	1
Molecular Medicine	1
Spatial Planning	1
Total	20

Figure 34: Q 1.4 Please indicate your nationality (n=187)



Source: Student-Survey by 3

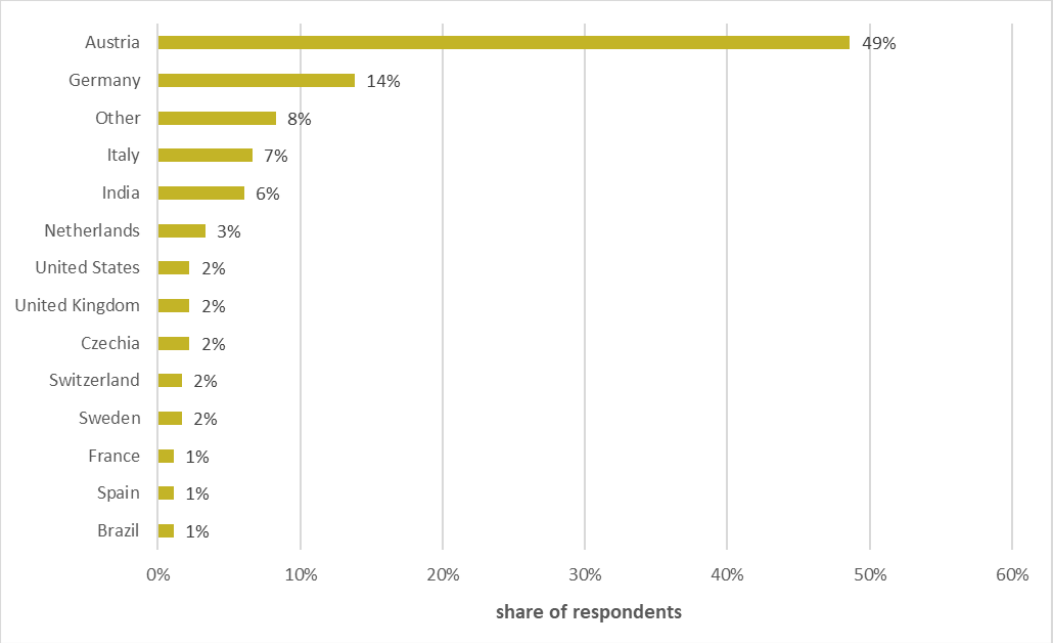
Table 23
Q 1.4 Nationality by programme status (n=182)

	FWF doc.funds PhD candidates	not doc.funds PhD candidates	not sure'
Austria	34	15	4
Germany	24	10	3
Italy	12	1	1
Netherlands	4	0	0
Hungary	3	0	0
Slovakia	3	0	0
France	2	0	0
Portugal	2	0	1
Slovenia	2	1	1
other EU countries	6	3	0
Non-EU countries	42	6	2
Total	134	36	12

Table 24: Q 1.4 **Nationalities of candidates from non-EU countries by programme status (n=48)**

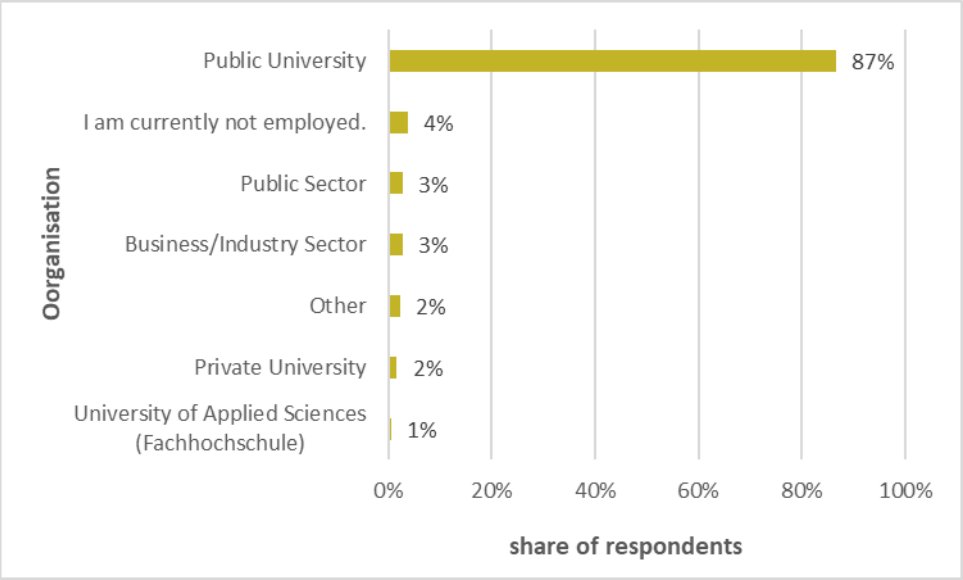
	FWF doc.funds PhD candidates	not doc.funds PhD candidates	not sure'
India	10	1	0
Serbia	3	0	0
Ukraine	3	0	0
Vietnam	3	0	0
China	2	1	0
Belarus	2	0	0
other non-EU countries	17	4	2

Figure 35: Q 1.5 Please indicate the country of your previous employment/studies (n=181)



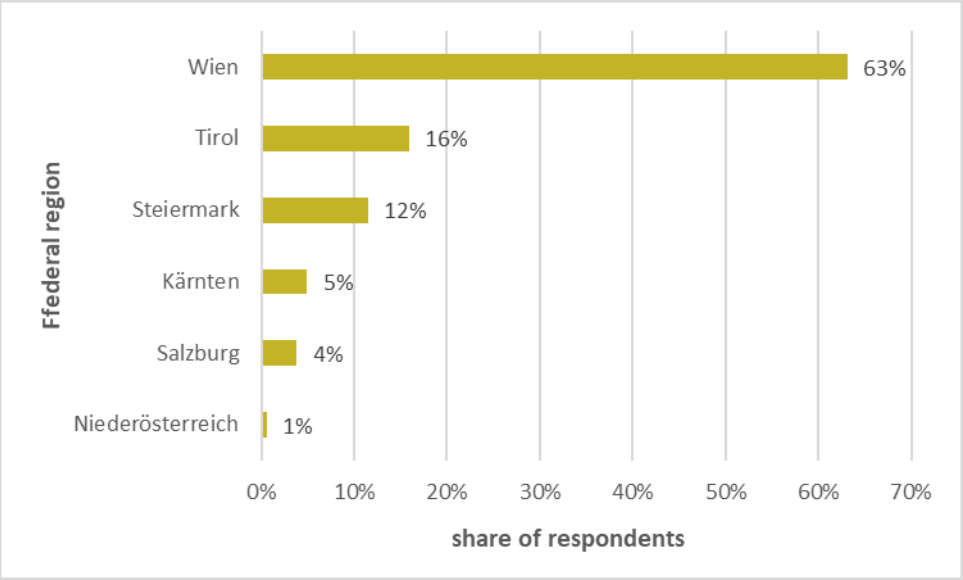
Source: Student-Survey by 3s.

Figure 36: Q 1.6 What kind of organisation is your main employer? (n=187)



Source: Student-Survey by 3s.

Figure 37: Q 1.7 In which federal region is your research organisation located? (n=182)

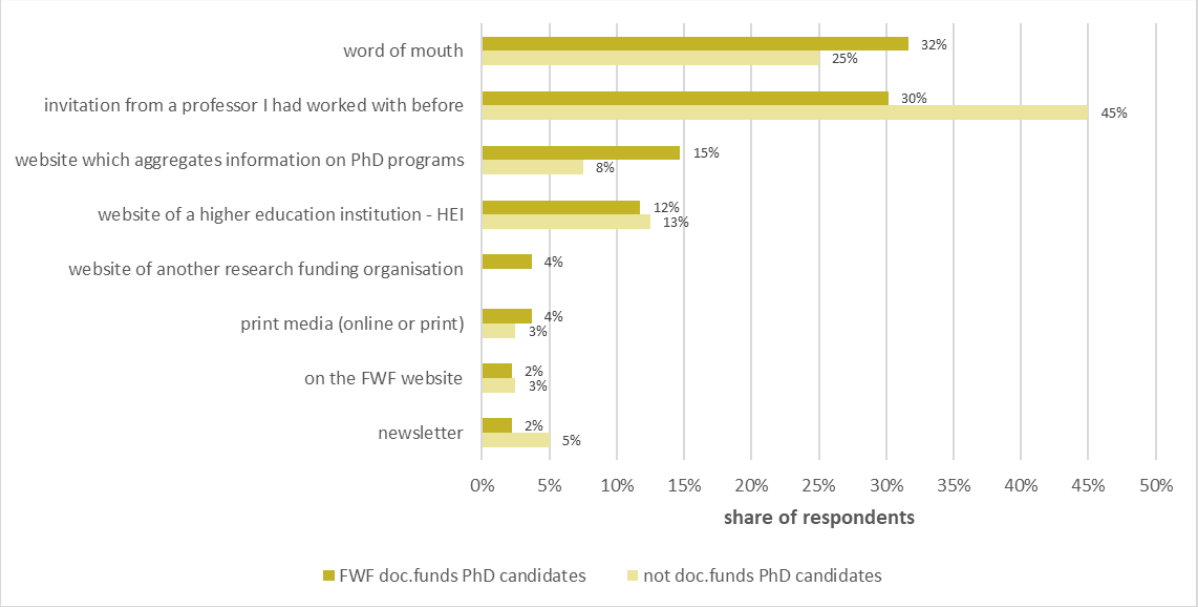


Source: Student-Survey by 3s.

Block 2 Application Process

Block 2 of the Survey deals with the application process. In most cases, the initial application was through an invitation by a professor (35 %) or word of mouth (30 %). The majority of students is employed as a doctoral student in a university/research institute (55 %). Most students mentioned their PhD to be conducted entirely within academia (96 %). The application procedure was mentioned to be extremely to highly competitive by around 40 % of students and 76 % perceived it to be very to rather user-friendly.

Figure 38: Q 2.1 How did you hear about your PhD position? (n=176)



Source: Student-Survey by 3s.

Table 25: Q 2.1.1 Through which website of a higher education institution did you hear about your PhD position?

WU job portal
Website of the Vienna Graduate School of Finance (VGSF)
PLUS University of Salzburg
Medical University of Innsbruck job portal
Vienna BioCenter
Vienna University of Economics and Business
Website of the Institute of Discrete mathematics of TU Graz
Academy of Fine Arts, Vienna
AKBild.at

Table 26: Q 2.1.2 Through which aggregating website did you hear about your PhD position?

FENS
Findaphd.com
EURAXESS
Mountain Research Initiative (MRI)
Academicpositions.at
Josh's Waters Jobs
HSozKult
TUwien.at
Inomics
Academics.de
Tissuehome.org
PhD.co.uk
Vienna Biocenter PhD program
Linkedin.com

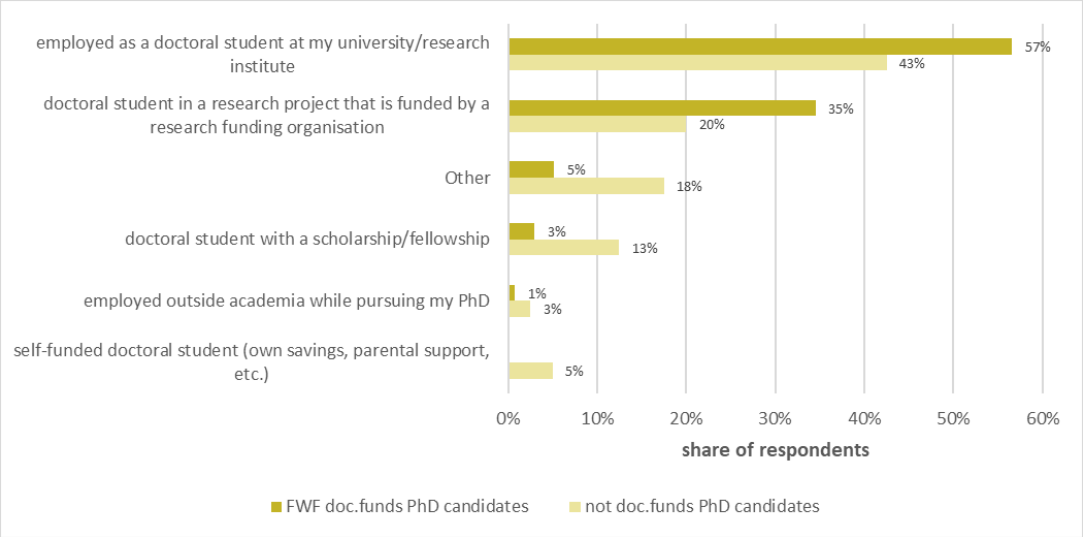
Table 27: Q 2.1.3 Through which print media (online or print) did you hear about your PhD position?

Book (asked author to be supervisor)

Table 28: Q 2.1.4 Through which newsletter institution did you hear about your PhD position?

EPS
AM – Anthropology Matters
Institute for Austrian and International Tax Law
DMANET
PhilosL

Figure 39: Q 2.2 Which of the following statements best describes your current role as a doctoral student? (n=187)



Source: Student-Survey by 3s.

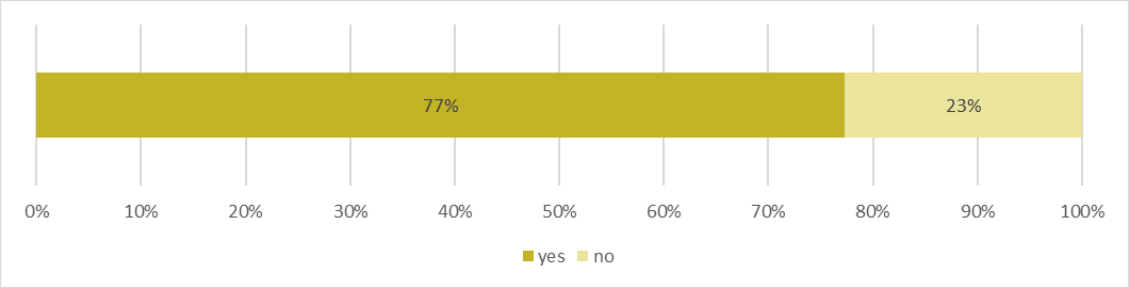
Table 29: Q 2.2.1 Please specify the sponsor of your scholarship/fellowship

Austrian Partnership Programme in Higher Education and Research for Development a programme of the Austrian Development Cooperation (ADC)
DOC fellowship by the Austrian Academy of Sciences
Evangelisches Studienwerk Villigst
FWF Doc Funds Cellular Basis of Disease
Swiss Humer Foundation
Österreichische Akademie der Wissenschaften

Table 30: Q 2.2.2 Please specify the research funding organisation

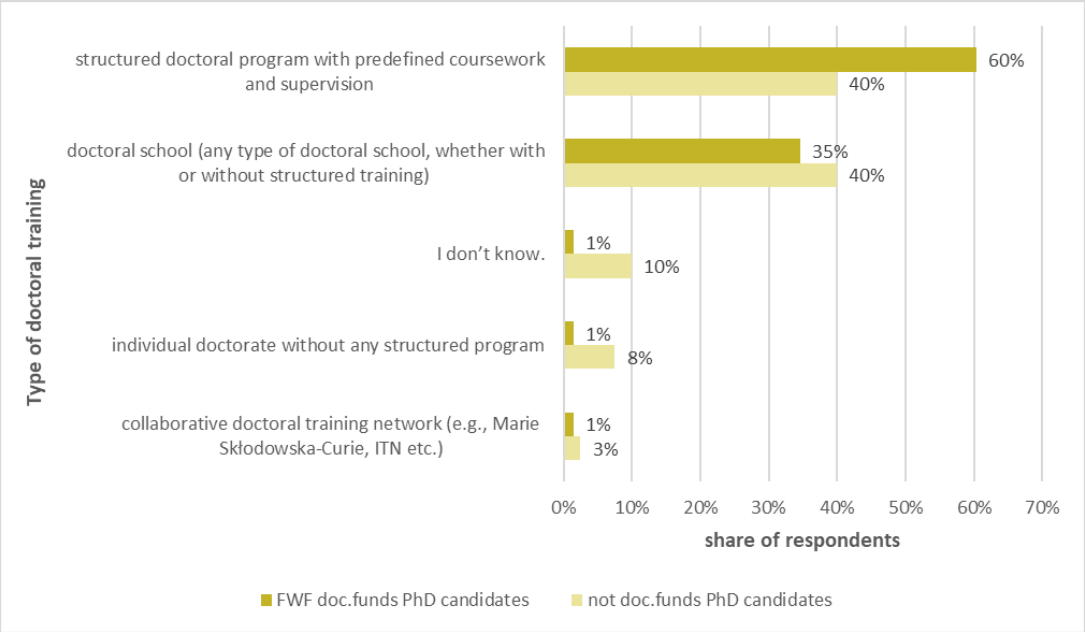
Austrian Science Fund (FWF)
BioTechMed-Graz
ELLIPSE/FWF grant
EU, Klimafonds
European Research Council (ERC)
Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK)
GFF
Molecular & Cellular Control of Tissue Homeostasis in Health & Disease (TissueHome)

Figure 40: Q 2.3 I am a doctoral student in a FWF doc.funds project (n=176)



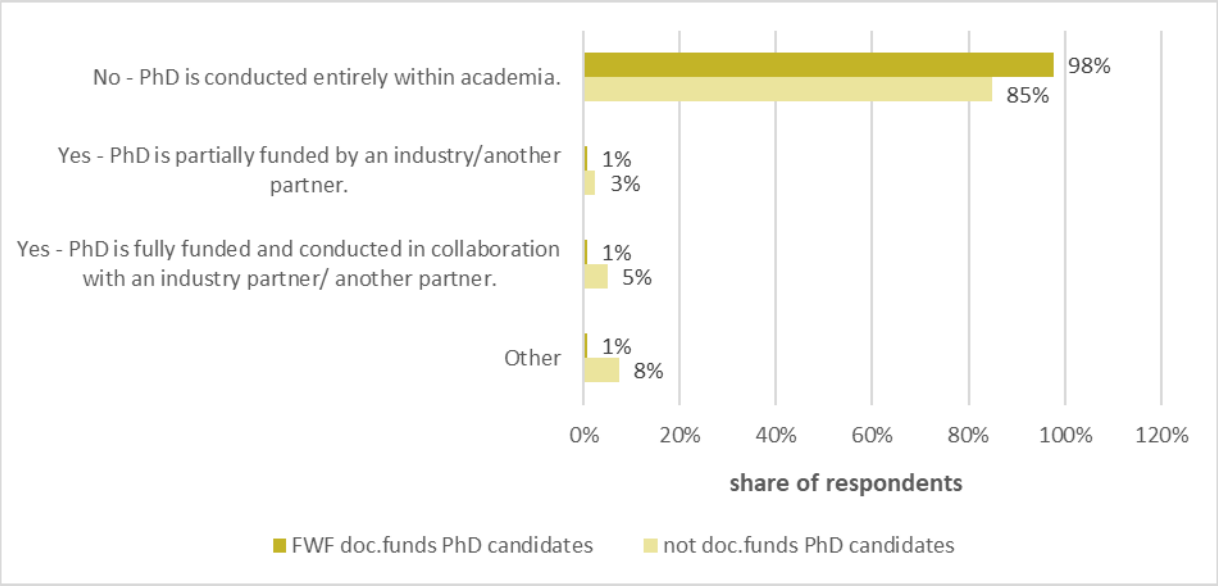
Source: Student-Survey by 3s.

Figure 41: Q 2.4 Which of the following statements best describes the type of doctoral training you are pursuing? (n=176)



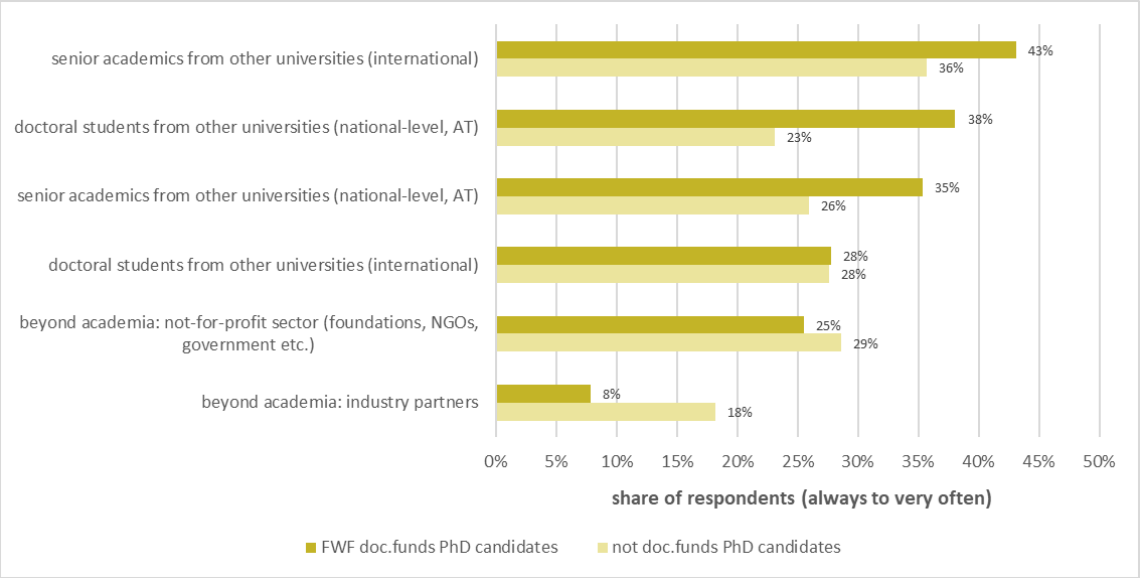
Source: Student-Survey by 3s.

Figure 42: Q 2.5 Are you conducting your PhD as part of a collaboration with an industry partner or another partner outside academia? (n=174)



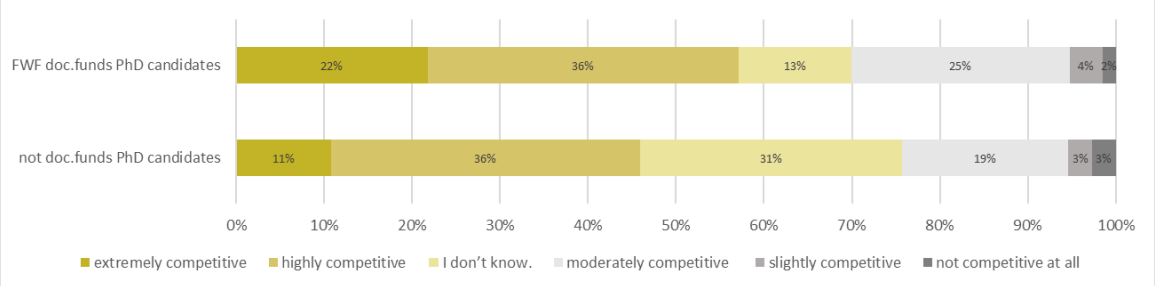
Source: Student-Survey by 3s.

Figure 43: Q 2.6 In your PhD project, how frequently do you collaborate with any of the following external partners? (n=149)



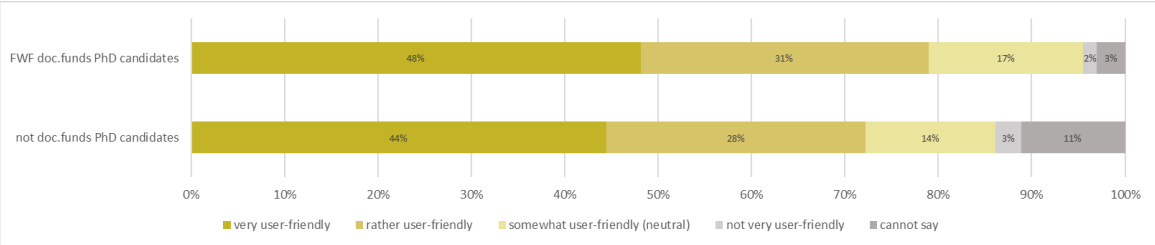
Source: Student-Survey by 3s.

Figure 44: Q 2.7 How competitive was the application procedure for your PhD position? (n=177)



Source: Student-Survey by 3s.

Figure 45: Q 2.8 How user-friendly is/was the application procedure for your PhD position overall? (n=169)



Source: Student-Survey by 3s.

Table 31: Q 2.8.1 Please provide more information about your experience regarding the application procedure

After finishing my master thesis in one of the projects that I still work for, I was offered a position for field work and some data analysis which was then turned into a PhD later on. Therefore, there was no official application procedure.
After sending in my documents, there was an approximately one hour online interview, where I was asked to present some previous scientific work of mine. A few weeks later I got offered the position. Only after that we went through the formal application procedure at our university.
could be even more digitalized
I applied for a PreaDoc position written out by my supervisor. I found the position on my university's job portal. The application requirements were straightforward. The required application documents were all commonly requested ones for positions of this type.
I applied with my CV and a letter of motivation. From my master's, I already knew the PI I am currently working with.
I took part in the proposal process, was involved from the beginning.
I was fine but I know from many non-EU students that the Visa process was horrible. Unis and Projects should definitely provide more support here, if Austria wants to be an internationally competitive research environment.
It consisted in compiling a sample of previous academic writing, diplomas including grade details, a cv and motivation letter into one single pdf, then having a 30 minutes long interview.
It was not well defined, I had to search and ask around a lot
It was on-line, very clear and easy to comply.
My PhD application was fine and without being too complicated, it included an oral interview as part of the selection process.
Not so much special to tell - it required multiple rounds and took some time until I got the official confirmation. Probably this process could have been completed faster as some applicants had different offers during that long application period, then accepted these different offers and were "out" of our application procedure before the next step started (therefore they dropped out during the long period until a decision was made).
Online Interviews (Covid-Pandemic)
Online Job Interview and quick response times.
Structure of the application letter was not clear, instructions not clear, however the hearing itself was well sructured.
The application procedure consisted of two parts: the doctoral program and the employment as a doctoral student at the university. The application for the position as a doctoral student was comparable to applying for a research position outside academia. It involved submitting a CV, a research proposal, letters of recommendation, and participating in an interview. The application for the doctoral program itself was a formal process organized by the doctoral office of my university.
The application process was rather rigorous with recommendation letters being obligatory in the first application round. Successful applicants were invited to interviews which included giving a presentation about a given topic (research paper) in front of several PIs. After successful completion of this second application round, a match-making process connected PIs with prospective PhD students. During the match-making process, mutual acceptance by both the PI and the student led to final inclusion in the PhD program which at least in my case began with a trial month at the university.

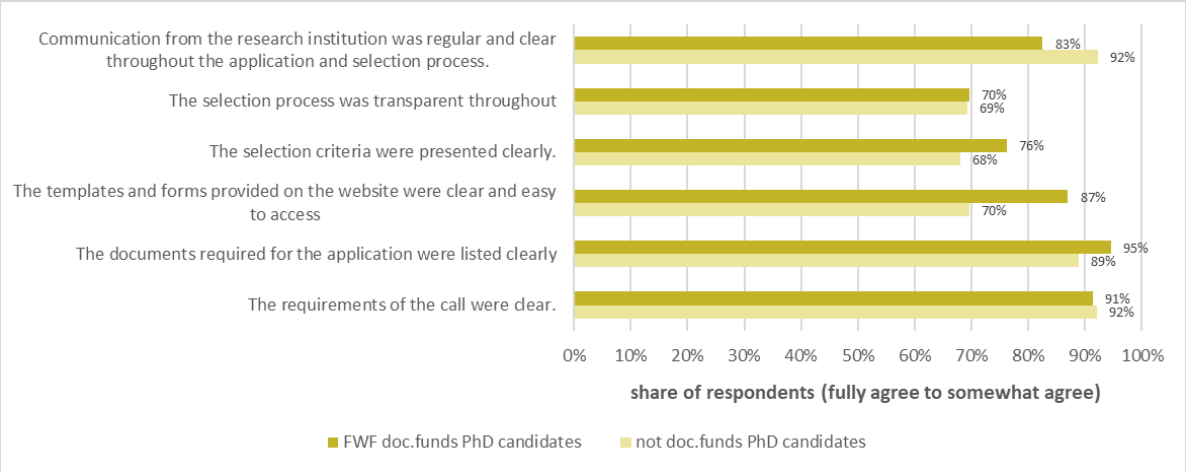
There was an open call for the position, defining the required qualifications and tasks as well as the documents that I was supposed to submit for my application. I prepared an application in line with that, received an invitation to an online interview and was accepted a couple of days after. It was user friendly for a number of reasons: 1. All necessary documents were exactly described in the call. 2. The number of documents was limited to the most necessary documents. 3. The interview was held online which was easier to arrange. 4. Overall, everything was transparent
Very user friendly and the advertisement for the PhD position covered all the necessary details.
During the application we were required to create an account in order to send the application. This did not work just before the application deadline.
I took part in proposal writing and submitting.
It was a three-phase application. First: Online application with questionnaire and CV. Second: Online interview. Third: In-person interview.
The application procedure consisted of a number of interviews, where short presentations about previous research (master thesis, projects etc.) and about a selected paper had to be given. These were followed by questions from the professors, both about the presentation and generally about the personal motivation regarding the PhD position.
Very straight-forward with good guidelines to follow.
2 step process: Written application (CV, Transcript of student records, letter of motivation, draft of master thesis) Interview talk (short presentation about my research, Questions from the faculty)
Against 40 other candidates
All went well, one interview and that was it. Good.
Application procedure went rather smoothly, considering the presence of some restrictive Corona measures that were still in place. The documents were submitted online and later interviews were all online, throughout several days. Enough time was left for those, it was not made to be done in a rush, which is very positive.
Application, then invitation to talk to my possible future Boss + other PIs from the programm. After that presentation in front of the entire programm community (PIs, students) and then acceptance into the programm
Clear instructions, help if needed, personal conversations not just with the commitee but also other groupmembers
Clearly communicated and easy to follow
During my PhD application process in Austria under FWF funding, I experienced a highly structured and competitive selection procedure. The initial stage involved submitting a detailed application package, including a research proposal, motivation letter, and academic transcripts. After a rigorous review process, shortlisted candidates were invited for interviews, where I had the opportunity to present my research ideas and discuss them with the selection committee. The process emphasized both scientific merit and the alignment of my research interests with the funding guidelines. I found the procedure transparent, professionally managed, and supportive, with clear communication at each stage. Overall, it was a valuable and enriching experience that strengthened my motivation for pursuing academic research.
Everything was very clear and structured beforehand, so one knew what to expect.
For three/two funded positions, upto 450-400 applications are recieved for our PhD in Practice program... The selection process is very tough because number of seats are very few

and that makes it extremely competitive.. Ideal case scenario there need to be more such positions
Handing in the application via e-mail, followed by a personal interview on sight with the chance to see the laboratories. Reasonable time to finalize the decision on both sides.
Hard to track its progress status.
I applied during the pandemic. Therefore, the application was entirely online. Everything was very structured and understandable. The funding of the position was one of the main reasons I applied. Otherwise, there would not have been a PhD position in the laboratory.
I applied for many positions before this one. Sometimes my profile was not of interest, sometimes the competition was fierce. I had occurrences where I waited a long time before being denied the interview or the position. I had many interviews, and sometimes I was the second candidate of choice, and unfortunately ultimately refused. I am fine with my experience here in Innsbruck, I had good and bad times, and now I am finishing.
I contacted my current PI directly by email and we scheduled an interview.
I do not remember it as either complicated nor particularly labor intensive.
I found out about the position on the "Academic positions" website, the application was quite direct and easy.
I had no issues with the application procedure.
I had to send in various documents and had to prepare 2 presentations for the interview followed by a discussion
I had to write an in-depth letter of motivation and provide further application documents (CV, certificates from previous education,...) and wnt through an interview process/hearing, for whihc I had to present my vision for the topic
I have applied to three PhD programs that I would classify as highly competitive in the European research landscape. The VBC PhD Program was the most user friendly of all, I felt well informed about every step of the selection process and every interview part.
I have been working on this project during my masters' thesis and got the opportunity to keep on working in the same project as a PhD student. Therefore, I never had to officially apply for this position other than deciding to keep on being a part of this project.
I interviewed directly with my current supervisor, and after being offered a position I applied via the university website.
I sent in the required documents and had an interview.
I think it is biased towards presentation skils
I think that the procedure of submission of the application was very clear and manageable. I also think that it was good the fact that they only require the necessary/useful documents and that was not too much.
I was interviewed by senior academics who showed great enthusiasm for my project.
I was invited to come to Innsbruck to do the interview in front of an audience, I was also invited for dinner afterwards
I would say my experience was quite positive and the few minor points of uncertainty were easily clarified after contacting the academic institution via email.
interview process
It was a very straight forward process.
It was good and easy to follow.
It was not always 100 % clear how forms were needed to be filed out (especially in the first online step).
It was very challenging in a good sense. It made me work disciplined and come up with a thoroughly worked through expose and application materials.
It was very user-friendly, and we got excellent guidelines on how to follow the application.

It was very well explained on the Vienna BioCenter website, and we also had meetings to answer any questions that we might have. The procedure was rigorous, but straightforward.
My application procedure was structured with several interviews with different revisors.
Online portal was easy to access
Overall, it was a very smooth and informal application process. Submission of the required documentation via mail to the doctoral school was sufficient.
Personal interview gave me a good impression of the faculty
Platform a bit old school but quite straight forward.
The application period worked as expected. The documents required were logical, as were the futher steps (interview).
The application procedure for my PhD program included three different phases: 1. Written application – This included all information about previous studies and a practical exercise on how to address a specific research question (main steps, samples, controls to be included, etc.). 2. Online interview – Conducted with two of the principal investigators (PIs) involved in the program, to discuss the initial application and answer further questions. 3. In-person multiple-round interviews: 3. 1Presentation of our Master's thesis project and a research paper, using only a chalkboard. 3.2 One-to-one meetings with the PIs we were interested in working with. 3.3 Final assessment, where each candidate submitted a ranked list of preferred PIs, and the PIs did the same. Only candidates with a direct match were selected. After each round of interviews, only the most successful candidates advanced to the next stage. For each phase, the information provided was clear, and communication was always timely and transparent.
The application procedure simply asked to send the required documents as an email attachment.
The application procedure was adequate
The application procedure was organized by the Vienna Biocenter PhD Program. There was a clear step by step process with Zoom meetings in between for all participants to get more information on the next steps.
The application procedure was quite okay; only the need for two recommendation letters instead of one may be an issue for some people
The application process comprised of presenting a scientific article in a coherent manner and answering the questions by the examiners regarding the paper. the applicants were also required to present their master's project and to answer questions about their previous project.
The application process was very smooth, the requirements were clearly defined. After applciation I got the responce within the next 2 days and were scheduled for an interview pretty quickly. It was a pleasant experience.
The application process was very straightforward via the website.
The application was very clear, also concerning the necessary documents and deadlines.
The call was well-advertised on LinkedIn, where I check for job offers. I had to submit my application through an online platform, which was also displayed in English, making the process user-friendly (I do not speak German). That platform automatically sent a link to my referees to allow them to submit their reference letters, which I found transparent and smooth. Throughout the application, I sent my questions by e-mail to the contact in the ad, and they always replied.

The formal application was straightforward: the forms to fill out and the required documents were clearly specified and easy to submit. The subsequent application procedure was well structured, and the steps and timelines were communicated clearly.
The hardest part was to find accommodation in time, which was a requirement to start the position
The procedure was overall smooth but a prolonged process!
The procedure was very straight forward and the few questions I had were quickly and easily answered by university staff.
the selection procedure did not appear to be transparent and based on merit.
The University were very helpful to me when I corresponded with them and even accepted a late application from me.
The webpage for document upload provided by TU Wien is not really user-friendly. Buttons are hidden and it was quite time consuming to upload all the documents in the right place.
There were several rounds of selection with written, online and in person parts.
To date, this was the most comprehensive application package I've ever submitted, and I am currently applying to postdoc positions. I prepared a short research proposal based on the project's goals, but was given a lot of academic freedom, which was both exciting and challenging. I also submitted a portfolio of three writing samples from my MA studies and the usual documents like CV and transcripts from BA and MA studies. The application package did not require a reference letter, only contacts of potential referees, but I have misread that and attached two reference letters. The requirements were very clear, and I just sent a file by email, which was, honestly, way less intimidating than the application portals of EUI, Oxford and CEU.
Very clear and transparent
very easy, just emailing the questioned documents
Very friendly and approachable representatives that answered all questions and represented the institution in a positive way.
very structured.
We hat to tape a 5 Minute Video why we should be consider for the program. Also: 3 Letters of recommendations, 1 Motivation letter and all university Grades were required
When I hear about the information of PhD application, it is very near the deadline. But well-defined requirements of submitted materials and other matters made it possible that all materials were prepared within a week. I appreciate such a highly efficient and transparent application procedure.
While applying for my position, I was employed full time. It was extremely hard to make time to write an application on a level that would get me accepted. I had to work through some nights and weekends. It was very exhausting and I was very close to not applying due to lack of time resources. But I do think that the requirements were probably comparably easy to fulfil in comparison to some other more competitive programs.
Written application procedure followed by online interview

Figure 46: Q 2.9 How would you assess the following aspects of your user experience during the application? (n=156)



Source: Student-Survey by 3s.

Table 32: Q 2.9.1 Please provide more information about your experience regarding the application procedure

As stated above, the application procedure was entirely online due to COVID-19 and the lockdowns. During the first day, we wet everyone online. The staff and group leaders introduced themselves and the free positions. Afterwards, everyone had to present their previous work (usually their master's thesis and questions were always encouraged). The second day consisted of one-on-one meetings with the groups and group leaders of the positions you were most interested in. A lot of times you were required to hold a journal club and generally get to know people. After the official days, the interested parties kept in contact and relatively quickly informed us whether we got the position or not.
Rather straight forward. I particularly liked, that students, that applied for one position with one of the PIs, were referred to other positions of the doctoral programm, in case the originally applied to position was already taken or someone else was a better fit. I also liked, that Students from abroad were flown in, to get to know everyone (did not apply in my case, but with some of my now PhD colleagues).
Handing in the application via e-mail, followed by a personal interview on sight with the chance to see the laboratories. Reasonable time to finalize the decision on both sides.
The communications and requirements were very clear, but the selection process was not transparent.
I am satisfied with the application procedure
The forms and processes on how to enroll as a PhD student (regardless of the work contract, which was clearly communicated) were a little cryptic an unclear on what is needed to do. Furthermore, I want to mention that the university website with all the information about the PhD enrollment is given ONLY in german (which is not a problem for me as I am native, but some collegues from other countries had quite some trouble with it).
The selection criteria were never clearly stated.
All the interactions were very friendly and informative.
Throughout the application process, there was very limited information/feedback from the institute.
I was very happy with my application procedure. It was clear when I had the postion and what I was meant to do once I had it.
I was pre-selected for the position as a doctoral student.
I applied for many positions before this one. Sometimes my profile was not of interest, sometimes the competition was fierce. I had occurrences where I waited a long time before being denied the interview or the position. I had many interviews, and sometimes I was the second candidate of choice, and

unfortunately ultimately refused. I am fine with my experience here in Innsbruck, I had good and bad times, and now I am finishing.
I was pre-selected for the position as a doctoral student.
The application procedure was easy.
The aims and scope of the project was not defined at all and it was up to the applicant to come up with a story for the PhD.
I was contacted after a girl with lower grades and requirements than mine turned down the position. My interviews compared to others (who have relatives and friends in the academia) were much more difficult. Overall, the process is not transaparent and based on merit based on my experience. Many of my colleagues' CVs compared to those who applied and I know are inferior. The criteria on the website are unclear as is unclear how the FWF founding are used.
I don´t know about the criteria for selection. In my opinion it is totally subjective. There is no information about these criteria in the application procedure.
It was a classic Austrian procedure. Send documents, wait for reply, get an invitation, get a second invitation, job offer (here submission to the program). In terms of transparency, it was also Austrian: you don‘t get any information until you receive a NO or a GO. But overall, this was clear from the beginning and I did not expect anything else.
It was very well guided, short and concentrated and transparent.
The procedure was overall smooth but a prolonged process!
I did not see any issues with the application procedure
It was unclear whom to contact about the program
The selection criterea were not particularly defined by the commitee, but the selection was based on an interview, so I did not particularly expected to meet specific criterea other than the merit of my proposal.
After submitting my application, I had to go through three different interviews to get this position. The first one was during the first selection phase with my current supervisor, the second one was during the second selection phase, where other people from the selection committee were involved in the interview along with my current supervisor. The last interview was in person after I was invited as one of the other candidates.
Those encrypted documents that requires electronic signature from applicants and prospective supervisors are very hard to operate with. For example, when I signed my name on a form of intent electronically, the form would be locked such that my supervisors were not allowed to sign it again. This is very user-unfriendly.
I found my application process procedure very positive, as I do not recall any negatives. Furthermore, I have liked the option of selecting availability for interview slots.
All communication was handled via email. The invitation for the interview was very straightforward and the response fairly immediate, but the subsequent processes (communication, contract revision etc.) were very slow, unclear, and time consuming.
Everything was clearly stated
Clearly communicated and easy to follow
Based on what students were selected in the beginning was not clear, the rest yes.
I was satisfied, with the most notable moment being the ability to select preferred slots for the interview.
The application process was very straightforward via the website.
This is the same question as before.
The application was fine, with clear requirements and deadlines. Maybe the exact requirement for the statement of purpose was somewhat too general.
The website is not really user-friendly. Communication happened after the announced deadline it will happen.
Roughly 50 students were invited to a local hotel and starting from 8.00-18.00 every Student was assessed through a paper presentation (3 papers were given as options) and a few personal questions. After

that all Students Listed their 5 preferences and the 13 group Leaders also listed their Favorite 5 Student. Than the best Match got the position.
It was only online since it was in 2020, besides that it was quite clear beforehand what to expect and as far as i know from others the application procedure was the same for all of us.
I was one of the lucky ones to get through in the first go, many artists I know from the world over apply and dont get it..
It was smooth, friendly and quick.
Clear and transparent process, with criteria of different professors.
The application procedure was well structured, and the steps and timelines were clearly communicated. On the first day of the selection process (an in-person introduction following the initial video interview), each participating research group head explained their project and goals in detail. There was also sufficient time and an appropriate environment to foster interpersonal connections with other candidates, which later facilitated productive collaboration and exchange among the selected students. *Although the selection process was highly competitive, it was clear from the beginning that the pool of applicants would be narrowed down each day, which increased the overall performance pressure. In addition, candidates had to decide on specific research groups by the third day in order to schedule personal interviews within a short timeframe.* *Nevertheless, I would like to highlight that the principal investigators created a positive and respectful atmosphere throughout the entire process, which left me with a very good impression and strongly supported my decision to join the program.*
The application procedure for my PhD program included three different phases: *1. Written application – This included all information about previous studies and a practical exercise on how to address a specific research question (main steps, samples, controls to be included, etc.).* *2. Online interview – Conducted with two of the principal investigators (PIs) involved in the program, to discuss the initial application and answer further questions.* *3. In-person multiple-round interviews:* *3. 1Presentation of our Master's thesis project and a research paper, using only a chalkboard.* *3.2 One-to-one meetings with the PIs we were interested in working with.* *3.3 Final assessment, where each candidate submitted a ranked list of preferred PIs, and the PIs did the same. Only candidates with a direct match were selected.* *After each round of interviews, only the most successful candidates advanced to the next stage.* *For each phase, the information provided was clear, and communication was always timely and transparent.*
It was excellent, very well defined, and very user-friendly.
It was very user-friendly, and we got excellent guidelines on how to follow the application.

Block 3 Experiences in the doctoral programme

Around 83 % of students started their doctoral program in or after 2020. Only 16 % have already completed their doctoral degree while most students (79 %) are planning to finish their doctoral degree in 2025 to 2027.

Most motivation comes from the enjoyment of conducting research, finding the content exciting as well as earning money and needing the doctorate for the planned career. Over 50 % have/had two to three people supervise their doctoral project with 76 % having their official supervisor be a University Professor. Most people (69 %) mentioned their official supervisor to be their daily supervisor as well.

Over 80 % of students surveyed the quality of received supervision to be very to rather good and feeling integrated in their research group.

Table 33: Q 3.1 In which year did you start your doctoral program? (n=162, by programme status)

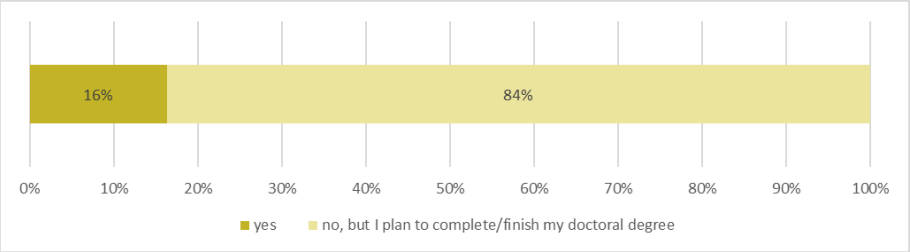
Year	FWF doc.funds PhD candidates	not doc.funds PhD candidates	# of responses
before 2016	4	2	6
2016	1		1
2017		1	1
2018	10	2	12
2019	6	2	8
2020	10	8	18
2021	26	7	33
2022	13	7	20
2023	19	10	29
2024	28	4	32
2025	2		2
Total	119	43	162

Table 34 Q 3.2 In which year did you enrol in the FWF's doc.funds program? (n=103, by programme status)

Year	# of re-sponses
before 2016	4
2018	11
2019	4
2020	7
2021	22
2022	7

2023	20
2024	25
2025	3
Total	103

Figure 47: Q 3.3 Have you already completed your doctoral degree? (n=165)



Source: Student-Survey by 3s.

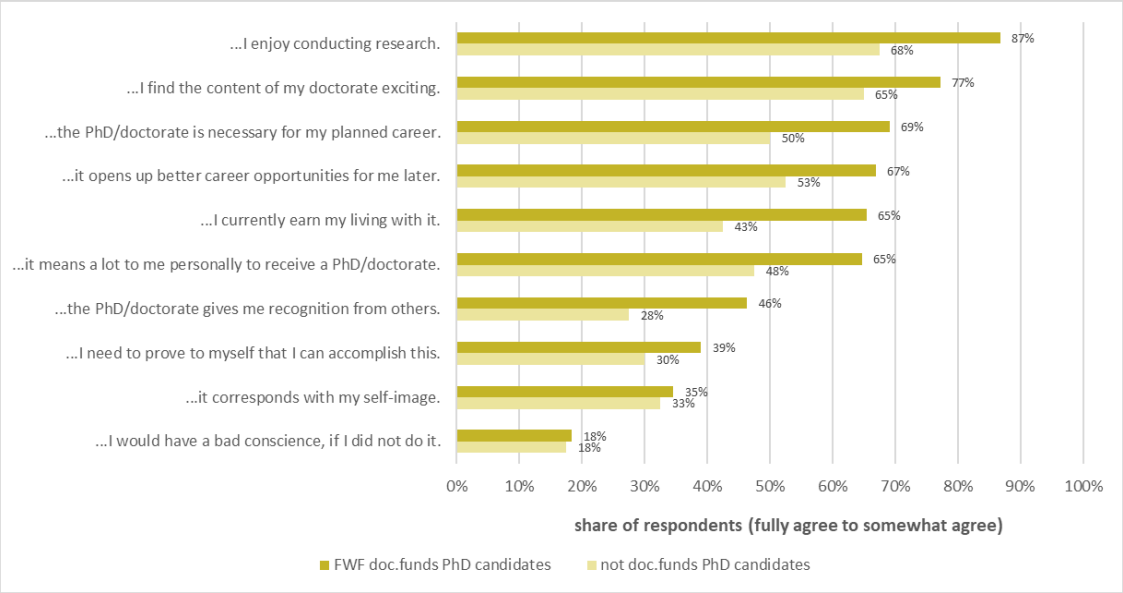
Table 35: Q 3.3.1 When have you completed your doctoral degree? (n=24, by programme status)

Year	FWF doc.funds PhD candidates	not doc.funds PhD candidates	# of responses
before 2016	2		2
2017	1	1	2
2019	1		1
2021		1	1
2022	1		1
2023	2		2
2024	4	3	7
2025	7	1	8
Total	18	6	24

Table 36: Q 3.3.2 When do you plan to complete/finish your doctoral degree? (n=128, by programme status)

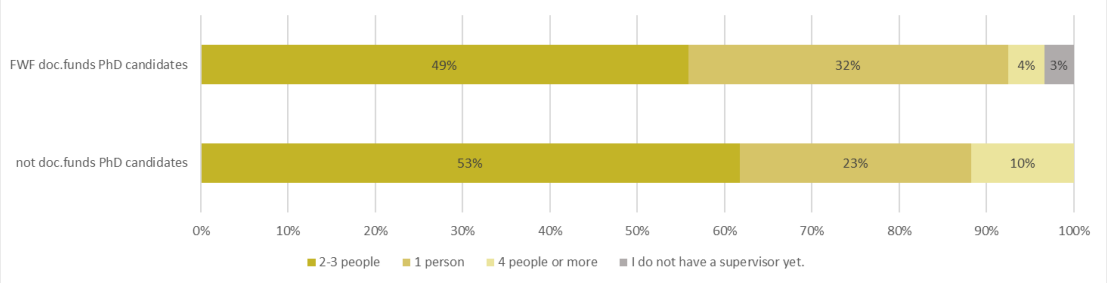
Year	FWF doc.funds PhD candidates	not doc.funds PhD candidates	# of responses
2025	35	8	43
2026	17	12	29
2027	24	4	28
2028	17	3	20
2029	7	1	8
Total	100	28	128

Figure 48: Q 3.4 What motivates you to work on your PhD/doctorate? I am motivated to work on my PhD/doctorate because... (n=156)



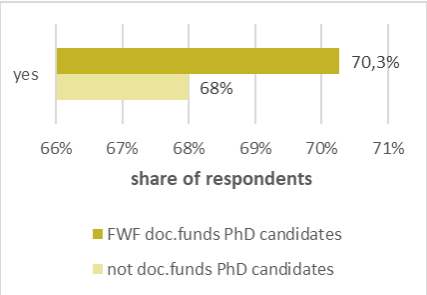
Source: Student-Survey by 3s.

Figure 49: Q 3.5 How many people are/were supervising your doctoral project? (Please include in your answer all persons who regularly advise(d) you on your dissertation) (n=164)



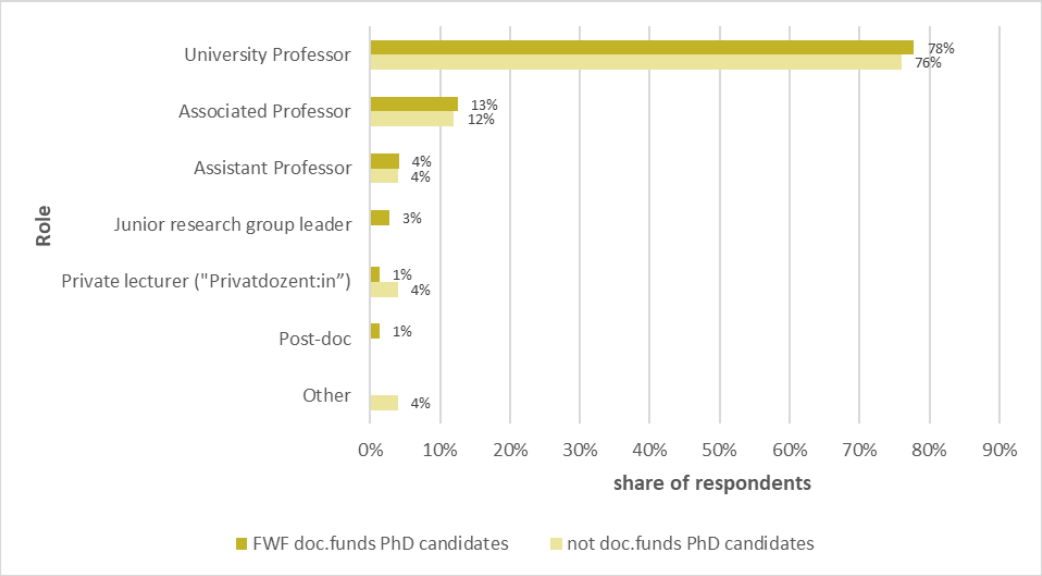
Source: Student-Survey by 3s.

Figure 50: Q 3.6 Is/Was your official supervisor also your daily supervisor? (this includes the possibility of having several daily supervisors) (n=105)



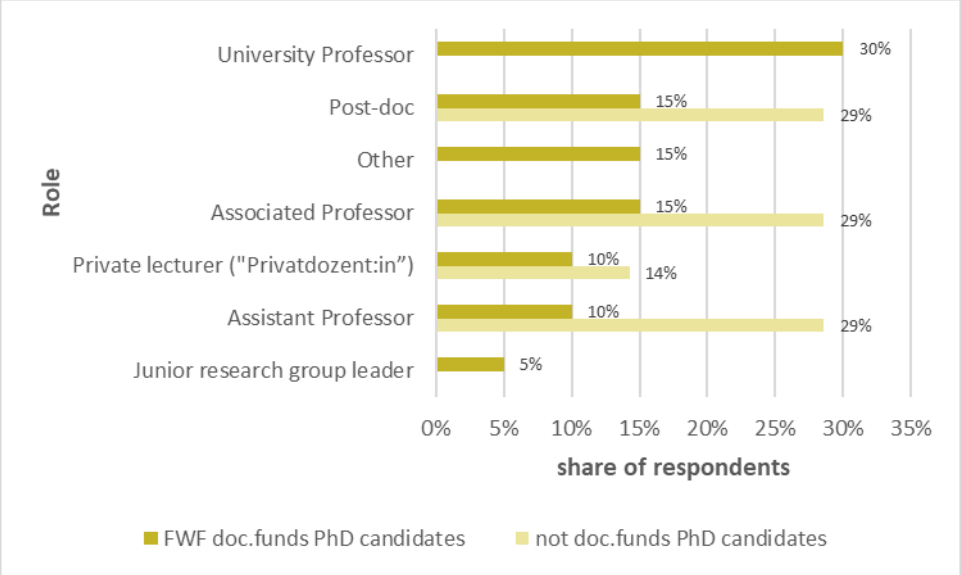
Source: Student-Survey by 3s.

Figure 51: Q 3.7 Which of the following describes the professional role of your official supervisor best? (n=97)



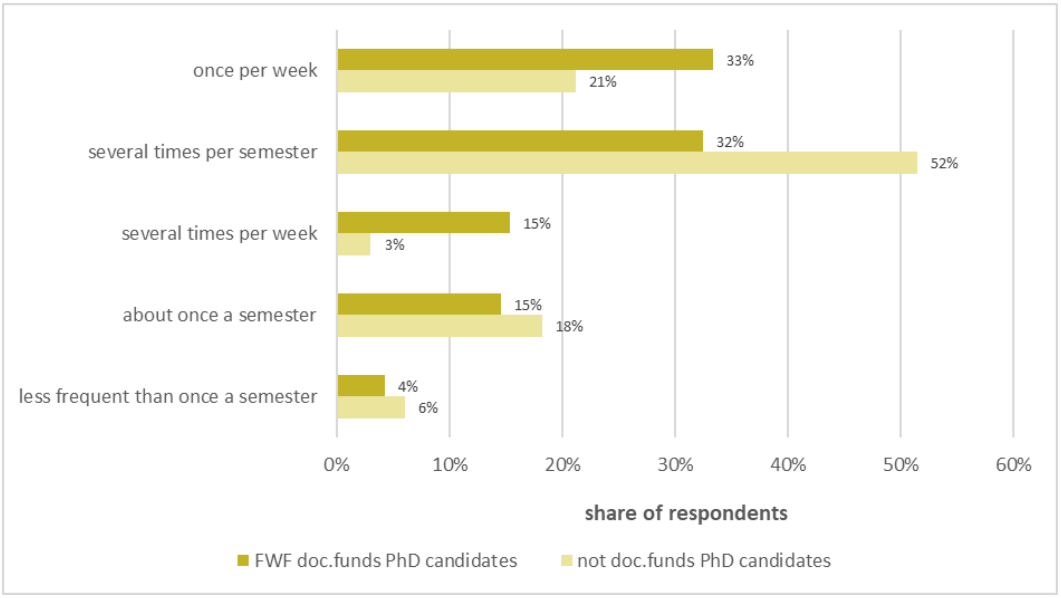
Source: Student-Survey by 3s.

Figure 52: Q 3.8 Which of the following describes the professional role of your daily supervisor best? (n=27)



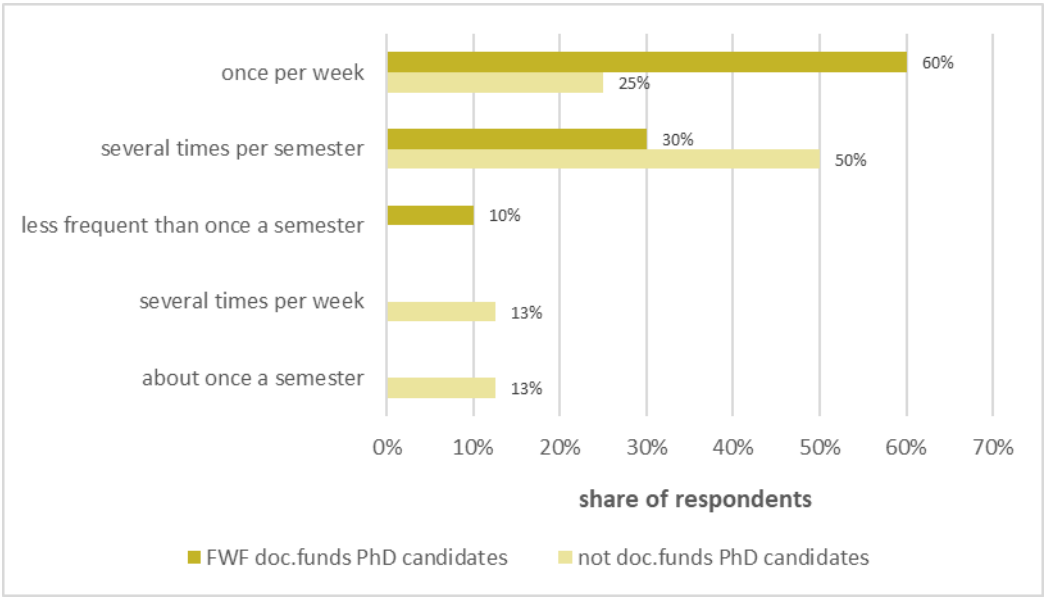
Source: Student-Survey by 3s.

Figure 53: Q 3.9 How often do/did you discuss your PhD/doctorate with your official supervisor? (n=150)



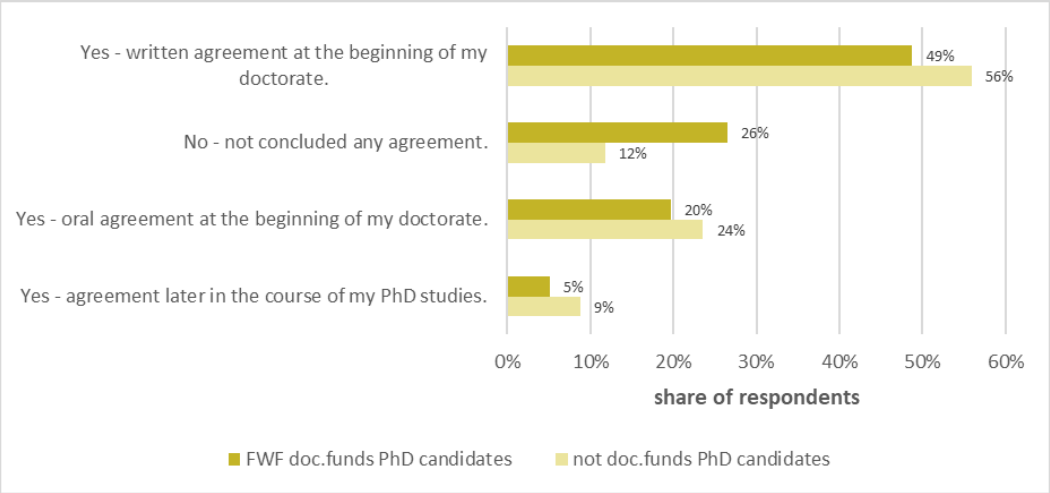
Source: Student-Survey by 3s.

Figure 54: Q 3.10 How often do/did you discuss your PhD/doctorate with your daily supervisor? (n=28)



Source: Student-Survey by 3s.

Figure 55: Q 3.11 Have you concluded/Did you conclude a supervision agreement with your official supervisor? (n=151)

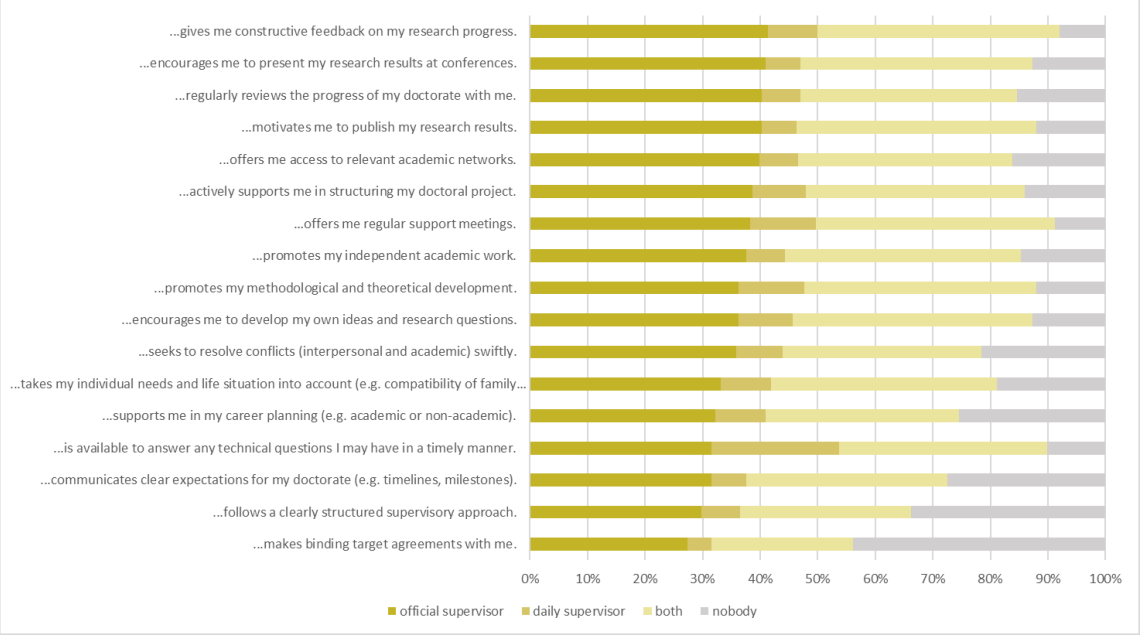


Source: Student-Survey by 3s.

Table 37: Q 3.11.1 When did you come to a supervision agreement? (n=11)

Year of doctorate studies	# of responses
1st year	6
2nd year	4
3rd year	1
	11

Figure 56: Q 3.12 Who offers/offered you support in the following areas? (n=150)

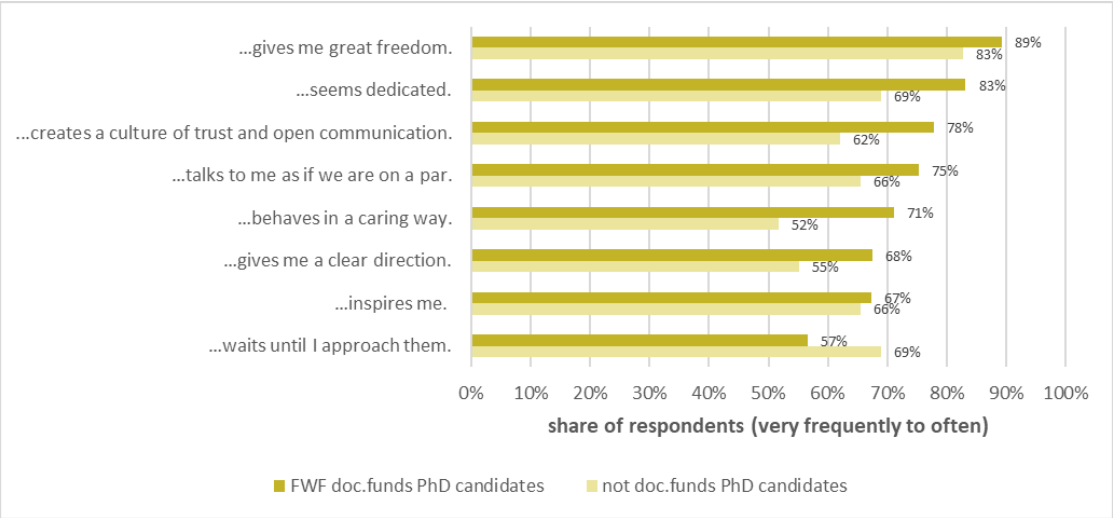


Source: Student-Survey by 3s.

Table 38: Q 3.12.1 Other forms of support that are/were offered to you

Additional teaching contracts
Encouragement to teach
Financial support
Help with doctoral program necessities
Help with unfamiliar system as an international PhD student
Manage work load
Mental health support
Team building outside the lab

Figure 57: Q 3.13 How often does/did your official supervisor demonstrate the following behaviours towards you? (n=143)

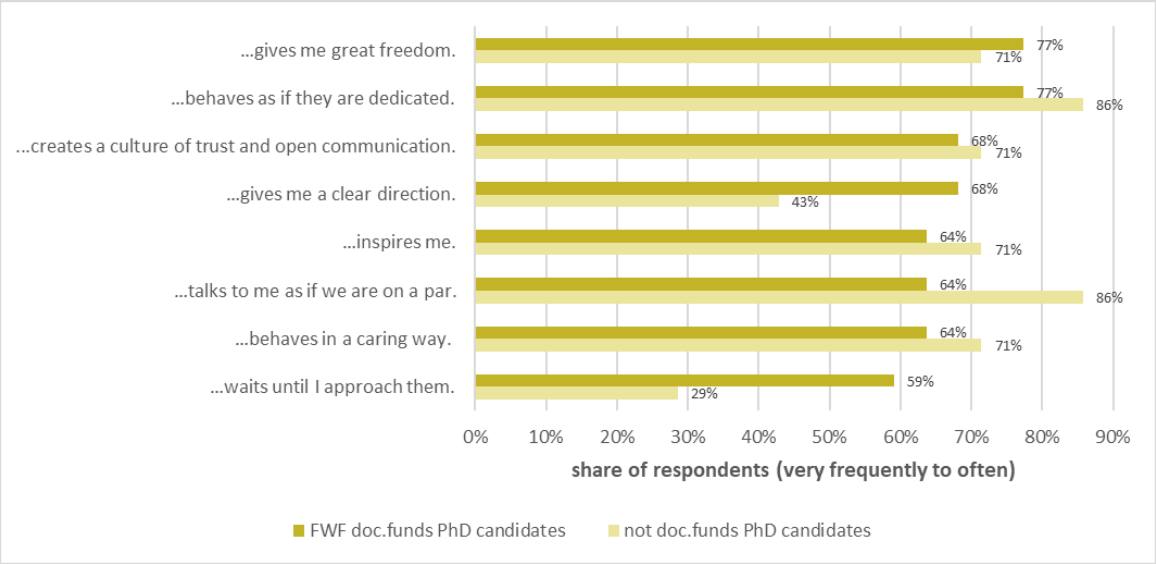


Source: Student-Survey by 3s.

Table 39: Q 3.13.1 What other behaviours does/did your official supervisor demonstrate towards you?

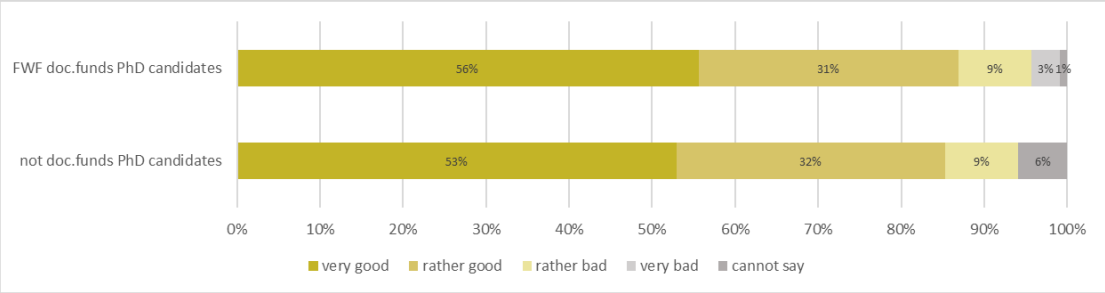
Active at the institute
Constant guidance
Mental health support
Motivation

Figure 58: Q 3.14 How often does/did your daily supervisor demonstrate the following behaviours towards you? (n=32)



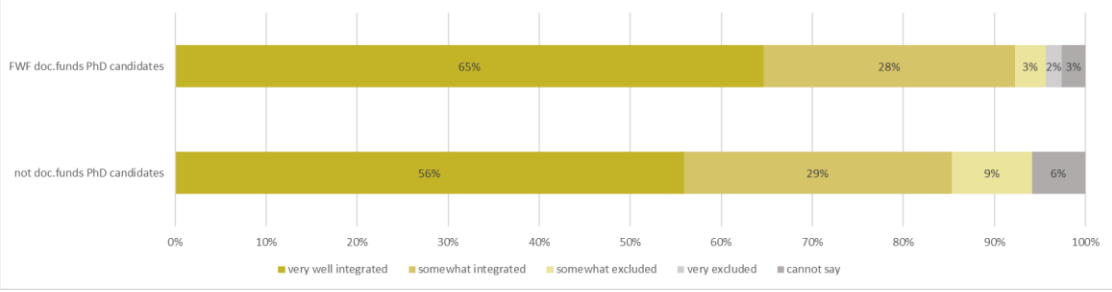
Source: Student-Survey by 3s.

Figure 59: Q 3.15 How do you rate the quality of the supervision you receive(d) overall? (n=159)



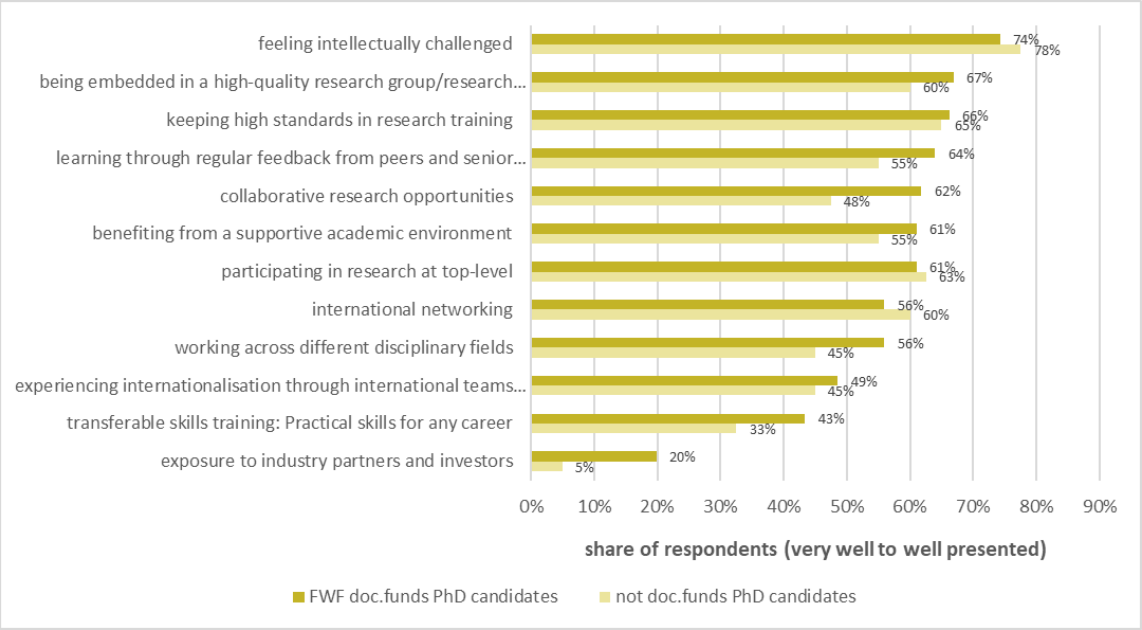
Source: Student-Survey by 3s.

Figure 60: Q 3.16 How would you describe your level of integration in your (main) research group? (n=160)



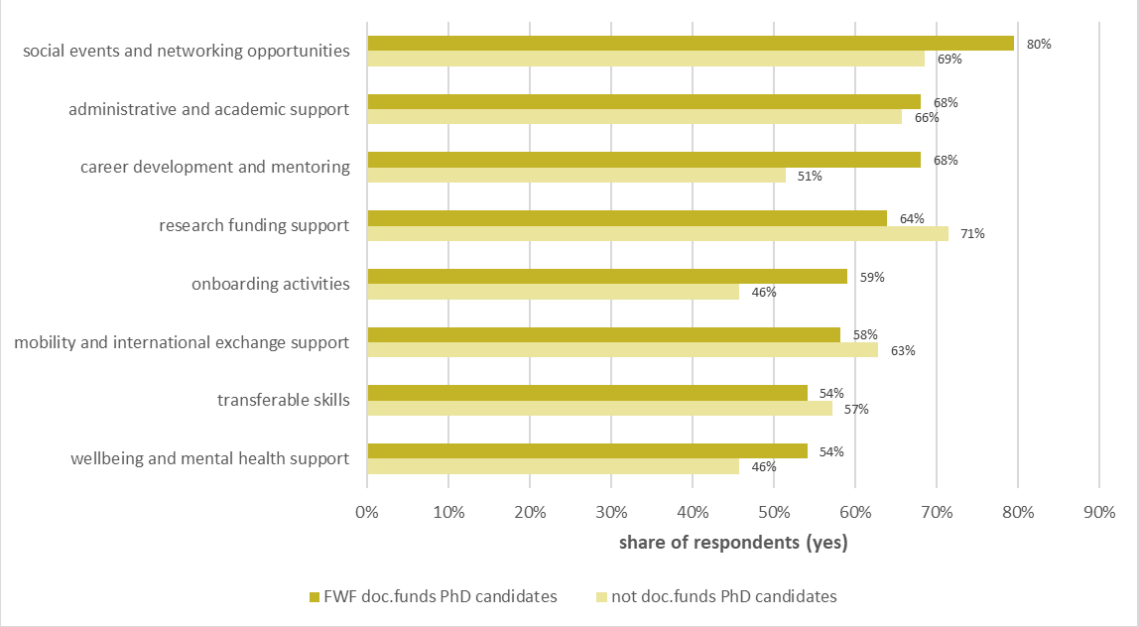
Source: Student-Survey by 3s.

Figure 61: Q 3.17 Which of the following elements do you find well presented in your doctoral training? (n=150)



Source: Student-Survey by 3s.

Figure 62: Q 3.18 What services and resources have been available to you as a doctoral student at your institution? (n=158

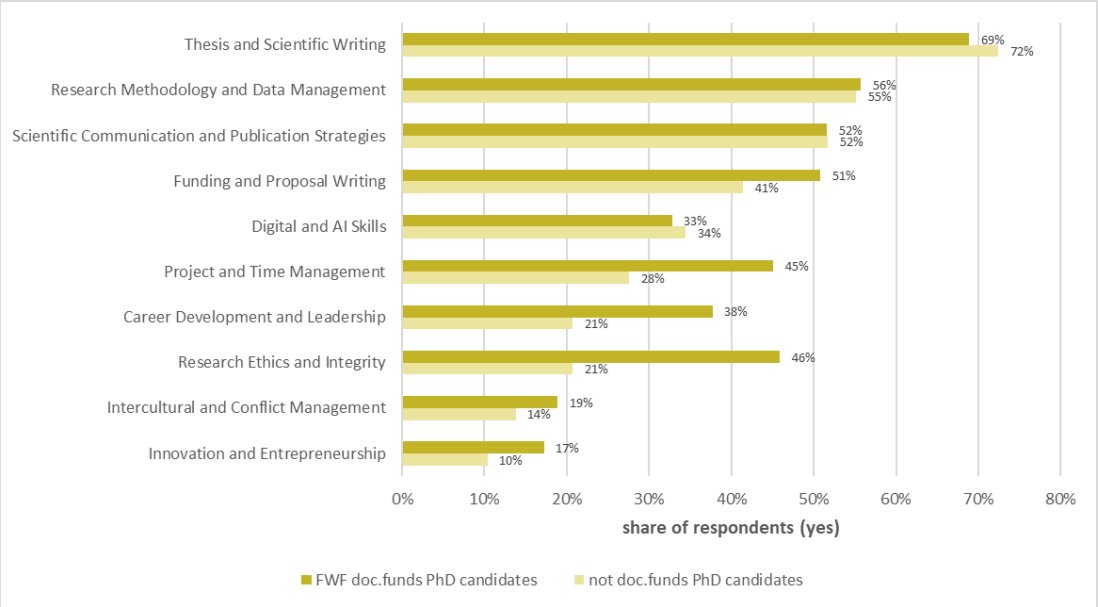


Source: Student-Survey by 3s.

Table 40: Other

Feedback group

Figure 63: Q 3.19 What types of transferable skills training have you been offered as a doctoral student at your institution? (n=151)

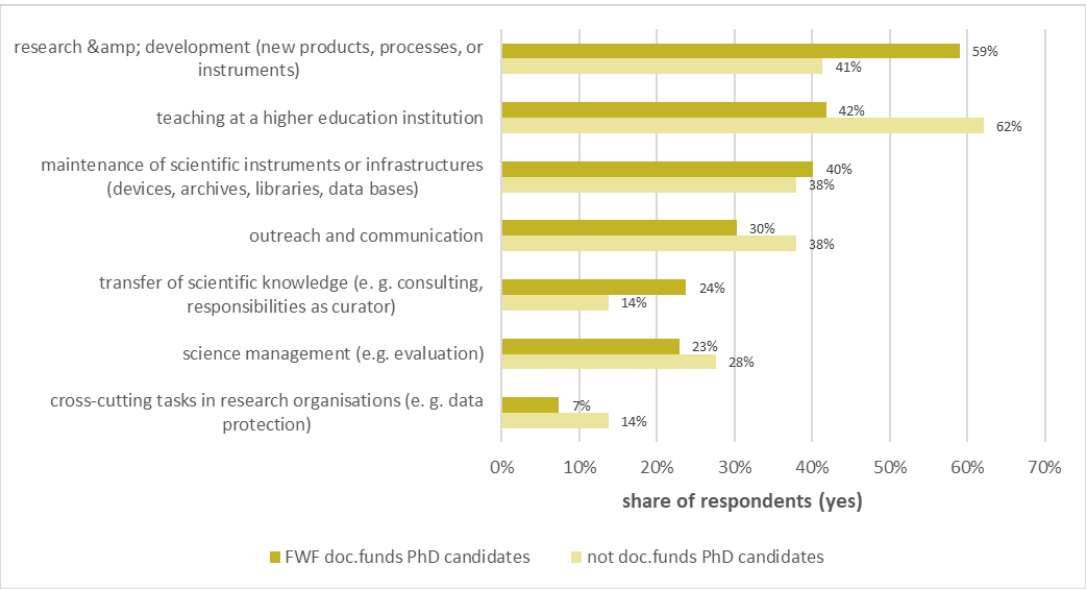


Source: Student-Survey by 3s.

Table 41: Other

First aid courses
Literature research
Public speaking training
Statistics

Figure 64: Q 3.20 Which of the following research-related activities do/did you perform as part of your doctoral studies/training? (n=158)



Source: Student-Survey by 3s.

Table 42: Q 3.21 What is/was your effective number of working hours per week on average? (n=146, by programme status)

In hours	less than 20 hours	20 – 30 hours	32 – 40 hours	42 – 50 hours	more than 50 hours	# of re-sponses
FWF doc.funds PhD candidates	1	19	49	35	10	114
not doc.funds PhD candidates	0	5	15	9	3	32
Total	1	24	64	44	13	146

Table 43 Q 3.22 How many hours per week are/were you able to work specifically on your PhD/doctorate? (on average) (n=146, by programme status)

In hours	less than 20 hours	20 - 30 hours	32 - 40 hours	42 - 50 hours	more than 50 hours	# of re-sponses
FWF doc.funds PhD candidates	6	48	38	17	4	113
not doc.funds PhD candidates	3	17	8	4	1	33
not sure'	2	4	3	1	0	10
Total	11	69	49	22	5	156

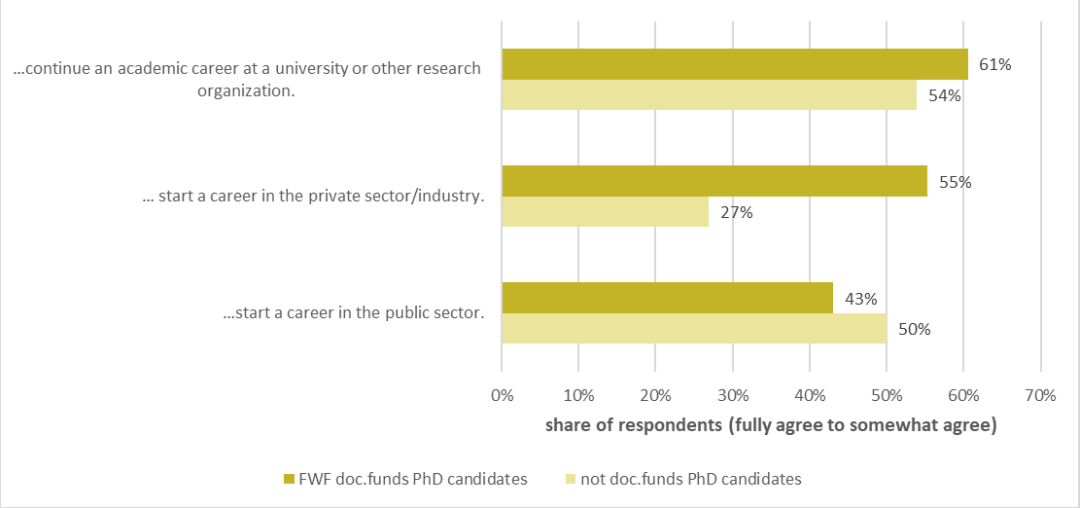
In %	less than 20 hours	20 - 30 hours	32 - 40 hours	42 - 50 hours	more than 50 hours	Total
FWF doc.funds PhD candidates	5%	42%	34%	15%	4%	100%
not doc.funds PhD candidates	9%	52%	24%	12%	3%	100%
not sure'	20%	40%	30%	10%	0%	100%
Total (average)	7%	44%	31%	14%	3%	100%

* numbers 31 and 41 not mentioned

Block 4 Future plans

The majority of students would mostly like to continue an academic career at a university or other research organization and would like to work in the European Union or Austria. Most people (54 %) are planning to work in Western Europe and globally in the United States (37 %).

Figure 65: Q 4.1 Upon completion of my doctoral degree, I would like to... (If you have already completed your degree, please think back to your time of studies and your plans) (n=147)

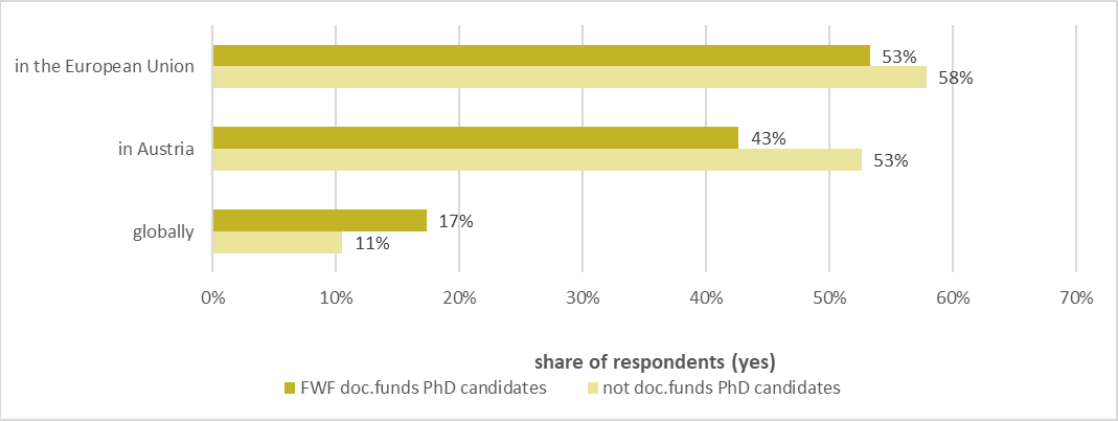


Source: Student-Survey by 3s.

Table 44 Q 4.1.1 Other career aims

Art-based research
Independent artist and curator
Multilateral organisations
Work independently

Figure 66: Q 4.2 Where would you like to work after completing your doctoral degree? (If you have already completed your degree, please think back to your time of studies and your plans) (n=108)



Source: Student-Survey by 3s.

Table 45 Q 4.2.1 Where in the European Union would you like to work after completing your doctoral degree? (n=87, multiple answers possible)

Region	# of responses
Western Europe	57
Northern Europe	18
Southern Europe	8
Eastern Europe	6
no preference / based on work opportunities	17
	106

Table 46 Q 4.2.2 Where globally would you like to work after completing your doctoral degree? (n=37, multiple answers possible)

Region	# of responses
United States	15
Asia	5
United Kingdom	4
Australia	3
Canada	3
South America	2
no preference / not sure yet	9
	41

12 Annex III: Methodological remarks to the Mapping of structured doctoral programmes in Austria

The mapping of structured doctoral programmes should draw an overview of structured doctoral programmes and their development at universities and extra-university institutions in Austria. It should identify and describe the most typical forms of structured doctoral training at Austrian (public) universities, including the structured doctoral training funded by the *doc.funds* programme. It should cover the majority of doctoral programmes from all institutions in Austria that currently can award doctoral degrees, and identify innovative doctoral training concerning the following innovative aspects of doctoral training (following the Salzburg II recommendations):

- Joint supervision
- Affiliation to a research group
- Interdisciplinary or inter-institutional collaboration
- Internationalisation
- Customised skills training
- ECTS above average
- Mentoring
- Employability support

The mapping based on a desk research conducted between March and September 2025, including an investigation of internet sources from universities and extra-university institutions offering doctoral programmes. In total 230 different structured doctoral programmes were identified and relevant information concerning admission, funding, programme description, and especially the innovative aspects of doctoral training were noted in an Excel overview file.

For overview reasons the research team also tried to produce a typology of different structured doctoral programmes, which is presented in the main part of the evaluation (chapter 4).

Therefore the mapping can answer the following questions:

- What is the approximate number of structured doctoral programmes in Austria?`
- Which types of structured doctoral programmes do exist and what are the main aspects to identify these types (taking into account that types of structural programmes may overlap and overlay)?

- What are the main funding sources for structured doctoral programmes in Austria and how do they affect the development of structured doctoral programmes?
- Which innovative aspects of doctoral training can be observed in the internet descriptions of the structured doctoral programmes investigated?
- How are the *doc.funds* programme funded doctoral programmes integrated into the Austrian landscape of structured doctoral programmes concerning their funding, university integration, and innovative aspects of doctoral training?

But the mapping is not exact representation of the situation in structured doctoral training in Austria, so several answers that probably one could expect, cannot be answered through the mapping, as:

- What is the exact number of structured doctoral programmes at a certain point in time in Austria?
- Which types of structured doctoral programmes do exist and what are the main aspects to identify these types (to create a typology without any overlaps and overlays)?
- What is the exact funding structure of doctoral training programmes in Austria?
- Which innovative aspects do all of the structured doctoral programmes consist of in total?

A mapping providing the exact answers to the questions above might be – as part of the evaluation of the *doc.funds* programme – not possible. Such an investigation would need much more effort and resources than foreseen in the course of the existing evaluation project.