



## **The Coronavirus Pandemic – Consequences and Opportunities for Science and the Humanities**

Report by the DFG's Senate Working Group on the Challenges of the Coronavirus Pandemic related to Research Activities, Individual Career Paths and Funding Activities

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## Summary

The DFG's Senate Working Group on the Challenges of the Coronavirus Pandemic related to Research Activities, Individual Career Paths and Funding Activities has identified measures for funding activities and need for action based on discussions of the experience of the pandemic.

The additional measures taken by the DFG – such as additional funding, deadline extensions, etc. – were able to mitigate pandemic-related restrictions and had a stabilising effect on DFG-funded projects overall. It was possible to observe differences between how the pandemic restrictions on research activity impacted on the various disciplines. It is important to emphasise the individual situation of female and male researchers due to additional care and nursing duties, especially in the case of female researchers. All in all, it became apparent that the contact and travel restrictions had a serious impact in the conception phase and at the beginning of projects: during these periods it was more difficult to engage in dialogue and discussion, arrive at agreements and gain a sense of orientation. Individual, subject-specific adverse effects and those varying depending on the project phase are adequately taken into account in subject-specific review and assessment on a case-by-case basis. This is explicitly pointed out to applicants, reviewers and evaluators. Other areas affected by travel and contact restrictions have been the building up of cooperation and the establishing of new contacts for networking in research communities. This has particularly affected early-career researchers, as their networks are often less well-established. In future, specific advice on and references to networking instruments in the DFG's funding portfolio are to continue to counteract these pandemic-related deficits.

The pandemic-induced digitisation boost offers both benefits – such as the intense use of virtual dialogue channels and a reduction in travel – but also challenges in terms of information technology skills and infrastructure. When organising reviews and other procedures related to DFG funding activities, a new balance must be struck in terms of meeting types: here it is important to consider what the event in question is aiming to achieve, who is to participate and, not least, the issues of climate protection and resource conservation. For the DFG, it is important to learn from the experience of the pandemic and continue to monitor the longer-lasting effects so as to increase resilience to future crises.

## I Starting point and objectives of the Senate Working Group

Since the onset of the global impact of the coronavirus pandemic at the beginning of 2020, the German research system and its stakeholders have been affected by restrictions and processes of adjustment in a variety of ways<sup>1</sup>.

The acute phase of the pandemic (early 2020 to spring 2022) saw immediate limitations being imposed on research work, including contact restrictions, cancelled or limited travel opportunities, laboratory closures, restrictions in the area of clinical trials, limited access to archives, collections and libraries, and disruptions to field research. These restrictions affected a great many researchers, research institutions and research funding organisations. For researchers in early career phases in particular, it became more difficult to establish and maintain research collaborations.

In addition, the protection measures imposed during the pandemic resulted in a change in the overall conditions in society as a whole, with school closures leading to the need for home schooling and limitations on social contacts, for example. In acute phases of the pandemic therefore, researchers – generally more often women – were also faced with additional responsibilities in terms of caring for children and relatives.

Careful reflection and a sound approach are required when considering the individual and systemic consequences of the pandemic, as well as the opportunities arising from the processes of change and adjustment, not least accelerated digitisation. In addition, the aim is to draw on the experience gained in the pandemic and the coping strategies adopted so as to be able to make use of them in other crisis situations in the future.

In the summer of 2021, the DFG Senate therefore advocated the establishment of a Senate Working Group to comment on the impact of the pandemic on research, funding and career paths from the perspective of the research system and draw the relevant conclusions in terms of the need for action and measures to be taken. The focus of the Senate Working Group was on the DFG's funding activities.

Parallel to this Senate Working Group, an Interdisciplinary Commission for Pandemic Research was established by the DFG Executive Committee in June 2020 to address the issues of pandemic preparedness and pandemic analysis. The Commission aims to increase the cross-disciplinary and interdisciplinary repository of knowledge relating to pandemics and epidemics in general and SARS-CoV-2 in particular. Since their foundation, these two statutory bodies have been working in close coordination in terms of personnel and subject matter.

The Senate Working Group, chaired by DFG Vice Presidents Professor Julika Griem and Professor Britta Siegmund, is made up of ten members of the DFG's statutory

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<sup>1</sup> Position Paper issued by the German Science and Humanities Council (Wissenschaftsrat, WR) "[Impulses from the COVID-19 crisis for the advancement of the research and higher education system in Germany](#)."

bodies and four researchers in early career phases. It has met a total of seven times since its constituent meeting in autumn 2021 and has specifically looked into the impact of the pandemic on the progress of research projects, how it has influenced researchers in early career phases, the shift in researchers' risk awareness as a result of their experience of the pandemic, and the repercussions in terms of national and international collaborations as well as the impact on the DFG's review, assessment and decision-making procedures. Based on the observations collected, the Senate Working Group has drawn conclusions as to the need for action on the part of stakeholders in the research system and measures taken in connection with DFG funding activities.

## II Core findings of the Senate Working Group

### Observations

#### regarding the impact of the pandemic on the progress of research projects

Adverse effects caused by the coronavirus pandemic are to be observed most clearly in the progress of research projects. Here, the way in which the pandemic influenced project implementation varies greatly from one project to another and from one subject to another. Initially affected severely by contact restrictions and limited access to laboratories, experimental research largely stabilised again in the second year of the pandemic. In the medium term, it tends to be more the problem of interrupted supply chains that continues to cause particular limitations in those areas of research involving intense use of instrumentation. Projects in established working contexts where there are no particular requirements in terms of laboratories, field trials or access to specific locations have in some cases even benefited from the digital exchange and communication formats that quickly became established as a result of the pandemic, since these enabled faster and simpler collaboration – at the international level, too. On the other hand, it became more difficult to initiate new collaborations in the face of contact and travel restrictions, since virtual communication is no substitute for in-person meetings, and conceptual work is often easier to carry out on a face-to-face basis, too.

In the case of research fields that make use of test person, project implementation was often difficult, too, because such things as hygiene considerations prevented test person from entering research institutions. In the area of quantitative behavioural research in particular, this was to some extent compensated for by the increased use of online data collection: in fact, this freed up new resources for research that continue to remain available after the pandemic. However, the use of online methods is very specific; such methods are not suitable for collecting physiological subject data, for example, as is needed in neuroscience. The above-mentioned framework conditions have since largely returned to normal.

During acute phases of the pandemic, contact and travel restrictions had a huge impact on field research. Data collection campaigns that are essential to the progress of research work had to be cancelled or postponed, both in Germany and abroad. Here, establishing local contacts is particularly important for field research, and networking through personal contacts on a face-to-face basis is a prerequisite for productive work processes. In addition, severe problems arose in the area of diplomacy and licensing (time-limited work licences for archaeological field research, for example). In terms of simply maintaining contact over long distances, however, the digital channels which received a boost through the pandemic offer a sound general alternative for close and ongoing dialogue if close links and the infrastructural requirements are already in place. In individual cases, successful virtual guidance of field research abroad has

also been possible using digital forms of communication (e.g. in Priority Programme 2176 “Iranian Highlands” in the field of archaeology): this allowed cooperation partners to take care of implementation on a reduced basis.

Work in the humanities, cultural studies and social sciences was particularly affected by limited access to primary sources due to more difficult access to archives, collections and libraries. Inconsistently available access to literature was particularly evident during the pandemic due to the varying digital accessibility of holdings. As a result of pandemic protection measures, limitations on the number of users in libraries, archives and collections likewise impacted negatively on the conception and/or progress of research.

Life science communities, especially those working in the area of pandemic research, were essentially able to adjust swiftly to the new situation and benefit from close and spontaneous collaboration among researchers that was bottom-up driven. In structural terms, however, there was a lack of a platform for the exchange of data and results in the area of pandemic research during the acute phase of the pandemic.<sup>2</sup>

Adverse effects caused by the pandemic situation impacted on the DFG’s various funding programmes in different ways. For example, the decline in the number of proposals under the Priority Programme was potentially due to difficulties caused by the pandemic in establishing new structures and networks. This number dropped from 50 and 49 in 2018/2019 to 29 and 33 proposals in 2021/2022, while the overall average number of proposals received under DFG funding programmes actually increased during the pandemic.<sup>3</sup>

It is also possible to identify sensitive phases in the course of research projects: the effects of the pandemic can be seen to be particularly severe in the conception phase and at the beginning of projects, since contact and travel restrictions have made it more difficult to engage in dialogue and discussion, arrive at agreements and gain a sense of orientation. This still applies to some extent. On the administrative side, too, there were delays in the integration of new staff due to delays in recruitment procedures and in the issuing of visas at the beginning of research projects. This again underlines the need for further digitisation in this area. These observations apply equally to individual and collaborative projects.

All in all, the impact of the pandemic made budgeting difficult both in the planning phase and in the implementation of research projects. Particular challenges to project implementation can be caused by the fact that project funds are tied to specific budget years in the case of Coordinated Funding Programmes, and that funding needs are asynchronous due to the crisis.

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<sup>2</sup> Statement issued by the DFG Interdisciplinary Commission for Pandemic Research on [Pandemic Preparedness](#).

<sup>3</sup>[The DFG’s Funding Activities in the Context of the COVID-19 Pandemic](#)



Measures taken

In view of the great variation in subject-specific and project-specific adverse effects during the pandemic, these should be assessed and taken into account individually and on a case-by-case basis. The best way to do this is based on a subject-specific peer review by experts in the respective research field.

For this reason, the Senate Working Group suggested that guidelines should be issued on how to deal with adverse effects on proposal submission and review as a result of the pandemic; such guidelines were produced in April 2022 (DFG form 55.07)<sup>4</sup>. The guidelines are provided for each review. Applicants are asked to describe difficulties in project implementation resulting from the pandemic and any alternative strategies that may be required so that reviewers can take these into account in their overall assessment. The new DFG CV template (DFG form 53.200)<sup>5</sup> also allows applicants to voluntarily describe personal circumstances that have impacted on their performance in terms of research projects or publications, e.g. due to the need to provide care and support for family members, such as home schooling. This allows such exceptional circumstances to be taken into account in the review.

Need for action

- It will emerge from the review and assessment of proposals to what extent applicants make use of the option to describe how the pandemic restrictions have impacted on them individually. The DFG Head Office is asked to provide information about options and monitor whether and to what extent these are used. Structures that have emerged or are still being developed for cross-institutional sharing of research results and data during the pandemic should receive support and funding from research organisations and funding agencies for future crises.
- Based on the experience of the pandemic, research institutions and other actors should take care to ensure that all researchers have unrestricted access to libraries, archives and collections in future. This is an important task for the future with a view to the further digitisation of holdings.
- What is more, the possibilities of digitalisation that received a boost during the pandemic offer research institutions the chance to optimise administrative processes in project implementation and international cooperation, including such things as recruitment procedures and visa matters. Strengthening these possibilities and offerings provides institutions with a productive opportunity for advancement.

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<sup>4</sup> [Information for Researchers No. 28 | 30 March 2022.](#)

<sup>5</sup> [Deutsche Forschungsgemeinschaft - Curriculum Vitae.](#)

## Observations on dealing with pandemic-related planning uncertainties

The coronavirus pandemic led to a significant increase in planning uncertainty in research for applicants, project leaders and reviewers as well as in terms of the administration of research projects. This has been exacerbated by the start of war in Ukraine, the related energy crisis and the ongoing supply chain difficulties. In view of these experiences, the question arises as to whether additional attention should be paid to planning uncertainties and how to deal with these in the proposal submission and review process. The Senate Working Group does not consider a broad risk assessment to be necessary in relation to the DFG's funding activities. The Senate Working Group believes it is neither sensible nor feasible for applicants to be required to anticipate unexpected risks such as a pandemic or the impact of war. As before, only foreseeable risks that are linked to the subject of the research should be addressed in the proposal and in the review. As a general rule, a high degree of funding flexibility is very helpful in dealing with crisis situations that affect the pursuit of research projects.

## Observations on adverse effects resulting from additional care and nursing duties during the pandemic

The contact restrictions in the acute phase of the pandemic resulted in researchers having to take on additional care responsibilities in their home setting. All in all, these have had an adverse effect on research work with the relevant consequences in terms of publication activity. Additional care duties due to the closure of kindergartens, the need for home schooling and care provision for relatives has placed a heavy burden on researchers, the majority of whom are women.

At least during the first phase of the pandemic, studies on individual disciplines suggest a decline or a lack of any increase in publication rates among female researchers – compared to those of male researchers<sup>6</sup>: this is something that may also have long-term consequences for the assessment of research performance. In subjects with a low share of women in particular, this could lead to a critical competitive disadvantage. No clear empirical evidence is available in relation to research funding. An initial

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<sup>6</sup> Flaminio Squazzoni, Giangiacomo Bravo, Francisco Grimaldo, Daniel García-Costa, Mike Farjam, Bahar Mehmani (2021): Only Second-Class Tickets for Women in the COVID-19 Race. A Study on Manuscript Submissions and Reviews in 2329 Elsevier Journals, SSRN Electronic Journal, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3712813](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3712813); Emil Bargmann Madsen, Mathias Wullum Nielsen, Josefine Bjørnholm, Reshma Jagsi, Jens Peter Andersen (2022): Meta-Research: Author-level data confirm the widening gender gap in publishing rates during COVID-19, Computational and Systems Biology, <https://elifesciences.org/articles/76559>; Vanessa Böhm, Jia Lui (2022): Impact of the COVID-19 pandemic on publishing in astronomy in the initial two years, nature astronomy, [www.nature.com/articles/s41550-022-01830-9?wt\\_zmc=nl.int.zonaudev.112331552451\\_405951221617.nl\\_ref](http://www.nature.com/articles/s41550-022-01830-9?wt_zmc=nl.int.zonaudev.112331552451_405951221617.nl_ref).

analysis the DFG<sup>7</sup> indicated only a few gender-specific differences in the number of proposals; at the beginning (March 2020 to February 2021), the number of new and renewal proposals submitted by women actually increased. However, the current DFG Monitoring Equal Opportunity 2022 shows that the share of first-time female applicants declined in the first year of the coronavirus pandemic (2020), for example, and did not yet fully recover in 2021. Up until 2020 the share of first-time female applicants saw a steady increase<sup>8</sup>. At the present time it is not possible to establish a clear causal connection here; further observation and research are necessary.

Need for action

An informative database would be helpful in order to undertake a targeted analysis and assessment of pandemic burdens, e.g. in terms of the additional effort required to provide care and support for relatives and the competitive disadvantages this result in for researchers. Here, the Senate Working Group currently sees a conflict of objectives between the need for an informative database and justified data privacy interests (especially with regard to personal and sensitive data): this has not yet been resolved.

## Observations on the consequences of the pandemic for early-career researchers

The unstable job situation of people at an early stage of their research career – e.g. due to holding temporary positions, being in a research environment that is often not yet firmly established and often also having additional family care burdens – continues to make this group particularly vulnerable to the effects of the pandemic.

The restrictions on contact and travel that prevailed during the acute phase of the pandemic severely disrupted the establishment of contacts and the development of collaborations and networks that are essential at the start of a research career. For example, proposals for fellowships abroad under the two funding programmes Research Fellowships and the Walter Benjamin Programme declined by at least one fifth in 2020 and 2021 compared to the three years before the pandemic (2017, 2018, 2019)<sup>9</sup>. By contrast, people at an advanced stage of their career usually already have a stable scientific network which they have been able to use productively to engage in dialogue in times of contact restrictions, home office and conference cancellations.

Digital formats were only a partial substitute for missed conferences and research visits. Conferences and the opportunities these provide for getting to know each other

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<sup>7</sup> [DFG infobrief 1.21 – Coronavirus, Gender and Research Funding](#).

<sup>8</sup> (DFG. Monitoring Equal Opportunity 2022, in German only) Deutsche Forschungsgemeinschaft. [Chancengleichheits-Monitoring 2022: Antragstellung, Begutachtung und Gremienaktivität von Wissenschaftlerinnen und Wissenschaftlern](#). (“Proposal submission, review and committee activity on the part of researchers”) reporting year 2021, p. 17.

<sup>9</sup> DFG [The DFG's Funding Activities in the Context of the COVID-19 Pandemic](#).

in person and engage in close discussion are an indispensable part of research activity. These encounters are particularly essential for access to the social and communicative forms of interaction that are specific to research, as well as for networking in the early stages of a research career.

The change of institutions and the associated change of location, which is typical for early careers in science and the humanities, was also significantly more difficult due to the pandemic; aspects that were especially affected during the acute phases of the pandemic included the ability to establish contacts – as is so vital for early-career researchers – and engage in informal dialogue on site. Administrative integration, the establishment of working groups and the stabilisation of independent networks likewise became more difficult.

It can be assumed that these adverse effects on researchers in early career phases will have long-term consequences, including an increased number of individuals abandoning their career, but it will not be possible to analyse such phenomena until a few years have passed.

The Senate Working Group was keen to take action as early as possible to counteract such potential long-term effects, given the crippling impact they could have on the research system as a whole: for this reason, it focused especially on doctoral researchers, postdoctoral researchers and independent junior research group leaders.

#### Measures taken

- Two instruments in the DFG's funding portfolio are particularly suitable for networking: firstly, the funding instrument Scientific Networks offers researchers in all career phases the opportunity to engage in a multi-year exchange across different locations on a topic of their own choice with the objective of achieving a concrete outcome (e.g. a joint publication, the preparation of joint projects, the advancement of research methods, etc.).

Secondly, the funding programme Initiation of International Collaboration offers support in initiating international scientific cooperation. It consists of the components "Exploratory Workshops", "Preparatory Trips Abroad" and "Preparatory Guest Visits". The programme serves to explore a topic-related (usually bilateral) collaboration with partners abroad or jointly prepare an idea for a concrete project.

At the suggestion of the Senate Working Group, targeted counselling of researchers in early career phases and the promotion of these two funding instruments for networking in the research community is incorporated in all counselling services and discussion formats provided by the DFG for all those who are at an earlier stage of their career or who are not yet established in the research system. These are the following: the regular DFG information events offered online through the series *Prospects*, the Emmy Noether meeting (13-15 July 2022), the GAIN annual meeting (2-4

September 2022), the Heisenberg meeting (13-15 July 2022) and the information on the DFG website<sup>10</sup>.

- Since researchers in early career phases are particularly affected by travel and contact restrictions, a circular was sent out to the spokespersons of DFG-funded networks calling on them to take proactive measures in this regard. Specifically, more is to be done to advertise networking meetings outside the network itself, with proactive invitations being sent out to external postdocs and independent junior research group leaders.
- In the coming years, the DFG Head Office plans to monitor career paths during the acute phase of the pandemic and beyond.
- A uniform CV template is being introduced for DFG funding programmes that enables applicants to describe the effects of the pandemic on their own career, so monitoring of this will yield insights here, too.

Need for action

- The impact of the pandemic on international research stays, research activity and researchers should also be adequately considered at research institutions in connection with appointment negotiations, interim evaluations, etc. Here, individual circumstances and their impact on research output must be taken into account.
- The DFG Head Office should systematically bear in mind that review and evaluation procedures are to take account of potential problems caused by the pandemic when assessing the publication performance of researchers, especially those in early career phases.

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<sup>10</sup> [Info Talks on DFG Funding Opportunities for Research Careers.](#)

## Observations on communication and cooperation in research during acute pandemic phases

The Senate Working Group has the impression that while researchers intensified their contact with a small number of partners during the pandemic, there was nonetheless an ongoing decline in terms of the breadth and continuous development of networking as well as with regard to subject-specific and personal dialogue. In-person, face-to-face dialogue is vital to research activity – from both a social and an epistemic point of view.

The intense and broad-based discussion of results and hypotheses among researchers as is common practice at national and international conferences and is a key factor in terms of research quality assurance.

Events in digital formats have compensated for cancelled trips and face-to-face events to some extent, particularly where they have addressed a smaller group of individuals who already knew each other well. In principle, the possibilities of engaging in international dialogue have in fact improved – provided that the digital infrastructure is in place – since the high cost and effort involved in travel and organisation are no longer a constraint.

The quality of the virtual exchange, and whether or not an in-person meeting can be adequately substituted by a digital meeting in the first place, depends on the objective of the event. Face-to-face events will continue to be better suited where the aim is to build groups and establish trust, for example when setting up new research cooperations, or where the focus is on in-depth subject-specific discussion, creative processes or explorations of new interdisciplinary territory. However, since there is a need for research-related travel to be more climate-friendly and resource-saving, it will be important to strike a new balance between physical travel/in-person events and digital/hybrid communication formats.

Compared to digital meeting formats, hybrid events are significantly more demanding to implement – not least in view of the current level of technical equipment. The balanced inclusion of those who are physically present and those participating virtually is particularly challenging. The DFG Head Office is currently gathering feedback on hybrid meetings so as to be able to ensure this format is more effectively organised in future.

It will be important in general to keep an eye on the rapid technical developments in the field of digital and hybrid communication.

Measures  
taken

The project “Digital Turn” being conducted by the DFG Head Office aims to support, develop and elaborate the above-mentioned aspects relating to the use and impact of the possibilities of digital communication in connection with research activity.

Need for action

- The strengthening of IT – in terms of both infrastructure and skills – is a key future task at all levels of responsibility within the research system.
- The Senate Working Group advocates an open-minded attitude among researchers in general towards new techniques of dialogue in science and the humanities and the further advancement and adaptation of these in the day-to-day routine of research. Here it will be useful to have further research results on the effects of digital communication, not least with regard to creative processes, team building and the culture of discussion and debate.

## Observations

### on the use of digital and hybrid exchange formats in review and decision-making

Review, evaluation and decision-making meetings were conducted digitally during the acute pandemic phase; hybrid formats were added as the pandemic has progressed. The preparation of digital meetings often requires more time and human resources on the part of the DFG Head Office; this applies even more so to hybrid meetings. The experience gained has meant that a familiar routine has now been established for organising virtual meetings. This routine is still lacking for hybrid meetings. What is more, virtual review processes are considerably more strenuous for both reviewers and applicants. For the future, it will be necessary to consider how the advantages and disadvantages of different meeting formats – face-to-face, video or hybrid – can best be put to use in achieving the objective of the event in question and with regard to the group of participants concerned. Here it is also important to take into account the aim to organise reviews and other processes connected with DFG funding activities in a way that impacts as little as possible on the climate and on resources.

There is a pronounced preference among the DFG’s statutory bodies for face-to-face events. In the review situation in particular, where a newly formed group of participants is to arrive at a joint assessment, a face-to-face situation facilitates trust and consensus-building, as well as promoting depth of discussion and attentiveness; this applies to constituent meetings of review boards, for example. In-person discussion is essential when it comes to moderating divergent views, which makes it very important for research and scientific discourse in numerous research fields. What is more, digital meetings are less suitable for dealing with conflict, so they tend to

exacerbate it instead. Virtual review sessions are often managed in a formal manner based on reviewers' preliminary votes. They offer less opportunity for joint opinion-forming and feedback within the review group, while greater weight is unintentionally given to the chairing of sessions by the DFG Head Office.

Planning uncertainty as a result of the pandemic has meant that meetings continue to be held virtually: the aim here in particular is to maintain equal and fair review conditions for cohorts of proposals that are assessed on a comparative basis by evaluation and decision-making bodies such as the Senate and Grants Committees on Research Training Groups and Collaborative Research Centres. In addition, the DFG Head Office's observations indicate that, despite the fact that those involved in the decision-making process would fundamentally prefer to attend in person, individuals frequently cancel their attendance at in-person sessions at short notice, requesting virtual attendance at such sessions instead. Switching to a hybrid format at short notice then requires considerable additional organisational effort.

This should also be seen in the context of a high workload due to the shift of scientific exchange into the digital space, making it almost possible to meet at any time and from any location. This also results in a loss of preparation time, e.g. during travel to review sessions or to meetings of statutory bodies. Along with the new strategies for making day-to-day work routines less hectic, these latter aspects must also be taken into account in future when considering the benefits and drawbacks of the different meeting types.

Last but not least, the advantages and disadvantages of digital and hybrid meeting formats must be taken into account when it comes to gaining the services of reviewers. On the one hand, video conferences are less well suited to enabling reviewers to exchange information on current developments in the research field within a small group of colleagues. For this reason, digital review sessions are less attractive to reviewers than on-site sessions, since the former lack the opportunity of engaging in direct personal dialogue. On the other hand, they make it possible to participate in review sessions in a way that saves time, is environmentally friendly and can be reconciled with care and nursing duties.

**Need for action**

- For the sake of quality assurance and comparability – especially in the case of review, evaluation and decision-making meetings, but also in the recruitment of reviewers – a new balance needs to be struck between different meeting formats. The purpose of the meeting should be the central concern here, while time and personnel resources should be incorporated in the considerations accordingly, as well as the climate-friendly organisation of such events. One sensible model would be to alternate between face-to-face formats and video conferences in the case of DFG statutory bodies that meet regularly, since these benefit from an existing foundation of trust and a consolidated working mode. Some review boards are already operating in this way. The change in communication could be supported by developing workflows to identify the most appropriate



meeting format and clear rules for implementation, as well as clearly defined expectations of the reviewers.

- The specific requirements for face-to-face events should be set out in concrete form so as to enable plausible decisions to be made in favour of face-to-face events – also when weighing such an option against the possibility of a more climate-friendly virtual meeting. At the same time, the Senate Working Group sees a need to support the process of adaptation to the new possibilities of communication and to specify and draw people's attention to the characteristic features regarding social interaction, the culture of debate and discussion, commitment and attentiveness. This can suitably be taken care of as part of the project Digital Turn currently being pursued by the DFG's Head Office.
- The Senate Working Group appeals to reviewers and evaluators to be aware of their responsibility towards applicants, to keep their commitments to meetings, and to continue to be reliable in supporting the review and decision-making process.
- The DFG's Head Office should continue to collect and evaluate feedback from hybrid meeting formats so as to be able to respond even more effectively to the need for this more demanding meeting constellation.

## Observations on the role of the DFG in the pandemic and preparedness for future crises

The DFG has had a stabilising role to play in the research system during the coronavirus pandemic. It is to be assumed that as a result of the DFG Head Office providing continuous accessibility and ongoing counselling of researchers and research institutions, as well as ensuring a rapid changeover to digital review formats and setting up functioning processes for proposal submission, review and decision-making, the DFG has helped mitigate the impact of restrictions on research resulting from the pandemic. The DFG has also helped counteract the adverse effects of the pandemic by means of its concrete support measures: for example the extension of proposal deadlines (e.g. under the Emmy Noether Programme), the additional funding to extend projects towards the end of the project duration (emergency support), the possibilities for reallocation of funds, and the facilitation of the transfer of funds allocated to a specific year to the subsequent financial year. At the same time, explicit calls for proposals and the newly created funding instrument of COVID-19 Focus Funding for pandemic-related research topics has created funding options to address urgent research needs in a timely manner.

Nevertheless, DFG support measures were not able to compensate for all the restrictions and deficits in research activity caused by the pandemic, even though compensating for systemic deficits in particular is not the DFG's responsibility.

In the crisis situation, the linking of overarching frameworks (in particular the comprehensive changeover of the review procedures) and overarching measures (in particular the extension of application deadlines) has proven successful with a case-by-case approach. One of the ways this principle is reflected is in the request for specific pandemic-related difficulties to be described in new proposals and renewal proposals so that these can then be put into context in the review process, according to the specific subject.

Across the board, through the aforementioned measures and the establishment of the Interdisciplinary Commission for Pandemic Research, the Senate Working Group believes the DFG has provided fresh momentum in the research system to meet the challenges of the pandemic, as well as to make the most of the opportunities and coping strategies that the pandemic has given rise to.

From the global political perspective, new and significant uncertainties are currently emerging for research activity and research funding. This makes it all the more important to systematically illuminate the pandemic experience in preparation for potential future scenarios in which the research system may be impacted by restrictions and crises.

Measures taken

- In the course of addressing the role of science and the humanities and the role of research funding in the pandemic, the Interdisciplinary Commission for Pandemic Research issued a statement on the systemic handling of pandemic conditions and recommendations for strengthening the research system against future pandemic crises<sup>11</sup>.
- In order to analyse the DFG's diverse pandemic-related measures, surveys of applicants and reviewers were conducted in 2020 and 2021 for the seven calls for proposals under Focus Funding. Furthermore, a lessons-learned workshop was held at the DFG Head Office in the summer of 2022 on the experience of funding activities during the pandemic.

Need for action

- The DFG should also be aware of its role as a role model and indicator of future processes of change and adaptation. In order to be even better equipped to deal with future crises, it is important to identify aspects or groups that are particularly sensitive to planning uncertainty. Communication should also be designed to be barrier-free for those with disabilities.

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<sup>11</sup> Statement issued by the DFG Interdisciplinary Commission for Pandemic Research on [Pandemic Preparedness](#).

### **III Conclusion and future perspectives**

The Senate Working Group's work report sheds light on the impact of the pandemic on research activity, funding activities and early career development. The effects and developments triggered by the pandemic are ongoing and cannot yet be conclusively assessed.

The Senate Working Group therefore plans to hold another meeting in the summer of 2023 to examine with greater hindsight whether pandemic-related problems continue to persist and whether researchers in early career phases continue to have any specific support needs. Finally, a summary will be drawn up of how the coping strategies developed during the difficult times of the pandemic have been incorporated in the "new normal" in research, for example the use of digital communication formats.

In future, structured feedback from the proposal review, evaluation and decision-making process may be available for this purpose, complete with comments on how the pandemic restrictions have had an impact. An initial assessment of the introduction and use of the new CV template may also be available. Finally, empirically supported reflection will offer starting points for drawing possible conclusions and making recommendations for action in future crises.