

QUALITY MANAGEMENT IN SCIENCE ADVICE. A PRACTICE REPORT.

Paul Buntfuß and Thomas König

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ABSTRACT

Effective science advice relies on quality that is actively produced throughout the advisory process. This practice report examines how the Austrian Council for Sciences, Technology, and Innovation (FORWIT) managed quality during its formative years. Using a narrative reconstruction of two advisory processes applying structured conversations and the CRELE heuristic (credibility, relevance, legitimacy), we demonstrate how quality is enacted through procedural choices, boundary-work, and compensatory strategies. The comparison highlights two patterns: first, quality assurance shifts into ex-post rationalization when consideration of either of the quality attributes is missing from early process design; second, procedural explicitness functions as a resource for both epistemic and political robustness. By making internal practices visible, this article contributes to institutional learning on how advisory bodies organize credible, relevant, and legitimate science advice.

Keywords: *Science Advice, Austrian Council for Sciences, Technology, and Innovation, Advisory Bodies, Advisory Process, Boundary Work.*

1. INTRODUCTION

In most industrialized countries, a multilayered landscape of the “knowledge space” (Braun, 2008) has evoked the establishment of national advisory councils for science and innovation. As comparative analysis shows (Cevallos & Merino Moreno, 2020), these boundary organizations are quite different from one another – hardly surprising, given how diverse national innovation systems have turned out. Yet collectively, one can argue, they form a distinct

group within the even broader (and, again, quite diverse) realm of scientific advisory boards and councils (Schwaag Serger et al., 2015).

In part, this notable distinction is due to the rather active, or coordinative, role those advisory councils often elicit, being expected to influence the very policy field(s) in which they operate. To some extent, however, the distinction is due to the nature of those policy fields themselves. As a baseline of our argument, we pose that, to be effective, advice in the field of science and innovation policy holds expertise on the specific institutional context in high demand. To convert such expertise into science advice effectively, a specific set of norms and procedures is required.

To explore whether effective science advice in the field of science and innovation policy is achieved (or not), this article examines two cases of advisory work in the Austrian science and innovation setting from the Austrian Council for Sciences, Technology, and Innovation (FORWIT). It needs to be emphasized that we, as the authors, do not solely have an academic interest in the topic: as employees of the council's secretariat, we are very much concerned with effectiveness (and, inevitably, effects) of the council's advisory work. Due to our position, this practice report might present partial results and draw biased conclusions. The benefits of the insights that outside observers might not easily attain outweigh these risks.

We take this practice report as an opportunity to reflect on the council's performance during its first two years of existence. FORWIT was established as an independent advisory council to the Austrian federal government in 2023 by a legal act of the Austrian parliament (FWIT-Rat-Gesetz, 2023),¹ following a recommendation by the OECD in its latest country report on Austria's innovation system to merge existing advisory structures into one (OECD, 2018).² FORWIT advises the federal government on the policy areas of research, science, innovation and

1 <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20012266>

2 https://www.oecd.org/en/publications/oecd-reviews-of-innovation-policy-austria-2018_9789264309470-en.html

technology development to sustainably strengthen Austria's innovative power and increase the country's competitiveness. Consisting of twelve council members and an independent secretariat with several policy officers in support of the council, FORWIT is expected to cover the span of policy fields from science, research, innovation to technology development.

Right from its inception, FORWIT aimed to provide effective science advice, while at the same time coping with the fact that internal norms and procedures were not yet fully in place.³ Besides "specific structural features of the Austrian institutional landscape" that impact the effectiveness of advisory bodies more generally (König & Stampfer 2026, 8), the policy fields of innovation and science that fall under the council's purview are somewhat integrated strategically yet separately governed by different ministries.

How, then, did the FORWIT fare in its initial attempts of providing advice? While it is difficult to assess the actual impact of science advice, we make use of the CRELE framework, which looks at quality as dimensions of effectiveness. By reconstructing attributions of effectiveness guided by the CRELE framework, we are able to find out whether the FORWIT achieved the necessary level of quality that, in its own perspective, it deems required for its advice to become effective.

However: even when it comes to quality more narrowly, much depends on specificities of each case. As there are neither universal guidelines how advisory processes should be conducted nor a general rationale to what end science advice is to be provided, much of what "quality" means initially is to be defined by FORWIT practices, its norms as well as procedures. To us, elaborating on this topic is not merely an academic exercise – as intriguing as it is – but also of importance for determining FORWIT's own progress three years into its existence.

3 Institutional memory was available insofar as the secretariat staff as well as three council members continued to serve from the two merged councils; however, FORWIT was set up with the promise to bring fresh approaches to science advice, in addition to the repertoire of the previous councils.

2. THE CRELE FRAMEWORK AS HEURISTIC FOR QUALITY IN SCIENCE ADVICE

The purpose of this article is to examine FORWIT's actual practices of managing quality in giving science advice, with this research question: **How does FORWIT understand the management, specifically the production and the assurance of quality when it comes to giving science advice?** To answer this question, we draw on the CRELE framework, which has increasingly become popular in literature on science advice (Heink et al., 2015). The power of this framework is that it draws upon three attributions – credibility, relevance, and legitimacy – that are all central to the endeavor, and hence can be understood as dimensions that, in sum, determine its quality.

The CRELE framework was developed as a heuristic approach to conceptualize the effectiveness of science advice. To do so, it views three interdependent qualities of any given advice: credibility, relevance (also sometimes called salience), and legitimacy. The framework's core assumption is that those qualities are not intrinsic properties of information, but attributions to science advice practices, made by actors in the science-policy interface. Effectiveness is conceptualized as depending on meeting threshold levels for each attribute across intended audiences; falling below any single threshold typically undermines effectiveness while these thresholds vary by context and over time. In this view, credibility concerns perceptions of scientific adequacy in both evidence and process; relevance concerns timeliness and the fit of scope and scale to decision contexts; legitimacy concerns whether processes are seen as fair, unbiased, and appropriately inclusive (Cash et al., 2002, 2003).

While the literature on CRELE comes from a question of effectiveness, it can be adapted for our interest in the *quality management* of science advice, as the two terms are often considered closely related to each other.⁴ Given

4 On a sidenote, we have found it useful to understand “management” as two interlinked yet separate spheres of practices, namely the production as well as the assurance of quality. While this analytical distinction is not relevant for the remainder of this article, we still think it is important to mention it here.

the focus on the three said attributes, a conceptualization as a heuristic for quality seems rather obvious. Quality of science advice can accordingly be addressed as a question of attribution by the relevant actors. This directs the analytical interest towards the interplay of credibility, relevance, and legitimacy.

Because the attributes are tightly coupled, the CRELE framework foregrounds tradeoffs that arise in the practice of science advice. Empirical work identifies at least four practical tensions: speed–quality (rapid response vs rigorous assessment), clarity–complexity (simple messaging vs explicit uncertainty), push–pull (supply driven vs demand driven strategies), and personal time (interfacing vs other obligations). These tradeoffs are dynamic, often sensitive to the respective policy cycle (uncertainty is frequently more valuable in early stages; clarity later), and casespecific. Moreover, policy relevance should be distinguished from policy demand: advice can be relevant without being formally demanded, and supplyside activity can create demand over longer horizons – central to balancing the push–pull tradeoff (Sarkki et al., 2014).

From the perspective of the CRELE framework, quality in science advice emerges from boundary work ensuring that each attribute (credibility, relevance, legitimacy) is reflected given the specific context. Boundary organizations often do this work by coproduction of boundary objects (e.g., models, scenarios, or scoping requests) and dual accountability across science–policy interfaces (Cash et al., 2003). In many advisory mechanisms, a division of labor carries out said boundary work: independent advisors primarily carry epistemic credibility (and some legitimacy via independence), while professional secretariats actively construct relevance by shaping timing, scope and scale, as well as by formatting and sustaining selective permeability of the boundary (Allegra, 2024). E.g., coproduced requests can function as boundary objects that clarify topical and temporal limits while aligning advice to concrete decision needs (Allegra, 2024; Cash et al., 2003).

While CRELE has been criticized for abstraction and vagueness when applied evaluatively (Heink et al., 2015), its strength is heuristic: By looking at actors’ attributions, the framework provides a structured lens

on advisory processes and their practices of producing and managing quality (Cash et al., 2003; Sarkki et al., 2014; Allegra, 2024).

3. A DESCRIPTION OF OUR TWO CASES

For our analysis, we have selected two cases of advisory work being formulated by the council. The two cases share some common ground. In both instances, the actual advice has been provided, meaning that the cases are already concluded at the time of this article, with a written document bearing FORWIT's logo published in the council's repository, manifesting the result. Also, each of the two cases deals with institutional reform, albeit at very different scales. That said, the two cases also differ in some important ways.

The first case concerns a broad set of science and innovation policy issues. Following its own constitution in late 2023, the freshly appointed council members decided that the upcoming parliamentary elections in the second half of 2024 would offer a good opportunity to draw up recommendations that the next government should take into consideration. A formal working group was set up and a policy officer was assigned to coordinate the task.⁵ The working group was expected to finalize a draft of the recommendation in summer of 2024, and the final text of the recommendation was indeed adopted in early September. As a formal council recommendation, the text entails twelve fields of action that the council deemed necessary for the next government to tackle at the time (FORWIT, 2024). Those fields of action range from digitization and cyber threats to suggested reforms in educational policy and support for startups and a call to lobby for an integrated European financial market, to more specific comments on student commitment and research funding programs.

In the second case, FORWIT was reacting to an invitation by the Federal Ministry of Education, Science and Research (BMBWF) related to an evaluation report on a single medical faculty at an Austrian public university. A bit of institutional history is required here: Having been

5 See <https://forwit.at/en/groups/requirements-for-the-government-programme-of-the-28th-legislative-period/>

set up amidst intense discussion ten years earlier, the medical faculty's initial funding was set to be running out in 2028. The evaluation report, instigated by the university's management, was intended to examine to which extent the faculty has achieved its goals; implicitly, it was also an input for upcoming negotiations with the ministry regarding continuation of funding. The ministry asked FORWIT to contextualize the evaluation report, and to provide a different (more systemic) perspective on the issue. Upon discussion in the council plenum, response to the invitation was delegated to a group of two council members and the managing director of FORWIT, who authored an expert opinion that was submitted to the ministry and also published on the council's repository (Haubenberger et al., 2025). The expert opinion intended to assess the quality of the evaluation report itself, and to contextualize its findings into the greater Austrian landscape of medical research.

In several ways, the two cases represent different paths of science advice. While the first case was conceived by the council members themselves, the second was triggered by an initial request from the BMBWF. The first case was very broad, while the second case concerned a much more limited scope. In the first case, the recommendation was formally adopted as an official council statement, while the second case was delegated to an ad-hoc group of two council members and the managing director of the council's secretariat who wrote down, and submitted, their expert opinion. From a methodical point of view, the two cases represent opposing features.

4. REMARKS ON THE METHOD

To analyze how FORWIT approaches the issue of quality management in its advisory processes, we employed a narrative reconstruction of the two aforementioned selected advisory processes.⁶ This allowed us to look at practices of our own organization through reflective, insider-based observation. The two cases were reconstructed through structured

6 On the term of "narrative reconstruction" see Roe (1994). Broadly, this approach relates to methodological considerations in the interpretive branch of policy analysis (Yanow, 2000; Fischer, 2007).

conversations between the two of us with a clear distribution of roles: the one of us who was involved in both advisory processes provided detailed recollections of decision-making processes, procedural steps, and internal considerations. The other took notes and posed questions; he also wrote a detailed protocol of each of these conversations, constituting the narrative reconstruction of each case. In the next step, we applied the CRELE framework as the interpretive lens to identify specific practices through which FORWIT enacts quality management.

Since only one of us was directly involved in both advisory processes (while the other was not involved at all), the asymmetry of different positional perspectives created an analytical vantage point, from which we gained both embedded insights and yet a distanced view.⁷ Still, a few comments on limitations and constraints of this approach are warranted. First of all, it is important to note that the reconstruction is limited by the fact that it builds on the narrative account of only one involved practitioner. As the empirical basis of our analysis is a transcription of narrative reconstructions, our aim is neither to reproduce events with empirical finality nor to evaluate outcomes externally; it is restricted to understanding how practitioners of advisory work make sense of their own doing.

Consequently, our approach does not observe ‘quality’ directly. Instead, it reconstructs how both the council and the secretariat understand, interpret, and perform quality in concrete advisory situations. Despite this limitation, we can analyze how credibility, relevance, and legitimacy are attributed within internal processes, how tradeoffs are negotiated, and which compensatory mechanisms are mobilized when better-suited procedures are absent. The method provides access to the practical enactment of quality management at the council (both the expert advisors and the secretariat). Through this heuristic lens, we identified characteristic practices and the procedural ways in which the CRELE dimensions shape internal understandings of what constitutes quality in science advice.

7 As noted in the introduction, we believe that the benefits of a reflective approach from within the organization outweigh the inevitable risks of bias and partiality.

5. CASE STUDY 1: RECOMMENDATIONS FOR THE GOVERNMENT'S PROGRAM

In the case of recommendations for the government's program, the council's foresight and ambition to come up with recommendations related to science, technology and innovation policy for the next government was not (yet) met with the required tools, norms and procedures. It is noteworthy that drafting the text started almost immediately after the council was formally established. Measures and procedures to produce and assure quality were an afterthought at first – at least that's how the narrative reconstruction tells it.

Quality, in the reconstruction, is primarily mentioned through retrospective critique of the council's own procedure at the time. Tellingly, rather than depicting a single coherent production model, our narrative reconstruction repeatedly brings up the distinction between "*Plan B*" and "*Plan A*". The distinction of the two plans is useful also for our analysis: "*Plan B*" is to be understood as identifying potential weaknesses and subsequently attempting to mitigate them. It is, in other words, the umbrella notion of compensatory measures that were actually adopted under constraints of timing and resources and while the process of drafting and revising the recommendations was already going on. "*Plan A*", on the other hand, is a retrospective ideal of how quality management should have been constituted and organized from the very beginning of the case.

The operationalization of "*Plan B*" is told along two activities: the writing of an extended endnote apparatus and the conduct of expectation management. Writing an endnote apparatus was done by the secretariat by retrospectively fitting literature references to the existing text of the recommendations. The aim of the endnote apparatus is to compensate for a perceived *credibility* deficit by anchoring claims in evidence. In our reconstruction, this activity is viewed as ambivalent: it is credited as an active contribution of the secretariat, but it is also criticized as ex-post rationalization, retrofitting evidence to an already drafted narrative.

The other compensatory activity concerns what is called "expectation management" in the reconstruction. Since it reflects on the need

to anticipate how the council's recommendations will be judged by external audiences, this activity falls squarely under the attribute of *relevance*. This emphasis reveals a recurrent tradeoff: the council's recommendations are described as sensible from an expert standpoint but lacking salience for decision-makers. Relevance is not treated as intrinsic to content, but as contingent on how the output resonates with external conceptions of what matters. Expectation management, in this telling, requires differentiating between frontstage positioning and backstage coordination, with the secretariat taking the role of backstage signaling awareness of constraints and by promising improved performance in the future, thereby anticipating and pre-empting critical response.

The reconstruction highlights how positioning choices in the drafting of the recommendations can reconfigure this tradeoff. One example mentioned in the reconstruction concerns the emphasizing of a theme, namely setting an R&D intensity target for 2030, which is then interpreted as a deliberate attempt to align with perceived public expectations and to mark a recognizable stance. At the same time, this move is described as bearing the risk of drawing attention from other substantive elements, potentially generating new *relevance* conflicts and necessitating additional handling elsewhere. Observations like this draw connections between the dimensions of *credibility* and *relevance* to communicative strategy: the same text of recommendations can be evaluated differently depending on what audiences expect it to do.

The perceived ambivalence also points to a more general concern repeatedly emphasized in the narrative reconstruction under reference to the counterfactual ("*Plan A*"). It serves as an idealized alternative that entails notable measures that should have taken place if the advisory process had been set up properly from the beginning. Mentioned are elements such as systematically involving external experts early on, actively eliciting addressee needs to incorporate external conceptions of relevance and acknowledging (rather than disguising) uncertainties and evidentiary limits explicitly, thereby making the epistemic status of recommendations transparent.

The imaginary “*Plan A*” reveals the cumbersome process against which it is projected and therefore gives an important insight into how the credibility dimension of quality is imagined in an idealized form. It reflects a dissonance between self-understanding and external resonance. Identified deficits include limited contextual knowledge as well as a lack of observable policy effects. Also mentioned is that the list of recommendations was not thoroughly curated and vetted due to missing feedback loops with the ministries. The compensatory activities, which are set in motion to produce *relevance* after the fact are critically reflected: the attempt to influence the framing (notably by the preamble), announcements that seek to create attention, and intensified coordination that turn the text into a top-level responsibility.

Combinations of two dimensions appear in the reconstruction of this case only marginally through an unsuccessful attempt to involve external expertise. The narrative account suggests that such involvement would have strengthened both *credibility* and *legitimacy*, including by providing a broader basis for claims and by signaling procedural openness. Where this attempt fails, the endnote apparatus is mobilized as partial compensation, underscoring the centrality of secretariat work in maintaining the perceived quality (in the credibility dimension) of the output. The reconstruction also hints at an unrealized potential: the council could have acted more explicitly as a platform convening expertise also from outside, which in turn would have changed how *legitimacy* is attributed.

6. CASE STUDY 2: CONTEXTUALIZING AN EVALUATION REPORT

The reconstruction of the case on contextualizing an evaluation report provides a different picture. Here, attributions of *credibility* and *legitimacy* are often bundled together. The advisory process is reflected as being organized around the recurring formula of a “methodologically correct procedure”. Through this formula, quality is negotiated as a matter of evaluative rules, standards, and their proper application. Accordingly,

the case concerns not only what is said about the object of the evaluation report (i.e., the medical faculty), but how the evaluation is done properly and how this can be rendered accountable.

The formula of “methodologically correct procedure” comprises two topical clusters in the narrative reconstruction. A first cluster concerns the “rules of the game”. Here, it is stressed that templates and standards established by an independent Austrian platform for research and technology policy evaluation (fteval) must be applied and made visible. *Credibility* is pursued via adherence to procedural expectations and best practices, while *legitimacy* is pursued by demonstrating that the council’s stance is grounded in a defensible method rather than discretionary judgement. This emphasis produces a second cluster: “robustness through methodological reflection”. The council’s own assessment is depicted as more robust when it explicitly distinguishes descriptive statements about the methodological procedure from substantive propositions, and when it communicates that distinction to audiences. The analytical implication is that quality assurance is enacted through disciplined structuring: separating method from content becomes a practical device to stabilize *credibility* and *legitimacy* simultaneously.

Yet the case also shows that such structuring is socially consequential. Concerns are expressed that a structured account of method can be interpreted as critique, even when the intent is procedural clarification. Consequently, the process incorporates defensive quality practices: avoiding pejorative language, smoothing formulations, and presenting the approach in a way that reduces exposure to contestation. In this sense, methodological explicitness and rhetorical caution operate as complementary boundary-work strategies.

Another cross-cutting motif is the “significance of the case”. This theme appears repeatedly across the three dimensions of quality and functions as a justificatory hinge for why the council should engage in the case at all. In the *credibility* dimension, significance is not exhausted by methodological rigor; it is also articulated as a systemic perspective. In the reconstruction of the case, the argument is prominent that focusing only on the specific faculty would be short-sighted, and that decisions

cannot be discussed without situating the evaluation within the broader Austrian landscape of medical research and policy. This systemic framing simultaneously expands the scope and clarifies the mandate of science advice: it draws on system knowledge within the council and positions contextualization as a distinctive contribution.

At the same time, the systemic perspective requires explicit boundary-setting regarding what the council is – and is not – doing. This is reflected in the council's emphasis on not conducting an evaluation itself but assessing the evaluation and working with the text of the report. This distinction matters in the *credibility* dimension because it controls expectations about epistemic authority, and in the *legitimacy* dimension because it delineates an appropriate role vis-à-vis other evaluative actors. *Legitimacy* is additionally aimed at through roles and process design. On the one hand, there were concerns voiced about bias and the sensitivity of involvement by council members, and it stresses the separation between individual experts and the council itself. On the other hand, communication with the ministry, including iterative coordination, is presented as part of a careful process that helps to sustain procedural acceptability.

Moreover, *legitimacy* is supported by emphasizing exceptional circumstances: the case is framed as a situation in which the council can act in ways the ministry cannot, and in which purely routine treatment would be inadequate. These elements link *legitimacy* to both independence and appropriate responsiveness. *Relevance* is treated more often as an independent attribution and is anchored in a distinct formula: “being useful to the ministry”. The ministry is perceived as asking how the council could help, and the council as providing interpretive assistance and arguments that can be translated into negotiating positions, while avoiding the appearance of advancing a political agenda. Usefulness thus functions as an explicit performance criterion, jointly recognized by the council and the ministry and considered achieved in this case by both.

7. COMPARATIVE ANALYSIS AND SUMMARY

This article explores how the FORWIT manages quality in its science advice processes. We chose two cases of advisory work, both quite different in scope, mandate, and activity, but both ultimately terminated with a written document bearing the FORWIT logo and posted on its repository. To unpack different aspects of quality management in each of the cases, we applied the CRELE framework to a narrative reconstruction of each case. Table 1 (see below) gives an overview of how the CRELE dimensions, and specific combinations thereof, could be identified in our narrative reconstruction of the two cases. The table lists a summary of selected quality management activities that our reconstruction identified. Some entries appear in more than one CRELE dimension, since the framework conceptually allows combinations of quality dimensions. The combinations that we deem the most important ones are listed in a separate row of the table.

	Case study 1	Case study 2
Credibility	Operationalization of “Plan B”: • Writing an endnote apparatus • Involving external expertise	• Methodologically correct procedure • Significance of the case
Relevance	• Expectation management • Influencing the framing	• Being useful to the ministry
Legitimacy	• Involving external expertise (retrospectively)	• Methodologically correct procedure • Significance of the case
Important combinations	Credibility and Legitimacy: • Combined in the attempt to involve external expertise, even though unsuccessful	Credibility and Legitimacy: • Combined in the formulas of “methodologically correct procedure” and “robustness through methodological reflection” • Combined in the view of a systemic approach, expressed as “significance of the case”

Comments	• Perspective of “ex-post rationalization” guided engagement with all three dimensions • Quality management is revealed by formulating “ideal” procedures	• Credibility and legitimacy are in several ways combined; relevance remains standing alone • Distinguishing method and content is important theme in quality management, able to link the dimensions
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Table 1: Identification of CRELE dimensions in the FORWIT’s quality management activities in the two case studies

Source: Compiled by the authors

It is important to stress here again the inherent limitations of what follows, as the empirical basis for the analysis (the actual narrative reconstruction) is narrow and, due to our own involvement with the council, prone to being biased. However, when taken as an explorative attempt to reflectively reconstruct attempts of quality management at specific cases of science advice, the following statements can be made.

In the first case study, not all three dimensions of the framework could be addressed. This confirms the general, and rather critical, assessment of this case of science advice in the narrative construction: the council’s ambition to point out fields of action that range wide and across different areas of policy making could not be matched with the tools and procedures that this would have required. In the second case study, a much more limited scope was met with a more appropriate set of such instruments; here, our reconstruction revealed that all three dimensions were addressed. The second advisory process, thus, can be described as a successful case of science advice insofar as the narrative reconstruction saw the quality management as satisfactory.

Another important insight from the second case is that “method” matters for quality management. The intriguing aspect here is that “method” is not only a (procedural) tool to be applied to the matter at hand – in our case determining the correct conduct of an evaluation along predefined standards and best practices. It is also of relevance in a more strategic sense, as it confirms the soundness of the result. This corresponds to an argument in the literature that science advice must ensure both epistemic and political robustness (see, e.g., Weingart & Lentsch,

2008) – an interplay we could observe in practice. Here, the pivotal role of secretariats becomes visible, contributing to the political robustness through division of labor, as Allegra (2024) puts it. Interestingly, while the first case study did not arrive at a similarly robust method, the analysis indicates that the retrospective ideal (*“Plan A”*) would have provided a process-oriented alternative for quality assurance.

Is the CRELE framework suitable for assessing quality management of science advice? Critics point to the fact that, despite the seemingly intriguing complementarity of the three dimensions, the concept’s strength as well as its weakness lies in the “polysemy” of its attributes (Heink et al., 2015, 686). We can testify in our exploratory analysis that it was difficult to operationalize the CRELE framework for our purposes. It required time in the interpretation sessions to arrive at a common understanding of the narrative reconstructions. That said, the framework worked well heuristically at least in three ways: first, exercises of reflection upon practices of quality management can be stimulated by, as well as structured with the framework. Second, it is a good way to make the process of two cases of science advice, even quite diverse ones, comparable, thereby allowing us to think about quality in the first place. Finally, dissecting cases along the three dimensions also brings new perspectives – always a valuable aspect when science advice is seen as a practice that depends on incremental learning.

For practicing science advice, a general learning from applying the CRELE framework is that all three dimensions, namely credibility, legitimacy, and relevance, should be considered already in the initial steps of coming up with science advice. Clearly, this was achieved in the second case, which seems to have contributed to the overall success of managing quality in drawing up the science advice. In contrast, and maybe due to the circumstances under which the first case of science advice was inceptioned, the three dimensions were not taken into account, leading to a rather laborious attempt of reverse-engineering, which additionally makes the advice more prone to critique at both content and process levels.

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AUTHORS

Paul Buntfuß

FORWIT

Austrian Council for Sciences, Technology, and Innovation
Pestalozzigasse 4/D1, 1010 Vienna (Austria)

Email: pb@forwit.at

ORCID: 0009-0006-4766-7605

Thomas König

FORWIT

Austrian Council for Sciences, Technology, and Innovation
Pestalozzigasse 4/D1, 1010 Vienna (Austria)

Email: tk@forwit.at

ORCID: 0000-0003-4337-5163

Biographies

Paul Buntfuß

Paul Buntfuß is a staff member at the Council for Research, Science, Innovation and Technological Development (FORWIT) and a PhD candidate at the Institute of Sociology at the University of Vienna. His research interests lie in the field of science studies and the sociology of scientific policy advice and expertise. He approaches scientific policy advice from both a practical and an academic perspective.

Thomas König

Thomas König is the Managing Director of FORWIT and has been observing Austrian and European research policy for many years, both as a researcher and as a policy-maker. He has a particular interest in the diverse interactions between science and politics, most recently focusing on the organizational structures of scientific research and the role of scientific expertise in politics.