

Quality matrix: evaluating science communication projects

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Note: this translation only features pages 12-19 of the 2020 version of the document.

Reading guide

Below is a table of fifteen quality indicators. Included are questions that can help understand the quality of a project. Some possible answers to those questions are also included in the table: from good to unsatisfactory. Note: these answers are intended as *examples*, we did not strive for completeness.

By reading the table, the reader can get an idea of aspects that should have been considered in a good science communication project. Those who read the table can recognize or avoid the biggest pitfalls.

However, science communication is a profession – using this table does not yet make you an expert. Compare it to a pop festival: anyone who wants to organize that as a layperson does not have enough to go on if they are given a budget and 40 pages of information. That is why the involvement of experts is essential, both in organizing a project and in assessing it.

Three categories of quality indicators

The first ten indicators, under categories 1 and 2, are "technical": with these, we look at consistency, feasibility, how well thought out and how effective is the project. Those familiar with recognizing quality in other types of projects will recognize many of these indicators. Still, they are not trivial: it is precisely in these areas that science communication projects have much to gain. A project that does not score well on these indicators will, for example, not be very consistent or effective, and thereby fail to reach target audiences or risk reinventing the wheel.

The third category contains five normative criteria, focused on societal goals, themselves based on values. In other words, a project that does not score well in these areas may well be an effective project, but may not contribute to desirable goals. What is desirable is a normative choice. The normative criteria are consistent with advice from experts in the field, with the mission of the Rathenau Institute, and with existing policy.

	Indicator	Questions to ask	A good proposal	An acceptable proposal	An unsatisfactory proposal
	CONSISTENCY Is the project put together well?				
1.1	Goals	Are goals described in an understandable way? Are goals formulated according to SMART criteria? Is there a clear distinction between goals and means?	Goals are, where possible, formulated SMART as the starting point of the project. Types of goals (knowledge transfer, attitude change and/or actions from the target audience) are clearly described. Goals focus on impact, not only on corporate communication, marketing and/or (student) recruitment.	Goals are vague, and cannot be evaluated as a consequence. No clear distinction between goals and means.	Focus is on the means, the goal is not well thought through and/or too general. Knowledge transfer and attitude change are equated. Goals don't relate to societal impact, only to marketing of the institution.
1.2	Target audiences	Are target audiences clearly described and delimited?	The project focuses on one or more clearly described target audiences, which match the goal.	The project mentions target audiences, but doesn't delimit them properly. The project focuses on target audiences that are not a match for the goal.	The project focuses on 'a general audience' without further specification.

1.3	Efficiency	Does the budget and allocated time match the planned activities? Are cost estimates for expenses realistic?	Costs and activities are connected. The investment (in time/money) is appropriate for the result. There is a balanced budget. Quotes have been requested from external parties carrying out work.	Most of the expenses and hours and reasonably well estimated, but certain tasks are over/underestimated. No quotes are requested for external work.	It seems like there is no realistic idea of what projects cost. It is either way too expensive or way too cheap for what will be delivered. There is an unbalanced budget, that for certain points allocates much more financial room than for others. Experts were not consulted to make good cost estimates.
1.4	Evaluation and reflection	In which way do evaluation and reflection take place, both during and at the end of the project? Is potential impact being looked at? Is there space to adjust the strategy depending on evaluation outcomes?	The project incorporates the right moments for evaluation and can adjust its course depending on the outcomes. There is an ongoing check whether goals are being met. The project uses thorough methods to estimate impact.	Evaluation takes place in the right way, but at the wrong moment, for instance, only at the end. The setup does not offer so many ways to adapt to new insights.	There is no evaluation, or evaluation only occurs after the project's conclusion. The method chosen for evaluation is guaranteed to report a positive outcome. Only outputs are looked at, not impacts.
1.5	Knowledge sharing	Are knowledge and experiences gained from the project shared?	During and after the project, gained knowledge is shared via relevant channels with colleagues, so they can learn from it.	The project wants to share knowledge, but picks the wrong channels. Results are being made public, but experiences are shared relatively little or not at all.	Gained knowledge is not shared, or hardly at all.

	Indicator	Questions to ask	A good proposal	An acceptable proposal	An unsatisfactory proposal
	EFFECTIVITY Is the project reaching its goals?				
2.1	Strategy	Are goals realistic, taking into account means, target audiences, budget, and duration? Do the means follow from the goals? Are they formulated well?	The means are a good match for the clearly-described and well-substantiated target audience, making the goals realistic.	Goals themselves could be realistic, but means are not a fit. Chosen means may contribute to some goals, such as knowledge transfer, but not to others, such as influencing behavior. Goals seem like they may have been formulated at a later point in time to match the means, and are not a complete fit for them.	Focus is on means, goals are not well thought through, target audiences are not properly delimited. This makes the project unrealistic: it tries to do too many things.
2.2	Relevant expertise and competencies	Is the project team a match for the target audience and the means? Are the necessary competencies and expertise present? If needed, are external experts involved?	The project substantiates which competencies are present within the researchers and the team. The project indicates what is missing and recruits external competencies for that. External partners make sense and are complementary.	The project broadly identifies the right competencies, but does not provide them appropriately. Part of the thinking still needs to take place, not all missing parts are accounted for yet.	There is no clear idea of the required competencies. The project underestimates missing parts and overestimates its own expertise. External partners are involved, who do not seem to provide competencies the project needs. External partners give the impression of little knowledge or favoritism.

2.3	Involving target audiences	Is the target audience involved in the project? At which stage?	The target audience is involved in the project from the start. Their input can influence the way the project happens.	There is no possibility to change course depending on the target audience's input. The project does involve the target audience in the process, but only as receivers. Or does have a discussion with them, but only after the project concludes.	Only involves the target audience in the role of receiver, and late in the process, for instance, at the end of a research project when results are known.
2.4	Connecting to needs of/questions from the target audience	Are the goals of the project formulated only from the point of view of science? Or can the target audience also benefit? Does the project identify a clear need of the target audience?	The project convincingly connects to a need, desire or interest of the target audience(s).	Potential needs of the target audience were contemplated, but remain speculation. There is no research into whether assumptions are right and the project does not provide a way to test this either.	The project satisfies an organizer's need, but it doesn't help other parties. It is unclear how the target audience benefits from the project. Because of this, the question arises whether the target audience will be reached.
2.5	Positioning with respect to the current science communication landscape	Does it seem likely that the project will fill a gap? Do the choices for means and target audiences clearly take into account other projects currently on offer, and is there a collaboration with other relevant parties?	The project fills a gap by offering something not currently provided (sufficiently). Clearly describes what will be added to the existing science communication landscape.	There are too many unsubstantiated assumptions about the existing science communication landscape. The project fills a gap, but does not refer to possible competitors. The project offers something that already exists, but does it in a better way.	The projects adds little to nothing to the existing landscape. The project serves a target audience that already has a lot available to them, with which the project competes. The project does not demonstrate insight into the existing science communication landscape.

	Indicator	Questions to ask	A good proposal	An acceptable proposal	An unsatisfactory proposal
	NORMATIVE CRITERIA Does the project contribute to external goals?				
3.1	Diversity in the target audience	Does the project focus on a target audience that is underrepresented in current science communication, for instance, people with a non-university education, people with lower socioeconomic status, people with a migration background, and people outside of university cities?	The project focuses on a target audience that is underrepresented, and thereby contributes to a wider reach of science communication in general.	On paper, the target audience also includes underrepresented groups. But the target audience is so poorly focused, that the audience will self-select such that the project ends up reaching mostly overrepresented groups.	The project focuses on an overrepresented target audience, such as highly educated people in university cities.
3.2	Degree of dialogue	What is the relationship between researcher and target audience in the project? Does the project only send information, or is listening part of it too? Do researchers present themselves as a source of knowledge, or also as a party with questions?	Researchers also take on the role of a person in (part of) the project, as equals of the target audience. The project pays attention to ways in which the target audience's voice can be heard. The project demonstrates an interest in the input and values of the target audience.	There is an interest in input from the target audience, but the project does not offer sufficient avenues to live up to it. Evaluation perhaps makes it possible to change course in a timely manner.	Researchers are a source of information, the target audience acts as a receiver. The project takes on a form that looks like a dialogue, but is ultimately aimed at transferring knowledge and values in one direction only.

3.3	Focus on process, person, and interpretation	Does the project give attention to research as a way of producing knowledge, and to aspects of the scientific process? Is attention being paid to research as a human enterprise? Or is it only about the products of research?	The project not only pays attention to the results of scientific research, but also to the research itself and its context. Uncertainty, experiments, peer review and other aspects of research are included. The target audience gets to know the people behind the research.	The project pays attention to researchers, but only as people who discover new knowledge and explain what results mean. Researchers give insights into their role, but the process of doing research is not included. Facts are presented without context or interpretation.	The project only focuses on the results of its research. The project emphasizes knowledge, discoveries and innovation. The process that precedes discoveries stays implicit, and so do the people that do the work and the potential meaning of the discoveries for the target audience.
3.4	Role model diversity	Does the project contribute to the visibility of diverse role models?	Diverse people are included in diverse roles. Members of the target audience can recognize themselves and others in different roles, and can see that there is diversity in research.	Diverse people are included, but diversity is limited to gender and ethnic background. There is diversity, but all researchers who are featured are older men. Women and younger people take on secondary roles.	All researchers fall within the same stereotypical group: white, highly educated men who live in cities, speak standard Dutch, and are between 30 and 50 years old.
3.5	Connection to the Dutch Research Agenda (<i>Nationale Wetenschaps-agenda/NWA</i>)	Does the project connect to the Dutch Research Agenda and the accompanying portfolio?	The project clearly demonstrates its connection to one or more routes in the Dutch Research Agenda; and/or the project answers questions that the public posed as part of the Dutch Research Agenda.	The project's content connects to a route in the Dutch Research Agenda, but does not refer to it or its portfolios. The project connects on a content level, but does not deploy its communication in ways specified in the portfolio.	The project does not connect to a route in the portfolio of the Dutch Research Agenda and does not answer questions posed by the public in this context.