„…never neutral“: Practices, concepts and methods of evaluating technology over the last 50 years

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The Verein Deutscher Ingenieure (VDI) (Association of German Engineers) and the Gesellschaft für Unternehmensgeschichte (GUG) (Society for Business History) are jointly hosting the Workshop "'…never neutral': Practices, concepts and methods of evaluating technology over the last 50 years" from June 18 to June 19 2026 in Deutsches Museum München. The workshop aims to explore the often invisible and informal practices, concepts, models and methods that engineers, businesses, politicians and other actors used for evaluating technology, and to discuss the relationship of this form of evaluation to institutionalized, political forms of Technology Assessment — both past and present.

In 1991, the VDI issued VDI-Richtlinie 3780 on "Technology Assessment - Concepts and Foundations" (VDI 1991; König 2021). This standard was an attempt by Germany's largest engineering association to define central concepts and provide guidance on how to deal with the risks and benefits of technology. Assessing the positive and negative effects of technology was not a new task for engineers. In the first half of the 20th century, however, engineers evaluated technology within engineering associations or in internal company contexts —without clearly defined evaluation standards and little consideration of technology´s long term consequences. After World War II, discussions about the impact of technology became increasingly public and political, as its transformative power came to be seen as more risky and irreversible, particularly from the 1970s onwards. Intense debates around nuclear energy, the chemical industry, and air pollution provided the backdrop for what Ulrich Beck famously described as the emergence of a "risk society" (1986).
At the same time, civil society actors in Western Europe and the US—especially the environmental movement—began to challenge established systems of technical regulation. In this context, historian of technology Melvin Kranzberg formulated his well-known "laws," the first of which states: "Technology is neither good nor bad; nor is it neutral." Given the controversial and contested role of technology in society, different forms of evaluating technology in a systematic manner emerged and became institutionalized, parallel to the VDI-Richtlinie, most notably in the field of "Technology Assessment" (TA). Examples include the U.S. Office of

Technology Assessment (1974-1995); the Office of Technology Assessment at the German Bundestag (TAB), established in the mid-1980s; the Institute for Technology Assessment and Systems Analysis (ITAS) in Karlsruhe, founded in 1995, the "Technikfolgenakademie" Bad Neuenahr., founded in 1996, or acatech, originating around the same time as an association of engineers committed to technology-related policy making and fostering the common good (Janes 2014; Wingert 2005; Bimber 1996; Ropohl 1996, 159ff; Eichener et al 1991). Today, technology assessment is a vibrant and interdisciplinary field.

From a historical perspective, however, the formal institutionalization of evaluating technology was a relatively late development. It complemented—but did not replace—longstanding and more subtle practices in the broader sense of the German term "Technikbewertung" that had taken place in firms, engineering associations, and other contexts. There was rarely consensus. While media and public discourse in the 1980s focused on the dangers of nuclear energy, engineers and their associations often weighed these risks against potential environmental benefits, such as reducing air pollution and CO_2 emissions. While political actors and car manufacturers debated the necessity of catalytic converters and seat belts, other companies had already begun serial production. These decisions and debates involved various forms of evaluating technology, yet they often differed significantly from the recommendations of the VDI Richtlinie or the working methods of TAB (Rapp 1999).

This workshop is intended to take a long-term perspective on the historical development of the various forms of evaluating technology. It aims to explore the often invisible and informal practices, concepts, models and methods that engineers, firms, politicians and other actors used for evaluating technology, and to discuss the relationship of this form of evaluation to institutionalized, political forms of Technology Assessment. We invite contributions that examine the mutual influences and possible interactions between engineering communities and the various institutionalized forms of evaluating technology — both past and present.

We focus on the period since the 1970s, a time when technology became a matter of public political debate and began to be considered more systematically from an interdisciplinary, systems-oriented perspective—also within engineering associations such as the VDI, which began to include the "human factor" in its consideration.

Guiding questions include:

- What exchanges or mutual influences have existed between technical experts and organisations such as VDI, TAB or acatech, and political or research-oriented forms of evaluating technology?
- Which forms of evaluating technologies emerged since the late 1960s and how did they relate to each other? Which actor-networks did help establish them? Which guiding ideas did they follow? To whom did they ascribe the responsibility of designing "good" technology?
- Why did most forms of evaluating technology follow the idea of a *value-orientation* in technology development and design? How did this line of reasoning align with politics and certain forms of rationality (e.g., decision making theory, action theory)? Did it reflect the (German) engineering tradition of understanding technology as a cultural value?
- How did the debate about the so-called "neutrality-thesis" speak to a value-orientation in technology assessment and evaluation? Does this reflect the tradition of describing technology as a cultural value?

- How should the VDI-Richtlinie 3780 be classified in light of previous codes or subsequent codes? Conceptually, in terms of its orientation, its history, its practicality?
- Which actors had the greatest influence on the actual design and implementation of technology?
- How did engineers understand and assess their own responsibility in this process?
- How receptive were firms and industry associations to debates about evaluating technology/TA/Technology ethics?
- Were there differences between specific technological fields—for example, between energy production and air pollution control?
- How can we explain the resistance to the political institutionalization of evaluating technology, its relatively late implementation, and its evolution over time—including the increasing importance of public participation? (Brennecke 2016)

The workshop aims at an empirical investigation of case studies and major transformations over time in interdisciplinary perspective. Since these developments were international in scope, rather than specific to Germany, we explicitly welcome case studies from other countries or comparative approaches. We do not intend to address the methodological, theoretical, or normative complexities of technology assessment as a field. However, we believe that a broader, international historical perspective can help illuminate both practical and theoretical questions of technology assessment by highlighting the social and contingent contexts in which such evaluations take place. We welcome proposals that take this approach.

The workshop takes place at **Deutsches Museum** in Munich, the world's largest museum of science and technology, **June 18 and 19, 2026**.
The organizers will cover costs for travel (airfare up to a maximum amount) and accommodation. Deadline for submissions is **Dec. 10, 2025**. Applicants will be informed about our decision and further details before the end of the year.
Proposals should be a **single PDF-file**, including name, affiliation, title of the presentation, main questions of interest and abstract (up to 300 words), as well as a short biographical note. Please send your proposals to **teupe@unternehmensgeschichte.de**

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