

# Towards Cultural Change

## Implementing Responsible Research Assessment at KIT

# ERRED

## REFERENCE MODEL

The reference model developed within ERRED comprises three major topics that drive the implementation of responsible research assessment at KIT:  
**the maturity model, a framework, and a communication strategy.**

### INTRODUCTION

As a signatory of DORA, Karlsruhe Institute of Technology (KIT), Germany, is an active supporter of the open science movement, and the development of a responsible system of research assessment is seen as a crucial part of establishing an open science culture. Therefore, the nationally funded project "Development of a Reference Model for Reporting in Scientific Institutions Based on DORA" (ERRED) was launched in September 2023, aiming to create an alternative set of indicators.

### THE PROJECT

**Project time frame**  
09/23 – 08/25

**Project lead**  
Juliane Mörsel (10/24 – 08/25)  
Dr. Steffen Burk (09/23 – 04/24)

**Project goals**  
Improvement in bibliometric analysis  
Integration of alternative and diversified indicators  
Strengthening qualitative factors  
Stopping the use of journal-based indicators  
Acknowledgment of diversity in research  
Initiate cultural change

### MATURITY MODEL

ERRED adapted a maturity model developed by Helmholtz Open Science Office (Castell et al. 2024) as the basis for the reference model at KIT. The core principle of the maturity-model-based assessment is the evaluation of various dimensions with differentiated attributes to address multiple themes of scientific work and to take into account diverse career paths.

The themes reflect the diverse aspects of research activities and provide greater visibility and diversification, for example, by adding teaching, mentoring, and leadership skills to the evaluation criteria for professorship appointment procedures. Depending on the specific task, the maturity model serves as a dynamic toolbox and should be regularly reviewed and updated following the ongoing developments and initiatives.

### COMMUNICATION

The third component of the ERRED reference model is communication and collaboration in responsible research assessment through different channels and formats.

At the KIT level, this entails promoting responsible research assessment among KIT's scientific staff through regular training sessions and by adding new advisory services for researchers, students, and academic staff. Additionally, regular workshops with administrative departments will support change at the level of decision-makers.

To share and discuss developments and best practices, the KIT Library participates in multiple task groups at the Helmholtz Association level, as part of TU9 (a cooperation of leading technical universities in Germany), and soon in a new national Community of Practice.

### FRAMEWORK

One key insight from ERRED is as important as developing a set of indicators. Building on this, the library advocates signing the CoARA and Barcelona Declaration to strengthen the implementation of responsible research assessment processes at KIT. These commitments, along with the development of internal guiding policies, are accompanied by a stronger focus on institutional identity management.

This involves publication guidelines that promote good scientific practices with the consistent use of research profiles within the KITopen repository, connected to ORCID. The identity management is supported by regular campaigns targeting new and early-career researchers.

### NEXT STEPS

- 1 Signing the CoARA and Barcelona Declaration and establishing a Working Group within KIT to put the commitments into practice.
- 2 Identity management campaigns at the campus level to increase visibility of research profiles as well as promote the institutional repositories
- 3 Implementing a teaching series that includes training sessions and workshops to raise awareness at an early career stage.

### OUTLOOK

During the project period, a reference model was developed, and external framework conditions were designed. Additionally, multiple communication channels were established to support the ongoing implementation of changes at Karlsruhe Institute of Technology (KIT) and across national organizations.

At the same time, reaching a state of responsible research assessment at KIT remains a long-term goal. The movement toward responsible metrics and open science is challenging a well-established system and will lead to a cultural shift in scientific publication and reporting.

**Attributes**

The dimensions are broken down into separate individual areas called attributes. The maturity level of each attribute is measured on a scale from 0 to 5.

The level can be derived from a diverse set of metrics as well as a qualitative assessment through a review process.

Dimension Openness can be measured with the following Attributes:

#### Metric of Open Access

- Level 0 Percentage of Closed Access
- Level 1 OA in hybrid form
- Level 2 Green Open Access
- Level 3 Gold Open Access
- Level 4 Diamond Open Access

#### Dimensions

Indicators illustrating the different perspectives on research performance, including the five core principles: openness, collaboration, impact, quality, and sustainability

