

The Biological Information and Documentation System (BIDS)

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dkfz.

GERMAN
CANCER RESEARCH CENTER
IN THE HELMHOLTZ ASSOCIATION

At a glance

BIDS is the central DKFZ platform for documenting genetic engineering work.

It supports legally compliant recording and long-term storage of genetic engineering projects, genetically modified organisms and safety instructions in accordance with the Genetic Engineering Recording Ordinance (GenTAufzV).

As a paperless, web-based system, BIDS can be accessed anytime and from anywhere. It thereby simplifies documentation processes and provides a transparent and reliable information basis for all responsible stakeholders who are conducting genetic engineering work, but also for the regulatory authorities.

INTRODUCTION

All genetic engineering work in Germany is subject to mandatory documentation requirements. The legal framework requires that records are complete and stored in a timely and non-deletable manner, while ensuring that any subsequent changes remain transparent and traceable.

At the DKFZ, numerous research groups conduct genetic engineering work on a daily basis. To support scientists in meeting these regulatory requirements efficiently and consistently, we have developed a time- and paper-saving, web-based solution in collaboration with the Helmholtz Center Munich: BIDS

What BIDS can do

BIDS provides legally compliant documentation and long-term data management for genetic engineering work at the DKFZ, including:

- genetic engineering projects
- risk assessments
- genetically modified organisms
- safety instructions

In addition, BIDS ensures:

- long-term storage of all records (10 years for BSL-1 and 30 years for BSL-2/3 work)
- a centralized database of organisms, vectors and nucleic acids used in genetic engineering projects at the DKFZ (so-called "GMO attributes")

STRUCTURE

BIDS is organized into several functional modules, including genetic engineering work, safety instructions, administrative information and a dedicated help section. As a web-based platform, BIDS can be accessed independently of the DKFZ internal network and without the need for a VPN connection, allowing flexible use from any location.

A clear rights management ensures appropriate access to the different BIDS modules, as well as clearly defined permissions for data entry and editing. This approach ensures both data integrity and data protection. For example, appointed project managers can only access their own projects, while local authority representatives are granted read-only access to approved projects.

BIDS in numbers

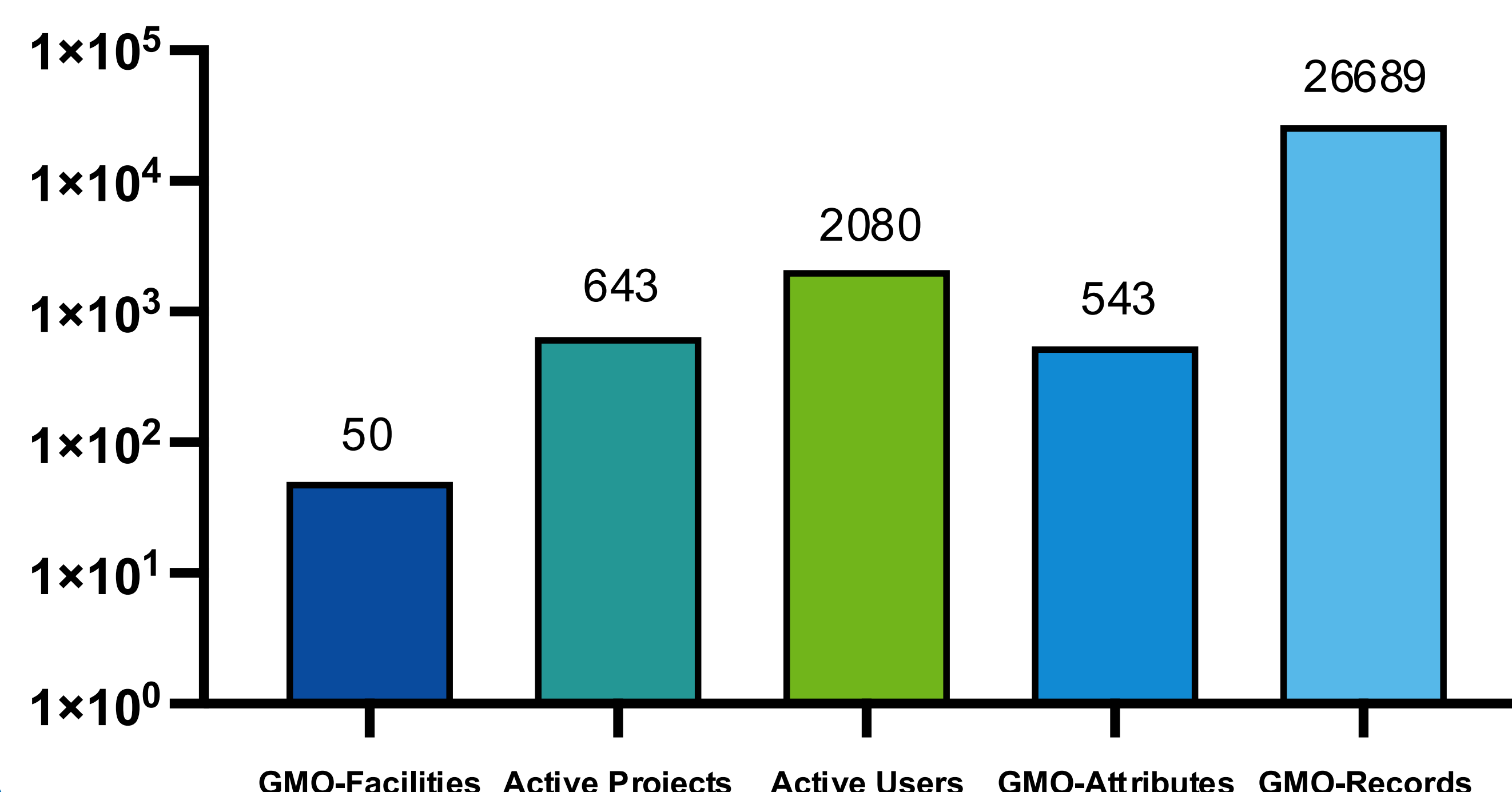


Fig. 1: BIDS in numbers. Overview of active genetic engineering facilities, projects, users, GMO attributes and stored records in BIDS. Due to the wide range of values, data are displayed on a logarithmic scale.

HOW TO USE BIDS

BIDS is based on user-provided entries. The type and scope of information to be entered depend on the user's role.

As appointed project manager:

- create new genetic engineering projects
- add active workers (possible accross departments)
- upload project-relevant documents (e.g. risk assessment, plasmid maps, ...)
- record genetic engineering work
- document safety instructions

As project member:

- record genetic engineering work

All entries are stored alongside a unique user ID and a timestamp, and cannot be deleted. Any modifications remain fully traceable through versioning and timestamping.

TRAINING

To support effective use of BIDS, the following training options are available:

- BIDS-EDU version as a sandbox and for learning purposes
- Training courses offered by the Biosafety department
- User guidelines and training videos

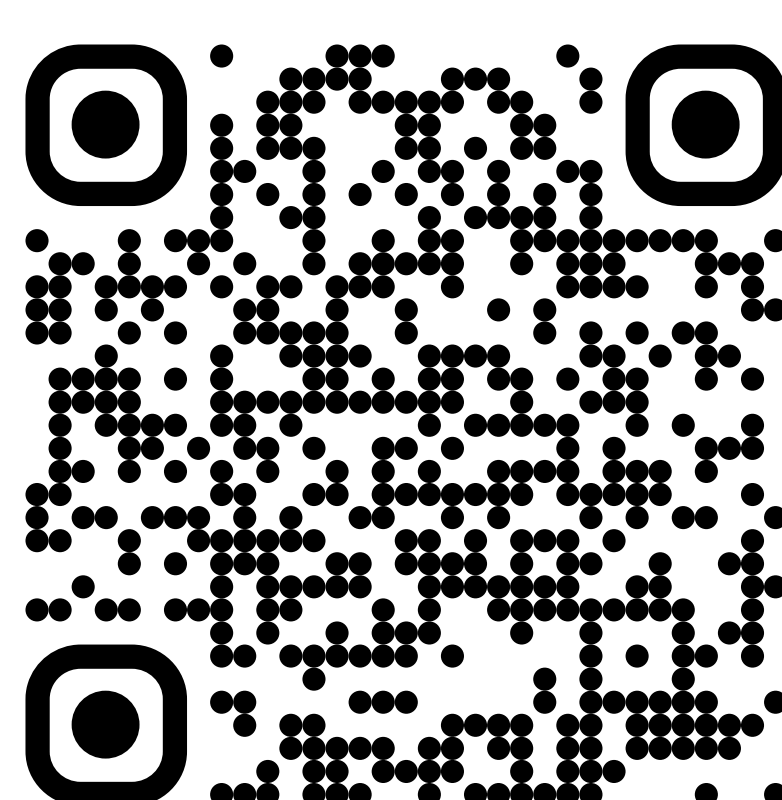
What BIDS cannot do

Please note the following limitations:

- BIDS does not replace laboratory notebooks and does not serve as documentation of experimental work at the bench, and vice versa
- BIDS is not linked to official risk group classifications and recommendations issued by ZKBS and TRBAs and thus does not automatically update GMO-attributes

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| managing risk.
| supporting science.

 BIDS



Nice to know:

BIDS is hosted and maintained by our collaborators, the HMGU, in Munich.