

DSPACE / DSPACE-CRIS AT FRAUNHOFER



Dirk Eisengräber-Pabst, Michael Erndt | Fraunhofer IRB

euroCRIS Membership Meeting 2019

DSpace-CRIS User Group Meeting, Nov. 18th 2019



Agenda

- **Fraunhofer-Gesellschaft** Basic Facts
- **Fraunhofer-FIS** Research Information System
- **Fraunhofer-Fordatis** Research Data Repository
- **Fraunhofer-Publica** Institutional Repository (publication data & full texts)



Competence Center Research Services & Open Science

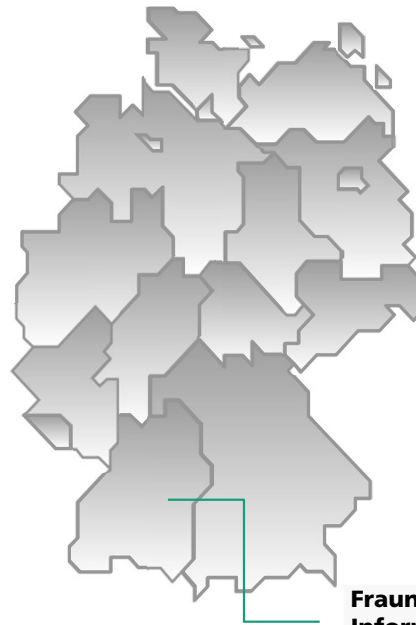
Fraunhofer-Informationszentrum Raum und Bau (IRB)

www.irb.fraunhofer.de

Nobelstraße 12

D-70569 Stuttgart

Germany



**Fraunhofer-
Informationszentrum
Raum und Bau IRB**

**CC Research
Services &
Open Science**



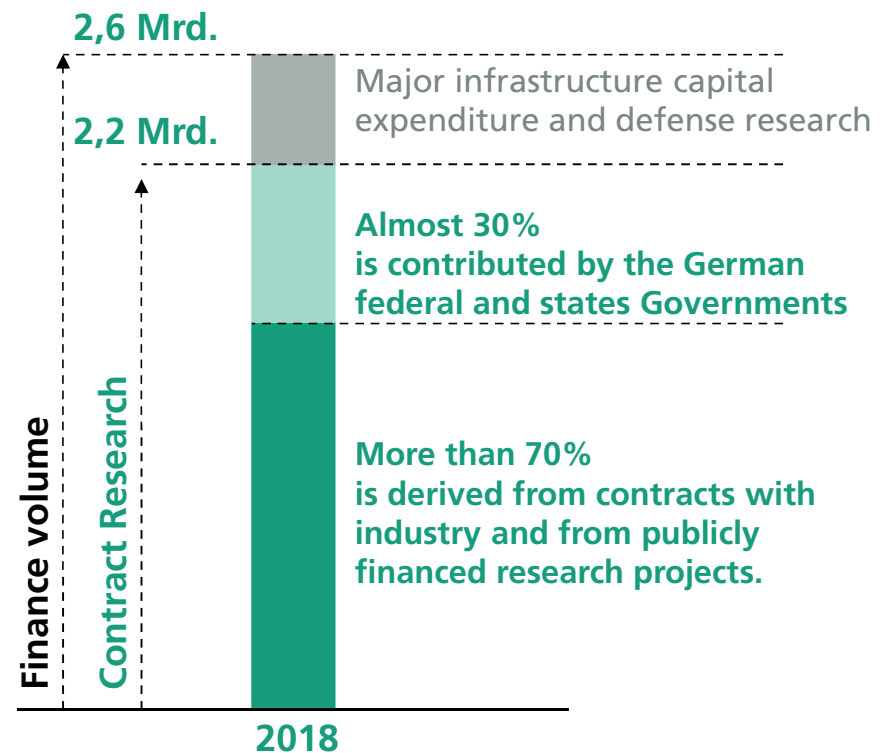
Expertise:

- Open Science @ Fraunhofer
- Indicators
- Dissemination-strategies
- Publication Support
- Repository Managment
- Community Engagement

Fraunhofer at a glance


26 600 staff


72 institutes and research units



Fraunhofer research groups



Innovation Research

IAO, IMW, INT, IRB, ISI



IuK Technology

AISEC, ESK, FIT, FKIE, FOKUS, IAIS, IDMT, IESE, IGD, IOSB, ISST, ITWM, IVI, MEVIS, SCAI, SIT
Guests: HHI, IIS, IAO



Life Sciences

EMB, IBMT, IGB, IME, ITEM, IVV, IZI



Light & Surfaces

FEP, ILT, IOF, IPM, IST, IWS



Microelectronics

EMFT, ENAS, FHR, HHI, IAF, IIS, IISB, IMS, IPMS, ISIT, IZM
Guests: AISEC, ESK, FOKUS, IDMT, IKTS, IMWS, IZFP



Production

IAPT, IEM, IFF, IGCV, IGP, IML, IPA, IPK, IPT, IWU, UMSICHT



Defense & Security

EMI, FHR, FKIE, IAF, ICT, INT, IOSB
Guests: HHI, IIS, ISI



Materials & Components

EMI, IAP, IBP, ICT, IEE, IFAM, IKTS, IMM, IMWS, ISC, ISE, IWES, IWM, IZFP, LBF, WKI
Guests: IGB, IIS, ISI, ITWM

Academic research structures

72



∞ 64 Universities

48 Univ. of Applied Science

- Extensive interrelations with universities and universities of applied science.
- **80** Fraunhofer directors hold chairs at universities.
- Direct involvement of Fraunhofer staff into academic lecture content
- Referred to 2018: **269** doctoral theses finished supported by Fraunhofer. **3317** ongoing
- Referred to 2018: Approx. **3090** scientific publications indexed in WoS/Scopus. **8127** publications in Fraunhofer-Publica. **837** projects of excellence (EU, DFG, BMBF).

Scope

- FIS: **F**orschungs-**I**nformations-**S**ystem
- Challenge: Measure academic / scientific performance
- Tool / web application for collecting data needed for calculation of Fraunhofer scientific indicators
- Data entered by Fraunhofer institutes: projects of excellence, supported doctoral theses and other theses, spokespersons, awards, teaching activities
- Data entered centrally: Number of scientific staff and number of patents per institute
- Analysis of scientific publishing activities of the institute is done outside of Fraunhofer-FIS based on Scopus
- „Closed“ system (restricted to Fraunhofer IP ranges; Useable only with account and only for certain group of staff)
- Calculation of indicator values and reporting is done outside of Fraunhofer-FIS

Technics & Configuration

- Running on VM in Fraunhofer Private Cloud.
- OS: Debian GNU/Linux 8 (jessie).
- Apache web server forwards to Tomcat. Second Tomcat instance for SOLR. Postgres-DB. Everything on the same server.
- DSpace-CRIS 5.8 JSPUI. Update to 5.10 will be done in near future. Higher upgrades not planned in the near term.
- Workflow: **Submission** (institute level) > **first approval** (institute level) > **final approval** (centrally by CC Research Services & Open Science at Fraunhofer IRB).
- Fraunhofer-specific adjustments including implementation of new entities, improvement of MyDSpace area, improvement of organisational unit page, PDF export.
- Currently no automated data exchange with other systems

Scope

- Fordatis: **F**orschungs-**D**aten-**I**nfra-**S**truktur
- Institutional research data repository of the Fraunhofer-Gesellschaft
- Research data and Metadata submitted by the researchers at the institutes. Quality assurance of the metadata is done by data curators at the institutes and by CC Research Services & Open Science at Fraunhofer IRB.
- All data is public and it is required to attach at least one file per data publication.
- Connection to the OpenAIRE repository.
- Login via Fraunhofer PKI-Card
- Metadata is based on DataCite-Standard

Technics & Configuration

- Running on a VM in Fraunhofer Private Cloud.
- OS: Ubuntu 18.10. Cosmic.
- Architecture: Frontend Server: DSpace & SOLR. Backend Server: PostgreSQL
- Based on DSpace 6.3 JSPUI.
- Interfaces: OAI-PMH, REST-API, RDF TripleStore.
- Workflow: **Submission** (researchers ; institute level) > **quality assurance** (data curators ; institute level) > **final approval** (centrally by Fraunhofer-IRB CC RSOS).
- Affiliation add on (via SOLR)
- Depositor: Deposit Licence
- Configuration management: Ansible 2.9.

Objectives & Challenges

- Publica Relaunch: Relaunch of two existing Fraunhofer repositories
 - Publica (bibliographic data)
 - ePrint (fulltext)
- Early Adopter of DSpace CRIS 7
- Research Output: Publications, Research Data, Patents, Software
- Linked with Entities (CERIF): RP, Project, Organisation, Journal, Event ...
- Linked with Fraunhofer DataSpace
- Linked to Fraunhofer ERP system
- Integration of external DBs and Services: Scopus, WoS, ...
- Implementing a new workflow and collaboration culture

Technics & Configuration

- Running on VMs in Fraunhofer Private Cloud
- OS: Ubuntu 18.10 Cosmic
- Architecture: Backend Server: DSpace Rest API; Frontend Server: Angular; DB Server: PostgreSQL; Solr Server (additional: Grobid Server)
- Storage: Fraunhofer S3
- Configuration management: Ansible 2.9.0
- Workflow: still under development
- Authentication: still under development

Kontakt

Competence Center Research Services & Open Science

Fraunhofer-Informationszentrum Raum und Bau (IRB)

www.irb.fraunhofer.de

Nobelstraße 12

D-70569 Stuttgart

Germany

Dirk Eisengräber-Pabst (Fraunhofer-Publica)

dirk.eisengraeber-pabst@irb.fraunhofer.de

Michael Erndt (Fraunhofer-FIS)

michael.erndt@irb.fraunhofer.de

Andrea Wuchner (Fraunhofer-Fordatis)

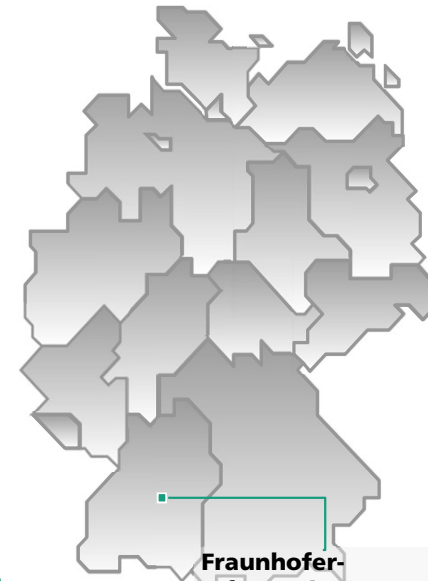
andrea.wuchner@irb.fraunhofer.de

CC Research Services & Open Science



Expertise:

- Open Science @ Fraunhofer
- Indicators
- Dissemination-strategies
- Publication Support
- Repository Managment
- Community Engagement



**Fraunhofer-
Informationszentrum
Raum und Bau IRB**

Fraunhofer IRB





Thank you.

