

»Fraunhofer-Publica« unlocked for Open Access and Interoperability

Anja McGrath

Dirk Eisengräber-Pabst

Open Repositories 2023 - Stellenbosch - June 15th 2023

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1.

Brief introduction of Fraunhofer-Gesellschaft

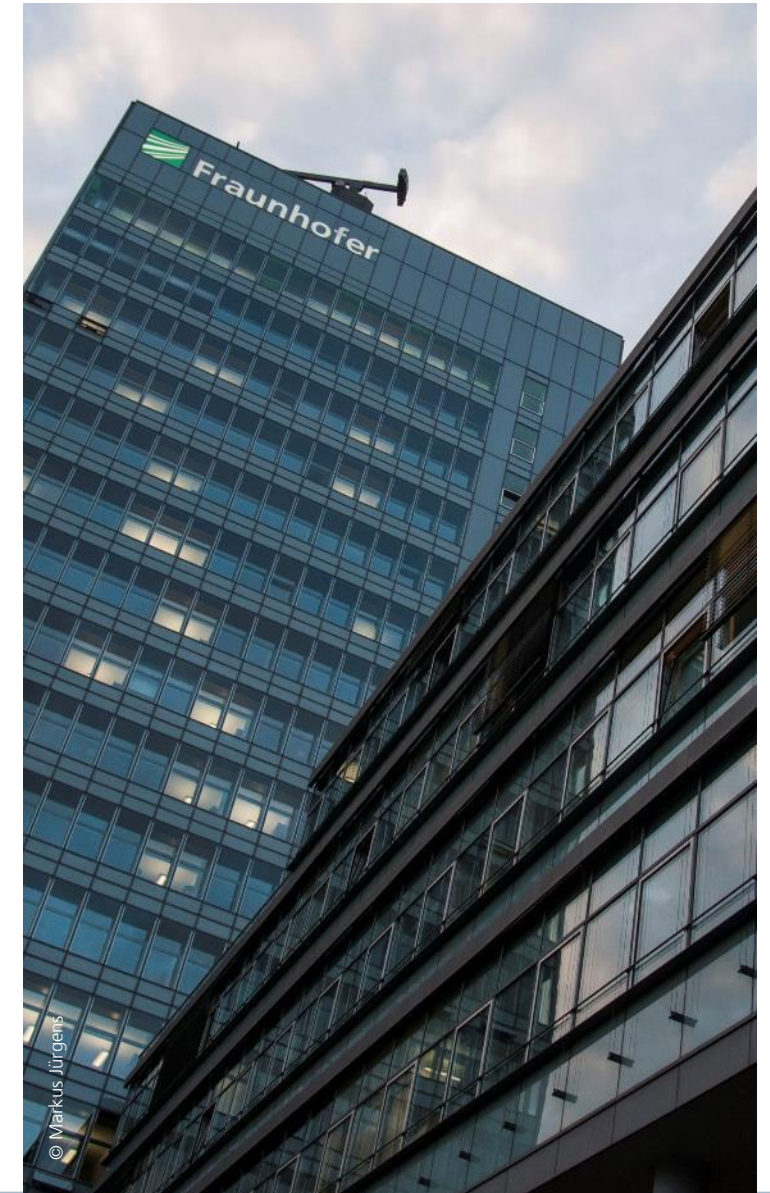
Fraunhofer-Gesellschaft

The leading applied research organization

The Fraunhofer-Gesellschaft, based in Germany, is the world's leading applied research organization. Prioritizing key future-relevant technologies and commercializing its findings in business and industry, it plays a major role in the innovation process.

A trailblazer and trendsetter in innovative developments and research excellence, it is helping shape our society and our future. Founded in 1949, the Fraunhofer-Gesellschaft currently operates 76 institutes and research units throughout Germany.

Over 30,000 employees, predominantly scientists and engineers, work with an annual research budget of 2.9 billion euros, 2.5 billion euros of this being designated as contract research. Roughly two-thirds of that sum come from industry contracts and publicly-funded research projects. Approximately one-third of it is base funding contributed by the German federal and state governments.



Founding of the Fraunhofer-Gesellschaft

In Munich on March 26, 1949



As part of Germany's reorganization and expansion of its research infrastructure, the Fraunhofer-Gesellschaft was founded in Munich on March 26, 1949.

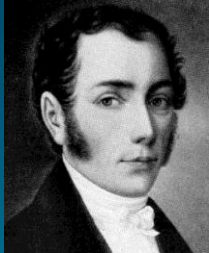
Joseph von Fraunhofer

The new research organization named itself after Joseph von Fraunhofer (1787–1826), a Munich scholar who enjoyed equal success as a researcher, inventor and entrepreneur.



Our eponym

Joseph von Fraunhofer



Joseph von Fraunhofer

Discoverer of the Fraunhofer lines in the solar spectrum

New methods for grinding lenses

Director and partner of a glassworks

Researcher

Inventor

Entrepreneur

The Fraunhofer-Gesellschaft



Research and development contracted by industry and government

mp3 music format, white LEDs, high-resolution thermal-imaging camera

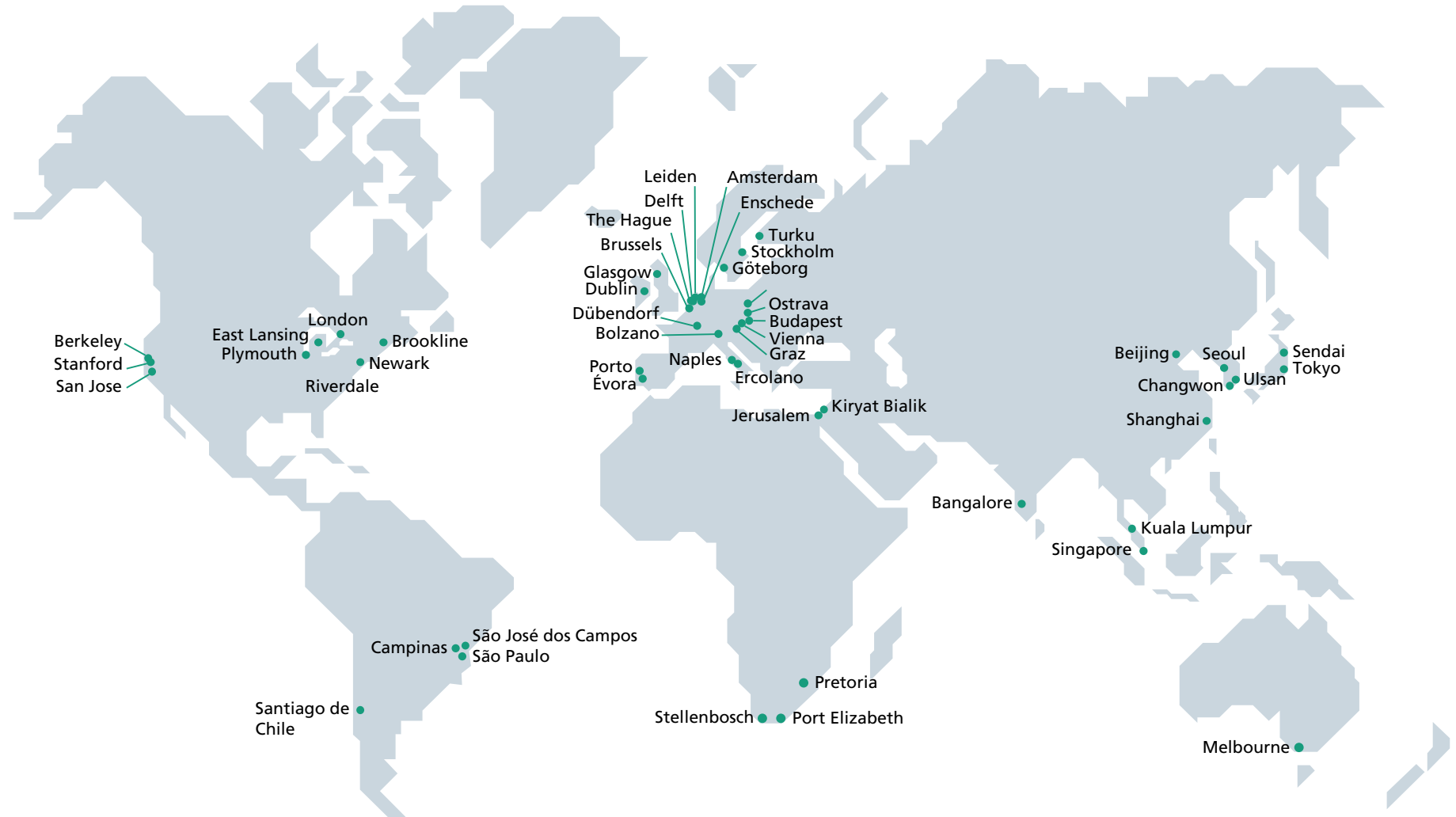
Research budget:
approx. 2.9 billion euros annually

Fraunhofer-Gesellschaft

International network



- Eight independent international Fraunhofer affiliates
- Activities with partners in approximately 80 countries
- Representative offices and senior advisors worldwide build bridges to local markets

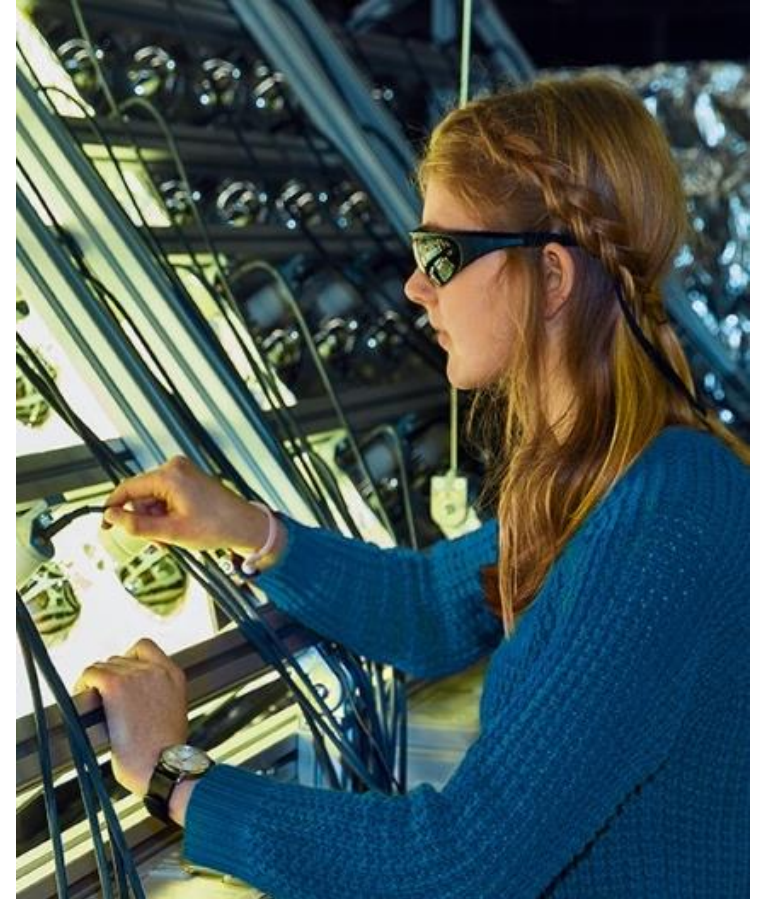


Mission statement

Our mission

The Fraunhofer-Gesellschaft is the world's leading applied research organization. We work together with companies to transform innovative ideas into technological breakthroughs, thus meeting the challenges of tomorrow — to benefit society and strengthen the German and European economies.

Our employees are shaping the future — in ambitious positions at Fraunhofer or in other areas of research and industry. Their personal and professional development is therefore a top priority at the Fraunhofer-Gesellschaft.



2.

History of the repository »Fraunhofer-Publica«

History of Fraunhofer-Publica

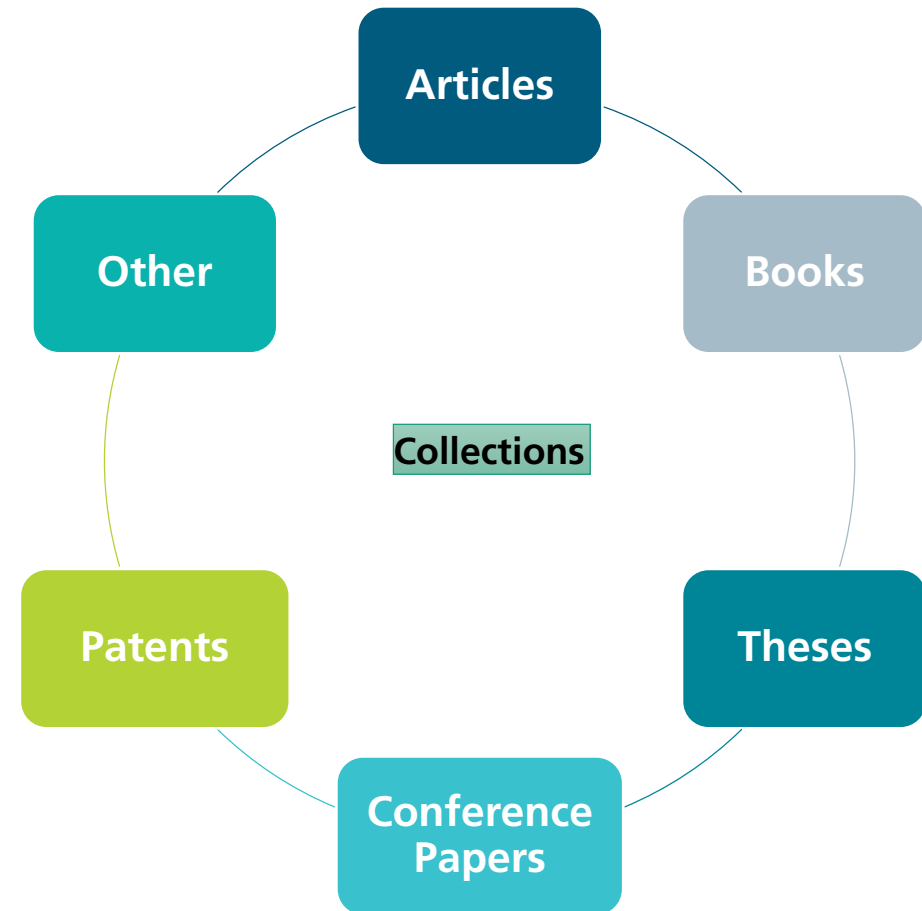


Research Output

The Fraunhofer-Publica has been successfully documenting the research results of the Fraunhofer Gesellschaft for over 35 years.

2500 000 publications
27 000 full texts

44 percent Open Access (Gold and Green) in 2020



Key users of Fraunhofer-Publica

Key users

Key users classic:

- Libraries of the Fraunhofer institutes
 - Submitting research output
 - Publication lists for project applications ...
- Marketing/PR of the Fraunhofer institutes
 - Publication lists to promote their own research

Key users new:

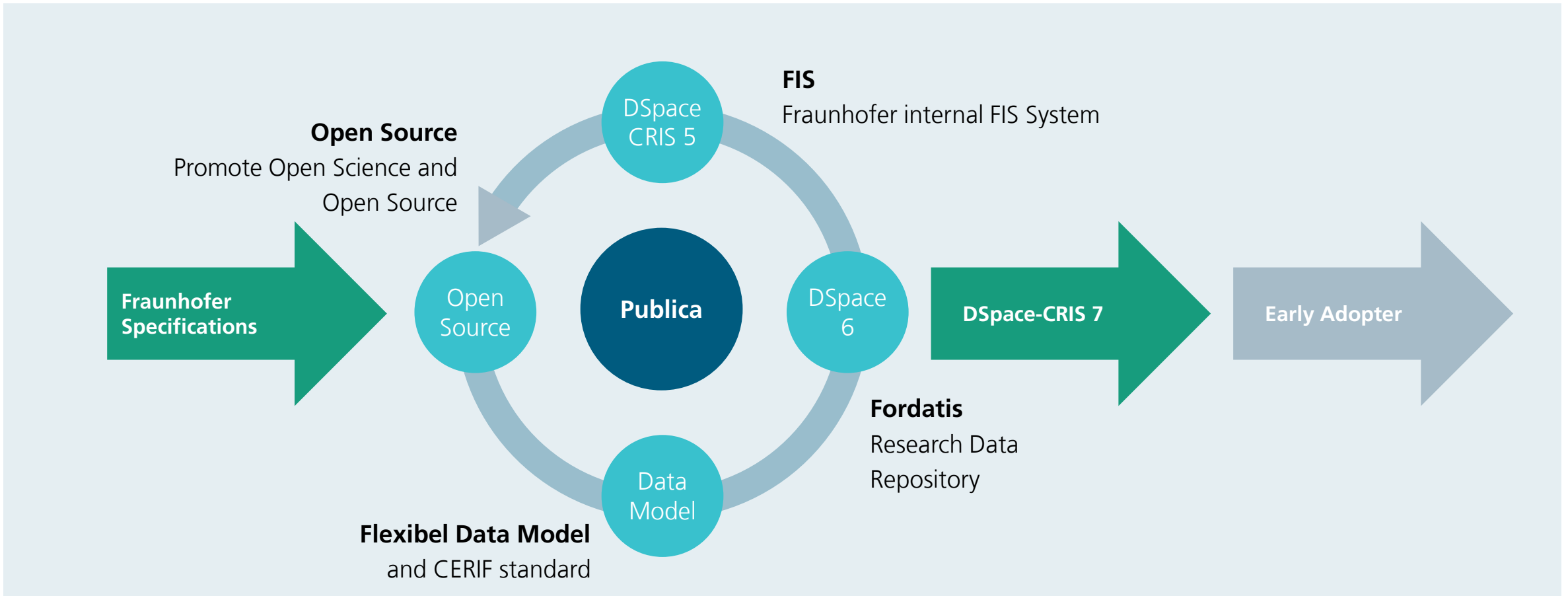
- Headquarters of the Fraunhofer-Gesellschaft
 - Cost transparency regarding open access funding
 - Other departments with specialized requests
- Scientists
 - Unified platform for all research output
 - Own profile, ORCID ...

3.

Implementation of DSpace CRIS 7

Dspace-CRIS 7

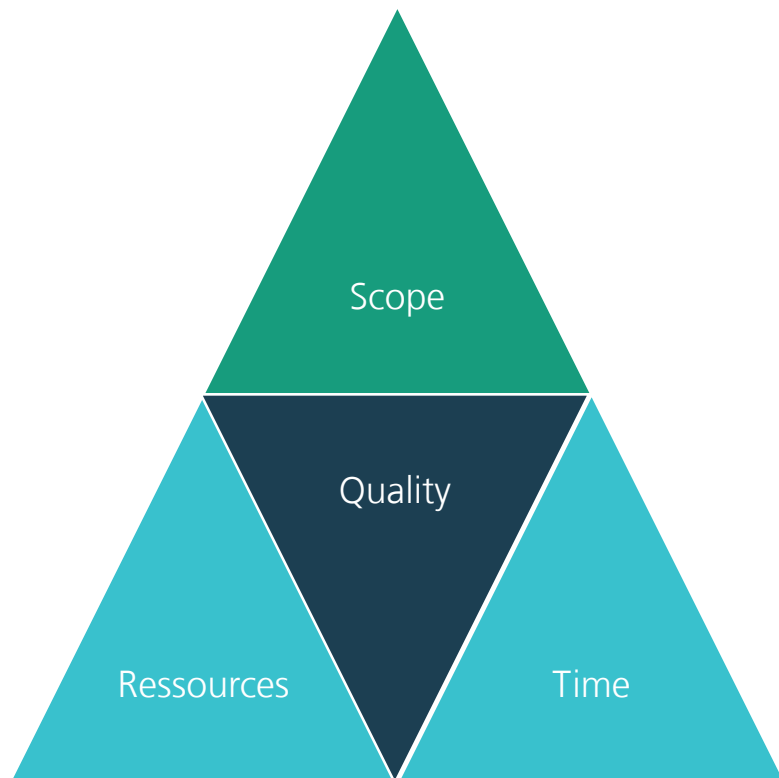
Decision 2019



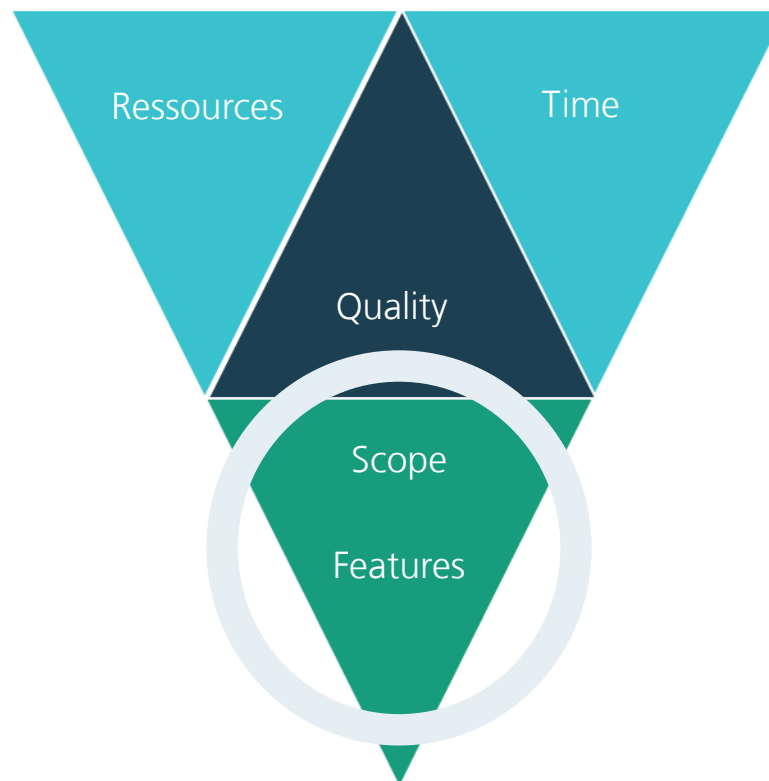
Publica Relaunch

Iron Triangle Paradigm Shift

Fixed



Estimated



Publica Golve 2022

Minimal Requirements

New Publica

Lessons Learned – Key Lesson

How to present migrated and new data using the same layout?

- Heterogeneous data quality
- Change of data model
- User habit: Linking is not Facet Search
- Items without submitter

Titel

Qualitative und quantitative tageslichttechnische Fassadenplanung für die Beratungspraxis

Abstract

Im Bereich von Fassaden und Dachoberlichtern herrschte bezüglich deren tageslichttechnischen Auswirkungen auf das Gebäude lange Zeit Planungsunsicherheit. Es fehlten Systemdaten und geeignete Planungs- und Beratungssoftware. Dies führte zu planerischen Fehlentscheidungen und Potentiale...

<https://publica-dev.fraunhofer.de/search?configuration=researchoutputs&f.author=Boer, Jan de,equals>

Planning uncertainty has long prevailed in the area of facades and skylights due to the use of daylight in buildings. There was a lack of data describing the characteristics of daylighting systems and the appropriate planning and consultation software. This led to planning errors and not maximising the po...

Author(s)

Boer, Jan de   Fraunhofer-Institut für Bauphysik IBP 

Wössner, Simon   Fraunhofer-Institut für Bauphysik IBP 

<https://publica-dev.fraunhofer.de/items/cd9ded63-dd98-4f11-9282-5f08c122dfda>

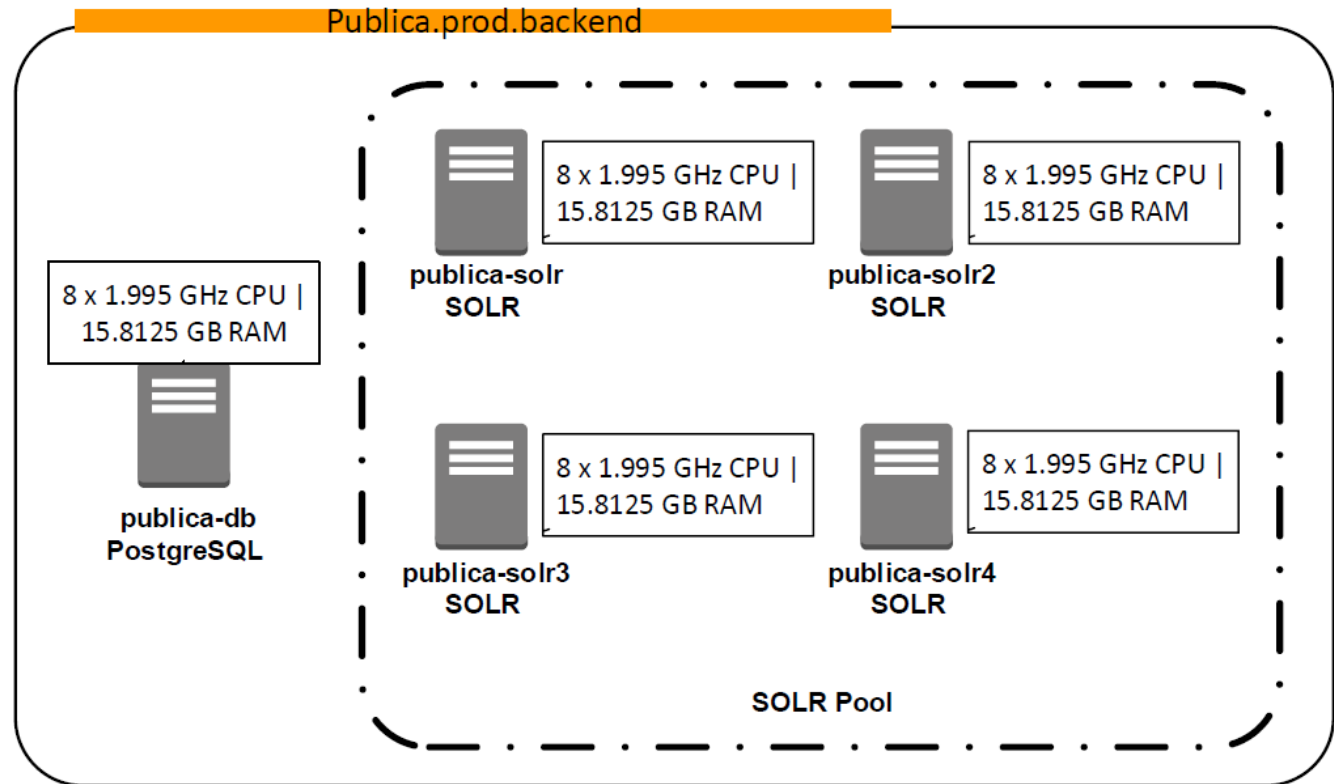
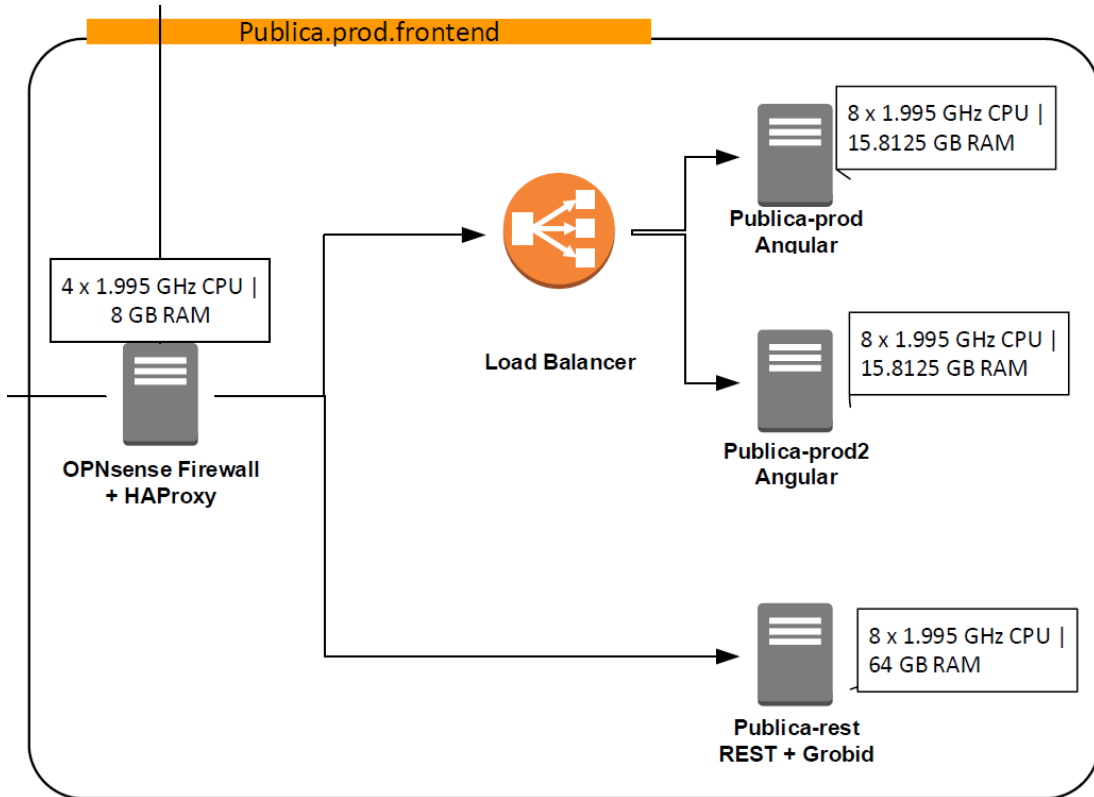
Polle, Dieter 

Witzel, Daniel  DIAL GmbH, Lüdenscheid

Schmidt, Mathias  Hochschule Rosenheim, Fakultät für Innenarchitektur

New Publica

Infrastructure – Launch configuration

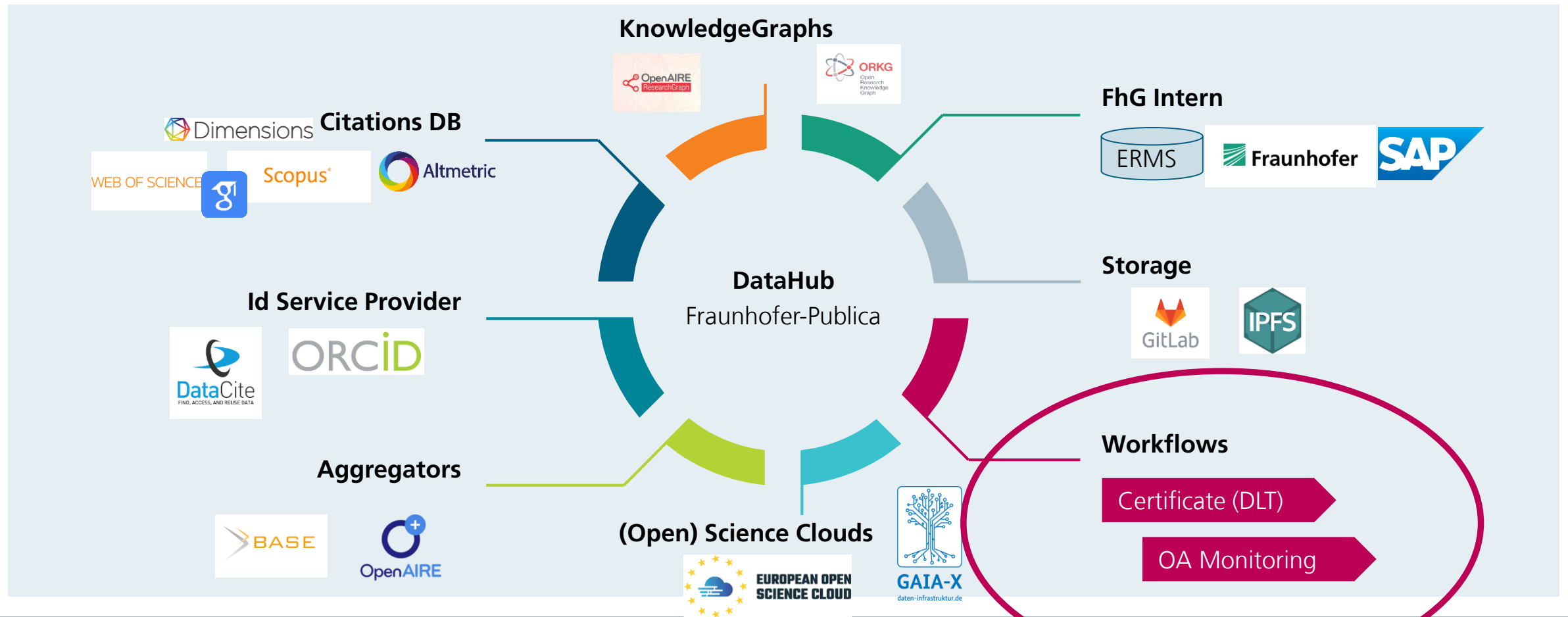


4.

»Fraunhofer-Publica« as DataHub

Fraunhofer-Publica as DataHub

Structured Metadata for all Research Entities: Publication, Researchdata, Patents, ...



5.



OA Monitoring Workflow

Open Access at Fraunhofer

Balance between science and business

Fraunhofer's Open Access Strategy

Objectives and measures

OPEN ACCESS STRATEGY

Open Access Publications

Open access publications of the Fraunhofer researchers

OPEN ACCESS PUBLICATIONS

Fraunhofer-Publica

The publication database and the publication repository of Fraunhofer

FRAUNHOFER-PUBLICA

DFG Funding Programme: "Open Access Publication Funding"

Fraunhofer-Gesellschaft Publishing Fund

Open Access Publication Funding

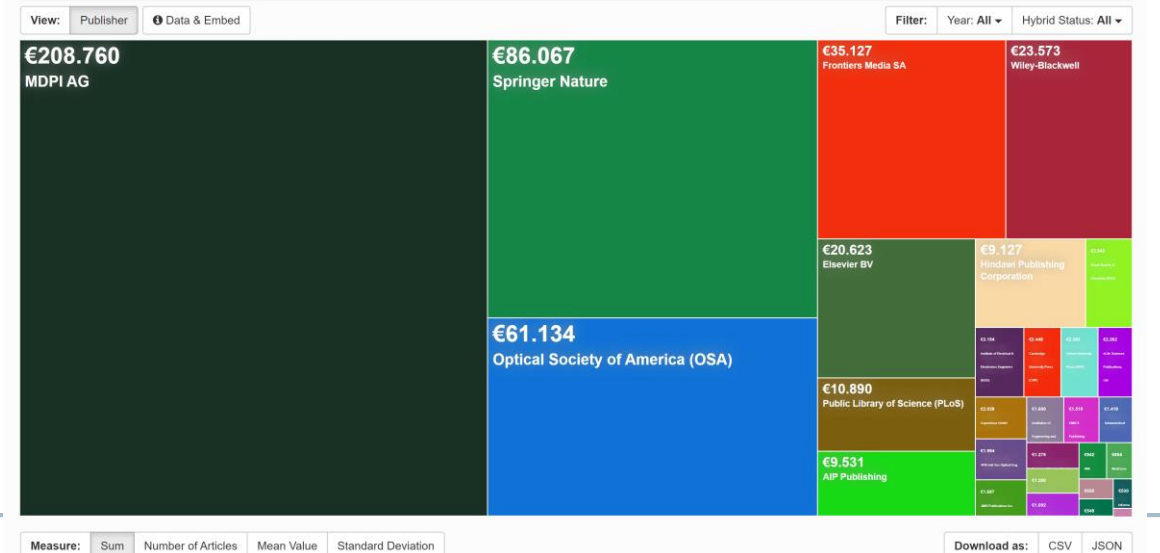
The aim of this funding programme is to create structural adjustment in financial flows, thus enabling the transformation of open access and improving transparency regarding the costs for open access publication of research results.

Central aspects of the funding programme

- Establish cost transparency
- central contracts or central accounting for publishing (APC)
- decentralised expenditure of costs via central accounting account
- central recording of all cost data
- Management of cost data in the repository
- Focus on journals
- Delivery of metadata to FZ Jülich

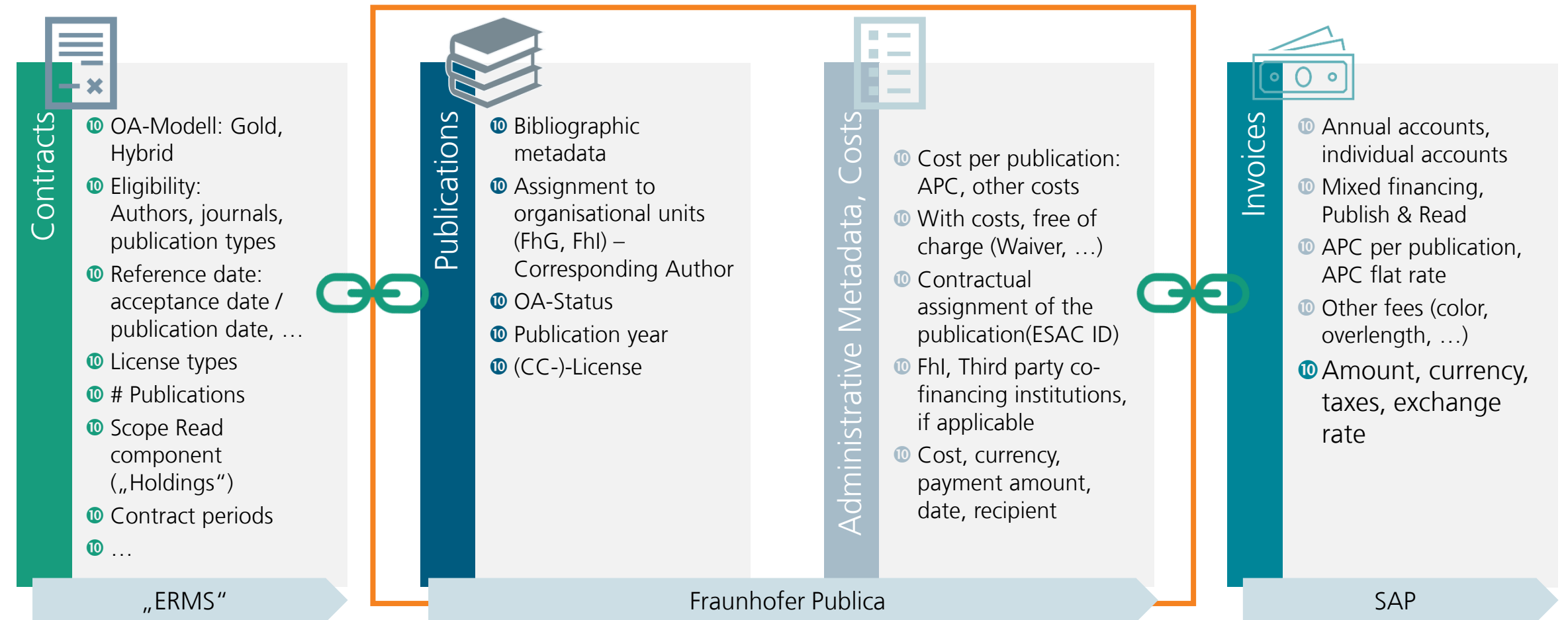


FRAUNHOFER-GESELLSCHAFT PUBLISHING FUND



Fraunhofer Publica – key instrument for publication monitoring

Publications and costs – monitoring workflow



6.

Certificate Workflow (DLT)

DLT and Research Output

Advantages of Blockchain and SmartContracts in Scientific Research

“DLT stands for Distributed Ledger Technology, which refers to a decentralized system that records and stores transactions or data across multiple nodes in a network. It offers transparency, security, and immutability by utilizing cryptographic techniques, enabling trust and eliminating the need for a central authority.”
chatgpt

1

enables transparent and verifiable data sharing

2

enhancing collaboration and reproducibility in scientific research

3

ensures data integrity and immutability - preventing tampering or data manipulation

4

promotes trust in scientific findings and enhances the credibility of research outcomes

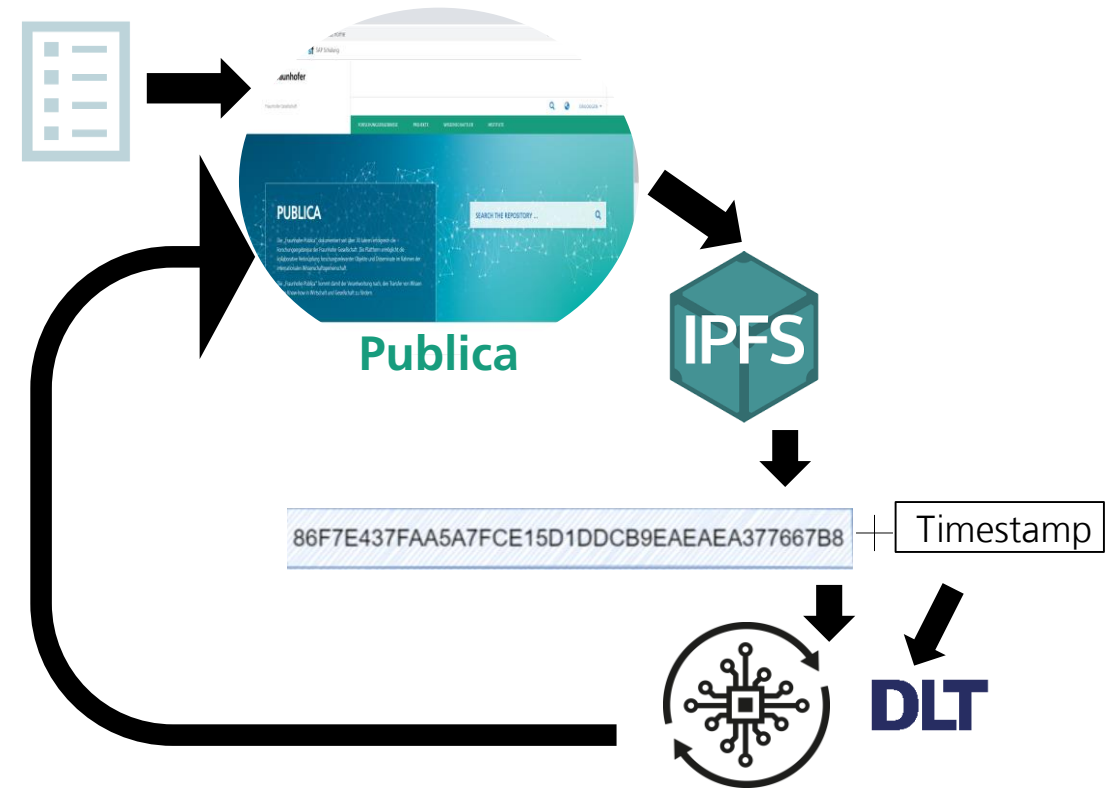
DLT – Fraunhofer-Publica

Certificate Workflow

Fraunhofer-Publica Use Cases

- Integrity of Research Data
- Defensive Publishing

Simplified schematic illustration



Current Publica DSpace Implementation (Proof of Concept – TRL 6)

Workflow: Item Submission and the process of issue and verify certificates

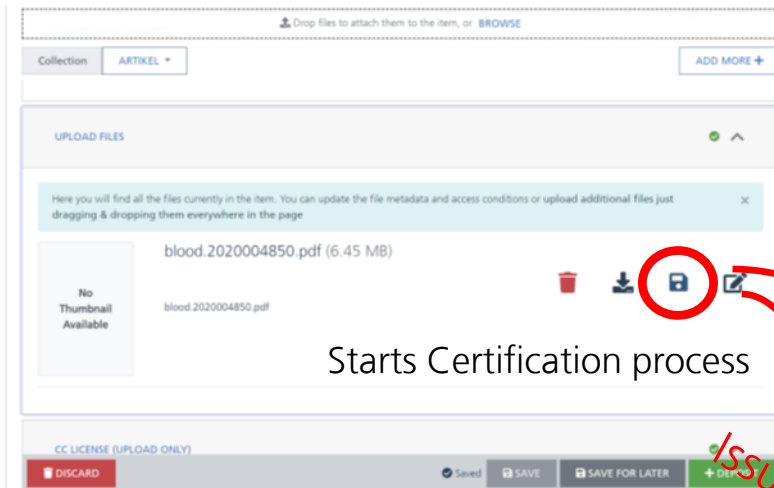


Researcher (Workspace Item)

- Starts the item submission
- Expresses the wish via checkbox

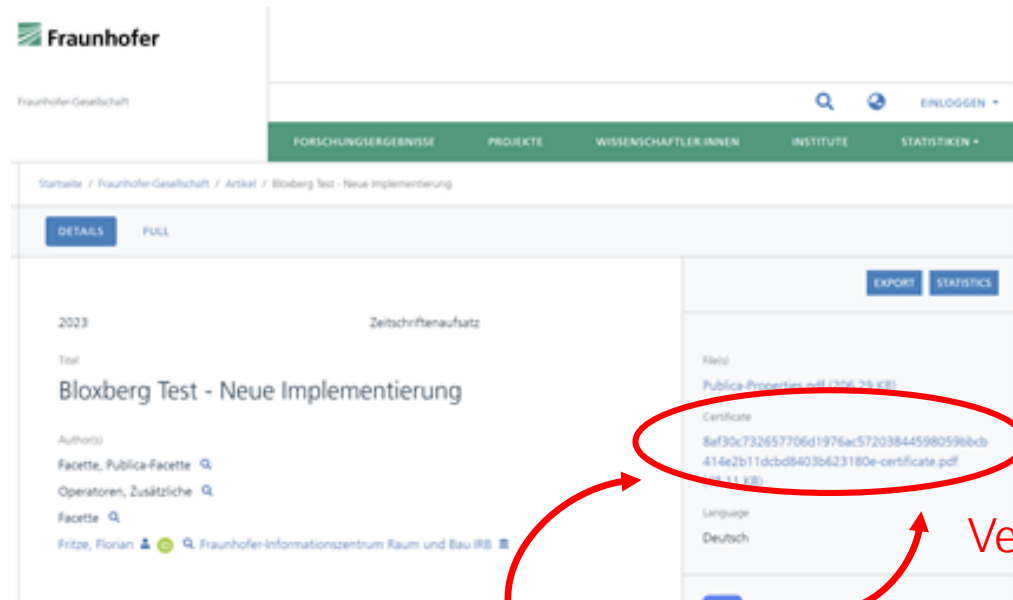
Librarian (Workflow Item)

Approves the DLT which



Starts Certification process

Issue certificate



Archived Item

Verify certificate



Thank you!

Questions?

Dirk Eisengräber-Pabst

dirk.eisengraeber-pabst@irb.fraunhofer.de

Tel: +49 (0)711 / 970-2979

Anja McGrath

anja.mcgrath@irb.fraunhofer.de

Tel: +49 (0)711 / 970-2618

**Competence Center Research Services
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Fraunhofer-Informationszentrum Raum
und Bau (IRB)

www.irb.fraunhofer.de

Nobelstraße 12

D-70569 Stuttgart

Germany