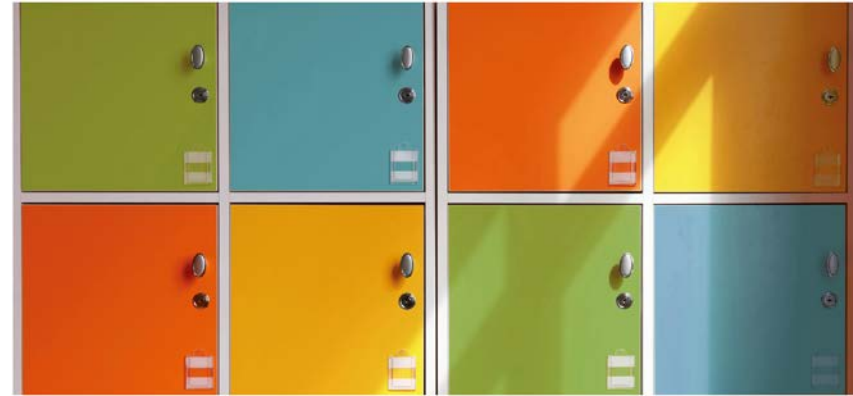




**RADAR**

# RADAR project:

Data preservation and  
publication



**RESEARCH DATA REPOSITORY**

**Dr. Angelina Kraft**

**German National Library of Science  
and Technology (TIB)**

DataCite Annual Conference

*Giving Value to Data: Advocacy, Guidance, Services*

Nancy, August 26<sup>th</sup>, 2014




## AGENDA

- **Project: RADAR – OVERVIEW**
  - Motivation
  - Partners
  - Aim
- **State of the art – WORK PACKAGES**
  - Progress & deliverables
- **RADAR – OUTLOOK**
  - Support services
  - In a nutshell
  - Next steps



## OVERVIEW

 **RADAR** = **R**esearch **D**ata **R**epository

- **Interdisciplinary infrastructure** which provides a sustainable **preservation & publication service** for **research data**
- Online: <http://www.radar-projekt.org>
- Which data? → DIGITAL! Including:
  - Raw (primary, machine output)
  - Secondary (working data)
  - Negative
  - Analyzed in scientific articles
- Duration: 01.09.2013 - 30.08.2015 with extension to 30.08.2016
- Funded by  **DFG** Deutsche Forschungsgemeinschaft



## MOTIVATION

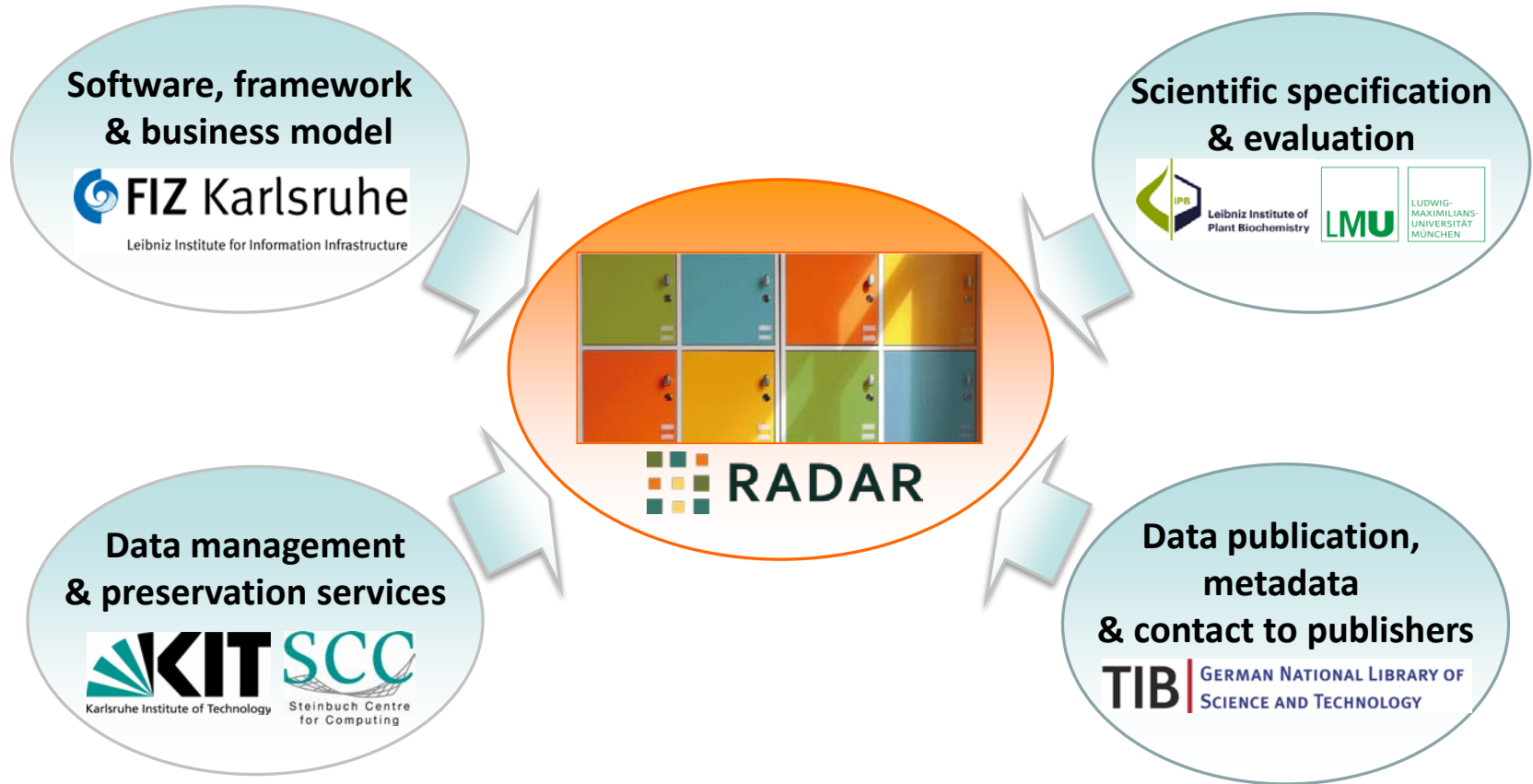


### **Construction sites ... in many (specific) research disciplines:**

- Missing infrastructures
- Quality control
- Publishability
- Traceability
- Usability → user & scientist
- Programming interfaces (web, portable applications)



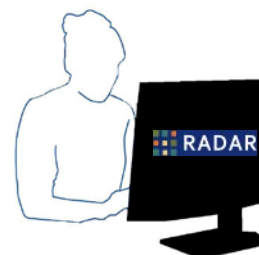
## PARTNERS

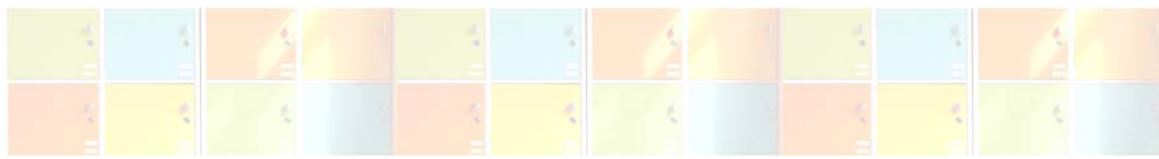




## AIMS

- Stimulating the viability of data
- Enable cross-platform (meta)data sharing via appropriate interfaces
- Extension of renowned, discipline-specific data repositories





## STEPS TO DATA PRESERVATION



- 1** Registration / Sign in
- 2** Data selection
- 3** Service types:
  - A** Preservation
  - B** Data publication with integrated data preservation

- 4** Data ingest
- 5** License
- 6** Data transfer & checksumming
- 7** Data preservation
- 8** Allocation of persistent identifiers
- 9** Reporting for the data provider



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## WORK PACKAGES (WP 1 – 7)

**WP 1: Project management**

[radar-projekt.org](http://radar-projekt.org)

**WP 2:**  
Specification  
analysis

Technical &  
scientific  
standards

**WP 3:**  
Metadata  
specifications

Metadata  
Schema  
v0.1

**WP 4:**  
Data  
management

Architecture  
  
Bitstream  
Preservation  
  
Web design

**WP 5:**  
Data  
publication

Workflows  
  
Two-stage  
service  
  
Guidelines

**WP 6:**  
Business  
model & legal  
framework

Cost estimates  
  
Single/Yearly  
payment  
  
RDM funds

**WP 7: Evaluation**

Test system 2015/Workshops



## RADAR Metadata Schema


9 Mandatory properties

12 Optional properties

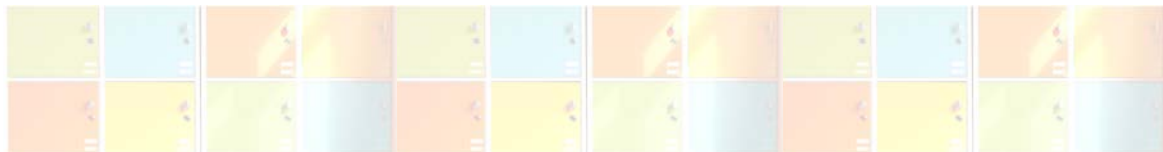


## METADATA SCHEMA

### Mandatory properties


\* Identical to  
properties   
DataCite  
International Data Citation

1.	<b>identifier*</b>	Handle, DOI*
2.	<b>creator*</b>	Persons involved in producing the data
3.	<b>title*</b>	Study/Data title
4.	<b>publisher*</b>	Corporate/Institutional or personal name
5.	<b>productionYear</b>	Year, in which data was created or refers to
6.	<b>subjectArea</b>	Scientific fields appropriate for the resource
7.	<b>resource</b>	Resource's content (dataset, model, software...)
8.	<b>rights*</b>	Rights management statement (CC BY...)
9.	<b>rightsholder</b>	Institution/Person holding rights



## METADATA SCHEMA

**Optional properties** - for discipline-specific data descriptions

\* Identical to properties   
DataCite  
International Data Citation

10.	<b>additionalTitle</b>	Complementary textual information
11.	<b>description</b>	Further information (abstract...)
12.	<b>keyword</b>	Keywords describing the subject focus
13.	<b>contributor</b>	Associated institution/person (funder...)
14.	<b>language*</b>	Main language used or relevant to resource
15.	<b>alternateIdentifier*</b>	Unique string within its domain of issue (local identifier...)
16.	<b>relatedIdentifier*</b>	Identifiers of related resources
17.	<b>geoLocation*</b>	Region/Place where resource originated/refers to
18.	<b>dataSource</b>	Data origin (instrument, observation, trial...)
19.	<b>softwareApplication</b>	Software used for data production
20.	<b>dataProcessing</b>	Specifies further processing (statistics...)
21.	<b>relatedInformation</b>	Further information (database number...)

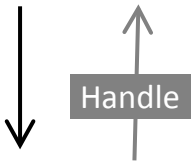


## Two-stage service

- A** „Preservation“
- B** „Data publication with integrated preservation“



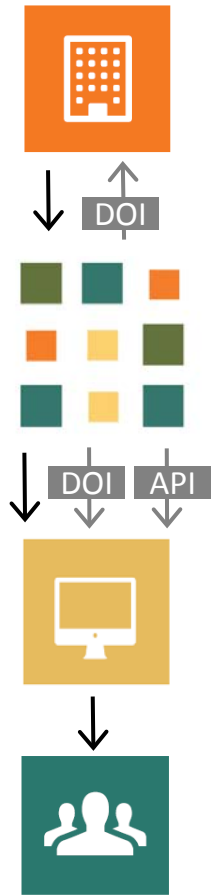
## SERVICE TYPE **A** „Preservation“



- Aim: Trustworthy data preservation
- For whom?
  - Completed research projects
  - Internal resources, not to be publically available (yet)
- Properties:
  - Minimum metadata set (9 parameters)
  - Handle
  - Variable storage period: 1 to 15 years
  - Bitstream Preservation for storage period
  - Regular reports on data integrity
  - Access rights for selected groups/users



## SERVICE TYPE **B** „Data publication with integrated preservation“



- Aim: Trustworthy preservation & traceable publication
- For whom?
  - Projects: Data basis for scientific papers
  - Independent data publications (e.g. negative data)
  - Digital representations
- Properties:
  - Expanded metadata set for discipline-specific data
  - DOI
  - Unlimited storage period
  - Regular reports on downstream use to data provider
  - Access management (embargo & publisher services)



## Workflows for services:

- DECISION: **A** or **B**
- OPTIONS: **B** PUBLICATION





DECISION: **A** or **B**

Registration/Initialization



Make your decision



**A**

### *Preservation*

- Secure archiving (without publication)
- Graded rights of access

Access to data and metadata for administrators and curators

Access to data and metadata for selected users

**B**

### *Data publication with preservation*

- Archiving & (delayed) publication
- Publicly available metadata & advanced access

Publication with embargo

Immediate Publication

Article Review with Data Publication



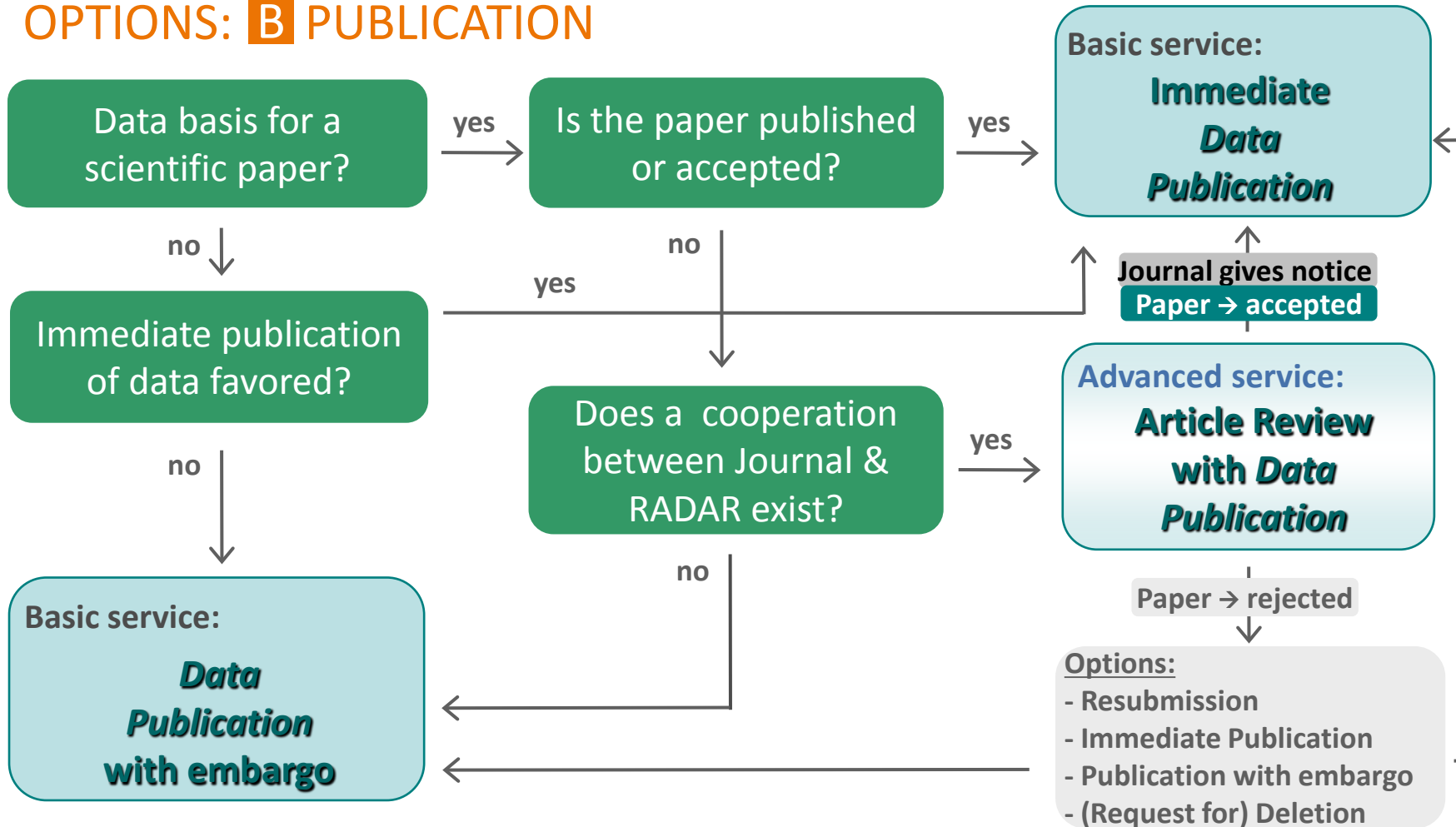
Indicative price



Selection of data  
Submission of metadata



## OPTIONS: **B** PUBLICATION



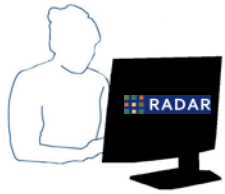


## AGENDA

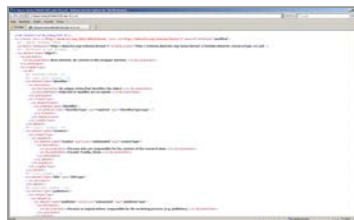
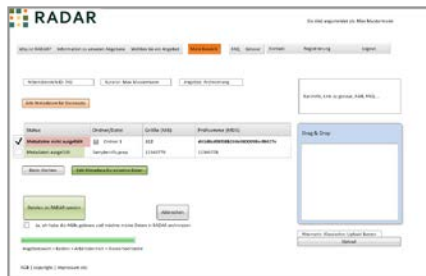
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## SUPPORT SERVICES:

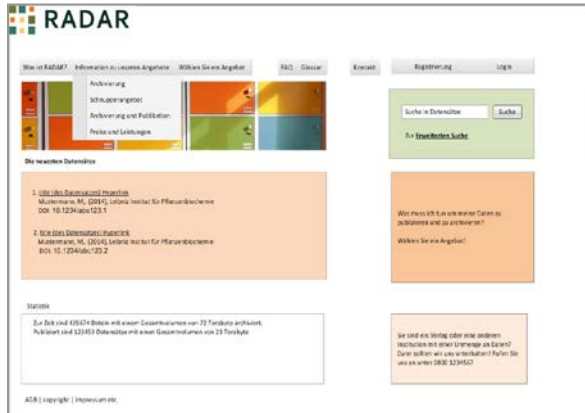


- **Guidelines**  
→ How-To's, recommendations on formats, citations, licenses ...
- **General & discipline-specific glossary**  
→ Step-by-step addition of examples
- **Quotes**  
→ Indicative price, e.g. for funding applications
- **Integration services for publishers/journals**  
→ Data for peer review





## IN A NUTSHELL...



- **Interdisciplinary end-point repository**
- Focus: specialized research disciplines
- **Extension** of discipline-specific data archives
- Support of **cross-platform** (meta)data **sharing**
- **Two-stage service:**
  - A** „Preservation“
  - B** „Data publication with integrated preservation“
- **Business model** → ‚pay to publish‘



## NEXT STEPS

- **Product development**

- System specification - **platform, APIs, design** - for two-stage service
- Metadata implementation (XSD), user centered design
- Guidelines, policies, FAQs, Glossary

→ **Start of test service in 2015**

- **Networking**

- **Workshop with stakeholders:** publishers, academic institutions, companies  
→ discussion of system functions & properties
- **Co-operation with other research areas**, e.g. engineering sciences
- **2015/2016:** Expanding services - **Integration of journals** (peer review support)  
- **Institutional ,branding'** (front end support)

Thank you for your attention!

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