Graz University of Technology

Project presentation

RDM Marketplace – Barcamp – 4th February 2021

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Jakob Harden

Graz University of Technology

The project team

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LabNDB project management,
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Junior scientist
Support and knowledge for material
database

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Laboratory manager
Support for laboratory processes and
workflows, quality management, IT-support

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Laboratory Notebook and Database
LabNDB

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Who are we?

Institut für Materialprüfung und Baustofftechnologie mir angeschlossener TVFA für Festigkeits- und Materialprüfung, IMBT/TVFA [2060]
Institute of Technology and Testing of Construction Materials

How to get in contact with us?

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Homepage: https://www.tugraz.at/institute/imbt-tvfa/home/

Where are we?

Inffeldgasse 24/I, 8010 Graz, Austria
Campus Inffeldgasse - BTZ

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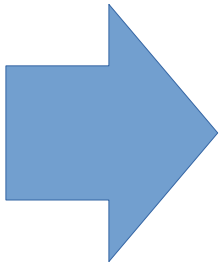
Current RDM scenario

- Different data formats
- Different data storage locations
- Different documentation types
+ Quality management system
+ Experience in laboratory processes

Data is there but …

- Hard to find
- Hard to reuse
- Hard to analyse



Target RDM scenario

- Unified data formats
- Central data storage location
- Unified documentation system
- Enhanced quality management
- Provide data for research and production
- Long term availability to create a scientific body

Data is there and FAIR

- Findable
- Accessible
- Interoperable
- Reusable

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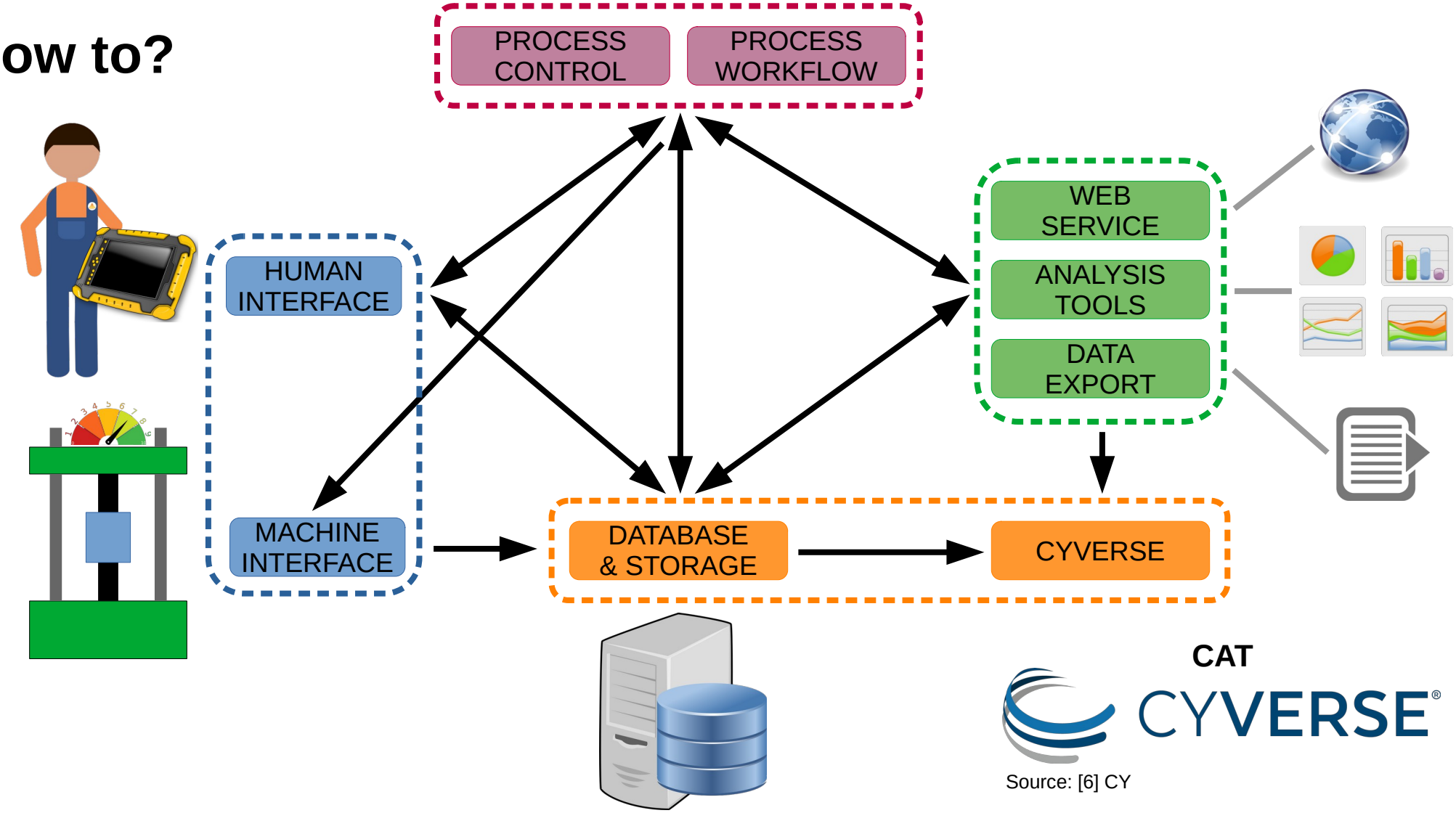
How to?



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Main components

Laboratory Notebook	Material/Sample Database	Database/File Server	Data export
Web frontend	Web frontend	Relational, scalable DB	Open formats
Workflow oriented	Modular structure	Reliable file service	CyVerse (iRODS) InvenioRDM
Modular structure	Tablet computers, desktop computers, smart phones	Up-to-date security	Open source tools
Tablet computers, desktop computers, smart phones	Open source tools	Open source software	
Open source tools			

Content Management System (CMS)

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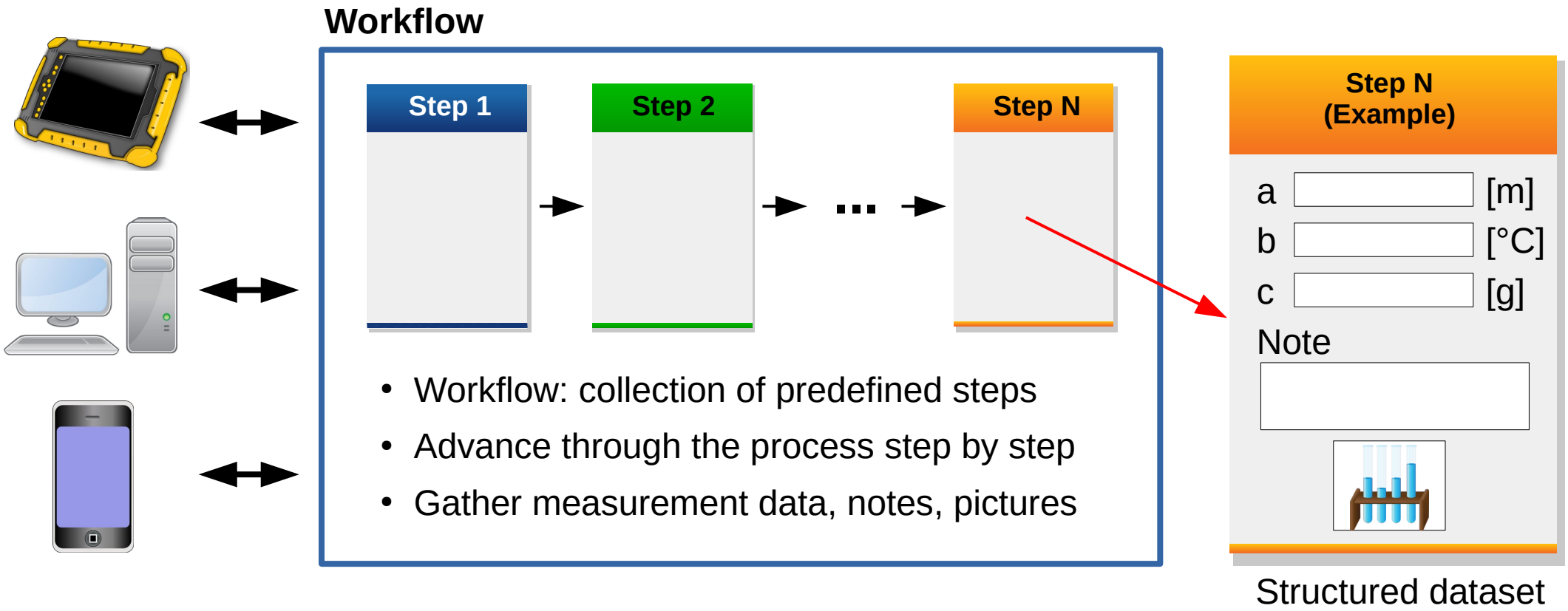
Laboratory Notebook



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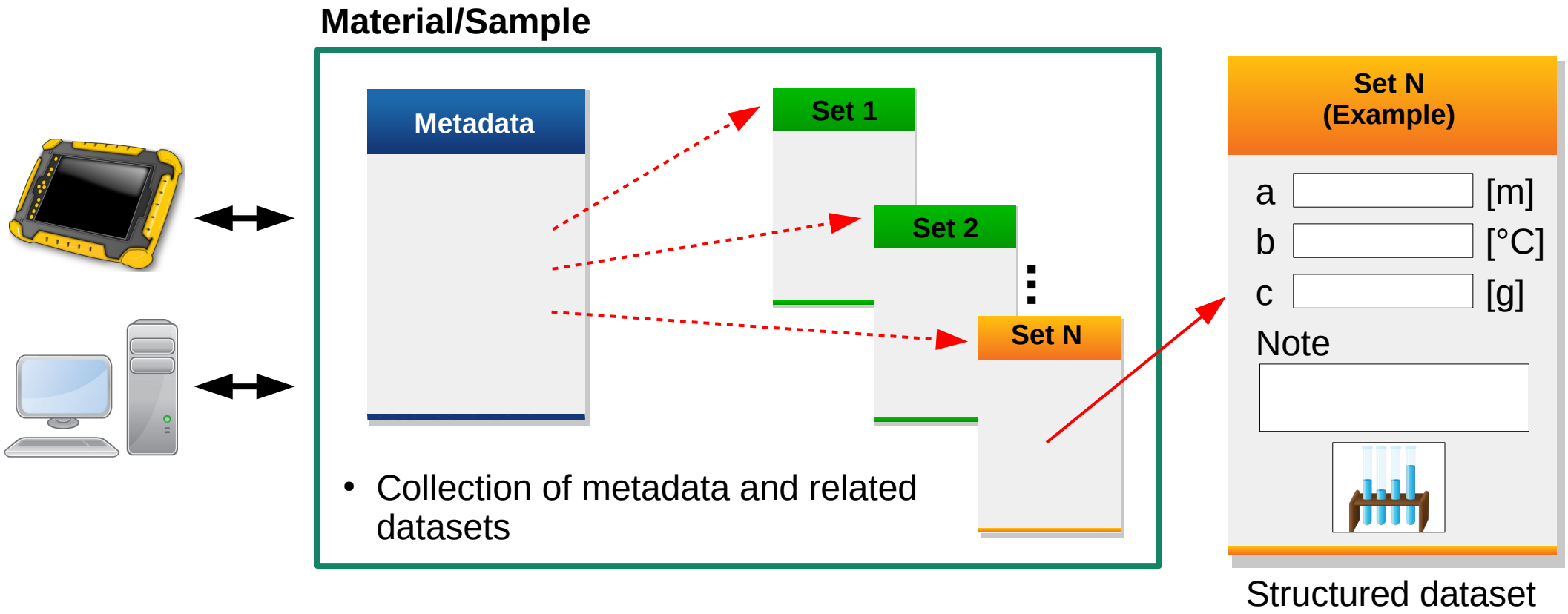
Material/Sample database



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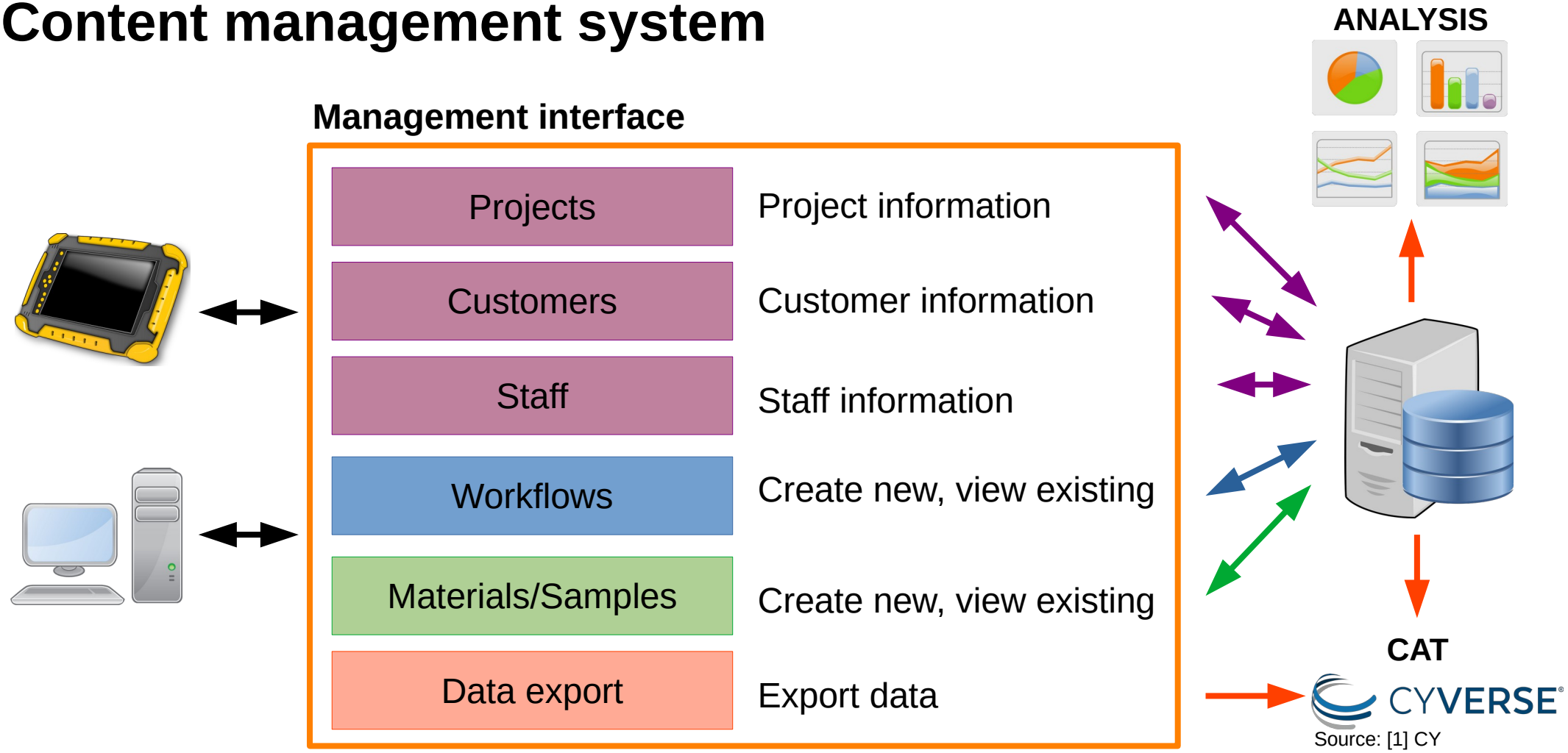
Content management system



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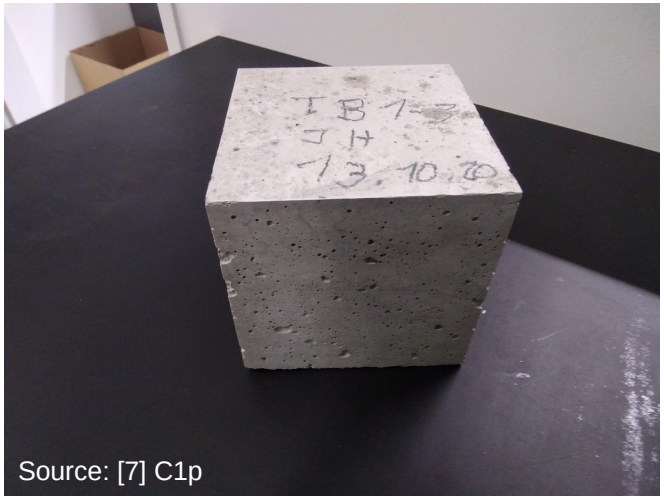
Laboratory Notebook – application example

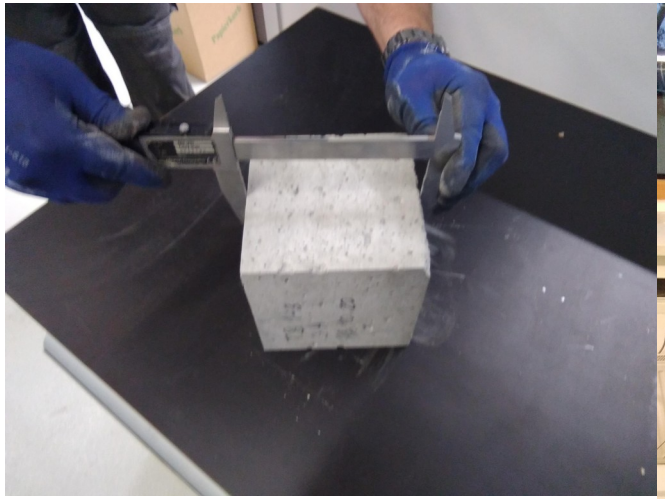
Compressive strength of a concrete cube

Get sample from customer



customer, date, what tests are to be done, photo, ...

Measure sample dimensions and weight



width, height, length, mass, ...

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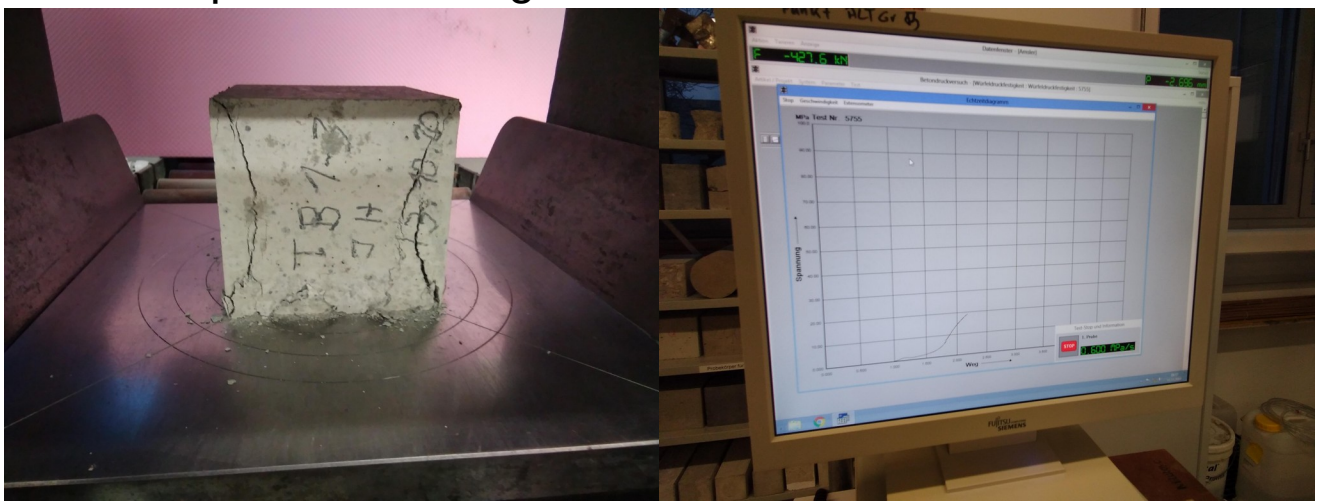
Laboratory Notebook – application example

Compressive strength of a concrete cube

Test compressive strength



measurement data from test device, photo, notes, ...

create report

analyse data

export data

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