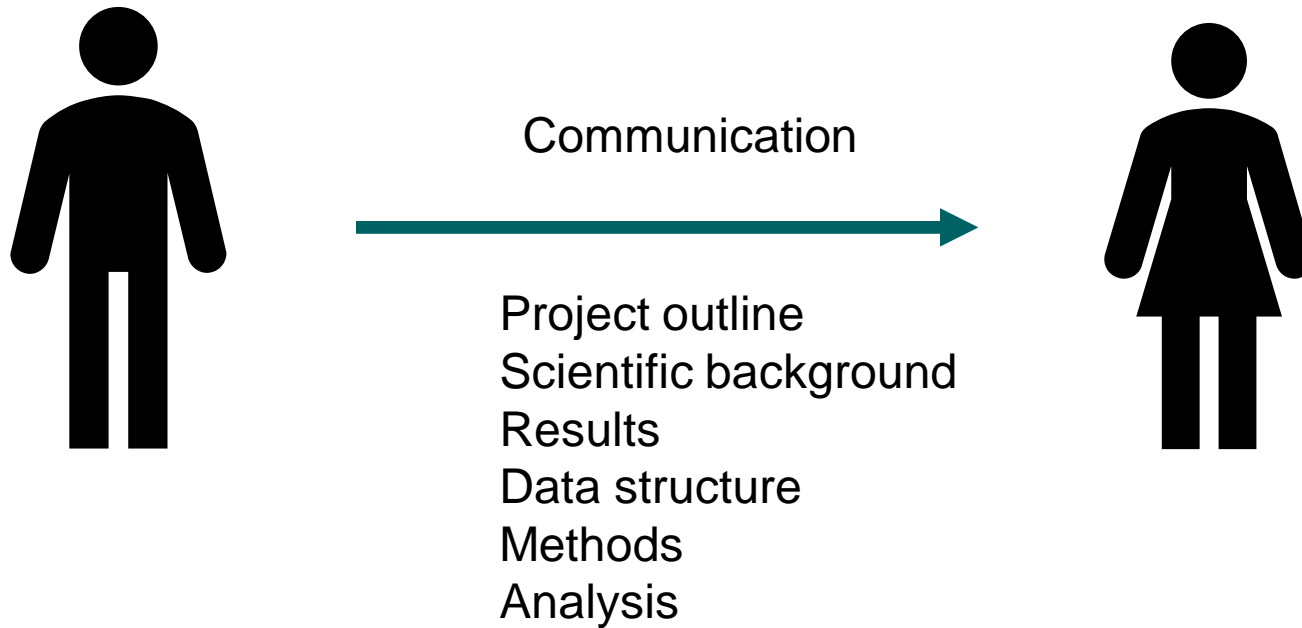


A common data management strategy in a heterogenous research group

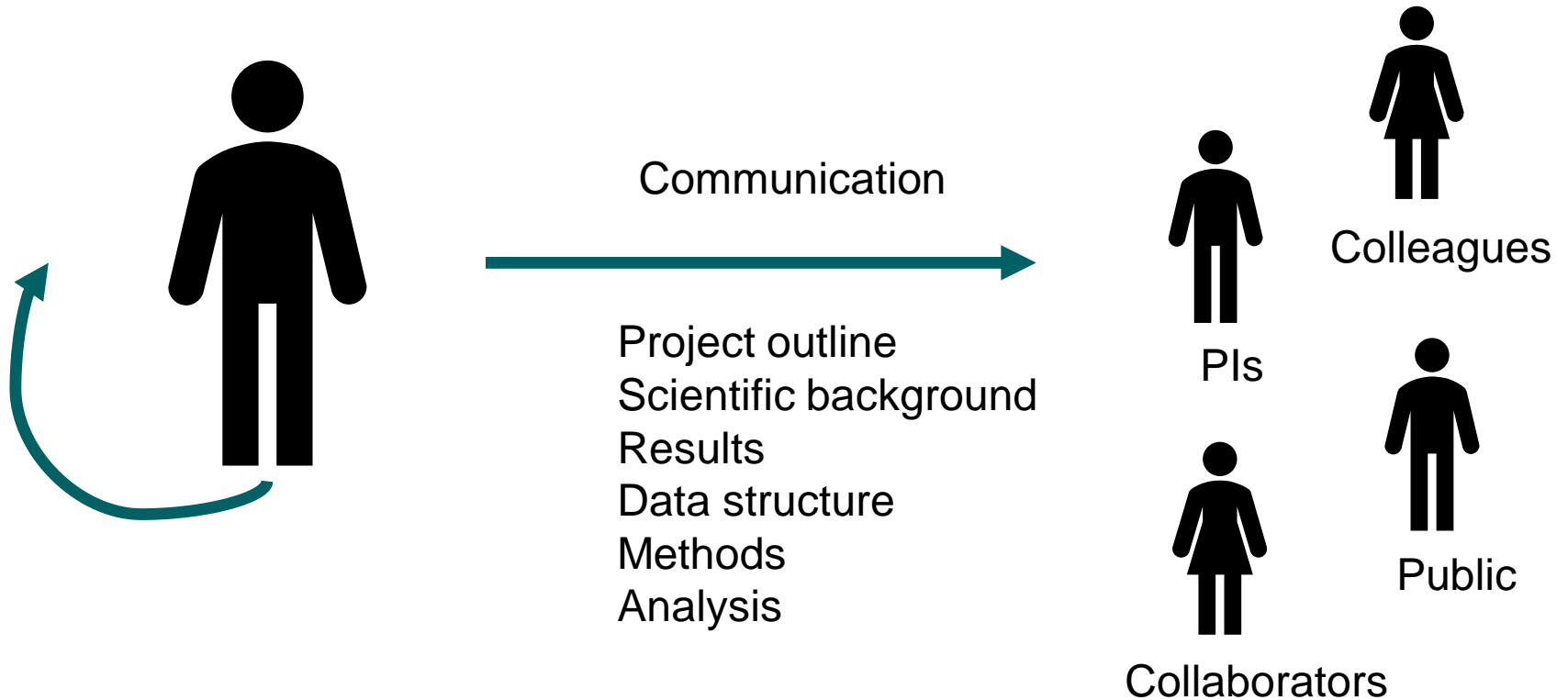
RTG 2416
Multi Senses
Multi Scales

Dr. Christopher Wiesbrock
5th Workshop of the NFDI Neuroscience
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Data Communication



Data Communication



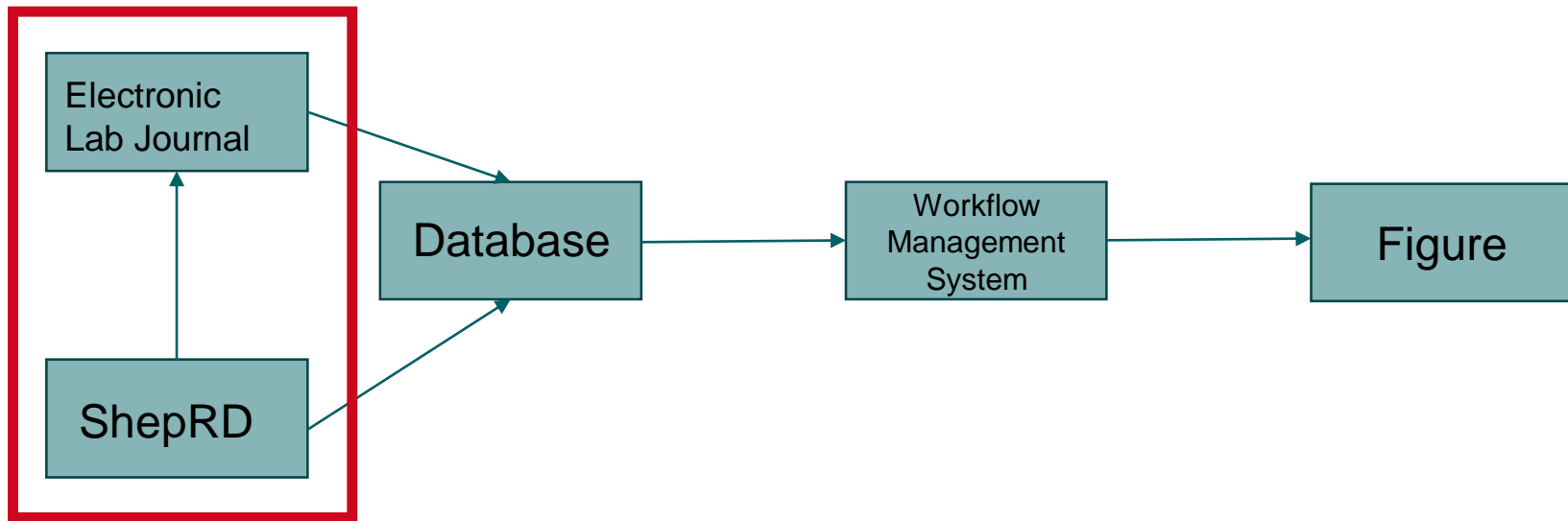
The Challenge

Multisensory Integration

- Wide range of methodological approaches
 - Imaging
 - Cell biology
 - Electrophysiology
 - Behavior
 - Simulations
- Different programming experience
 - From beginner to expert in different languages
- Make Data Management accessible for everyone!
 - Find an approach which is independent from individual backgrounds
- Implementation of research data management in everyday routines



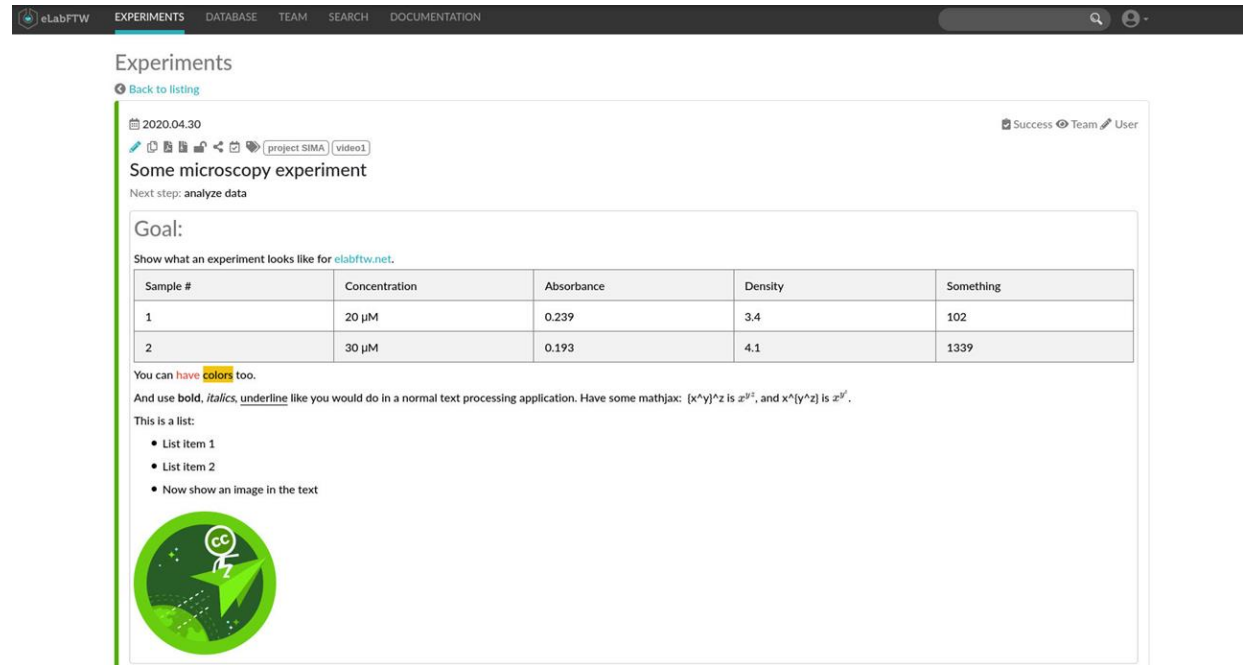
The Data Management Eco system



Everydays routine

ELN - ElabFTW

- Digital labbook
- Keywords can be implemented to search within the labbook
- Entries can be exported
- Legally proofed due to timestamps and locking functions



The screenshot displays the ElabFTW interface for an experiment entry. The top navigation bar includes 'eLabFTW', 'EXPERIMENTS', 'DATABASE', 'TEAM', 'SEARCH', and 'DOCUMENTATION'. The main content area is titled 'Experiments' and features a 'Back to listing' link. The entry is dated '2020.04.30' and includes tags for 'project SIMA' and 'video1'. The title is 'Some microscopy experiment' with a 'Next step: analyze data' note. A 'Goal:' section contains a table with experimental data and a list of instructions for text formatting. A green circular logo with a person and a magnifying glass is at the bottom.

2020.04.30

project SIMA | video1

Some microscopy experiment

Next step: analyze data

Goal:

Show what an experiment looks like for elabftw.net.


Sample #	Concentration	Absorbance	Density	Something
1	20 μM	0.239	3.4	102
2	30 μM	0.193	4.1	1339

You can have colors too.

And use bold, *italics*, underline like you would do in a normal text processing application. Have some mathjax: $[x^y]^z$ is x^{y^z} , and $x^{\lfloor y^z \rfloor}$ is x^{y^z} .

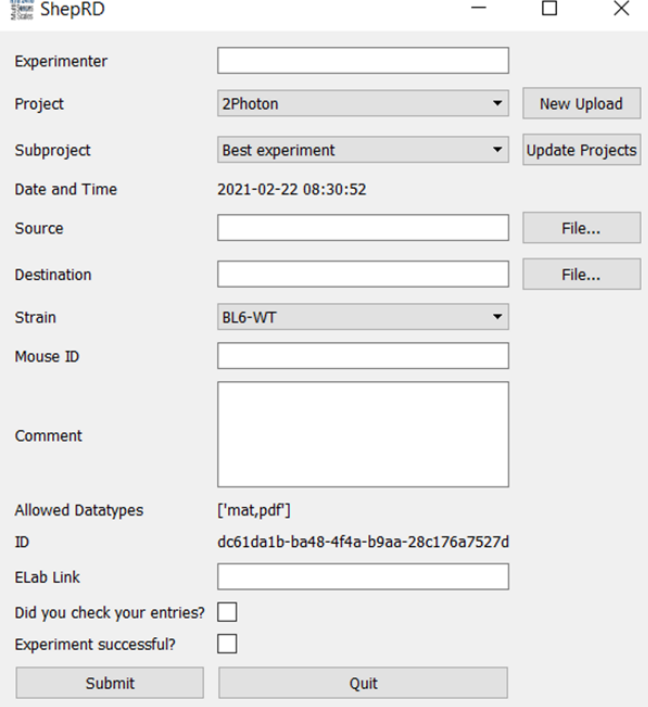
This is a list:

- List item 1
- List item 2
- Now show an image in the text



ShepRD – Data Transfer and Tracking Tool

- Backend project management
 - Projects are defined by Pis
 - Subprojects are defined by PhD students
- Timestamp for data transfer
- Every uploaded dataset receives a UUID
- Plausibility check
 - Next Update: complete file list or file suffixes
- Log file is written to the data destination
- Link to ELN

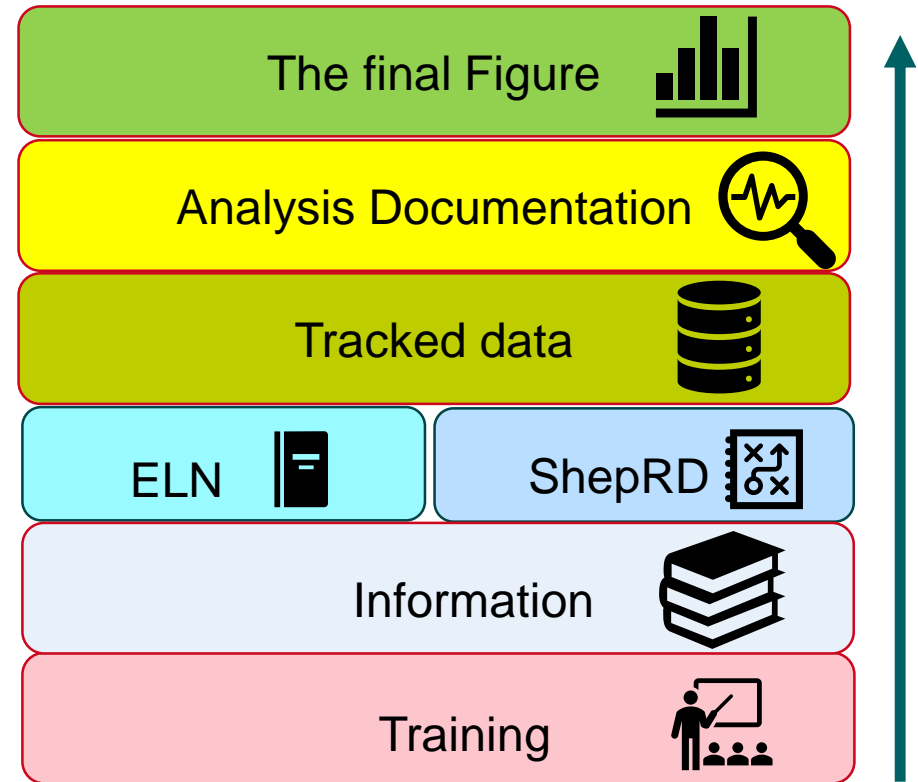


The screenshot shows the ShepRD web interface with the following fields and controls:

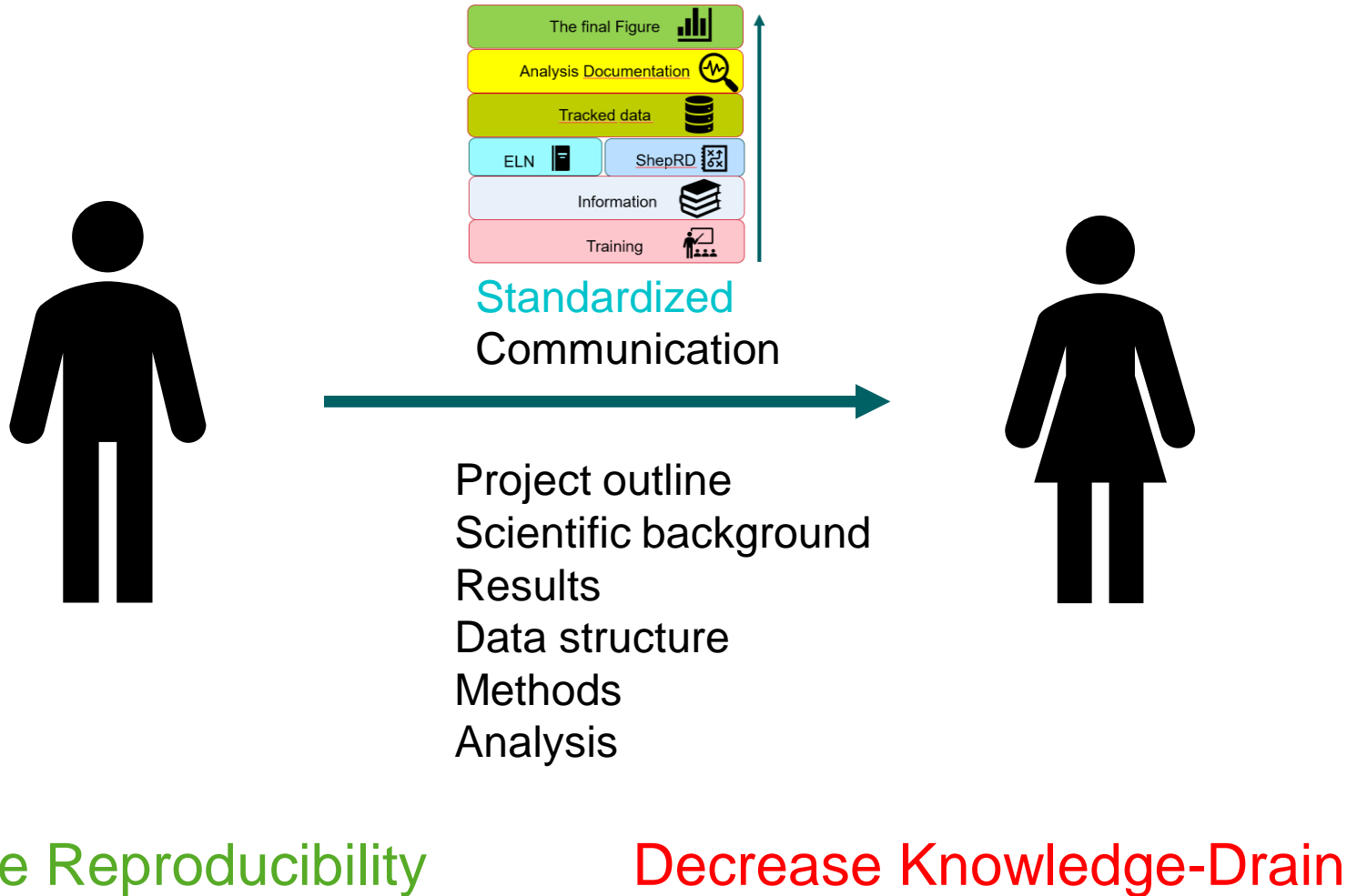
- Experimenter:** Text input field.
- Project:** Dropdown menu with "ZPhoton" selected. Includes a "New Upload" button.
- Subproject:** Dropdown menu with "Best experiment" selected. Includes an "Update Projects" button.
- Date and Time:** Text input field showing "2021-02-22 08:30:52".
- Source:** Text input field with a "File..." button.
- Destination:** Text input field with a "File..." button.
- Strain:** Dropdown menu with "BL6-WT" selected.
- Mouse ID:** Text input field.
- Comment:** Text area.
- Allowed Datatypes:** Text input field showing "[*mat,pdf*]".
- ID:** Text input field showing "dc61da1b-ba48-4f4a-b9aa-28c176a7527d".
- ELab Link:** Text input field.
- Did you check your entries?:** Checkbox (unchecked).
- Experiment successful?:** Checkbox (unchecked).
- Submit:** Button.
- Quit:** Button.

The Strategy

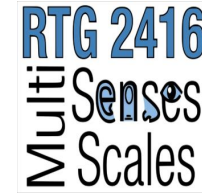
- We want to establish a feasible and accessible infrastructure for research data management following the FAIR principles
- Establishing a RDM Wiki with information
- Digital and searchable Lab Journal
- Comprehensive data tracing with ShepRD
- Collection of information within a database
- Project management including documentation of data analysis
- Bring the threads together with final publication figures



Conclusion



Acknowledgements



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Oke Nommensen

Chemosensation Group
Neurophysiology Group

Daniela Hausen
The RDM-network of the RWTH Aachen

And thanks to you for your attention

Are there questions?

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