



# THE EVOLVING SCHOLAR

## RETHINKS THE PUBLICATION AND PUBLISHING PROCESSES

Frédérique Belliard & Nicoleta Nastase





## Frédérique

- Publishing officer in the Research Support @ TU Delft Library
- Open science & Open publishing advocate
- Role: help researchers sharing their work – increase the visibility and recognition the researcher and their work

## Nicoleta

- Innovation consultant in the Research Support @ TU Delft library
- Service Designer & UX researcher
- Role: design sustainable solutions through co-creation; connect the dots between needs and resources for and with researchers in the actual academic publishing ecosystem and support the free flow of knowledge

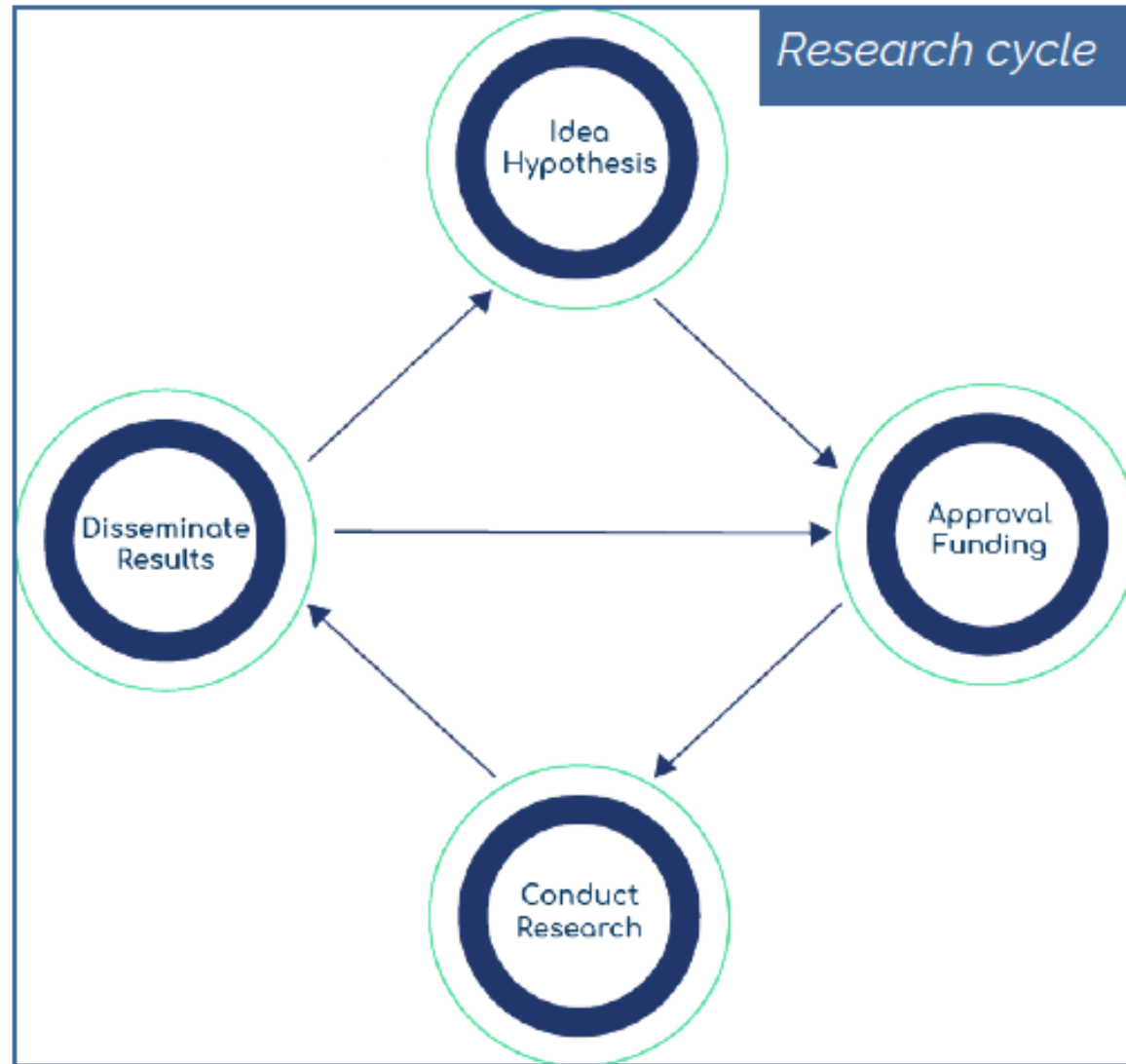
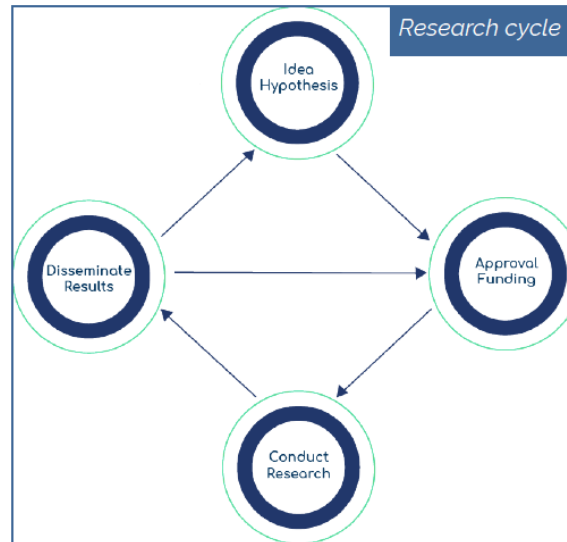


Image taken from [orvium.io](https://docs.orvium.io/Orvium-WP.pdf) <https://docs.orvium.io/Orvium-WP.pdf>



## PROBLEM SOLUTION

### Researchers' Journey along the Research cycle Open Science

huge amount of “invisible” necessary activities  
long processes  
unacknowledged work  
orphan studies

transparency  
reuse of methods, models, FAIR data  
reward & recognition  
non-traditional publishing

# OPEN SCIENCE PROGRAM: RESEARCH AND EDUCATION IN THE OPEN ERA

*Making open research and open education a standard part of scientific practice*



<https://doi.org/10.4233/uuid:f2faff07-408f-4cec-bd87-0919c9e4c26f>



## PROBLEM

### Traditional Publishing

focused on key findings  
visibility & recognition dependent on high impact  
research footprint



## SOLUTION

### OPEN Publishing

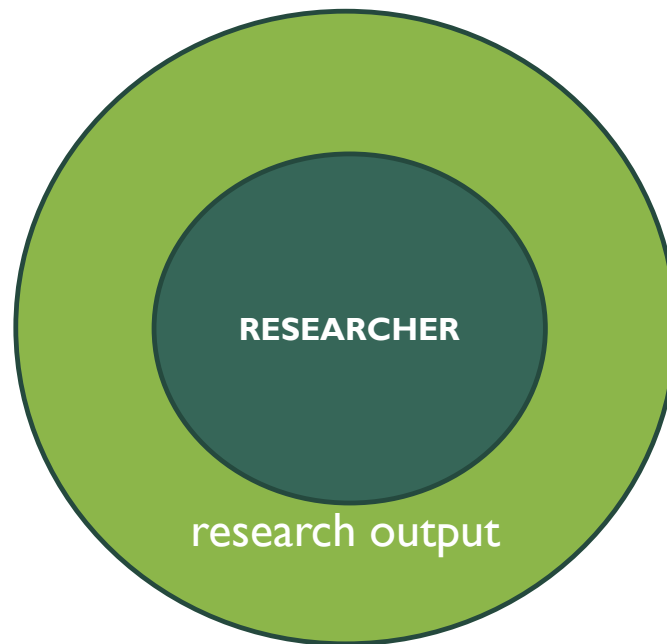
transparent publishing process  
non-traditional publications  
reward & recognition



Open Publishing is  
***“an electronic reinvention of the ancient art of storytelling”***  
says Matthew Arnison

# TU DELFT OPEN PUBLISHING

## VISION



# TU DELFT OPEN PUBLISHING

*Free flow of knowledge*

## Facts

- Young publisher launched in 2019
- Diamond open access academic publisher: No submission/publications fees
- Authors retain their copyrights

## Portfolio



■ Journals

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■ Books

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■ Textbooks

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■ Services

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<https://www.tudelft.nl/library/openpublishing>

# TU DELFT OPEN PUBLISHING



■ Journals

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Experimental space  
for new forms of publications  
and publishing



# TU DELFT OPEN PUBLISHING

## MISSION

Become the researcher's publishing companion  
during its journey



# Experimental space...

- **Authors:** introduce new forms of publications (eventually in co-creation)
- **Reviewers:** write open peer-reviews, get DOIs for them and get recognition
- **Moderators:** empower the authors and reviewers to interact for the benefit of the community and a high quality scientific output.
- **Readers:** leave comments on publications or reviews that matter



- **Publishing skills:** understand the editorial workflow and the peer-review process
- **Professional skills:** reinforce your subject knowledge and learn how to communicate efficiently
- **Personal development:** boost your self-confidence

## New forms of publications

- Non-traditional publications
  - Negative results
  - Orphan studies (unpublished-new ideas)
- Interactive publications



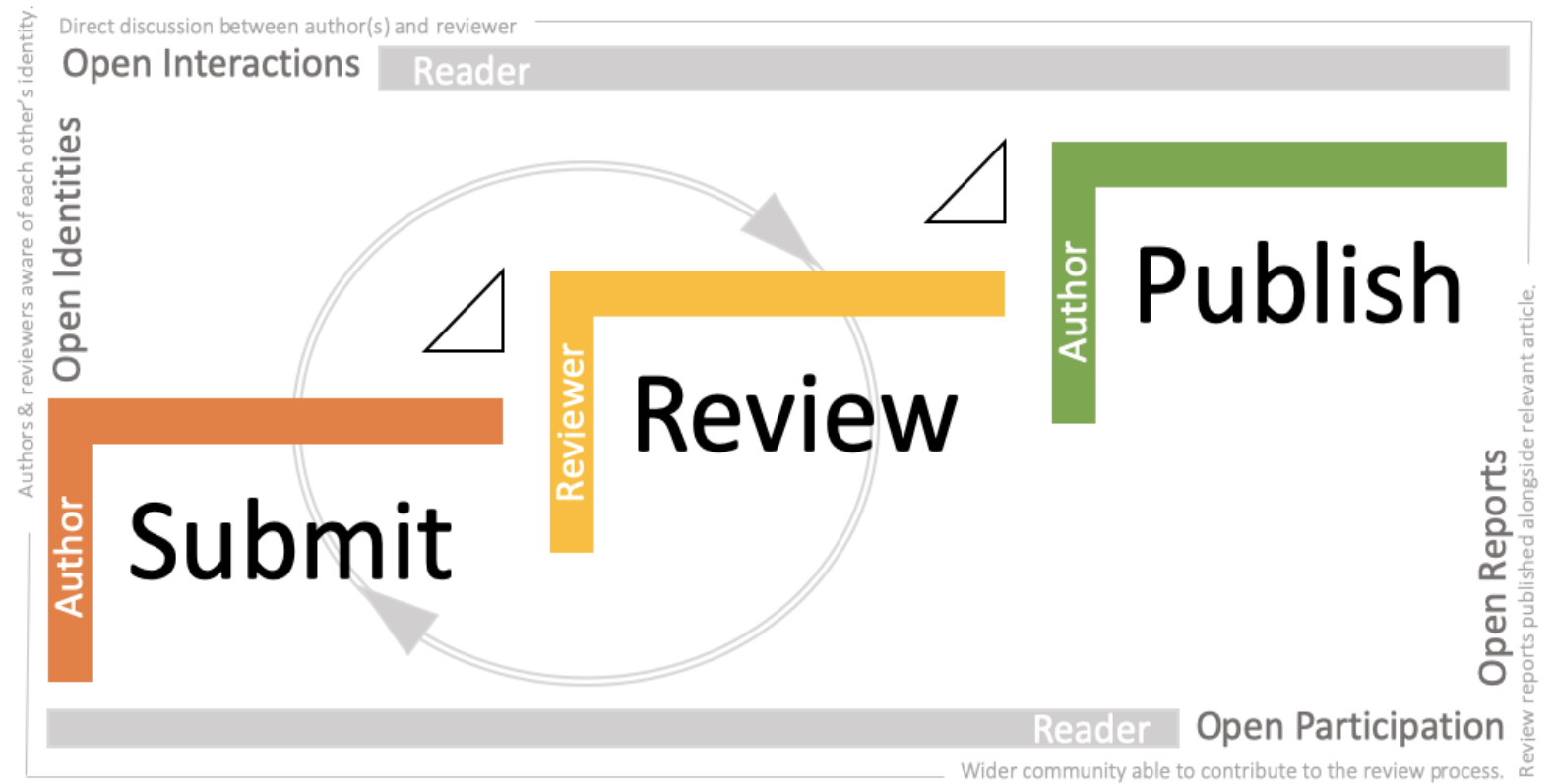
## New form of publishing

- Open peer review
- Break-down of the publishing process
- Community-driven

# New forms of publishing

## Open peer review

DOIs



Review driven by the community

# New forms of publishing

## Break-down of the publishing process

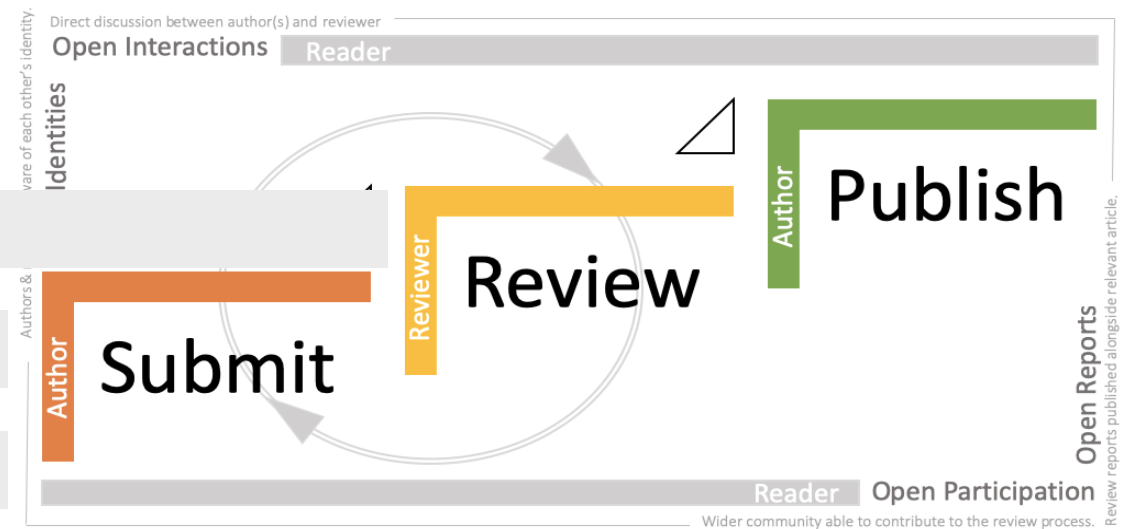
Content published elsewhere (with DOIs)

Data (with DOIs)

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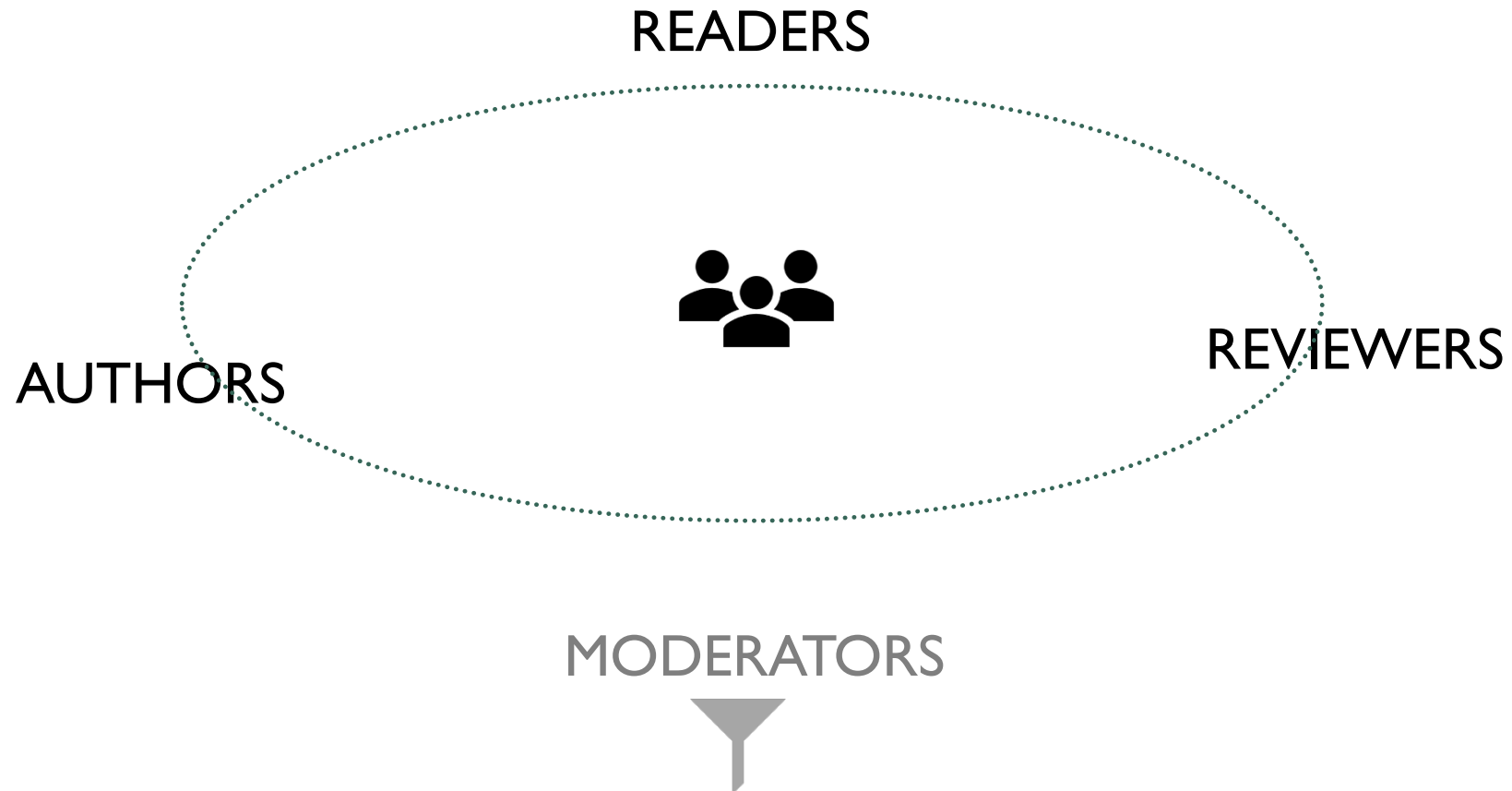
PAPER

PREPRINT

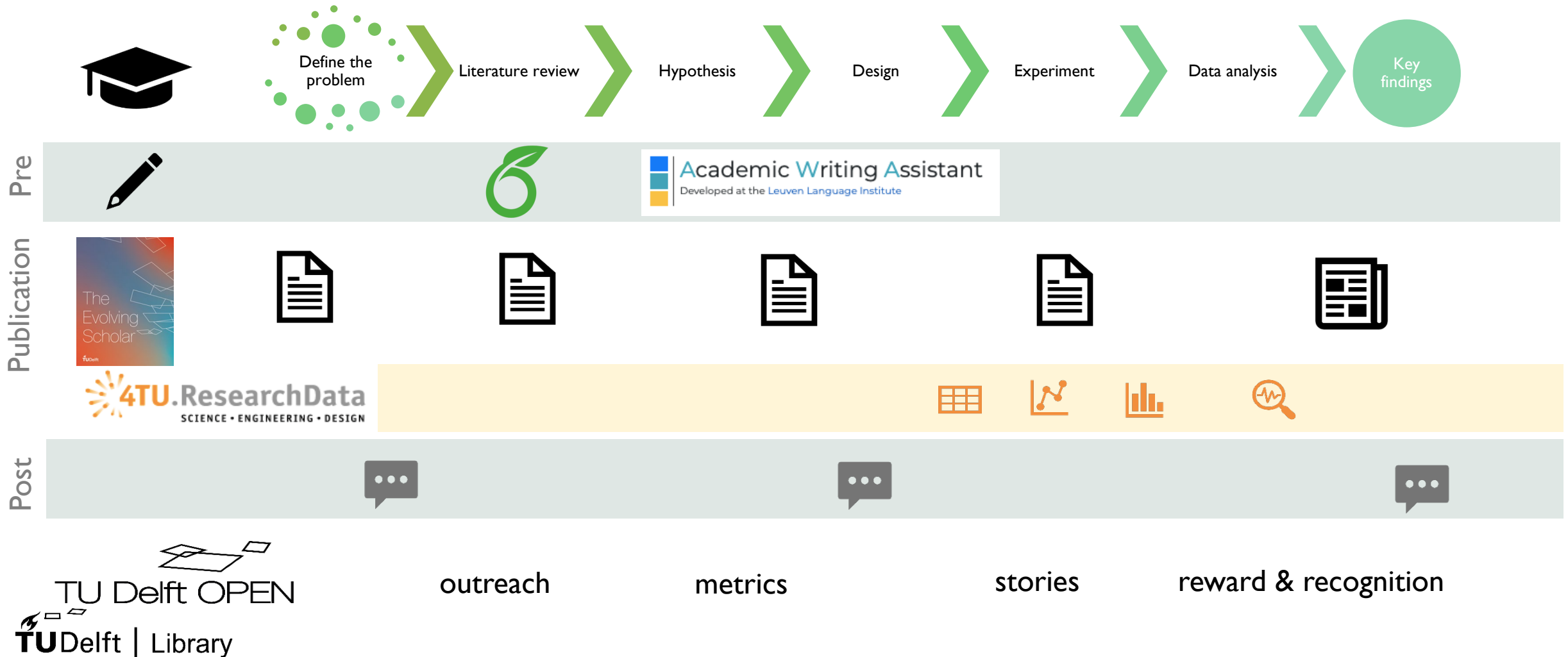


# New forms of publishing

## Community-driven



# TU DELFT OPEN PUBLISHING



# Discover about what matters to you

Critical Sociology

Humanistic Sociology

Political Sociology

Food Engineering

Finance

Agricultural Economics

Environmental Science

Computer Security And Reliability

Environmental Engineering

Public Sociology

Sociology

Sociology Of Conflict

POPULAR ON THE PLATFORM

## Recent Publications

Preprint

Article

CC BY-ND

Open Review



### A Review of Use Cases for Blockchain in the Mortgage and Real Estate Industries

28 February 2021 | By Steve Schepman 

This paper discusses several areas in the real estate and mortgage industries that a blockchain could be applied to and grow from. Blockchain is a distributed ledger technology that contains a ledger recording transactions hosted on the platform of tokenized assets, which smart contracts govern using transaction protocols. After interviewing... [Show More](#)

Preprint

The Evolving Scholar

Preprint

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### Got Whey? The significance of cheese whey at the confluence of dairying, environmental impacts, energy and resource biorecovery

07 January 2021 | By Maria Paula Giulianetti de Almeida  Gustavo Mockaitis  David G. Weissbrodt 

Milk discovery and processing enabled human settling and thriving in various settings. The discovery of cheese led to the production of

## Top Communities



### Invite your colleagues

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[Invite to Orvium](#)

✓ Draft ✓ Pending Approval Preprint 4 Published

## Got Whey? The significance of cheese whey at the confluence of dairying, environmental impacts, energy and resource biorecovery [Version 1]

07 January 2021 | By  Maria Paula Giulianetti de Almeida  Gustavo Mockaitis  David G. Weissbrodt

[Environmental science](#) [Environmental engineering](#) [Biotechnology](#) [Agricultural economics](#) [Food engineering](#)


### Abstract

Milk discovery and processing enabled human settling and thriving in various settings. The discovery of cheese led to the production of whey as dairy by-product. Although it can find application in food, beverages, personal care products, pharmaceuticals and medical treatment, cheese whey is a massive dairying residue world-wide (154 Mm<sup>3</sup>y<sup>-1</sup>) with high organic and nutrient loads. About 42% is used as low-value products as animal feed and fertilisers or even directly discharged in water streams, leading to ecosystem damage by eutrophication. Recycling and repurposing whey remains a challenge for remote locations and poor communities with limited access to expensive technology. Anaerobic digestion is proven and accessible for utilizing whey as substrate to produce biogas and/or carboxylates. Alternative processes combining anaerobic digestion and low-cost open photobioprocesses can foster the valorisation of cheese whey and capture of organics and nitrogen and phosphorus nutrients into a microalgal biomass that can be used as food and crop supply or processed into biofuels, pigments, antioxidants, among other value-added products. Awareness should be raised about the economic potential of cheese whey surplus by developing an action plan that (i) identifies stakeholders, (ii) sets goals and achieves solutions, (iii) decreases technology gaps among countries, (iv) enforces legislation and compliance, and (v) creates subsidies and foment partnerships with industries and other countries for the full valorisation of whey. We propose a closed-loop biorefinery implementation strategy to simultaneously mitigate environmental impacts and valorise whey resources.

Comments (0)



### Files

 Got Whey\_ The significance of ... [Publication](#)

[Download PDF](#)


### Versions

- Version 1

### Keywords

[cheese whey](#) [environmental impacts](#) [resource valorisation](#) [laws and regulations](#)  
[information access](#) [anaerobic and microalgal processes](#)

### Details

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- License: [CC BY-ND](#) 
- Publication type: [Preprint](#)
- Submission date: [7 January 2021](#)
- Publication date:

## Author Spotlight: Making the most out of whey with open knowledge and peer review

✈️ Posted on 📅 April 14, 2021 by 👤 Emmy Tsang

📊 Post Views: 60

Milk and cheese play major roles in many diets all around the world. Yet, few are aware of the problems brought about by cheese whey – a massive by-product from dairy processing. “Here in Brazil, I came across so many difficulties in finding information about how much whey was produced, and what was done with it,” said Maria Paula Giulianetti de Almeida, PhD candidate with Gustavo Mockaitis in the Interdisciplinary Group for Agricultural and Environmental Biotechnology at the University of Campinas Faculty of Agricultural Engineering and CAPES visiting doctoral researcher in the Weissbrodt Group for Environmental Life Science Engineering at the TU Delft Department of Biotechnology, “so I decided to dig deeper into this.”

An amount as high as 154 million m<sup>3</sup> of cheese whey is produced annually, and a substantial proportion (42%) is turned into low-value products like animal feed and fertilizers, or simply discarded in the environment. However, cheese whey in the water stream can lead to eutrophication – the nutrients in whey can serve as the substrate for microalgae biomass, leading to excessive algal growth, decay, and oxygen depletion in surface water. This is a particularly big problem in Low- and Middle-Income Countries (LMICs), as the technology and funding to treat whey and remove nutrients from water is not widely available. Poorly enforced environmental regulation further encourages whey producers to simply discard whey residues into a nearby water stream.

In [their recent preprint](#), published in the open peer-review mega-journal [The Evolving Scholar](#), Maria and her co-authors devised a scalable roadmap to combat this issue. They looked into bioprocesses that can capture the nutrients in whey and turn it into a biomass that can be used as food supply, or processed into other value-added products like biofuels.

## CHALLENGES

- Awareness within the university
  - Embracing open peer-review
    - Audience elsewhere
      - IF still in power

Hesitation!

Not a standard practice!

Communities already formed elsewhere!

## SOLUTIONS

- Community engagement
  - Manager
  - Critical Friends
  - Open Science Workshops
- Start Conversations within the journal

Any other idea?

Do you have similar experiences?

Please share!  [@tudelftopen](https://twitter.com/tudelftopen)



TU Delft | Library

*Free flow of knowledge*



## *Accelerating* scientific publishing

Orvium is the scientific publishing platform that [helps researchers and institutions](#) to share their work, create open access journals, and streamline peer review.

Frederique Belliard  
Nicoleta Nastase  
Paul Suijker  
Emmy Tsang  
Just de Leeuwe  
Adriaan Bisschop



**Antonio, Roberto**

We typically reply in a few minutes



Got any questions? I'm happy to help.

[www.journals.open.tudelft.nl/thes](http://www.journals.open.tudelft.nl/thes)



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