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It's high time to rethink how  
we pay for  
Open Science infrastructure

Focus on Open Science

Vanessa Proudman, Director SPARC Europe

Focus on Open Science, Budapest, 14 Nov 2018

# SPARC Europe

**Key goal: Making Open the default**

Helping ensure that OA and OS is fully realized





SPARC Europe...

Working to create a climate in which  
Open Research and Education thrives

# SPARC Europe is

- ✱ Driving policy development
  - Copyright reform, PSI and FP9 in Europe
  - Supporting policy development amongst Europe's research institutions and funders
  - Policy reporting in Europe
- ✱ Providing advocacy guidance and tools
- ✱ Encouraging cultural change through engagement activities
- ✱ Supporting the sustainability of Open infrastructure

# Plan S: 10 ways libraries can support the implementation of Plan S

1. Continue to **innovate the scholarly communication system** and provide guidance to COAlition S on **where to invest** — be this in services or infrastructure
2. Work with the Plan S implementation group to explore **collective funding approaches to subsidise Open Access to research**
3. Provide information on **strong alternatives and platforms for publishers for their institution models**
4. Supply a **stable, quality-controlled** deposit, curate, verify and disseminate through their repositories
5. Supply **information on local policies and implementation mechanisms** that will support the local (Member State) implementation of Plan S

& Implementation guide  
delivered to the Plan S  
Task Force, Oct 2018

# Increased policy development in Europe

- \* Competitiveness Council, European Council, 2016
- \* National policy: NL, N, FR, etc
- \* Increases in institutional policies. 2018: 559
- \* Funder OA / OS policies: EC, Wellcome, NWO
- \* Plan S and cOAlition S, Sept 2018
- \* Horizon Europe (under development)

More Open Access  
policy in Europe

=

more dependence on a  
stable infrastructure

=

additional costs



# The context of OS infrastructure

- \* Short-term funding / seed-money for OS
- \* A large offering of scholarly comms solutions
  - \* Projects, start-ups & infrastructure
  - \* Longer-standing services & infrastructure
- \* Publisher / company diversification



**GitHub**

Etc.



**Who's next?**



# 101 Innovative tools and sites in 6 research workflow phases (< 2000 - 2015)



# The context of OS infrastructure

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**Who's next?**

# Need for a European regulatory body



## 4 signposts

1. We need a fair, stable and sustainable scholarly communication infrastructure
2. No more imbalanced commercial exploitation of science, through Open Access
3. There is no longer a place for monopolies to call the shots
4. Libraries and the research community takes more control over their scholarly communications

How do we as a community ensure  
that we have  
the infrastructure  
in years to come to support the  
implementation of  
Open Access and Open Science?

# Locate the funds to meet ambitions



# Support a range of business models



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## UNIVERSITÉ DE LORRAINE

Université de Lorraine becomes first French institution to join OLH LPS model



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Subject search and browse: Physics Search Form Interface Catchup

25 Jun 2018: Our holiday schedule has been updated for September 2018

14 May 2018: Search interface updated to version 0.3

4 May 2018: New search interface updated to version 0.2

See cumulative "What's New" pages. Read robots beware before attempting any automated download

### Physics

- Astrophysics ([astro-ph new](#), [recent](#), [search](#)) includes: Astrophysics of Galaxies; Cosmology and Non Phenomena; Instrumentation and Methods for Astrophysics
- Condensed Matter ([cond-mat new](#), [recent](#), [search](#)) includes: Disordered Systems and Neural Networks; Mg Gases; Soft Condensed Matter; Statistical Mechanics;  $\epsilon$
- General Relativity and Quantum Cosmology ([gr-qc new](#))
- High Energy Physics - Experiment ([hep-ex new](#), [recent](#), [sea](#))
- High Energy Physics - Lattice ([hep-lat new](#), [recent](#), [sea](#))
- High Energy Physics - Phenomenology ([hep-ph new](#), [recent](#), [sea](#))
- High Energy Physics - Theory ([hep-th new](#), [recent](#), [sea](#))
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## Open Modular architecture enables innovation and collaboration

NOTEBOOKS METADATA SEMANTICS ENHANCERS VERSIONS REAL-TIME COLLABORATION REVIEWER MATCHING ANNOTATION DISCOVERY TOOLS

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LATEST NEWS

Tue, 04 Sep 2018  
Listening to our Community

Thu, 30 Aug 2018  
ORCID, OpenID Connect, and

# Leadership & co-ordination

- \* SPARC (NA)
- \* 2.5% / Invest in Open
- \* JROST
- \* OPERAS
- \* Human Frontiers Science Program
- \* Invest in Open Infrastructure
- \* SCOSS

*All under development*



# Invest in Open / 2.5% 2018/2019

- \* Top slicing library budgets
- \* The need for investing in open infra
- \* Aggregating information on the key infrastructure ecosystem
- \* Estimating the costs of Open infrastructure
- \* Monitoring the library spend on Open infra

# Joint Roadmap for Open Science Tools

A community working on a joint roadmap for open science tools.

Join our collaboration that started during the [2018 Mozilla Global Sprint](#).

[Blog](#)

[Join & Communicate](#)

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[Meetings](#)

[Participants](#)

Contact us: [info@jrost.org](mailto:info@jrost.org)

Wikidata: [Q53729922](https://www.wikidata.org/wiki/Q53729922)

<https://jrost.org/>

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Science  
Society

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knowledge  
foundation

 COMMON  
WORKFLOW  
LANGUAGE

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OPEN  
SCIENCE  
MOOC

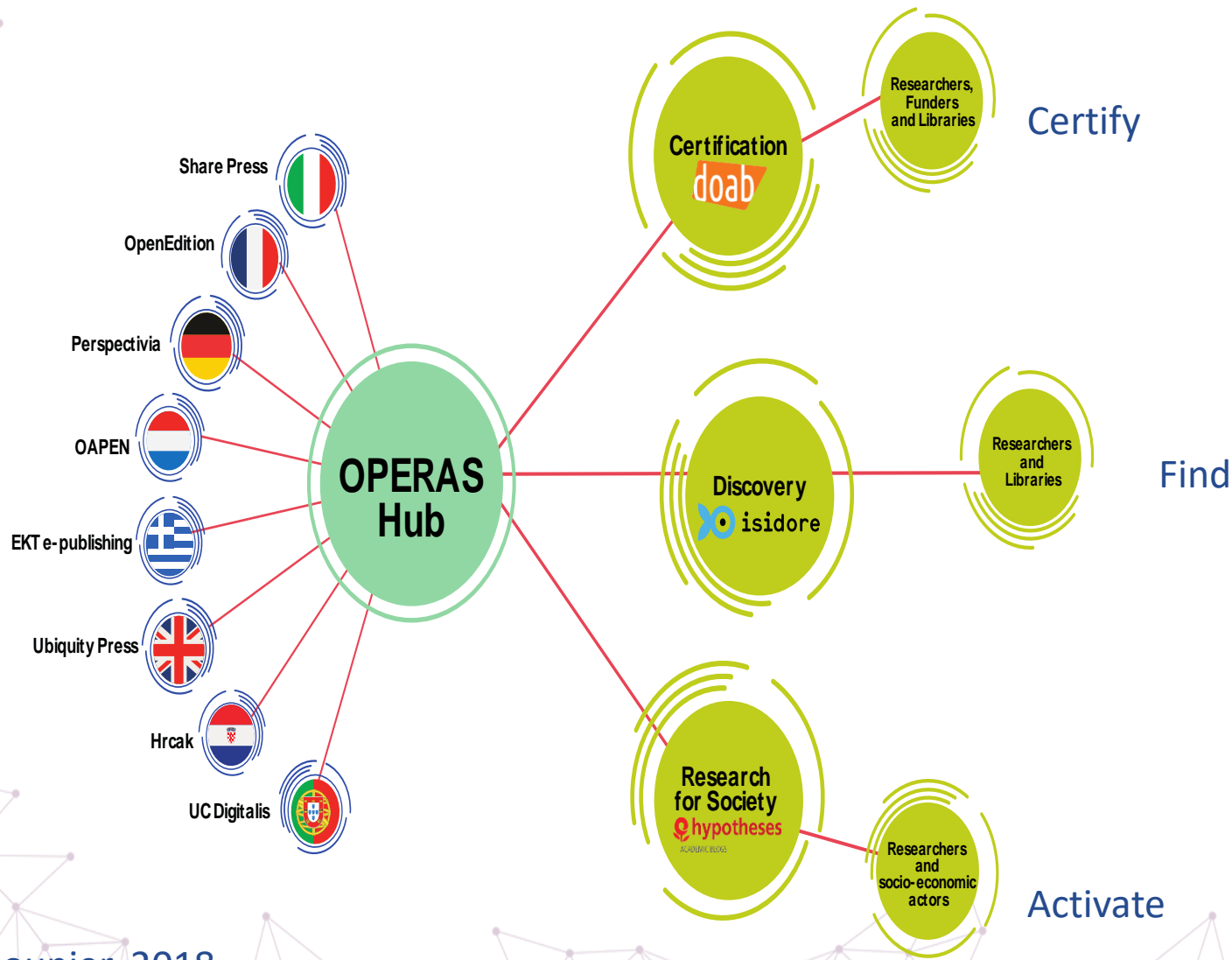
# Invest in Open Infrastructure: Who

We are an international alliance of organizations and like minded efforts that share these mutual goals and in most cases have already been working towards these objectives. We are coming together under IOI to coordinate and align our efforts in order to get there faster.



The alliance brings together Joint Roadmap for Open Science Tools (JROST), OPERAS, Open Research Funders Group (ORFG), Scholarly Commons (2.5% Commitment), SPARC Europe and SPARC NA

# OPERAS



# Human Frontiers Science Program



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## TOWARDS COORDINATED INTERNATIONAL SUPPORT OF CORE DATA RESOURCES IN LIFE SCIENCES

Warwick Anderson, Rolf Apweiler, Alex Bateman, Guntraud  
Judith A Blake, Niklas Blomberg, Stephen K Burley, Guy Cozzari,  
Valentina Di Francesco, Tim Donohue, Christine Durinx, Alfred  
Takashi Gojobori, Peter Goodhand, Ada Hamosh, Henning Herwig,  
Robert Kiley, Johanna McEntyre, Rowan McKibbin, Satoru Miyano, Barbara  
Norbert Perrimon, Mark A Ragan, Geoffrey Richards, Yik-Ying Teo, Monte  
Eric Westhof, Paul F Lasko

doi: <https://doi.org/10.1101/110825>

This article is a preprint and has not been peer-reviewed [what does this mean?].

**Abstract**

Info/History

Metrics

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**Abstract**

Funders of the life sciences  
should commit to the  
long-term shared  
responsibility to sustain open  
access to  
core data resources

Next 

**Subject Areas**

All Articles

Animal Behavior and Cognition



# Global Sustainability Coalition for Open Science Services

*Helping sustain Open Science infrastructure*

# Science in the Open

The online home of Cameron Neylon

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## Principles for Open Scholarly Infrastructures

23 FEBRUARY 2015

14 COMMENTS

Cite as "Bilder G, Lin J, Neylon C (2015) Principles for Open Scholarly Infrastructures. *Science in the Open* 1:1-10. doi:10.6084/m9.figshare.1314859" retrieved [date], <http://dx.doi.org/10.6084/m9.figshare.1314859>"

*infrastructure* [ˈɪnfəstrʌktʃə] (noun) – the basic physical and organization (buildings, roads, power supplies) needed for the operation of a society  
*American Dictionary*

*Everything we have gained by opening content and data will be under threat if we allow the enclosure of scholarly infrastructures. We propose a set of principles by which Open Infrastructures for the research community could be run and sustained.* – Geoffrey Bilder, Jennifer Lin, Cameron Neylon

Over the past decade, we have made real progress to further ensure the availability of data that supports research claims. This work is far from complete. We believe that data about the research process itself deserves exactly the same level of respect and care. The scholarly community does not own or control most of this information. For example, we could have built or taken on the infrastructure to collect bibliographic data and citations but that task was left to private enterprise. Similarly, today the metadata generated in scholarly online discussions are increasingly held by private enterprises. They do not answer to any community board. They have no obligations to continue to provide services at their current rates, particularly when that rate is zero.

### License



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Everything we have gained by opening content and data will be under threat if we allow the enclosure of scholarly infrastructures

business model citation communication Creative Commons data commons data feeds data formats data model e-notebook ELN ethics Fb4Sci Friendfeed funding identity LaBlog Meeting metadata open-science-charter open-source open access open data open notebook science open

SC  SS is

an Open Science community of organisations  
that promotes essential OS infrastructure  
recommending it to the user community  
for collective / crowd-funding



# Current SCOSS members, 9 Nov 2018



# SCOSS definition of infrastructure

- \* SCOSS-supported **open science infrastructure** provides the scientific and scholarly community with resources and services to access, share, and assess research
- \* Unspecific to any discipline / OA or OS area
- \* Non-profit established infrastructure

# SCOSS approach 1/2

- \* Developed by significant players in the research, Open Science & library community
- \* Forming a consolidated voice from trusted stakeholders and representatives of the international Open Science community
- \* Establishes a system to identify and evaluate OS services & recommend them for funding

# SCOSS approach 2/2

- \* Creates a framework to increase efficiency for investors & addresses community needs
- \* Helps provide more transparency on costs and funding needs to enable the fair remuneration to sustain them
- \* Provides capacity building:  
e.g. knowledge on business models

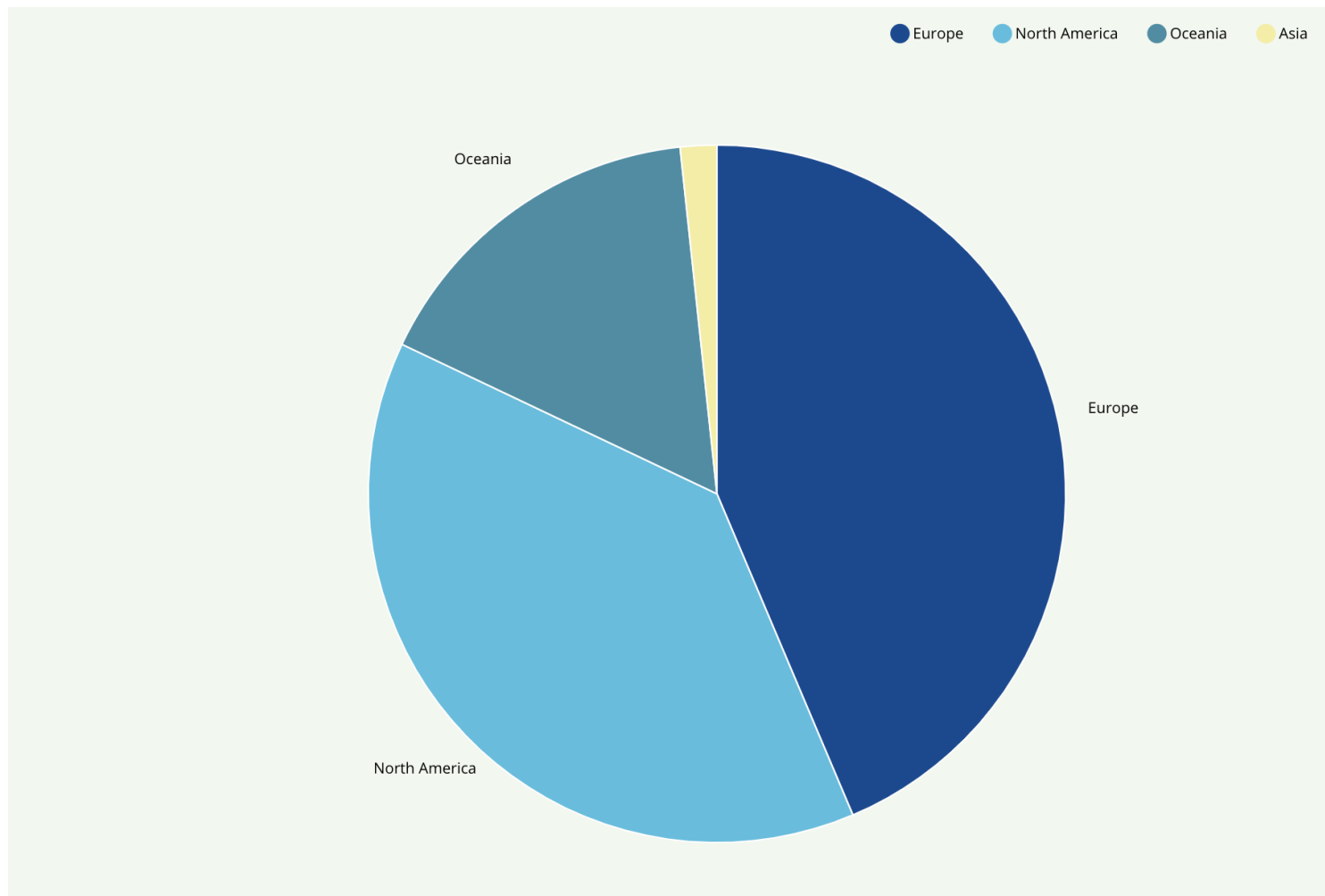
# Evaluation criteria

- ✓ General: scope, intentions, Neylon principles
- ✓ Value proposition
- ✓ Technical details
- ✓ Costs
- ✓ Governance
- ✓ Sustainability measures
- ✓ Foresight
- ✓ BATNA
- ✓ Score

# Key results, 9 Nov 18

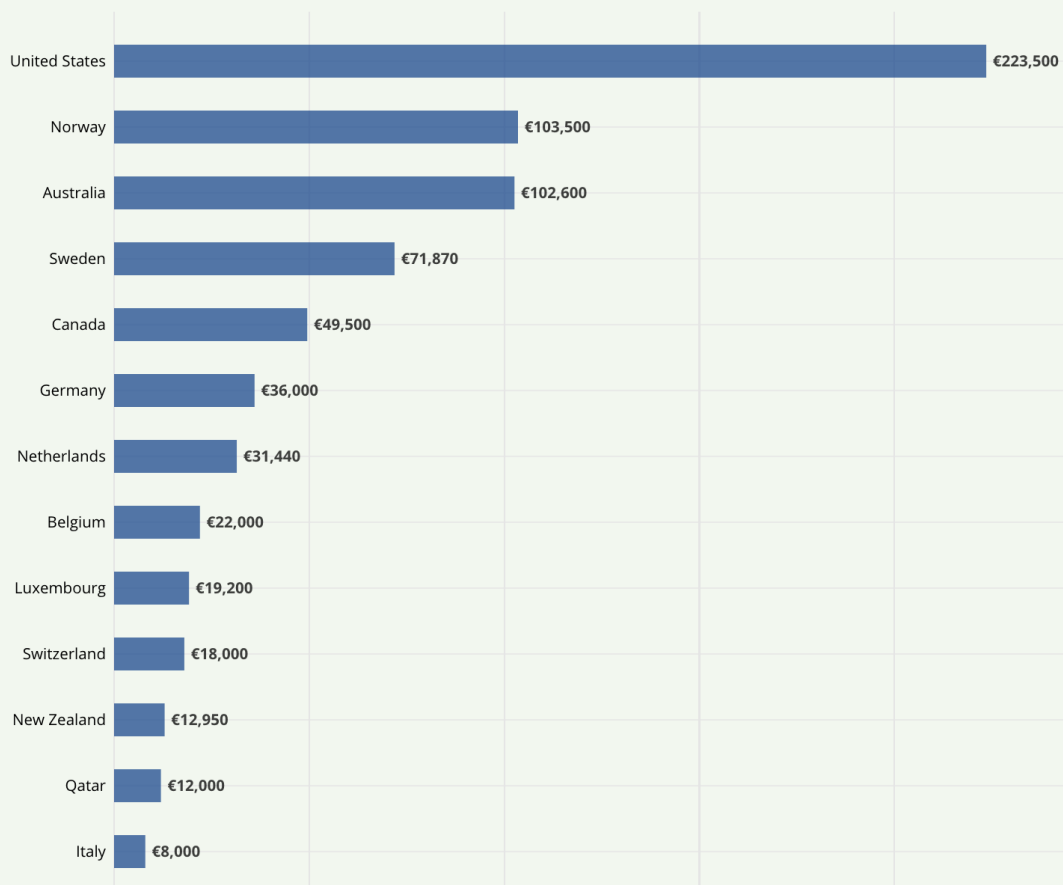
- \* Funding appeal launched late Nov '17  
Current target reached 9 Nov 2018:  
€895,060 / USD 1,021,550 raised
- \* Capacity-building
- \* Changing the mindset of funding OS infra,  
e.g. ICOLC, Invest in Open Infrastructure

# Funding progress by continent, 9 Nov 18



# Top countries funding, 9 Nov 2018

## Funds committed by country

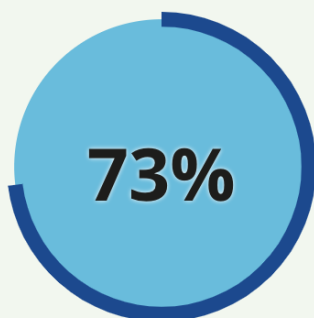




# Funding progress DOAJ, 9 Nov 2018

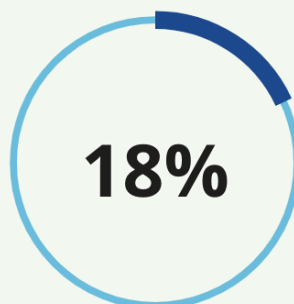
## Funding progress

### Committed



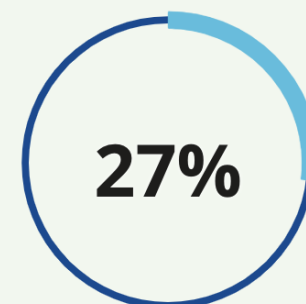
€710,560 of  
€970,000

### Paid



€173,809.58 of  
€970,000

### Needed



€259,440 of  
€970,000

# 2 key challenges for SCOSS

Pricing

Service capacities



# 2<sup>nd</sup> SCOSS funding cycle

- \* Autumn 2018
- \* Applications for expression of interest
  - OA or OS infrastructure
  - Non-profit
  - Of international interest
  - Issues with sustainability
- \* Evaluation of Eols
- \* Invitation to apply: Begin 2019 (at the latest)

36 submissions

# SCOSS and what you can do

1. Discuss pledging for OA/OS infra within
  - your institution
  - your consortium
  - your community
2. Pledge to Sherpa/RoMEO and/or DOAJ
3. Help promote investing in infrastructure

*Please don't just rely on others to do so*

# 3 calls to action

1. Explore and invest in different business models.

How sustainable is your infrastructure or the one you rely on 3 / 5 years from now?



# 3 calls to action

2. Raise awareness of the need for collective action around funding infrastructure in your community
3. Strive to *consistently* invest in Open Science infrastructure to support a fair and growing schol comms ecosystem



Join a growing  
community of  
action to fund  
Open  
Access and  
Open Science  
infrastructure!

# Any questions?

[www.sparceurope.org](http://www.sparceurope.org) / [www.scoss.org](http://www.scoss.org)

[vproudman@sparceurope.org](mailto:vproudman@sparceurope.org)

Please join us!





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