Strategic Plan 2017 - 2020 with Programs & Performance Indicators

This second phase strategic plan is an update and expansion of COS's first strategic plan, and remains aligned with all key elements of that plan. We envision a future scholarly community in which the process, content, and outcomes of research are openly accessible by default. [Editor's Note: The COS programs and performance indicators documented in this StratML rendition are taken from COS's profile on GuideStar, at https://www.guidestar.org/profile/46-1496217]

Specific strategies are selected based on how effectively and efficiently they can advance one or more of these goals. Achieving the mission requires culture change in the incentives that drive researchers' behavior, the infrastructure that supports research, and the business models that dominate scholarly communication. A key challenge is that the decentralized nature of the scholarly community creates a coordination problem. Culture change requires simultaneous movement by funders, institutions, researchers, and service providers across national and disciplinary boundaries. Despite this, the vision is achievable because openness, integrity, and reproducibility are shared values, the technological capacity is available, and sustainable business models that promote openness exist.

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DEMONSTRATION ONLY

Center for Open Science (COS)

Stakeholder(s):

Scholarly Content Holders

Role: Record Keeping

All scholarly content is preserved, connected, and versioned to foster discovery, accumulation of evidence, and respect for uncertainty.

Scholarly Service Providers

Role: Competition

Scholarly service providers are incentivized to compete on quality of service and maximizing transparency of process and content.

Research Institutions

Role: Evaluation

Institutions evaluate researchers based on both the content of their discoveries and the process by which they were discovered.

Research Funders

Role: Insight

Funders have full insight into the activity and outcomes of their research investments to more efficiently achieve their mission and guide future investments.

Researchers :

Researchers prioritize getting it right over getting it published, and receive credit for scholarly contributions beyond the research article such as generating useful data or authoring code that can be reused by others.

Role: Prioritization
Role: Recognition

Research Reviewers

Role: Feedback

Reviewers provide feedback at all stages of the research lifecycle and openness introduces potential for credit and reputation enhancement for reviewing.

Librarians

Role: Curation

Librarians apply curation and data management expertise throughout the research lifecycle, not just retrospectively.

Consumers

Role: Access

Consumers have easy access to the evidence supporting scholarly claims.

Research Stakeholders

Role: Inclusion

All stakeholders are included and respected in the research lifecycle.

COS Programs

Role: Programmatic Expertise & Service

Reproducibility Project: Cancer Biology :

The RP:CB is an initiative to conduct direct replications of 50 high-impact cancer biology studies... The RP:CB is a collaborative effort between the Center for Open Science and network provider Science Exchange.

Role: Learning

The project anticipates learning more about predictors of reproducibility, common obstacles to conducting replications, and how the current scientific incentive structure affects research practices by estimating the rate of reproducibility in a sample of published cancer biology literature.

SHARE: SHared Access Research Ecosystem

Role: Data Sharing

SHARE is building a free, open, data set about research and scholarly activities across their life cycle.

Transparency and Openness Promotion (TOP) Guidelines

Role: Reproducibility

Transparency, open sharing, and reproducibility are core values of science, but not always part of daily practice. Journals, funders, and scholarly societies can increase reproducibility of research by adopting the Transparency and Openness Promotion (TOP) Guidelines and helping them evolve to meet the needs of researchers and publishers while pursuing the most transparent practices.

Open Science Framework (OSF) :

The Open Science Framework (OSF) provides free and open source project management support for researchers across the entire research lifecycle.

Role: Collaboration

As a collaboration tool, the OSF helps researchers work on projects privately with a limited number of collaborators and make parts of their projects public, or make all the project publicly accessible for broader dissemination. As a workflow system, the OSF enables connections to the many services researchers already use to streamline their process and increase efficiency. As a flexible repository, it can store and archive research data, protocols, and materials.

Vision

We envision a future scholarly community in which the process, content, and outcomes of research are openly accessible by default. All scholarly content is preserved and connected and transparency is an aspirational good for scholarly services. All stakeholders are included and respected in the research lifecycle and share pursuit of truth as the primary incentive and motivation for scholarship. Achieving the mission requires culture change in the incentives that drive researchers' behavior, the infrastructure that supports research, and the business models that dominate scholarly communication.

Mission

To increase openness, integrity, and reproducibility of research.

Values

Research

Integrity

Reproducibility

Mission-Driven: COS is mission-driven. * COS is a culture change organization aiming to increase openness, integrity, and reproducibility of research * COS uses research and the best available evidence to set its strategic priorities * COS monitors, evaluates and adjusts its tools, training and services to meet the needs of research stakeholders * COS sets and follows strategic priorities to meet its mission, not to perpetuate COS as an organization

Openness: COS is open. * COS builds exclusively open-source public goods products and services * COS minimizes user lock-in and facilitates connections with other services * COS ensures that survival of services and user data does not depend on survival of the organization

Transparency: COS is transparent. * COS defaults to public sharing of organizational decision-making and operations * COS protects privacy and security interests of its stakeholders

Inclusiveness: COS is inclusive. * COS serves all stakeholders in knowledge accumulation * COS's services are free to maximize accessibility to communities of any means * COS respects all people, regardless of position or status * COS strives for diversity in its team and community of users and stakeholders

Collaboration: COS is collaborative. * COS leads advancement of its mission and is responsive to needs of stakeholder communities, while working with stakeholders to build actionable consensus * COS maintains and works with stakeholder committees to shape development of products and services with maximal benefit for all * COS prioritizes adding value to existing services by supporting and collaborating with domain experts

Performance: COS is high-performing. * COS has high expectations of itself and team members have high expectations of each other * COS delivers enterprise quality products and services

Efficiency: COS is efficient. * COS fosters good stewardship of its resources to advance its mission * COS evaluates process, progress, and impact continuously * COS maximizes reuse of open tools and avoids redundancy * COS prioritizes projects based on projected resource to impact ratio and availability of open alternatives

Continuous Improvement: COS is constantly improving. * COS uses iterative cycles to update and improve its products and processes * COS grows skills and expertise among its team to maximize capacity and performance

1. Metascience

Acquire evidence to encourage change.

In the next three years, COS will provide evidence on the state of science, evaluate COS services to maximize effectiveness, and track culture change in openness.

Performance Indicators

Description	Type	Start Date	End Date
[To be described]	Target		
	Actual		

2. Infrastructure

Build technology to enable change.

In the next three years, COS will establish viability of open scholarship across the entire research lifecycle, and support hundreds of community interfaces for conducting and sharing scholarly activity.

2.1. OSF

Provide free and open source project management support for researchers across the entire research lifecycle.

Stakeholder(s):

Researchers

Role: Project Management

As a workflow system, the OSF enables connections to the many services researchers already use to streamline their process and increase efficiency. As a flexible repository, it can store and archive research data, protocols, and materials.

Role: Collaboration

As a collaboration tool, the OSF helps researchers work on projects privately with a limited number of collaborators and make parts of their projects public, or make all the project publicly accessible for broader dissemination.

Performance Indicators

OSF Registered Users

Description	Type	Trend	Start Date	End Date	Number
Unspecified	Target				
2018 = 124,105	Actual	Increasing	2018-01-01	2018-12-31	124,105
2017 = 74,794	Actual		2017-01-01	2017-12-31	74,795
2016 = 35,000	Actual		2016-01-01	2016-12-31	35,000
2015 = 18,000	Actual		2015-01-01	2015-12-31	18,000
2014 = 7,000	Actual		2014-01-01	2014-12-31	7,000
2013 = 1,900	Actual		2013-01-01	2013-12-31	1,900

OSF Projects Created

Description	Type	Trend	Start Date	End Date	Number
Unspecified	Target				
2016 = 70,000	Actual	Increasing	2016-01-01	2016-12-31	70,000
2015 = 19,000	Actual		2015-01-01	2015-12-31	19,000
2014 = 7,600	Actual		2014-01-01	2014-12-31	7,600
2013 = 2,200	Actual		2013-01-01	2013-12-31	2,200

OSF Projects Made Public

Description	Type	Trend	Start Date	End Date	Number
Unspecified	Target				
2016 = 11,000	Actual	Increasing	2016-01-01	2016-12-31	11,000
2015 = 4,000	Actual		2015-01-01	2015-12-31	4,000

Description	Type	Trend	Start Date	End Date	Number
2014 = 1,700	Actual		2014-01-01	2014-12-31	1,700
2013 = 400	Actual		2013-01-01	2013-12-31	400

OSF Registrations

Description	Type	Trend	Start Date	End Date	Number
Unspecified	Target				
2016 = 6,000	Actual	Increasing	2016-01-01	2016-12-31	6,000
2015 = 3,600	Actual		2015-01-01	2015-12-31	3,600
2014 = 1,300	Actual		2014-01-01	2014-12-31	1,300
2013 = 200	Actual		2013-01-01	2013-12-31	200

2.2. SHARE

Host a free, open, data set about research and scholarly activities across their life cycle.

Stakeholder(s):

Researchers   *Role:* Data Sharing

Performance Indicators

Registered Studies Published

Description	Type	Trend	Start Date	End Date	Number
Unspecified	Target				
2017 = 242	Actual	Increasing	2017-01-01	2017-12-31	242
2016 = 124	Actual		2016-01-01	2016-12-31	124
2015 = 64	Actual		2015-01-01	2015-12-31	64
2014 = 29	Actual		2014-01-01	2014-12-31	29
2013 = 1	Actual		2013-01-01	2013-12-31	1

Number of registered studies published (known)

SHARE Research Events

Description	Type	Increasing	Start Date	End Date	Number
Unspecified	Target				
2016 = 16,000,000	Actual	Increasing	2016-01-01	2016-12-31	16,000,000

3. Training

Disseminate knowledge to enact change.

In the next three years, COS will optimize training delivery to maximize its reach and impact particularly for supporting underserved communities, and foster sustainability with integration into course curricula.

Performance Indicators

Description	Type	Start Date	End Date
[To be described]	Target		
	Actual		

4. Incentives

Provide reasons to embrace change.

In the next three years, COS will bring adoption of its incentive services to scale, monitor and incentivize adoption by stakeholders, and incorporate continuous evaluation of intervention effectiveness.

4.1. TOP

Increase reproducibility of research.

Transparency and Openness Promotion (TOP) Guidelines — Transparency, open sharing, and reproducibility are core values of science, but not always part of daily practice.

Stakeholder(s):

Journals

Role: Reproducibility

Increase reproducibility of research by adopting the Transparency and Openness Promotion (TOP) Guidelines and helping them evolve to meet the needs of researchers and publishers while pursuing the most transparent practices.

Funders

Role: Reproducibility

Increase reproducibility of research by adopting the Transparency and Openness Promotion (TOP) Guidelines and helping them evolve to meet the needs of researchers and publishers while pursuing the most transparent practices.

Scholarly Societies

Role: Reproducibility

Increase reproducibility of research by adopting the Transparency and Openness Promotion (TOP) Guidelines and helping them evolve to meet the needs of researchers and publishers while pursuing the most transparent practices.

Performance Indicators

TOP Guidelines Journal Signatories

Description	Type	Trend	Start Date	End Date	Number
Unspecified	Target				
2017 = 4,957	Actual	Increasing	2017-01-01	2017-12-31	4,957
2016 = 700	Actual		2016-01-01	2016-12-31	700
2015 = 500	Actual		2015-01-01	2015-12-31	500

5. Community

Foster connection and inclusion to propagate change.

In the next three years, COS will grow and empower community partnerships with integrated services and collaboration across stakeholder communities.

Performance Indicators

Description	Type	Start Date	End Date
[To be described]	Target		
	Actual		

Administrative Information

Start Date: 2017-01-01
End Date: 2020-12-31

Publication Date: 2019-05-15
Source: https://docs.google.com/document/d/1sqz3appQ73vqa6fP1Gy8KK8HZpotoSGaiJC1XQuvREI/edit

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