

# JST Open Science Policy and implementation

June 22, 2023

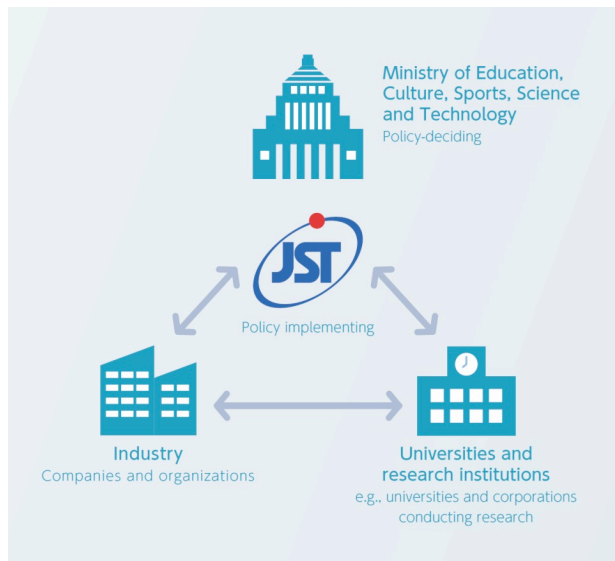
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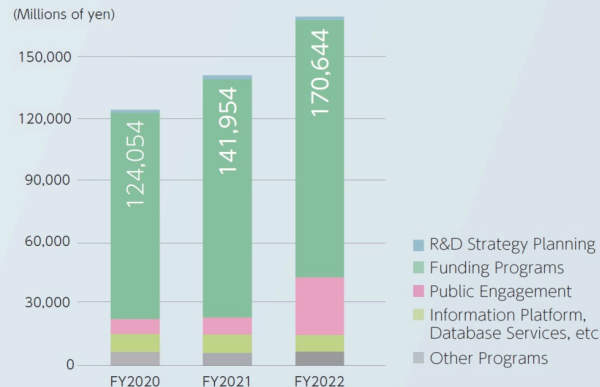
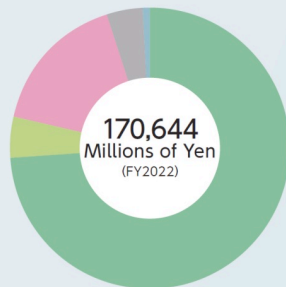
# Promoting Open Science at JST

# About JST



## 5th Mid-to-Long term Plan (FY2022 - 2026)

### Initial Budget



### Funding programs 74.0%

As a network-based research institute, JST promotes research and development leading to innovation and address economic & social issues throughout the implementation of research results and International joint researches.

- Strategic Basic Research
- International Collaborations
- Industry-Academia Collaboration and Technology Transfer

### Public engagement 16.5%

Promoting dialogue with various stakeholders toward co-creation of a future society. JST also fosters next generations talents in the fields of S&T as well as human resources who can contribute to S&T innovation.

- Promotion of "Science in/for Society"
- Fostering the Next Generation Human Resources
- Miraikan

### R&D strategy planning 0.8%

Throughout dialogue with stakeholders and data analysis, JST formulates R&D strategies toward the future.

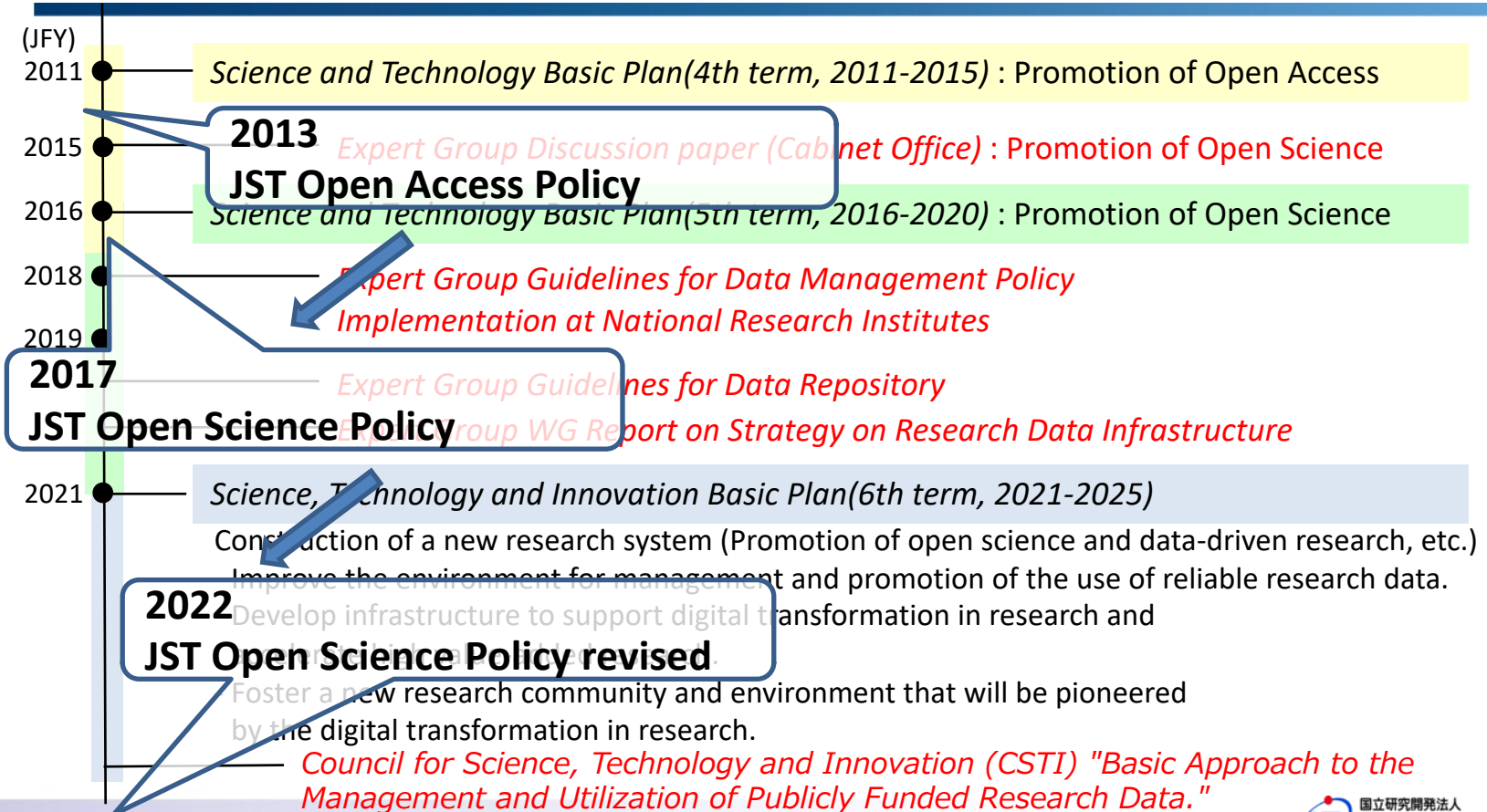
### Information platform and database services, etc. 4.7%

### Other programs 4.0%

# Open Science Policy in Japan (Timeline)



# Open Science Policy in Japan



# JST Policy / JSTの方針

## JST Policy on Open Access to Research Publications and Research Data Management

(April 1, 2017) (Revised on April 1, 2022)

### オープンサイエンス促進に向けた研究成果の取扱いに関する JST の基本方針

(平成 29 年 4 月 1 日 施行) (令和 4 年 4 月 1 日 改定)

#### I. Open Access to Research Publications

- Open Access should be applied to all research publications
- within 12 months of publication for peer-reviewed research articles

**Green OA is recommended, and Gold OA can be selected.**

- In achieving Open Access, it is recommended that make final accepted peer-reviewed manuscripts and other relevant submitted versions publicly available by depositing them in an institutional repository or other relevant mechanisms.
- Publishing research publications in Gold OA is allowable but is not necessarily encouraged.

#### II. Handling Research Data

#### I. 研究成果論文のオープンアクセス化について

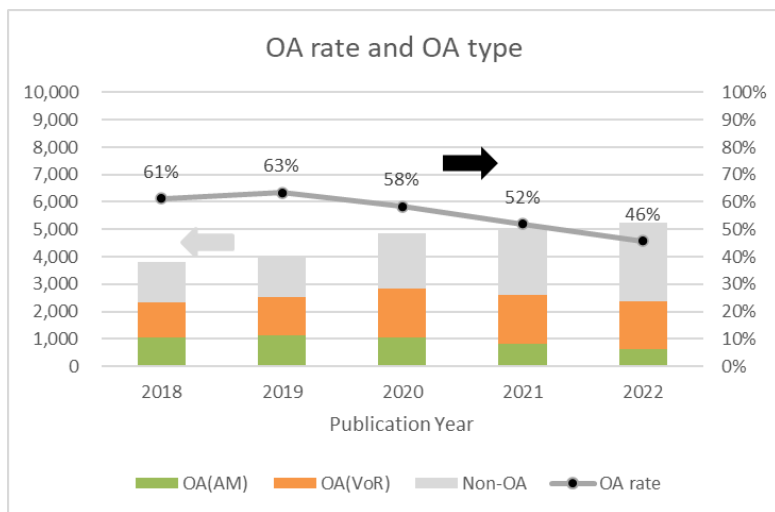
- 研究プロジェクトの成果に基づく研究成果論文はオープンアクセス化することを原則とする。全ての研究成果論文を対象とするが、特に、査読済の論文（レビュー論文、会議論文（プロシーディングに採録された論文）を含む）については、原則として出版後 12 ヶ月以内にオープンアクセス化する。

#### グリーンOAを推奨、ゴールドOAも可

- 著者最終稿等を国の施策として進められている機関リポジトリ等を活用し公開することを推奨する。
- 研究プロジェクトに参画する研究者等がオープンアクセスを前提とした学術誌(全記事または一部記事)等に研究成果を発表することによるオープンアクセスへの対応も可能とする。

#### II. 研究データの取扱いについて

# Monitoring



- "OA(AM)" is an article published on the publisher's website and made OA by the CHORUS initiative. However, the status of implementation differs among publishers.
- The capture rate of articles is increasing because the number of articles has increased, but the OA rate has yet to.
- 「OA(AM)」は出版社サイトでの公開であり、CHORUSの取り組みによりOA化されたもの。ただし、出版社によって対応状況が異なる。
- 論文数は増えており、捕捉率は上がっていると推測できるが、OA率は上がっていない。



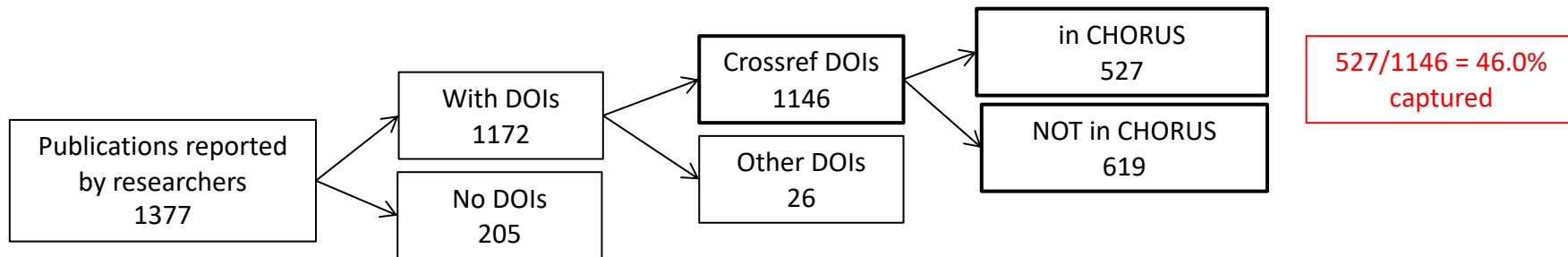
# Reports from researchers / CHORUS data matching

## Matching study of CHORUS data with reports on ERATO program

- Matching of papers reported by researchers on ERATO research projects that were underway in FY2021 and papers in CHORUS
- Papers with Crossref DOI were expected to be found in CHORUS, but 619 were not included.
- The main reason may be that the information about JST funding is not given as metadata (it may be in the acknowledgment section). There could be multiple causes, such as authors not entering the data, publishers not distributing the data, etc.
- Encouragement is needed for all stakeholders regarding the enhancement of metadata.

## ERATOプログラムの成果論文とCHORUSデータのマッチング調査

- 2021年度に実施中であったERATOの研究課題について、研究者からの報告にもとづく論文のうち、CHORUSデータに含まれているものの調査を実施。
- Crossref DOIが付与されている論文はCHORUSに含まれていることを期待するが、619件は含まれていなかった。
- 主な原因としては、JST支援の事実がメタデータとして付与されていない（謝辞には書かれている可能性あり）が考えられる。著者が入力しない場合、出版社がデータを流通させない場合等、複数の原因が考えられる。
- メタデータの充実に関する関係者の働きかけが必要。



# Monitoring using multiple sources

The OA rate is about 50%, but still a ways to go.

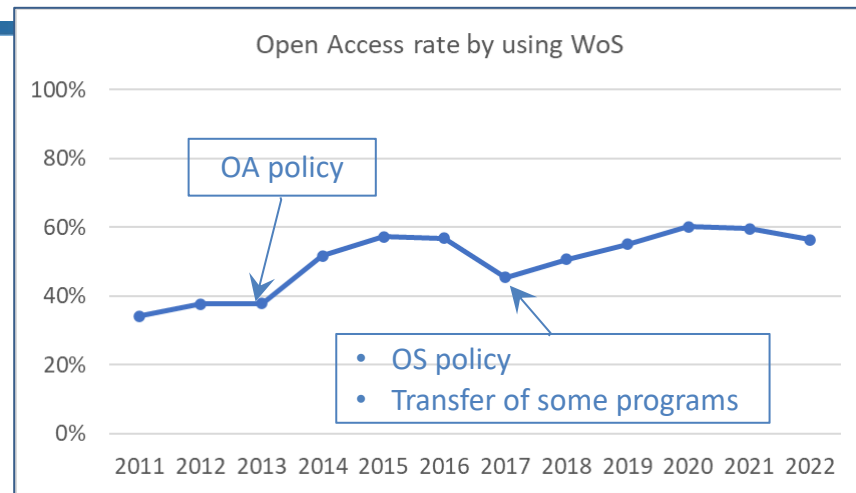
(Issues)

- To capture an accurate OA rate
  - ✓ Although CHORUS and WoS are used, it is not easy to define the actual rate because it depends on the data collection of each service.
  - ✓ The status of green OA is unclear.
- Low compliance rate for "in principle open to the public."
  - ✓ Causes and countermeasures need to be examined.

OA率は約50%、まだ道半ば

(課題)

- 捕捉精度の向上
  - ✓ 調査方法によって捕捉率は変わるため、様々なデータソースを用いてOA率を把握する必要
  - ✓ グリーンOAの状況が不明
- 「原則OA」の遵守率としては高くない
  - ✓ 理由の深掘りが必要



	Total	OA paper	OA rate
ERC (EU)	24,426	22,003	90.1%
NIH (US)	97,465	84,916	87.1%
NSF (US)	88,987	56,995	64.0%
<b>JST</b>	<b>8,127</b>	<b>4,849</b>	<b>59.7%</b>
NSFC (CH)	366,375	129,375	35.3%

Comparison of OA rates with institutions overseas (2021 Publications)  
海外機関との比較 (2021年出版論文)

# Reasons for Not Going OA

## Possible "Reasons for Not Going OA "

- JST OA policy is not widely aware among authors
- APC (Article Publication Charge) is too high
- The burden of openness outweighs the benefits  
Especially in the case of green OA, the burden of self-archiving is high: Confirming rights with publishers, registering author manuscripts at repositories, etc.

## Actual opinions

- Many concerns and requests for APCs
  - ✓ Recent rise in APC
  - ✓ After submitting a paper, it may be guided to OA journals with higher APCs
  - ✓ Requests for support after the research project ends
- There is a gap in feelings towards OA depending on the researchers even in the same research field.

No comments were received on deposit to a repository; a possibility that Gold OA may be in mind when considering OA.

## 考えられる「OA化されない理由」

- OAポリシーが浸透していない
- APC（論文掲載料）にかかる負担が大きい
- オープン化の手間がメリットを上回る
  - ✓ 特にグリーンOAの場合、セルフアーカイブの負担が大きい。出版社との権利関係の確認や、リポジトリへの登載作業など

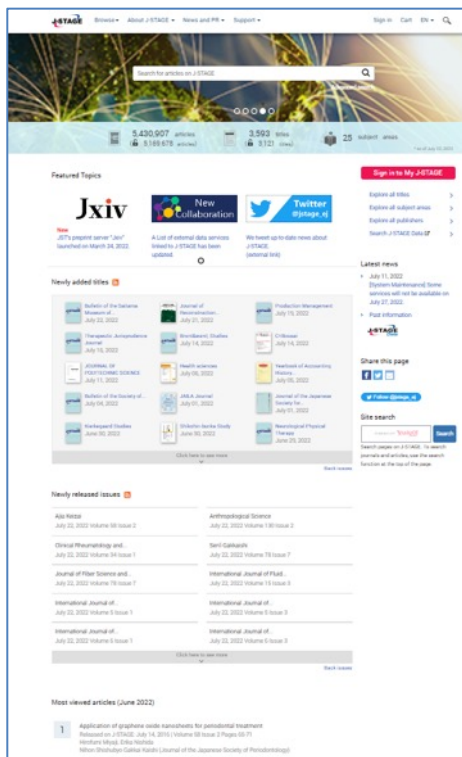
## 【現場からの意見】

- APCにかかる懸念、要望
  - ✓ 最近のAPCの高騰
  - ✓ 投稿後、APCが高いOA誌に案内されることもある
  - ✓ 期間終了後の支援要望
- OAに関する温度感が同じ分野でも研究者によって異なる

→ リポジトリ登載に関する意見は届いていない。  
OAを意識する場合は、Gold OAが念頭にある可能性。

# Information Services

# J-STAGE – journal platform for Japanese academic societies



[www.jstage.jst.go.jp](http://www.jstage.jst.go.jp)

◆ J-STAGE is an electric journal platform operated by JST since 1999 for Japanese academic societies

◆ Purpose

- ✓ To promote the electric publication of journals from Japanese academic societies
- ✓ To disseminate those publications through the internet and to promote open access

## J-STAGE hosts:

Titles : 3,524

Articles : 5,372,753

Published by

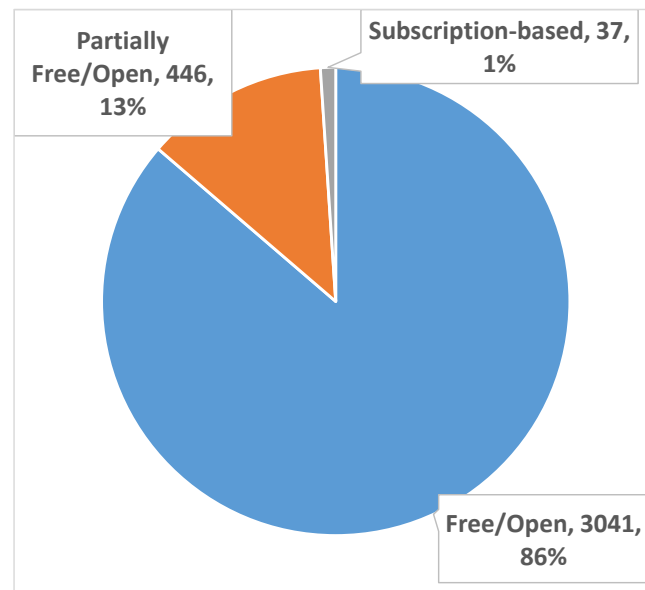
2,052 Learned Societies

More than

400 million downloads

in FY 2021

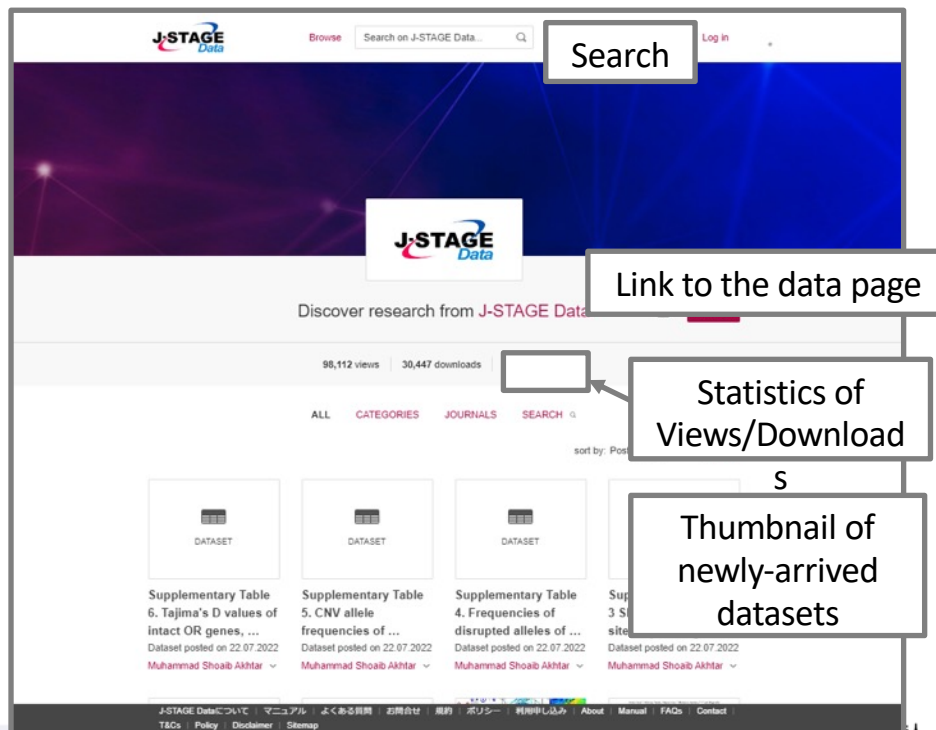
(as of March 31, 2022)



- About 86 % of journals on J-STAGE are Free/Open Access
- However, journals with reuse license and claim “OA journals” is small.

Data repository to publish research data that underlie articles on J-STAGE.

- March 2020 released
- Open Access
- DOIs are registered
- 32 journals, 462 datasets (1/14/2023)
- Powered by Figshare
- Indexed by Google Dataset Search and Dimensions



# Japan's Preprint Server "Jxiv" has Launched

March 24, 2022

<https://jxiv.jst.go.jp/>



- Jxiv makes unpublished papers (preprints) openly available before peer review.
- Preprints are in English and Japanese and span all research fields.
- A researchmap or ORCID ID required to submit.

## Background:

Publication of research results by preprints expanded rapidly with COVID-19 research.

- The number of preprints from Japan was relatively small.
- It is challenging to ensure the quality of preprints.
- Some servers in other countries have given up the operation because of financial difficulties.

- Complement the time-consuming journal publication process, leading to early commercialization of research results.
- Enable the continuous operation of the preprint server through government support.
- Function as a forum for rapid discussion of urgent issues.
- Contribute to open access.



# Future Considerations

# Future Considerations

## APC support

Assuming that current non-OA papers are to be transferred to Gold OA, \$7-14 mil/year is needed

- Using CHORUS to extract the number of non-OA papers of JST results
- ✓ Actual APCs for the top 10 journals with the highest number of papers published by year are surveyed and used.
- ✓ After 11th place, used about \$10 thou for Nature, and an average of about \$2.8 thou for all other journals.
- ✓ Total APCs for non-OA papers in CHORUS were calculated using the above values, and all JST papers were assumed to be twice that amount, and then the APCs were multiplied by two.

## Monitoring

One idea is to present the OA status of papers in a visible way for researchers in order to raise awareness of OA.

## Platform Development

Development and promotion of services such as preprint servers as an option for OA

## APC支援

現在OA化されていない論文をゴールドOA化すると仮定した場合、年間10～20億円が必要

- CHORUSを使って、JST成果の非OA論文数を抽出
- ✓ 各年の論文出版数の多いジャーナル上位10位について実際のAPCを調査して使用。
- ✓ 11位以降は、Nature誌は約150万円、それ以外は全ジャーナルの平均値約40万円を使用。
- ✓ CHORUSの非OA論文のAPC総額を上記の値で計算し、全JST論文をその2倍と想定して、APCを2倍した

## モニタリング

OAの認知度を上げるために、研究者にわかりやすい方法で、論文のOA状況を提示することも一案

## プラットフォーム整備

OA手段の選択肢として、プレプリントサーバ等サービスの整備と普及をはかる

Thank you