Exploring sustainability

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Outline

Part I. MorphoSource

- Current funding
- Estimated operating costs
- Guiding principles
- Sustainability model (?)

Part II. Sustainability consultants

- Sustainability solutions by Phoenix Bioinformatics

NSF

<u>2017-21</u>: ABI development grant (co-institution: Penn State)

• *Refactor MorphoSource to Hyrax (MS 2.0) + data storage*

<u>2017-21</u>: oVert TCN (subaward from UF)

• *Data storage and feature support for oVert*

<u>2018-21</u>: ABI development grant (collaborator: U. Washington)

• *API & data management features on MS 2.0*

Duke

5 year commitment starting 2021

Operating costs

Current Staff (during refactor)

- 3.5 FTE/year ~$350k

Current storage

- 40 Tb/year ~$11k

Future Staff (maintenance)

- 2-2.25 FTE/year ~$200k-$235k

Annual storage increases

+$2,500/year (over 10 years)

- +25% of previous year
- -12% per Tb/year

Projections for 2040

- 2 FTE ($307,000)
- 5.0 Pb ($76,000)

1) **NSF and other agencies should not be relied on long term**

2) **Access to data cannot require annual/periodic payments from depositors**

3) **Data must live on even if repository closes**

OCLC

Center *for* Research Libraries

GLOBAL RESOURCES NETWORK

1) **Revenue for data separate from revenue for staff/infrastructure**

2) **Develop a data fee structure that assumes onetime cost for long term storage *****

Storage

- eCommerce transactions for data allocations

- Pricing based on
  - Annual cost projection
  - Expected endowment returns
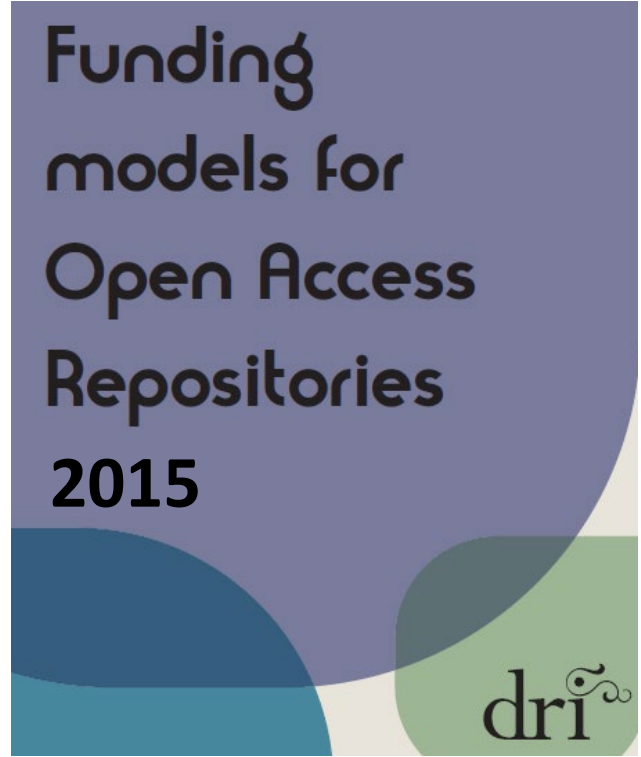
Staff & infrastructure

???

Potential models:

- voluntary subscription
- freemium
- licensing technology (or data?)

Many models excluded:

- compulsory user/downloader fees
- extra data contributor fees
- long term foundation support

Funding models for Open Access Repositories

2015

dri

Working plan

Staff/infrastructure (lines of defense)

1. Licensing technology (commercial contracts)

2. Freemium (???)

3. Voluntary subscription/consortium

-Duke backstop
-charitable donations

Licensing

In discussions with industry partners

Freemium (???)

No specific plans

Voluntary subscription/consortium

Potential administrative partners (Part II)

-Duke backstop
-charitable donations

Success requirements

Resources

Still a long road and we anticipate needing significant additional help from NSF before we are self-sustaining

Tools

Creation of non-profit, 501c(3) MorphoSource entity to interface with various partners including Duke MorphoSource Repository

-Duke backstop

-charitable donations

Phoenix Bioinformatics

Dr. Eva Huala - CEO