

Building Open Science Infrastructures through Open Information Systems



Washington Segundo

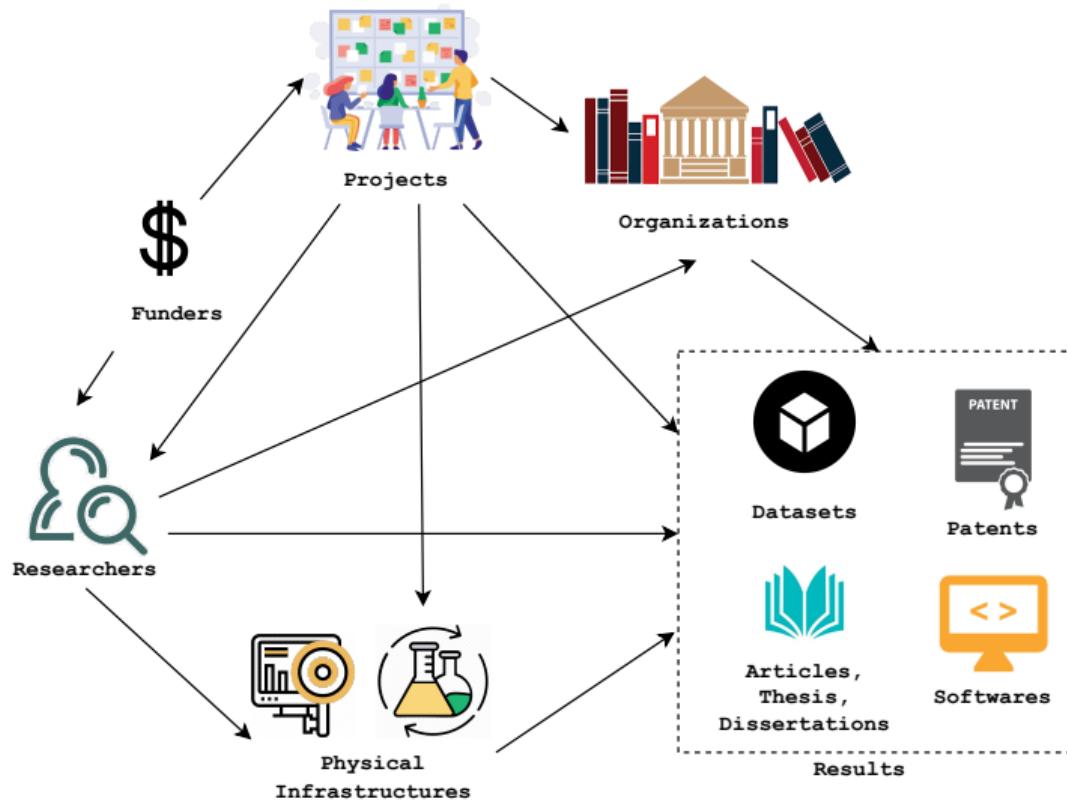
Instituto Brasileiro de Informação em Ciência e Tecnologia (Ibict)

27th April 2023



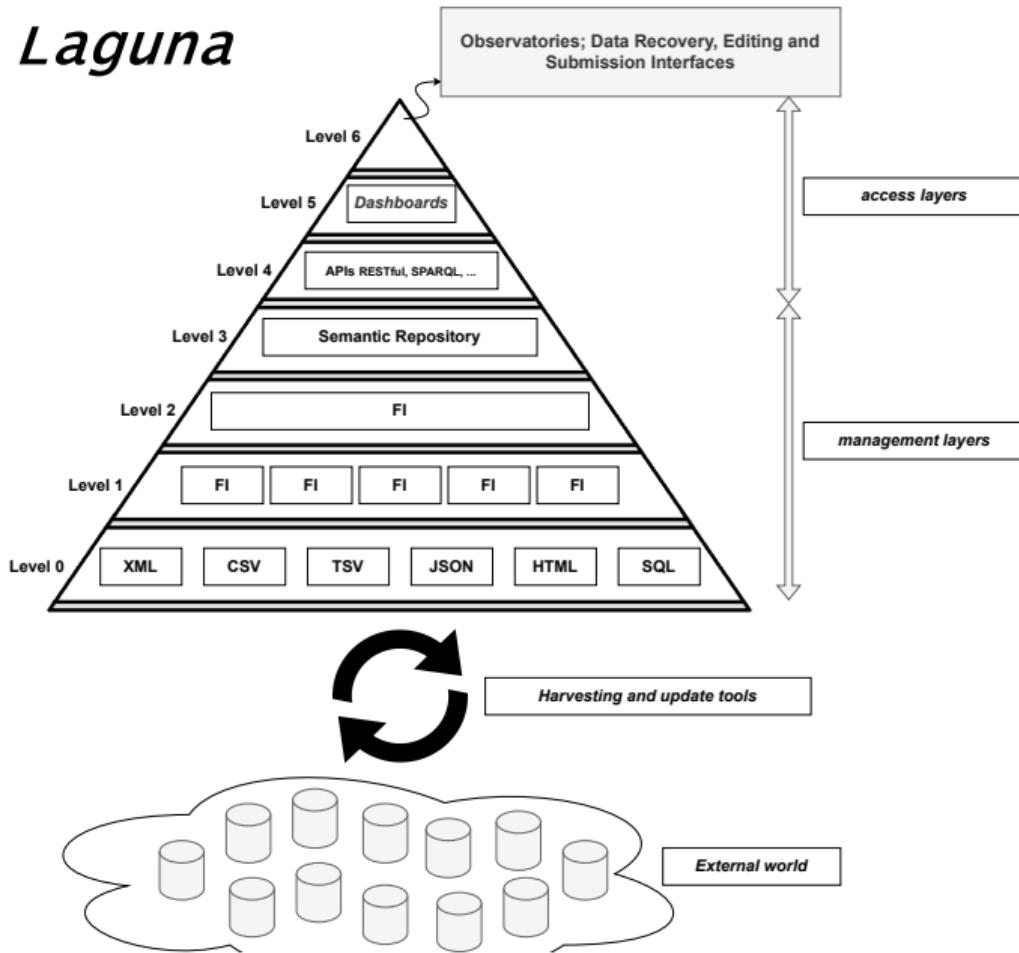
Brazilian Portal of Publications and Scientific Data in Open Access (approx. 4,335,000 items) <<https://oasisbr.ibict.br>>



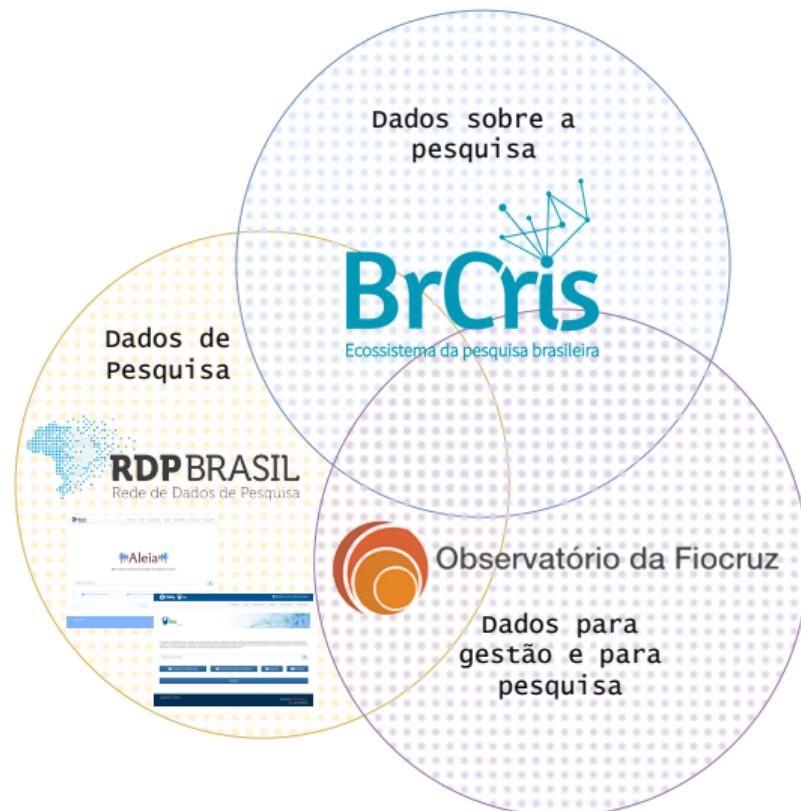




Laguna



**Data
from,
about and
for the
research**





ISSN → 1975 ORCID → 2018 DataCite → 2020 ROR → 2021

CoNCiênciA



Consortium lead



Organization 1
(Also Consortium Lead role)



Repository



Repository



Organization 2



Reposito



Organization 3



Repository





dARK



ISSN

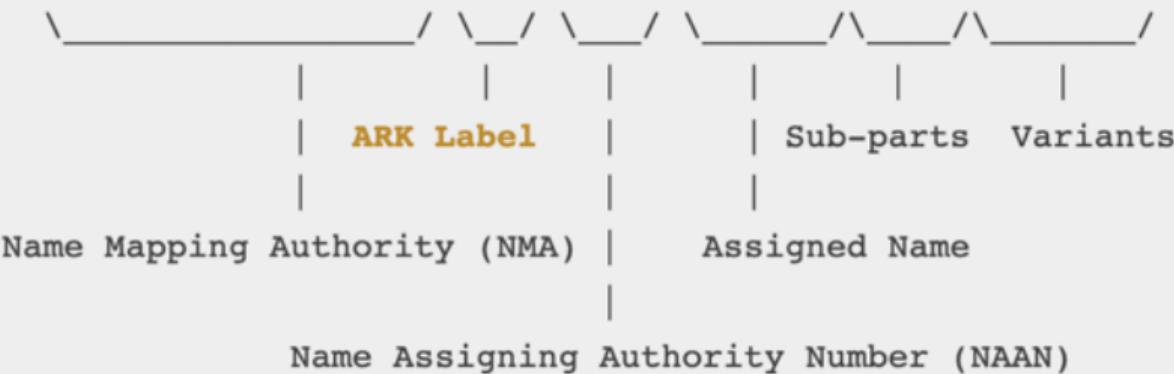
Goals

- **Avoid** disconnected multiple PID assignments.
Example: **a journal article (deposited in two different repositories) with two different DOIs that are not known**
- **Facilitate** PID assignments to multiple types of digital objects (**articles, thesis, data sets, DMP, instruments, ...**) in many diffusion channels (**repositories, journals, preprint servers, ...**)
- **Generate** services open to **publication, diffusion and evaluation systems**
- **Preserve** metadata through **blockchain** mechanisms

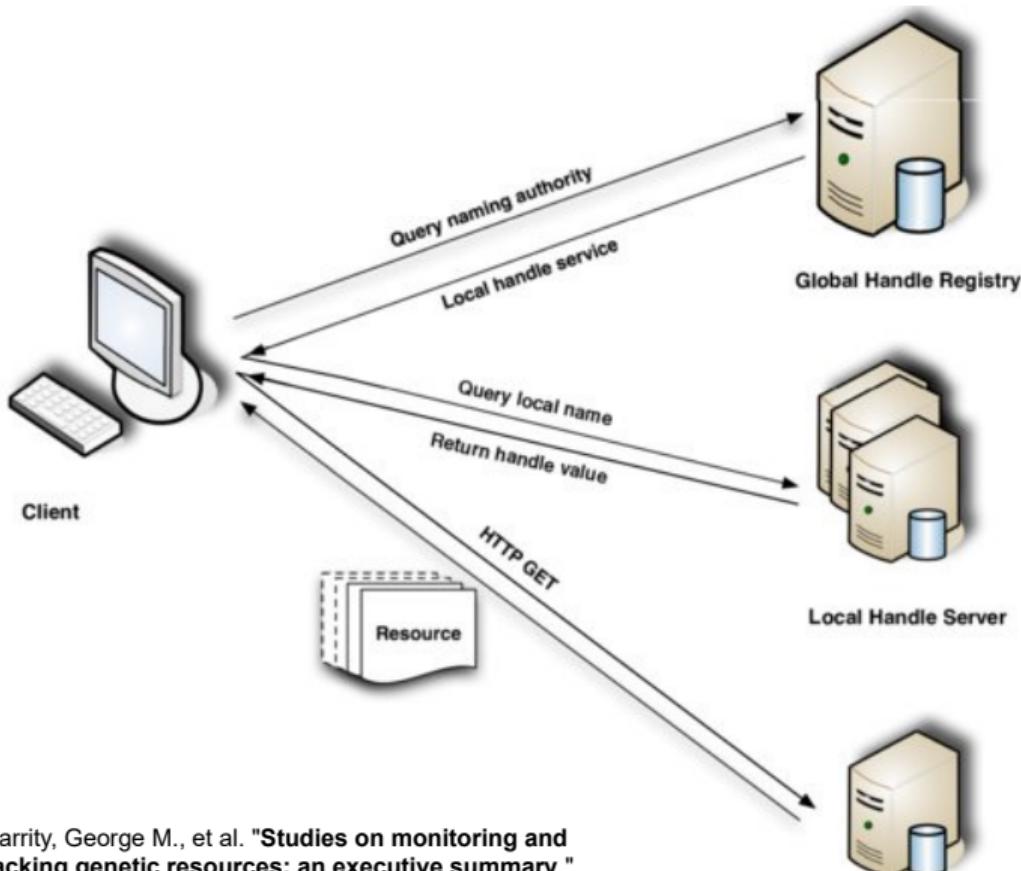


ARK Alliance

`https://example.org/ark:/12345/x54xz321/s3/f8.05v.tiff`

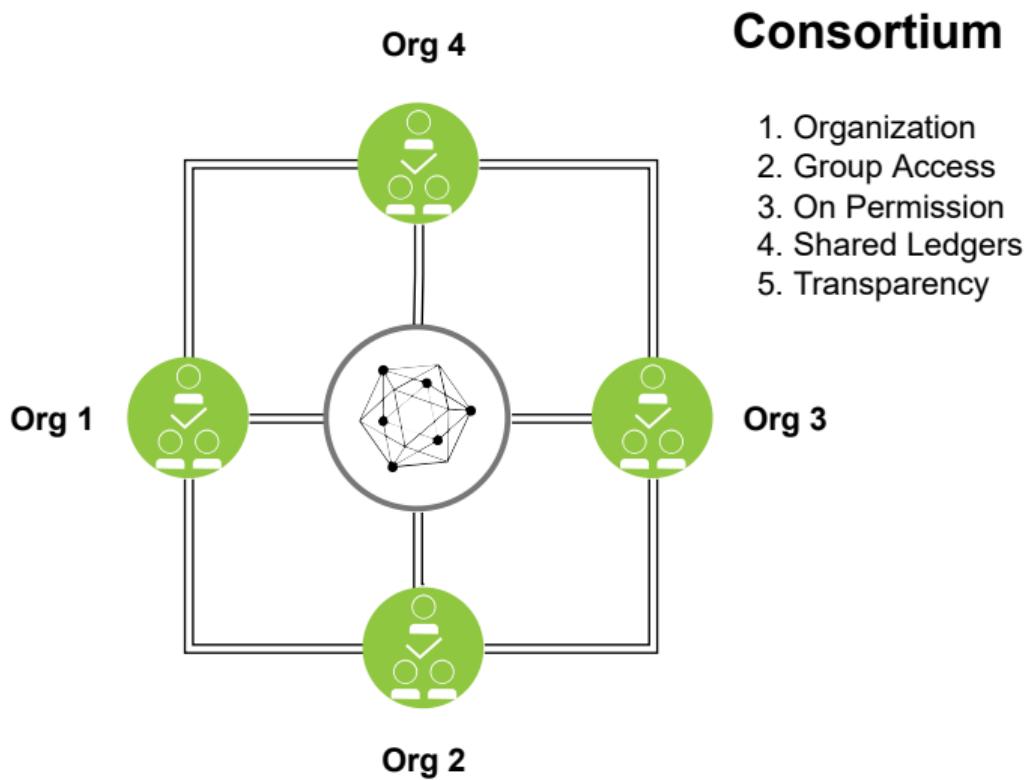


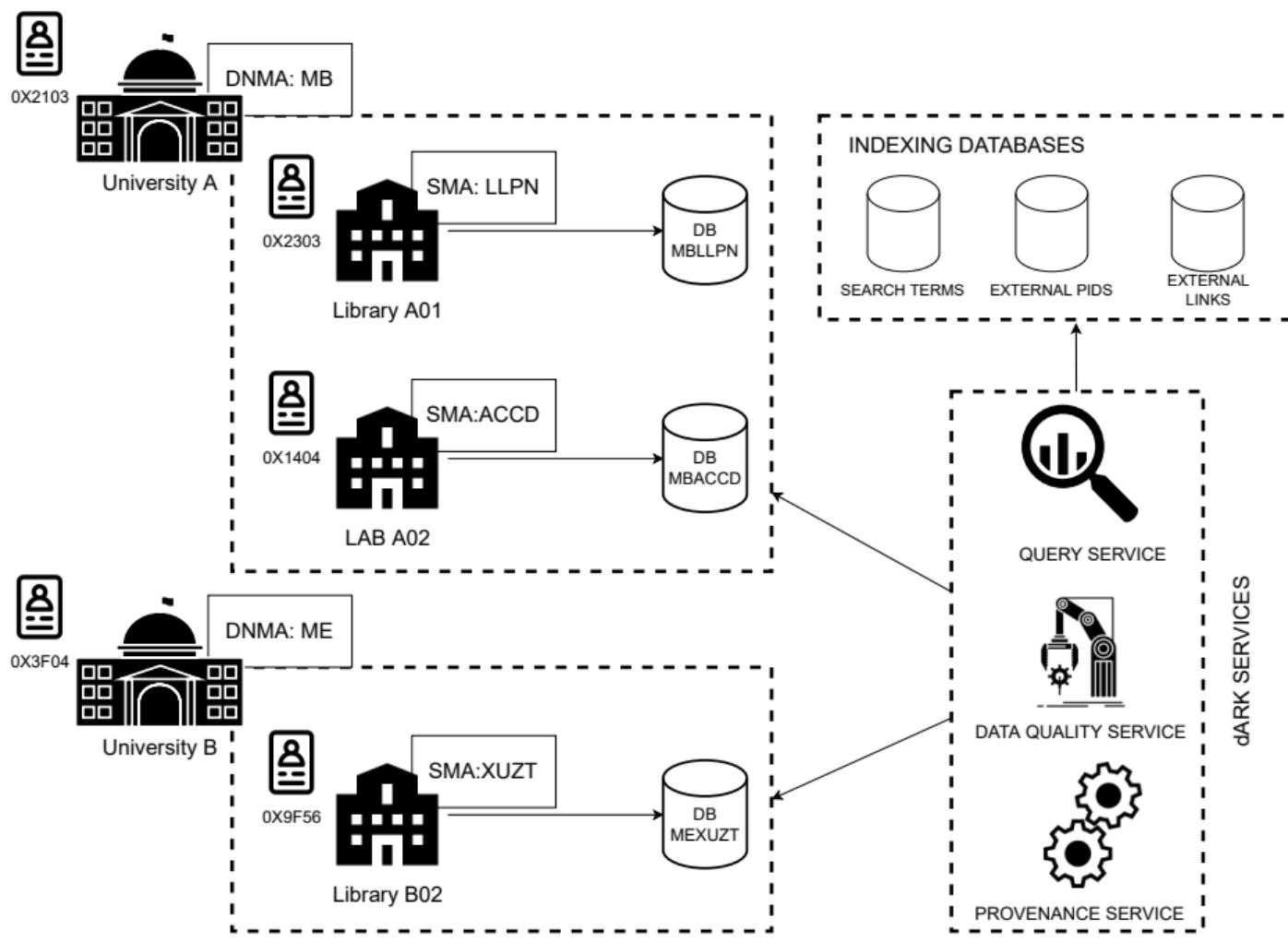
Huynh, Kyle, et al. "Simplifying ARK ID management for persistent access to digital objects." *Code4Lib Journal* 54 (2022).



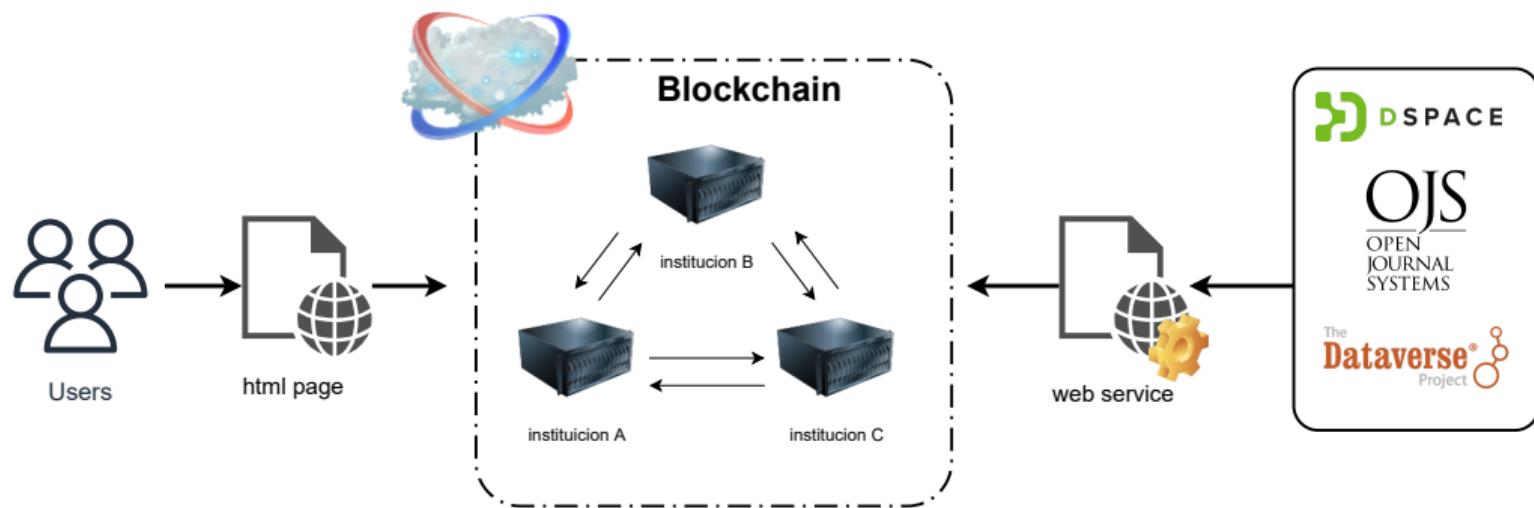
Garrity, George M., et al. **"Studies on monitoring and tracking genetic resources: an executive summary."**
Standards in Genomic Sciences 1 (2009): 78-86.

The blockchain consortium model





The dARK PoC



Response example

```
{  
  "noid": "8003/fkwff300001v",  
  "external_pids": [  
    {  
      "id": "0x6cd32058785840306ddaa126d57999315739722ce57131dde41aa3690a8afdd",  
      "schema": "DOI",  
      "value": "10.1016/J.IS.2021.101826",  
      "owner": "0xf17f52151EbEF6C7334FAD080c5704D77216b732"  
    }  
  ],  
  "payload": "{ 'title': 'Blockchain-based Privacy-Preserving Record Linkage: enhancing data privacy in an un  
' Thiago Nóbrega', 'type': 'Article'}",  
  "external_links": [  
    "https://doi.org/10.1016/j.is.2021.101826"  
  ],  
  "owner": "0xf17f52151EbEF6C7334FAD080c5704D77216b732"  
}
```

Conclusion

- Cooperation (in Brazil, Latin America and outside) between **institutions** and formation of **collaborative networks**
- Development of **models**, **standards** and **aggregation tools / treatment / retrieval / data visualization** and **information**
- Solutions, with **distributed management**, that are **simple** to use and have **low computational cost**

Thank you!

Thank You

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