

Peter Doorn, Director DANS
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on Research Data

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**Open Data in Science:
Challenges and Opportunities
for Europe**

Workshop

31 January 2018
9:00-16:30

Brussels
Rue du Trône 62

European Members of the International Council for Science

Questions by moderator:



1. Challenges for you as a public research funder regarding open data? Is there a difference in perspective being a public research funder at the national or European level?
2. The services you provide at DANS (DataverseNL, EASY and NARCIS) and how this fits into the EOSC declaration?

Questions (continued):

3. Science Europe working group on Research Data:



- Is agreement possible on how to deal with open research data with such a big group of research funding organisations?
- What are some of the main pressing obstacles you have encountered in your working group?

4. We have just started 2018: where do you stand as public research funder in 2025?

Question 1

Challenges for you as a public research funder regarding open data?



Is there a difference in perspective being a public research funder at the national or European level?

Answers:

- NWO started promoting Open Access Publishing a few years ago
- More recently: Open Science Policy, promoted during Dutch EU Presidency, also cornerstone of new Government
- Principle: Open if possible, protected if needed
- RDM costs can be budgeted in proposals

Answers to Q1



- NWO started pilot requesting data management paragraph and plan in 2016; now policy is implemented for all funding instruments and all domains
- National/international perspective: NWO active Science Europe member, pledged to work on international common core set of RDM requirements
- Challenges:
 - Harmonizing RDM requirements, nationally and internationally
 - How to evaluate DMPs? They do not (yet?) play a role in decisions about grants

Question 2



The services you provide at DANS (DataverseNL, EASY and NARCIS) and how this fits into the EOSC declaration?

DANS is about keeping data FAIR



Mission:
promote and
provide
permanent
access to digital
research
resources

Institute of
Dutch Academy
and Research
Funding
Organisation
(KNAW & NWO)
since 2005

First predecessor
dates back to
1964 (Steinmetz
Foundation),
Historical Data
Archive 1989

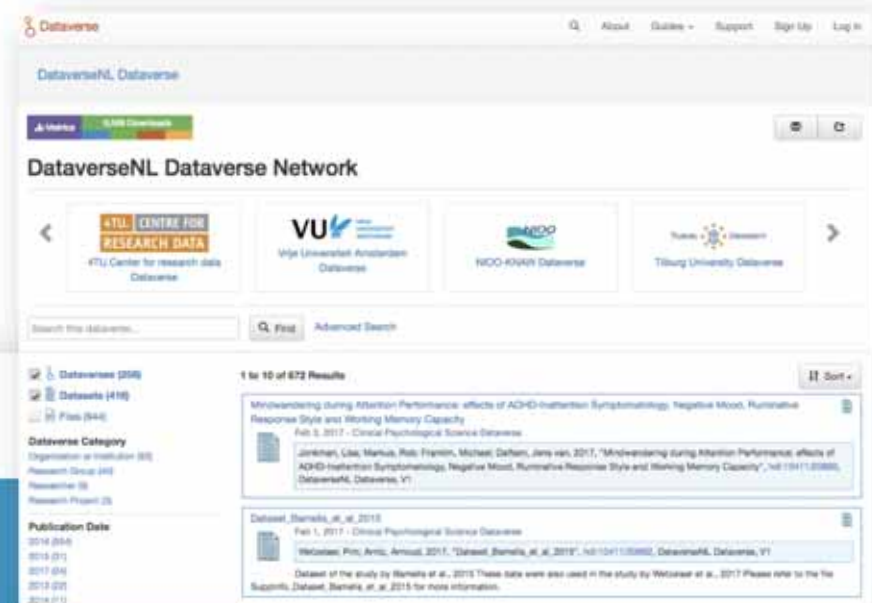
Data Archiving and Networked Services

DANS

DANS core data services



EASY: long-term Electronic Archiving System for self-deposit



DataverseNL for short/intermediate term storage (including RDM during research)



NARCIS: Gateway to scholarly information In the Netherlands

SCIENCE
EUROPE



Three additional services

<http://www.datasealofapproval.org/>



Cradle of the
Data Seal of Approval

<http://www.persid.org/>



Persistent Identifier
URN:NBN resolver

Training & Consultancy



<http://datasupport.researchdata.nl/>

Three new collaborative services



Background Archive



<https://data.mendeley.com/>

Research Data Journal
for the Humanities
and Social Sciences



BRILL

Software Heritage Archive

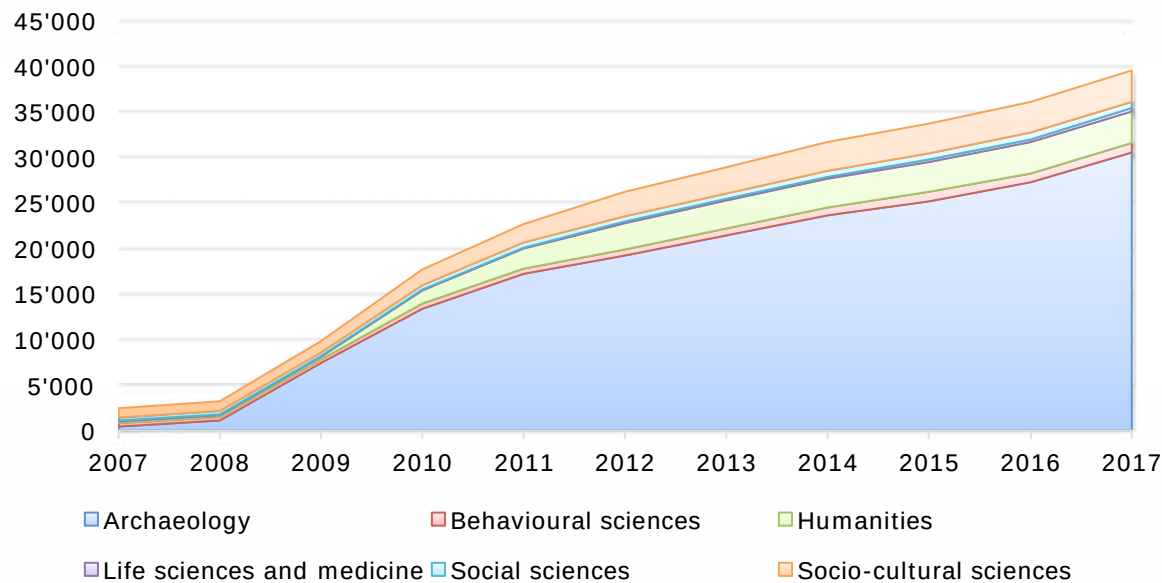


<https://www.softwareheritage.org/>

<http://www.brill.com/rdj>



Research Data Services: the EASY long-term Electronic Archiving System



over 40,000 data sets published

ikken, Tjerkgaast, gemeente De

Sort by: Choose One

Audience: Archaeology
Access: Restricted (archaeology group)
Submitted: 2015-03-30

REFINE

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Audience

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> Komweg (ong.) te Didam, gemeente Montferland; Archeologische Begeleiding (conform protocol opgraven)

Date: 2015-03-27
Creators: Diependaal, Drs. S. (consultancy bv); Veugeling, S.A. (consultancy bv)

Audience: Archaeology
Access: Restricted (archaeology group)
Available from: 2017-03-27
Submitted: 2015-03-27

> Oude Terborgseweg, Leliestraat en (verlengde) Asterstraat te Doetinchem, gemeente Doetinchem; Archeologisch gecombineerd verkennend en karterend booronderzoek

Date: 2015-03-27
Creators: Broeke, Ir. E.M. ten (consultancy bv)

Audience: Archaeology
Access: Open (registered users)
Submitted: 2015-03-27

DANS is partner in:



EOSC_{pilot}
The European Open Science
Cloud for Research Pilot Project



cessda eric



and many other EOSC building blocks

Question 3

Science Europe Working Group on Research Data:



- Is agreement possible on how to deal with open research data with such a big group of research funding organisations?
- What are some of the main pressing obstacles you have encountered in your working group?

Answers to Q3



Yesterday: Science Europe / NWO workshop “Open Science and Sharing Research Data: Towards European Guidelines on RDM procedures”

Working group aims at Common Core Requirements & Domain Protocols for RDM

Report:

[https://www.scienceeurope.org/wp-content/uploads/2018/01/](https://www.scienceeurope.org/wp-content/uploads/2018/01/SE_Guidance_Document_RDMPs.pdf)

[SE Guidance Document RDMPs.pdf](https://www.scienceeurope.org/wp-content/uploads/2018/01/SE_Guidance_Document_RDMPs.pdf)



What is Science Europe?

- Association of 43 European Research Funding Organisations (RFO) and Research Performing Organisations (RPO) in 27 European countries, based in Brussels. Combined budget: €18 billion
- Founding General Assembly in Berlin in October 2011
- **Mission:**
 - promote collective interests of members
 - support members to foster European research
 - strengthen the European Research Area (ERA)



Science Europe WG Research Data

Until 2016, the SEWGRD worked on basic aspects of research data, such as:



- Funding of data management and infrastructures: <https://goo.gl/eokd1j>
- Legal aspects related to copyright and Text and Data Mining (TDM)
- Common data terminology: http://sedataglossary.shoutwiki.com/wiki/Main_Page

Since summer 2016 the Working Group has focused on Domain Protocols for Research Data Management



Growing demands for Data Management Plans



- A growing number of SE Member Organisations have formulated policies, requirements, templates, etc. for Research Data Management (RDM) and Data Management Plans (DMP)
- The practices and cultures of data stewardship and data sharing vary among and within domains and communities, often depending on methodologies and nature of data collected/processed

Research Data Management: Lots of variation

Who requires RDM?

- funders: national and international, public and private
- research infrastructures: national and international (e.g. ESFRI)
- universities, RPOs
- journals (DAP)

What do they require?

- which/how many criteria?
- FAIR principles?
- retention period?
- during/after research?
- data sharing?
- eligible for funding?
- including software?
- recommended repository/datacentre/archive?

How do they require it?

- via project proposal
- during evaluations
- via code of conduct
- via DMP tool

How detailed?

- data management plan
- data paragraph
- once or periodic updates
- template: narrative/
checkboxes

How strict?

- obligatory
- (strong) recommendation
- advice

Summary of the RDM situation:

- Agreement on the overall policy aims of data management

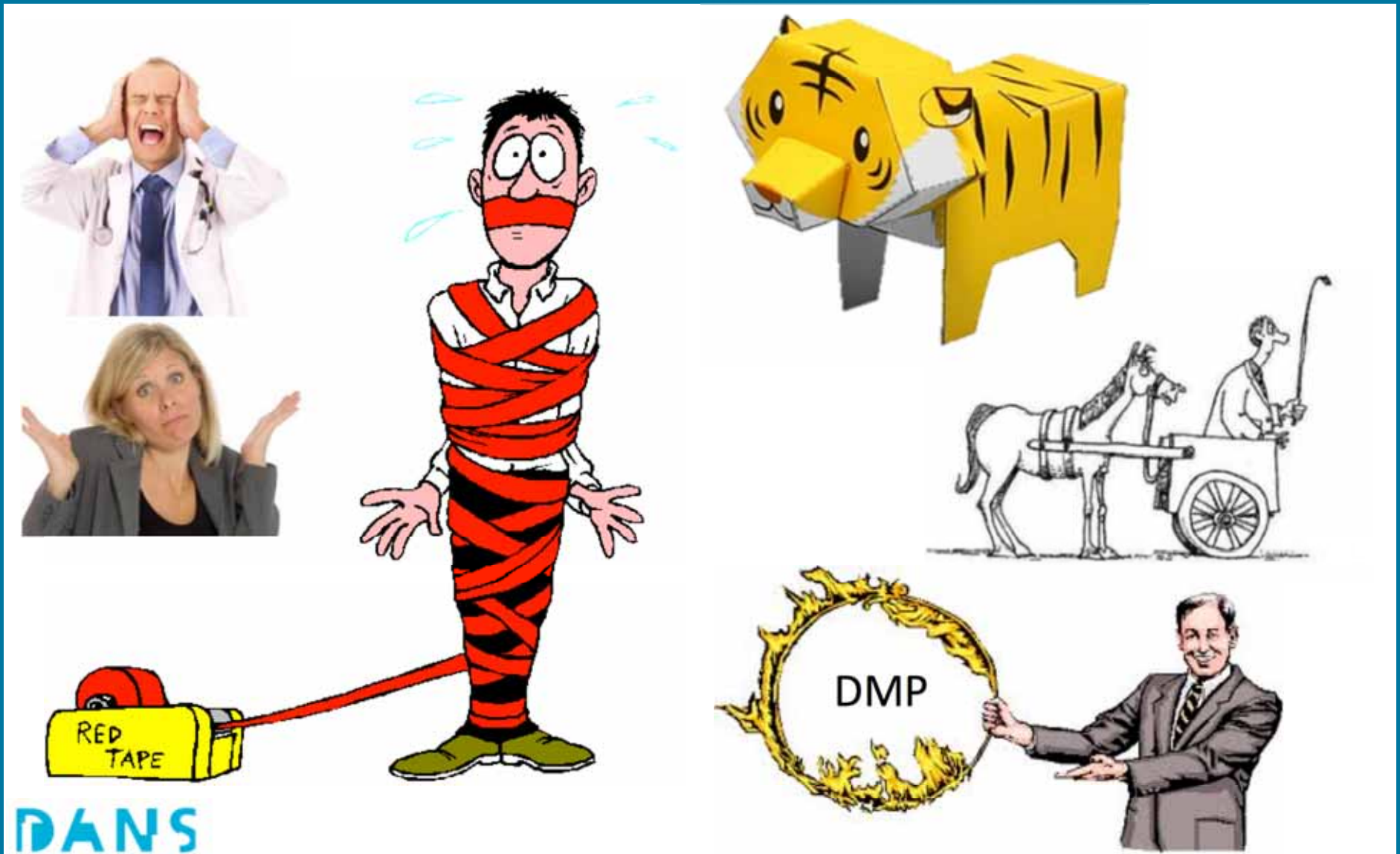


However....

- Many details differ at the level of implementation

Does this make sense?

What we try to avoid:



One size of data management doesn't fit all: a domain-oriented approach

Specialized data management practices are in use by different disciplines and communities.



A “bottom-up” approach complementing the “top-down” requirements, involving research communities, is needed:

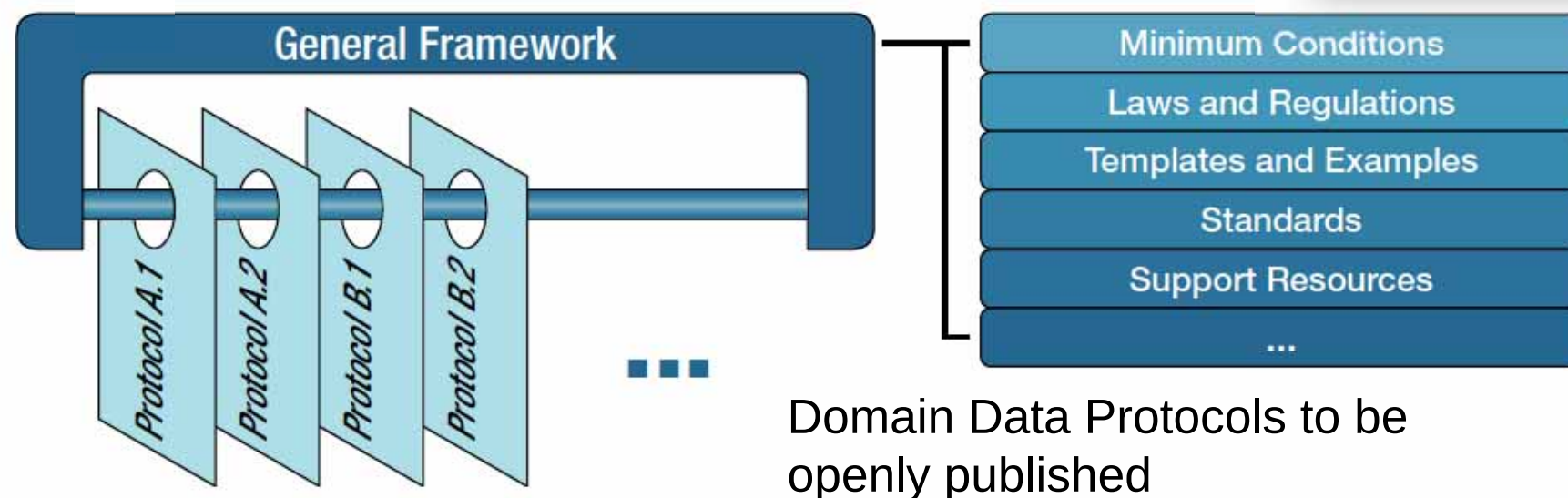
- Will be more suitable to community needs
- Will get better acceptance/adoption by communities

However:

- Terms of reference and guidelines are needed, to ensure legal compliance, comparability, procedures and basic quality standards
- This implies that research funders and performing institutions are to align their core RDM requirements

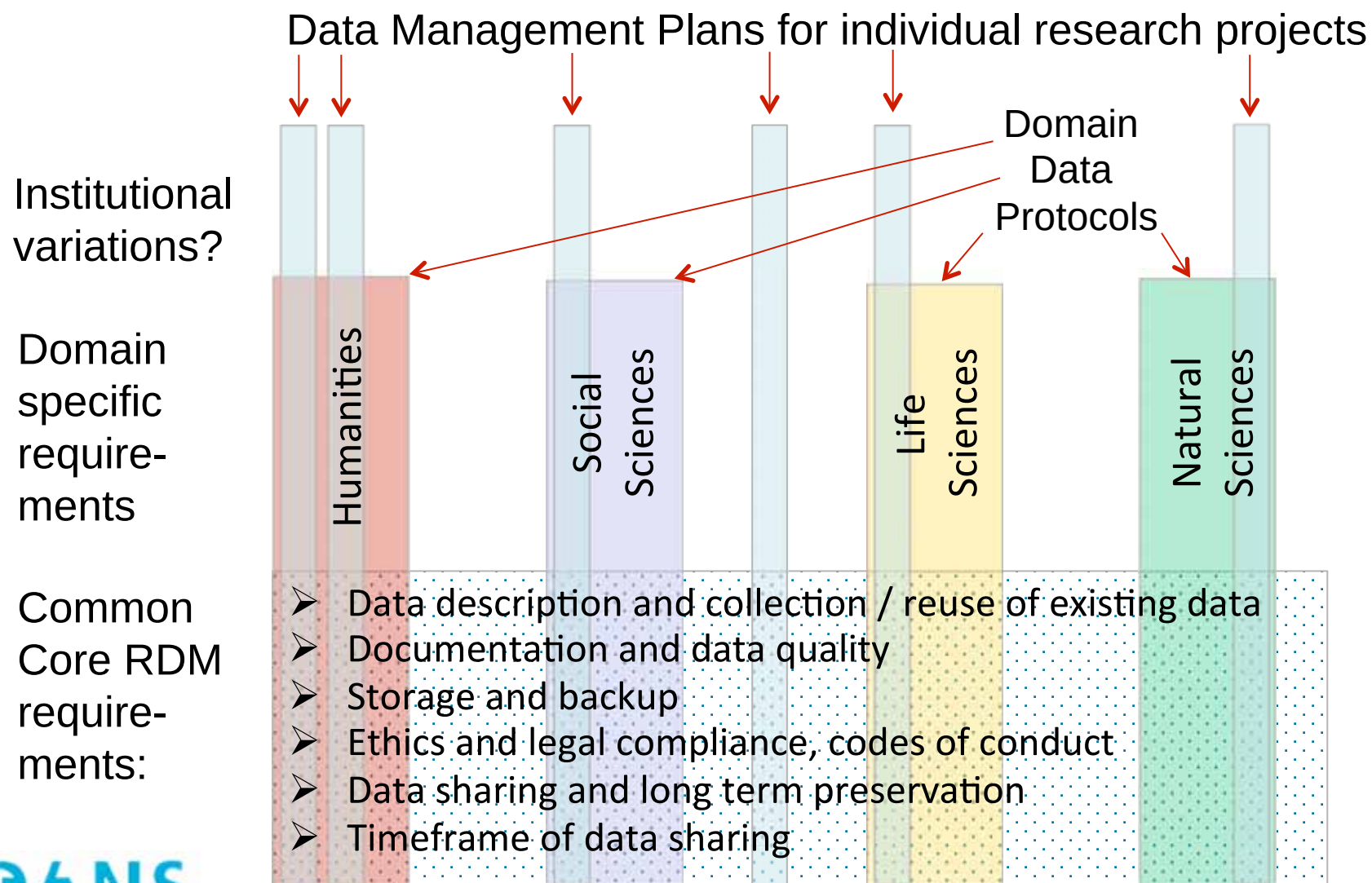
Actively involve communities in formulating RDM good practices

Science Europe M.O.'s to align RDM requirements and endorse Data Protocols Framework (Terms of Reference for Domain Protocols)



Report by Aerts & Doorn (2016): "A Conceptual Approach to Data Stewardship and Software Sustainability": <http://goo.gl/ycj8QH>

Common core and domain specific requirements for DMP's



Summary: the advantages of this approach



- Counter different RDM requirements from funder to funder, from university to university, from institute to institute
- Active involvement of scientific domains and scholarly communities increases acceptance and usefulness of RDM
- Less work for researchers proposing projects by accepting domain protocol as part of DMP
- Provision to researchers of a learning vehicle on RDM practices in their field, thus raising the general quality level of data management
- Reduced DMP processing costs and burdens for funders and researchers, and more focus on and better assessment of deviating RDM solutions

Question 4



We have just started 2018: where do you stand as public research funder in 2025?

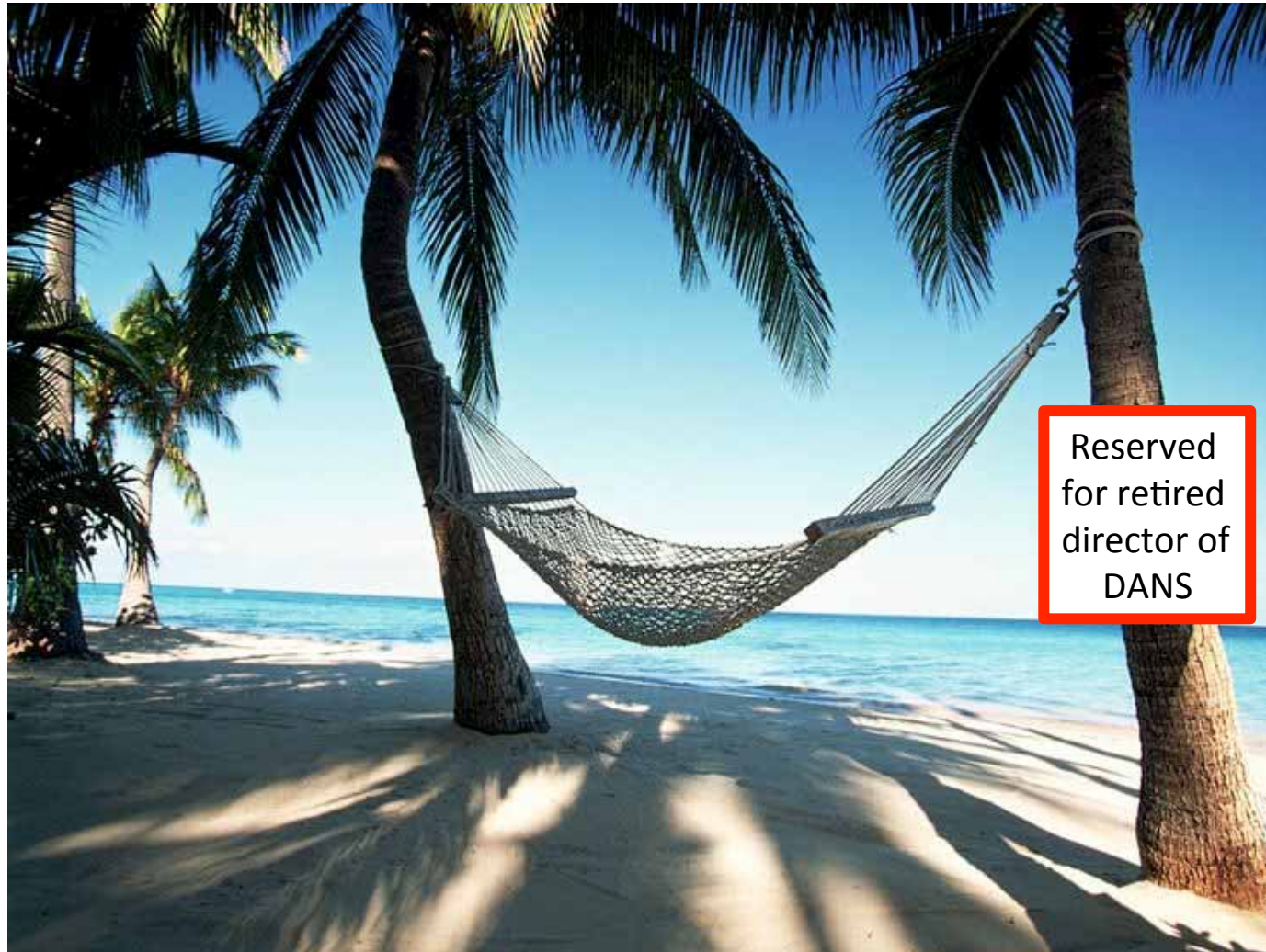
Answer to Q4

Some of my expectations for 2025:



- Culture change is a slow process, but data sharing will be the norm; data management will be as normal as footnotes or bibliographic references; funders will have common DMP criteria worldwide and endorse domain protocols
- Data repositories will be like journals: there will be certified, high-quality ones... and obscure ones
- Data citation is as normal as citation of research papers
- We will have an international software sustainability infrastructure
- We will have a couple of implementations of the FAIR data principles
- The EOSC will be a moderate success: as a technical backbone for data sharing it works fine, the governance and responsibilities will be more distributed in FP10

One final personal expectation for 2025:



Reserved
for retired
director of
DANS