Research data management: Experiences of scholars in Finland

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Research data management - Finland

- in Finland most universities have published their data management guidelines.
- Ministry of Education and Culture
  - Open science and research -initiative
  - Development of the national data management tool (DMP tool) in Tuuli-project (2016).
- In Finland the status of open access to research data has been implemented in a large-scale Open Science initiative and the other Nordic countries are following (NordForsk 2016).

- Scholars knowledge on the topic, their attitudes and their actual behaviour relate to research data literacy.
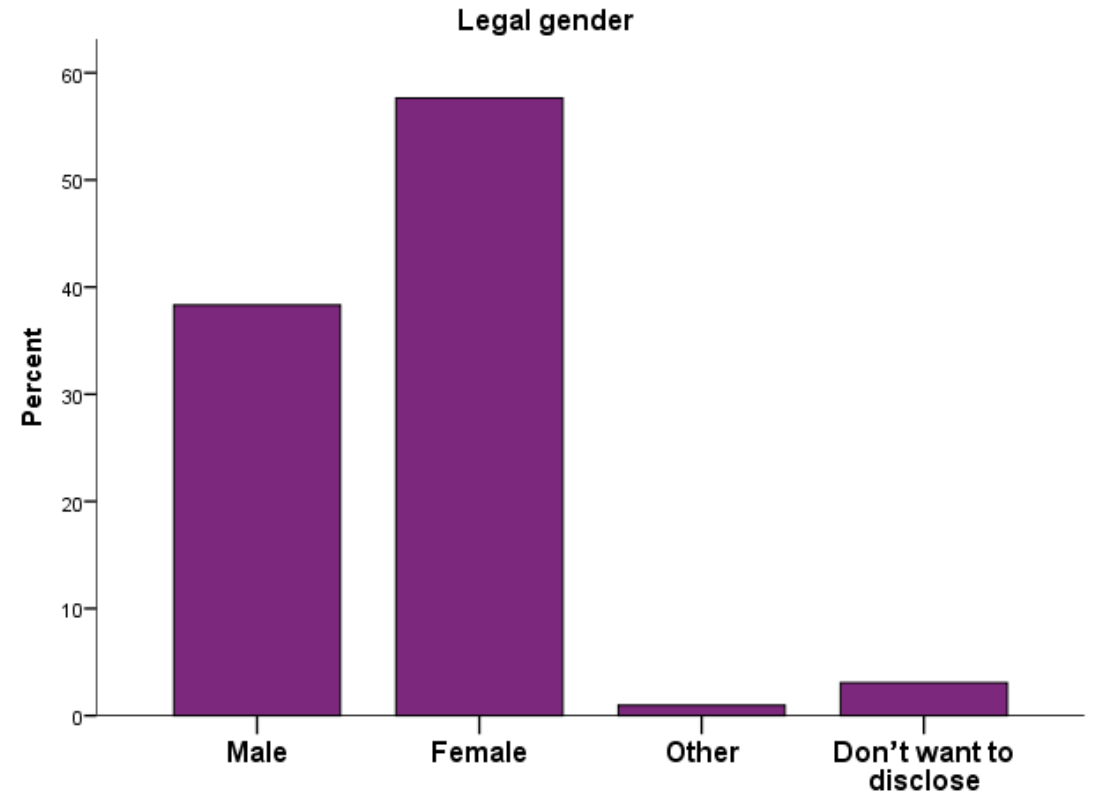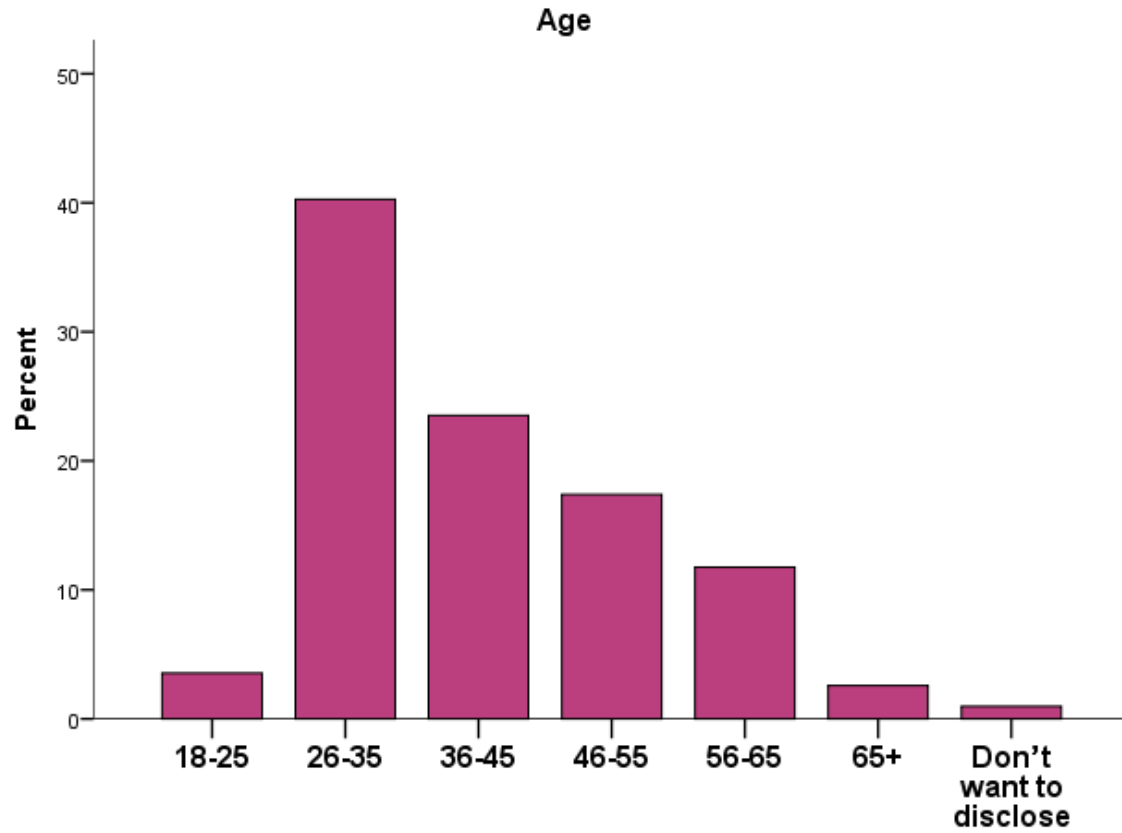
Data collection

- Part of an international collaboration project on Data Literacy and Research Data Management. The survey instrument, consisting 24 questions, was created by researchers from England, Turkey and France.

- LimeSurvey online platform used for data collection.

- The survey (in English, Finnish and Swedish) was distributed by utilising the higher education institutions' and research organisations' personnel involved in the development of the national DMP tool (Tuuli-project 2016).
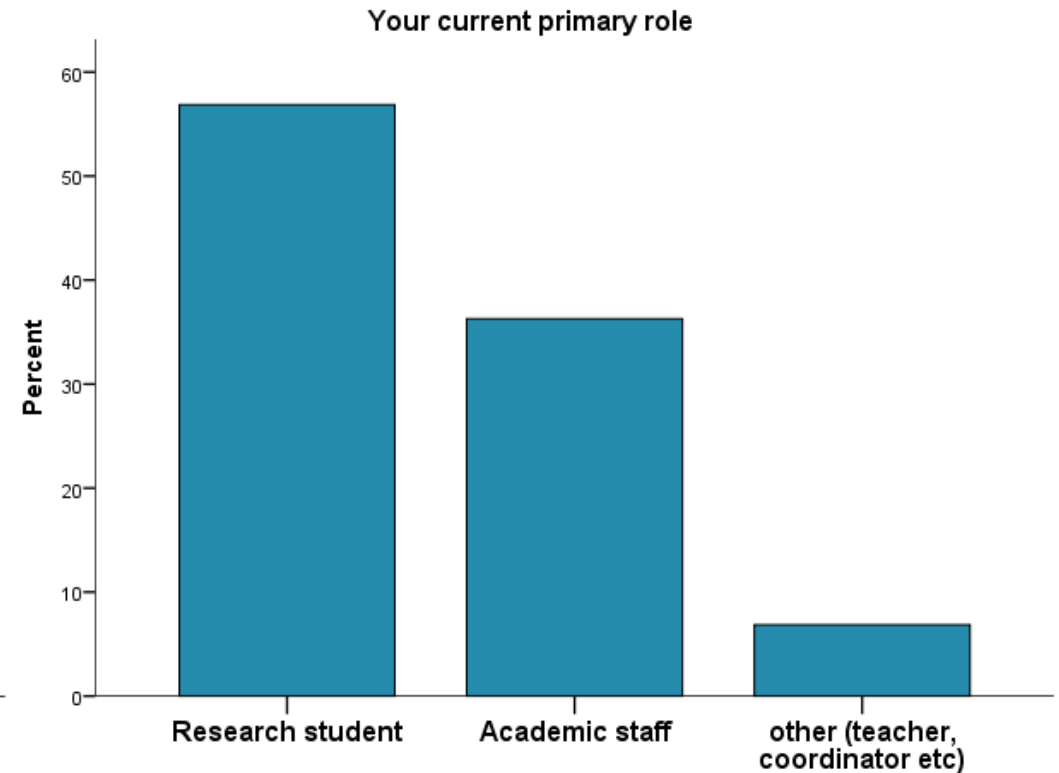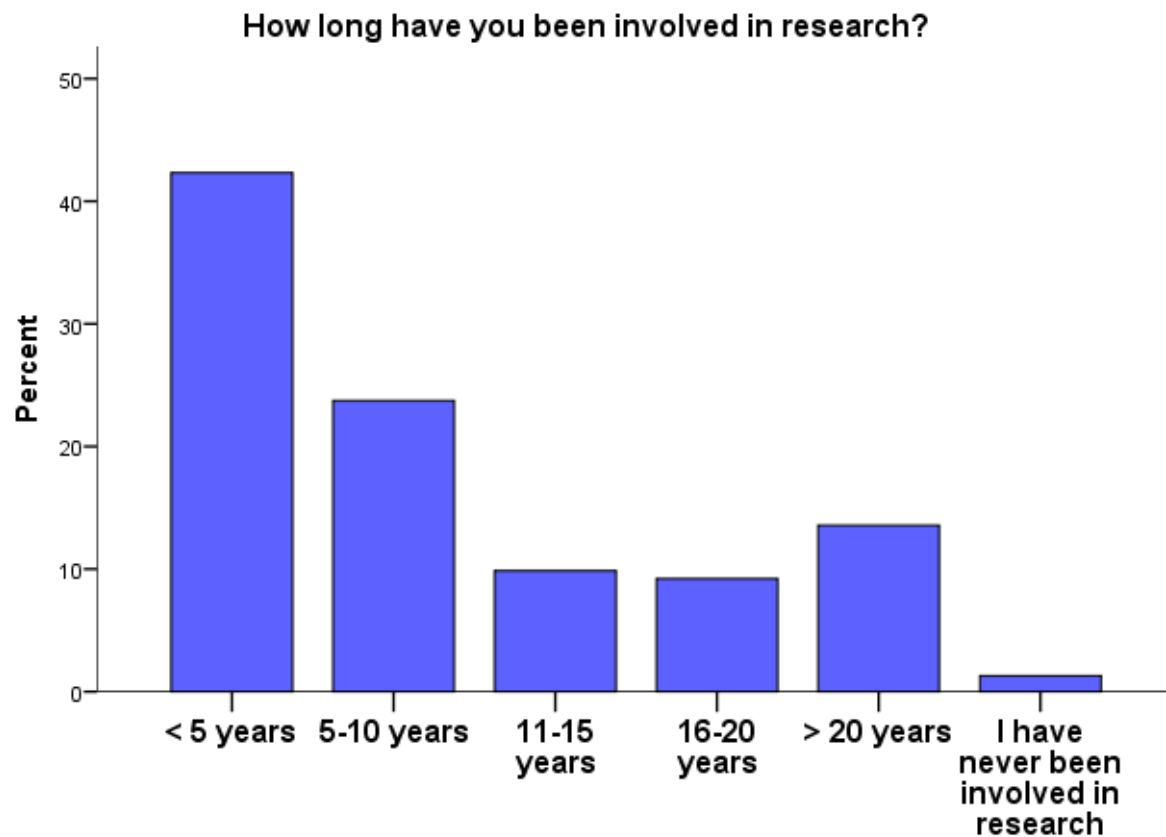
Data collection and analysis

- The data were collected in June and July 2017.

- The statistical analysis was conducted by using IBM SPSS Statistics.

- From the respondents 612 had answered at least to one question & 469 answered all of the questions.
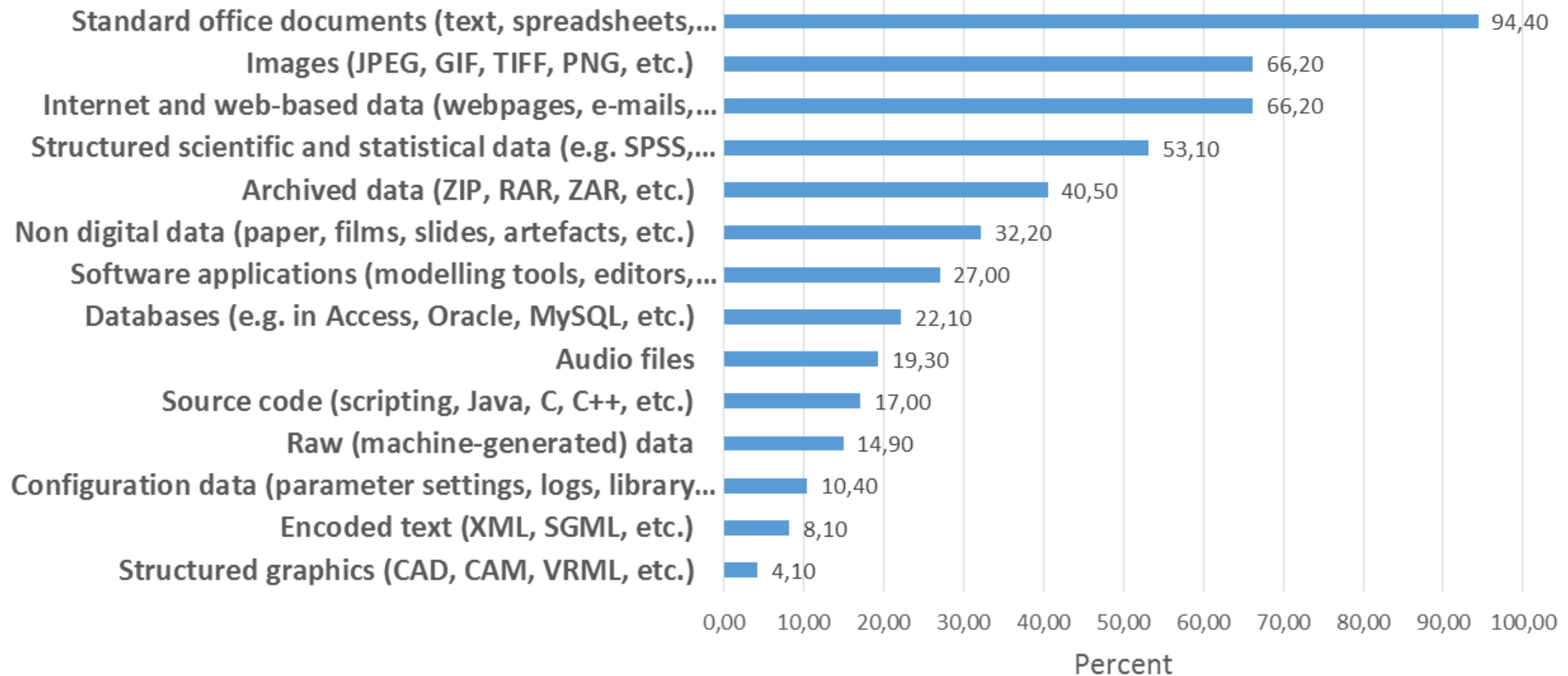
Age and gender

Research experience and current role

File type of data normally used for research

File type	Percent
Standard office documents (text, spreadsheets,…	94,40
Images (JPEG, GIF, TIFF, PNG, etc.)	66,20
Internet and web-based data (webpages, e-mails,…	66,20
Structured scientific and statistical data (e.g. SPSS,…	53,10
Archived data (ZIP, RAR, ZAR, etc.)	40,50
Non digital data (paper, films, slides, artefacts, etc.)	32,20
Software applications (modelling tools, editors,…	27,00
Databases (e.g. in Access, Oracle, MySQL, etc.)	22,10
Audio files	19,30
Source code (scripting, Java, C, C++, etc.)	17,00
Raw (machine-generated) data	14,90
Configuration data (parameter settings, logs, library…	10,40
Encoded text (XML, SGML, etc.)	8,10
Structured graphics (CAD, CAM, VRML, etc.)	4,10

Percent

Volume and origin of data

The volume of data used for research

Bar chart showing Percent on the y-axis (0 to 50) and data volume categories on the x-axis: MB (megabyte) ≈ 49, GB (gigabyte) ≈ 44, TB (terabyte) ≈ 7.
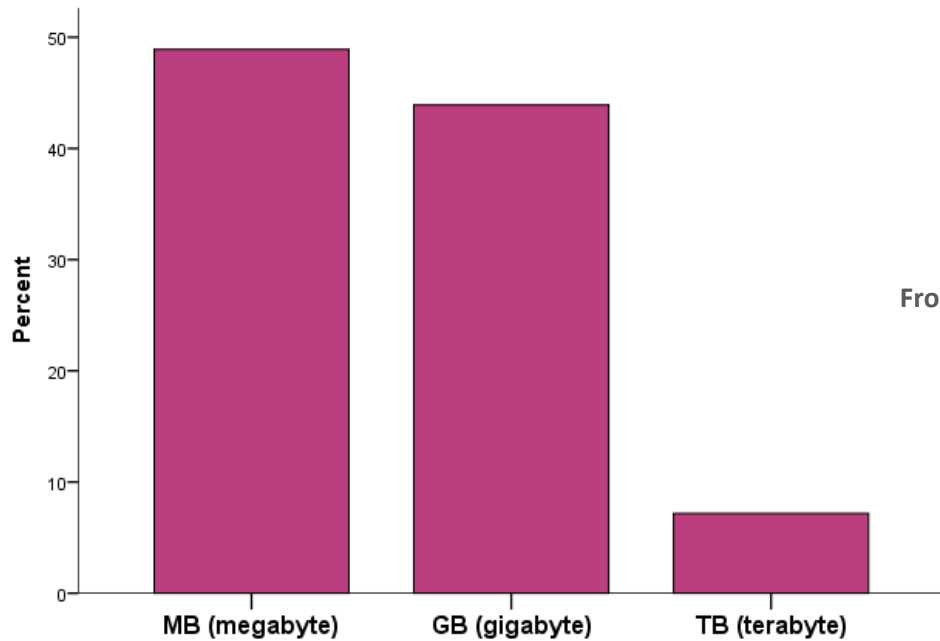
How you usually get the data for research?

Horizontal bar chart showing Percent:
- Create new data ≈ 73
- From own research team/group at the university ≈ 42
- From own research network (or personal/professional connections) ≈ 35
- Always from multiple known sources ≈ 32
- Always from one known source ≈ 6
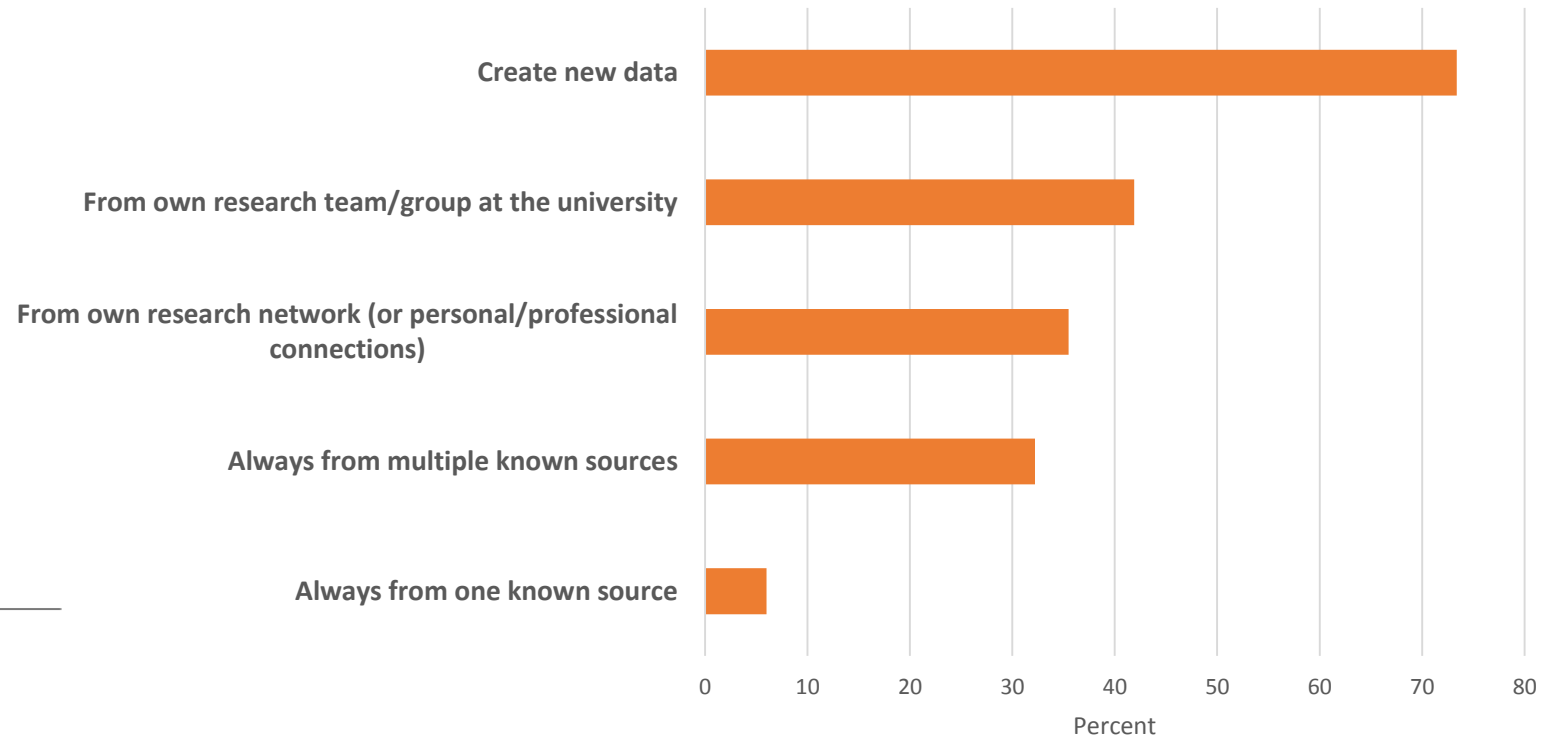
Storaging and sharing of data

Where do you usually store the data you produce from your research?

- Your own devices (your computer, your tablet, external drive, etc.)
- Central servers/repositories of the university
- Cloud
- Outside repositories

Percentage (0, 10, 20, 30, 40, 50, 60, 70, 80, 90)
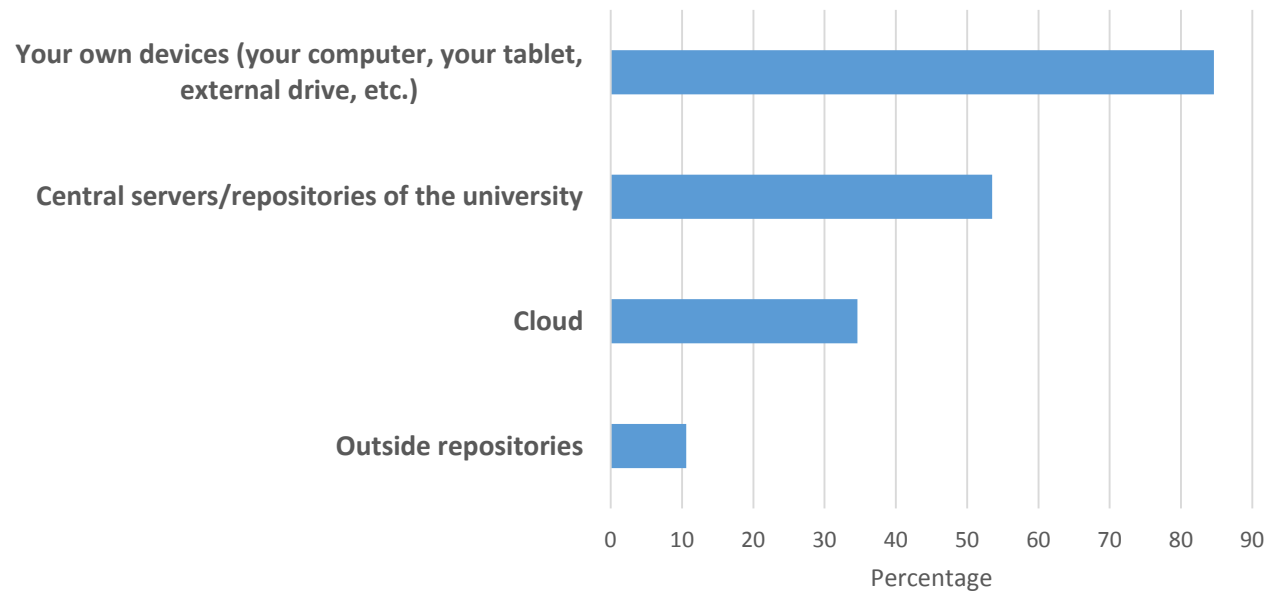
Do you collaborate with other researchers and share data?

- Yes, with researchers in the same team
- Yes, with researchers in other institutions
- Yes, with researchers in the same university
- No

Percentage (0, 10, 20, 30, 40, 50, 60, 70)
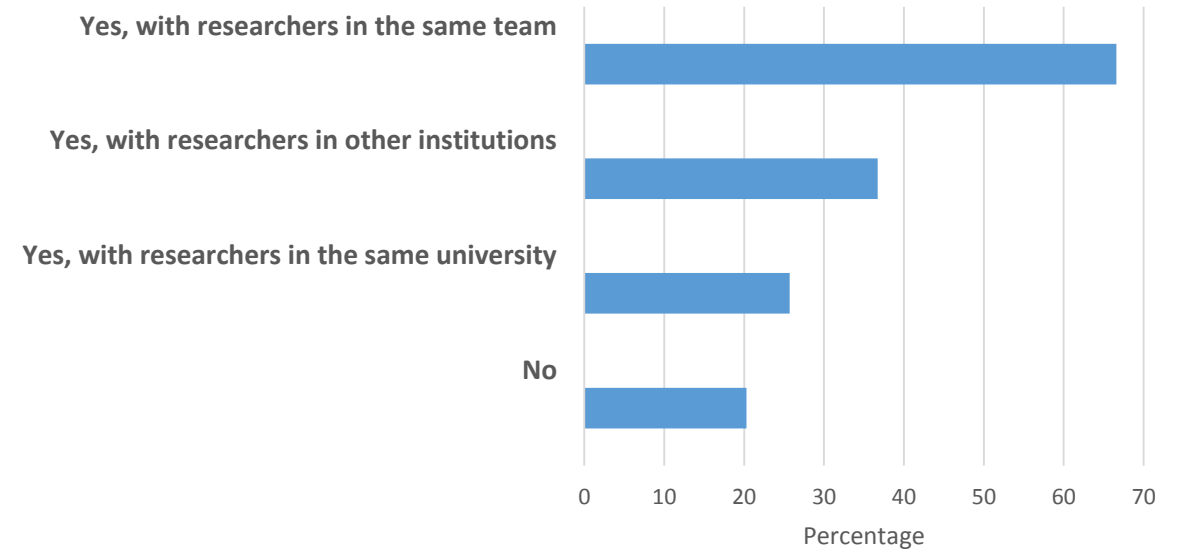
Openness of data and concerns relating sharing

Which of the following applies to your research data?

	Percent
My data is available openly upon request	~48
My data is openly available only to my research team	~41
My data has restricted access (e.g. only some parts of the dataset is accessible)	~27
My data is not available to anyone else	~22
My data is openly available to everyone	~10
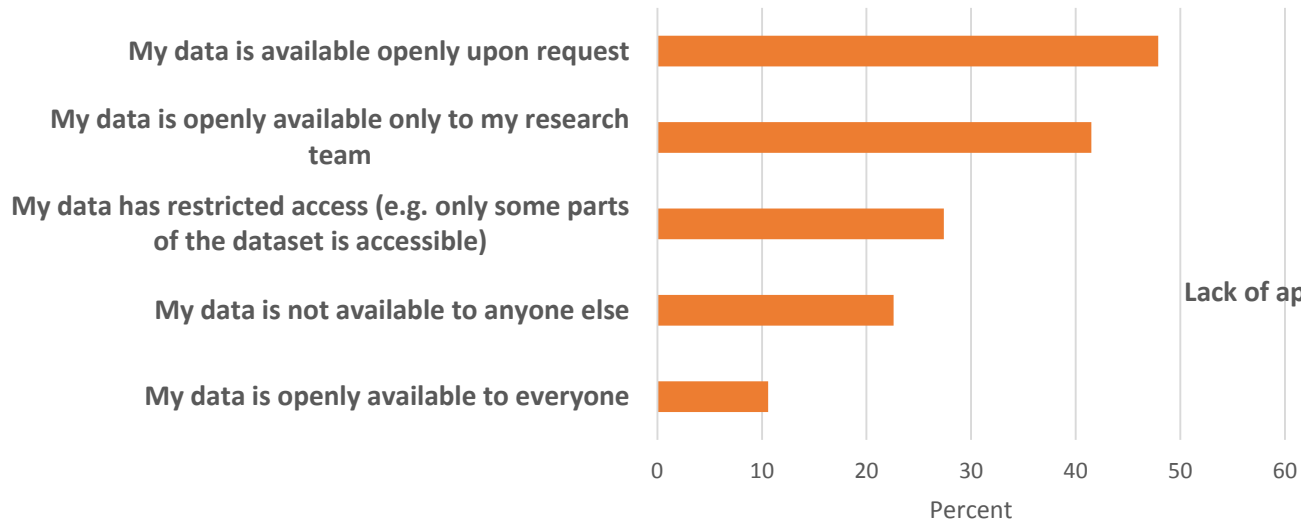
Do you have any concerns for sharing data with others?

	Percent
Legal and ethical issues	~37
No concerns	~34
Misinterpretation of data	~29
Misuse of data	~25
Lack of appropriate policies and rights protection	~21
Fear of losing the scientific edge	~19
Lack of resources (technical, financial,…	~16

Data Management Plan (DMP)
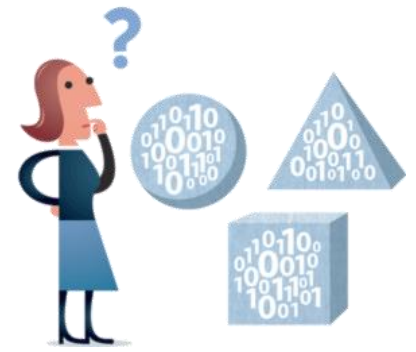
- Only about fifth (22.1%) responded that their institution has a DMP – 65.5% were uncertain.

- 24.0% had ever used DMP for their research.

- 22.9% had a DMP for their current research project.

- 73.6% agreed that every university should have a DMP.

- 32.4% think that DMP actually helps researchers in managing their research data – 58.3% were uncertain.

- Only few (8.1%) had had formal training on DMP.

Have you ever used a DMP for your research?
- Yes
- Uncertain
- No

Count

Research field

Natural sciences | Engineering and technology | Medical and health sciences | Agricultural sciences | Social sciences | Humanities
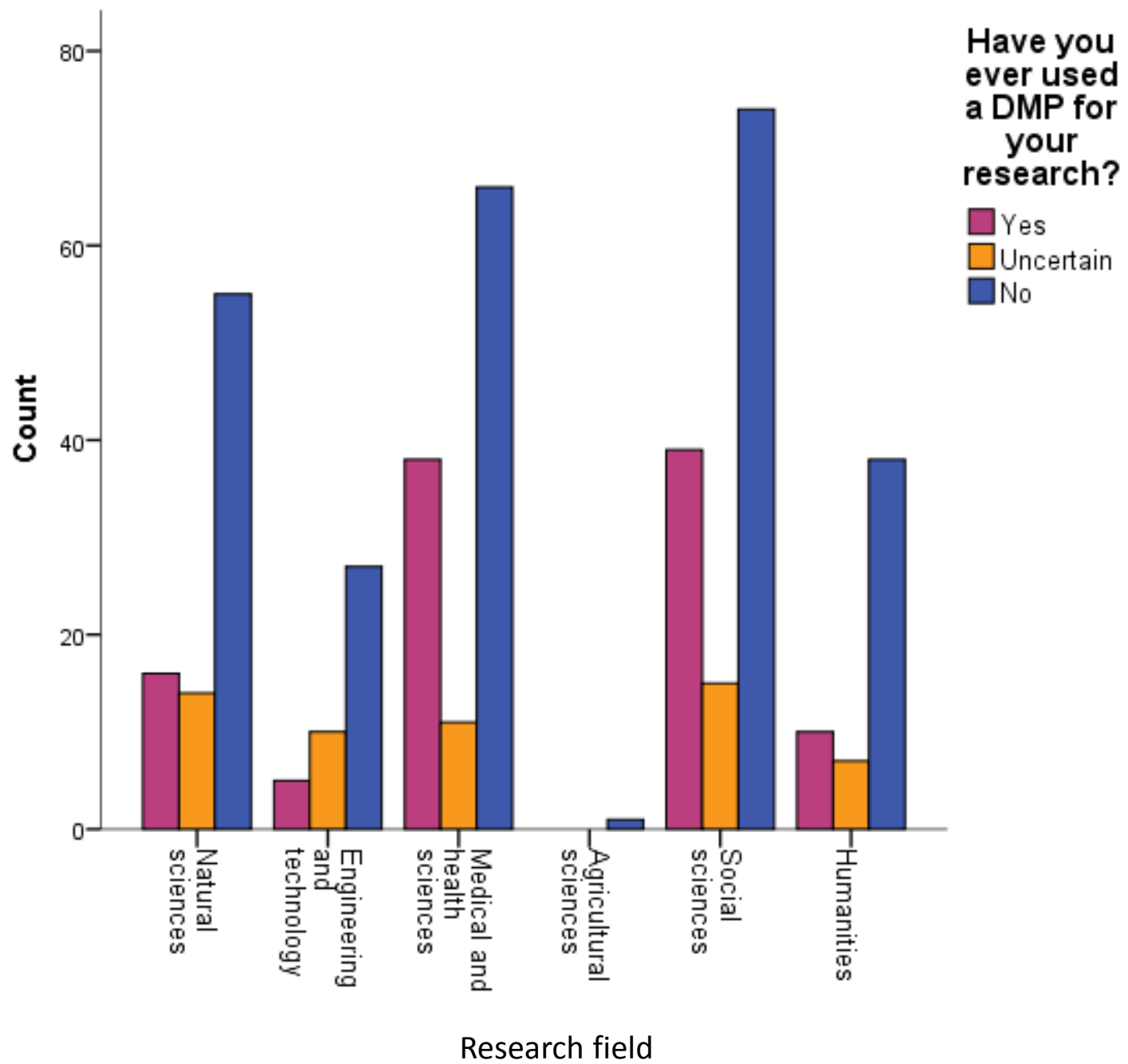
Discussion

- In general, many informants are uncertain of the issues related to open research data management.

- Although numerous foundations already recommend openness of research conventions, not all informants are aware of this.

- The results could be beneficial for universities and other research organizations in promoting research data management and open data initiatives.

- Open science movement is gaining increasing support in Finland!

OPEN SCIENCE
AND RESEARCH

Thank you!
Any questions?

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Open science and research:
http://openscience.fi/
Tuuli-project:
https://wiki.helsinki.fi/display/Tuuli/DMPTuuli-project
NordForsk policy paper (2016):
https://www.nordforsk.org/en/publications/publicatio ns_container/open-access-to-research-data-2013-status-issues-and-outlook

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