



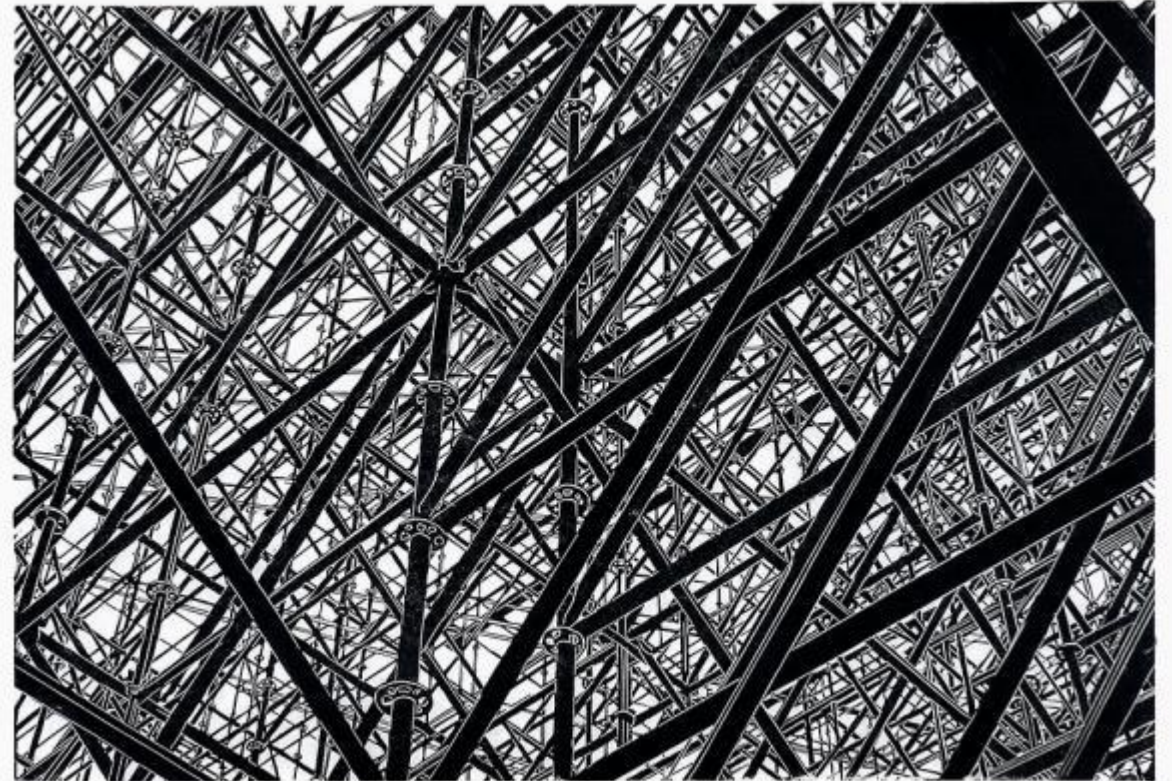
**Enabling international scientific research:
Call for federated cloud systems and supportive
instruments by the application of the EU-US-Privacy
Shield**

**Consultation on Cloud Computing Research Innovation
Challenges for WP 2018-2020
Brussels, November 7, 2016**

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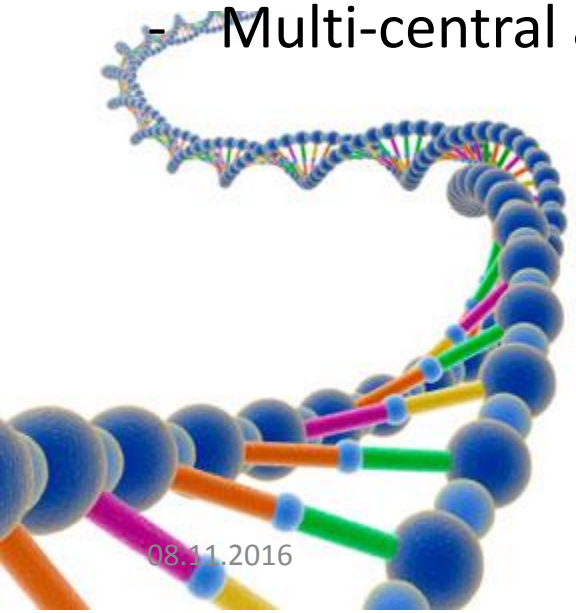
Structure of the presentation

1. **Big data use-case in biology and health: translational cancer genome research**
2. **Characteristics of research and legal conditions**
 - Personal data (GDPR)
 - Data transfers (EU-US)
 - Rights and responsibilities (GDPR)
 - Challenges?
3. **Solutions**
 - EOSC
 - EU-US Privacy Shield
4. **What to do?**
 - Supportive instruments for data transfers
 - Cloud structure: federated clouds



1. Use-case biology and health: cancer genome research

- High statistical validity needed
- Accumulation of a large number of cases and controls
- Number of analysed genomes is vastly increasing
- Cloud Computing
- Multi-central and cross-boarder research



The merger of a diverse range of information about a huge number of patient donors on an international level raises data protection issues.

2. Characteristics and legal conditions

Personal data



Data transfers



Rights and responsibilities



Molnár-Gábor/Korbel, ZD, 6/2016, 278.

2. Characteristics and legal conditions


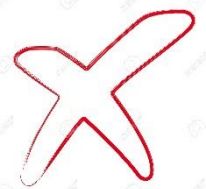

→ Challenges !!

- Verification of data processing
- Different understanding of data protection

Molnár-Gábor, MPECCoL, Oxford, 2017.



3. Solutions

- European Open Science Cloud
 - Status of research freedom in the EU? 
 - EU-US Privacy Shield
 - Adequate level of protection of patients' rights? 
- Research freedom in international context ? 

Molnár-Gábor/Kaffenberger, ZD, 1/2017.

4. What to do?

- Supportive instruments for the application of the Privacy Shield
- Cloud structure solutions for international data transfers in research



Thank you for your kind attention!

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