THE 7 SINS OF OPEN SCIENCE

BAREND MONS

(In honour of Karel Luyben)
OPEN SCIENCE?
The FAIR Data Principles set out requirements for data to be processed in an automated way

**Findable:**
"Easy to find by both humans and computer systems, and based on mandatory description of the metadata that allow the discovery of interesting datasets."
- e.g. Able to locate data by individual patient, patient segment, intervention, outcome metric

**Accessible:**
"Stored for long term such that they can be easily accessed and/or downloaded with well-defined license and access conditions (Open Access when possible), whether at the level of metadata, or at the level of the actual data content."
- e.g. Patients should be able to access parts of their own data via a patient controlled record

**Interoperable:**
"Ready to be combined with other datasets by humans as well as computer systems."
- Semantic interoperability: mapped data taxonomies across diseases and population groups e.g. consistent methodology & scale for measuring pain / quality of life
- Technical interoperability: specifications to allow different systems to communicate with each other

**Reusable:**
"Ready to be used for future research and to be processed further using computational methods."
- e.g. Outcomes data should be available for the long-term for systematic analysis or clinical research (with permission from data owner)

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**Important that interoperable datasets can be interpreted by computer systems:**
to (semi) automatically combine different data sources for richer knowledge discovery

Source: Dutch Techcentre for Life Sciences
Informatics Module Master v11.pptx
1: Age factor….Reward only narrative.com
2: Ignore complexity and existing data
3: Disrespect other disciplines
4: publish data without a supplementary paper
create a nightmare for machines
6: refuse to invest in research-infrastructure
7: Create Data without a Data Stewardship plan
ALL OPEN SCIENCE SHOULD BE FAIR SCIENCE 
BUT NOT ALL FAIR SCIENCE IS OPEN SCIENCE
Progress towards the European Open Science Cloud: GO FAIR Office established

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In order to take a step closer towards the realisation of the European Open Science Cloud (EOSC), Germany and the Netherlands are setting up the International Support and Coordination Office (ISCO) to support the GO FAIR Initiative. France will also contribute to the office.
The GO FAIR Initiative takes an open and cooperative approach. This means that all Member States and research institutions, e-infrastructure communities and possibly industry can provide their support or contributions.

The GO FAIR Initiative is designed to ensure that shared digital research data and jointly used digital services meet the four FAIR principles of making data Findable, Accessible, Interoperable and Reusable. FAIR data and services will enable research data to be re-used in different disciplines and in different countries, thus helping to generate new knowledge.

Member of the government

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