NanoCommons

Nano-Knowledge Community

NanoSafety Cluster

Education day
16th November 2020
NanoSafe2020 conference

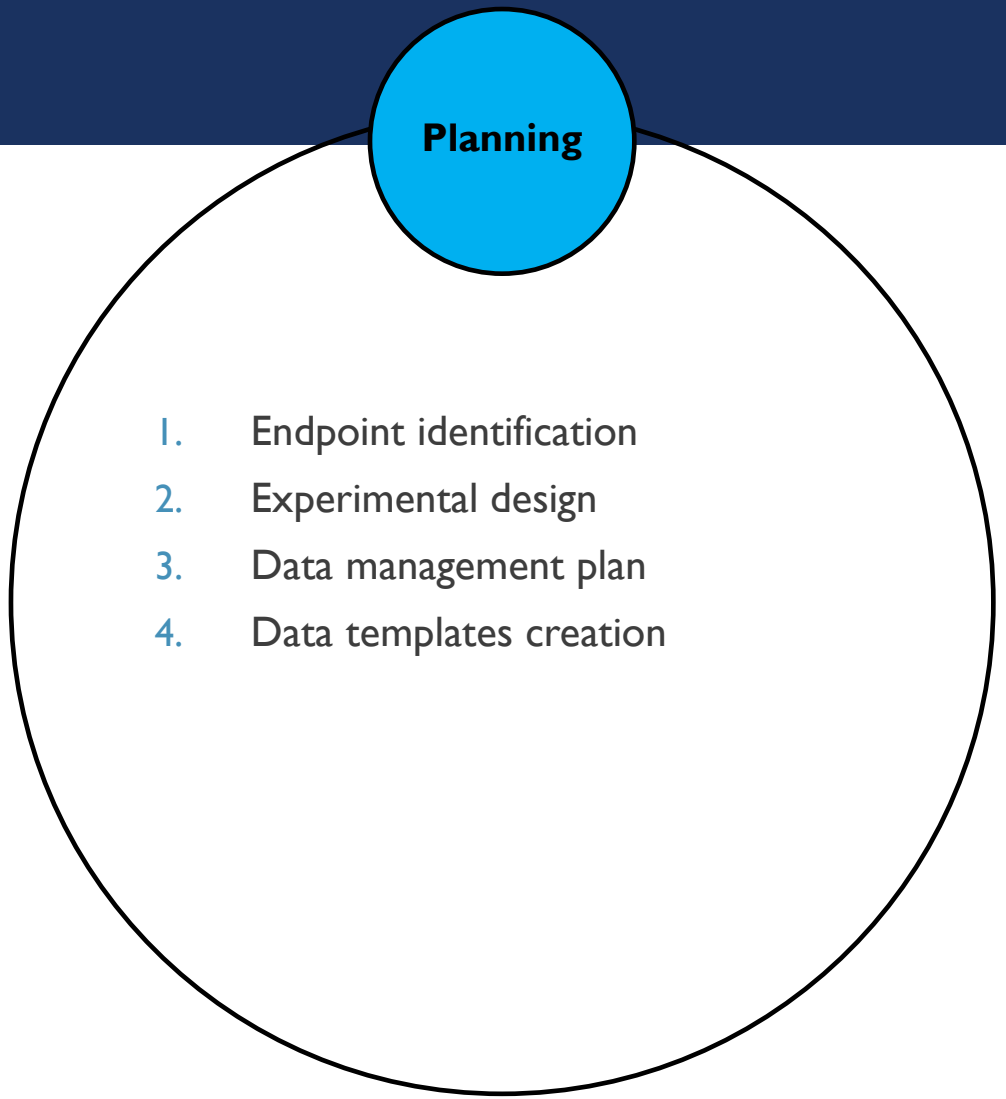
Session 4: E-tools along data life cycle

Data life cycle – generation processing, evaluation, prediction, curation

Prof. Iseult Lynch,

University of Birmingham

DATA LIFECYCLE



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DATA LIFECYCLE

Planning

Acquisition

1. Data acquisition
2. Data curation
3. Data digitisation

- Electronic lab notebooks
- Automated experimental workflows
- Data capture templates

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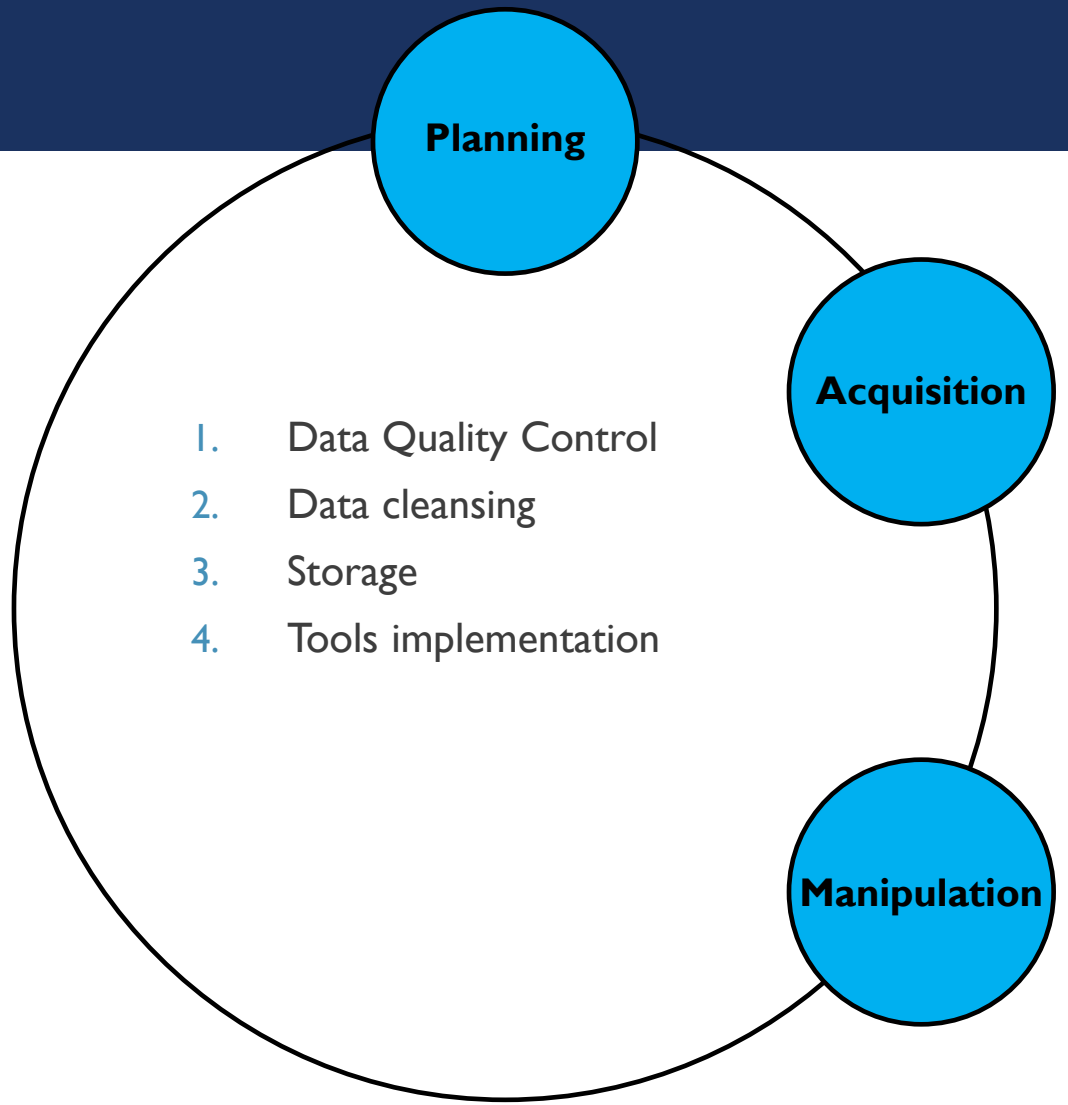
DATA LIFECYCLE



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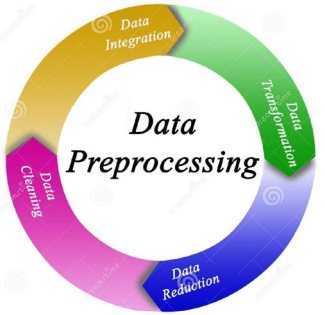
DATA LIFECYCLE

Planning

Acquisition

1. Data interpretation
2. Modelling/QSARs/Omics
3. Research outputs
4. Publications

Manipulation



- Statistical tools
- Data integration
- Data QA/QC
- Gap-filling

Analysis

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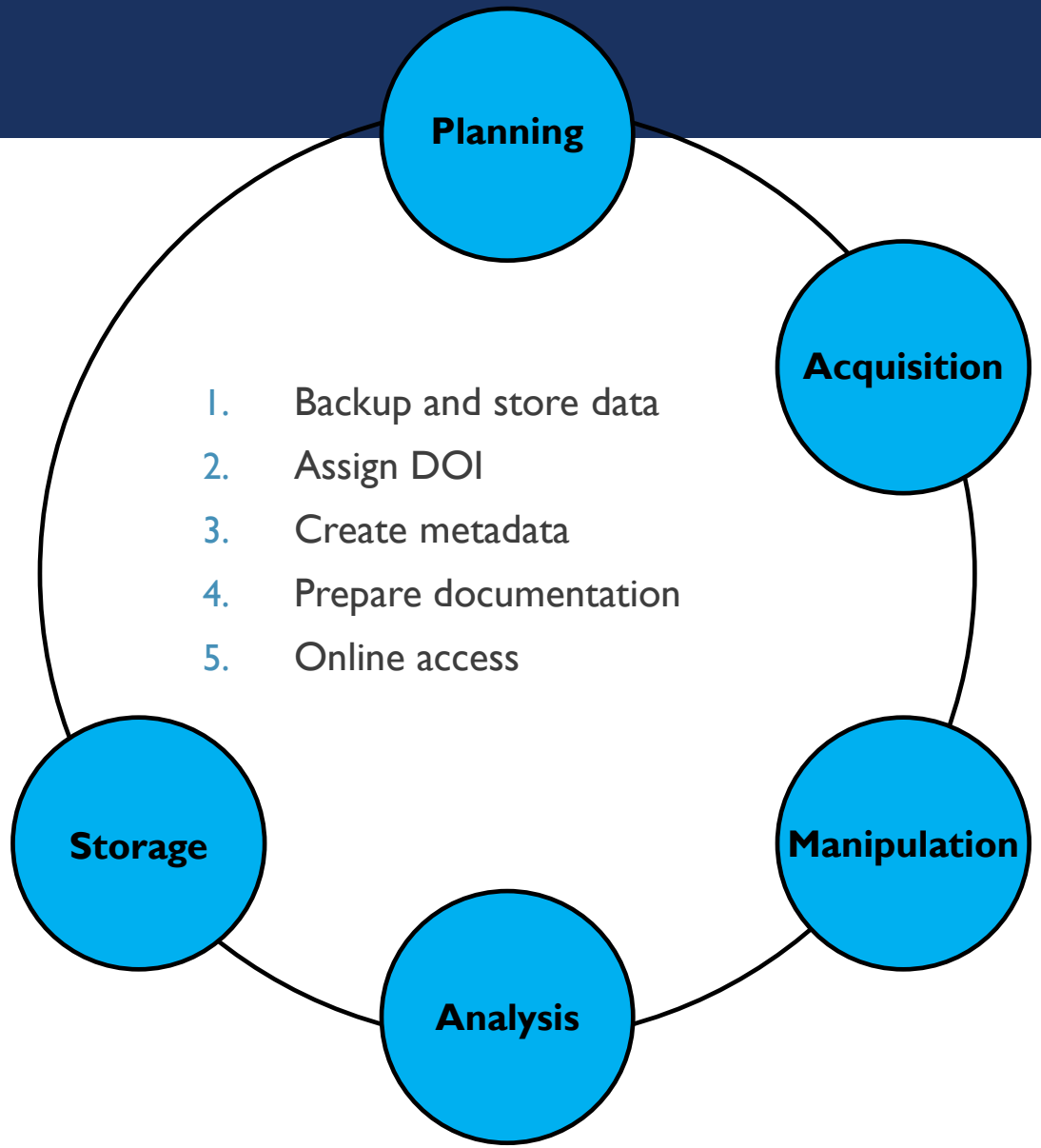
DATA LIFECYCLE

- Data / metadata indexing
- Data / metadata storage
- Dataset interoperability
- Database linking



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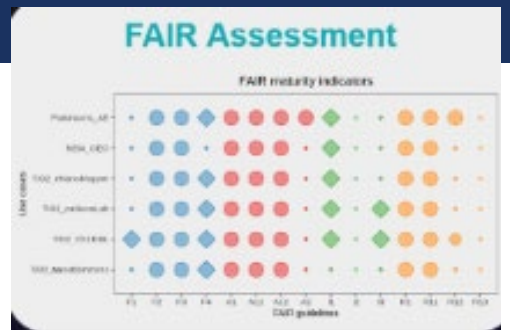
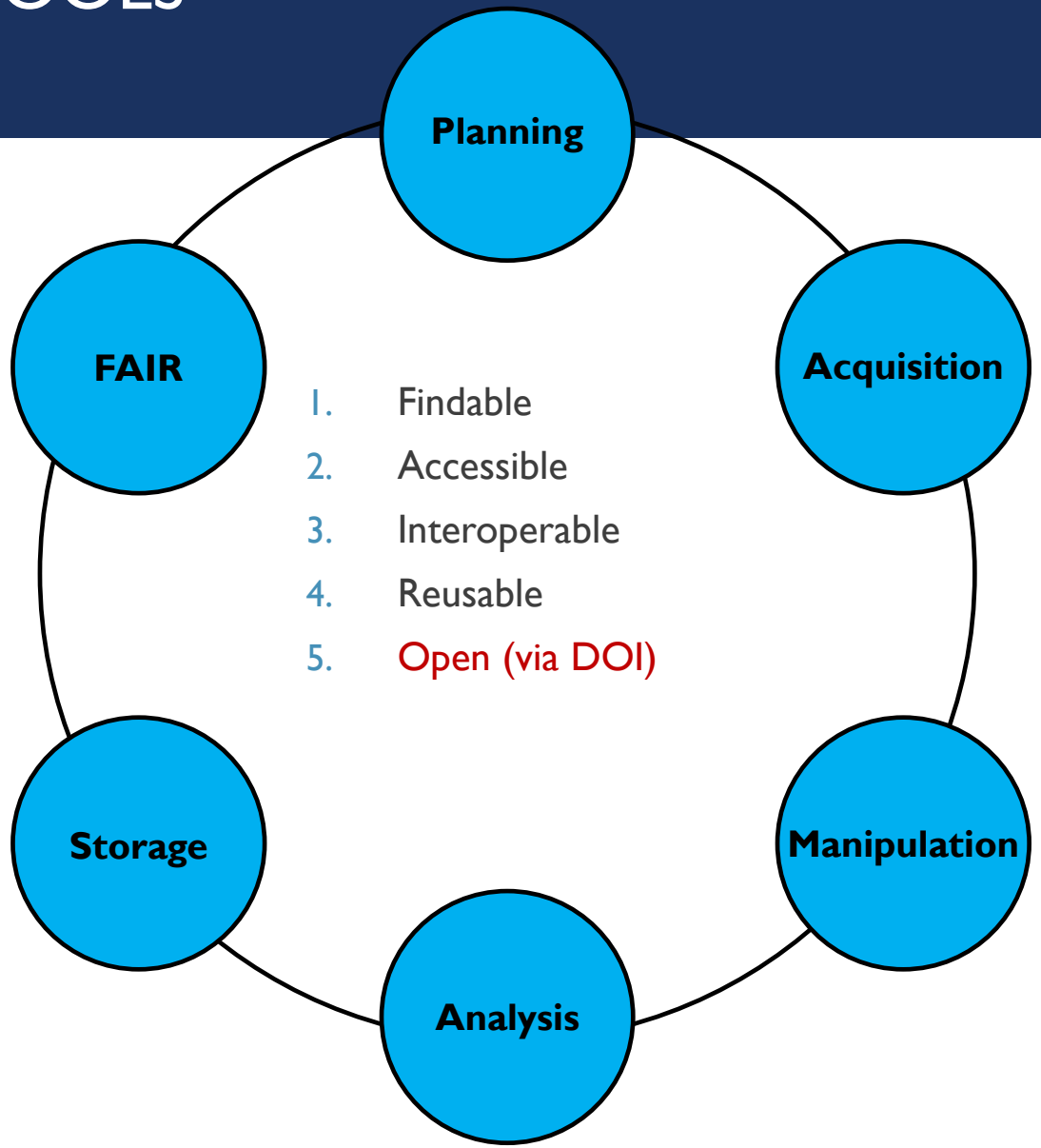
DATA LIFECYCLE TOOLS



- semi-automated FAIR scorecards
- Scientific FAIR principles
- Metadata community consensus



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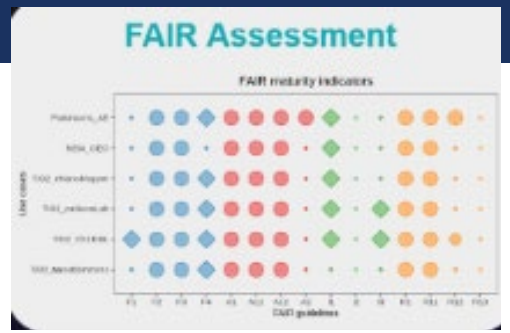
DATA LIFECYCLE TOOLS



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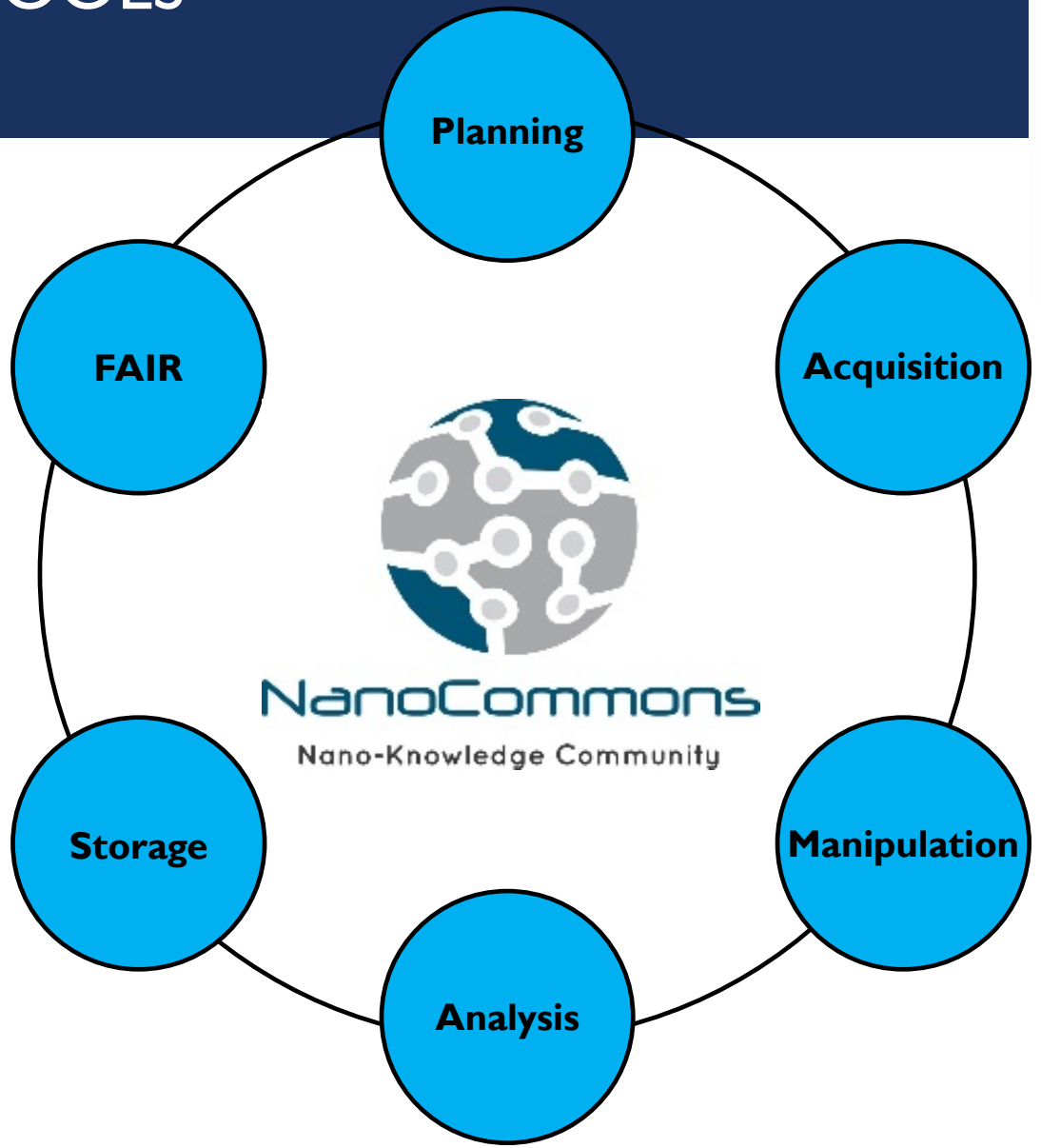

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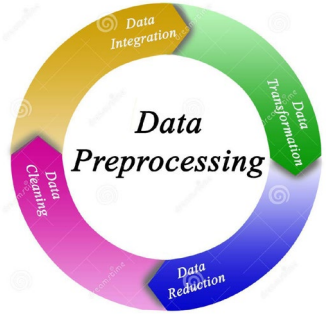


- Statistical tools
- Data integration
- Data QA/QC
- Gap-filling (computational)

ACCESS TO ALL TOOLS AVAILABLE VIA NANOCOMONS "TA"

Experimental Workflows Design & Implementation

Data Processing & Analysis

Data Storage & Online Accessibility

Data Visualisation & Predictive Toxicity

Existing tools or custom versions tailored to your needs

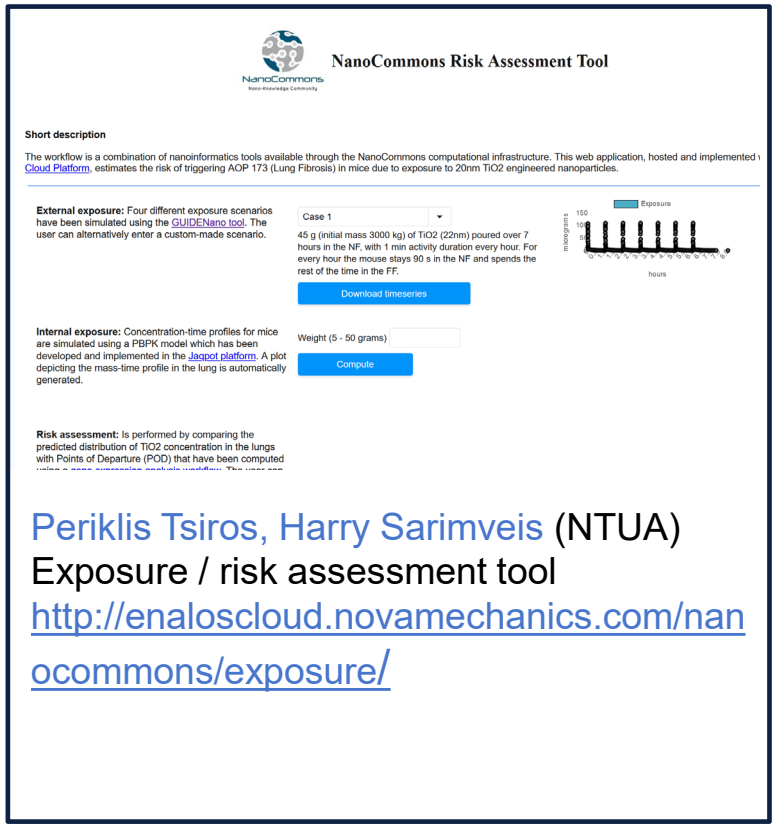
Funded access to the expertise needed to implement data life-cycle tools to your workflows

Apply here:
https://www.nanocommons.eu/apply-for-access/

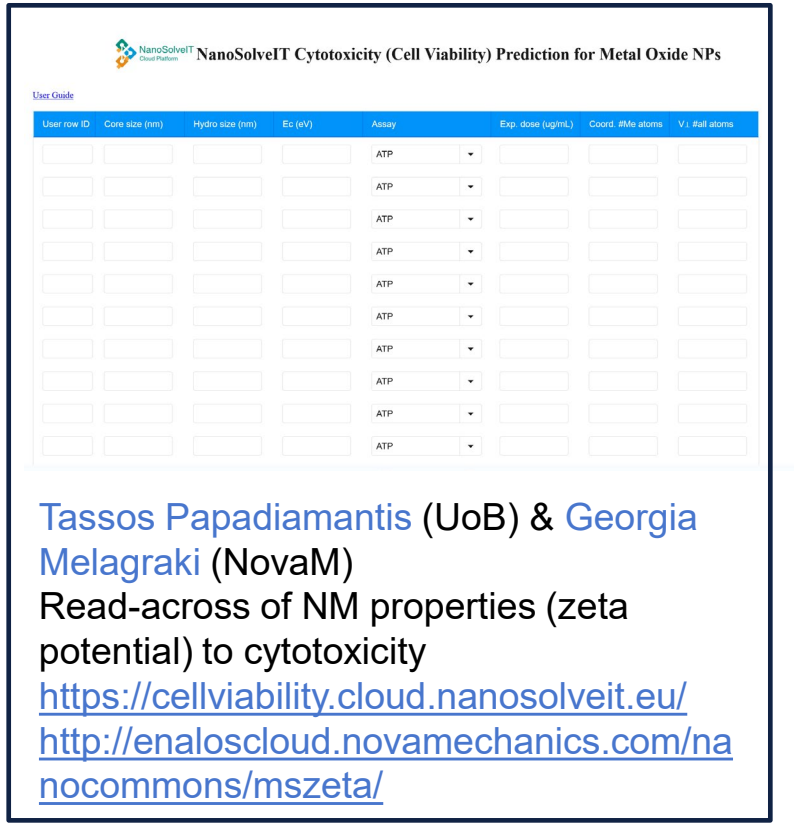
Rolling call - next review date: 1st December 2020

For details contact:
i.lynch@bham.ac.uk or a.Papadiamantis@bham.ac.uk

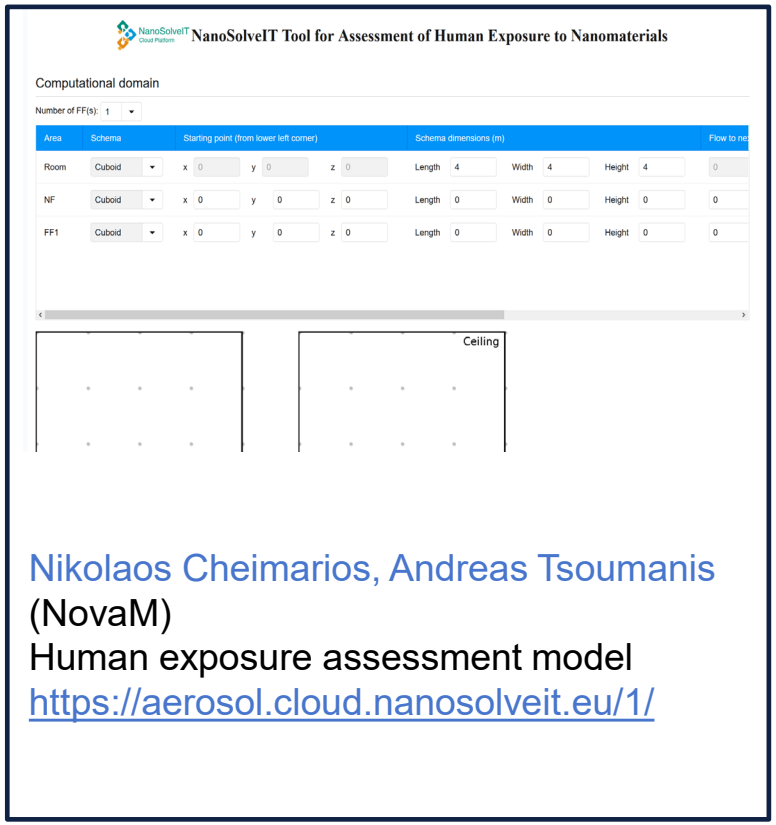
TOOLS DEMONSTRATED IN THIS SESSION



Periklis Tsiros, Harry Sarimveis (NTUA)
Exposure / risk assessment tool
http://enaloscloud.novamechanics.com/nanocommons/exposure/



Tassos Papadiamantis (UoB) & Georgia Melagraki (NovaM)
Read-across of NM properties (zeta potential) to cytotoxicity
https://cellviability.cloud.nanosolveit.eu/
http://enaloscloud.novamechanics.com/nanocommons/mszeta/



Nikolaos Cheimarios, Andreas Tsoumanis (NovaM)
Human exposure assessment model
https://aerosol.cloud.nanosolveit.eu/1/

Idea, methodology, current state of the NanoInformaTIX platform" by Gianpetro Basei, Greendecision

Call for action on the Gracious Ontology-Wiki" by Thomas Exner, Edelweiss Connect