

Nanosafety Knowledge Infrastructure (NSKI)
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Knowledge Extraction from Nanosafety Data



Robert Rallo

Universitat Rovira i Virgili, Catalunya



UNIVERSITAT
ROVIRA I VIRGILI

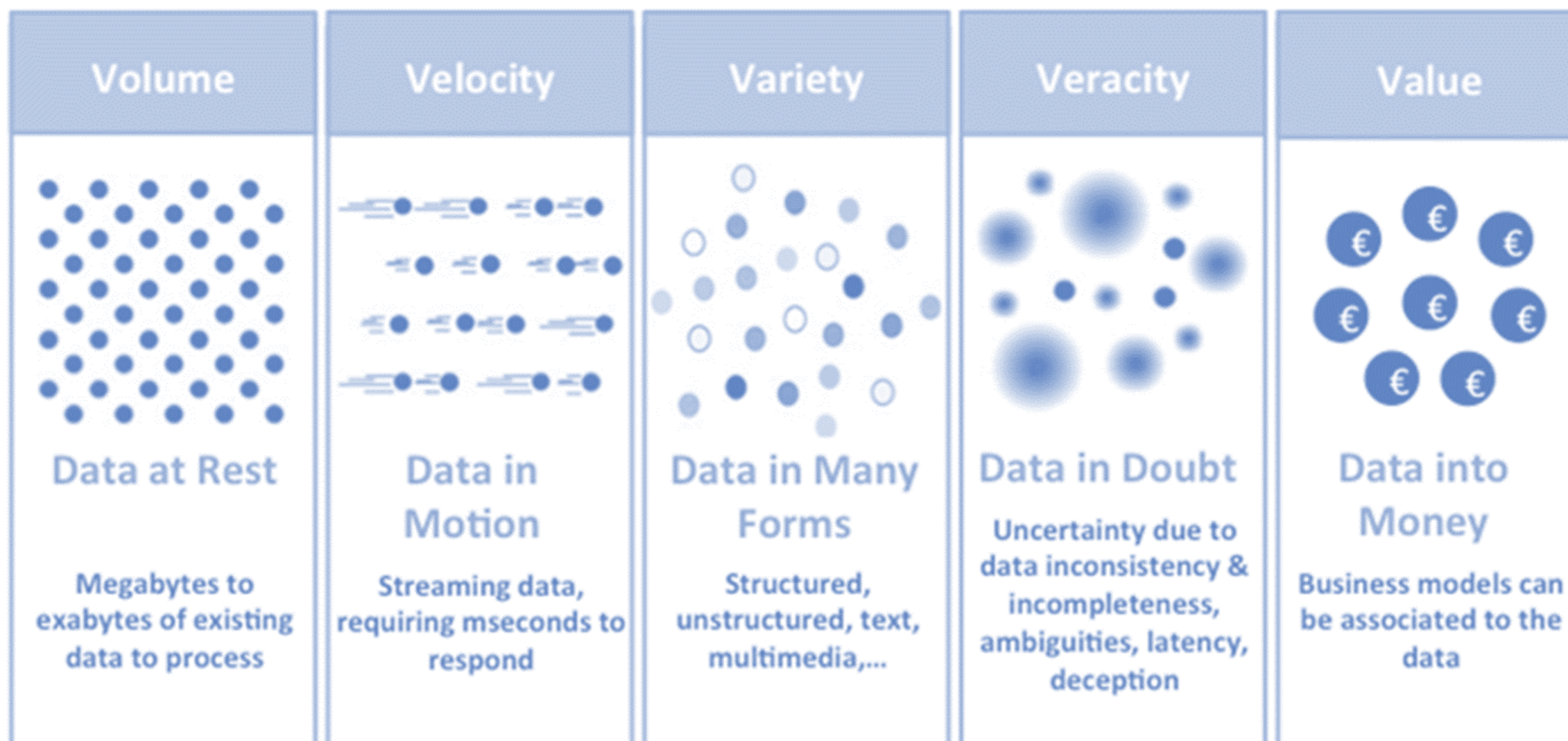
NATIONAL INSTITUTE OF CHEMICAL PHYSICS AND BIOPHYSICS
Kémiai és Biológiai Fizikai Intézet



UCLA



Nanosafety (big) data



Structured

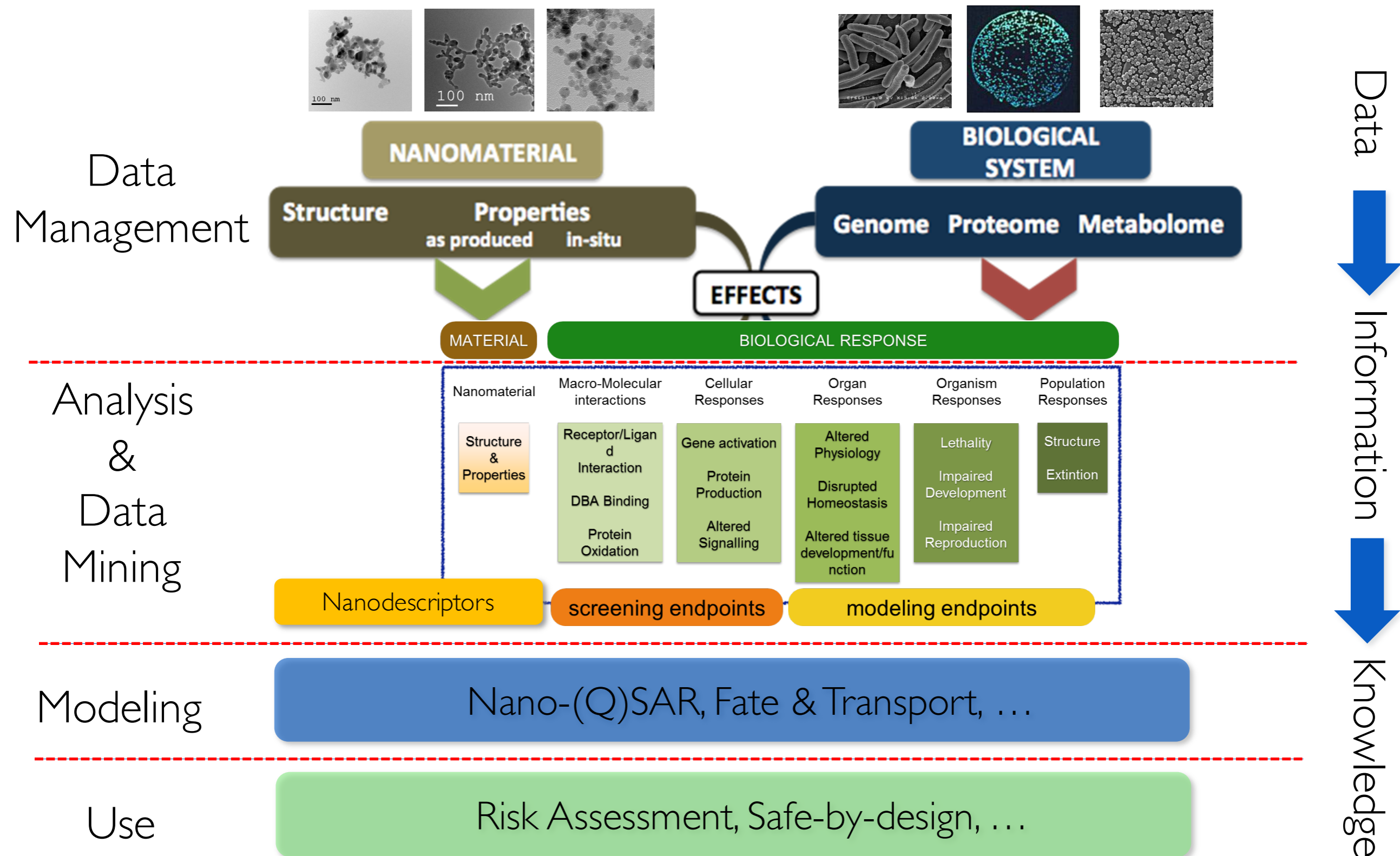
Semi-Structured

Unstructured

Management & Processing complexity



Knowledge extraction



Data providers

LIMS

Real-time
monitoring

Literature
data

NANOSAFETY
ONTOLOGY

Data Curation and QA/QC protocols

DATA
SHARING
STANDARDS

NANOSAFETY DATA WAREHOUSE
(structured, semi-structured, unstructured)

DATA PROCESSING SERVICES

Analytics

(data mining, quantum chemistry, molecular modeling, ...)

Modeling

(machine learning, statistical models, mechanistic models, ...)

Execution

(Descriptor calculation, toxicity prediction, ...)

Authentication & Access

Control

General
public

Academia

Regulators

Industry

Acknowledgement



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