



These projects have received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 963845 (ONTOX), No. 965406 (PrecisionTox), No. 964537 (RISK-HUNT3R)

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Open **2-3 July 2026** Symposium

Maastricht
The Netherlands

ONTOX: Innovative Services for Chemical Safety

Christof H. Schwab

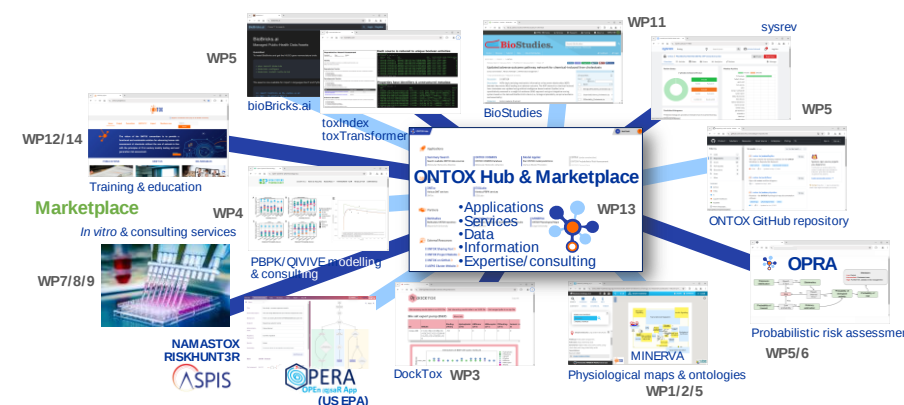
Molecular Networks Altamira, **MN AM**

ONTOX

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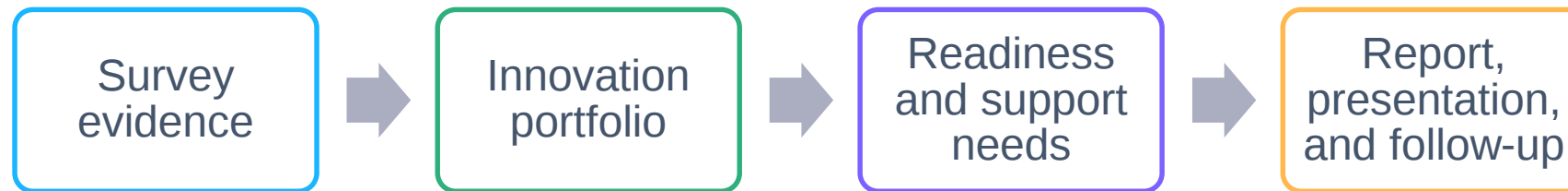


- ONTOX – innovative NAM ecosystem for NGRA
 - Ontology- and AI-based computational approaches linked to *in vitro* assays for hazard prediction combined with customized exposure assessment
 - Development of foundation of probabilistic risk assessment (OPRA)
- **MN/AM** – partner 14
 - Leader of WP13 Exploitation
 - Various aspects of EC definitions of exploitation
 - Establishing of ONTOX Hub and marketplace
 - Central instance to host, promote, and offer project results
 - Innovation - exploitation
 - EU Innovation Radar survey within WP13





- EU initiative to identify high-potential innovations and key actors in large EU-funded project portfolios
 - Characterise maturity, market orientation, exploitation gaps, and support needs
 - Questionnaire among partners
 - Translate raw questionnaire evidence into reportable portfolio insights



- Structured way from survey answers to innovation evidence
 - Comparable portfolio metrics rather than isolated descriptions
 - Visible maturity, exploitation, and support-need patterns
 - Transparent caveats for missing or incomplete answers
 - Defensible bridge from survey data to communication and planning

31
innovations
analysed

13
submitting
partners

19
involved
partners

4
innovation
categories



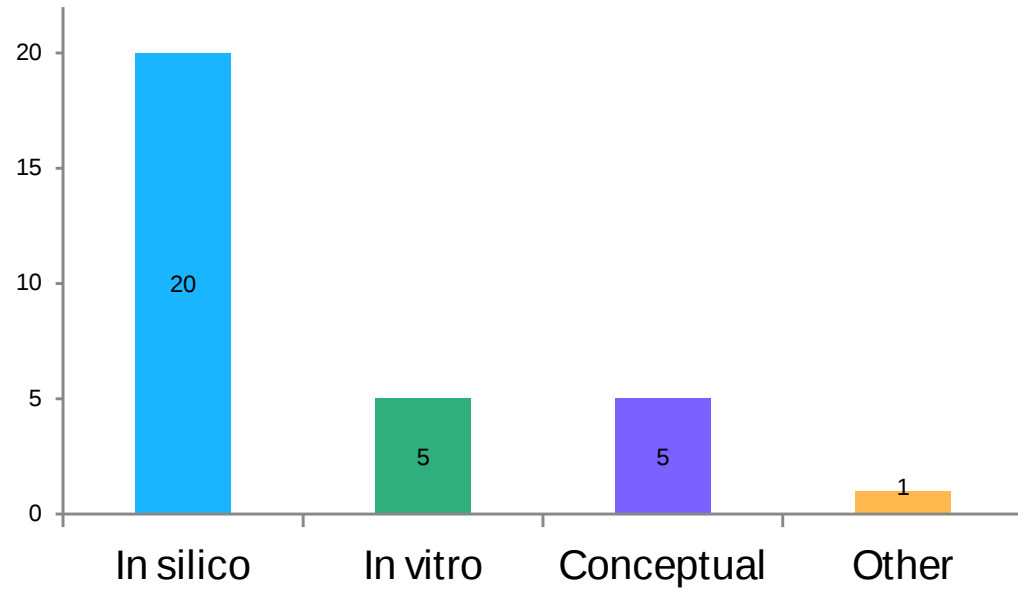
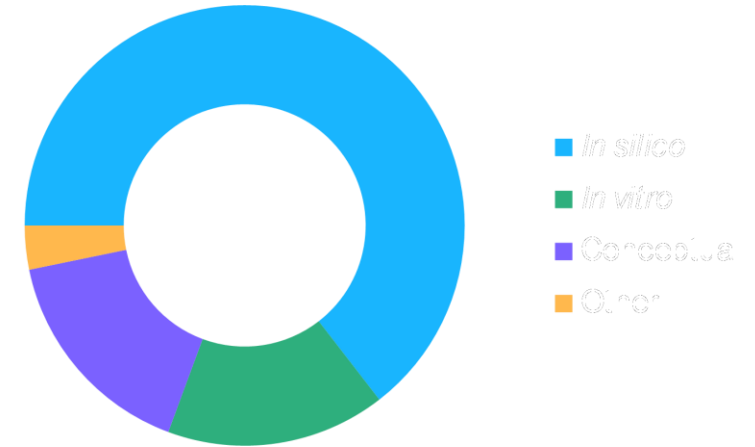
- Survey basis
 - Partner questionnaires consolidated into master workbook
 - Multiple QC passes
 - Generation of analytical sheets
- Critical caveats
 - Some questionnaires with missing, incomplete, or inconsistent answers
 - Cases preserved, flagged, and handled transparently
 - Assumptions documented (rather than hidden)

31
total
innovations

20
in silico
approaches

9
commercial
candidates

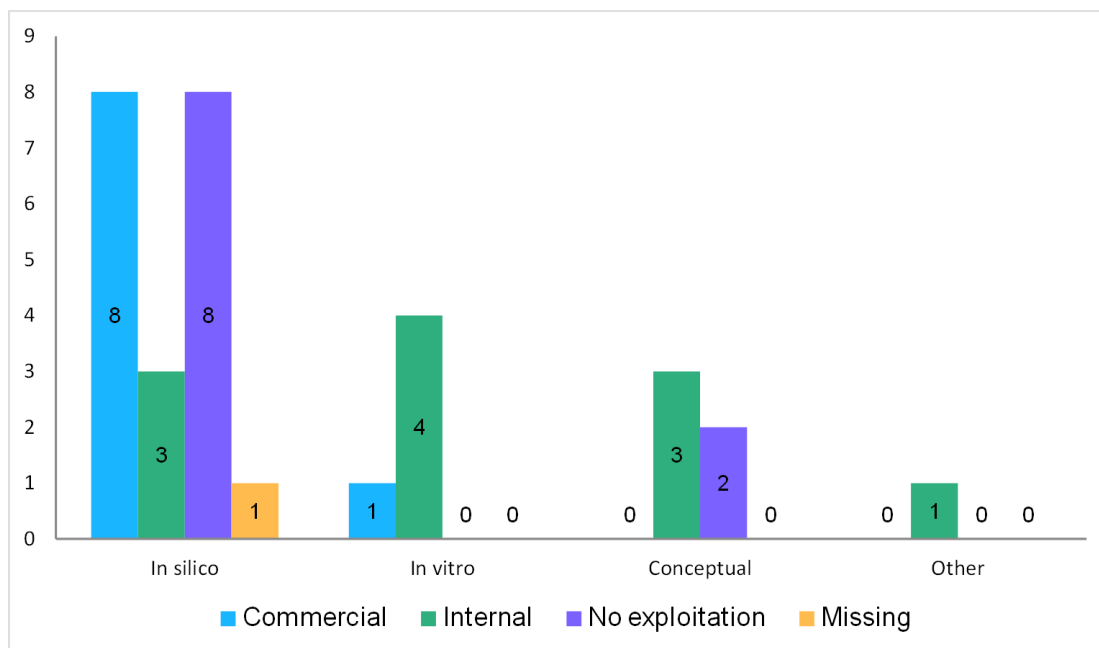
3.96
average
TRL level



- Diverse portfolio
- Domination of *in silico* approaches
 - Most of business/commercial opportunities



- Four innovation areas as a coherent NAM ecosystem



In silico

Main innovation cluster and commercial candidate pool

In vitro

Fewer, but relatively mature for internal evidence generation

Conceptual

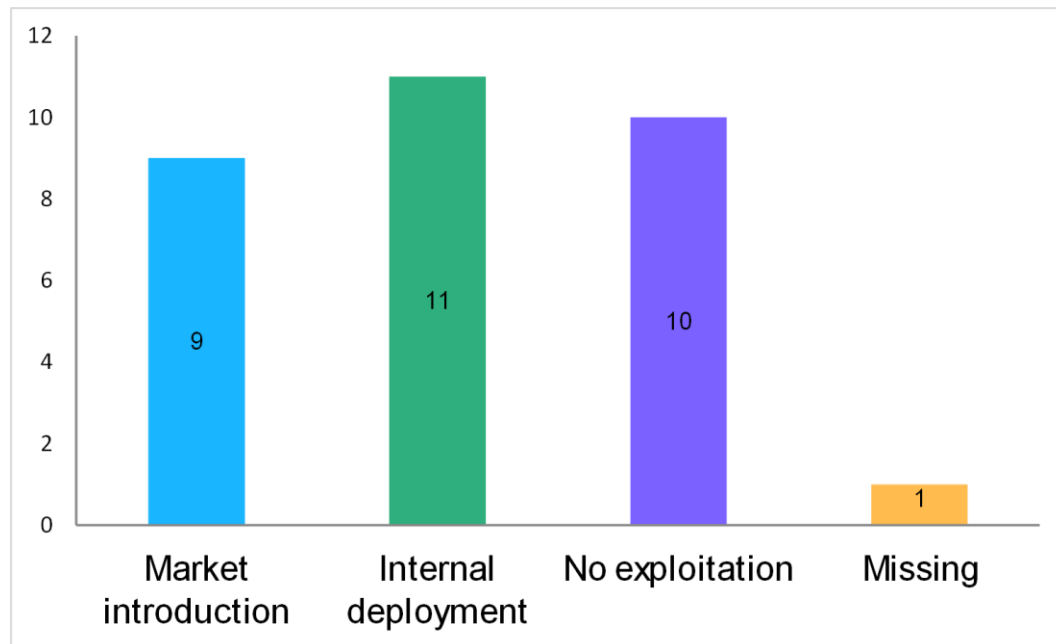
AOPs and PMs for mechanistic knowledge infrastructure

Other

Implementation quality, harmonization, and audit support

- Complementary components rather than individual innovations

- Existing but selective or focussed commercial potential



9
market-introduction
innovations

4.56
average
TRL of
commercial group

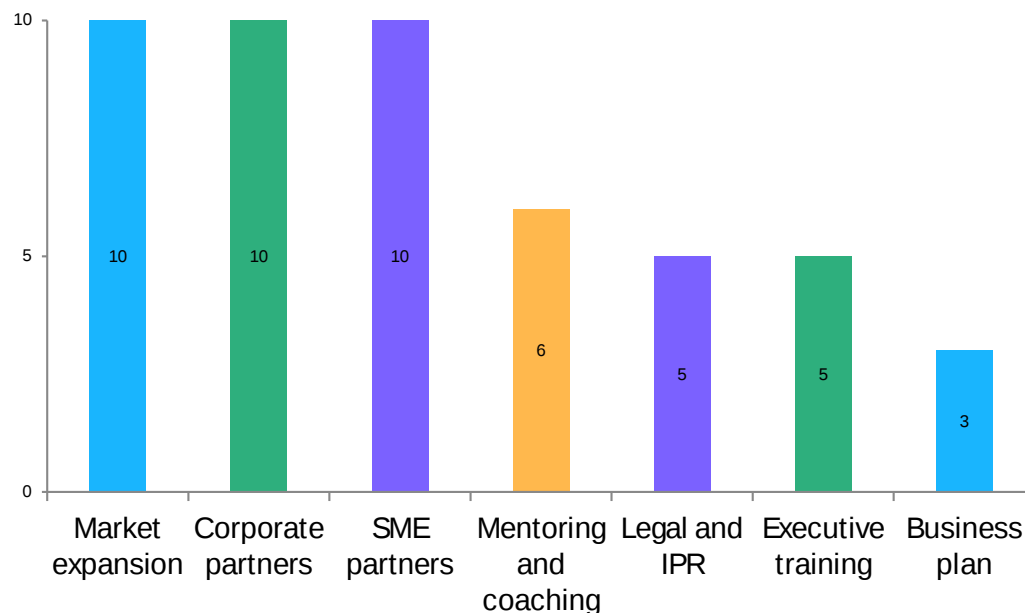
9/9
commercial
innovations
with support needs

8/9
in silico
commercial
candidates

- Creditable commercially-oriented outputs
 - Needs for market studies, standards contribution, business planning, and partnership support



- Needs around scaling, partnerships, and exploitation capacity



52
support-need
instances

10
innovations with
explicit needs

1.68
average support
needs per
innovation

15
maximum support
needs for
one innovation

- Not only technical maturation
- Implementation support, partner access, and market-facing exploitation support

31

innovations with
impact signal

44

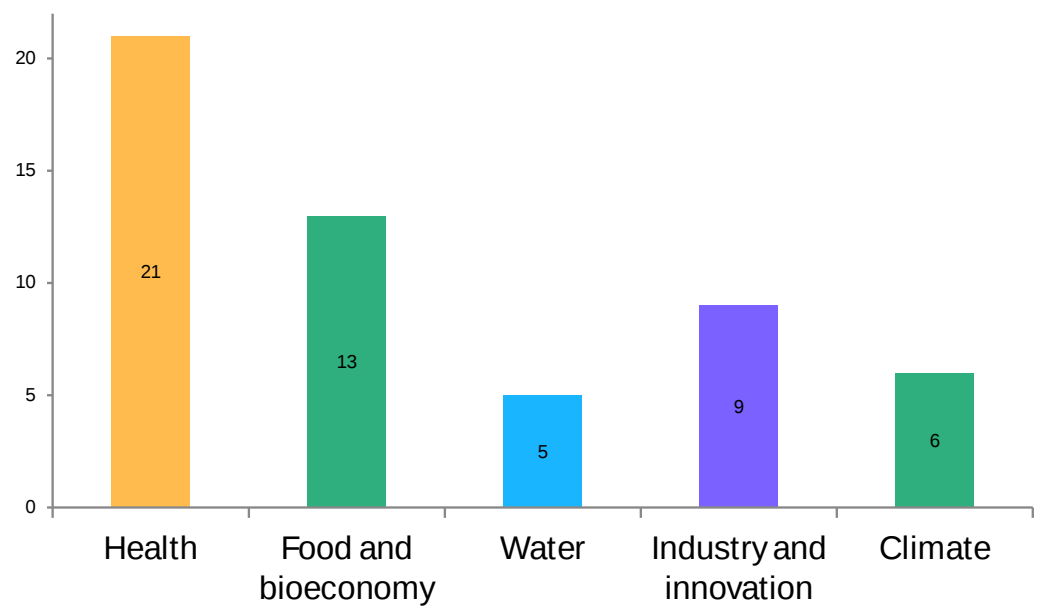
societal-challenge
assignments

47

SDG
assignments*

6

climate
mitigation/adaption
signals



- ONTOX innovations to support animal-free, mechanism-based chemical safety/risk assessment with regulatory confidence
- Critical reading of impact fields
 - Partner-reported responses
 - Potential, not independently validated downstream impact

* UN Sustainable Development Goals

- Missing or incomplete answers
 - Not "silently" filled, but documented as missing or with assumptions
 - Dependency inconsistencies
 - Conditional questions with answer-dependent subsequent questions
 - "Answer only if previous question answered with..."
 - Preserved answers with cautious and documented interpretation
 - Analytical assumptions for exploitation
 - Transparent and documented assumptions regarding public availability, academic use, or partner clarification
- ➔ Useful analysis with visible caveats



- Structured NAM and NGRA innovation portfolio of ONTOX
- Strong *in silico* portfolio
- Focussed commercial pipeline, not universal
- Strategically valuable *in vitro* and conceptual assets
- Implementation-oriented support needs
- Transparent caveats and assumptions



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