

SAFETY AND SUSTAINABILITY IN DPP

Advancing SSbD in the PINK Project

DPP4EU Conference, Brussels

17 June 2025



THE PINK PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT NO. 101137809.

ASSOCIATED PARTNERS (I.E. (A) SWISS PARTNERS AND (B) UK PARTNERS) HAVE RECEIVED NATIONAL FUNDING FROM (A) THE SWISS STATE SECRETARIAT FOR EDUCATION, RESEARCH AND INNOVATION (SERI), AND (B) INNOVATE UK.

PINK's ambition to contribute to...

What is the European Green Deal?

December 2019
#EUGreenDeal

The European Green Deal is about **improving the well-being of people**. Making Europe climate-neutral and protecting our natural habitat will be good for people, planet and economy. No one will be left behind.

The EU will:



Become
climate-neutral
by 2050



Protect human life,
animals and plants,
by cutting pollution



Help companies
become world leaders
in clean products and
technologies



Help ensure a
just and inclusive
transition

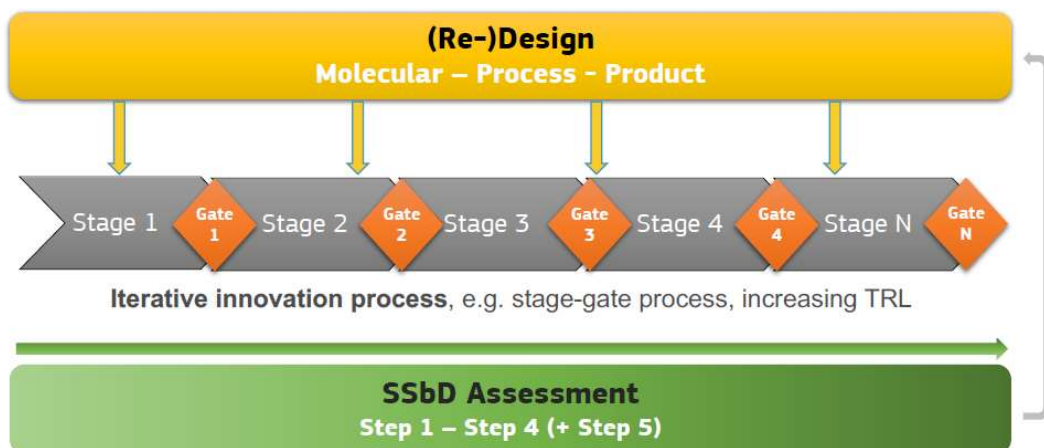
... by implementing industry-ready SSbD



JRC TECHNICAL REPORT

Safe and Sustainable by Design
chemicals and materials

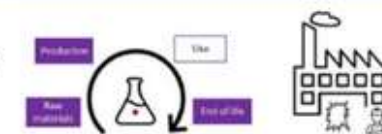
Framework for the definition of



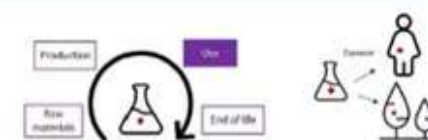
Step 1. Hazardous properties of the chemical/material in question



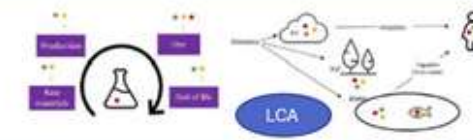
Step 2. Human health and safety aspects of production and processing



Step 3. Hazards and risks of the final application of the chemical or material in question



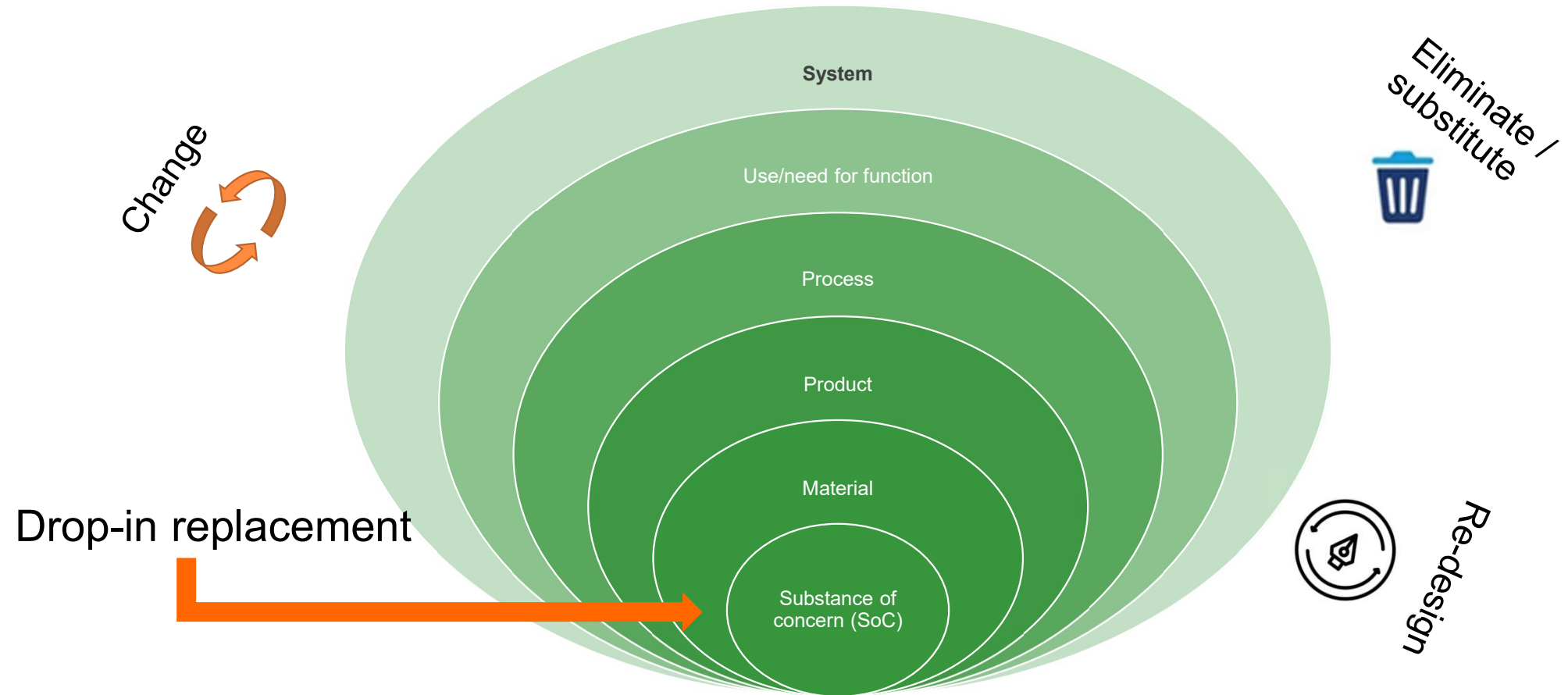
Step 4. Environmental impacts throughout the life cycle of the chemical or material in question



Step 5. Social and economic sustainability assessment



Where to implement SSbD



PINK's holistic approach

Production

Use



Raw Materials +
Extraction

Logistic +
Commerce

End of life +
Recycling

Translation



Function and
process design

Safety

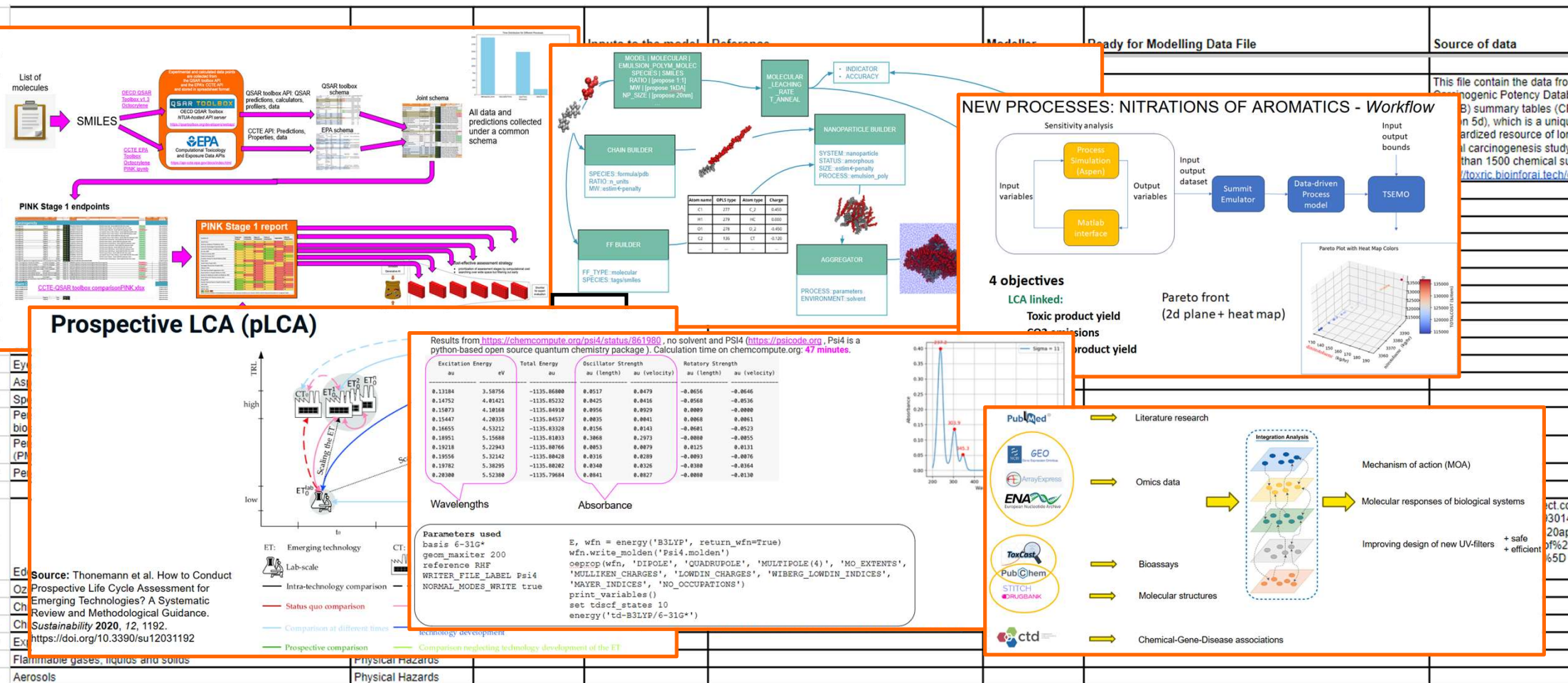
Sustainability

Circularity

**Holistic view on material
value chain and life cycle**

**Tiered list of indicators
representing the SSbD
dimensions**

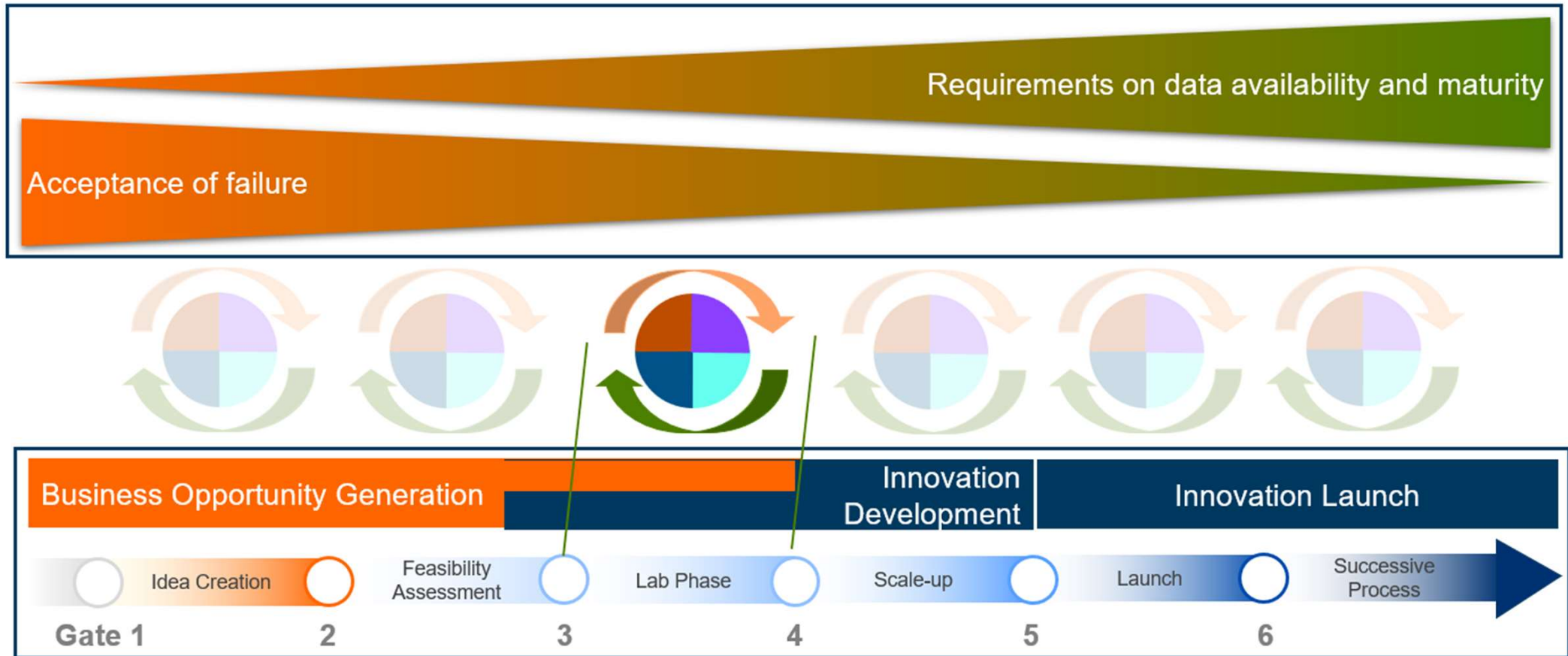
Digital/computational tools for all dimensions



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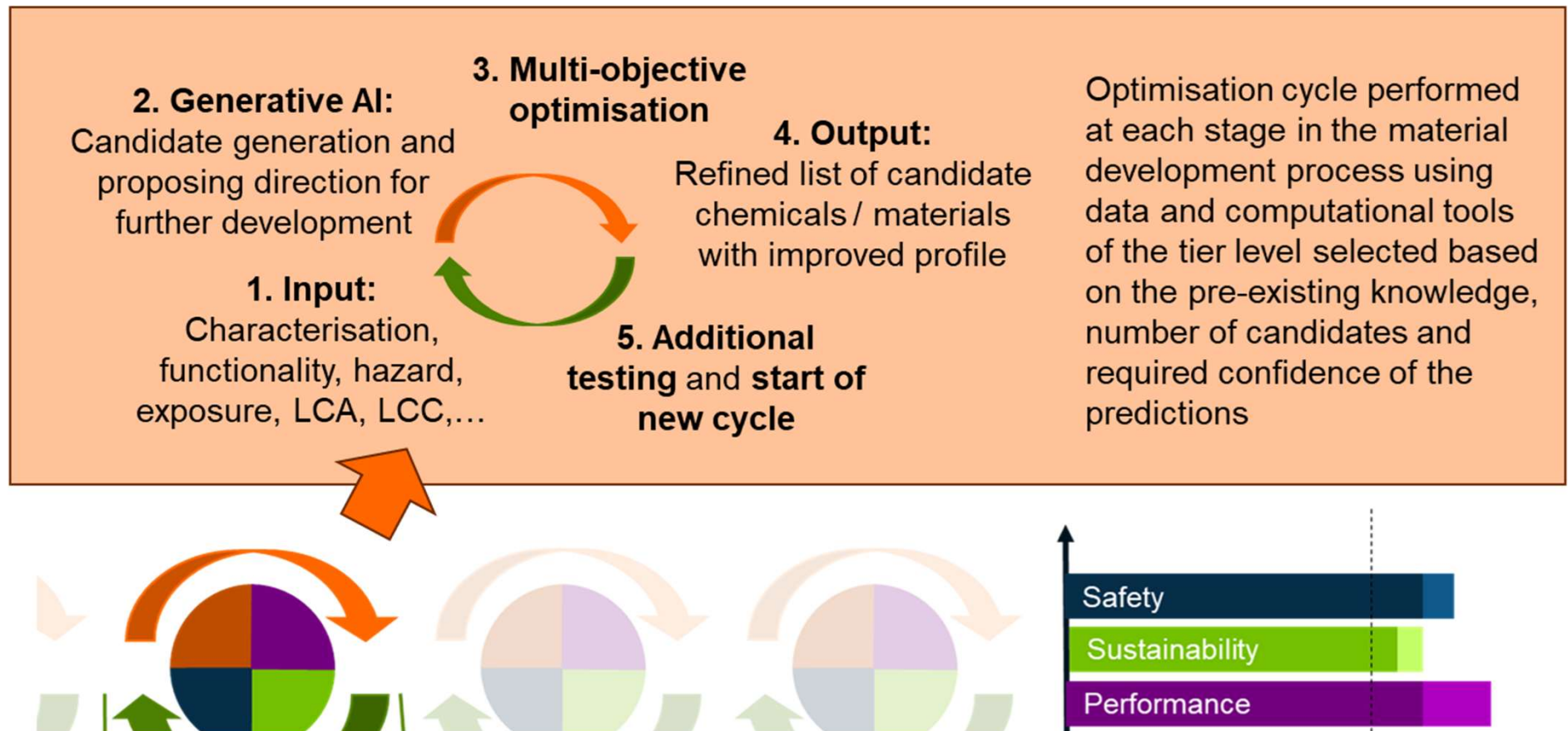
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PINK's tiered approach



Decision support for (re-)design

Decision support



Study design maps

×

Name

Characterisation

Description

- pH

- Solid content

Organisation responsible

RESCOLL

Resources

Measurement of solid content

Measurement of viscosity

pH measurement protocol

↓ Remove

↑ Add

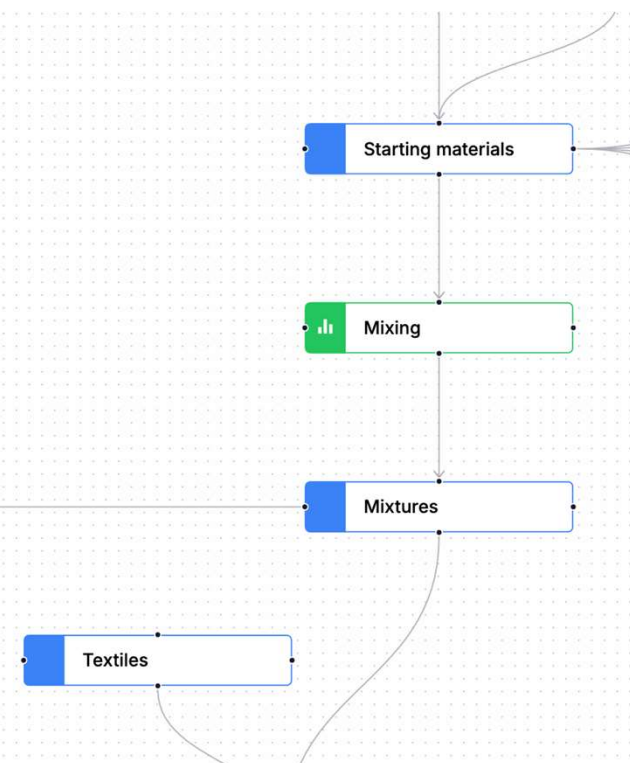
Search...

03/01/2024 - ADVALON HO 111

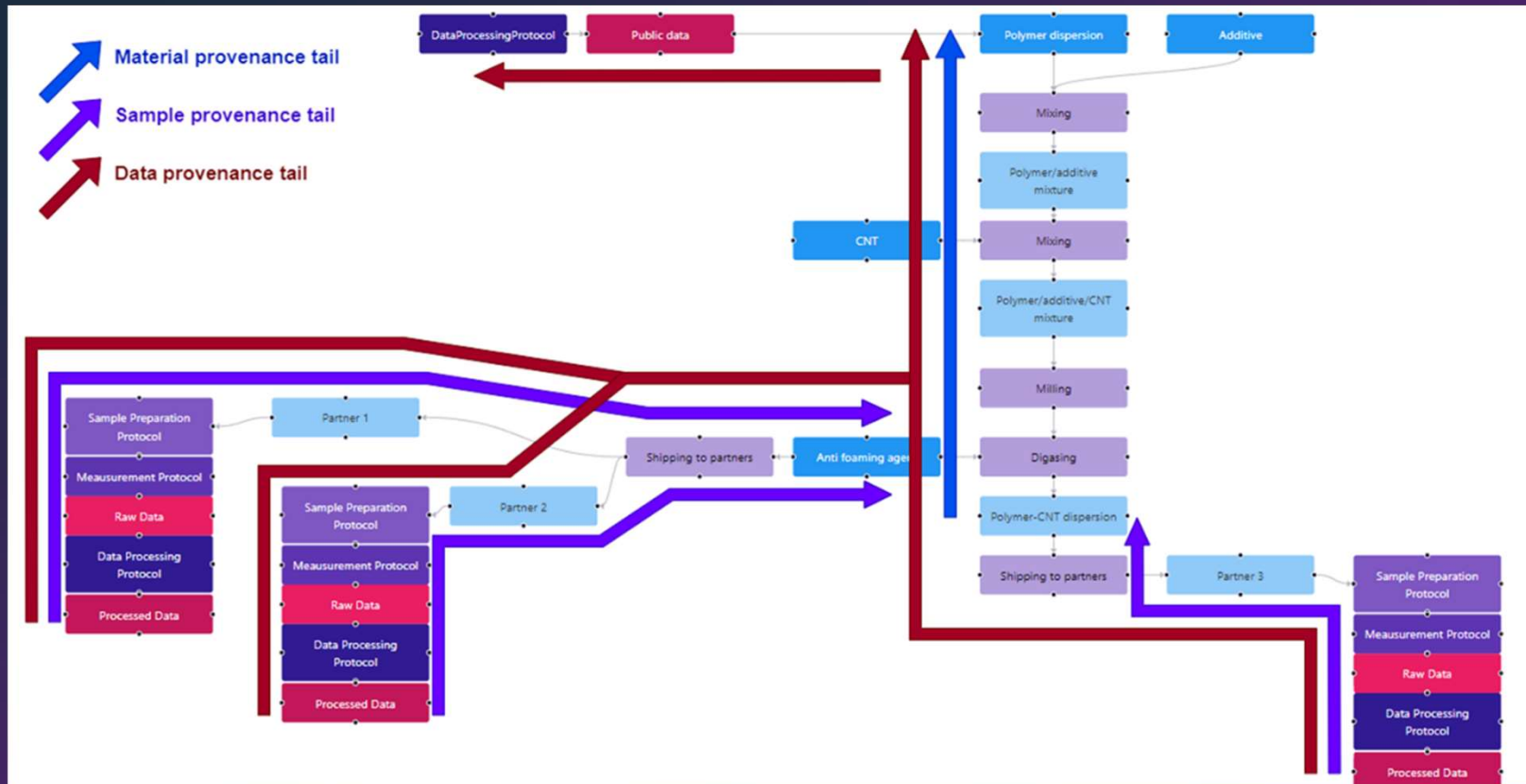
03/01/2024 - FVC Report DMR



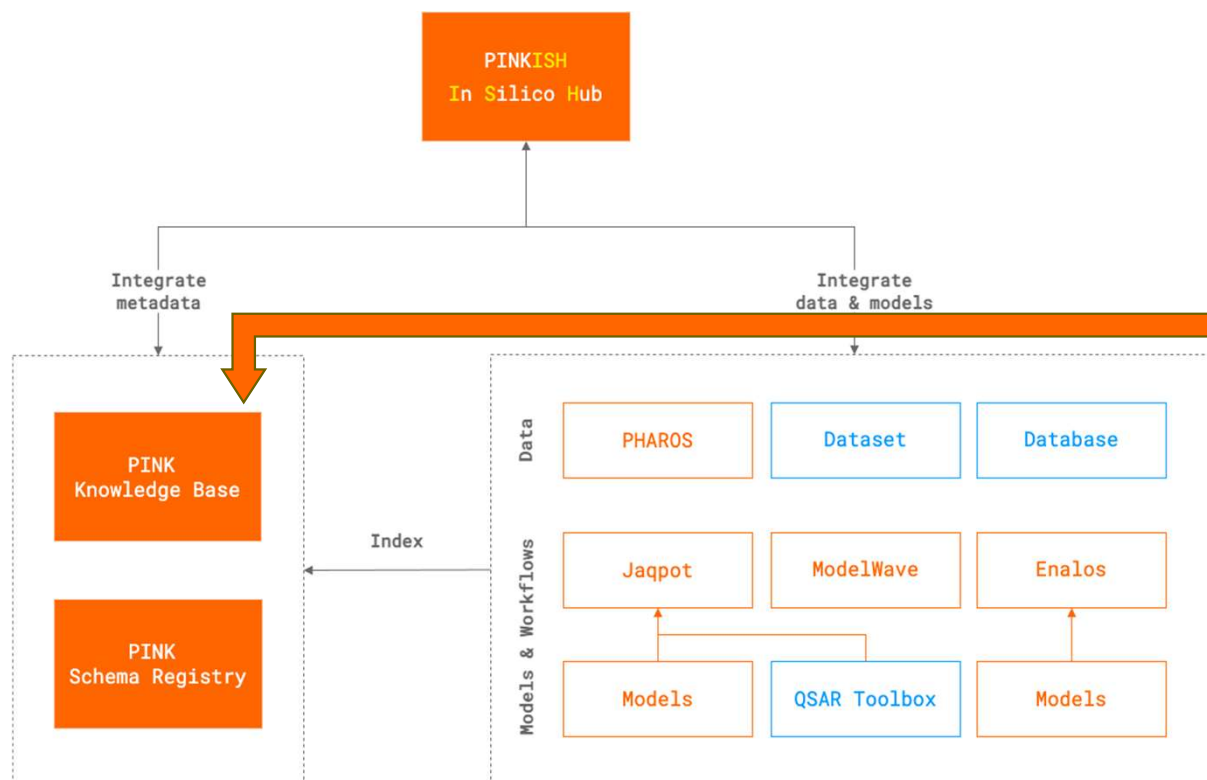
Detailed
information with
links to data



Provenance Trails

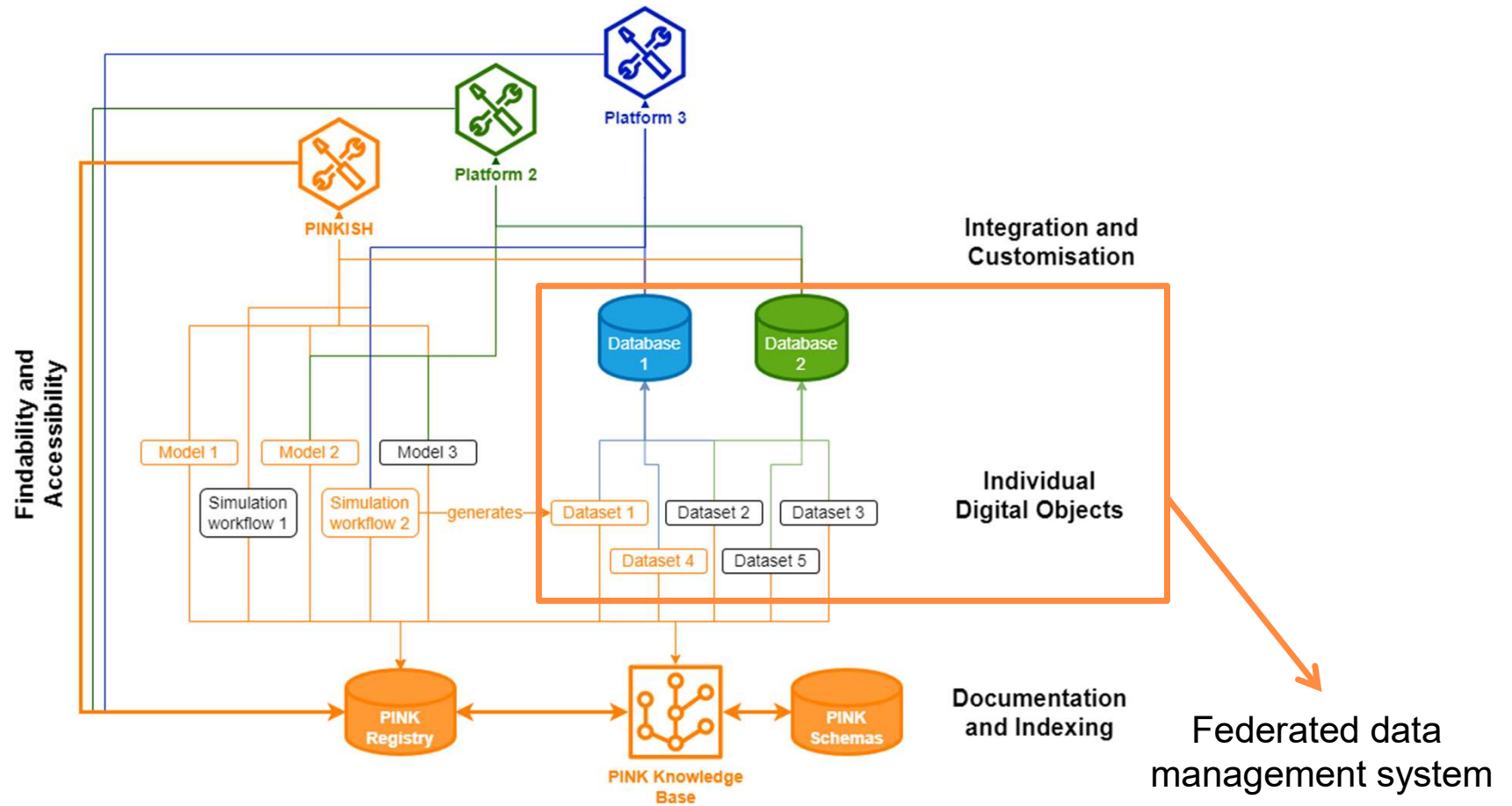


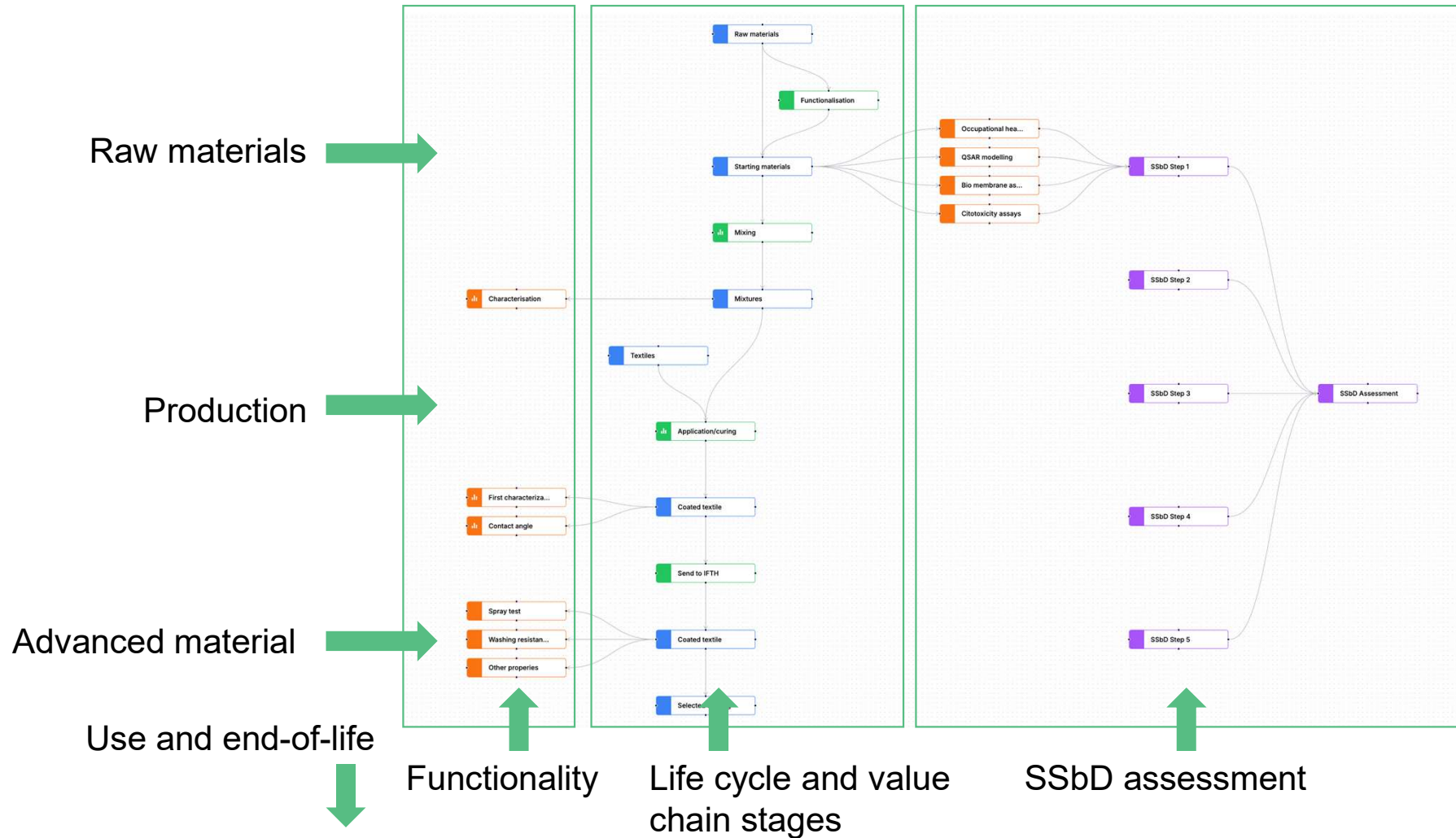
Working towards an interoperable ecosystem



PINK metadata	
SSbD category	Safety
Subcategory	Human Health
Stakeholder in value chain to provide data	Starting material provider
Material life cycle stage	Starting material
Method	QSAR / Random Forest classifi
Method ID	https://app.jaqpote.org/dashboards/2027
Indicator	Animal Carcinogenicity
Indicator ID	https://bioportal.bioontology.org/ENM?p=classes&concept%2F%2Fpurl.enanomap.org/2FENM_0000029
Input indicator	SMILES
Tier level (early, intermediate, late)	early
Chemical name	list of chemicals from training
CAS	list of chemicals from training
SMILES	list of chemicals from training

Working towards an interoperable ecosystem





- 1 Thomas Exner
- 2 Seven Past Nine

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>THANK YOU!

WWW.PINK-PROJECT.EU



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