

The European Commission's science and knowledge service

Joint Research Centre



How to increase data robustness and quality for better decision support?

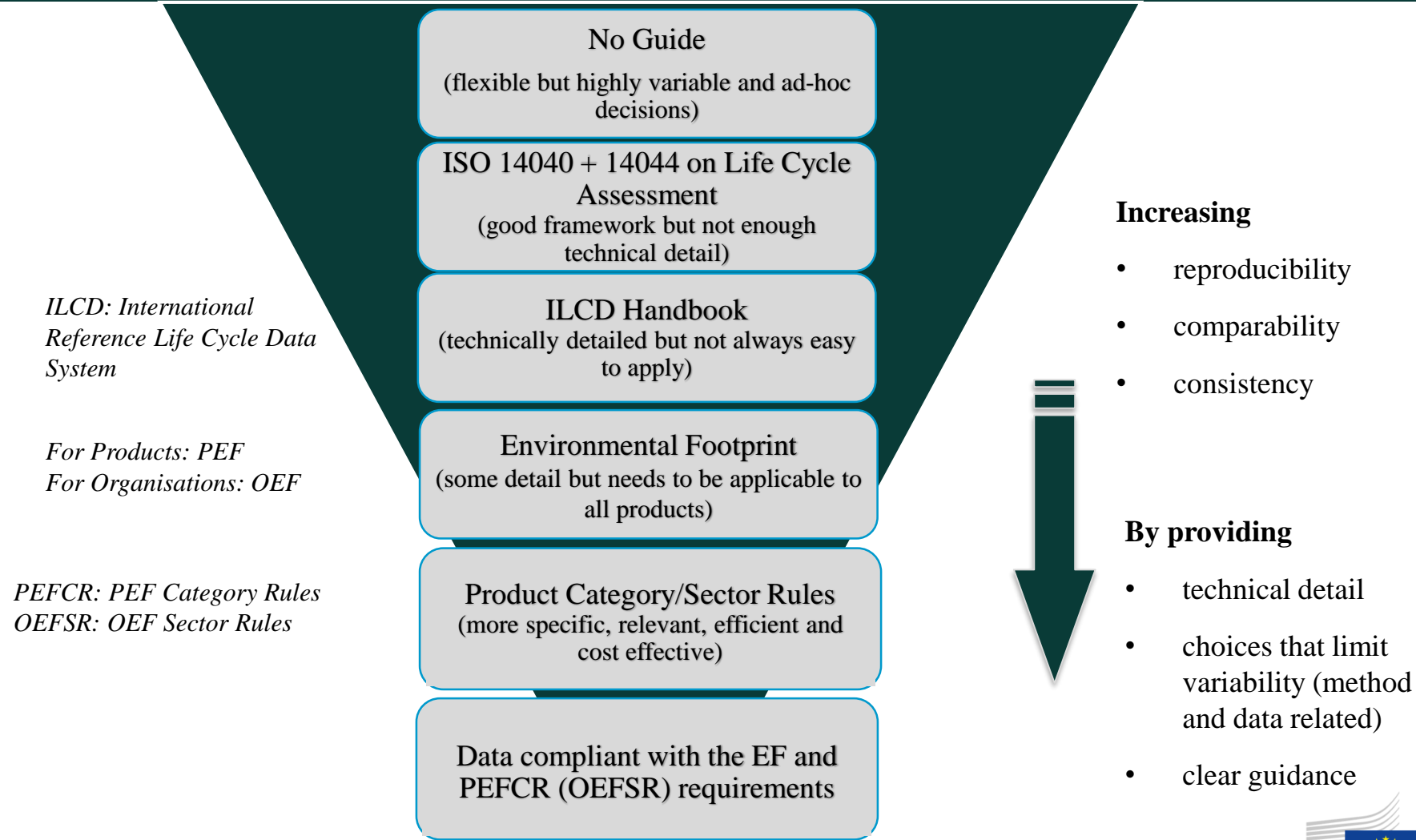
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Outline

- Objective: more robustness and consistency for a better decision support
- What have we achieved
- Challenges and next steps

Objective: More robust decision support by harmonizing methods and data



EF – compliant datasets

around 8000 EF compliant datasets procured by DG ENV will be available for free for users related to the developed PEFCRs and OEFSRs via the Life Cycle Data Network (LCDN)

- Energy and transport (also used as background data in the other packages)
- Packaging
- Minerals and metals
- End of life
- Electronics
- Plastics
- Agrofood
- Feed
- Chemicals
- Chemicals for paints
- Textiles
- Others

LCDN NODES

<http://lcdn.thinkstep.com/Node/>

<http://ecoinvent.lca-data.com/>

<https://lcdn.quantis-software.com/PEF/1>

<http://lcdn-cepe.org>

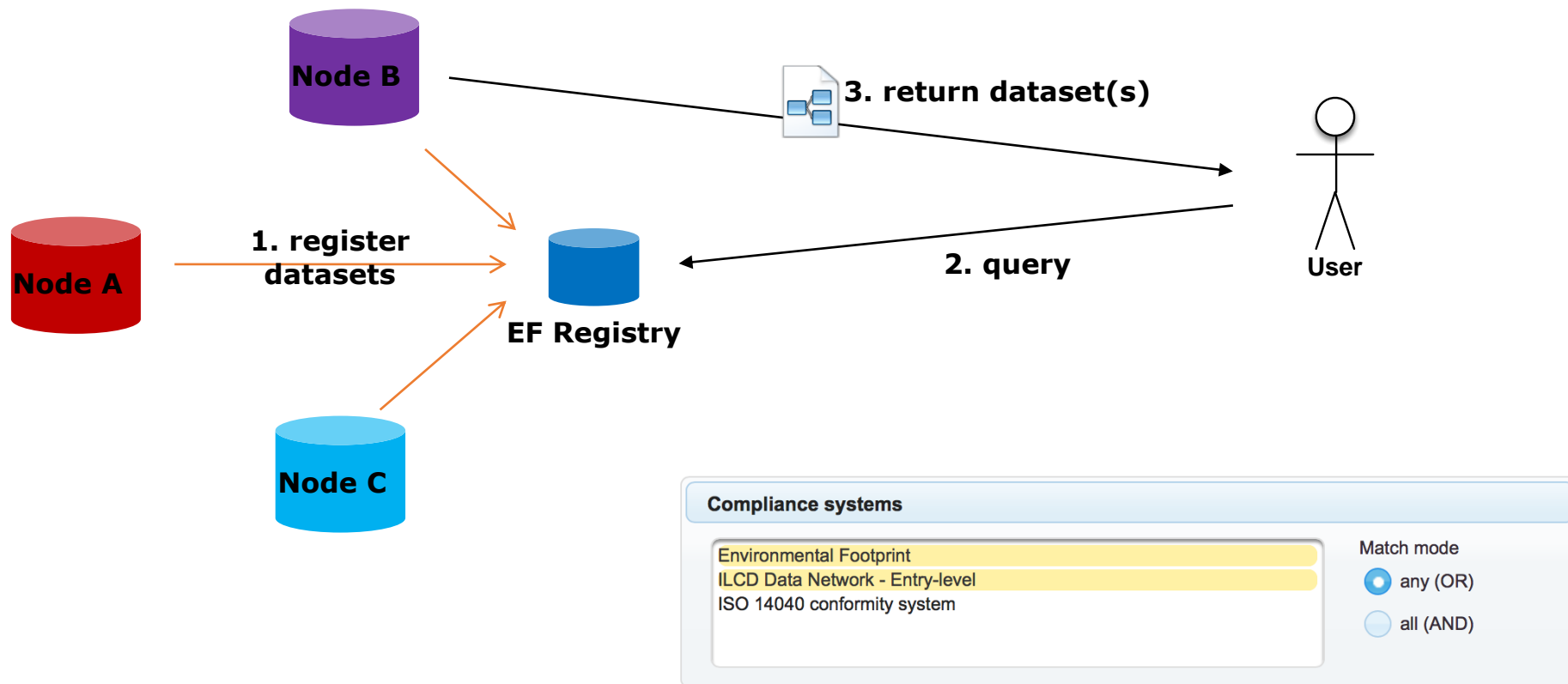
<http://lcdn.blonkconsultants.nl/Node/>

Life Cycle Data Network (LCDN)

- Web-based infrastructure to ensure easy access to life cycle data via searches, filtering, and sorting.
- Aimed at guaranteeing quality and coherence
- Registered datasets are either compliant with minimum requirements (ILCD entry-level), or with PEF/OEF requirements
- Datasets in the web-based registry come from different data developers/owners

Data distribution - EF data network

Aim: access to and search for EF datasets from single entry point
Enable search for compliance criteria



Improvements from ILCD Entry Level to Environmental Footprint

EF builds on ILCD structure with improved requirements beyond the entry level on:

- Data Quality criteria and Indicators
- Review process
- Modeling and allocation
- LCIA methods
- Nomenclature and regionalisation (elementary flows, e.g. for land and water use)

Look@LCI: What is it and why do we need it?

We are dealing with thousands and thousands of data flows in LCA and EF.

It would be a miracle if no (0) mistakes would occur between LCI and LCIA.

Look@LCI can be used as a tool to check EF-compliant datasets.

It calculates LCIA results using the .xml files of processes of EF-compliant LCI datasets and the .xml files of the EF-methods (with the elementary flows and characterization factors).

Calculations are run using the raw data: no transformation (i.e. mapping) of the original files into an LCA software is necessary

Results are therefore in principle correct and can be taken as the reference results.

Analysis of large number of processes in few minutes. It can analyze more than 500 datasets in 30 mins.

Look@LCI is a JRC in-house development

Look@LCI: What it does

Delivers results in Excel files:

- one summary worksheet,
- one worksheet with a graph of weighted results,
- one worksheet for each impact category,
- It flags:
 - processes with negative LCIA results < 0
 - processes with a dominant impact category (contributing $> 50\%$)
 - uncharacterized elementary flows.

Remaining challenges and next steps

- When creating new life cycle impact assessment methods, e.g. going for regionalisation, we need to better reflect what that means on the life cycle inventory side (needs and current limitations)
- Full consistency between EF method requirements and modelling in secondary datasets is still to be achieved (e.g. Circular Footprint Formula – CFF)
- Guidance on the review process of datasets should become more specific
 - What to review and how to review
 - How to document in a transparent way what has been reviewed and also which aspects may not have been reviewed in detail
- Checking tools like Look@LCI will be further developed and deployed
- We will further explore later this week how the data work for the Environmental Footprint can be useful also on international level in connection with the International Forum on LCA cooperation and the related Global LCA Data Access Network (GLAD)



Any questions?

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