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Key points to develop LCA databases

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Presentation to the AVNIR conference, Lille, 2012.11.06

Professor Bo Weidema

Chief Scientist

ecoinvent Centre
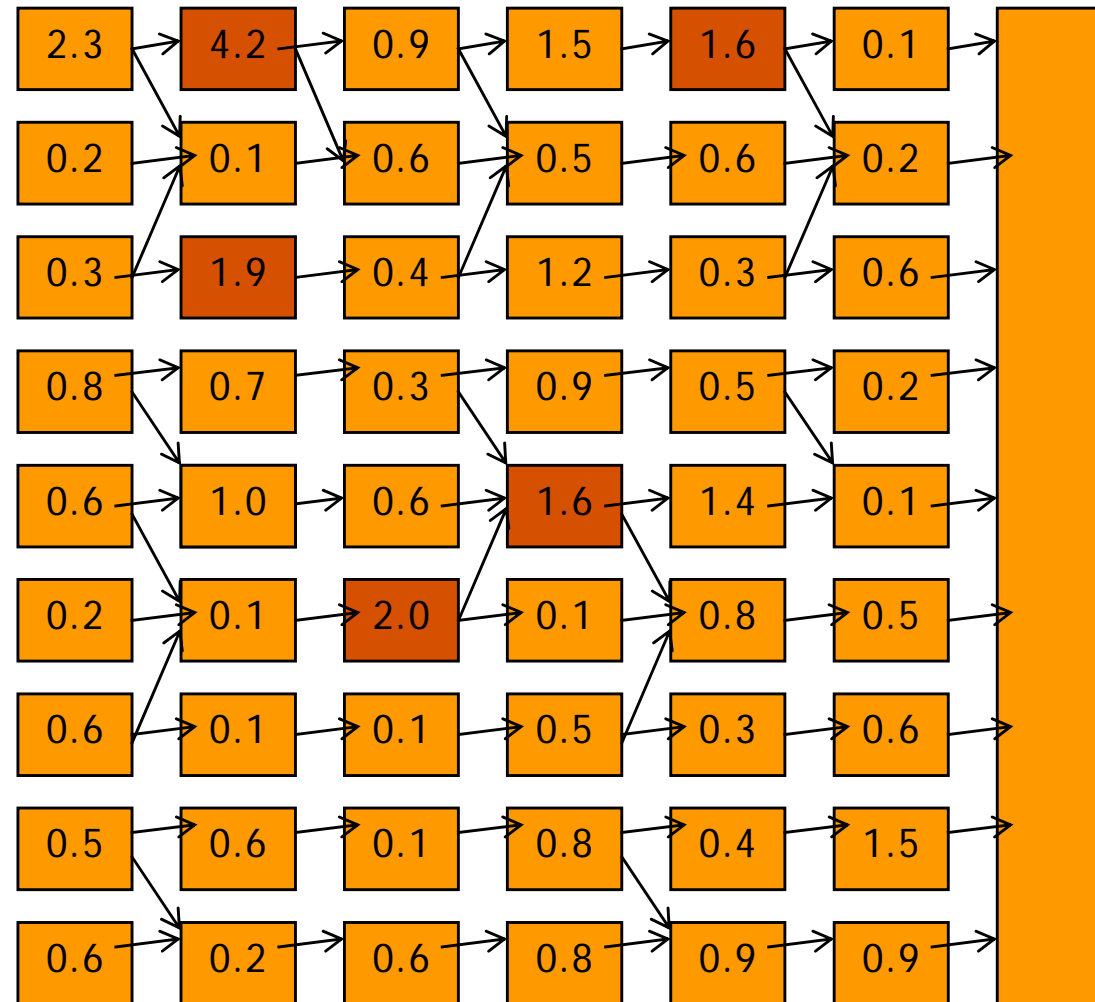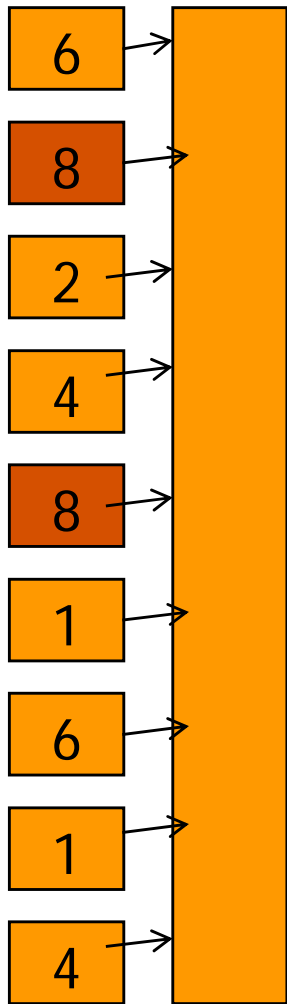
Trust in Transparency!

Key points

- Transparency at unit process level

- Flexibility for modelling choices

- Global scope

- Completeness

- Up-to-date

- A joint effort

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Transparency

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Transparency

- Openness to scientific scrutiny and dialogue

- Documentation and quality of documentation

- Unit process level: validation, mass balances, peer review

- Accessibility: All ecoinvent unit process data and documentation freely accessible via the Internet

- Ecoinvent v3: Making modeling of markets and technology constraints an area for scientific dialogue

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Flexibility for modeling choices:

Consistent introduction of markets (consumption mixes) for all products
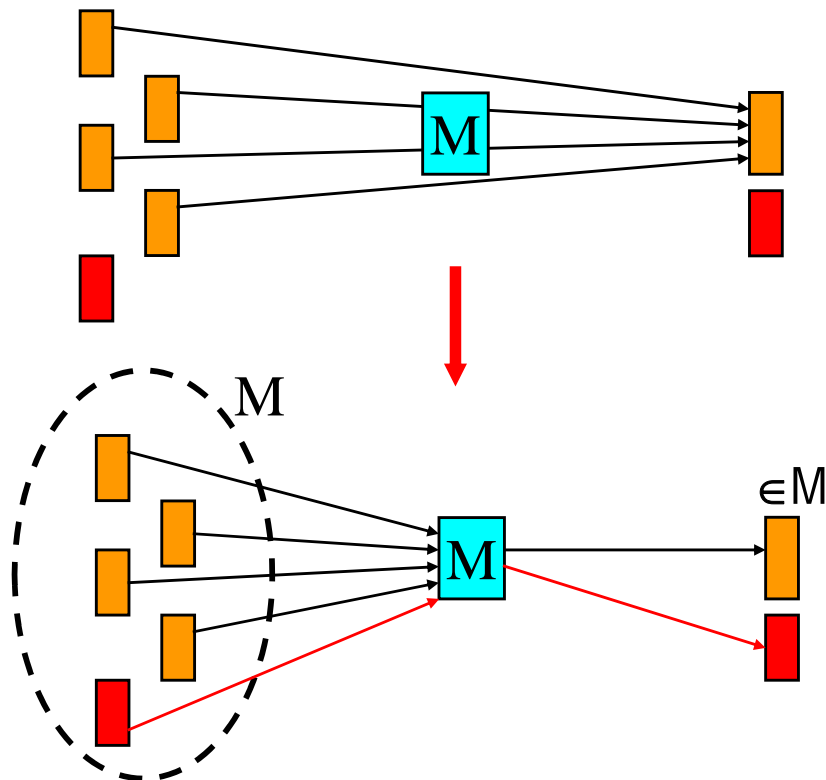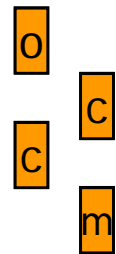

Unlinked datasets with product markets

Datasets linked, based on geographical location

- New datasets automatically linked to their suppliers and market

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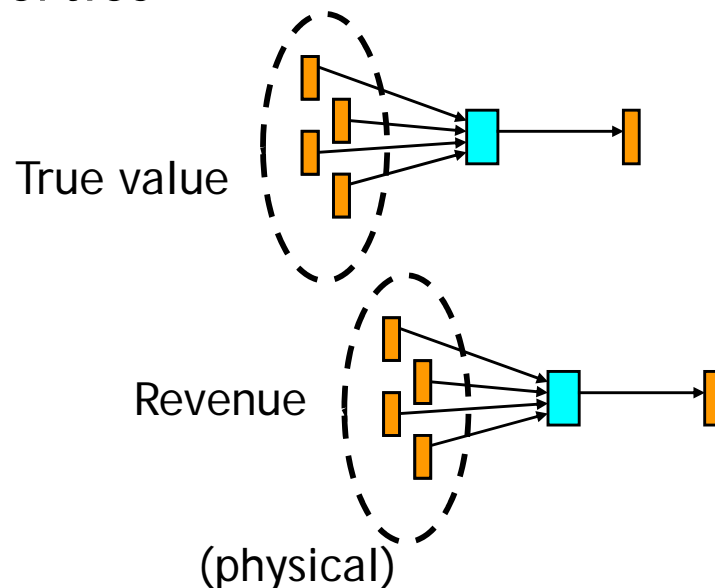ART

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Simple: One unlinked system
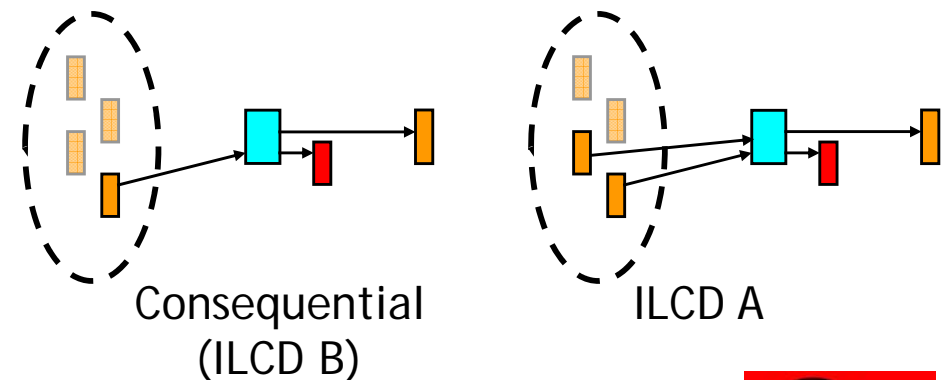# Flexible: Many derived models

One simple, unlinked
system of datasets

Several models without
constraints, using
different allocation
properties

Several models with
different constraints,
using substitution

True value
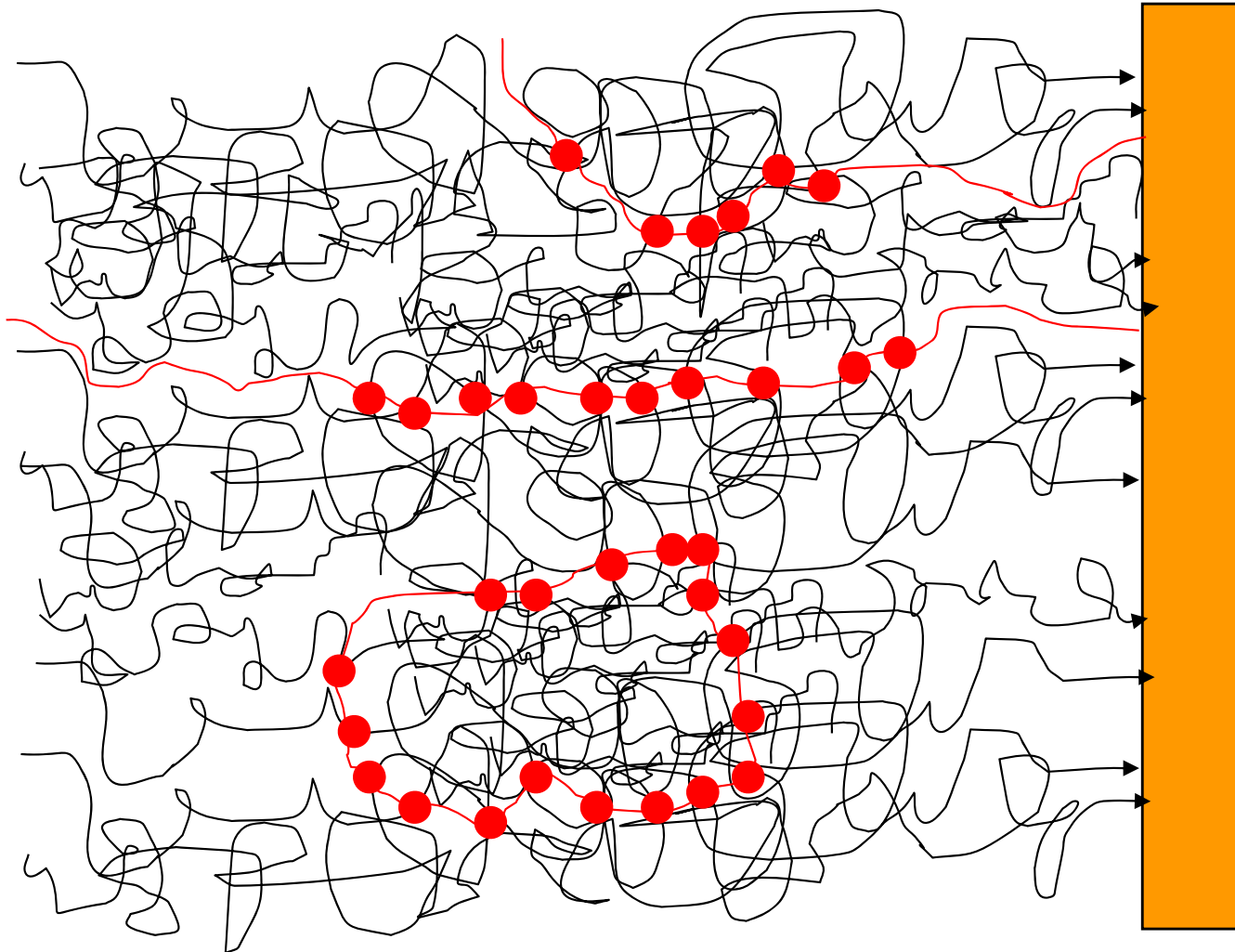
Revenue

(physical)

Consequential
(ILCD B)

ILCD A

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Global scope

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Completeness – economy-wide

- Bottom-up databases typically give incomplete results. Leaving out 50% of the totals is not uncommon

- Economy-wide coverage: No overlaps, no double-counting, no cut-offs → Results are always complete

- Aggregation error must be expressed in the uncertainty

- Continuously more detailed through disaggregation → New datasets are immediately placed - and linked - into the right context, without requirements on the data provider to provide links

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Completeness – physical, economical, social

- Combined physical and economical linking to reflect causalities: Example: waste treatment as a physical removal and an economic service

- Biophysical, social, and economic exchanges and impact categories

- Ensuring consistency across datasets

  – Temporarily including "unknown activities"?

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Up-to-date data

- Continuous effort: A viable business model is required

- A joint effort is required. No single company or public authority can build this alone

- Reduce effort for individual data providers

- Increasing central addition and editing of data to ensure consistency

- **Let us join forces:** We do not need more than one global, transparent database

    - Like Wikipedia: Not a formal monopoly - but effectively being one, as a consequence of our authority

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