

Multiple system models and improved integration of regionalized data in a background inventory database



LCA Conference 2013, Lille



2013.11.04



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Structure of the talk



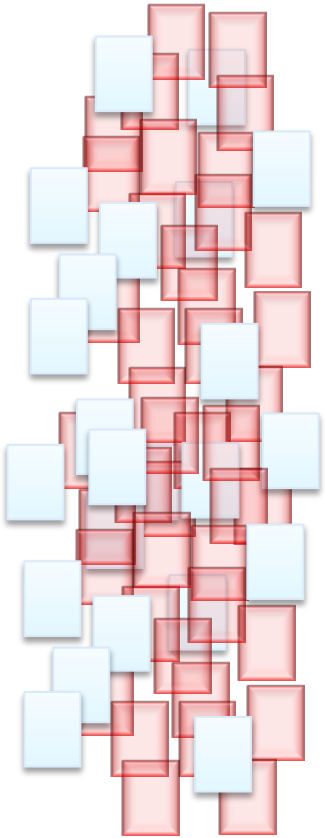
- The basics of ecoinvent v3
- Automatic creation and update of supply chains
- The system models

Basics of ecoinvent v3

Automated supply chains

The System Models

The version 3 structure: unlinked



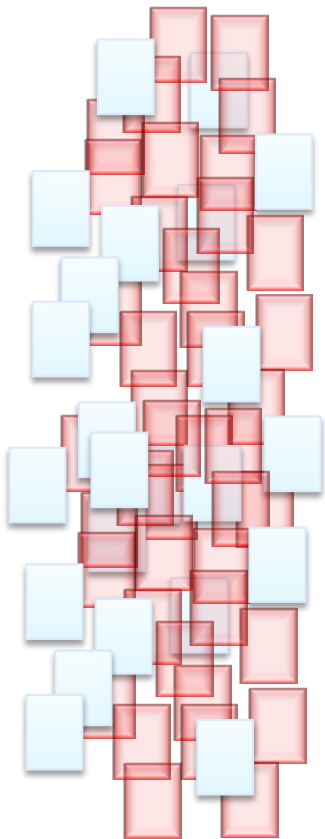
Unlinked database

Basics of ecoinvent v3

Automated supply chains

The System Models

The version 3 structure: activity



elementary exchanges
(from environment) →

intermediate exchanges
(from technosphere) →

TRANSFORMING
ACTIVITY

→ reference product

→ by-product / waste

→ elementary exchanges
(to environment)

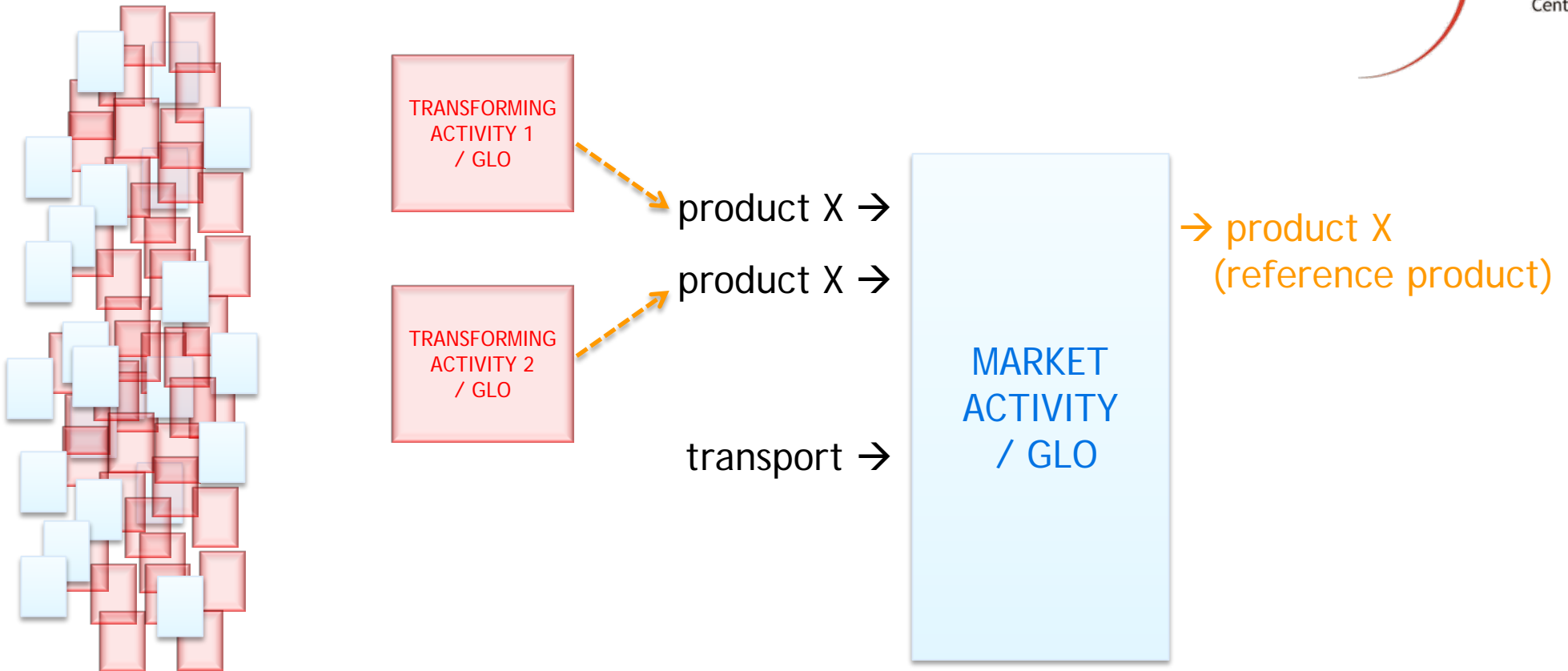
Unlinked database

Basics of ecoinvent v3

Automated supply chains

The System Models

The version 3 structure: markets



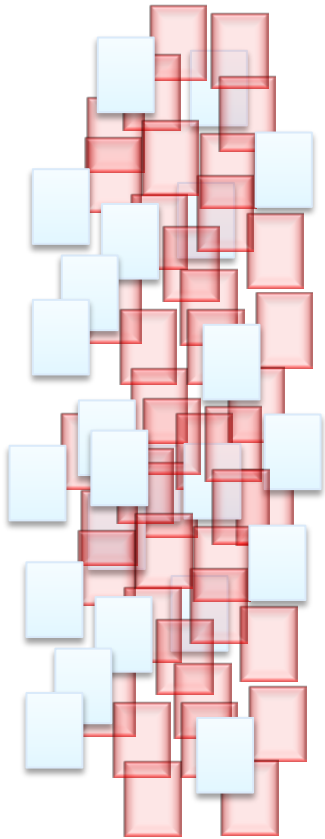
Unlinked database

Basics of ecoinvent v3

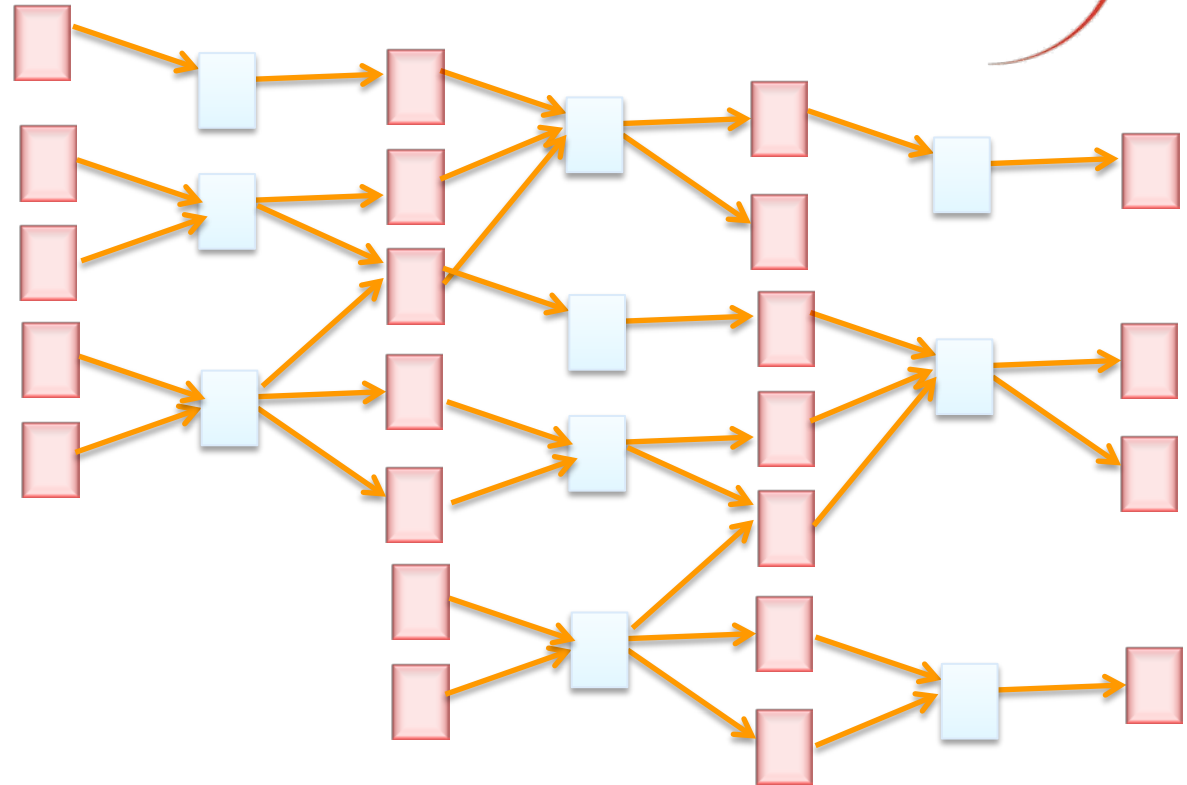
Automated supply chains

The System Models

The version 3 structure: linked DB

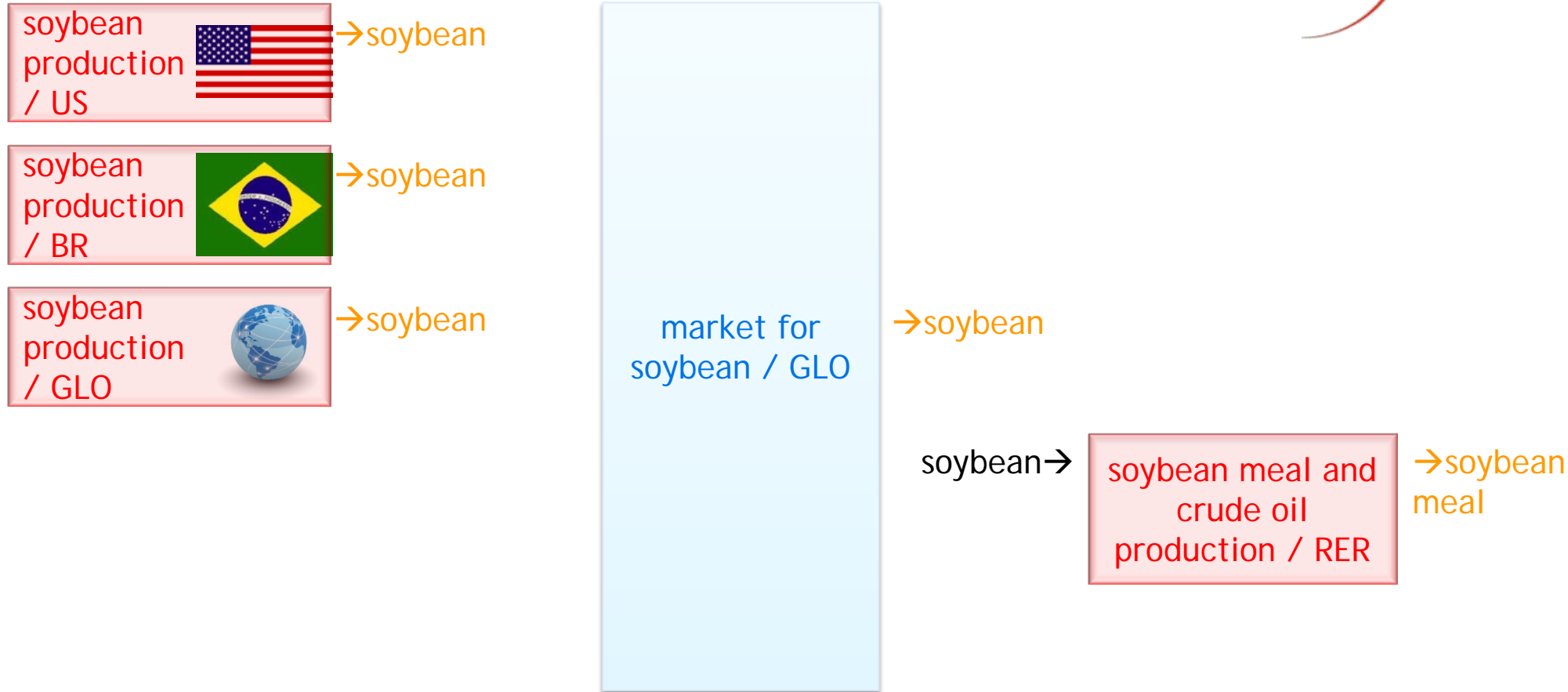


Unlinked database

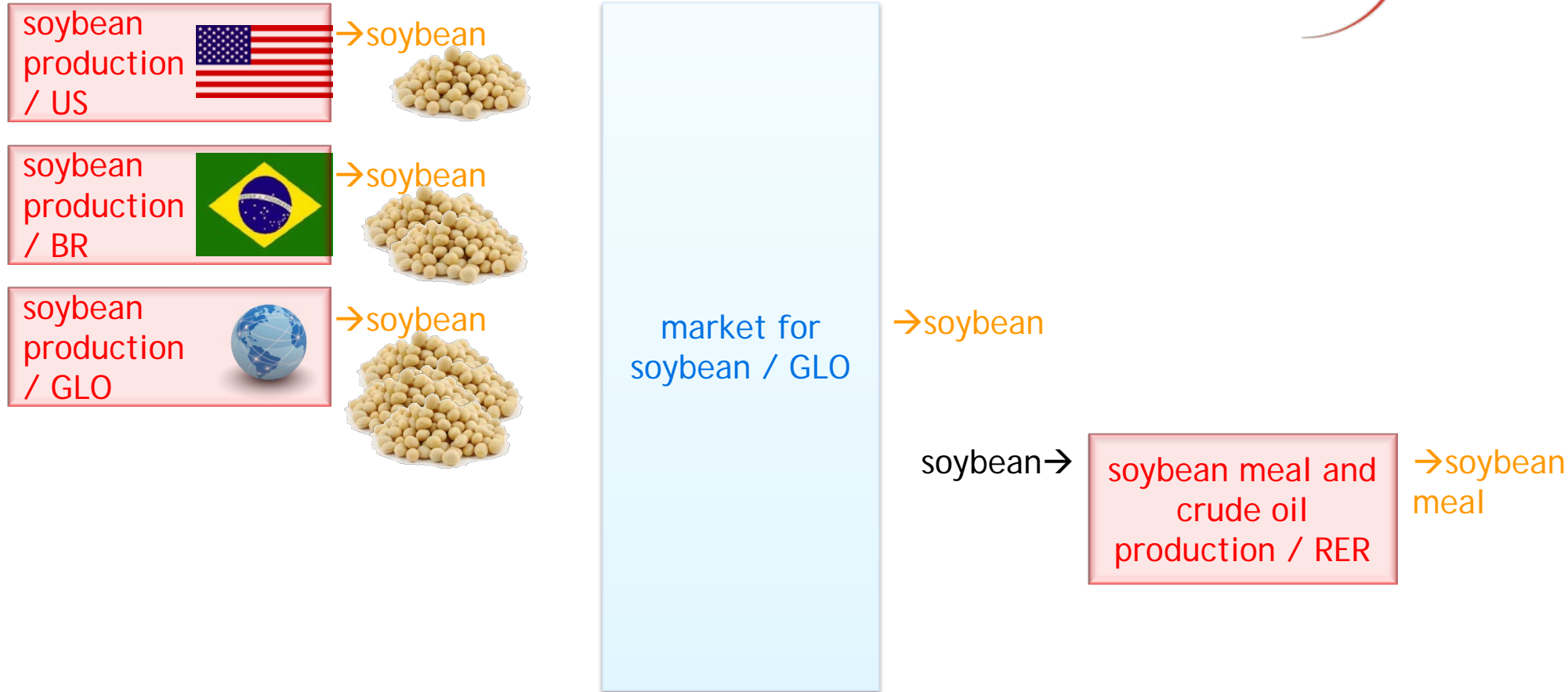


Calculated database

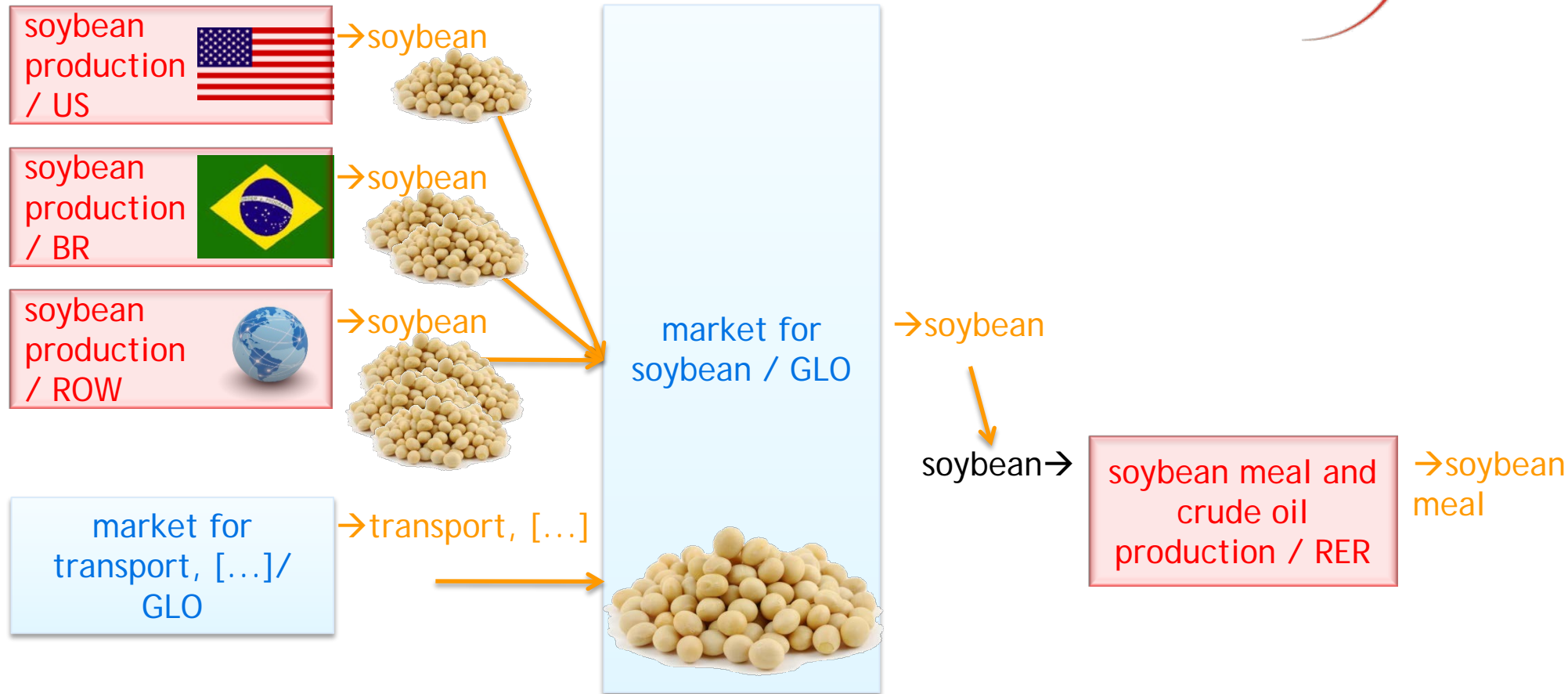
Automated creation of supply chains



Automated creation of supply chains

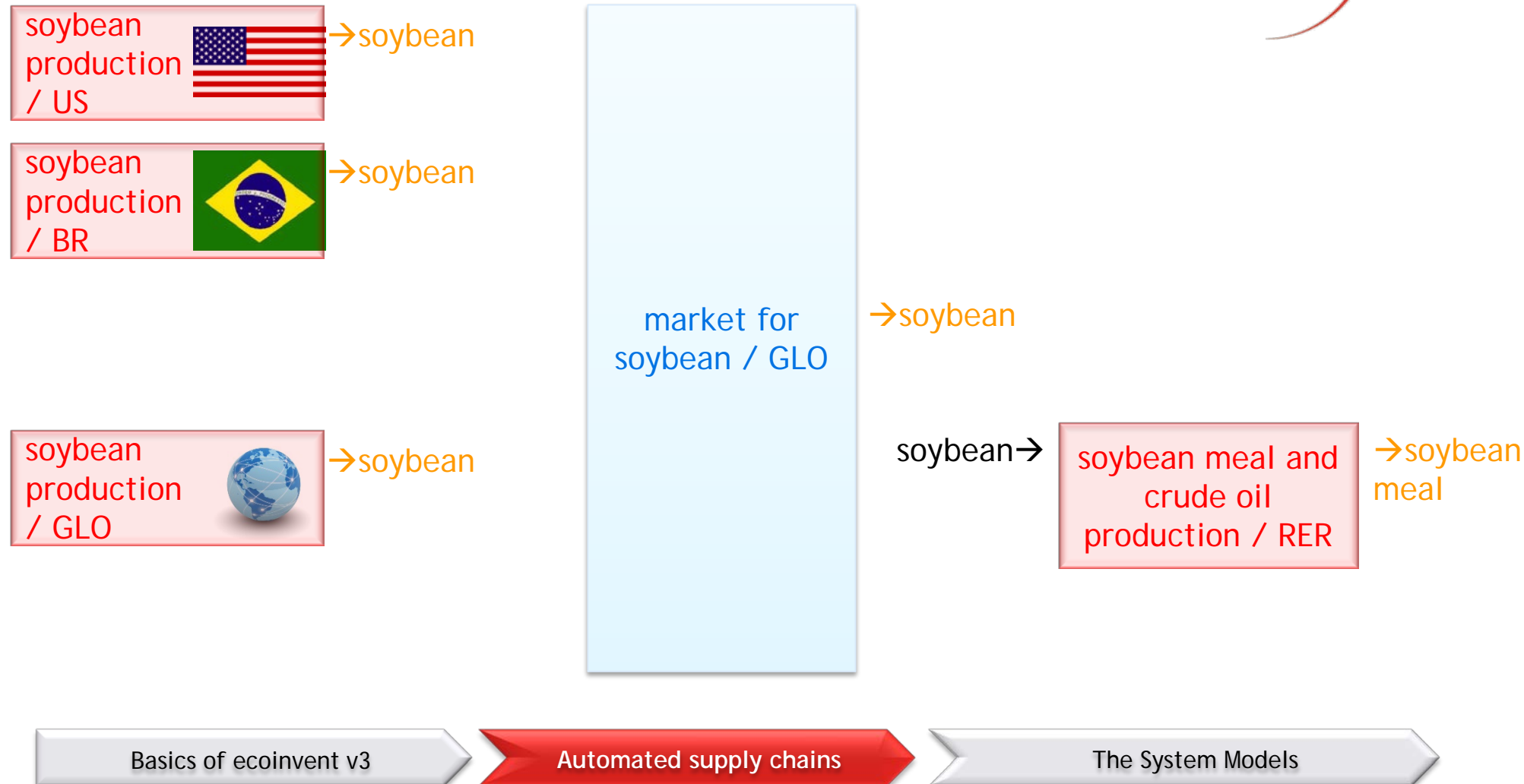


Automated creation of supply chains

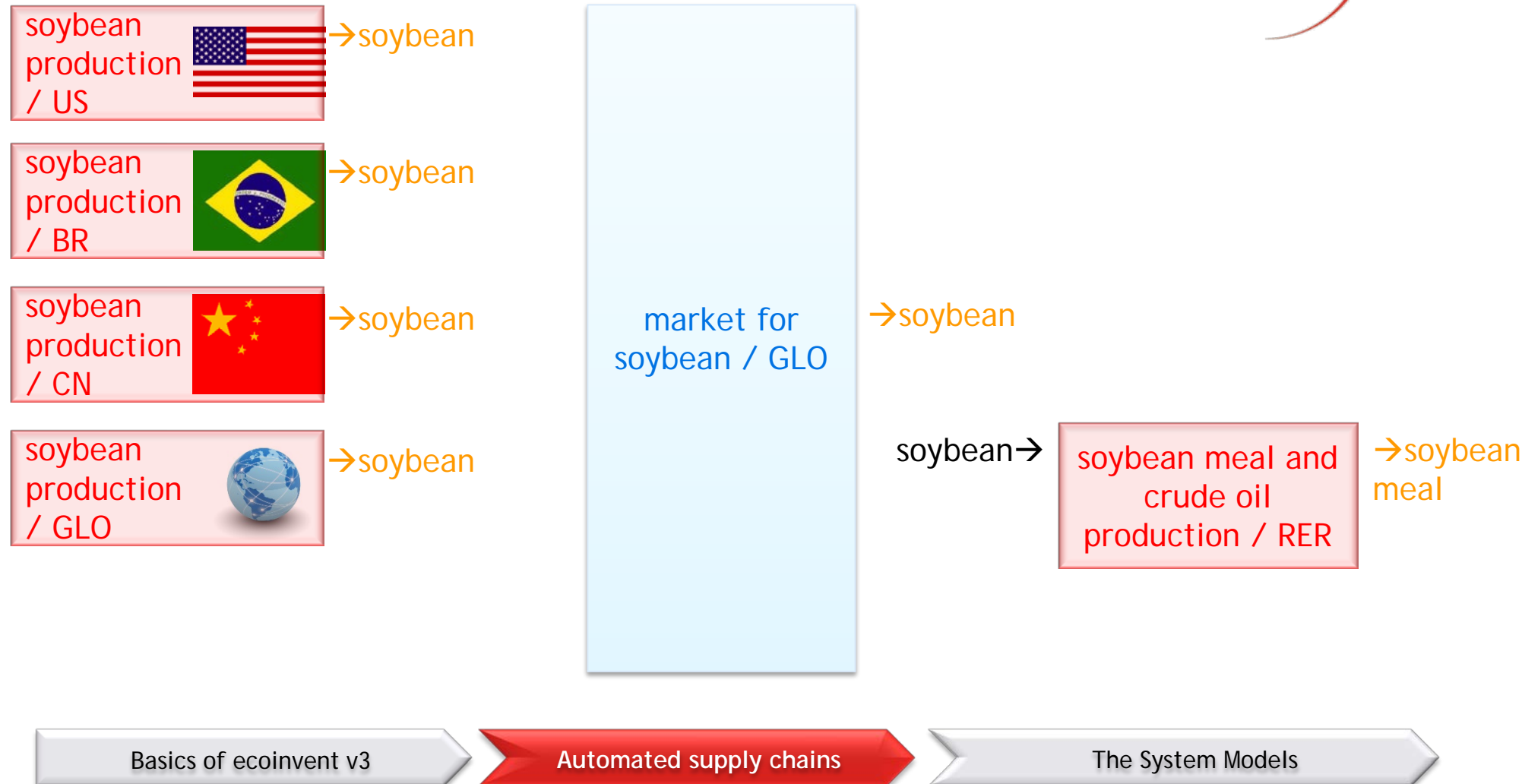


*RoW; rest of the world, the global production (GLO) minus the local ones.

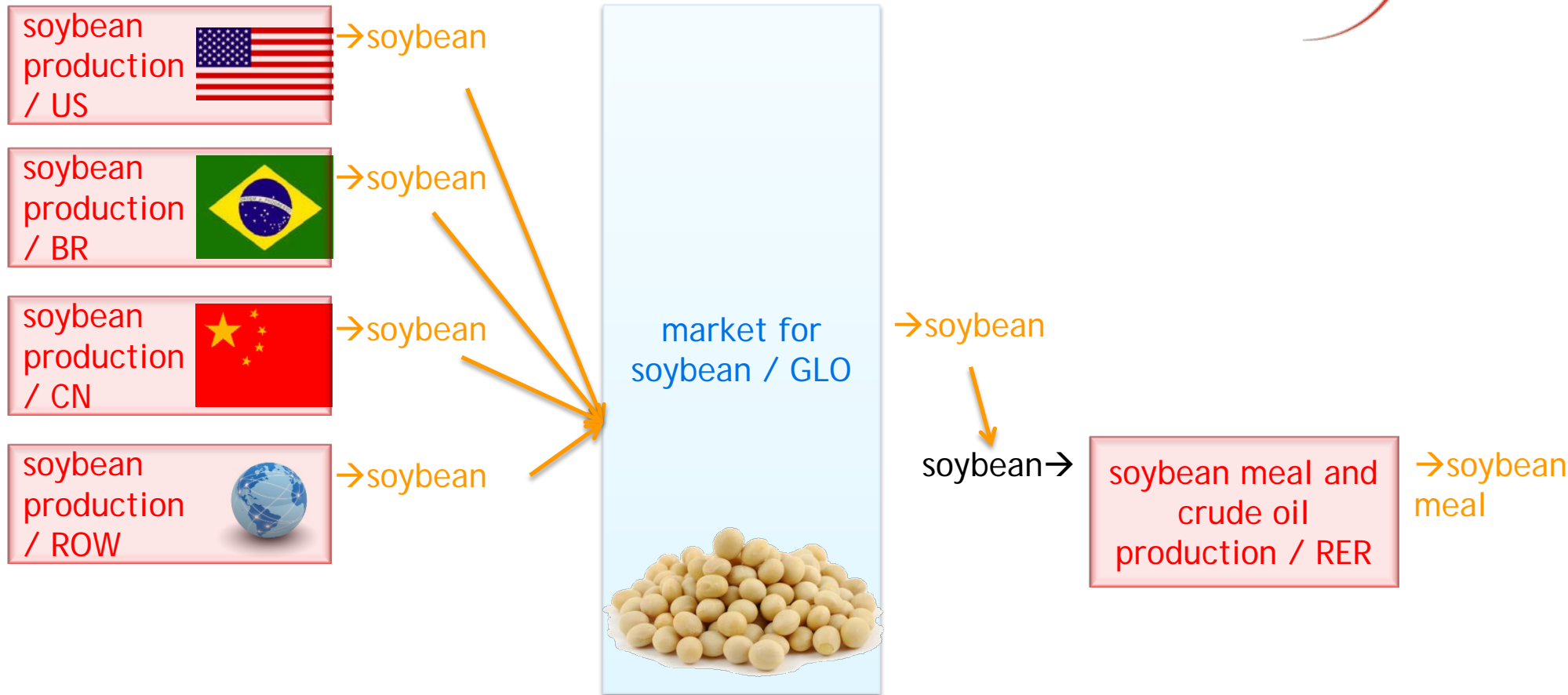
New regional data is automatically integrated in existing supply chain



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New regional data is automatically integrated in existing supply chain

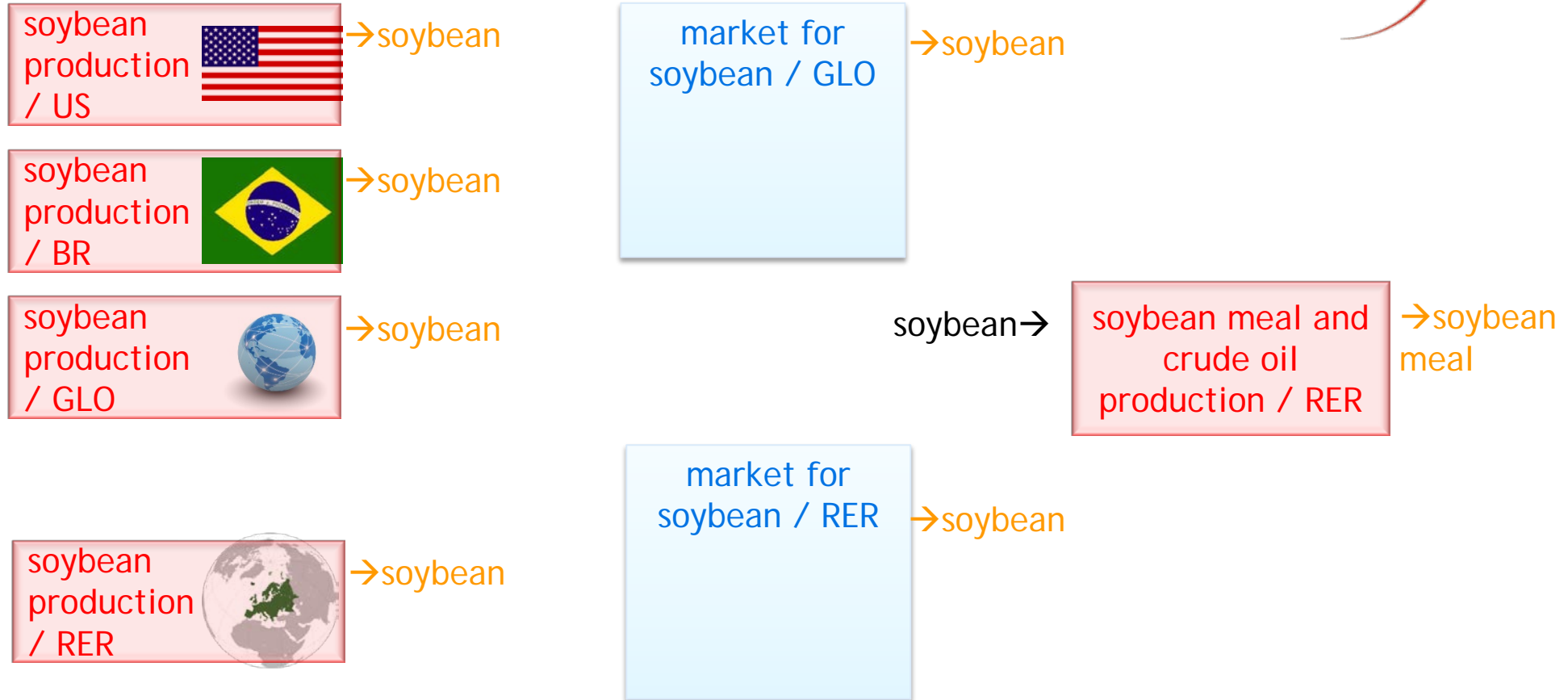


*RoW; rest of the world, the global production (GLO) minus the local ones.

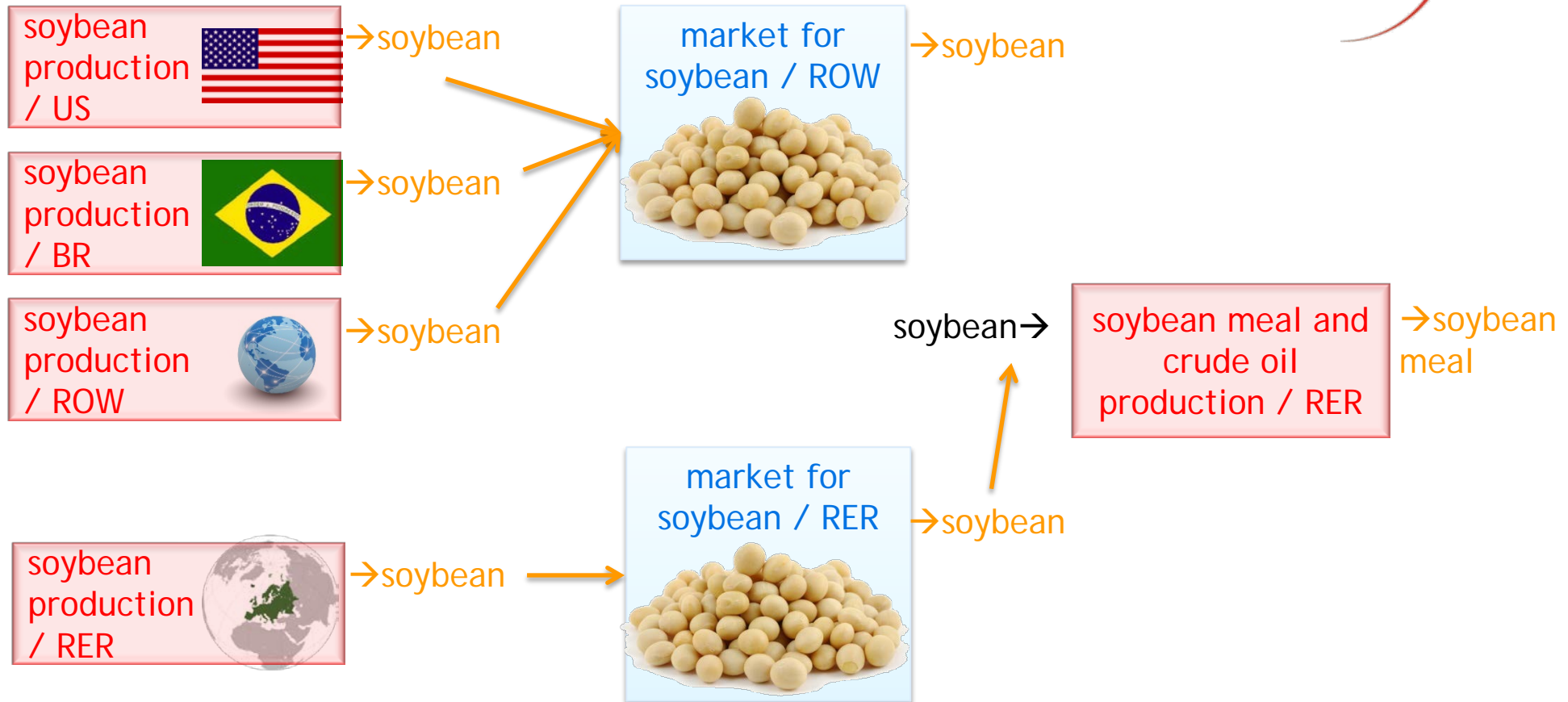
Generation of new regional supply chains



Generation of new regional supply chains



Generation of new regional supply chains



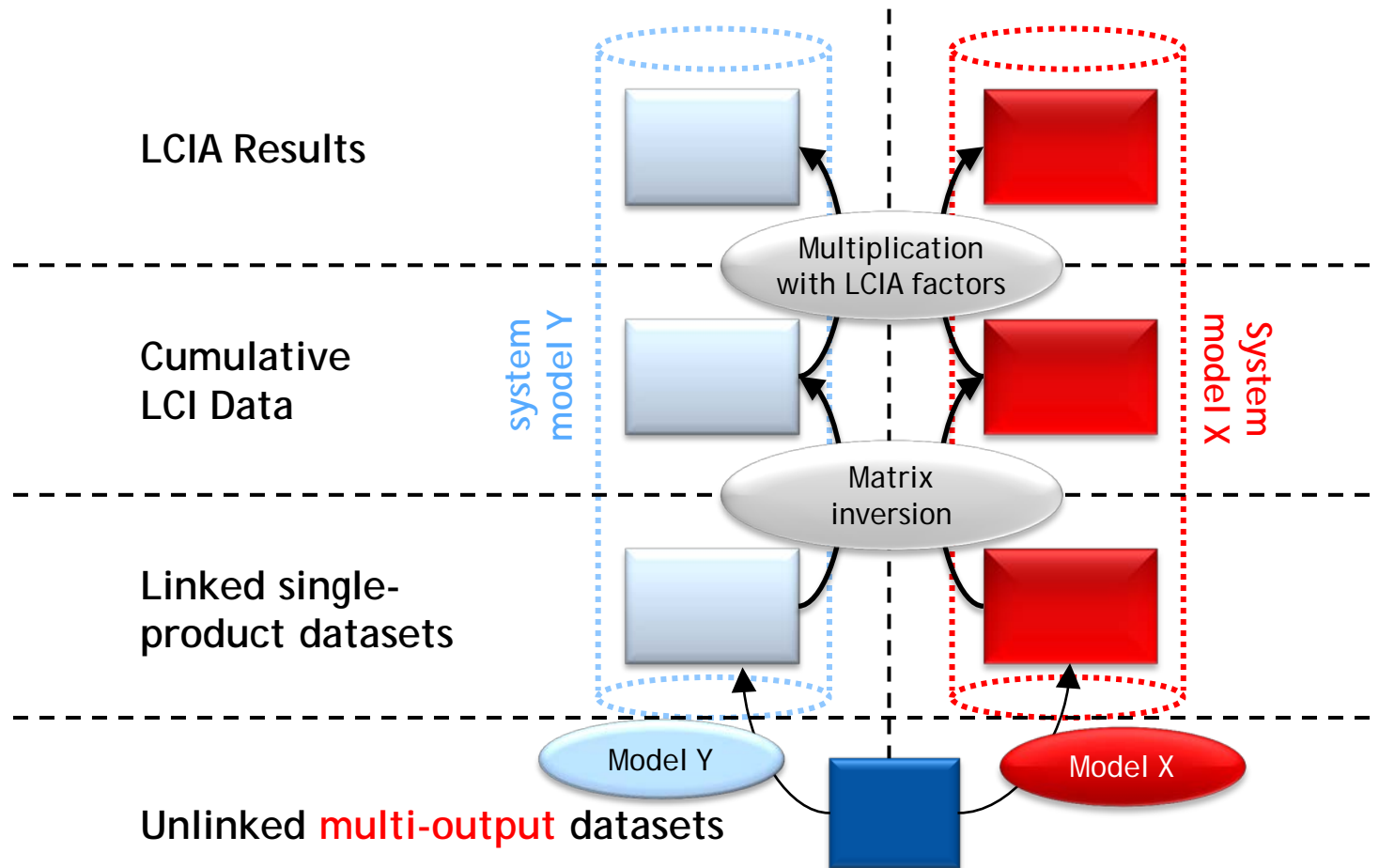
*RoW; rest of the world, the global production (GLO) minus the local ones.

National Databases Initiatives



- National initiatives are responsible for their own local data collection programme, and retains the right to license the collected data to third parties, while providing the collected data for publication in the ecoinvent database.
- ecoinvent provides the necessary infrastructure for validation and publishing of the data as part of the ecoinvent database.
- Free ecoinvent licenses to all active in the national initiative.

Same undefined DS, different results



The system models

1. Allocation, ecoinvent default

- ➡ all activities supply the markets (no technology constraint)
- ➡ by-products are allocated at the point of substitution (true value allocation; no cut off)

2. Substitution, consequential, long-term

- ➡ only unconstrained (marginal) activities supply the markets
- ➡ by-products are treated by substitution (system expansion)

Thank you for your attention!

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