United Nations Trade and Development (UNCTAD)

GLOBAL COMMODITIES FORUM
9-10 December 2024, Geneva

Collaborative and Inclusive Traceability in Agricultural Supply Chains

Lars Kahnert, Digitalisation Advisor, GIZ/SASI/DIASCA

The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.

Collaborative and Inclusive Traceability in Agricultural Supply Chains

DIASCA
Digital Integration of Agricultural Supply Chains Alliance

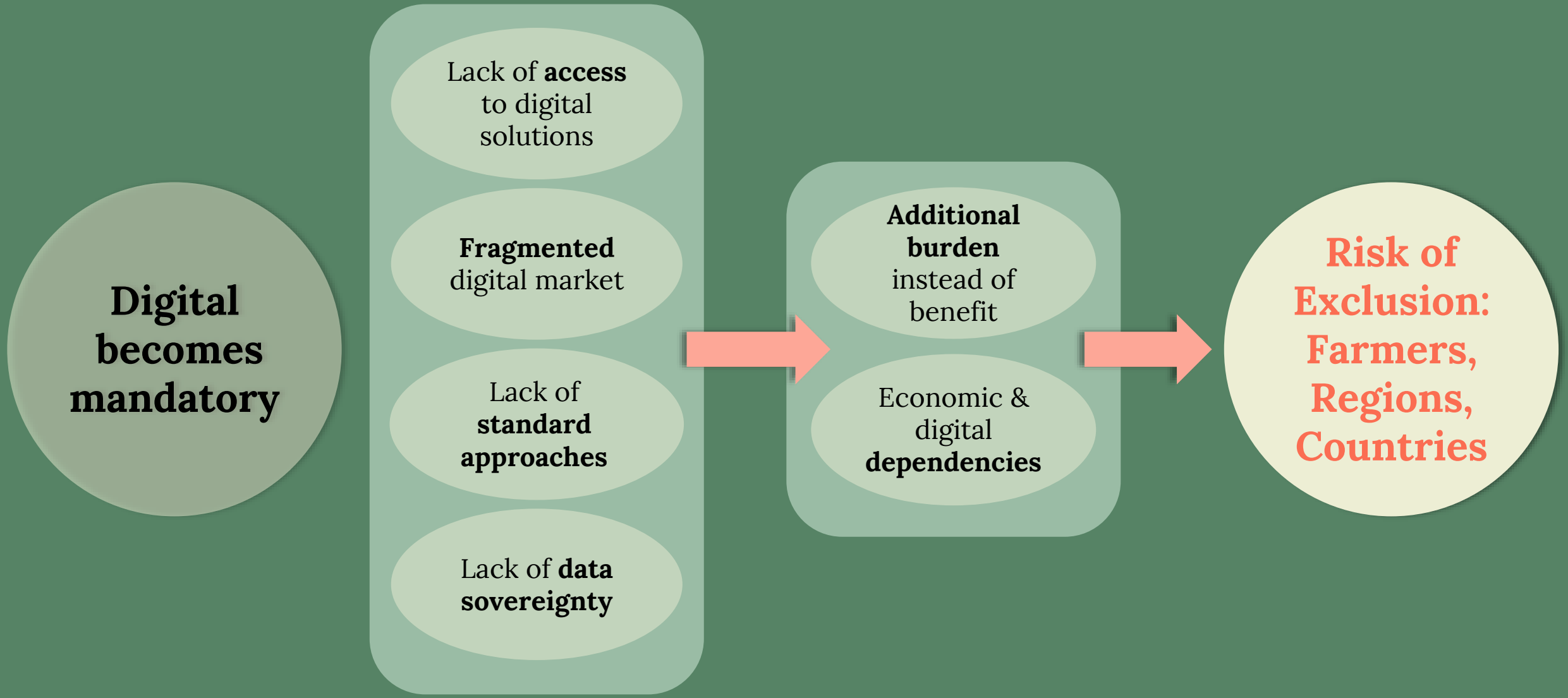
Global Commodities Forum

9-10 December 2024, Geneva

SASI
Sustainable Agricultural Supply Chains Initiative

Lars Kahnert
Digitalisation Advisor
GIZ/SASI/DIASCA

Challenges


Digital becomes mandatory
Lack of **access** to digital solutions
Fragmented digital market
Lack of **standard approaches**
Lack of **data sovereignty**
Additional burden instead of benefit
Economic & digital **dependencies**
Risk of Exclusion: Farmers, Regions, Countries

Heading towards compliance….
…yet: Everyone is building their own railway track
….and their own trains!

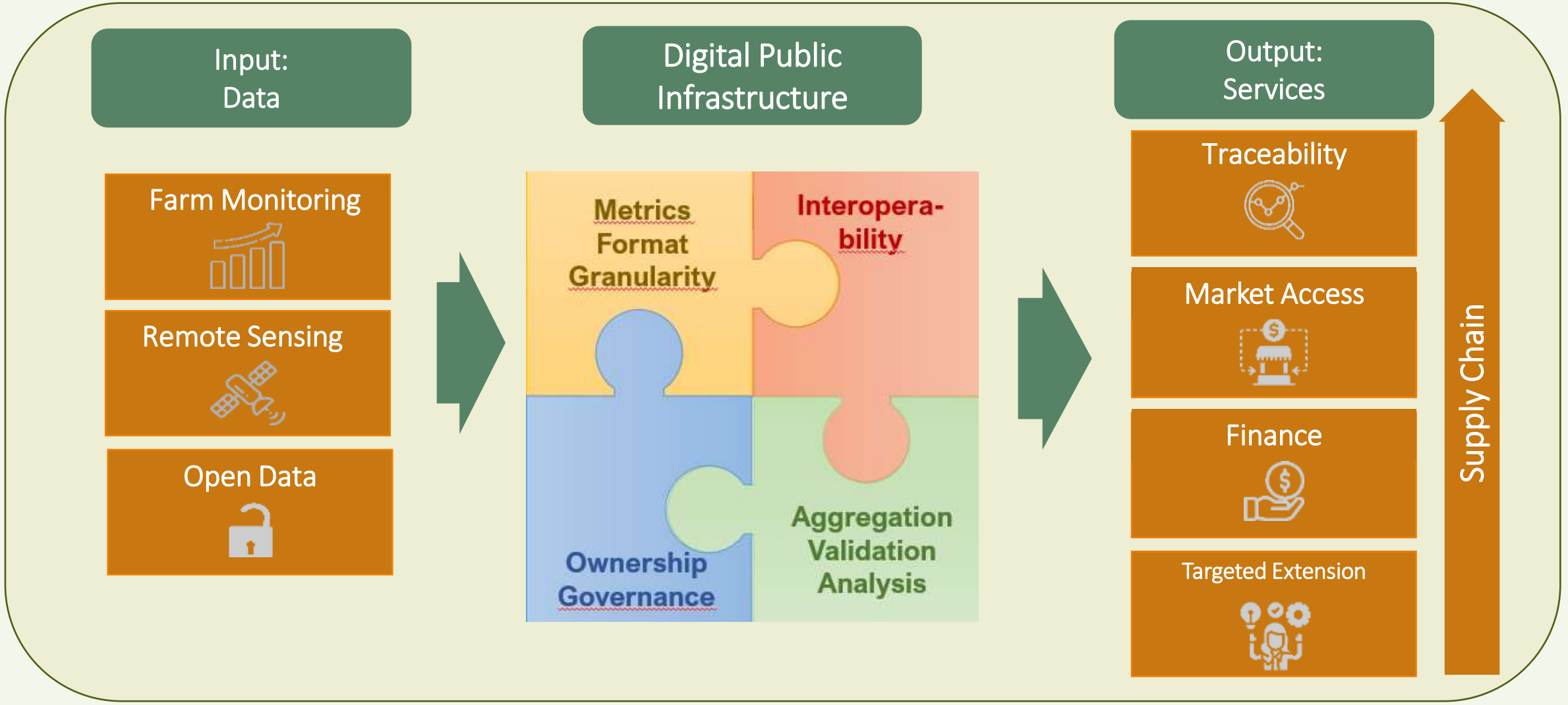
But what about….

- Cost / Reusability
- Accessibility
- Maintainability
- Interoperability / Standardization
- Trust (Neutrality, Security)
- Quality

Photo by Bruno Kelzer on Unsplash

‘Digital Backbone’ of Agricultural Supply Chains

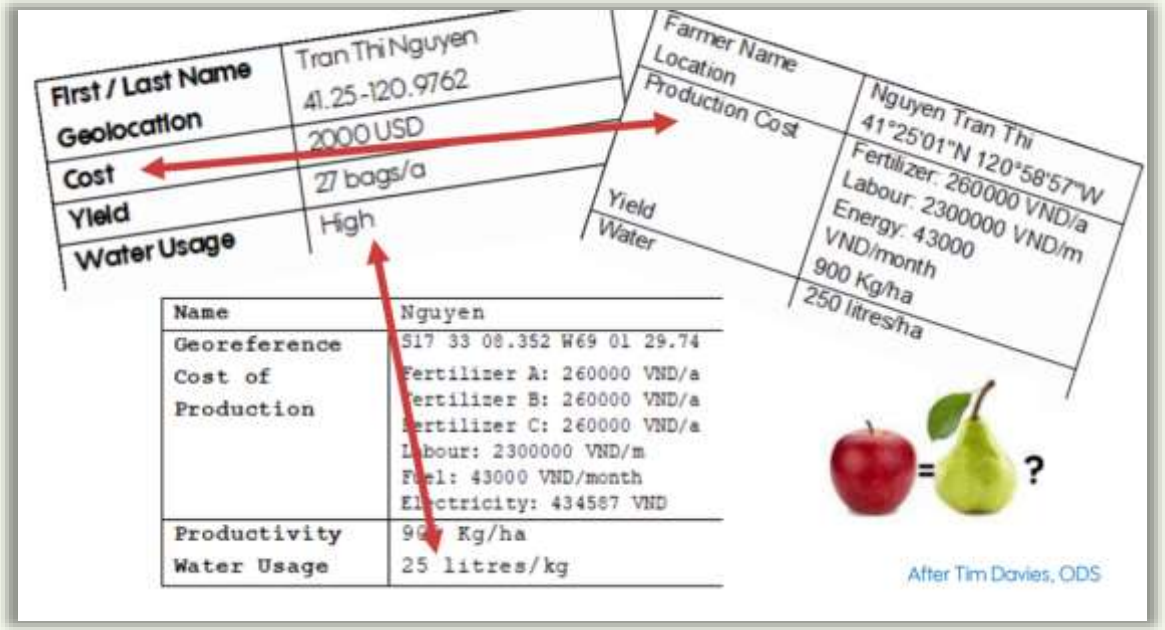
Decoupling data from apps



Interoperability

Data Exchange

Data Re-Use



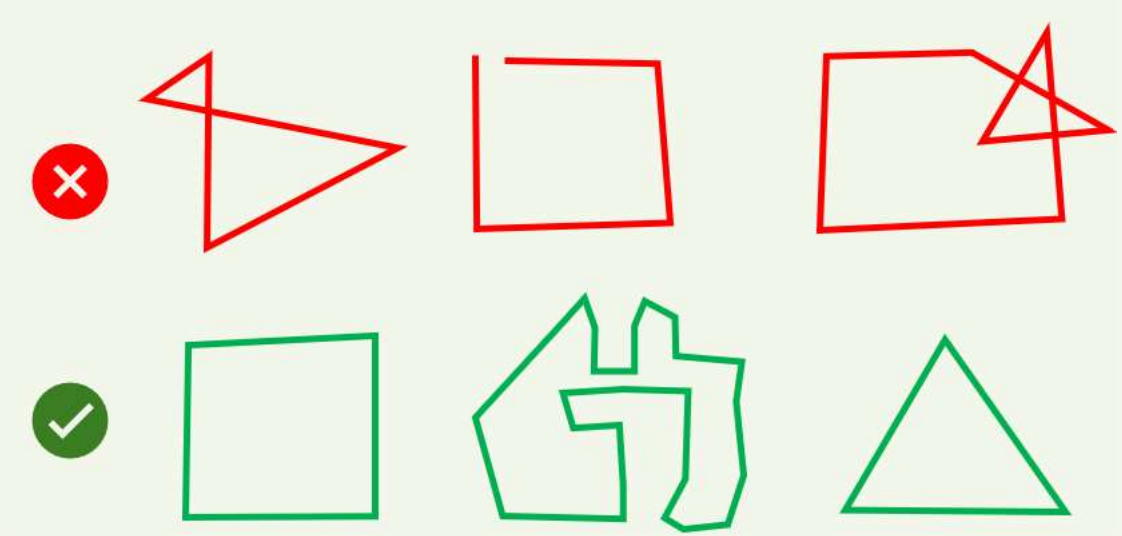
Comparability

Aggregateability

Accessibility

Data Quality

Example: Geodata for EUDR



Defining **Digital Public Infrastructure** (DPI)

A set of **technology building blocks**

powered by **interoperable open standards/specifications**

operated under **a set of enabling rules**

with **open, transparent, and participatory governance**

to **drive innovation, inclusion, and competition** *at scale*

Source: DPI Thinking Extended- CDPI (gitbook.io)

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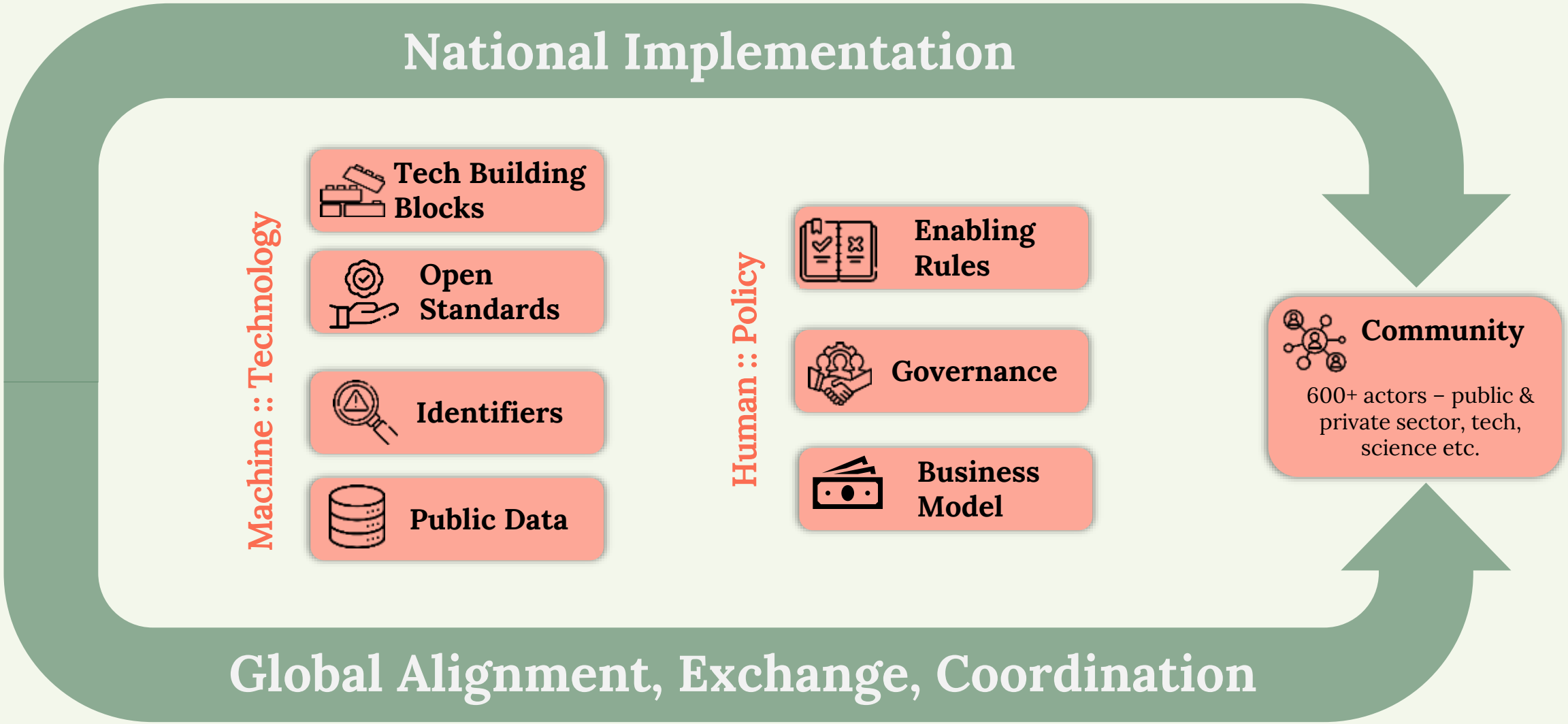
Towards DPI for Agriculture



Recent Publications

DIASCA

Tech Building Blocks (EUDR example)

Boundaries
- Field data
- Manual / AI-based
- Segmentation

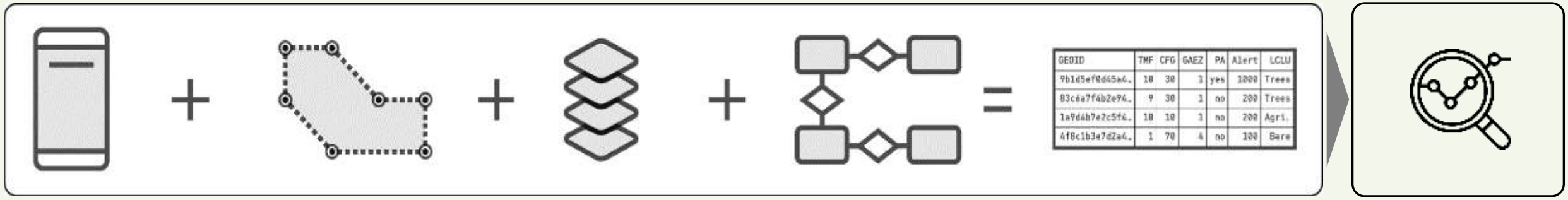
Unique Geo-IDs
- GDSP compliant
- Anonymous
- Attribute-less

Public geodata
- Land cover (change)
- Biophysical
- Land use

Public models
- AI models
- Decision trees

Compliance support
- Standardized data
- Risk assessment at plot level

Traceability
- interoperable systems



INA Sustainable Agricultural Supply Chain Initiative Trace

AgStack A Linux Foundation Project Asset Registry

Whisp

TraceFoodChain

openRAL

INA Sustainable Agricultural Supply Chain Initiative Trace

Geo-IDs: Asset Registry

http://asset-registry.agstack.org

Geoid: **ff93ad2470125dfe0f21b7b857140c94efa635c8b6f25104419e88129db9f682**

- It is a free, open source, public registry to create and maintain ubiquitous, geo-intelligent unique “public geoIDs” for field boundaries without requiring any other attribution
- geoIDs are anonymous, addressable but not discoverable

To be hosted by FAO globally, complemented by national instances

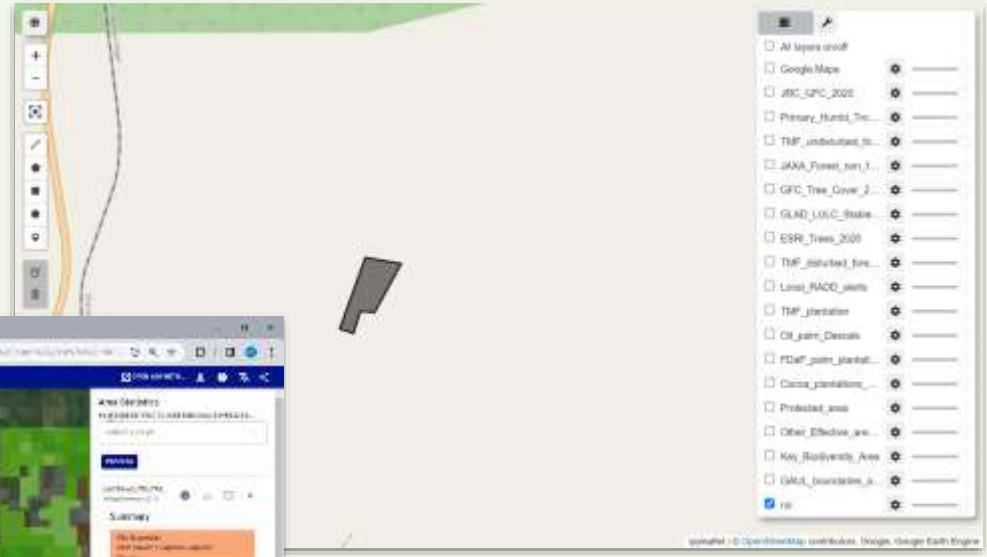
What is in that plot?

Convergence of Evidence

Whisp

Sustainable Agriculture for Forest Ecosystems

FOREST DATA Partnership



https://whisp.earthmap.org/

https://github.com/forestdatapartnership/whisp

Open Source Traceability

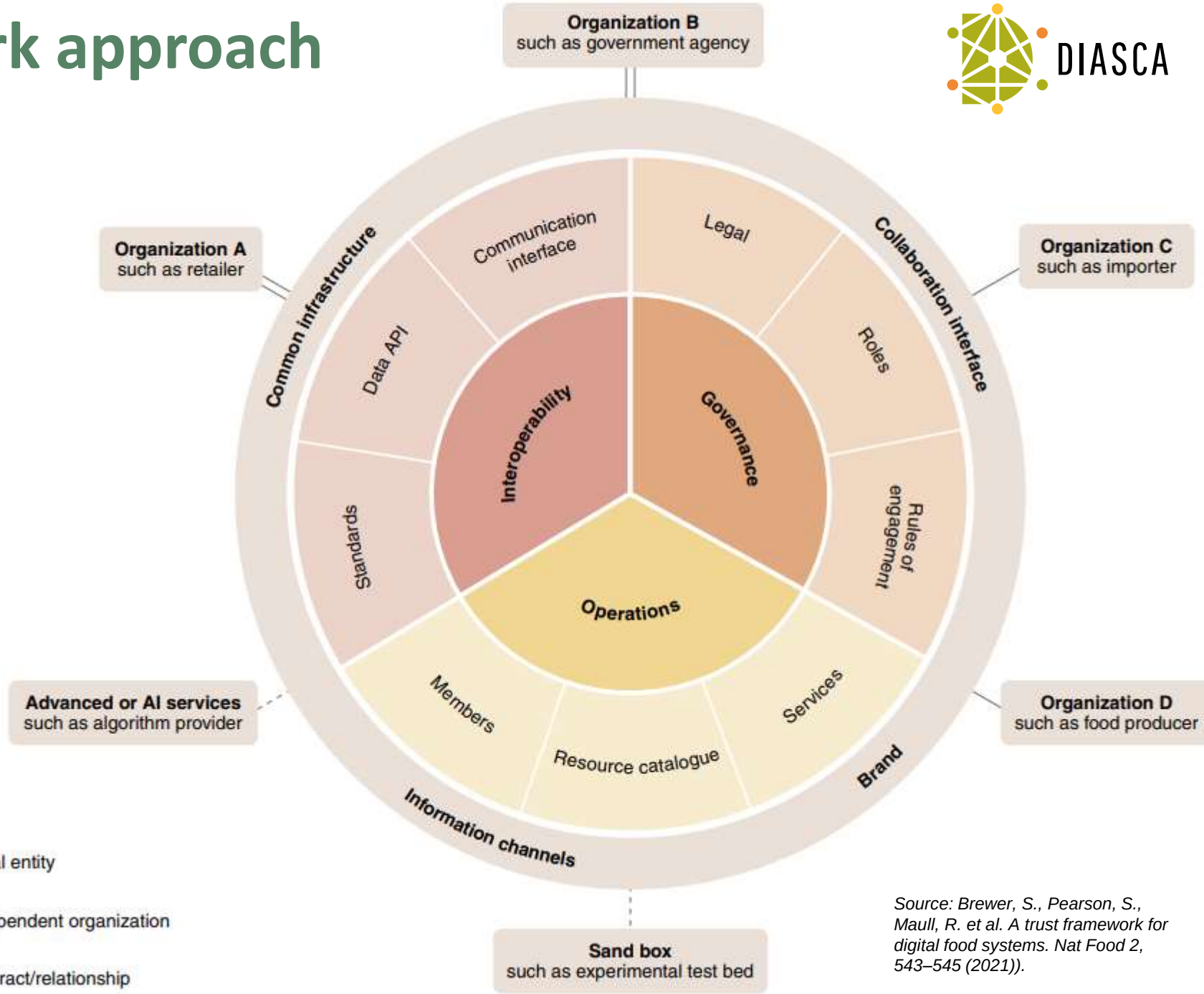
Sustainable Agricultural Supply Chain Initiative
Trace

- Free to use
- Highly adaptable & scalable
- maps all process steps and transactions, from the field to the end product
- Includes a polygon mapping app
- Integrated with WHISP and Asset Registry
- Integration in national DPIs ongoing
- in productive use in many countries and supply chains

https://inatrace.org/
https://github.com/inatrace

Trust Framework approach

- Shared governance and services to advance common interests
- DPI Prototype implementation



Source: Brewer, S., Pearson, S., Maull, R. et al. A trust framework for digital food systems. Nat Food 2, 543–545 (2021)).

Working Groups

DIASCA

Global exchange on country-level activities, resuming from 2025

Forest Monitoring

- EUDR DPI Prototype Exchange
- Data standard to facilitate efficient forest monitoring data exchange

Living Income

- Income Standardization User Guide & Interoperability Model.
- Groundwork for CSDDD

COSA Committee On Sustainability Assessment

Traceability & Governance

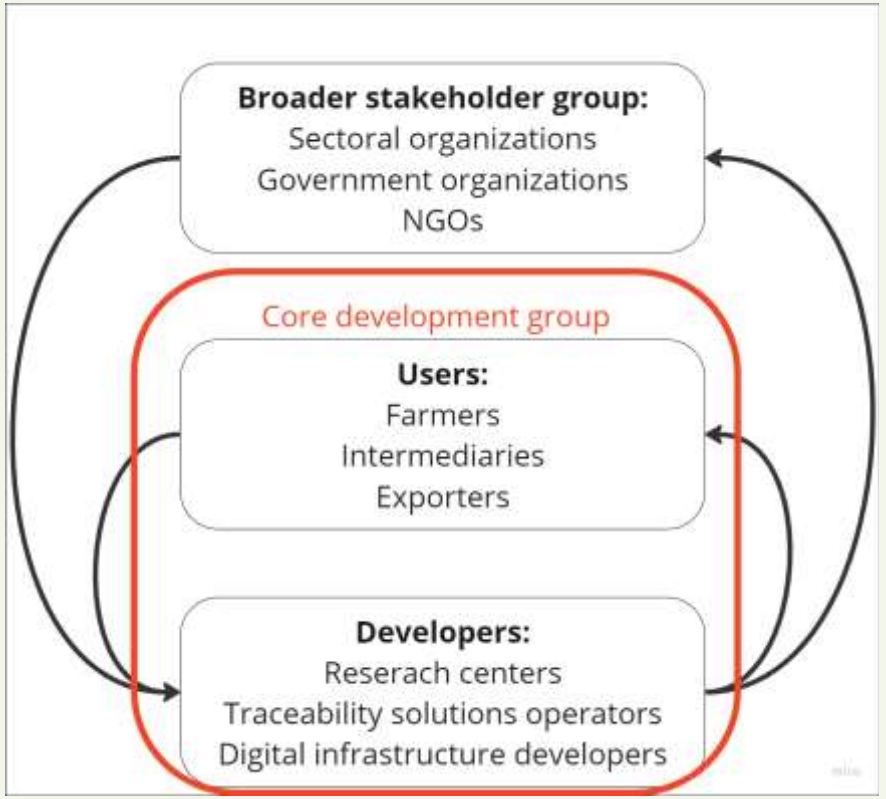
- Identify and validate key replicable standards, digital solutions, and critical capabilities
- Supply chain interoperability & collaborative governance

CGIAR

→ Register at diasca.org

In-Country Collaboration & Alignment

- Public Private Engagement
- Trust Framework
- Joint decleration on DPI
- Prototype implementation (geolocation asset registry, WHISP, INATrace etc.)



In-Country Collaboration & Alignment

FOREST DATA Partnership

- Public Private Engagement, run by WRI
- National pilot on DPI prototype implementation (geolocation asset registry, WHISP etc.) and data aggregation, harmonization, connectivity
- Develop and build consensus on data standards and review methods
- Alignment with National Dashboard

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http://diasca.org

SASI – Sustainable Agricultural Supply Chains Initiative by

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

On behalf of

Federal Ministry for Economic Cooperation and Development

Credits

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