



Ministry of Economic Affairs

High Performance Agriculture

Agriculture, Food Production &
Information

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Contents

- Stakeholders
- Issues
- Dutch approach
- Conclusions



High Performance Agriculture

- High Performance Agriculture
 - Information feed back and feed forward
- Learning to improve
 - increased volume, higher quality, less impact
- Inform chain
 - transparency, reliable, predictable
- Monitoring
- Verification



Sustainable Development Goals

9 out of 17

1, 2, 8, 9, 12, 13, 14, 15, 17

High Performance Agriculture is in the heart of the UN



Stakeholders

- Governments
- Agriculture Business
- Food Business
- Consumers
- Educational Institutes
- IM challenges



Stakeholder Government

- Protection
- Create, maintain playing field for (international) business
- Global trade
- Fraude
- Food Security
- Soft Trade Values
- Reliable (Predictable & In control)



Government, food safety

- International and national regulations
IPPC, OIE, Codex, HACCP, EU General Food Law
- Drugs, chemicals, residue levels
- Registration and licences for producers
- Regulations for storage, transport and processing



Stakeholder Agriculture Business

- Availability
 - fresh water
 - soil
- Increased Quality
- Increased Volume
- Increased Requirements
- Private certification
- Economics of Scale
- Negotiation position



Primary production information

- Which crop and which produce
- The resources used
 - Field, soil and water,
 - Labour
 - Inputs (seed, fertilisers, chemicals, water, energy)
 - Treatments , activities (why, what, when, where and who)
 - Local transport and Storage
- Meet the requirements defined by the buyer
- Farmer keeps record of everything
- Farmer provides all crop and produce information
- Farmer needs certification of farm and produce



Stakeholder Food Business

- Food Safety
- Public health, labeling of ingr. and allergens
- Private certification
- Food is very complicated
- Production chain is very complex
- Ingredients from everywhere
- Reduce food losses
- Reduce costs & maximalize benefits



Food information

- Who produced
- Where, When, How
- What is actually the *product*
- Quality?
- Proven quality?
- Legal?



Information

Food chain is very complex

Series of M:N relation of

- Products
- Parties
- Locations
- Processes

Pizza

Flour
Yeast
Salt
Water
Vegetables,
tomato, onion, pepper, garlic
Fish, Sausage, Cheese
Oil, Vinegar

Fresh, Froozen
Cooked , Uncooked
Sliced, Packed, ...





Product processing

Packing, trade and retail

- A node in the foodchain
 - Control the input (product information)
 - Control the proces
 - Quality assurance
-
- A licence to produce
 - Product certification
-
- A product can not go without the information



private business food safety

- Comply to regulations
- Comply to market requirements
- Branding and Marketing
- Reduce waste and recalls
- Risk management
 - Proces control
 - Information about inputs
 - Assessments, accreditation suppliers



Stakeholder Consumer

- more consumers
 - yopi
- demanding
 - experience, high quality
- critical
 - Ingredients, allergens, additives, conditioner
 - Organic
 - Health



Agriculture production and food safety

- Resources
 - Expertise
 - Risk management
- Ignorance / nonchalance
 - Incidents / external events
- Misbehaviour
 - Criminal minds



Food incidents

- Ehec, E.Coli, Salmonella
- Dioxine in animal feed
- Mineral oil in chocolate
- Horsemeat, meat from Brazil
- Spirits (fake vodka, methanol)
- Tjernobil, Fukushima
Floods



Information position

- The product information is virtually attached to the instance of the product.
- Requirement
 - Identification of
 - > Product instance or batch
 - > Production location
 - > Party
 - Proces / production information
 - Product information
 - Party information



Information exchange

- Standards messages
 - eCROP, eDAPLOS, TT product, EPCIS, eCERT
- Standard coding, code lists
 - GPC, EPPO, GLN, OIE, codex alimentarius
- Unique identification
 - GLN, animal tag, batch-id, container, storage, processing plant
 - Registration of events



Information exchange

- Info for certification
 - certification covers validation of product specification and qualification
- Risk management and proces management
- Incidents measures
- Track and trace issues
- Base for trust, proven data and answers about product.



Benefits

- Reduction of administrative burden
- Reduction of transaction cost
- Re-use of data
- Higher quality

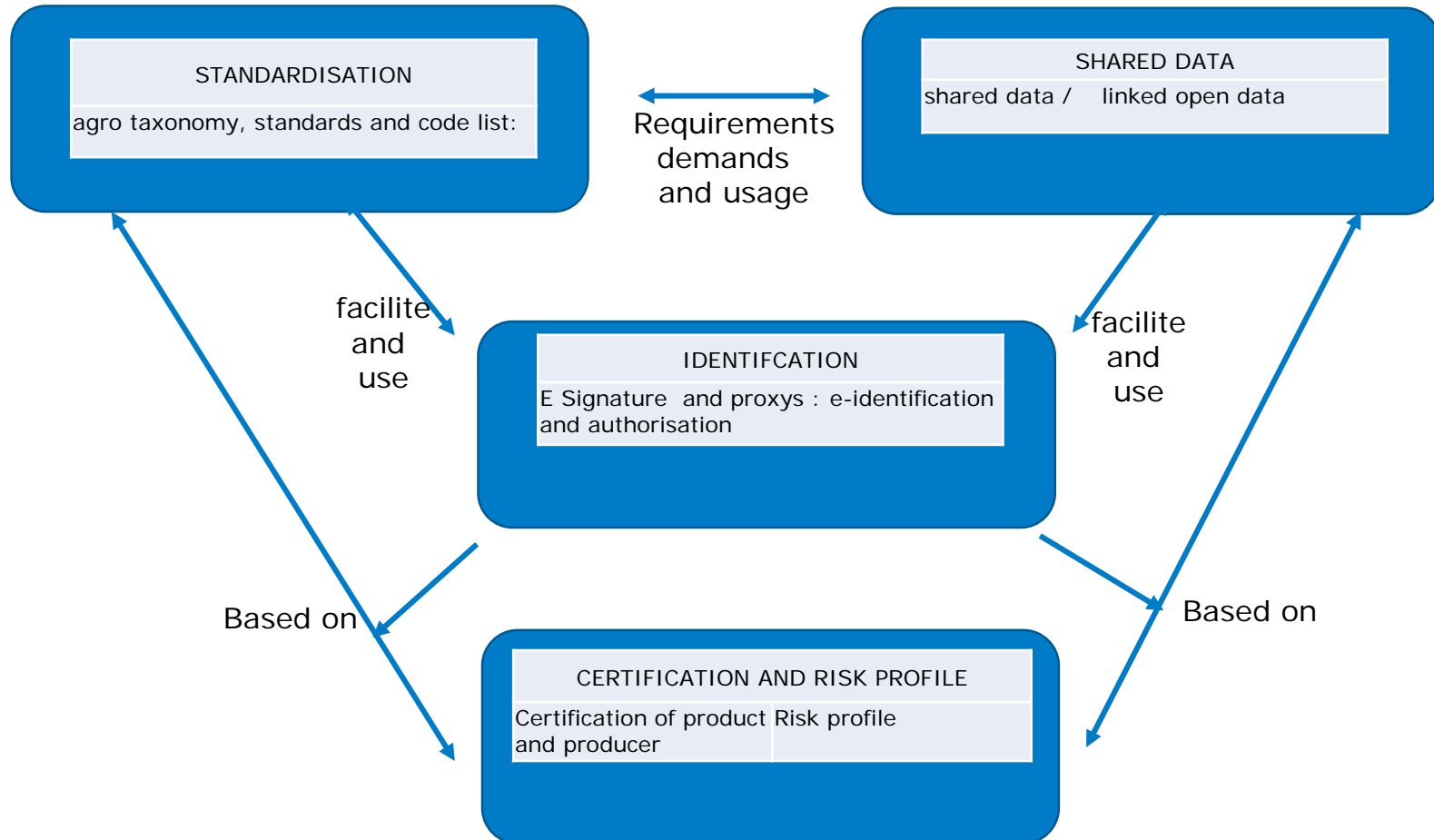


Policy in the Netherlands

- **Standardisation**
taxonomy, syntax, protocols,
code lists, identifiers
- **e-Identification and Authorisation**
e-signature, proxys, data ownership, data usage
- **Shared data and linked data**
data market, data stock
- **Certification of product and producer
and risk profile**
certified parties, products

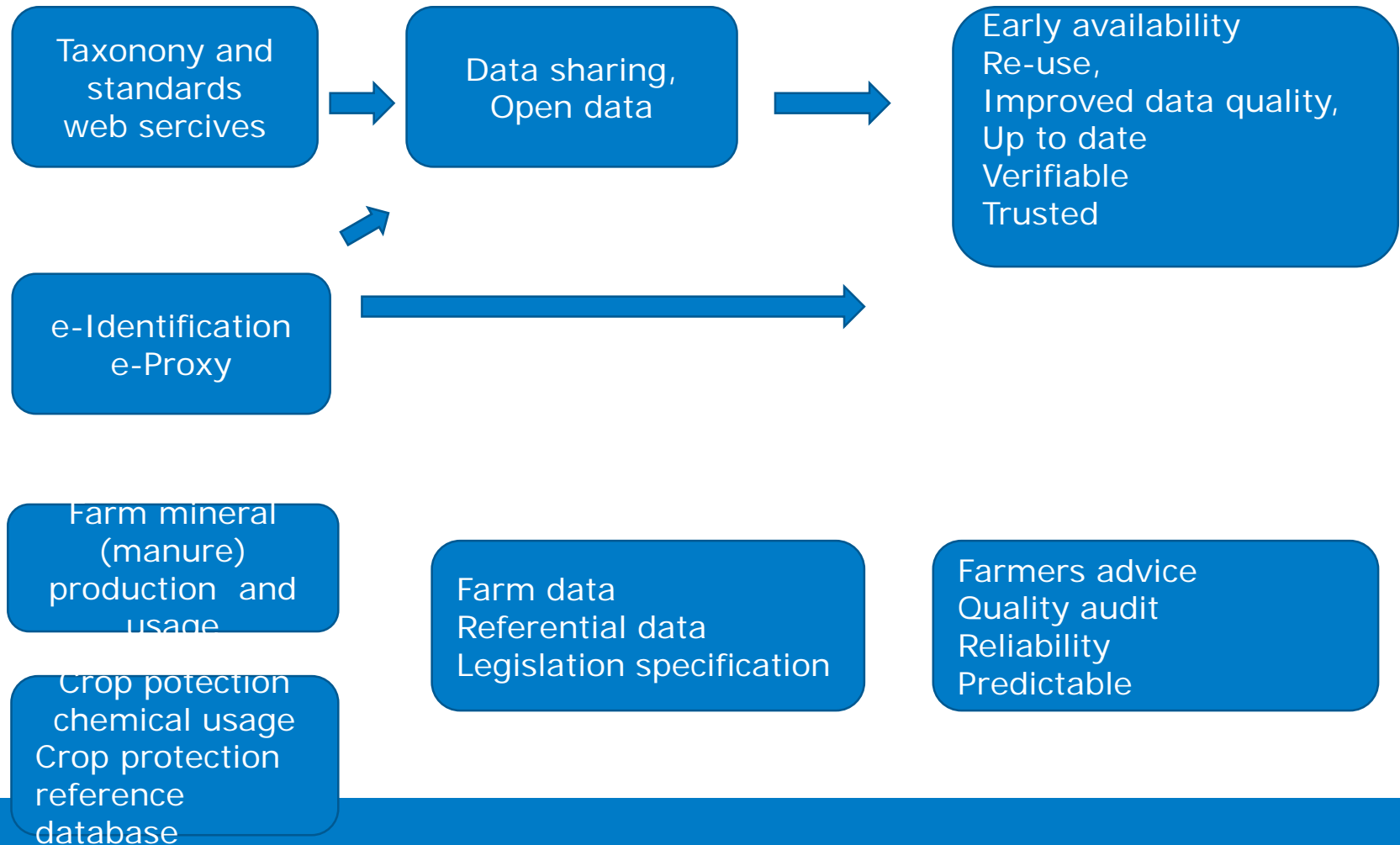


The themes related



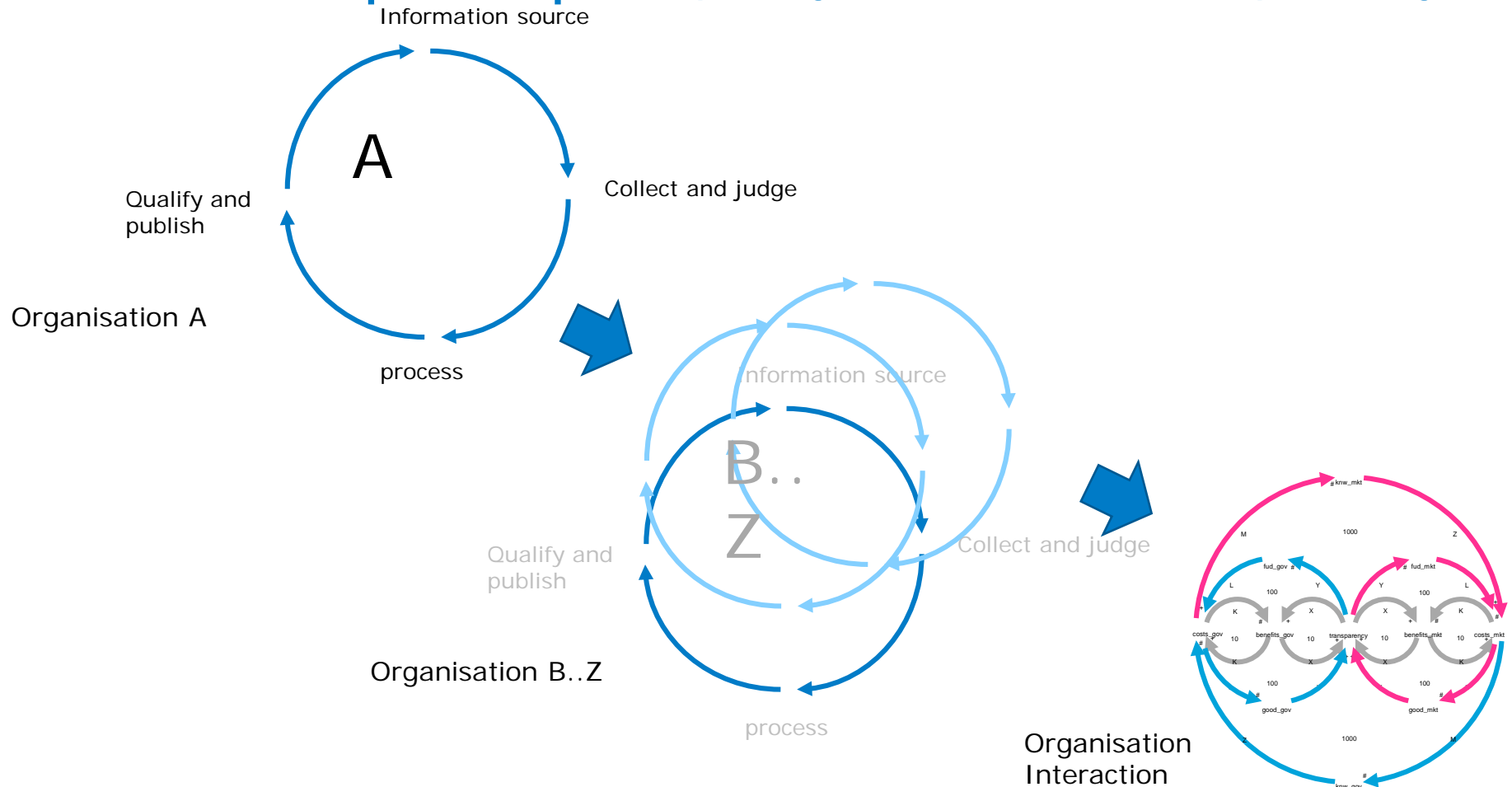


Scenarios



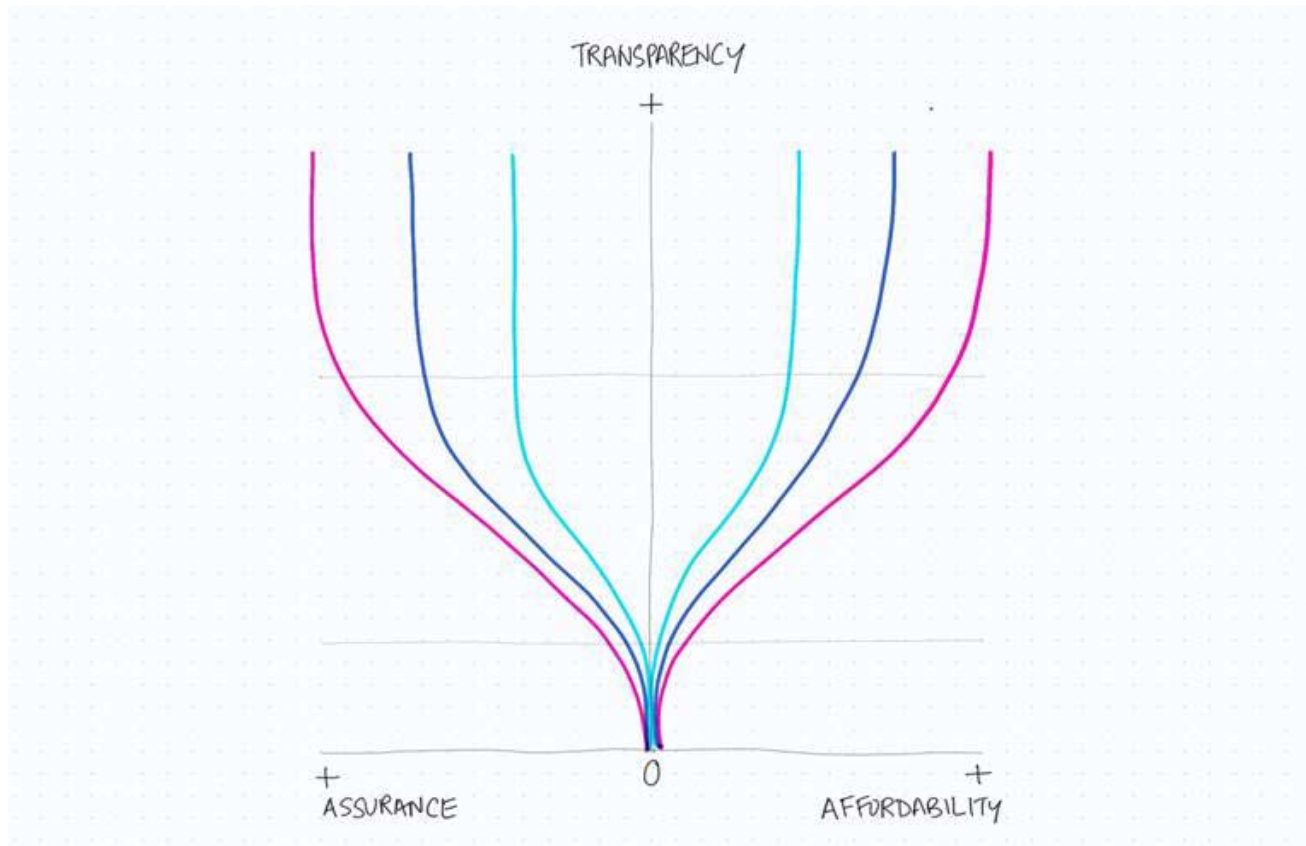


Scenario principle quality, assurance transparency





assurance, affordability and transparency





Conclusion

- Food information relies on transparency
- Transparency supports secure product quality
- Standards and shared data support transparency
- Product information is required for market access and food safety
- Farmer, processor, trader and consumer benefit from secure and transparent product information for market access, to sell or buy safe food
- ITC sustainable network and UNCEFACT standards contribute in these, at local market or global market, for farmer, SME, global player and authority.