TRADE FACILITATION IMPLEMENTATION

UN/CEFACT ASSETS AND GUIDELINE FOR AGRICULTURE

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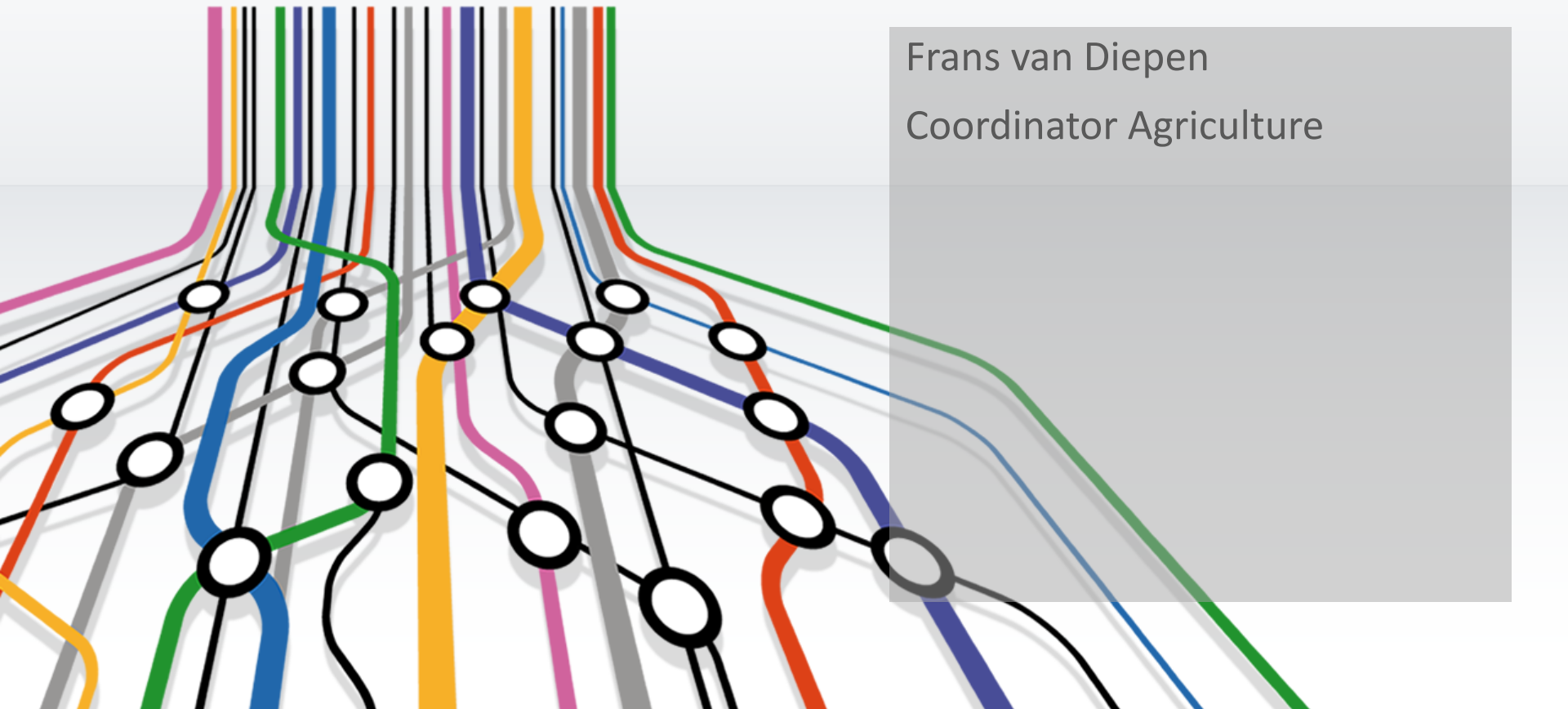
Content

- UN/CEFACT introduction
- The agro food production and the supply chain
- The UNCEFACT standards and recommendations in agriculture

- Developments

What is UN/CEFACT

- UN/CEFACT = United Nations Centre for Trade Facilitation and Electronic Business
- Objectives
  - Simple, transparent and effective processes for global business
  - Efficient and automated exchange of information
- Outputs
  - Global Trade Facilitation and Electronic Business Recommendations and Standards
- Means
  - Public Private Sector Partnership – over 300 experts from government and business
  - Meet virtually every week plus two Forums per year

UN/CEFACT Mission

- UN/CEFACT's mission is to improve the ability of business, trade and administrative organizations, from developed, developing and transitional economies, to exchange products and relevant services effectively.

- Its principal focus is on facilitating national and international transactions, through the simplification and harmonization of processes, procedures and information flows, and so contribute to the growth of global commerce

UN/CEFACT Objective and product

- Facilitate e-commerce and e-trade
- In cooperation with other bodies such as WCO, FAO, IMO , CITES, OASIS, W3C, GS1

- Recommendations
- Semantics (Core Component Library)
- Syntax (UN/EDIFACT and XML schemas)

Developments in agro food

- Sustainability
- Food safety
- Market access
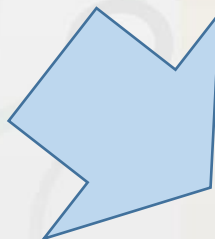
- Traceability
- Transparency

Traceability and Transparency

- Party
  - Identification
  - Information

- Product
  - Identification
  - Description
  - Process
  - Location
  - Date/time

- Who
- What
- Why
- Where
- When

Developments in the agri food domain

- Standard messages :
  - e-CERT phyto and veterinarian sanitary certificate   G2G
  - e-Daplos, e-CROP, agro product information message   B2B
  - Animal identification and e-Animal passport   G2G
  - Dispatch advice (batch number, identification)   B2B
  - e-LAB laboratory observations report   B2B, B2G, G2G
  - FLUX Fishing monitoring and reporting   G2G
  - Track and Trace Animals (and Plant and Product)   B2B, B2G, G2G
  - RASFF rapid alerts for food and feed   G2G (B2G and B2B for the next version)

- Coding
  - Product (EPC, Codex Alimentarius)
  - Location and Party identification (GLN, Blue number,)

- Certification
  - Authority, NGO, Private business   (GlobalGap, Organic , Sustainable, CITES, Standard Maps ITC …)

- Integration of domains
  - e-Invoicing (in fish, cutflowers, fresh fruits and vegetables)
  - Transport and location (GN codes – GS1)
  - CITES e-permits
  - WCO datamodel III and IV
  - Production, Trade and Retail
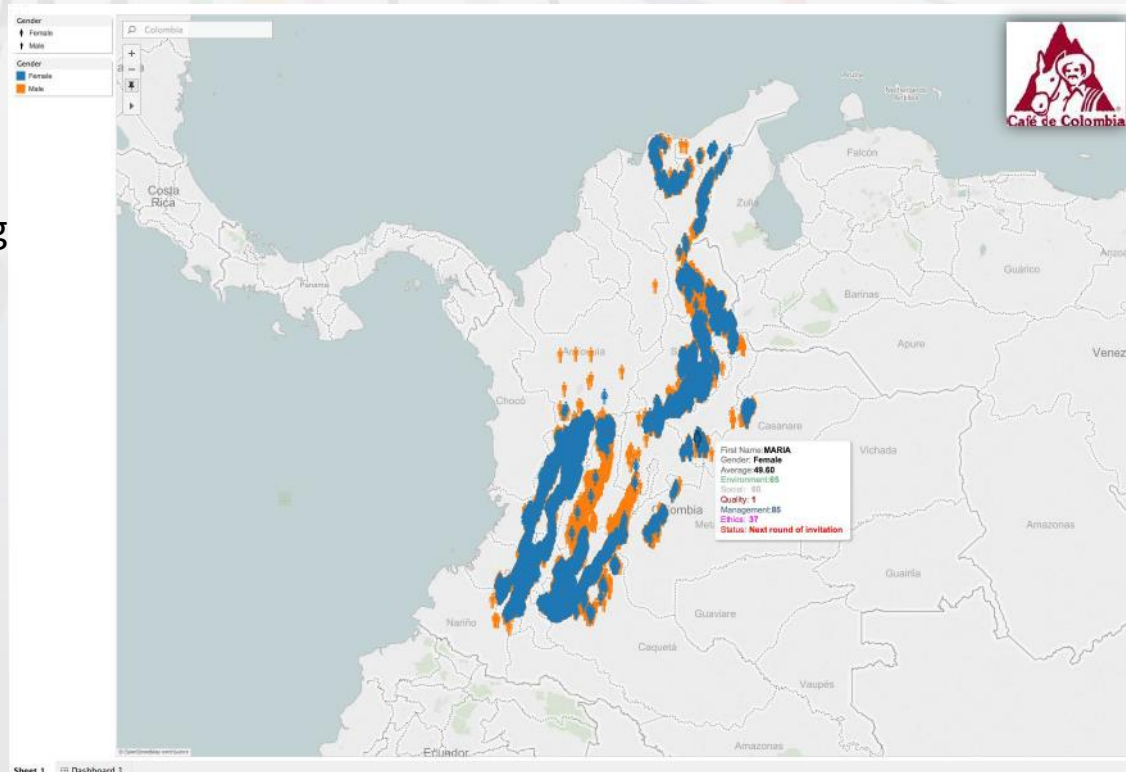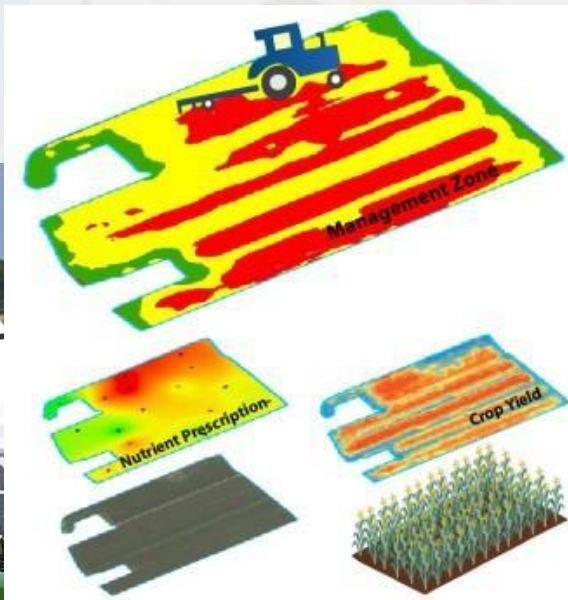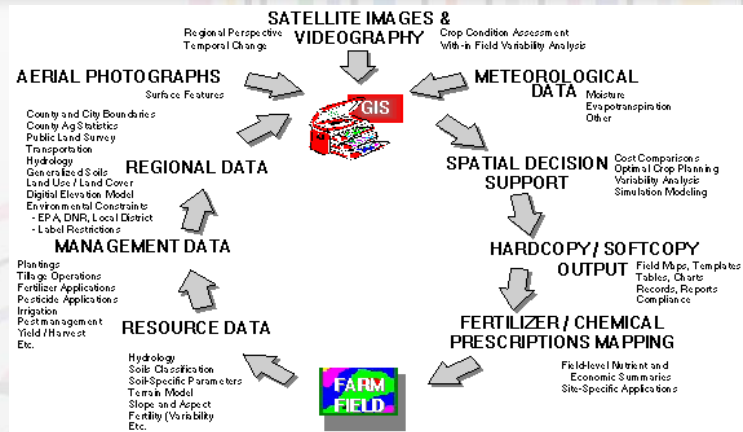
farmer and farm identification
Sustainable Network and GLN

(Point) Identifier + coordinate

- Geographical features
  farm, field, farm yard, building

- Agriculture organisation
  farmer, cooperative

SATELLITE IMAGES &
VIDEOGRAPHY

Regional Perspective
Temporal Change

Crop Condition Assessment
With-in Field Variability Analysis

AERIAL PHOTOGRAPHS
Surface Features

METEOROLOGICAL
DATA
Moisture
Evapotranspiration
Other

County and City Boundaries
County Ag Statistics
Public Land Survey
Transportation
Hydrology
Generalized Soils
Land Use / Land Cover
Digitial Elevation Model
Environmental Constraints
- EPA, DNR, Local District
- Label Restrictions

REGIONAL DATA

GIS

SPATIAL DECISION
SUPPORT
Cost Comparisons
Optimal Crop Planning
Variability Analysis
Simulation Modeling

MANAGEMENT DATA

HARDCOPY / SOFTCOPY
OUTPUT
Field Maps, Templates
Tables, Charts
Records, Reports
Compliance

Plantings
Tillage Operations
Fertilizer Applications
Pesticide Applications
Irrigation
Pest management
Yield / Harvest
Etc.

RESOURCE DATA

FERTILIZER / CHEMICAL
PRESCRIPTIONS MAPPING

Hydrology
Soils Classification
Soil-Specific Parameters
Terrain Model
Slope and Aspect
Fertility (Variability)
Etc.

FARM
FIELD

Field-level Nutrient and
Economic Summaries
Site-Specific Applications

Management Zone

Nutrient Prescription-

Crop Yield

Example for a field   B2B and B2G

Identification

Accuracy

The agri food domain

The e-CROP domain

UNECE
United Nations Economic for Europe

Product Flow

Exchange of Information

PRODUCT FLOW

ORDER FLOW

Tuinbouw
Greenport Digital Community
Digitaal
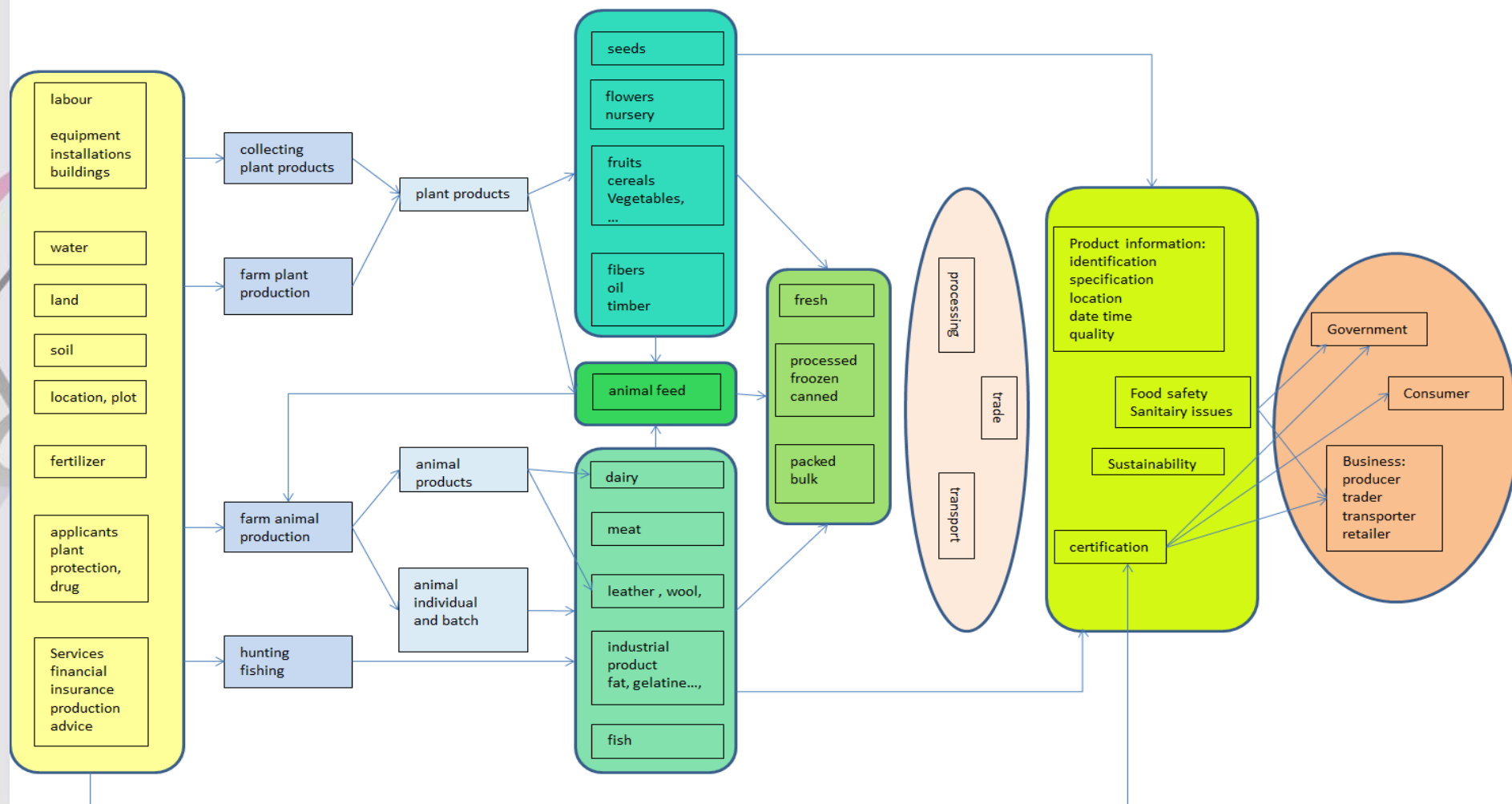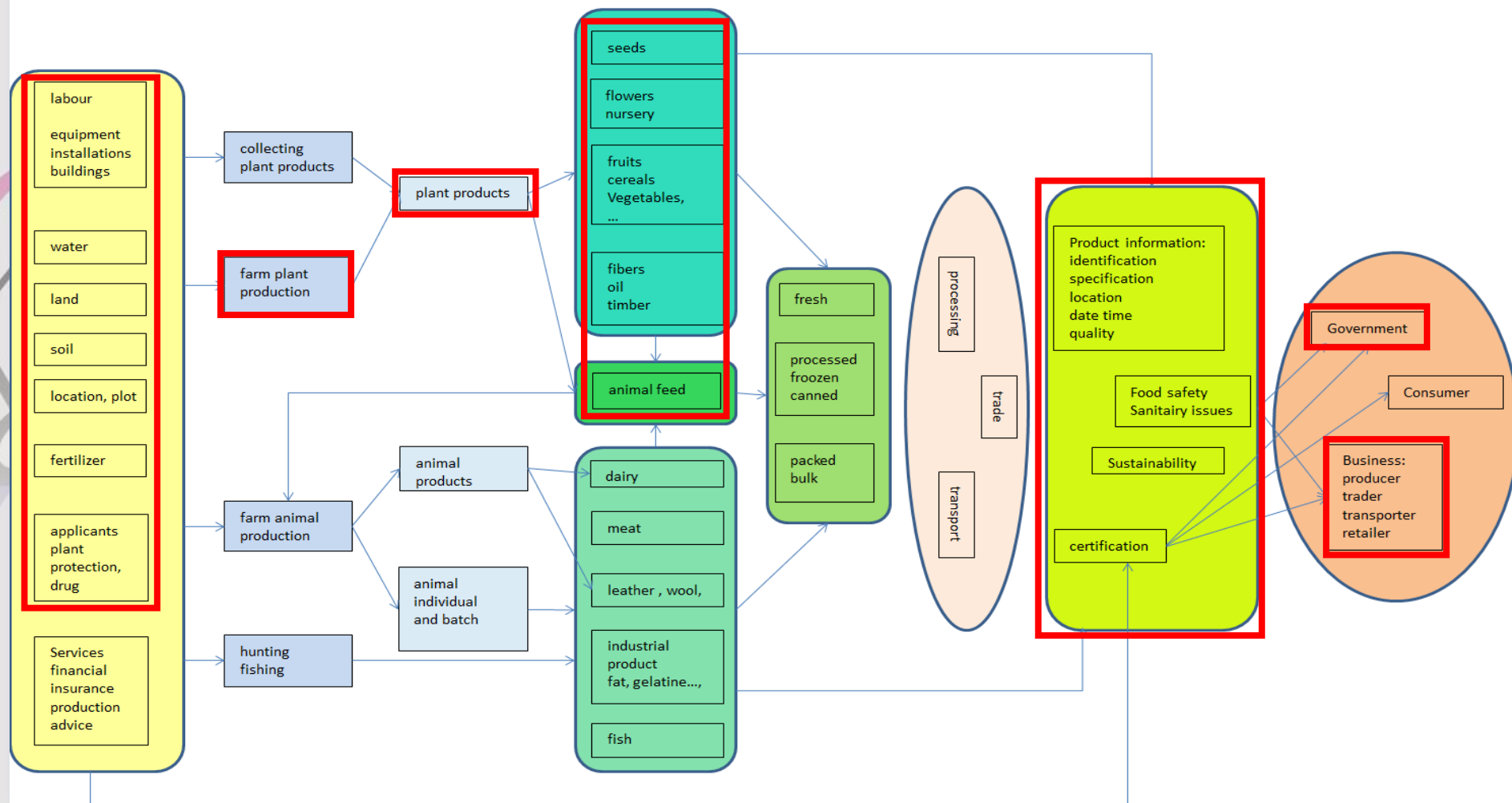
GROWER

PRODUCE ORGANISATION/ AUCTION

WHOLESALER/ EXPORTER

WHOLESALER/ IMPORTER

RETAILER

**OFFER
ORDER
ORDERRESPONSE
DELIVERY
INVOICE**

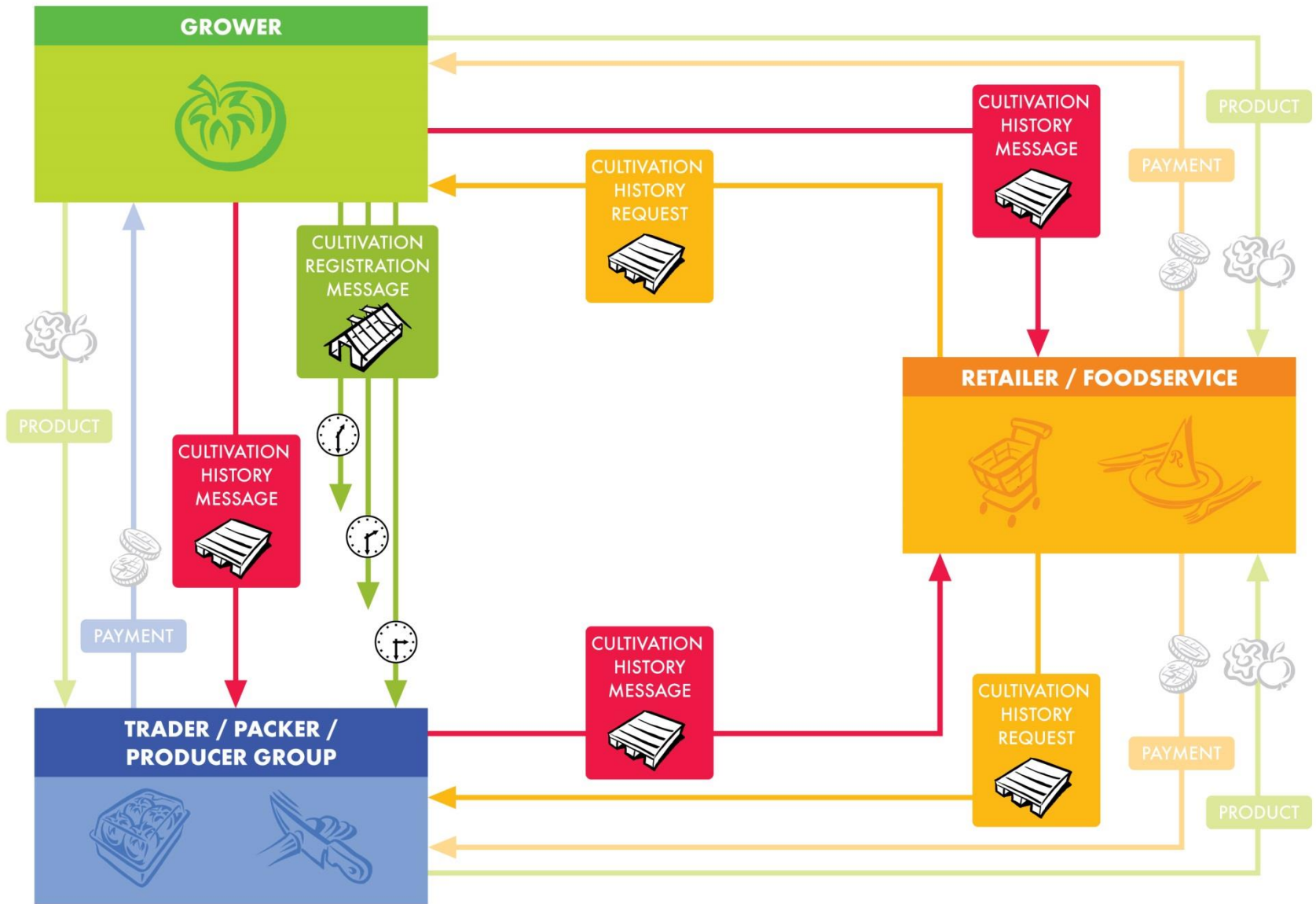# CTM - MESSAGE FLOW SCHEME

GROWER

CULTIVATION REGISTRATION MESSAGE

CULTIVATION HISTORY MESSAGE

CULTIVATION HISTORY REQUEST

CULTIVATION HISTORY MESSAGE

PRODUCT

PAYMENT

PRODUCT

PAYMENT

RETAILER / FOODSERVICE

CULTIVATION HISTORY MESSAGE

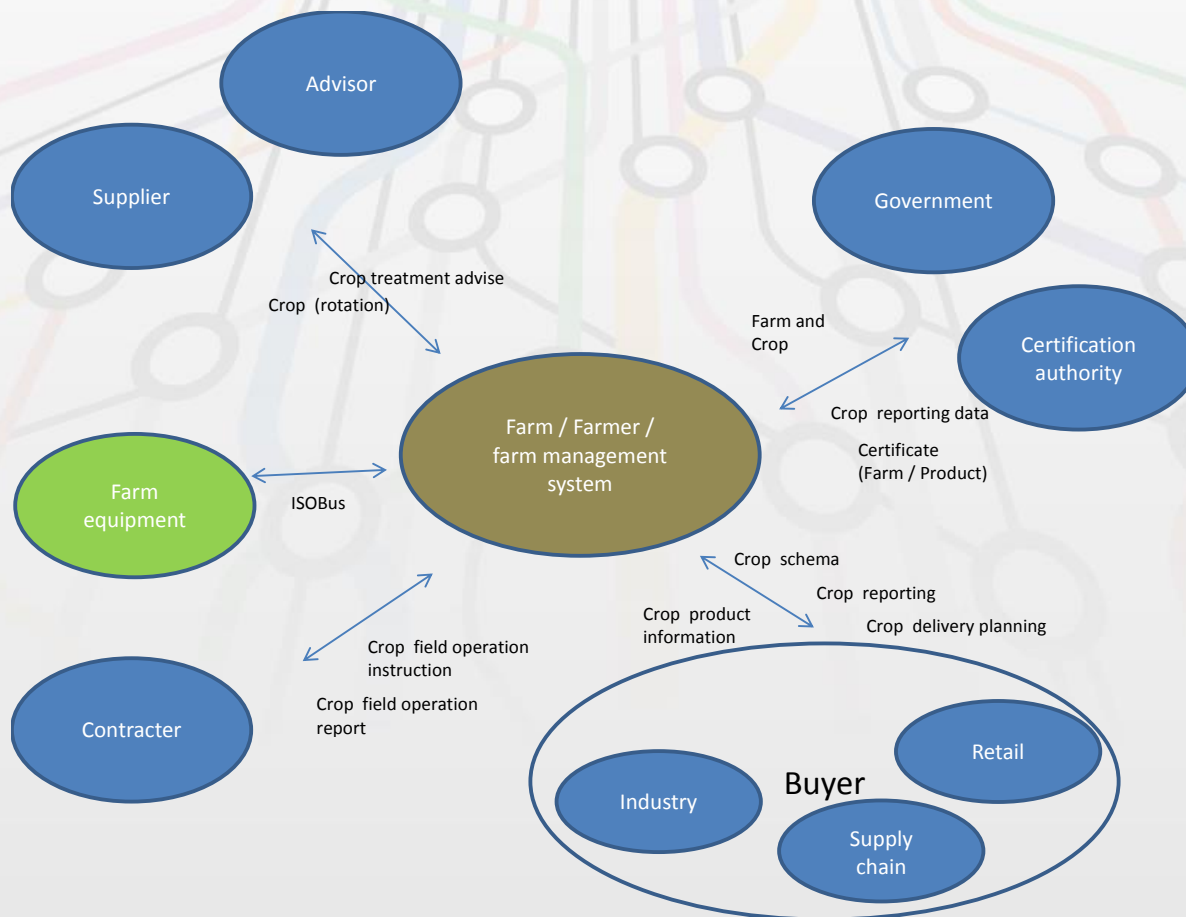CULTIVATION HISTORY REQUEST

PAYMENT

PRODUCT

TRADER / PACKER / PRODUCER GROUP

Location / Crop - Related info - Pre-harvest

Party / product - Related info - Post-harvest

E-CROP scope

e Crop → food supply chain

Parties:
- grower,
- advisor, contractor, supplier
- trader, processor, retailer
- consumer

Use cases:
- advising
- farm operations:
  - planning and instruction
  - operation
  - monitoring
- product information
- certification
- regulations

e-CROP

Use cases

- Advising

- farm operations:
  planning, instruction,
  operation and monitoring

- product information

- certification

- regulations

Messages

- Advice support

- Cropping scheme

- Farm operations

- Crop report

Content

- Crop specifications

  Start date, harvest date,
  variety, production location

- Data about treatments

  Fertilizers
  Pesticides
  Use of energy and water

- Data about labor

- Certificates (Global GAP, SPS E-Cert, …)

E-LAB: 3 messages

- Request for laboratory observations
- Report laboratoy observations
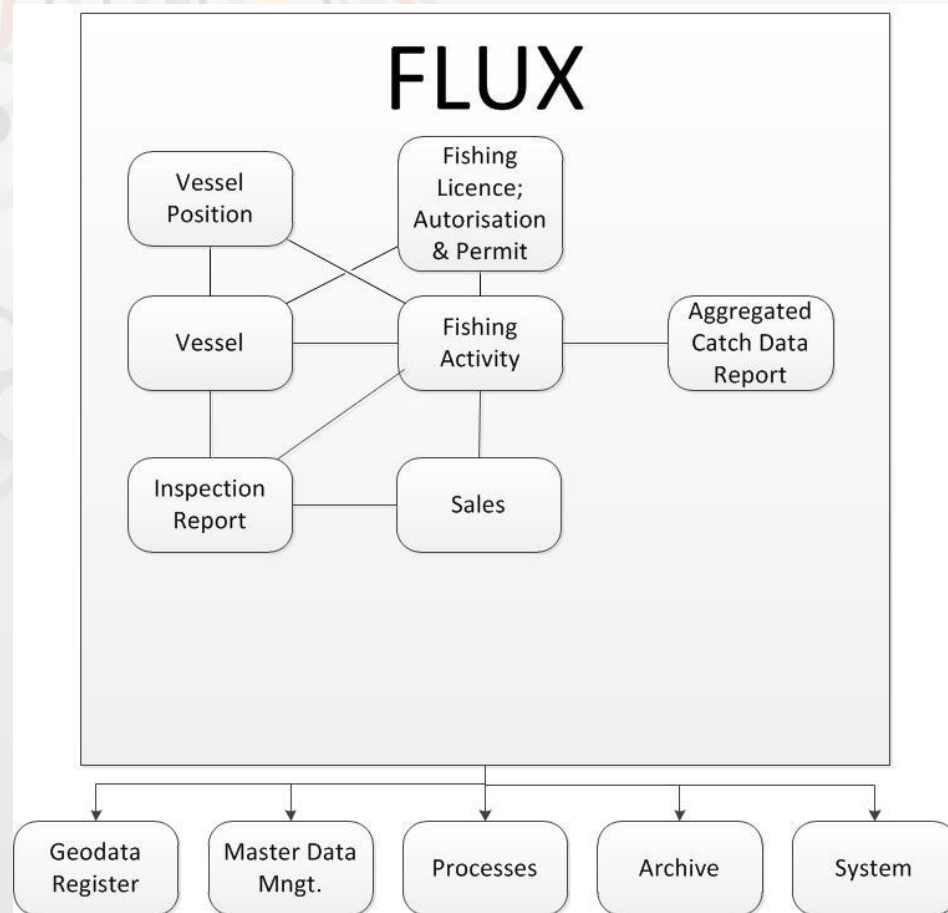- Acknowledge emssage

Practised for

- Residues on fruit and vegetables
- Mineral (fertiliser) management
- Soil sample observation results
- Dairy farming
- Animal health, animal products
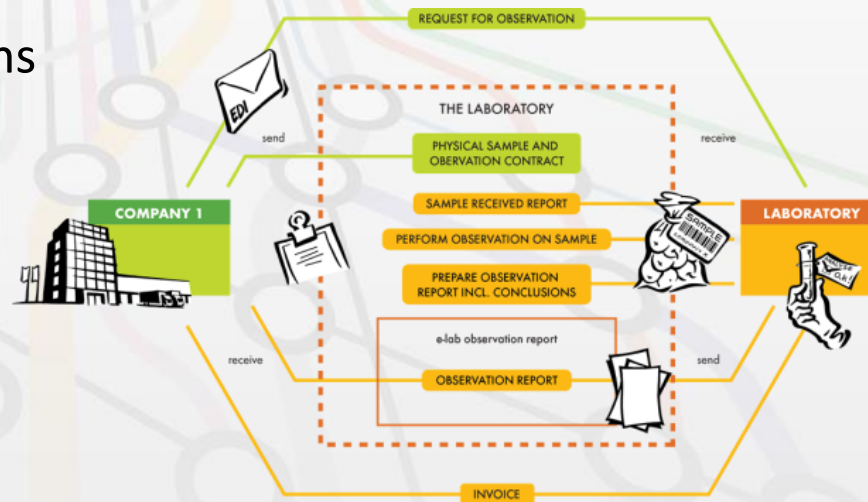
FLUX (Fishing Language universal Exchange)

Data requests from:

- Coastal states
- Flag States

- (Regional) Fisheries management organisations

- NGO
- FAO
- Scientific bodies

Track and Trace

Live animal, Fish, Animal product
Plant and Plant product

- Event driven

  Event: modification of location, product, proces
                     transport or party

- Recording of events

- Retrieving information about events.
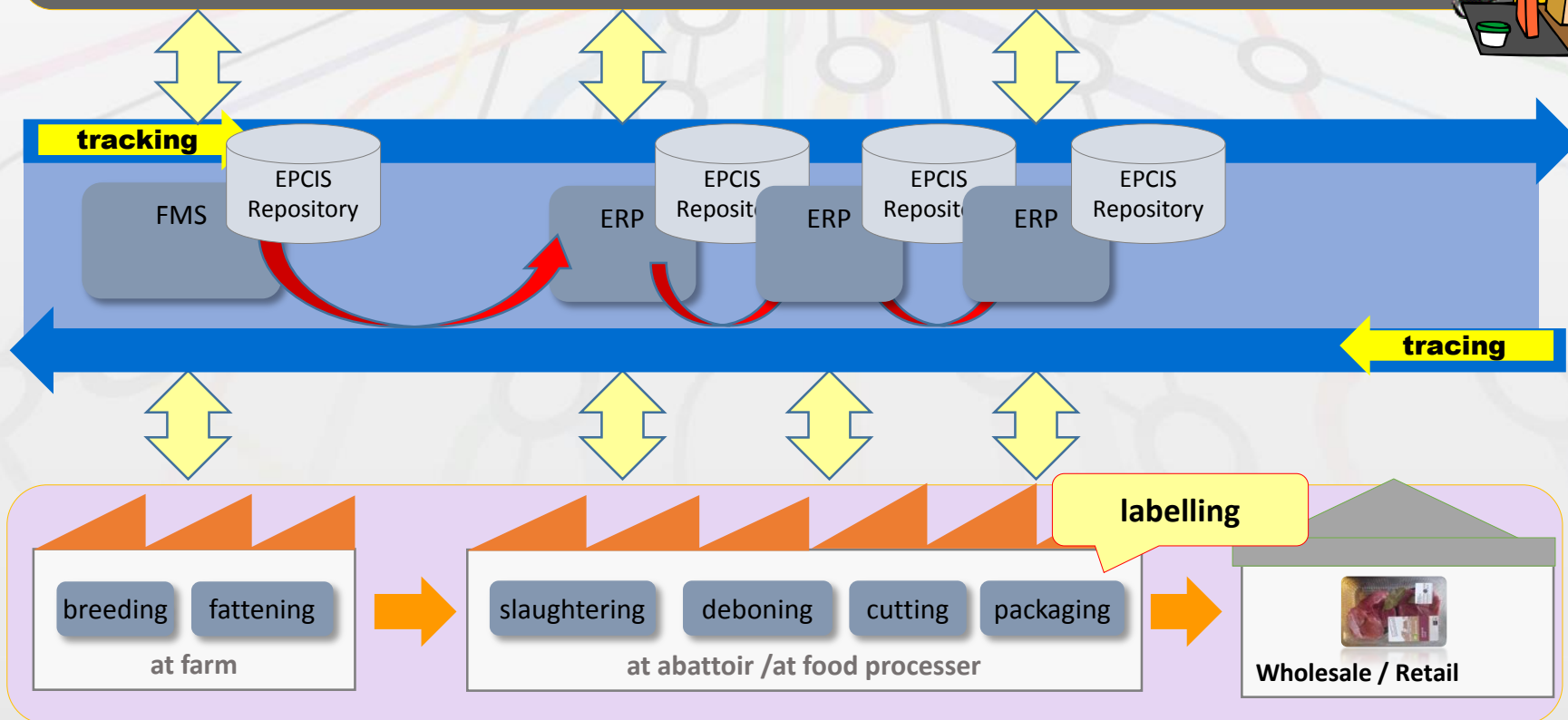

- Based on

    - Who, What, Why, Where, When
    - generic level ISO / IEC 19987 (EPCIS)
    - detailed level for animal, plant and product details

Track and Trace processes

- Event declaration

- Retrieve event inforamtion

UNECE
United Nations Economic for Europe

Services: discovery / search / smartphone apps

tracking

| FMS | EPCIS Repository | | ERP | EPCIS Repository | ERP | EPCIS Repository | ERP | EPCIS Repository |

tracing

labelling

| breeding | fattening |
at farm

| slaughtering | deboning | cutting | packaging |
at abattoir /at food processer

Wholesale / Retail

Source Angela Schillings-Schmitz   GS1 Germany GmbH
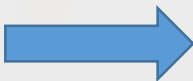
e-CERT

Electronic certificates

- SPS certificate
  animal, animal product and plant product
  sanitairy certificate
  G2G import - export
  memberstate authority and EU TRACES system

- Other certificates (CITES, private standards)

RASFF
Rapid Alert System for Food and Feed Safety

- System: composed of network (people) and IS (IT Tool)
- Participants
  - Food & Feed authorities
  - Central Authorities
- Exchange on
  - Incidents and cases
  - Controls
  - Measures taken

  →

  - Notification
  - Assessment
  - Transmission

The RASFF system implemented in the EU
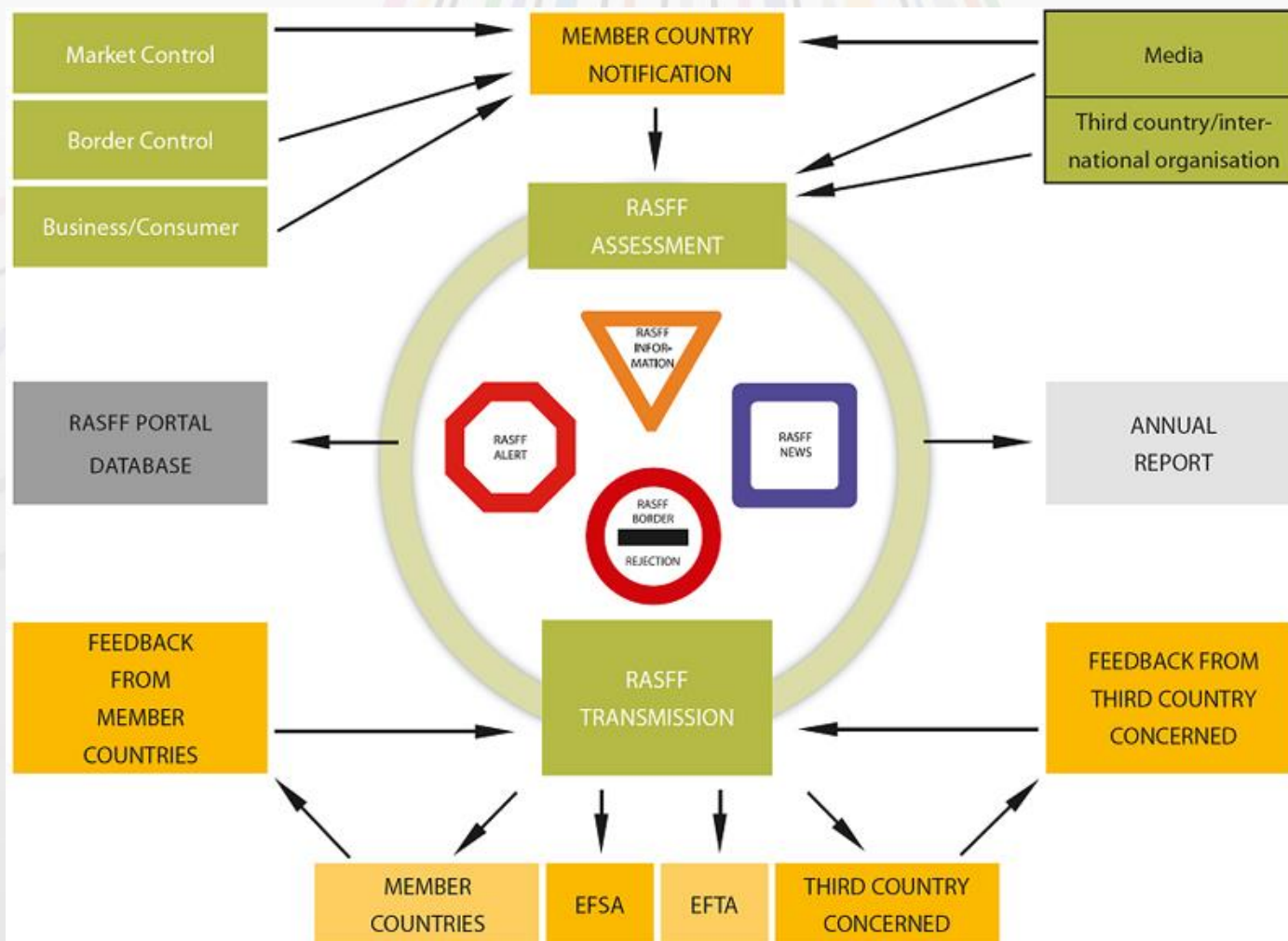
Status UNCEFACT messages

- In production
    - SPS e-CERT
    - e-DAPLOS
    - e-LAB
    - FLUX
    - TT events and TT animals
    - RASFF

- Under development
    - e-CROP (2017)
    - TT plant, plant product, animal product (2017)
    - RASFF 2

Documentation

- Business Requirement Specification
- Requirement Specification Mapping

- Core Component Library
- XML schema
- Implementation guideline

- Implementation

UN/CEFACT

SIMPLE, TRANSPARENT AND EFFECTIVE PROCESSES FOR GLOBAL BUSINESS