


11 Giugno 2019



Raccolta e gestione dati sulle micotossine in EFSA e miglioramento della qualità del dato per l'esposizione

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Data Management and Analysis

Trusted science for safe food



Background



Data collection and management



Enhancing data quality

- ❑ EFSA was established in 2002 as an independent source of scientific advice on risks associated with the food chain to:
 - ❑ Improve EU food safety
 - ❑ Help ensure a high level of consumer protection
 - ❑ Restore and maintain confidence in the EU food supply



Risk assessment and risk communication
but not risk management

□ Article 33

- EFSA “shall search for, **collect, collate, analyse and summarise relevant scientific and technical data** in the fields within its mission. (...)
- EFSA “shall work in close cooperation with all organisations operating in the field of data collection, including those from applicant countries, third countries or international bodies”.
- The Member States shall take the necessary measures to **enable the data** they collect (...) to be **transmitted to the Authority**.
- The Authority shall forward to the Member States and the Commission **appropriate recommendations** which might improve the technical comparability of the data it receives and analyses,(...).

- European Parliament legislative resolution of 17 April 2019 on the proposal for a Regulation of the European Parliament and of the Council on the transparency and sustainability of the EU risk assessment in the food chain amending Regulation (EC) No 178/2002
- Article 39f - **Standard data formats**
 - For the purposes of (...“data publication”) and in order to ensure the efficient processing of requests to the Authority for a scientific output, standard data formats shall be adopted (...). Those standard data formats shall:
 - (a) not be based on proprietary standards;
 - (b) ensure interoperability with existing data submission approaches;
 - (c) be user-friendly and adapted for the use by SMEs.

The commission will adopt draft standard data formats as part of implementing acts, that will be published on EFSA web site

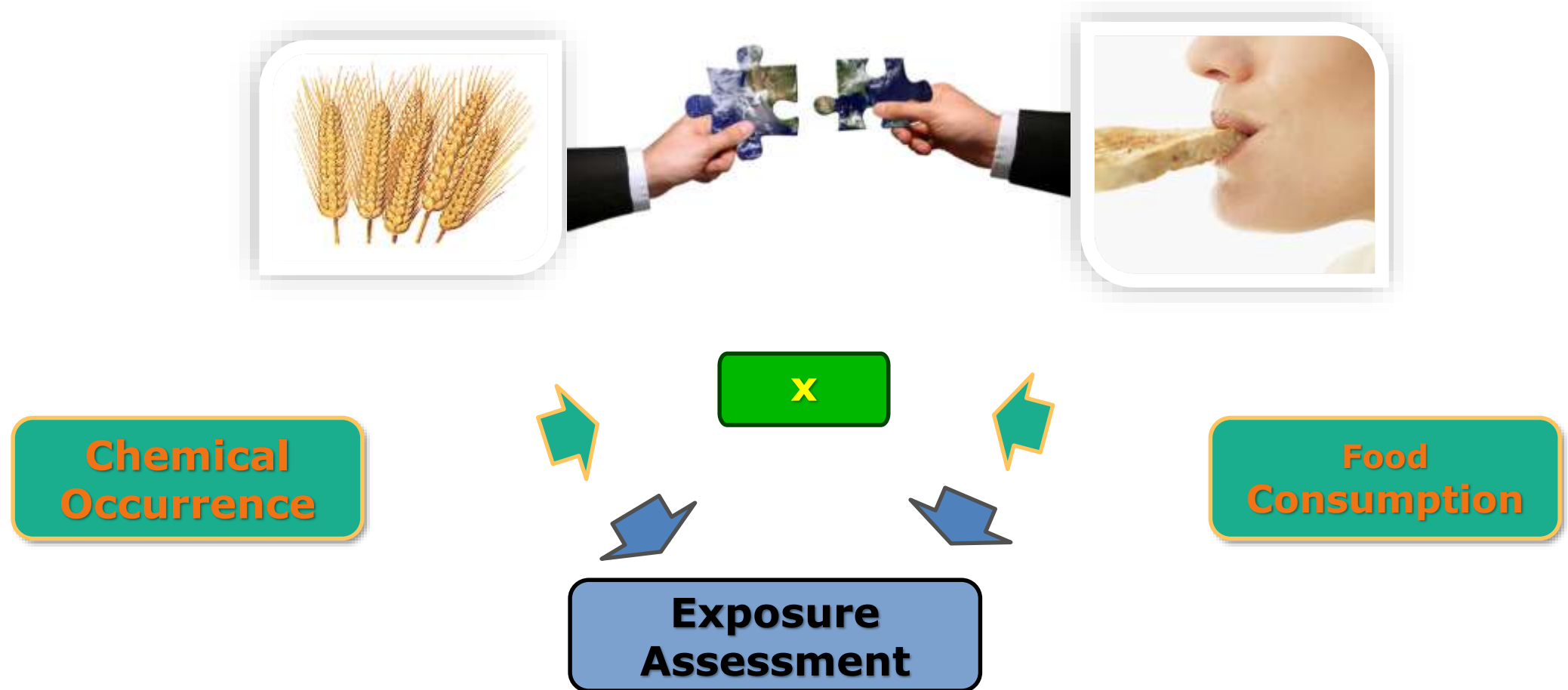
Legally binding standard data formats

EFSA has no laboratories



The Laboratories in the Member States are EFSA's Laboratories

Exposure calculation is a fundamental step of risk assessment process





Background



Data collection and management

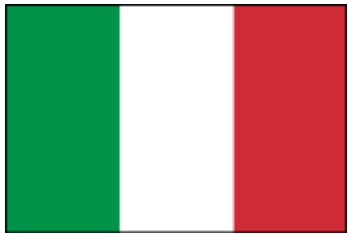


Enhancing data quality

A data collection involving multiple players



EFSA



Member States
Competent Authorities



Laboratories
Regional Authorities



Compliance



Sampling plan



Inspectors



Laboratories



Call for data on contaminants available at <https://www.efsa.europa.eu/en/consultations/call/190410>

Call for continuous collection of chemical contaminants occurrence data in food and feed

Deadline:
1 October 2019

Background

In the framework of Articles 23 and 33 of Regulation (EC) No 178/2002 EFSA has received from the European Commission a mandate (M-2010-0374) to collect all available data on the occurrence of chemical contaminants in food and feed. These data are used in EFSA's scientific opinions and reports on contaminants in food and feed.

Submission of data

National food authorities, research institutions, academia, food business operators and other stakeholders are invited to submit data on occurrence of contaminants with a focus on the substances and related substances listed below.

Process

Mycotoxins

Aflatoxins (B1 in feed, B1, B2, G1 and G2 and Total in feed)
Ochratoxin A
Deoxynivalenol (and acetylated derivatives and DON-3-epoxide)
Zearalenone and modified forms
Fumonisin and modified forms
Alternaria toxins (alternariol, alternariol monomethyl ether, tenuazonic acid, tentoxin)
Patulin
T-2 and HT-2 and modified forms
Nivalenol and modified forms
Ergot sclerotia
Ergot alkaloids
Enniatins
Sterigmatocystin
Beauvericin
Citrinin
Moniliformin
Diacetoxyscirpenol
Phomopsins

How to transmit data?

Only XML

Only
Standard
Sample
Description
2 (SSD2)

Only
Guidance on
Data
Exchange 2
(GDE2)

SSD2 - <https://www.efsa.europa.eu/it/efsajournal/pub/3424>

GDE2 - <https://www.efsa.europa.eu/it/efsajournal/pub/3945>

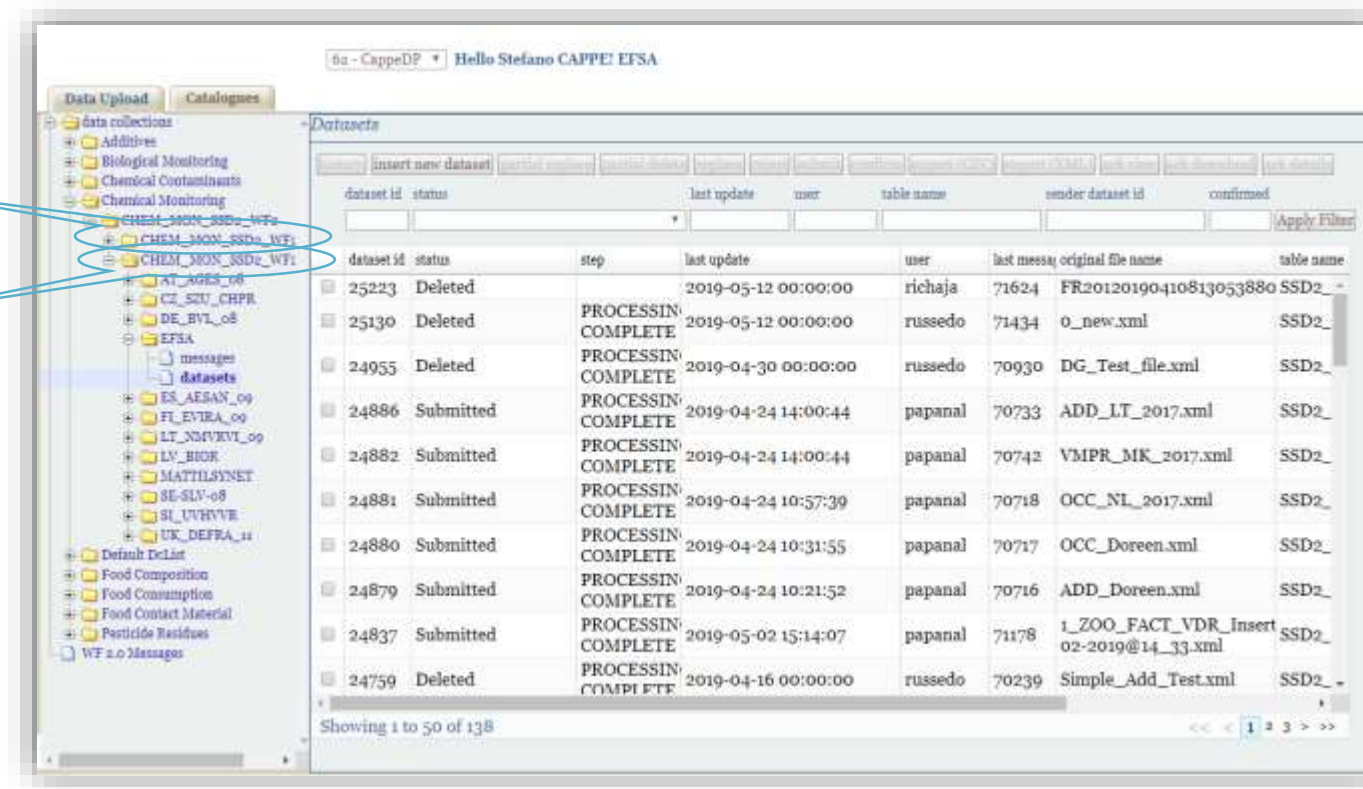
How to transmit data?

Are you a user?

Through DCF

Final

Test



dataset id	status	step	last update	user	last message	original file name	table name
25223	Deleted		2019-05-12 00:00:00	richaja	71624	FR20120190410813053880	SSD2_
25130	Deleted	PROCESSING COMPLETE	2019-05-12 00:00:00	russeido	71434	0_new.xml	SSD2_
24955	Deleted	PROCESSING COMPLETE	2019-04-30 00:00:00	russeido	70930	DG_Test_file.xml	SSD2_
24886	Submitted	PROCESSING COMPLETE	2019-04-24 14:00:44	papanal	70733	ADD_LT_2017.xml	SSD2_
24882	Submitted	PROCESSING COMPLETE	2019-04-24 14:00:44	papanal	70742	VMPR_MK_2017.xml	SSD2_
24881	Submitted	PROCESSING COMPLETE	2019-04-24 10:57:39	papanal	70718	OCC_NL_2017.xml	SSD2_
24880	Submitted	PROCESSING COMPLETE	2019-04-24 10:31:55	papanal	70717	OCC_Doreen.xml	SSD2_
24879	Submitted	PROCESSING COMPLETE	2019-04-24 10:21:52	papanal	70716	ADD_Doreen.xml	SSD2_
24837	Submitted	PROCESSING COMPLETE	2019-05-02 15:14:07	papanal	71178	1_ZOO_FACT_VDR_Insert 02-2019@14_33.xml	SSD2_
24759	Deleted	PROCESSING COMPLETE	2019-04-16 00:00:00	russeido	70239	Simple_Add_Test.xml	SSD2_

data.collection@efsa.europa.eu

Ask data service desk for user account

EFSA tools for manual data transmission <https://doi.org/10.5281/zenodo.1180710>

Are you a system?

Through Web Services

<https://dama-dcf-elect.efsa.europa.eu/elect?wsdl>

Reference terminologies?

Are you a user?

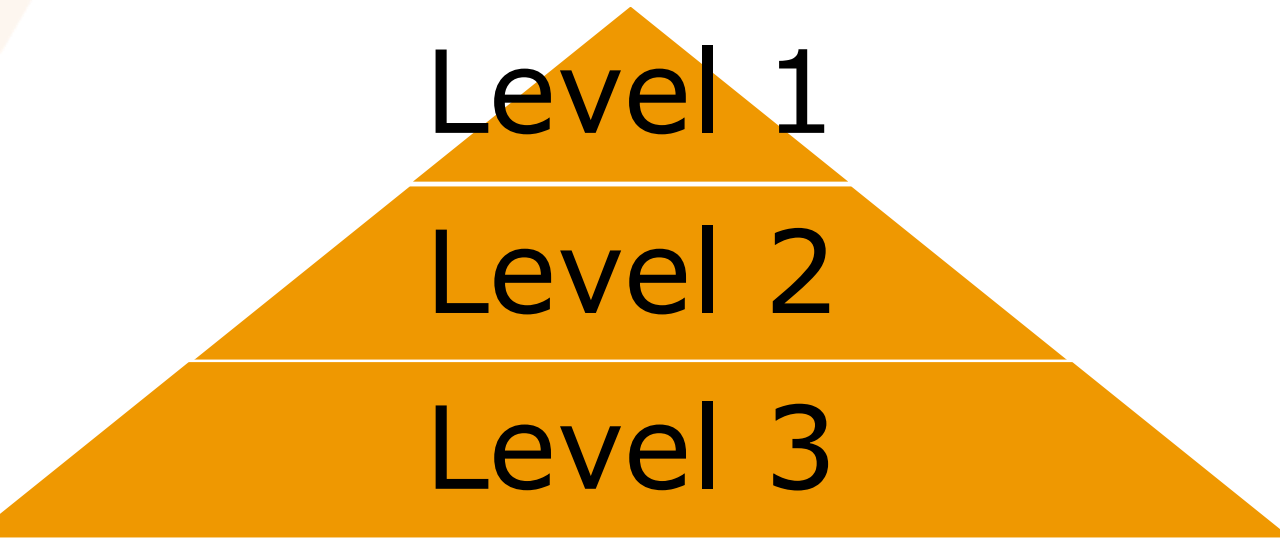
Through
catalogue
browser



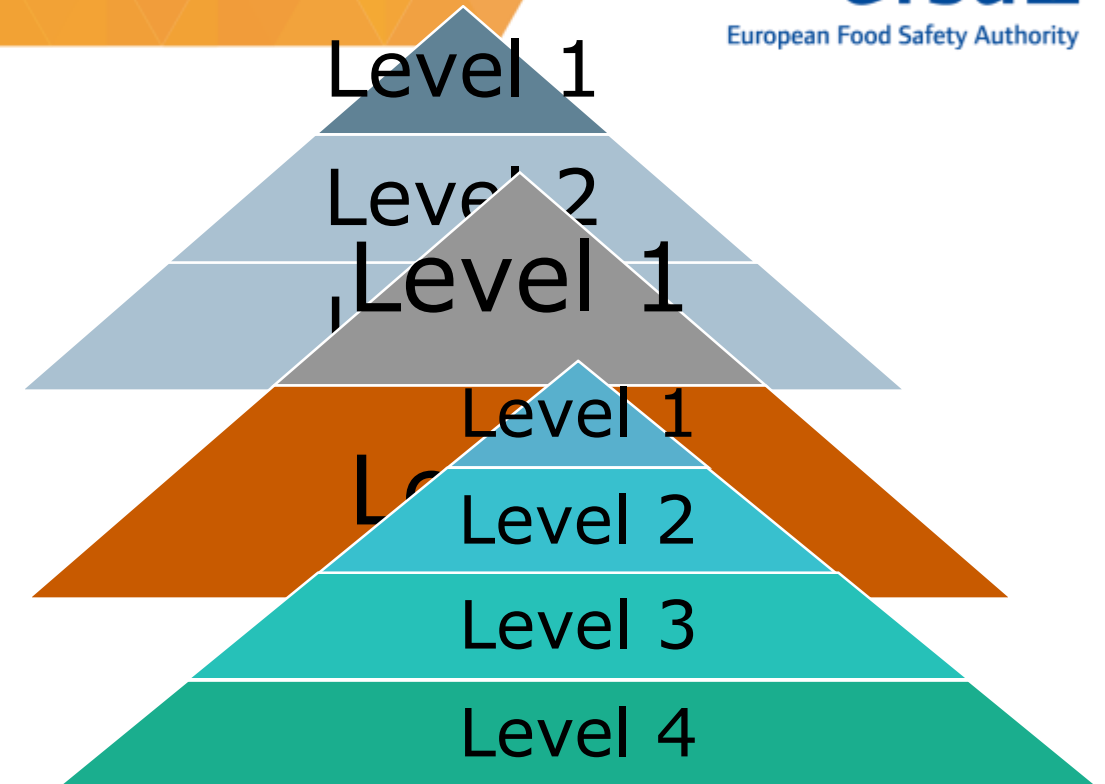
Are you a system?

Through Web
Services

<https://dama-dcf-elect.efsa.europa.eu/elect?wsdl>



Master hierarchy (one):
Contains all terms of
catalogue



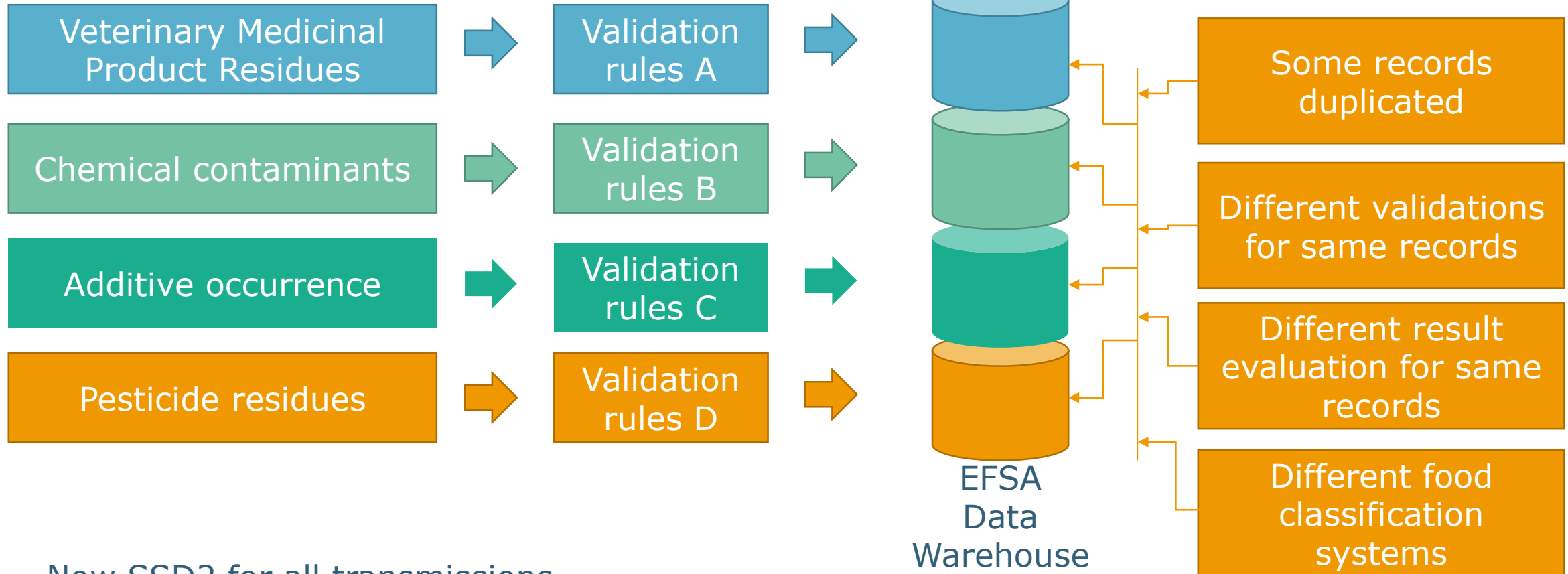
Domain specific hierarchies (Many):
Contains terms valid for reporting to a
data collection (reporting hierarchy) or
valid to analyse for a specific data
domain (analysis hierarchy)

Reference terminologies: Attributes

CODE	NAME	DOMAIN
N112A	Regulation (EC) No 1333/2008 (amended)	ADD
N211A	Commission Recommendation No 161/2010	CHEMOCC
N215A	Commission Regulation (EC) No 1881/2006 (amended)	CHEMOCC
N231A	Commission Regulation (EU) No 1259/2011 (amended)	CHEMOCC
N247A	Council Directive (EC) No 23/1996 (amended)	VMPR
N243A	Commission Regulation (EC) No 669/2009 (amended)	CHEMOCC
N302A	Commission Recommendation 2015/682	CHEMOCC
N_R	Not Reported	
N_A	Not Available	
N028A	Commission Directive (EC) No 125/2006 and 2006/141/EC	PEST
N129A	Regulation (EC) No 178/2002 (amended)	CHEMOCC
N139A	Regulation (EC) No 853/2004 (amended)	CHEMOCC
N208A	Commission Recommendation No 196/2007	CHEMOCC
N212A	Commission Recommendation No 307/2010	CHEMOCC
N214A	Commission Regulation (EC) No 401/2006 (amended)	CHEMOCC
N218A	Commission Regulation (EC) No 333/2007 (amended)	CHEMOCC
N310A	Commission Regulation (EU) 2017/2158	CHEMOCC
N017A	Regulation (EC) No 854/2004 (amended)	CHEMOCC
N018A	Regulation (EC) No 882/2004 (amended)	CHEMOCC
N027A	Regulation (EC) No 396/2005 (amended)	PEST

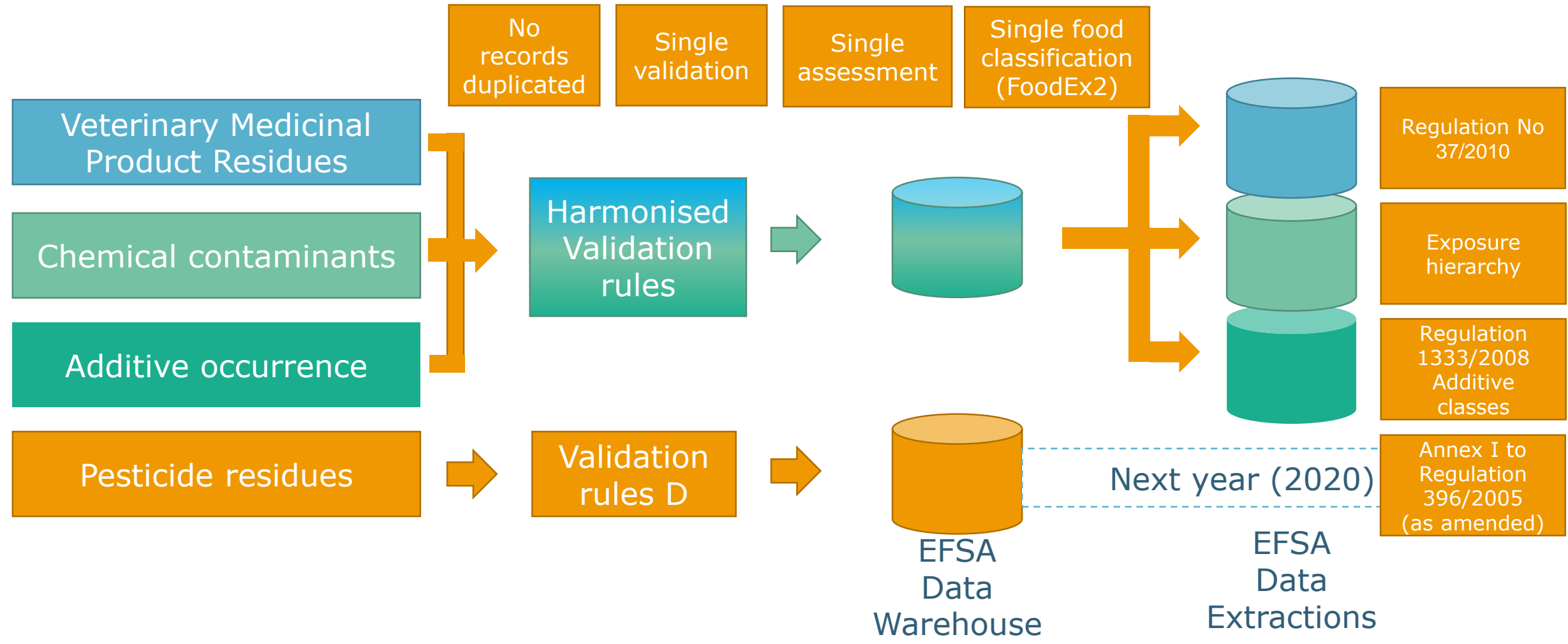
Attributes contain additional information applicable to the term:
For example LEGREF (legal reference) contains the data domain applicable to the term

What changes?

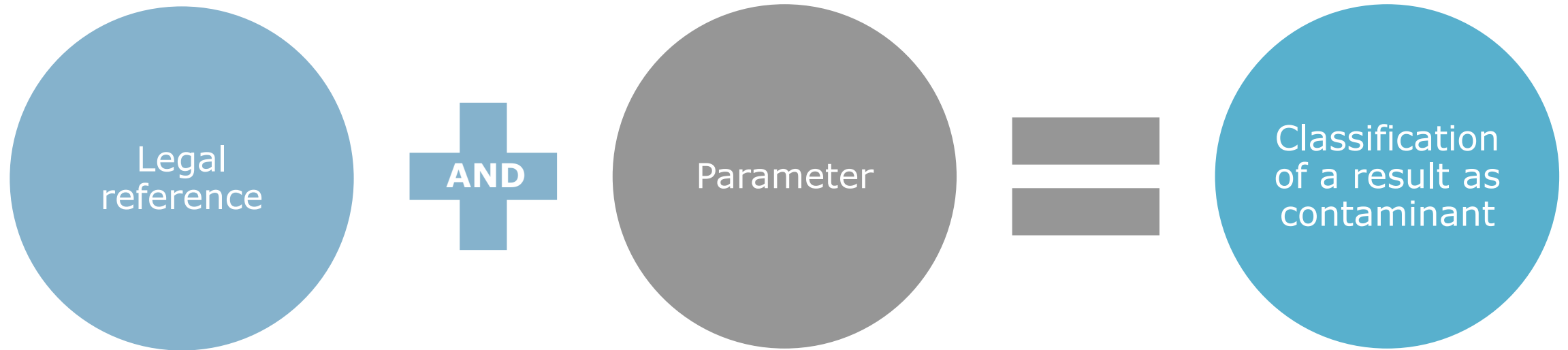


Now SSD2 for all transmissions

What changes?



For each record:

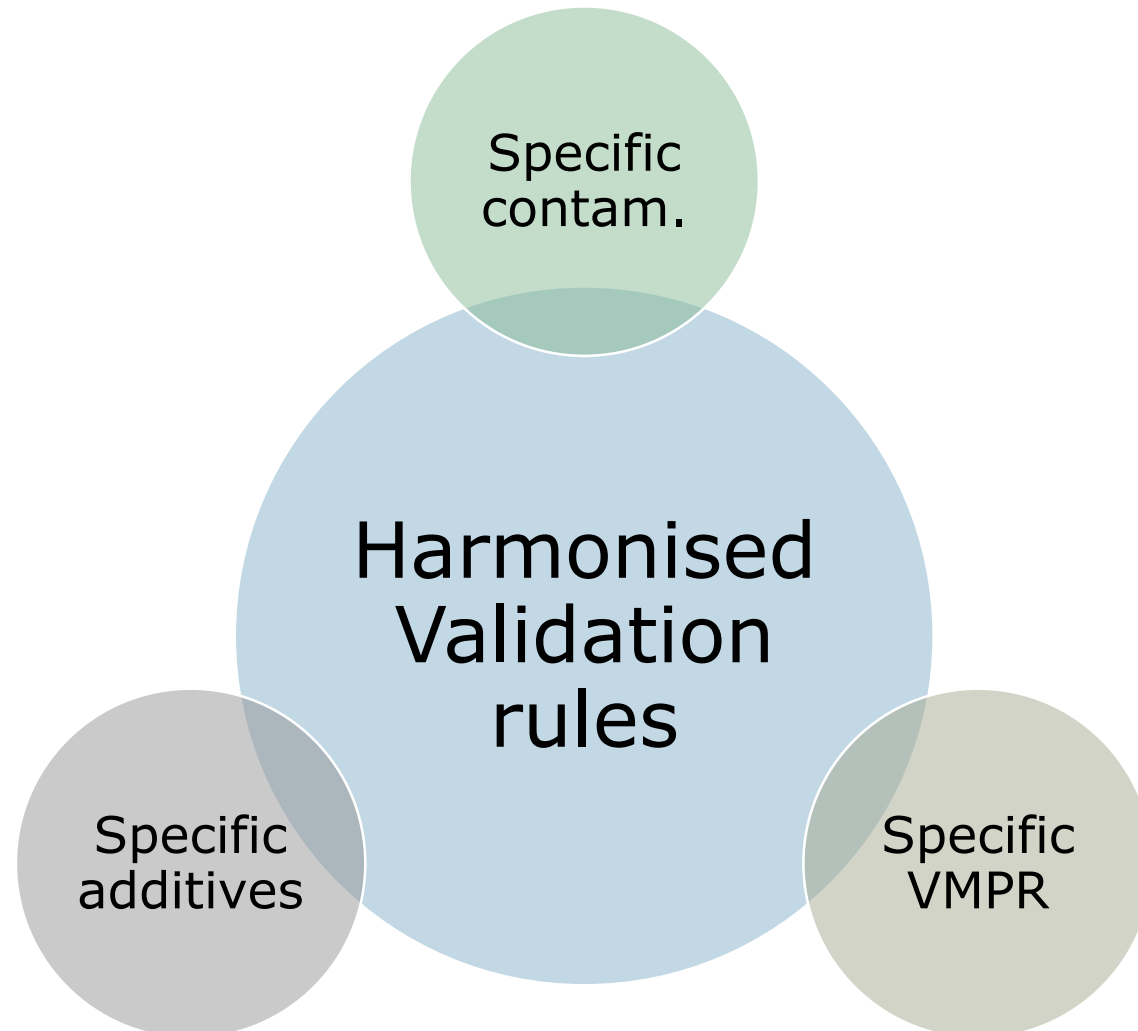


All terms Now repeatable:
<legRef>N215A\$N247A</legRef>

All terms in specific hierarchy in PARAM
catalogue in hierarchy PARAM_CHEMANALYSIS

Commission Regulation (EC) No
1881/2006 (amended)
= contaminants

Council Directive (EC) No
23/1996 (amended)
= VMPR



If Legal Reference & PARAM only applicable contaminant than no change to validation rules



If Legal Reference & PARAM applicable to VMPR or additives the additional validation rules are applicable

[Chemical Monitoring Reporting Guidance \(SSD2\)](#)



SampMatCode

FoodEx2

■ Report preferably core or extended base terms

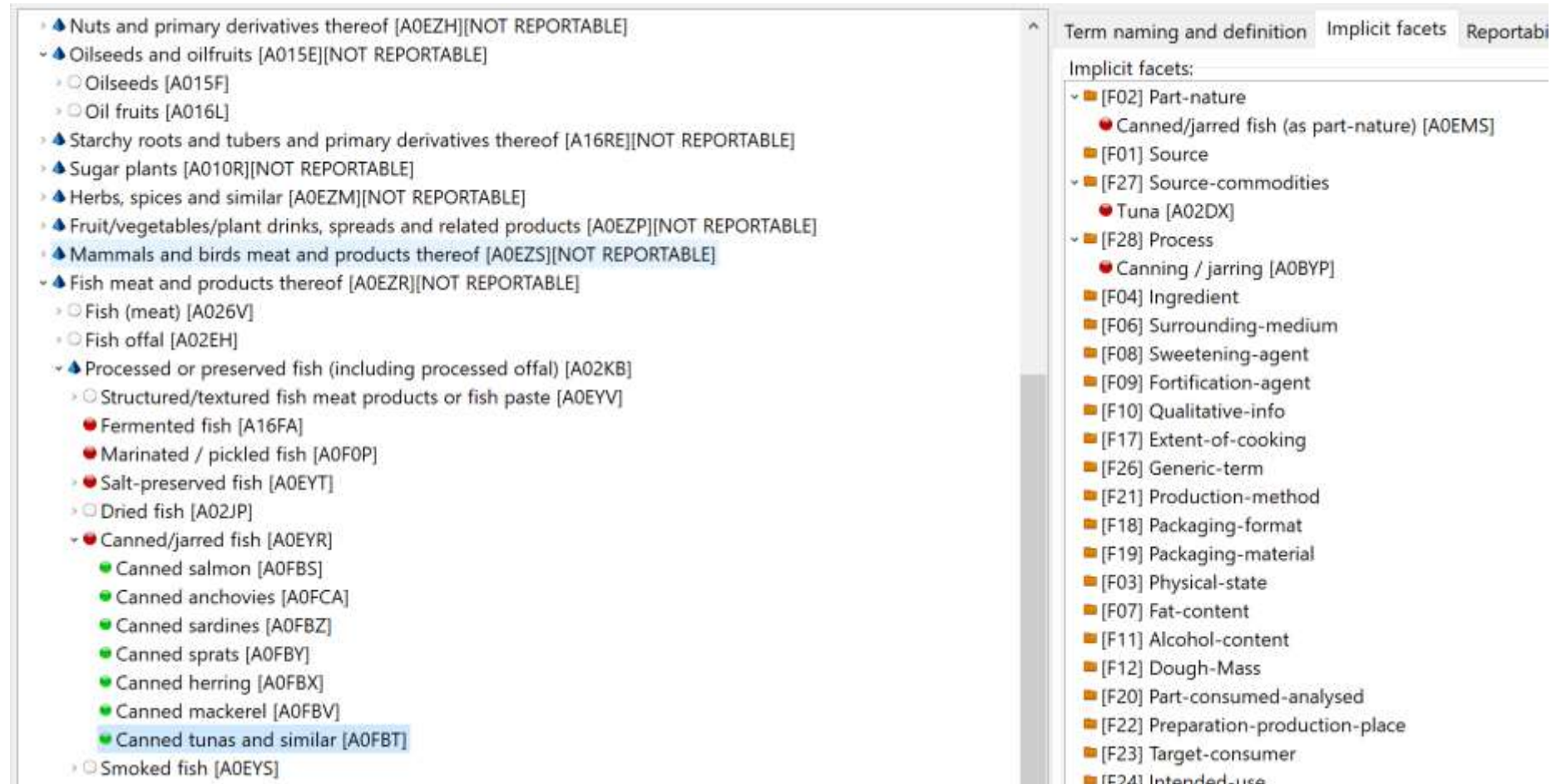
- ▼ ▲ Food [A0B6Z][NOT REPORTABLE]
 - › ▲ Grains and grain-based products [A000J][NOT REPORTABLE]
 - › ▲ Garden vegetables and primary derivatives thereof [A07XJ][NOT REPORTABLE]
- ▼ ▲ Legume seeds and primary derivatives thereof [A0EZG][NOT REPORTABLE]
 - › ○ Legumes fresh seeds (beans, peas etc.) [A011Y]
 - ▼ ○ Pulses (dried legume seeds) [A012R]
 - › ● Beans (dry) and similar- [A012S]
 - ▼ ● Lentils (dry) and similar- [A0DCE]
 - Lentils (dry) [A013Q]
 - › ● Peas (dry) and similar- [A0DCD]
 - › ● Lupins (dry) and similar- [A0DCA]
 - › ● Other pulses [A04HD]
 - › ▲ Processed or preserved legumes [A0BY9]

Not reportable terms

Core terms= red circle

Extended terms= green circle

- For derived products ensure source commodity is available, or specify



The screenshot displays a software interface with two main panels. The left panel shows a hierarchical tree of food products, and the right panel shows a list of facets for the selected product.

Left Panel: Product Hierarchy

- ▶ Nuts and primary derivatives thereof [A0EZH][NOT REPORTABLE]
- ▶ Oilseeds and oilfruits [A015E][NOT REPORTABLE]
 - Oilseeds [A015F]
 - Oil fruits [A016L]
- ▶ Starchy roots and tubers and primary derivatives thereof [A16RE][NOT REPORTABLE]
- ▶ Sugar plants [A010R][NOT REPORTABLE]
- ▶ Herbs, spices and similar [A0EZM][NOT REPORTABLE]
- ▶ Fruit/vegetables/plant drinks, spreads and related products [A0EZP][NOT REPORTABLE]
- ▶ Mammals and birds meat and products thereof [A0EZZ][NOT REPORTABLE]
- ▶ Fish meat and products thereof [A0EZR][NOT REPORTABLE]
 - Fish (meat) [A026V]
 - Fish offal [A02EH]
 - ▶ Processed or preserved fish (including processed offal) [A02KB]
 - Structured/textured fish meat products or fish paste [A0EYV]
 - Fermented fish [A16FA]
 - Marinated / pickled fish [A0FOP]
 - Salt-preserved fish [A0EYT]
 - Dried fish [A02JP]
 - ▼ Canned/jarred fish [A0EYR]
 - Canned salmon [A0FBS]
 - Canned anchovies [A0FCA]
 - Canned sardines [A0FBZ]
 - Canned sprats [A0FBY]
 - Canned herring [A0FBX]
 - Canned mackerel [A0FBV]
 - Canned tunas and similar [A0FBT]
 - Smoked fish [A0EYS]

Right Panel: Facets

Term naming and definition | Implicit facets | Reportabi

Implicit facets:

- ▼ [F02] Part-nature
 - Canned/jarred fish (as part-nature) [A0EMS]
- ▼ [F01] Source
- ▼ [F27] Source-commodities
 - Tuna [A02DX]
- ▼ [F28] Process
 - Canning / jarring [A0BYP]
- ▼ [F04] Ingredient
- ▼ [F06] Surrounding-medium
- ▼ [F08] Sweetening-agent
- ▼ [F09] Fortification-agent
- ▼ [F10] Qualitative-info
- ▼ [F17] Extent-of-cooking
- ▼ [F26] Generic-term
- ▼ [F21] Production-method
- ▼ [F18] Packaging-format
- ▼ [F19] Packaging-material
- ▼ [F03] Physical-state
- ▼ [F07] Fat-content
- ▼ [F11] Alcohol-content
- ▼ [F12] Dough-Mass
- ▼ [F20] Part-consumed-analysed
- ▼ [F22] Preparation-production-place
- ▼ [F23] Target-consumer
- ▼ [F24] Intended-use

■ Possibly report organic production

- > ♦ Farmed / cultivated / aquaculture [A07RV]
 - ♦ Semi-domesticated [A07RX]
 - ♦ Wild or gathered or hunted [A07RY]
 - ♦ Stray [A0C8D]
 - ♦ Outdoor/free-range growing condition [A07RZ]
 - ♦ Indoor/under glass growing condition [A07SA]
 - ♦ Hydroponic growing condition [A07SB]
 - ♦ Battery caged [A07SC]
 - ♦ Cage-free [A07SD]
 - ♦ Raised under controlled housing conditions (reg. Ec/2075/2005) [A07SF]
 - ♦ Not raised under controlled housing conditions [A0C6V]
 - ♦ Intensive production [A0C6Q]
 - ♦ Conventional non-intensive production [A0C6Y]
 - ♦ Raised under controlled husbandry conditions [A0C6X]
 - ♦ Not raised under controlled husbandry conditions [A0C6T]
 - ♦ Organic production [A07SE]
 - ♦ Use of genetically modified organisms [A07SG]
 - ♦ Back yard farming - growing [A0C6S]
 - ♦ Barn farming [A0C6R]



Background

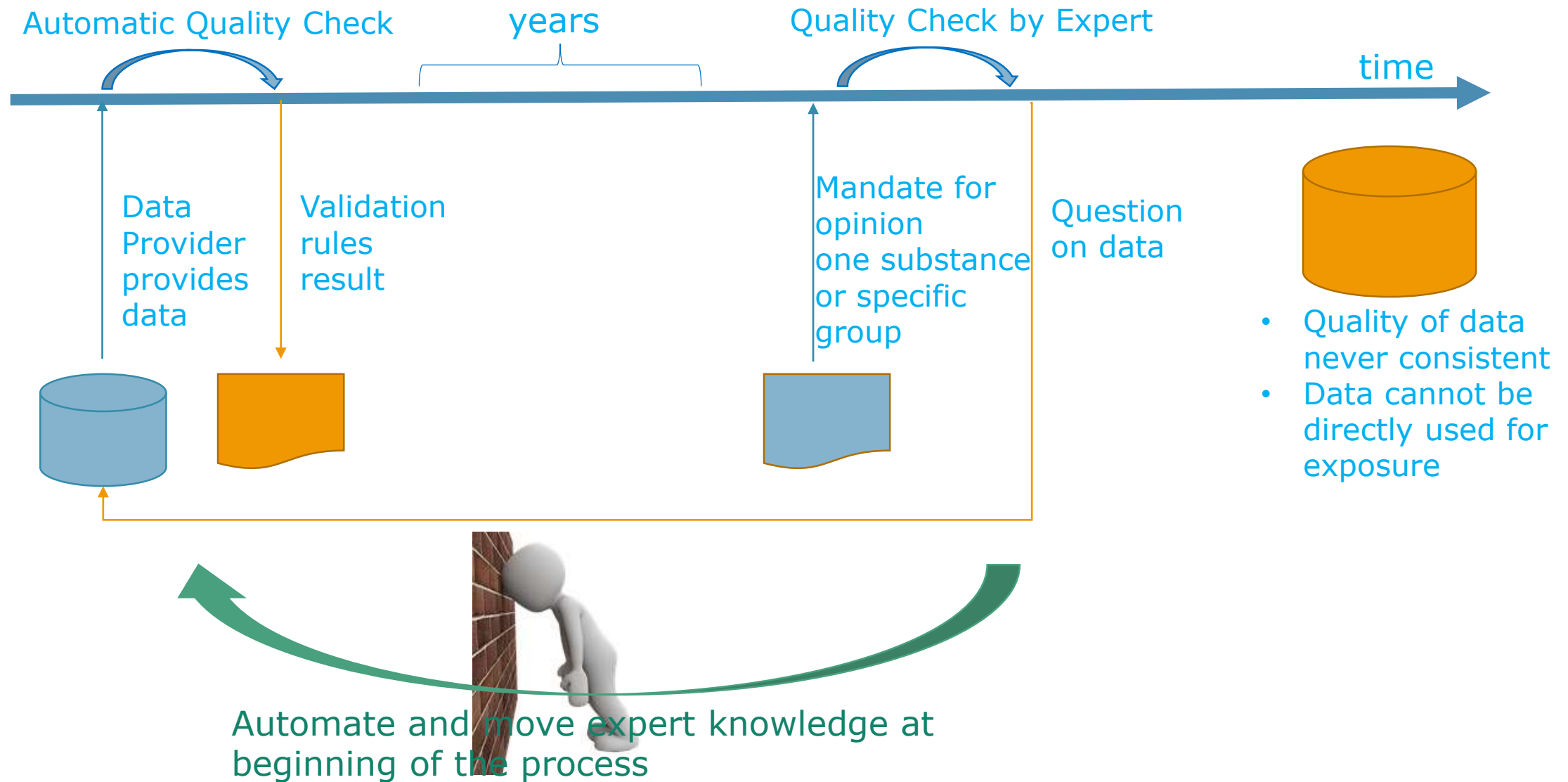


Data collection and management



Enhancing data quality

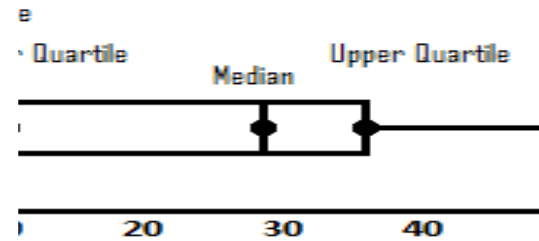
Enhance data quality



Plausibility analysis



Analytical methods by substance group



Result units by substance group/analytical method



Results compared to EFSA opinions values by food class and param



Expression of results by food class and param



Results compared to Maximum Limits Reg (EC) No 1881/2006 by food class and param

- Run algorithm to detect suspect duplicates analysing:
 - resultCode, paramCode, resVal, resType, resLOD, resLOQ, resUnit, labSampCode, EFSAProdCode
- Number of suspected duplicates detected:11741
- Number of duplicates confirmed by MSs:11741

- Table to calculate the sum of specific substance classes from individual substance:
 - Sum T-2 and HT-2
 - Aflatoxin (sum of B1, B2, G1, G2)
 - Sum of Fumonisin B1 + B2

- Sum re-calculated by individual substance

Part of contract with BV-TECH with support of university of Parma



Grazie per la vostra attenzione!

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Accessi e domande – Data Service Desk:
data.collection@efsa.europa.eu