#### Certificación Electrónica MSF en las **Americas**

Sesión Plenaria V: Requisitos y posibles formas de establecer el intercambio electrónico de certificados veterinarios en la región

Claudia Vitoria / Fernanda Michalski / Vidal Augusto Zapparoli - 26/07/2023

# The Brazilian technological point of view

#### MINISTRY OF **AGRICULTURE** AND LIVESTOCK

**BRAZILIAN GOVERNMENT** 



UNITING AND REBUILDING









Data about the issuance of the document

ID, Who, When, From, To, etc ...

Data about the consignment

What, Quantity, Weight, Package, Seal, Cargo ID, Temperature, Means of Transport

Data related to attestations (Requirements)

GMP, SSOP, Codex Alimentarius recomendations, HACCP, etc ...













structured

Data that is organized in a specific, predefined format, making it easily searchable, analyzable, and interpretable **by machines** 

Fixed Schema



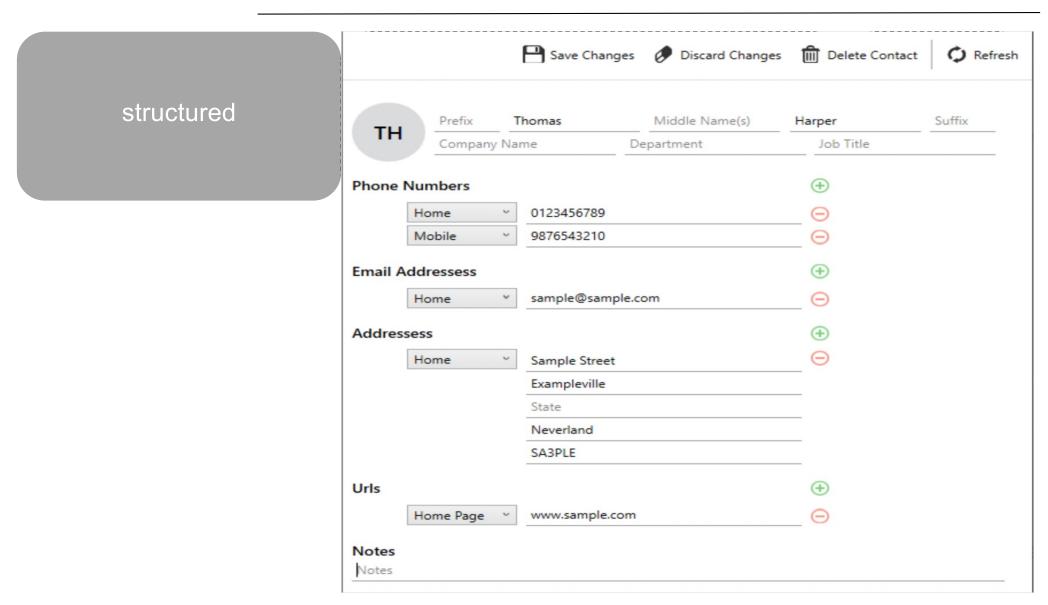
























Data that is organized in a specific, predefined format, making it easily searchable, analyzable, and interpretable by machines

Fixed Schema

semi-structured

Data that does not adhere to a rigid, predefined structure but still has some level of organization, combining certain aspects of organization with the flexibility to accommodate variations in data representation

Partial Schema











#### 3 Types of data



Todos nuestros clásicos incluyen ensalada de repollo y los dos acompañamientos que gustes. ARROZ COM POLLO e4950... Al estilo casero y único de Rosti MEDIA PECHUGA DESHUESADA ¢549 Nuestra deliciosa pechuga deshuesada, tortilla palmeada. FAJITAS DE POLLO e5890. PECHUGA DESHUESADA ¢6790 Medio pollo, jugoso y dorado, incluye tortillas palme Pudés pedir tu medio pollo a la plancha bajo en calorias (sin piel).

semi-structured











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Partial Schema

unstructured

Data that lacks a predefined data model or organized structure, that does not follow a specific format. Often intended for human consumption and interpretation, making it challenging to store, process, and analyze by data management systems















**IICA**®

IICA @IICAnews · Jul 21

.@IICAnews and @CATIEOficial reaffirm their partnership to drive research, leadership development, and the enhancement of tropical agriculture in the Americas.



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E-CERT

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PAPER

unstructured

Data that lacks a predefined data model or organized structure, that does not follow a specific format. Often intended for human consumption and interpretation, making it challenging to store, process, and analyze by data management systems

PAPER











Conclusion!

e-CERT is a data related project.



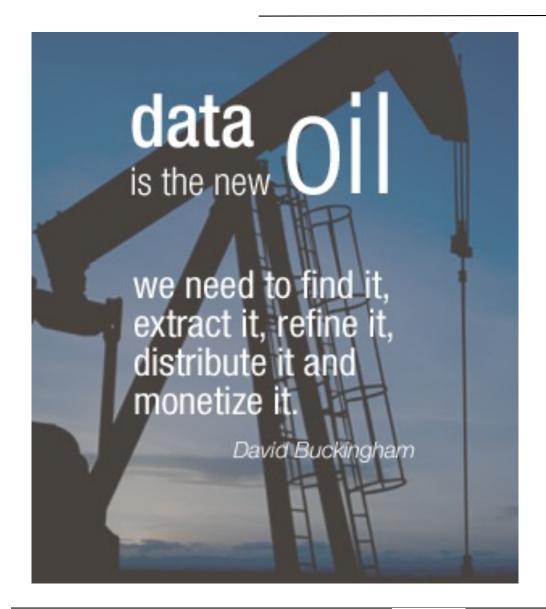












Conclusion!

e-CERT is a data related project.















e-CERT ISSUANCE

e-CERT

e-CERT **EXCHANGE** 













Where is the data?

How to extract / collect it?

How to refine it?

e-CERT ISSUANCE

e-CERT

How to distribute it for exporters?

How to distribute it for Importing Authorities?

e-CERT EXCHANGE











ISSUANCE: Where is the data?













Private Sector ERP (PPC+Sales systems)

**Production** Commercialization



Certification Request



Certification Analysis and Issuance



**Border Control** 

















Federal Inspection Management Information System (MAPA)



**Brazilian Customs Single Window** 













Private Sector ERP (PPC+Sales systems)

**Production** 

Commercialization



Certification Request



Certification Analysis and Issuance



**Border Control** 















ISSUANCE: How to extract / collect it?











**Production** 

Commercialization



Certification Request



Certification Analysis and Issuance



**Border Control** 















**Production** 

Commercialization



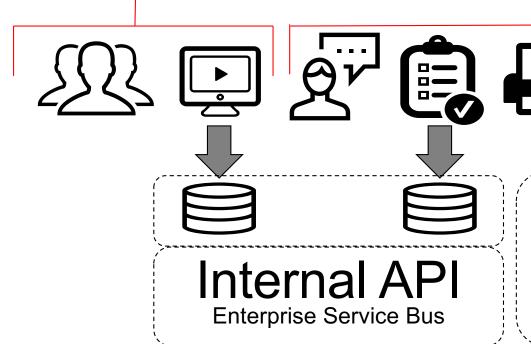
Certification Request



Certification Analysis and Issuance



**Border Control** 



#### **PROS**

- Pull data from different sources and return the complete information
  Better adress security controls
  Can be used for other interoperability
- needs

#### **CONS**

Performance













**Production** 

Commercialization



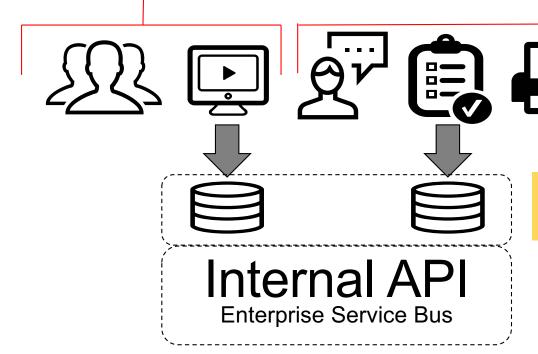
Certification Request



Certification Analysis and Issuance



**Border Control** 





Oooops! SIGSIF stores data following the same logic of the paper. Data is semi-structured!!













#### ISSUANCE: How to extract / collect it?

1. Consignor (name, address): COMÉRCIO DE ALIMENTOS		2. Certificate N°:  3. Competent Authority: Ministry of Agriculture, Livestock and Food Supply - MAPA  4. Local Competent Authority:  IONAL DISTRIBUTION COMPANYLIMITED								
<b>5. Importer</b> (name, address): BUILDING 89 YEN CHOW S'	TREET		IN	IERNATIO	NAL DISTRI	BUITO	N COMP	ANYLIMITE	D	
	11021		,							
, , , , , , , , , , , , , , , , , , , ,	ISO Code: BR	Code: 7. Cou Brazil		intry of dispatch:		8. Country of destinat Hong Kong		destination:	ISO Code: HK	
9. Place of loading: SIF SERV DE LOGISTICA LTDA	VIÇOS 10. M	leans of t	transport: V	ESSEL			11. Declared point of entry: HONG KONG			
12. Conditions for transport/s	torage: (18,0 °	C)								
13. Identification of container	r(s)/ Seal numl	oer(s): C	ONTAINER	Nº: HLBU 9	20381-0 - LA	ACRE /	SEAL: 0	036213/SIF51	7	
14. Identification of food prod	luote									
NCM Code or HS Code: 0203					Purpose	: For hu	ıman con	sumption		
Name of the product	lot or pro	duction	Approval nu	mber of estab	lishments	Type		Number of	Net weight	
(include species)	date		Abattoir	Cutting plan	t Cold store	pack	aging	packages	(Kg)	
FROZEN PORK - BONELESS COLLAR - SIF 996 (SUS SCROFA DOMESTICUS)	08/05/202 TO 08/19	-				CAR	TONS	1.350	27.000,000	













1. Consig	15. Heal	th Certification:	_			
COMÉRC	The Official Veterinary Inspector certifies that:					
			<sup>r</sup> - MAPA			
	a)	The meat or meat product(s) herein described come from animals born and raised, slaughtered and packed in BRAZIL; the slaughterhouses where the animals slaughtered and/or processing plants where the meat packed are approved and under regular veterinary-sanitary supervision of the Brazilian Ministry of Agriculture, Livestock and Food Supply (MAPA);				
	b)	The meat or meat product(s) was/were derived from animals that underwent ante and post mortem inspection and did not show signs of infectious and contagious diseases at the time of slaughter;				
5. Importe	c)	The animals were slaughtered following the Animal welfare provisions, meeting the rules set by the Competent Authority of Brazil;				
BUILDIN	d)	The products were obtained in hygienic conditions in establishments that implemented the Good Manufacturing Practices (GMP), Sanitation Standard Operating Procedures (SSOP) and Hazard Analysis and Critical Control Points Programs (HACCP), following the recommendations of <i>Codex Alimentarius</i> , with systematic verification of the Competent Authority of Brazil;				
6. Country BRAZIL	e)	The meat has been subject to the testing programmes for harmful organisms, veterinary drug residues and other toxic substances administered by the Brazilian competent authority. The results of the tests meet the Federal Industrial and Sanitary Inspection Regulation of Animal Products of MAPA and have not provided any evidence as to the presence of chemical/drug residues or toxic substance that could be harmful to human health. The tissues derived from food animals do not contain prohibited chemicals and the	Code:			
9. Place of		levels of drugs and chemicals in tissues do not exceed Maximum Residue Limits;	ONG			
SIF 517 - <i>I</i> DE LOGIS  12. Condi	f)	The meat or meat product(s) herein described has/have been dressed, prepared and packed under hygienic conditions in officially approved establishments which are subject to constant supervision by the official veterinarian. The meat or meat product(s) is/are fit for human consumption and eligible for export without restriction in accordance with the legislation of BRAZIL.				
	g)	The products packaging is first used and meets the hygienic-sanitary requirements established by the Competent Authority of Brazil;				
13. Identi	h)	The vehicle or transport equipment is in proper conditions of hygiene and maintenance and, if products are to be kept under refrigeration, has the appropriate cold generation equipment to maintain the temperature of the products during the transport;				
14. Identii	i)	The products are fit for human consumption and have free transit and trade in Brazil.				
NCM Cod						
Name of the	Addition	nal Health Attestation for Beef and Pork (if applicable):	et weight			
(include sp		Meat and meat products come from animals that:	ζg)			
FROZEN P COLLAR - (SUS SCRC	j)	Were born and raised in Brazil which has been classified by the World Organization for Animal Health (OIE) as a Negligible Bovine Spongiform Encephalopathy (BSE) risk country and is free from African Swine Fever (ASF) in accordance with the OIE Terrestrial Animal Health Code.	7.000,000			
	k)	Came from registered farms that are under supervision of the official veterinary service.				













ISSUANCE: How to refine it?

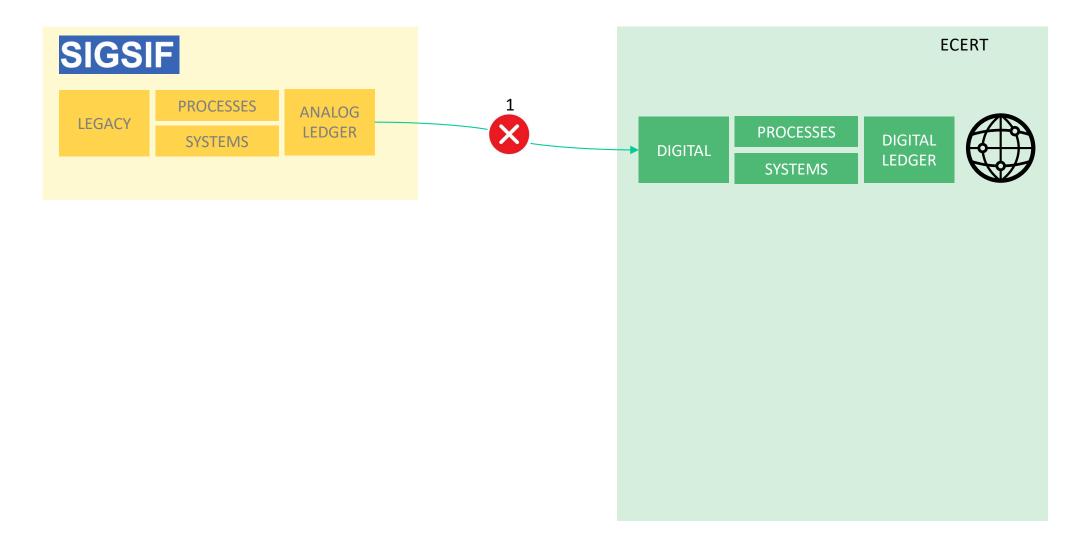














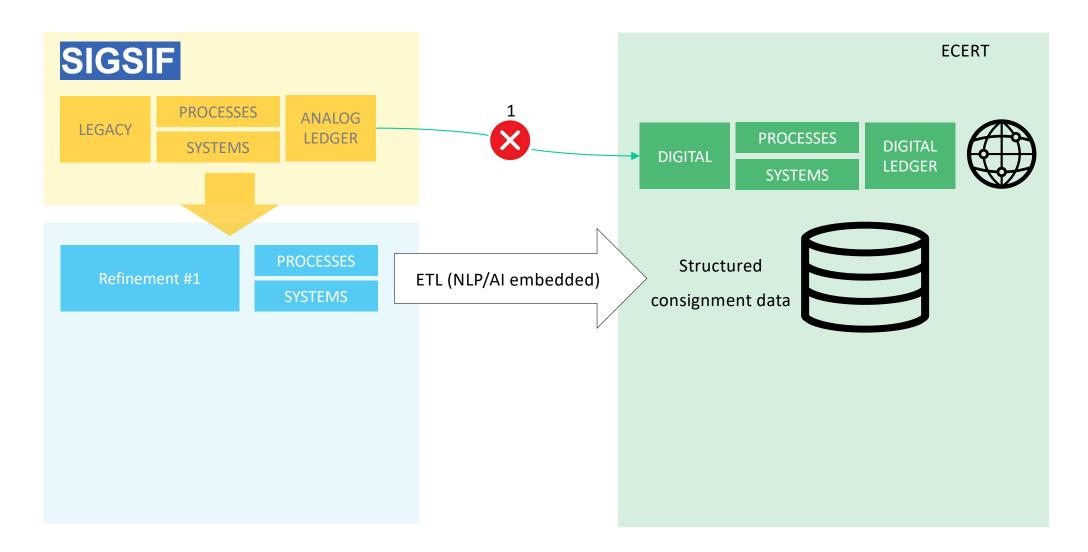














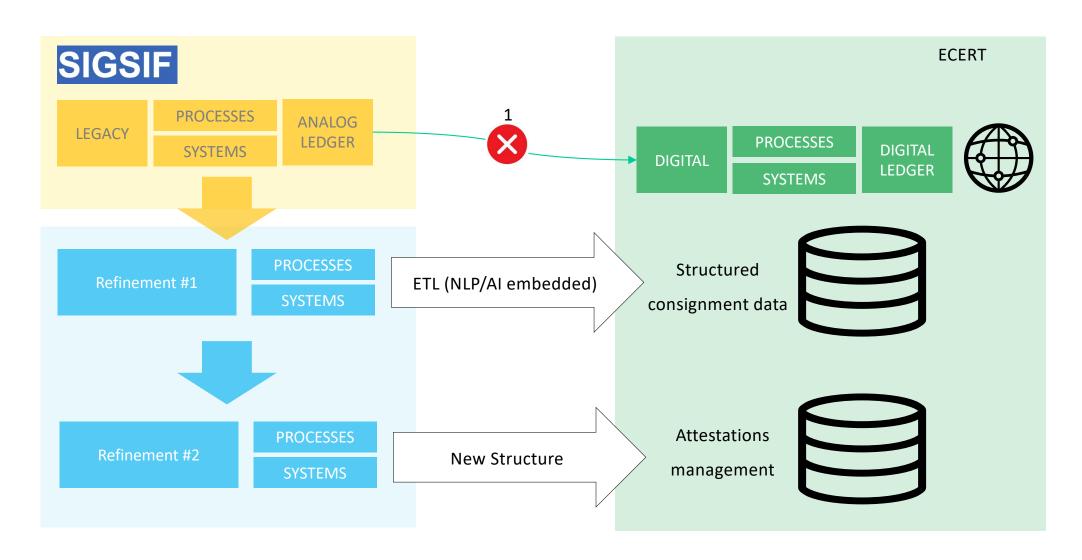














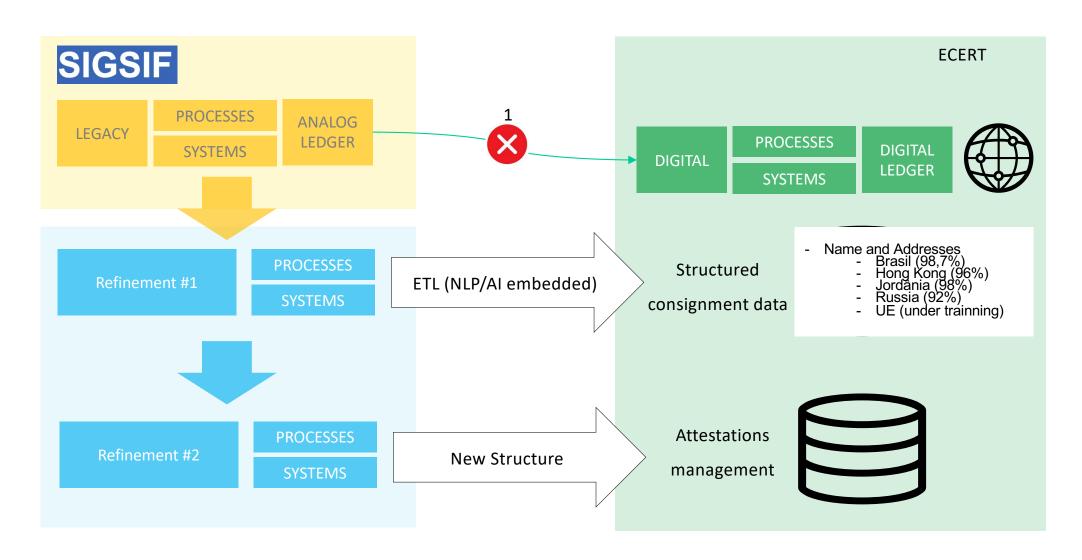
























Where is the data?

How to extract / collect it?

How to refine it?

e-CERT ISSUANCE

e-CERT













Where is the data?

How to extract / collect it?

How to refine it?

e-CERT ISSUANCE







#### INTERNATIONAL STANDARD

Syntax and Semantics definition

https://unece.org/trade/uncefact/ecert















```
-<rsm:SPSCertificate>
 -<rsm:SPSExchangedDocument>
   -<ram:Name languageID="pt" languageLocaleID="BR">
      CERTIFICADO SANITÁRIO PARA EXPORTAÇÃO DE CARNE E PRODUTOS CÁRNEOS DE BOVINOS OU SUÍNOS DO BRASIL
     </ram:Name>
   -<ram:Name languageID="en" languageLocaleID="HK">
      HEALTH CERTIFICATE TO EXPORT BEEF AND BEEF PRODUCTS OR PORK AND PORK PRODUCTS FROM BRAZIL
     </ram:Name>
     <ram:ID>I0-00088932/2015/23</ram:ID>
    <ram:TypeCode>852</ram:TypeCode>
     <ram:StatusCode>70</ram:StatusCode>
   -<ram:IssueDateTime>
      <udt:DateTime>2023-03-02T20:57:36</udt:DateTime>
     </ram:IssueDateTime>
   -<ram:IssuerSPSParty>
      <ram:Name>Ministry of Agriculture, Livestock and Food Supply</ram:Name>
    </ram:IssuerSPSParty>
   -<ram:IncludedSPSNote>
      <ram:Subject languageID="en" languageLocaleID="HK">Authenticity Code</ram:Subject>
      <ram:Content>I3R8Q786-ZNUFX77W-0PYBVDL4-DDPXR81J/ram:Content>
      <ram:SubjectCode>AUTHENTICITY_CODE</ram:SubjectCode>
```



#### INTERNATIONAL STANDARD

Syntax and Semantics definition













#### United Nations Directories for Electronic Data Interchange for Administration, Commerce and Transport



#### -<rsm:SPSCertificate>

-<rsm:SPSExchangedDocument>

-<ram:Name languageID="pt" languageLocaleID="BR"> CERTIFICADO SANITÁRIO PARA EXPORTAÇÃO DE CARNE E PI </ram:Name>

-<ram:Name languageID="en" languageLocaleID="HK">
HEALTH CERTIFICATE TO EXPORT BEEF AND BEEF PRODUCTS

</ram:Name>

<ram:ID>I0-00088932/2015/23</ram:ID>

<ram:TypeCode>852</ram:TypeCode>

<ram:StatusCode>70</ram:StatusCode>

-<ram:IssueDateTime>

<udt:DateTime>2023-03-02T20:57:36</udt:DateTime>

</ram:IssueDateTime>

-<ram:IssuerSPSParty>

<ram:Name>Ministry of Agriculture, Livestock and Food Supply/ran

</ram:IssuerSPSParty>

-<ram:IncludedSPSNote>

<ram:Subject languageID="en" languageLocaleID="HK">Authentici
<ram:Content>I3R8Q786-ZNUFX77W-0PYBVDL4-DDPXR81J</ran</pre>

<ram:SubjectCode>AUTHENTICITY\_CODE</ram:SubjectCode>

#### Change indicators

a plus sign (+) for an addition

an asterisk (\*) for an amendment to structure

a hash sign (#) for changes to names

a vertical bar ( $\mid$ ) for changes to text for descriptions and

notes

a minus sign (-) for marked for deletion (within either

batch and interactive messages)

a X sign (X) for marked for deletion (within both batch

and interactive messages)

1001 Document name code

[C]



#### INTERNATIONAL STANDARD

Syntax and Semantics definition















#### **United Nations Directories** for Electronic Data Interchange for **Administration, Commerce and Transport**

# **UN/EDIFACT**

-<rsm:SPSCertificate>

-<rsm:SPSExchangedDocument>

-<ram:Name languageID="pt" languageLocaleID="BR"> CERTIFICADO SANITÁRIO PARA EXPORTAÇÃO DE CARNE E PI </ram:Name>

-<ram:Name languageID="en" languageLocaleID="HK"> HEALTH CERTIFICATE TO EXPORT BEEF AND BEEF PRODUCTS

</ram:Name>

<ram:ID>I0-00088932/2015/23</ram:ID>

<ram:TypeCode>852</ram:TypeCode>

<ram:StatusCode>70</ram:StatusCode>

-<ram:IssueDateTime>

<udt:DateTime>2023-03-02T20:57:36</udt:DateTime>

</ram:IssueDateTime>

-<ram:IssuerSPSParty>

<ram:Name>Ministry of Agriculture, Livestock and Food Supply/ran

</ram:IssuerSPSParty>

-<ram:IncludedSPSNote>

<ram:Subject languageID="en" languageLocaleID="HK">Authentici <ram:Content>I3R8Q786-ZNUFX77W-0PYBVDL4-DDPXR81J/rai <ram:SubjectCode>AUTHENTICITY\_CODE</ram:SubjectCode>

Phytosanitary certificate

A message/doucment consistent with the model for certificates of the IPPC, attesting that a consignment meets phytosanitary import requirements.

Sanitary certificate

Document/message issued by the competent authority in the exporting country evidencing that alimentary and animal products, including dead animals, are fit for human consumption, and giving details, when relevant, of controls undertaken.

Veterinary certificate

Document/message issued by the competent authority in the exporting country evidencing that live animals or birds are not infested or infected with disease, and giving details regarding their provenance, and of vaccinations and other treatment to which they have been subjected.



#### INTERNATIONAL STANDARD

Syntax and Semantics definition















Return to Stylus Studio EDIFACT home page. -<rsm:SPSCertificate> Return to Stylus Studio EDIFACT D04B Code List page. -<rsm:SPSExchangedDocument> 4405 - Status description code -<ram:Name languageID="pt" languageLocaleID="BR": **UN/CEFACT Revision 2004B Code List** CERTIFICADO SANITÁRIO PARA EXPORTAÇÃO I </ram:Name> Repr: an..3 -<ram:Name languageID="en" languageLocaleID="HK" HEALTH CERTIFICATE TO EXPORT BEEF AND BE **Desc:** Code specifying a status. </ram:Name> This table also occurs in the following versions of this standard: <ram:ID>I0-00088932/2015/23</ram:ID> D00A, D00B, D01A, D01B, D01C, D02A, D02B, D03A, D03B, D04A, <ram:TypeCode>852</ram:TypeCode> **D99B** <ram:StatusCode>70</ram:StatusCode> **65** Negative -<ram:IssueDateTime> Negative status. <udt:DateTime>2023-03-02T20:57:36</udt:DateTime 66 Unsigned amount </ram:IssueDateTime> The status of the amount is unsigned. -<ram:IssuerSPSParty> **67** Preliminary <ram:Name>Ministry of Agriculture, Livestock and Fo Preparatory to. </ram:IssuerSPSParty> 68 Split -<ram:IncludedSPSNote> Divided into parts. <ram:Subject languageID="en" languageLocaleID="I</pre> 69 Recommended <ram:Content>I3R8Q786-ZNUFX77W-0PYBVDL4-D The object is favoured in preference to other alternatives. <ram:SubjectCode>AUTHENTICITY\_CODE</ram:Sincered</pre> 70 Issued Has been given out. 71 Available for ordering Goods are available for ordering INTERNATIO 72 Not available for ordering Goods are not available for ordering. 73 Confirmed Officially acknowledged. Syntax and Se 74 Expiry date exceeded









# **EXCHANGE**: How to distribute it for Importing Authorities?











**DIRECT EXCHANGE** 

**PULL** 

PUSH

INDIRECT EXCHANGE

**PULL** 

**PUSH** 











**DIRECT EXCHANGE** 

INDIRECT EXCHANGE

**PULL** 

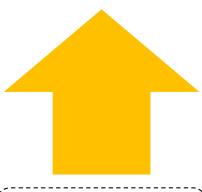
PUSH

**PULL** 

**PUSH** 

Exp: issue and store

Imp: connect to pull e-CERT



Most common for Vet Certificates













DIRECT EXCHANGE

INDIRECT EXCHANGE

**PULL** 

**PUSH** 

**PULL** 

**PUSH** 

Exp: issue and store

Imp: connect to pull e-CERT

Most common for Vet Certificates

Exp: issue, store and send to a 3<sup>rd</sup> party (Hub)













### **DIRECT EXCHANGE**

### **PULL**

Exp: issue and store

Imp: connect to pull e-CERT

Most common for Vet Certificates

### **PUSH**

Exp: issue, store and send to importing country



Traces-NT (EU)

### INDIRECT EXCHANGE

### **PULL**

### **PUSH**

Exp: issue, store and send to a 3<sup>rd</sup> party (Hub)



e-Phyto exporting county













### **DIRECT EXCHANGE**

### PULL PU

Exp: issue and store

Imp: connect to pull e-CERT



Most common for Vet Certificates

### **PUSH**

Exp: issue, store and send to importing country



Traces-NT (EU)

### INDIRECT EXCHANGE

#### **PULL**

Exp: issue and store

3<sup>rd</sup> Party: connect to pull e-CERT



**CCAB** 

### **PUSH**

Exp: issue, store and send to a 3<sup>rd</sup> party (Hub)



e-Phyto exporting county















Mc Certificates

county



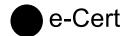


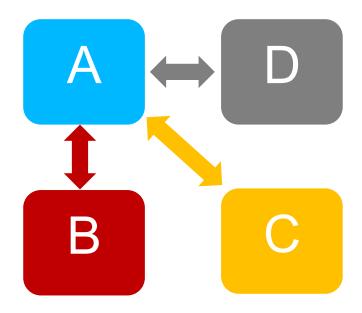












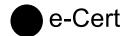


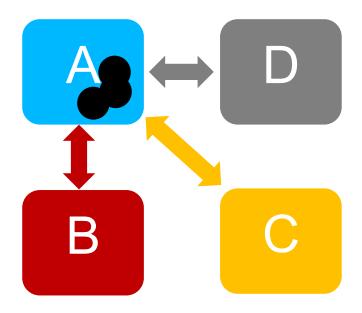














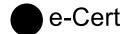


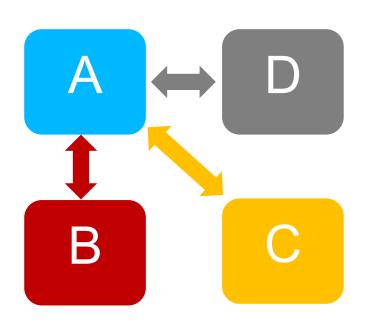


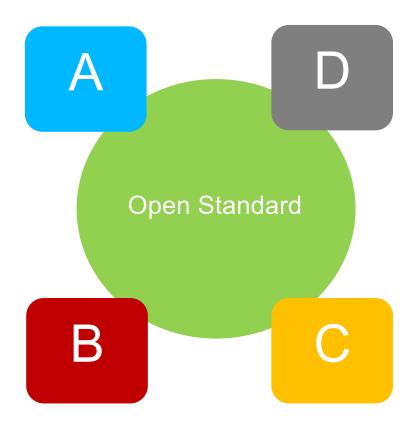














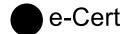


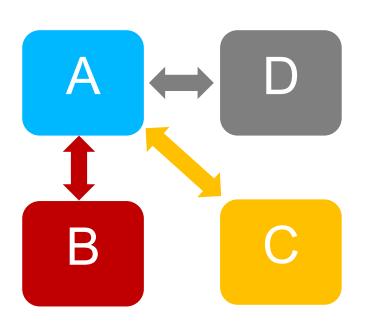


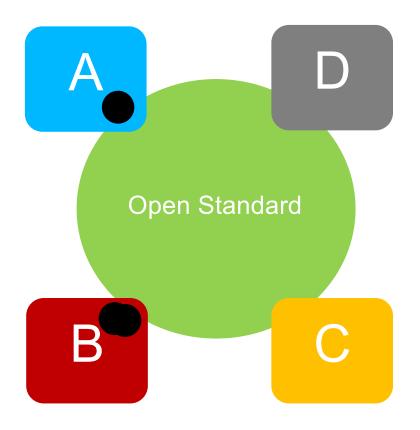






















# **EXCHANGE:** How to distribute it for exporters?











**Production** 

Commercialization

SIGSIF

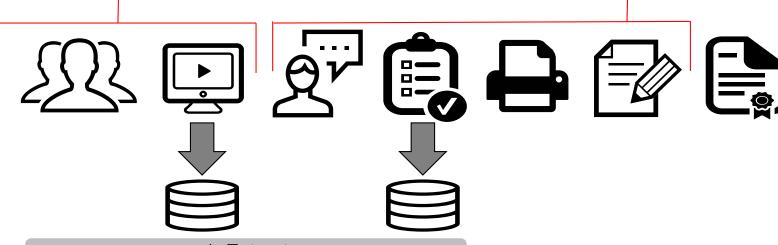
Certification Request

SIGSIF

Certification Analysis and Issuance



**Border Control** 



- 1. Extract
- 2. Refine
- 3. Transform paper certificate into e-CERT













**Production** 

Commercialization



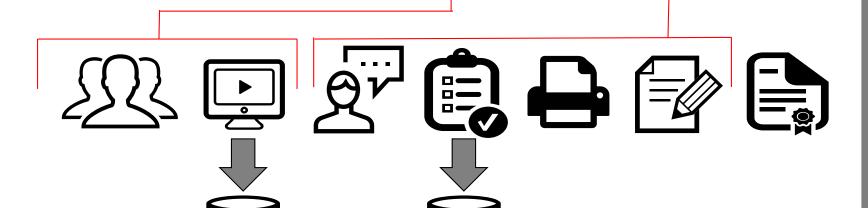
Certification Request



Certification Analysis and Issuance



**Border Control** 



- 1. Extract
- 2. Refine
- 3. Transform paper certificate into e-CERT

4. Send to Brazilian Single Window













#### **IMPORTANT!!**

#### **EXPORTERS MUST BE UPDATED ABOUT:**

- Issuance of the e-CERT
- Receiving by the Importing Authority
- Acceptance or Rejection/Motives by the Importing Authority



2. Refine

3. Transform paper certificate into e-CERT

4. Send to Brazilian Single Window











**Border Control** 

## **FUTURE**













ISSUANCE: How to extract / collect it?

Private Sector ERP (PPC+Sales systems)

**DPROD: DATA REUSE CONCEPT** 

**Production** 

Commercialization

Certification Request

Certification Analysis and Issuance

**Border Control** 











Private Sector ERP (PPC+Sales systems)

**Production** Commercialization **DPROD: DATA REUSE CONCEPT** 

Certification Request

Certification Analysis and Issuance



**Border Control** 







**Extract Structured Data** 

Animal T&T and Product T&T Standards

No refinement needed





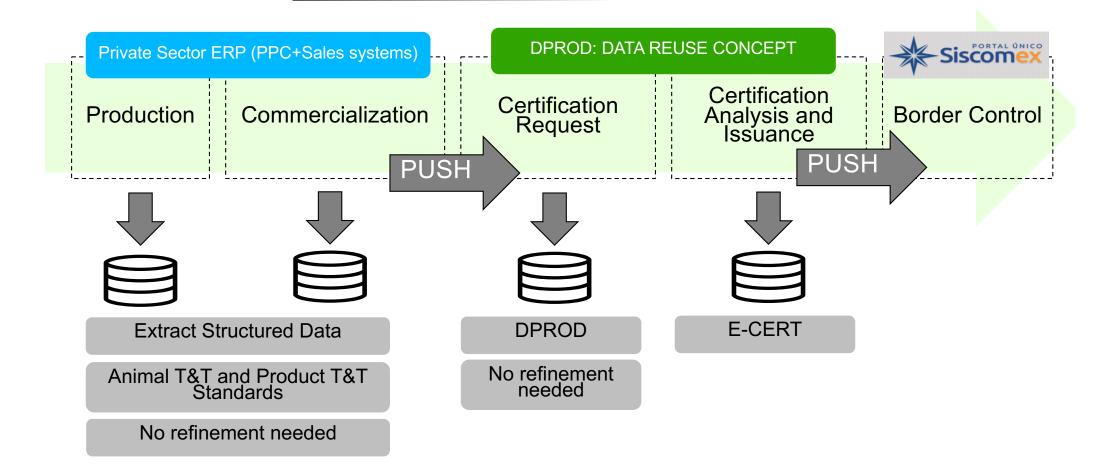








ISSUANCE: How to extract / collect it?















### THANK YOU!!!!

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fernanda.michalski@agro.gov.br

vidal.melo@usp.br











