



SEVESO REPORTING: eSPIRS Data Model

Seveso Community of Practice
Webinar, Copenhagen
17 April 2024



Housekeeping rules for participants

**No
recording**



The workshop is **not** being recorded

**Keep your
camera on**



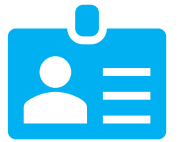
Feel free to keep your **camera on** but with your microphone muted – unless you wish to speak.

**We want
to hear
from you**



Raise your hand if you wish to speak.
Or share your comments, questions and insights **in the chat**.

**Your name
in TEAMS**



In chat messages, **please type your name first**, so we know who you are.

Technical difficulties? Send a message through the chat, or email to Seveso.helpdesk@eea.europa.eu



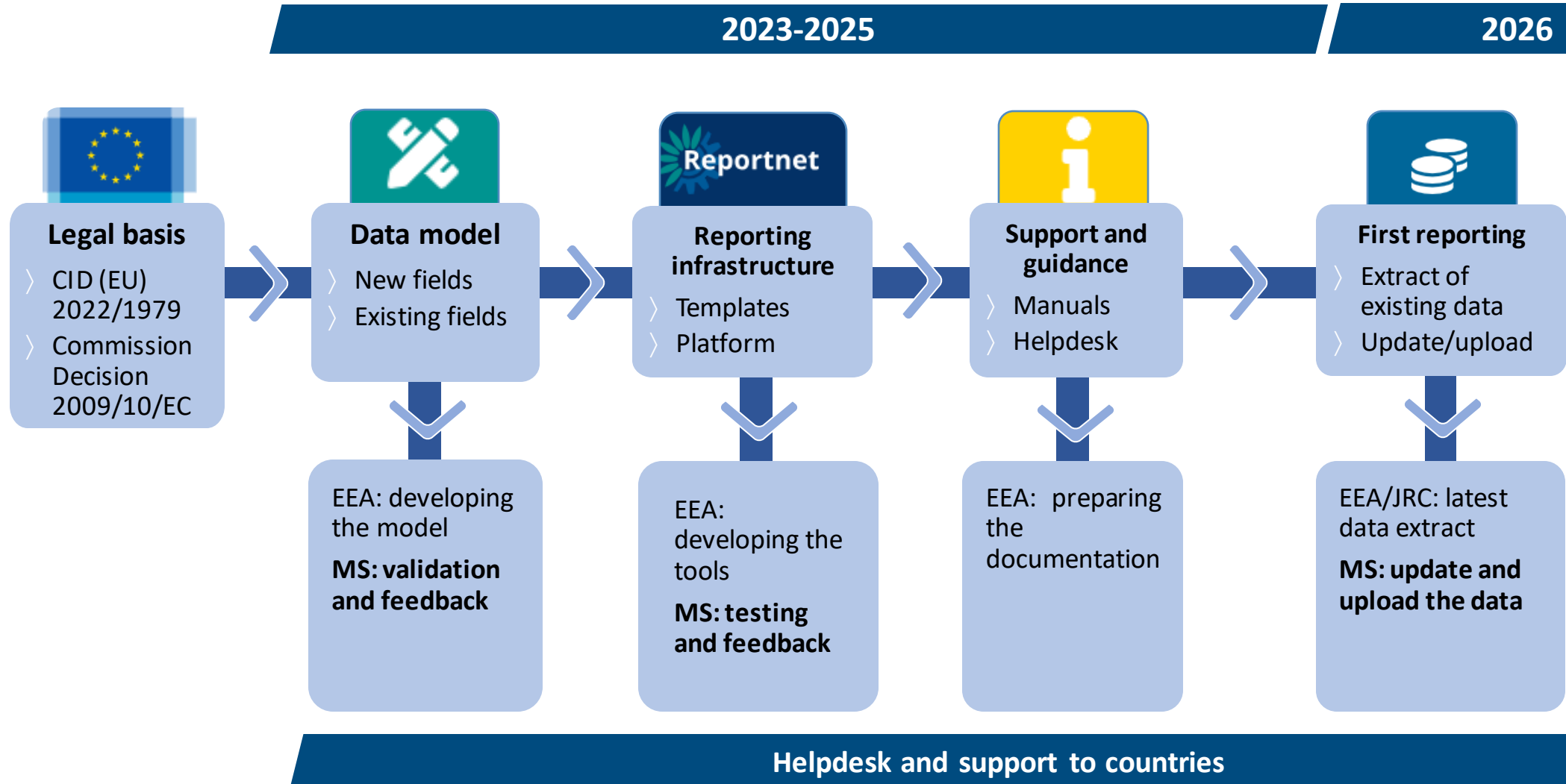
Aims of this webinar

- › Present the latest version of the eSPIRS data model
- › Discuss the feedback received from the countries
- › Introduce INSPIRE identifiers and links with EURegistry
- › Collect additional feedback
- › Next steps

Background

- › Seveso Directive reporting requirements
 - › Establishment information
 - › Major accident information
- › New CID – New reporting framework
 - › JRC stops hosting by end of 2025
 - › EEA starts hosting from 2026

Process



Progress

- › In 2023
 - › Analysis of CIDs
 - › Analysis existing JRC eSPIRS and eMARS platforms
 - › Initial drafting of data model specifications

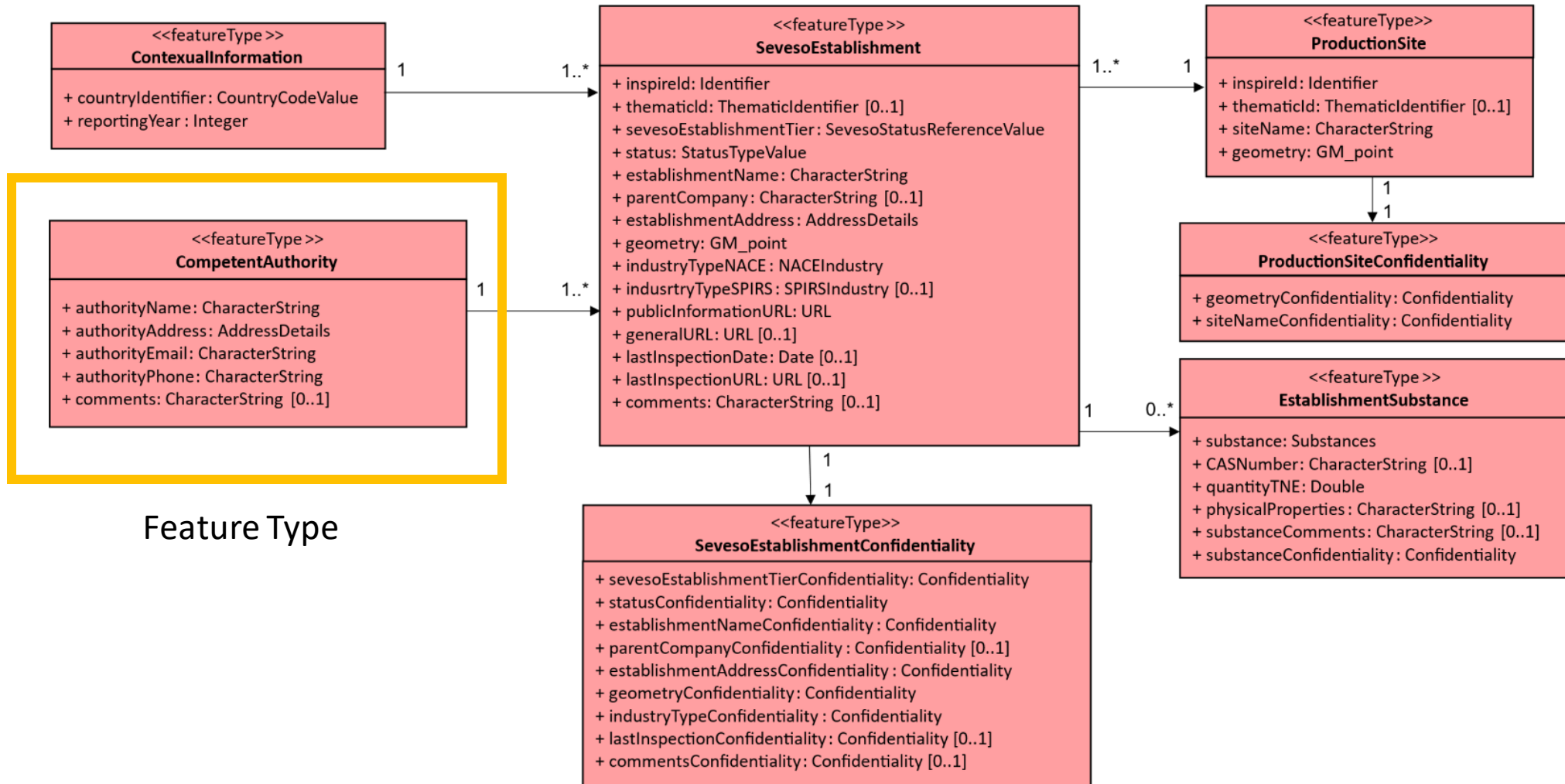
- › In 2024
 - › First draft of eSPIRS data model
 - › Feedback on data model from the Community of practice

eSPIRS data model – Feedback from Countries

- › Comments from eight countries
 - › Two bilateral meetings
 - › Six provided written feedback
- › Most commented feature: Sites
- › Many comments not directly related to the data model
 - › File format for reporting
 - › Reporting procedures
 - › Establishment lifecycle
 - › Links to other reporting obligations

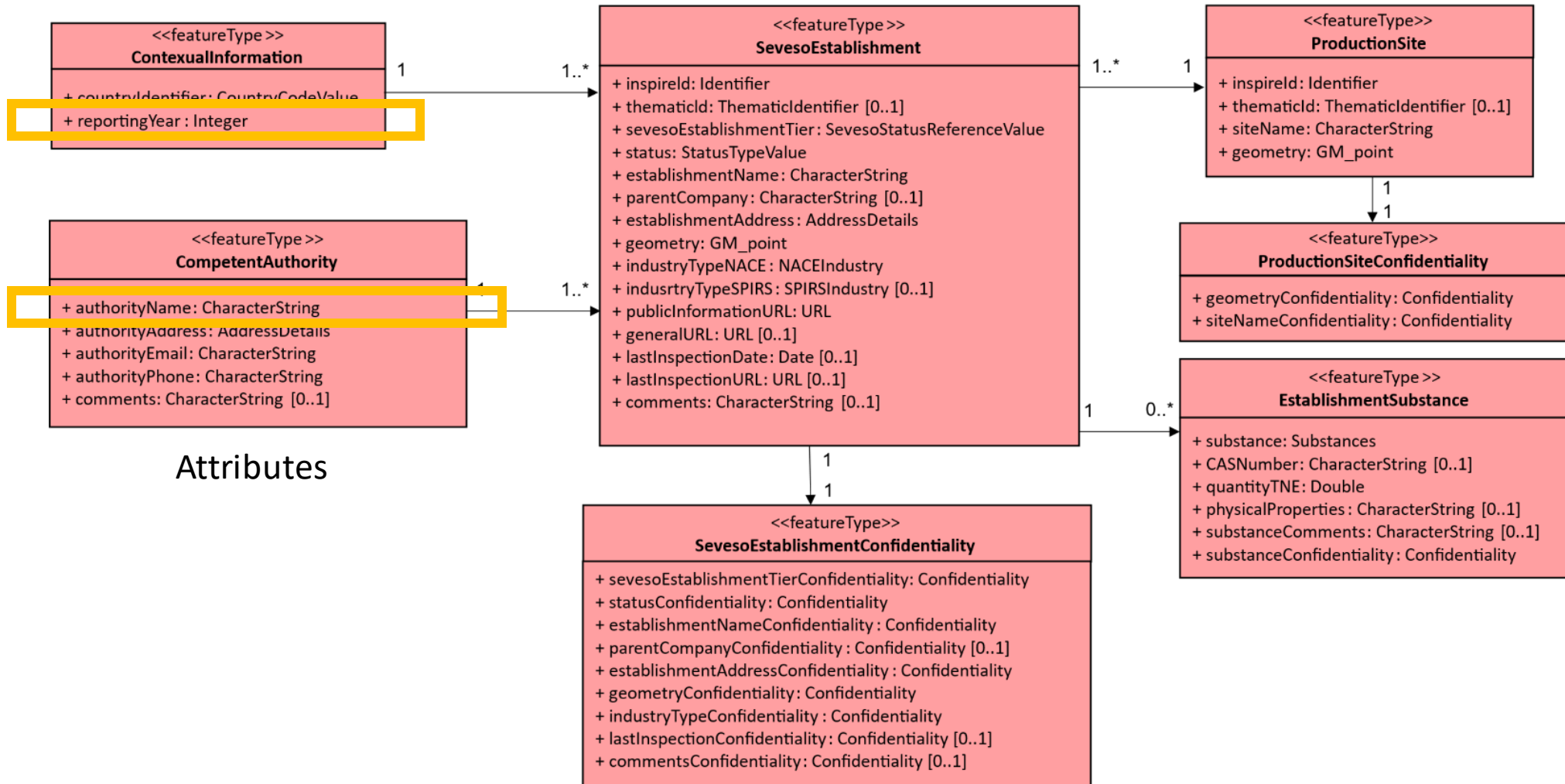
- › Based on CIDs, Seveso directive, existing platforms
- › Useful to :
 - identify data gaps
 - establish the type of each data element
 - define the relationship between different data elements
- › File formats and reporting procedures will be discussed in the future

eSPIRS data model – UML Diagram



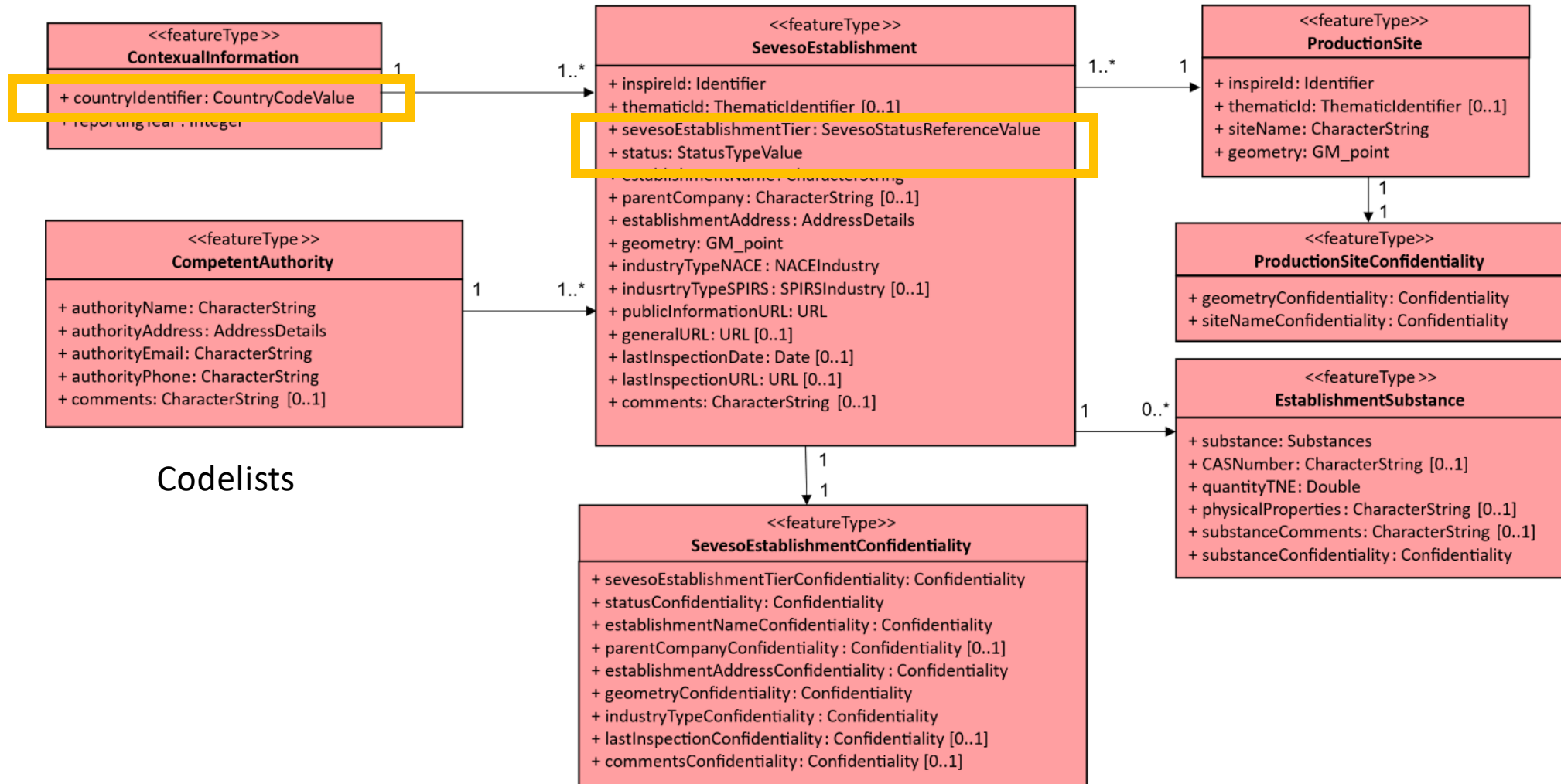
Feature Type

eSPIRS data model – UML Diagram Attributes

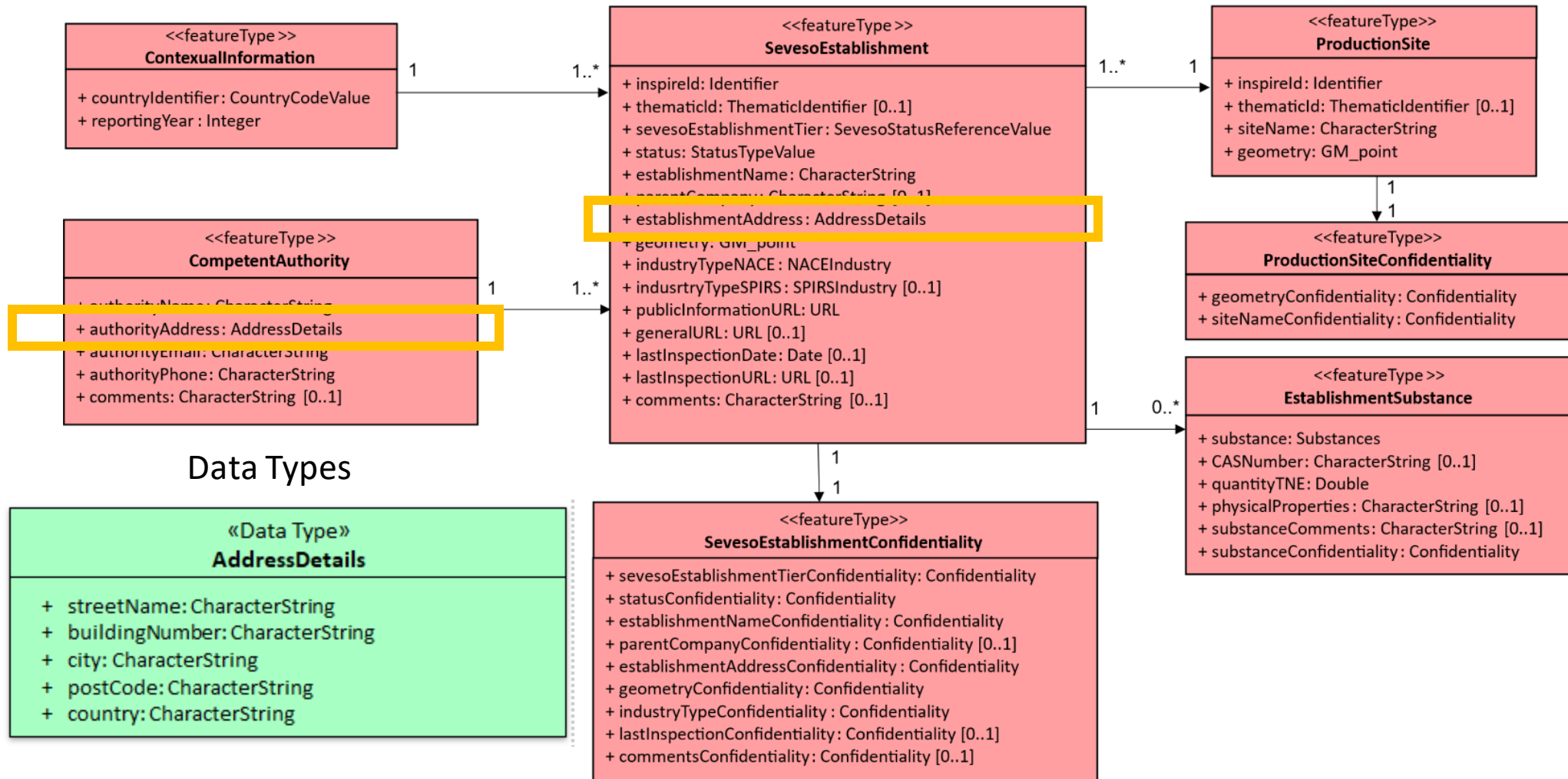


Attributes

eSPIRS data model – UML Diagram Codelists



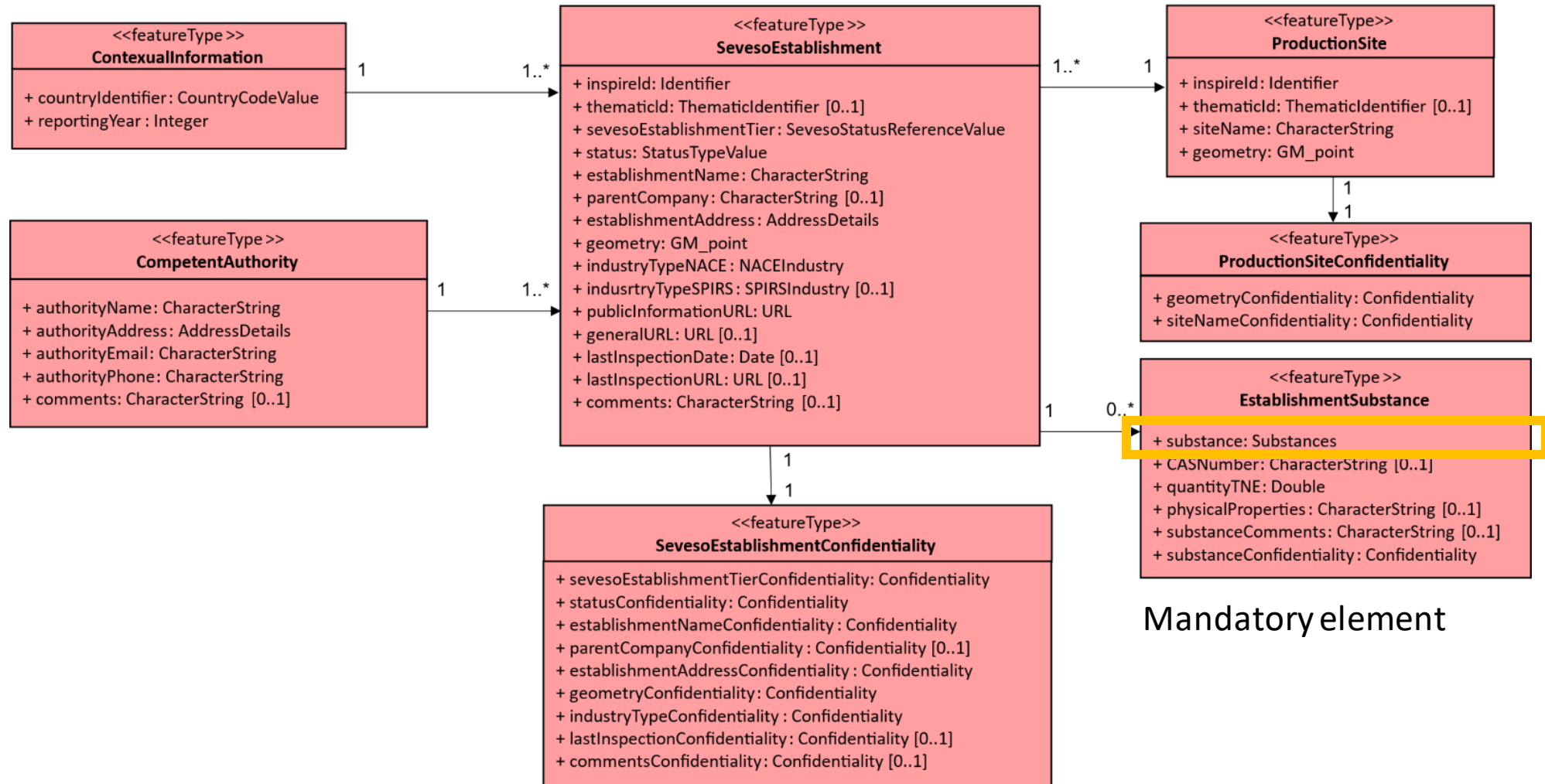
eSPIRS data model – UML Diagram Data Types



eSPIRS data model – UML Diagram Non Mandatory Element

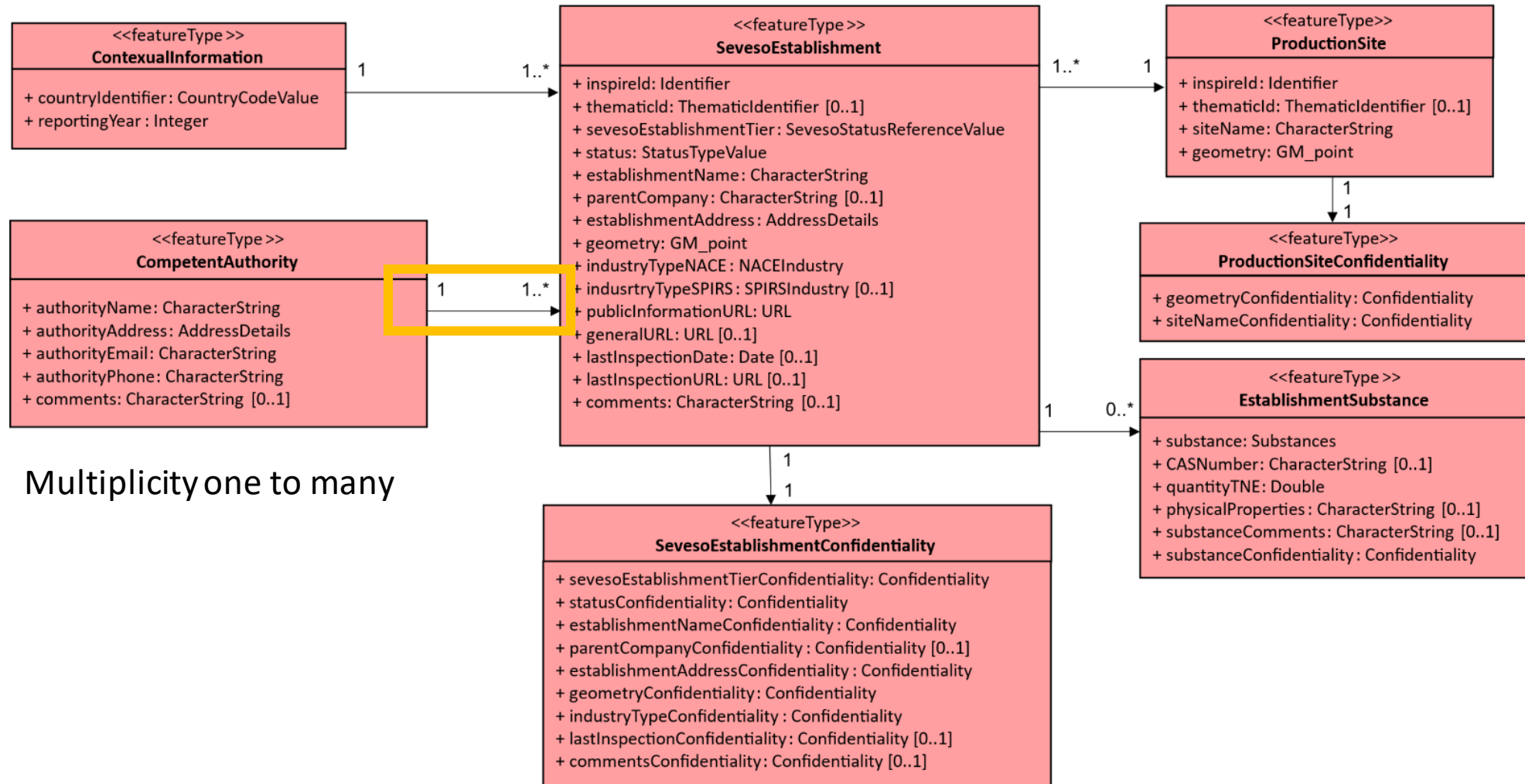


eSPIRS data model – UML Diagram Mandatory Element



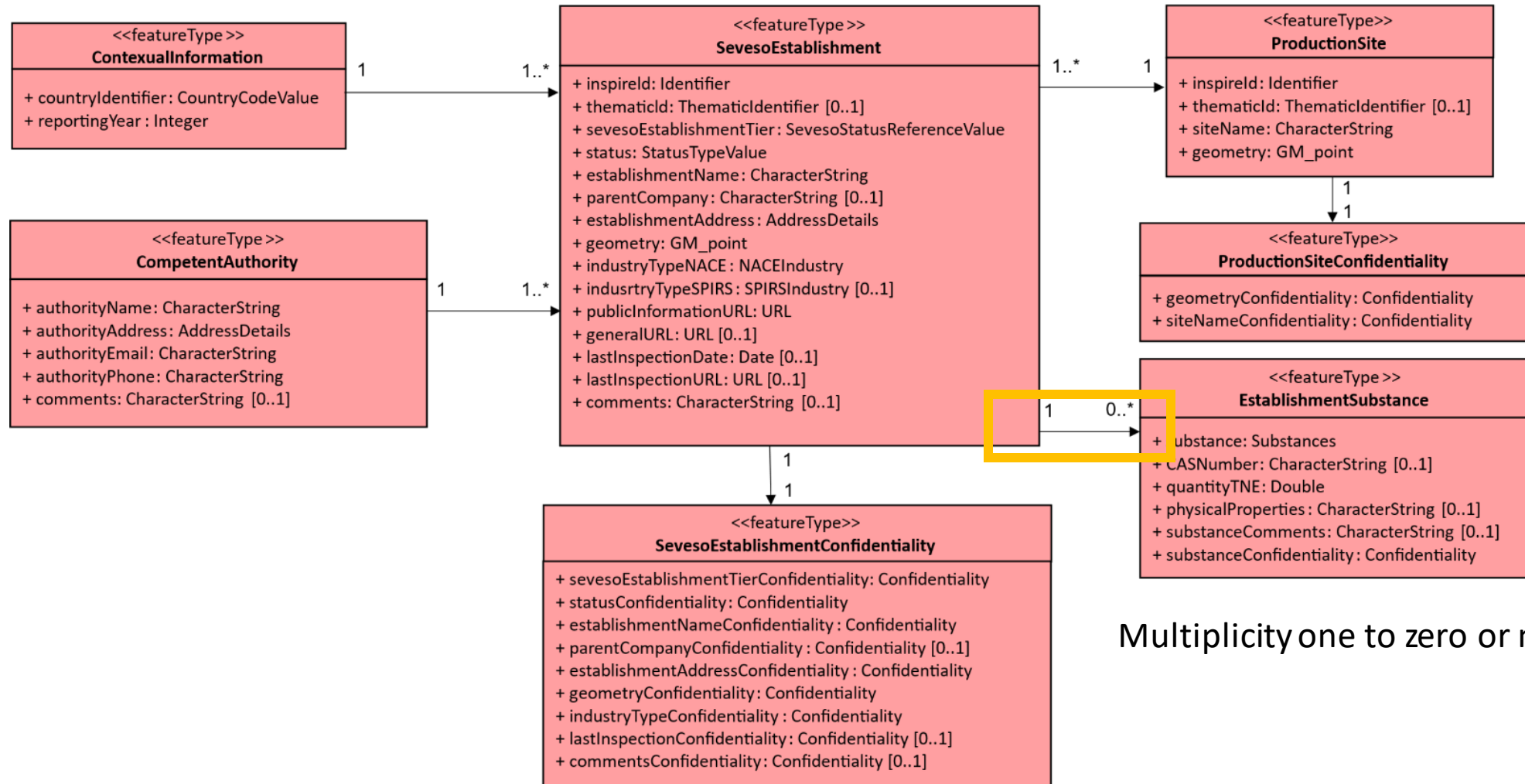
Mandatory element

eSPIRS data model – UML Diagram Multiplicity



Multiplicity one to many

eSPIRS data model – UML Diagram Multiplicity








Multiplicity one to zero or many

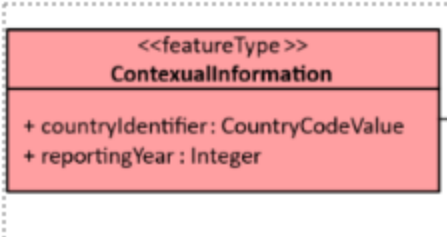
eSPIRS data model – New vs Old CID content

Contextual Information

CID 2014 /895/EU	CID 2022/1979
	1.1 Country Identifier
	1.2 Reporting Year

- > Metadata, one entry per delivery
- > No confidentiality
- > No comments from countries

	Match
	New element - information available/non mandatory
	New element - additional mandatory data
	New element - impact on implementation
	Not included in new CID



eSPIRS data model – New vs Old CID content

Reporting Competent Authority

CID 2014 /895/EU	CID 2022/1979	
2.1.a Reporting Competent Authority Name	2.1 Competent Authority Name	Match
2.1.e Reporting Competent Authority Country	2.2 Competent Authority Address - Country	Match
2.1.c Reporting Competent Authority City	2.2 Competent Authority Address - City	Match
2.1.b Reporting Competent Authority Address	2.2 Competent Authority Address - Street	Match
	2.2 Competent Authority Address - Building n.	New element - information available/non mandatory
2.1.d Reporting Competent Authority Post Code	2.2 Competent Authority Address - Postal Code	Match
	2.3 Competent Authority Email	New element - additional mandatory data
	2.3 Competent Phone Number	New element - additional mandatory data
2.1.f Comments	2.3 Comments	Match

- › One entry per delivery - info on the authority sending the data to the EEA
- › No confidentiality
- › Minor changes from old CID
- › No comments from countries



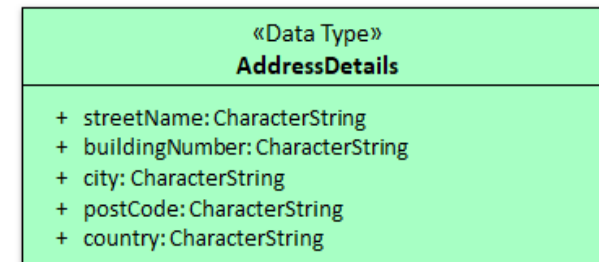
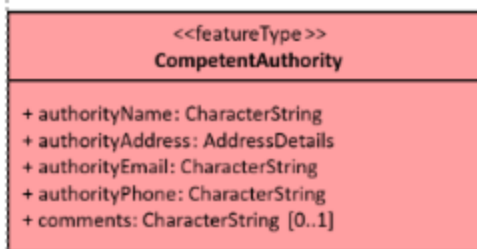
Match

New element - information available/non mandatory

New element - additional mandatory data

New element - impact on implementation

Not included in new CID








eSPIRS data model – New vs Old CID content

Information on Establishment 1/2

› More on the Ids later

CID 2014 /895/EU	CID 2022/1979	
	4.1 InspireId localId	Match
	4.1 InspireId namespace	Match
	4.2 ThematicId Identifier	Match
	4.2 ThematicId IdentifierSchema	Match
2.2a Seveso Status	4.3 Seveso establishment tier	Match
	4.4 Status	New element - additional mandatory data
2.2b Name of establishment	4.5 Name of the establishment	Match
2.2c Name of parent company	4.6 Name of the parent company	Match
2.2.d Personalized code		Not included in new CID
<i>Country is by default the reporting one</i>	4.7 Establishment Address - Country	New element - information available/non mandatory
2.3.a Establishment Location - City	4.7 Establishment Address - City	Match
2.3.a Establishment Location - Street	4.7 Establishment Address - Street	Match
2.3.a Establishment Location - Street number	4.7 Establishment Address - Building n.	Match
Post code is collected in eSPIRS	4.7 Establishment Address- Postal Code	Match
2.3.d Address comments		Not included in new CID
2.3.b Establishment Location Latitude	4.8 Geometry Latitude	Match
2.3.c Establishment Location Longitude	4.8 Geometry Longitude	Match

	Match
	New element - information available/non mandatory
	New element - additional mandatory data
	New element - impact on implementation
	Not included in new CID

```






<<featureType>>
SevesoEstablishment
+ inspireId: Identifier
+ thematicId: ThematicIdentifier [0..1]
+ sevesoEstablishmentTier: SevesoStatusReferenceValue
+ status: StatusTypeValue
+ establishmentName: CharacterString
+ parentCompany: CharacterString [0..1]
+ establishmentAddress: AddressDetails
+ geometry: GM_point
    
```

eSPIRS data model – New vs Old CID content

Information on Establishment 1/2

› Seveso Status is now the Tier

CID 2014 /895/EU	CID 2022/1979	
	4.1 InspireId localId	Match
	4.1 InspireId namespace	Match
	4.2 ThematicId Identifier	Match
	4.2 ThematicId IdentifierSchema	Match
2.2a Seveso Status	4.3 Seveso establishment tier	New element - additional mandatory data
	4.4 Status	New element - impact on implementation
2.2b Name of establishment	4.5 Name of the establishment	Match
2.2c Name of parent company	4.6 Name of the parent company	Match
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2.3.a Establishment Location - City	4.7 Establishment Address - City	Match
2.3.a Establishment Location - Street	4.7 Establishment Address - Street	Match
2.3.a Establishment Location - Street number	4.7 Establishment Address - Building n.	Match
Post code is collected in eSPIRS	4.7 Establishment Address- Postal Code	Match
2.3.d Address comments		Not included in new CID
2.3.b Establishment Location Latitude	4.8 Geometry Latitude	Match
2.3.c Establishment Location Longitude	4.8 Geometry Longitude	Match

	Match
	New element - information available/non mandatory
	New element - additional mandatory data
	New element - impact on implementation
	Not included in new CID

```






<<featureType>>
SevesoEstablishment
+ inspireId: Identifier
+ thematicId: ThematicIdIdentifier [0..1]
+ sevesoEstablishmentTier: SevesoStatusReferenceValue
+ status: StatusTypeValue
+ establishmentName: CharacterString
+ parentCompany: CharacterString [0..1]
+ establishmentAddress: AddressDetails
+ geometry: GM_point
    
```

eSPIRS data model – New vs Old CID content

Information on Establishment 1/2

- › Operational status of the establishment (functional, disused, decommissioned)
- › Connected to EURegistry
- › Comment on relevance to lifecycle and reporting

CID 2014 /895/EU	CID 2022/1979	
	4.1 InspireId localId	Match
	4.1 InspireId namespace	Match
	4.2 ThematicId Identifier	Match
	4.2 ThematicId IdentifierSchema	Match
2.2a Seveso Status	4.3 Seveso establishment tier	Match
	4.4 Status	New element - additional mandatory data
2.2b Name of establishment	4.5 Name of the establishment	Match
2.2c Name of parent company	4.6 Name of the parent company	Match
2.2.d Personalized code		Not included in new CID
<i>Country is by default the reporting one</i>	4.7 Establishment Address - Country	New element - information available/non mandatory
2.3.a Establishment Location - City	4.7 Establishment Address - City	Match
2.3.a Establishment Location - Street	4.7 Establishment Address - Street	Match
2.3.a Establishment Location - Street number	4.7 Establishment Address - Building n.	Match
Post code is collected in eSPIRS	4.7 Establishment Address- Postal Code	Match
2.3.d Address comments		Not included in new CID
2.3.b Establishment Location Latitude	4.8 Geometry Latitude	Match
2.3.c Establishment Location Longitude	4.8 Geometry Longitude	Match

	Match
	New element - information available/non mandatory
	New element - additional mandatory data
	New element - impact on implementation
	Not included in new CID

```

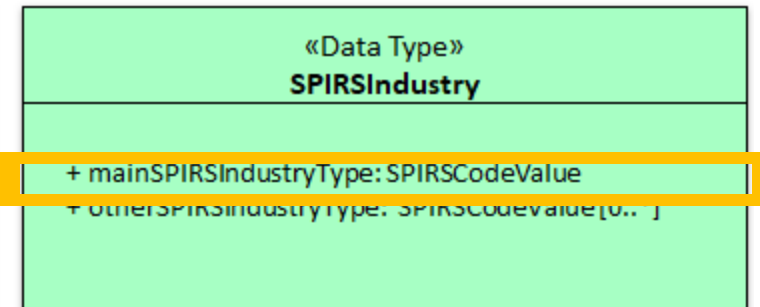
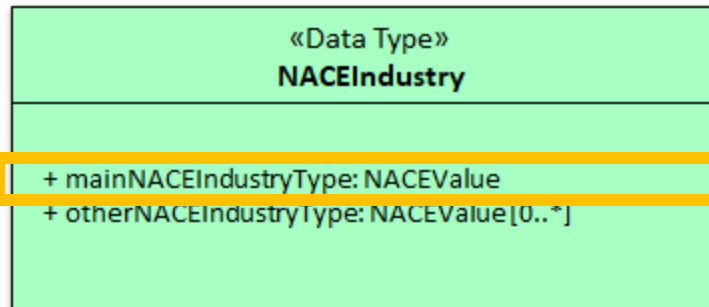
<<featureType>>
SevesoEstablishment
+ inspireId: Identifier
+ thematicId: ThematicIdentifier [0..1]
+ sevesoEstablishmentTier: SevesoStatusReferenceValue
+ status: StatusTypeValue
+ parentCompany: CharacterString [0..1]
+ establishmentAddress: AddressDetails
+ geometry: GM_point
    
```






eSPIRS data model – New vs Old CID content

Information on Establishment 2/2

- › Either SPIRS or NACE could be provided in previous CID
- › Now NACE is mandatory
- › Main Type is explicitly indicated in new data model
- › Comment on NACE updates

CID 2014 /895/EU	CID 2022/1979	
2.e Industry Type NACE	4.9 Industry Type NACE	Match
2.e Industry Type SPIRS	4.10 Industry Type SPIRS	Match
	4.11 Link to website info to population	New element - additional mandatory data
2.2.f Link to website with info on establishment	4.12 Link to generic website	Match
	4.13 Date of last inspection	New element - information available/non mandatory
	4.14 Link to inspection conclusions	New element - information available/non mandatory
2.2.i Establishment comments	4.15 Comments	Match
2.2.g EPRTR ID		Not included in new CID
2.2.g link to EPRTR website		Not included in new CID
2.2h IED ID		Not included in new CID
2.2h link to IED website		Not included in new CID



	Match
	New element - information available/non mandatory
	New element - additional mandatory data
	New element - impact on implementation
	Not included in new CID

eSPIRS data model – New vs Old CID content

Establishment Substances

CID 2014 /895/EU	CID 2022/1979	
2.4.a Substance common name, or hazard classification	5.1 Substance common name, or hazard classification	Match
2.4.b CAS Number (Auto-filled in eSPIRS)	5.2 CAS Number	Match
2.4.c Quantity	5.3 Quantity	Match
2.4.d Physical properties (Not implemented in eSPIRS)	5.4 Physical properties	New element - additional mandatory data
2.4.e Substance comments	5.5 Substance comments	Match

- › Was in 2014 CID but was not implemented in eSPIRS
- › Introduced as non-mandatory textual field
- › Could complicate reporting if physical state, pressure and temperature are specified as indicated in CID
- › Comment from country

Directive 2012/18/EU

Article 7

Notification

1. Member States shall require the operator to send a notification to the competent authority containing the following information:

(e) the quantity and physical form of the dangerous substance or substances concerned;

5.4	Physical properties	Storage conditions under which the substance is maintained, such as state (solid, liquid, gas), granularity (powder, pellets, etc.), pressure, temperature, etc.
-----	---------------------	--



Match

New element - information available/non mandatory

New element - additional mandatory data

New element - impact on implementation

Not included in new CID



eSPIRS data model – New vs Old CID content

Establishment Substances

CID 2014 /895/EU	CID 2022/1979	
2.4.a Substance common name, or hazard classification	5.1 Substance common name, or hazard classification	Match
2.4.b CAS Number (Auto-filled in eSPIRS)	5.2 CAS Number	Match
2.4.c Quantity	5.3 Quantity	Match
2.4.d Physical properties (Not implemented in eSPIRS)	5.4 Physical properties	New element - additional mandatory data
2.4.e Substance comments	5.5 Substance comments	Match

- > It is auto-filled in eSPIRS same functionality in the new system
- > No comment from country



Match

New element - information available/non mandatory

New element - additional mandatory data

New element - impact on implementation

Not included in new CID








eSPIRS data model – New vs Old CID content

**Information on
Production Site**

CID 2014 /895/EU	CID 2022/1979
	3.1 InspireId localId
	3.1 InspireId namespace
	3.2 ThematicId Identifier
	3.2 ThematicId IdentifierScheme
	3.3 Geometry Latitude
	3.3 Geometry Longitude
	3.4 Name of Production Site

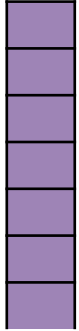
- > Production Site is a new requirement of 2022 CID
- > Many comments on how to define and report the Site

	Match
	New element - information available/non mandatory
	New element - additional mandatory data
	New element - impact on implementation
	Not included in new CID

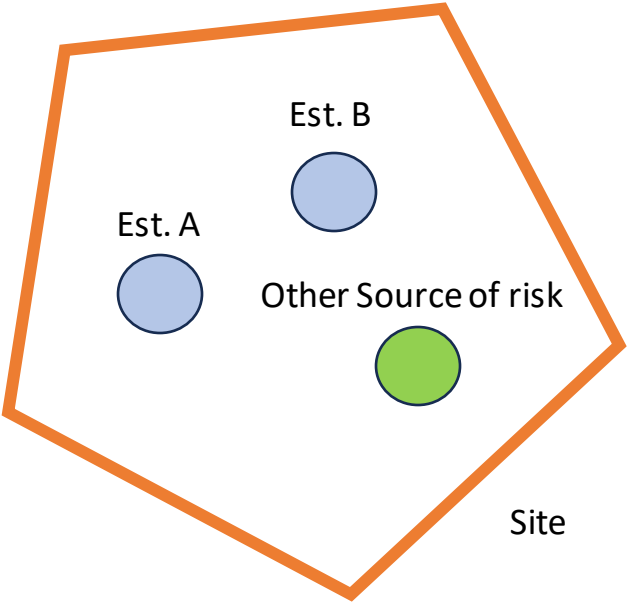
eSPIRS data model – New vs Old CID content

Information on Production Site

CID 2014 /895/EU	CID 2022/1979
	3.1 InspireId localId
	3.1 InspireId namespace
	3.2 ThematicId Identifier
	3.2 ThematicId IdentifierScheme
	3.3 Geometry Latitude
	3.3 Geometry Longitude
	3.4 Name of Production Site



- > Production Site is a new requirement of 2022 CID
- > Many comments on how to define and report the Site

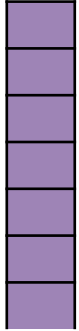


	Match
	New element - information available/non mandatory
	New element - additional mandatory data
	New element - impact on implementation
	Not included in new CID

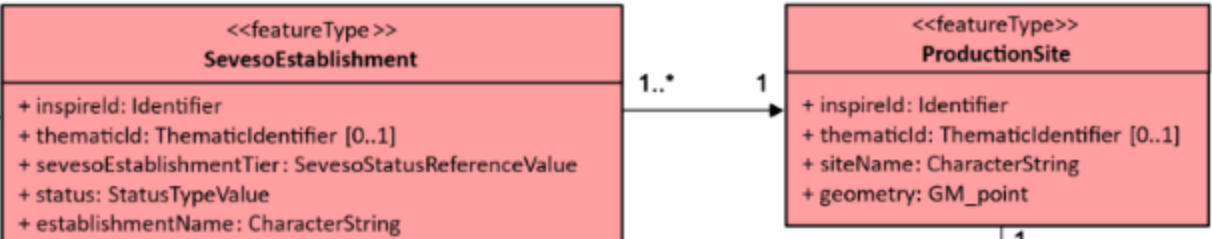
eSPIRS data model – New vs Old CID content

Information on Production Site

CID 2014 /895/EU	CID 2022/1979
	3.1 InspireId localId
	3.1 InspireId namespace
	3.2 ThematicId Identifier
	3.2 ThematicId IdentifierScheme
	3.3 Geometry Latitude
	3.3 Geometry Longitude
	3.4 Name of Production Site

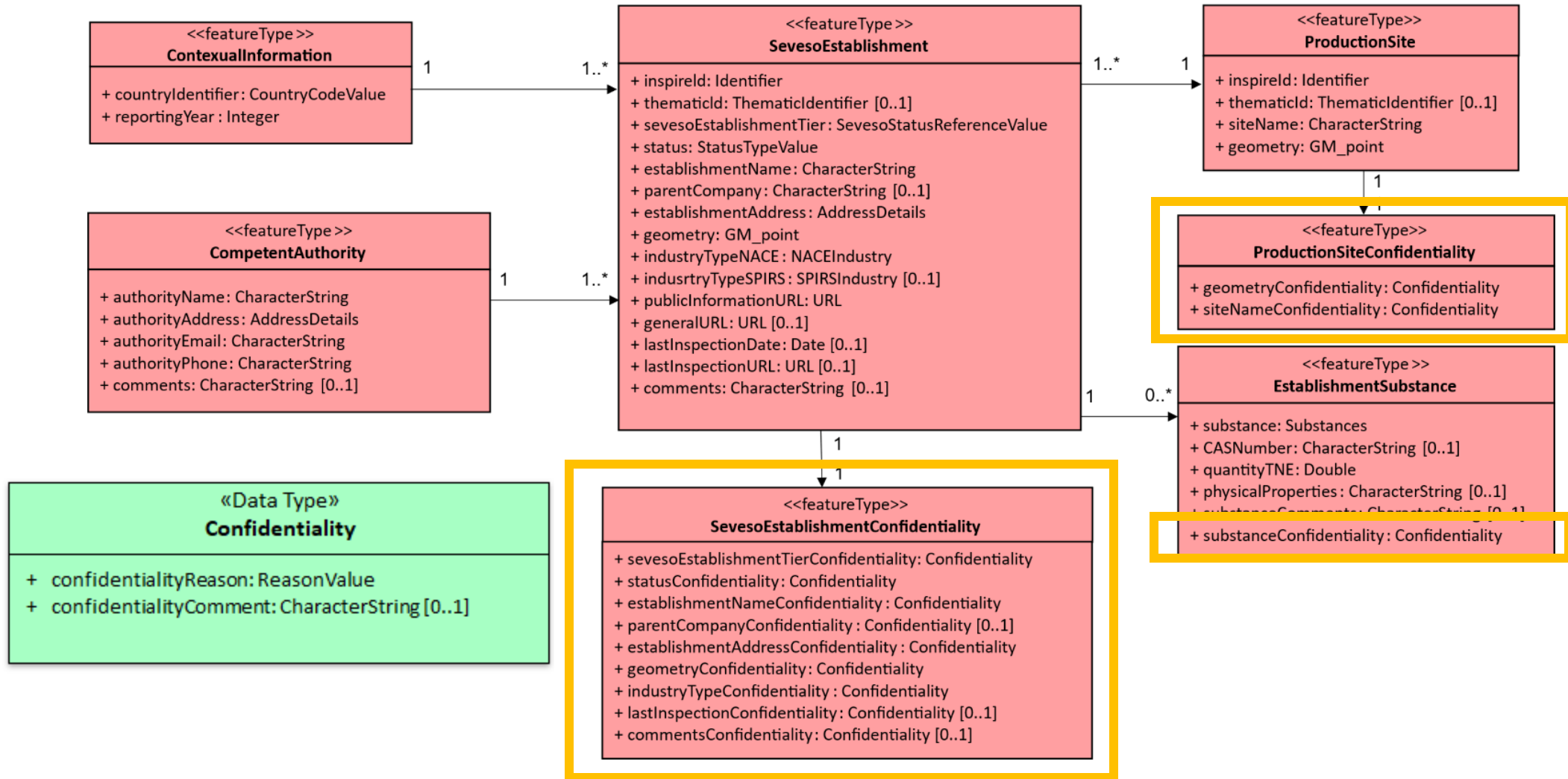


- > Production Site is a new requirement of 2022 CID
- > Many comments on how to define and report the Site



	Match
	New element - information available/non mandatory
	New element - additional mandatory data
	New element - impact on implementation
	Not included in new CID

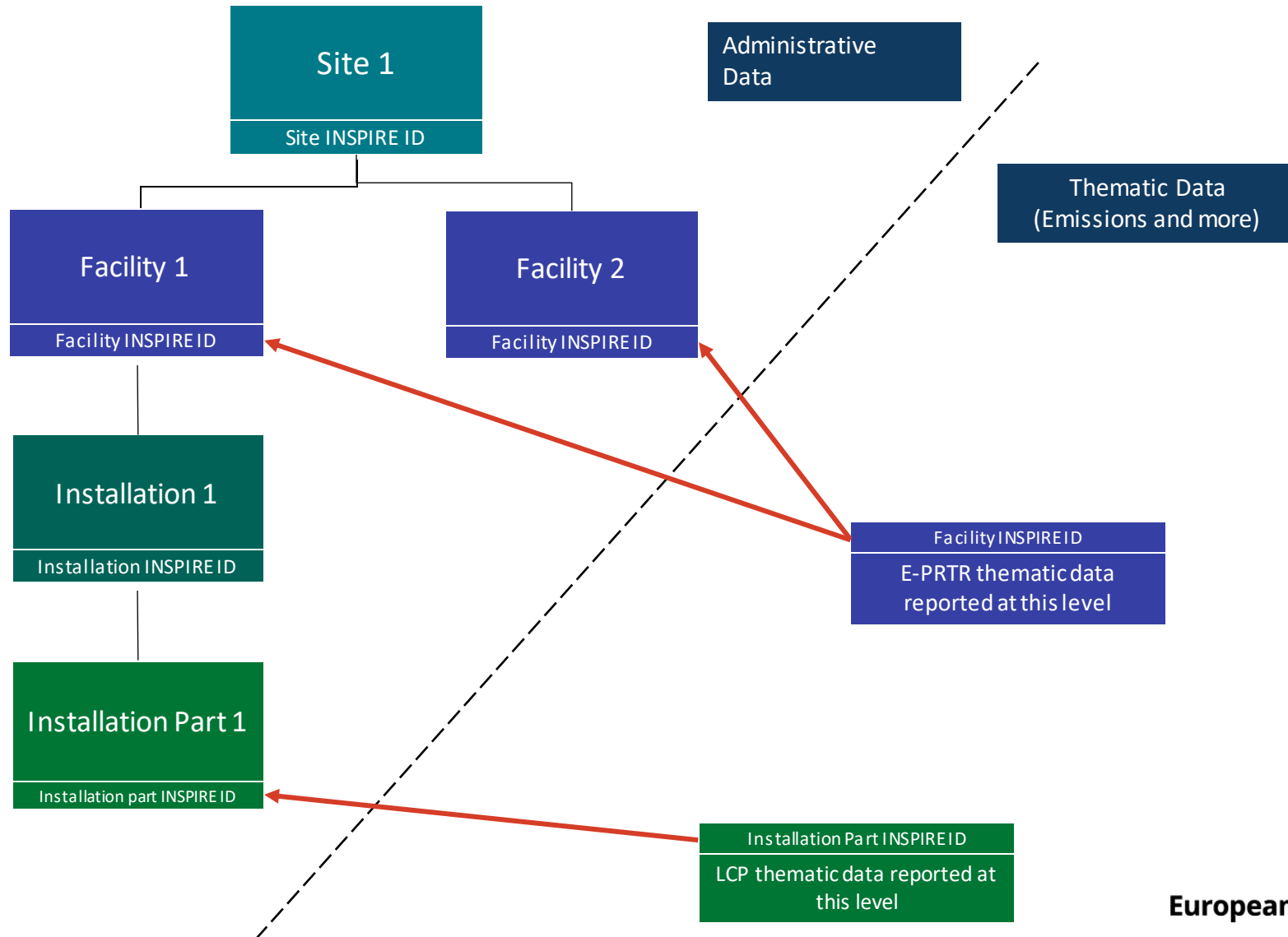
eSPIRS data model – Data specification Confidentiality



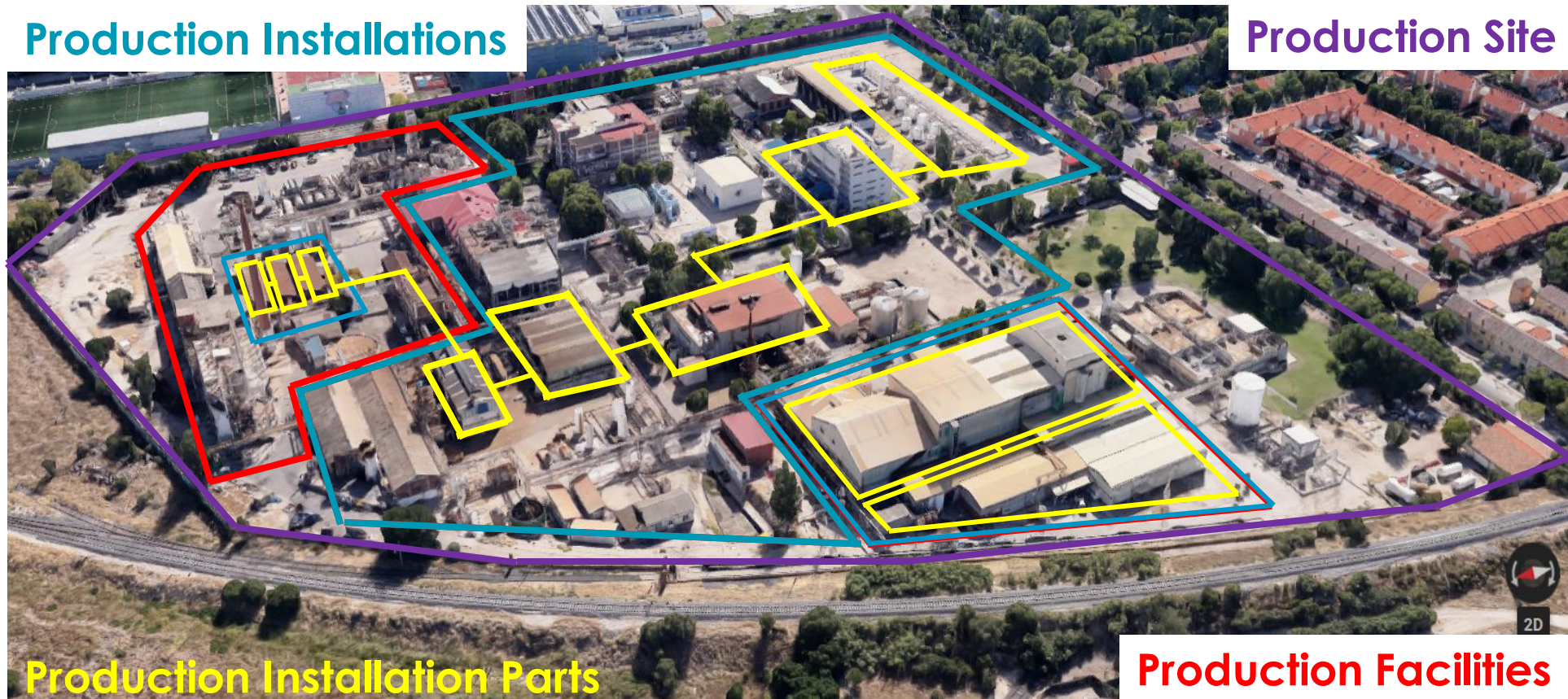
Questions? Comments?

- › 5 minutes break
- › Next topic after the break:
 - › Introducing INSPIRE identifiers and links with EURegistry

EUReg Reference database + thematic reporting

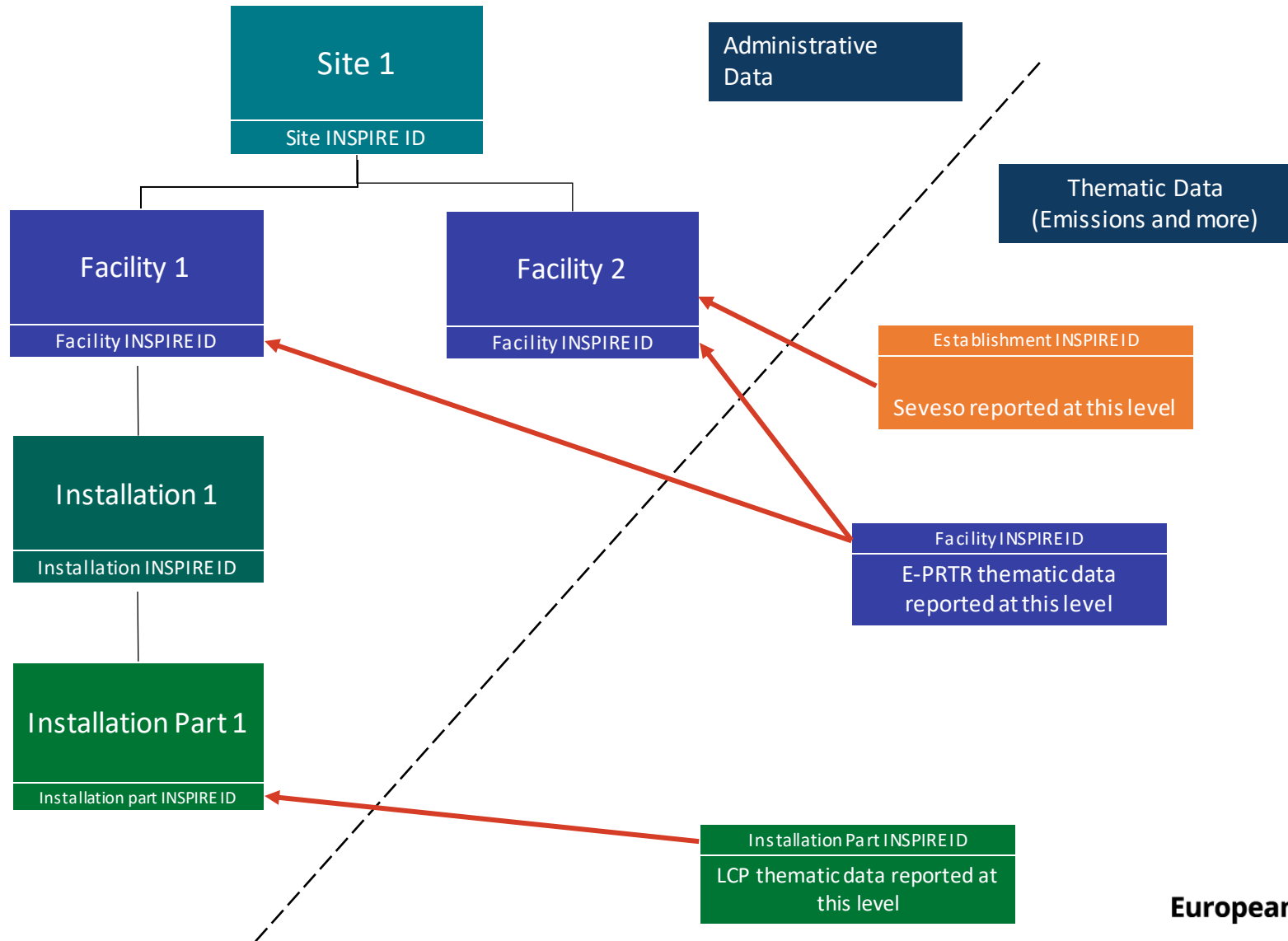


The EU Registry - Concept



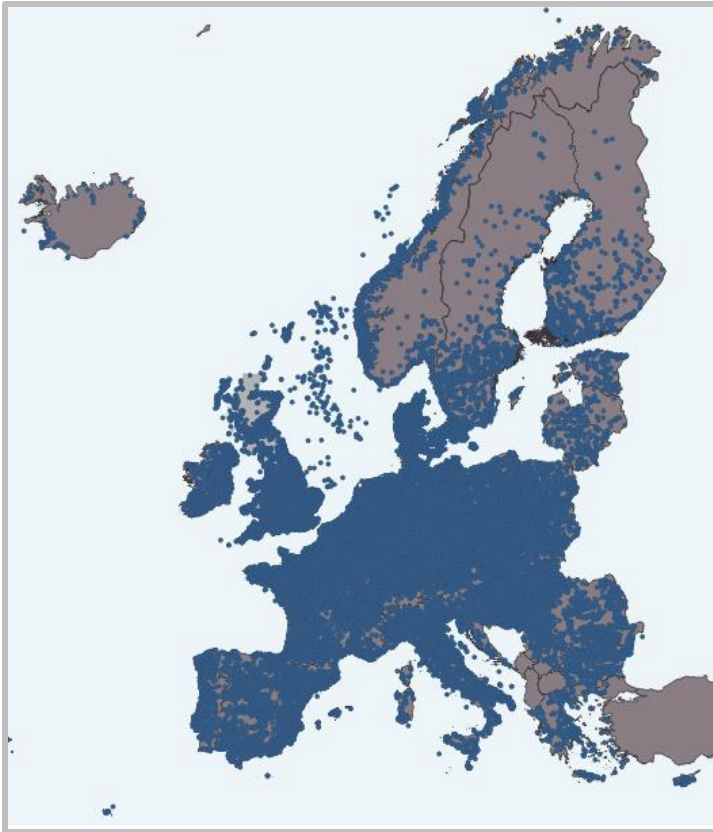
[Full definition in the EU Registry Manual For Reporters](#)

EUReg Reference database + thematic reporting Seveso



EURegistry Facility and Seveso Establishments

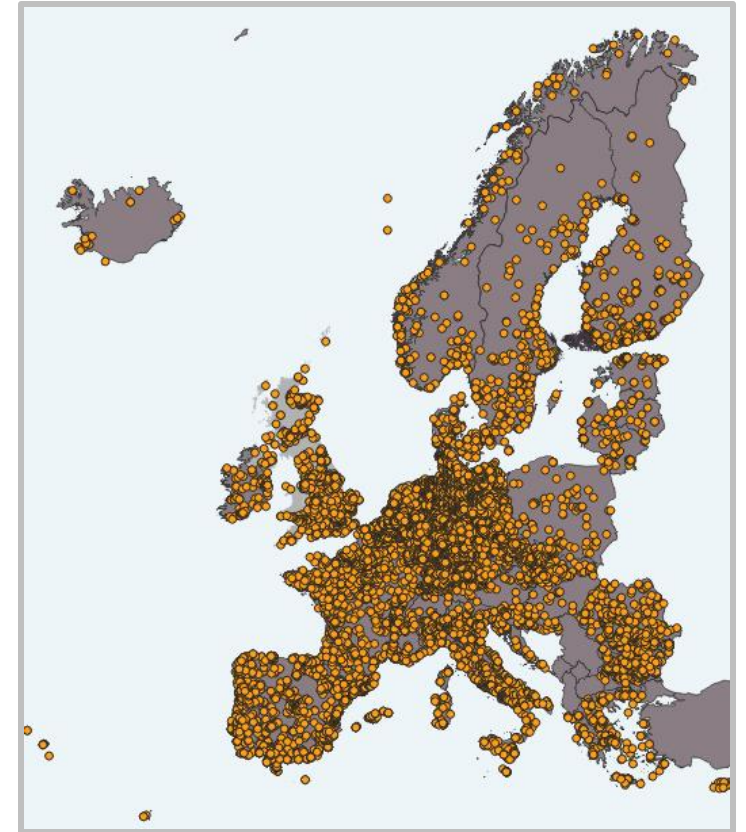
Facilities



100k records

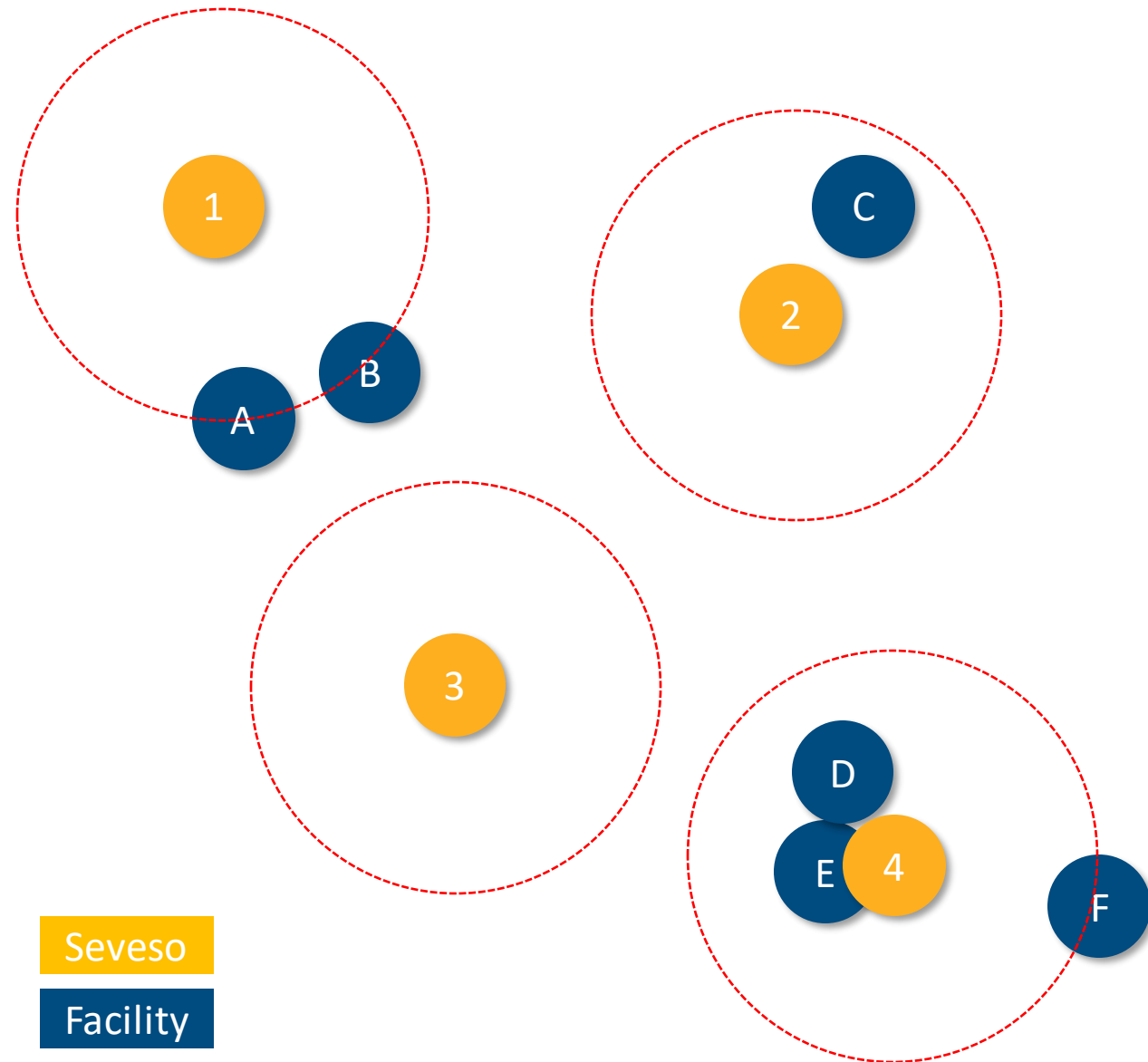
Use coordinates to “match” Seveso establishment with existing EURegistry Production Facility

Establishments



10k records

EURegistry Facility and Seveso Establishments



Seveso Establishment	Candidate EUReg Facility	Distance [m]	Match?
1	A		Yes
1	B		No
2	C		No
3			
4	D		No
4	E		Yes
4	F		No

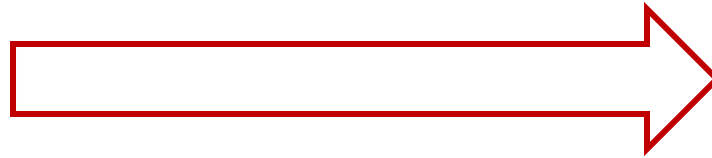
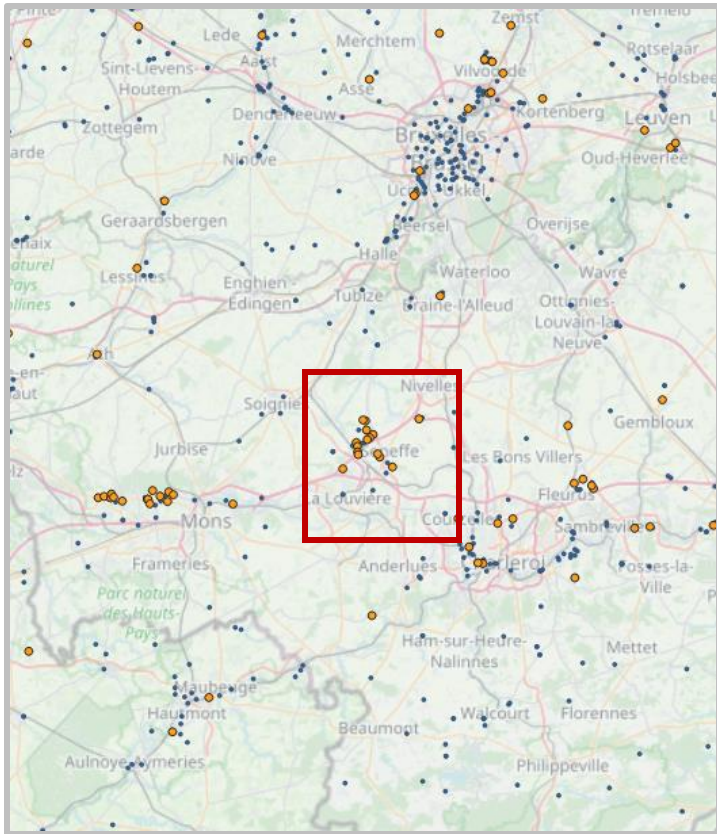
EEA will provide the list of Seveso establishment with the candidate facilities and the distance

Seveso reporter will select the matching combination

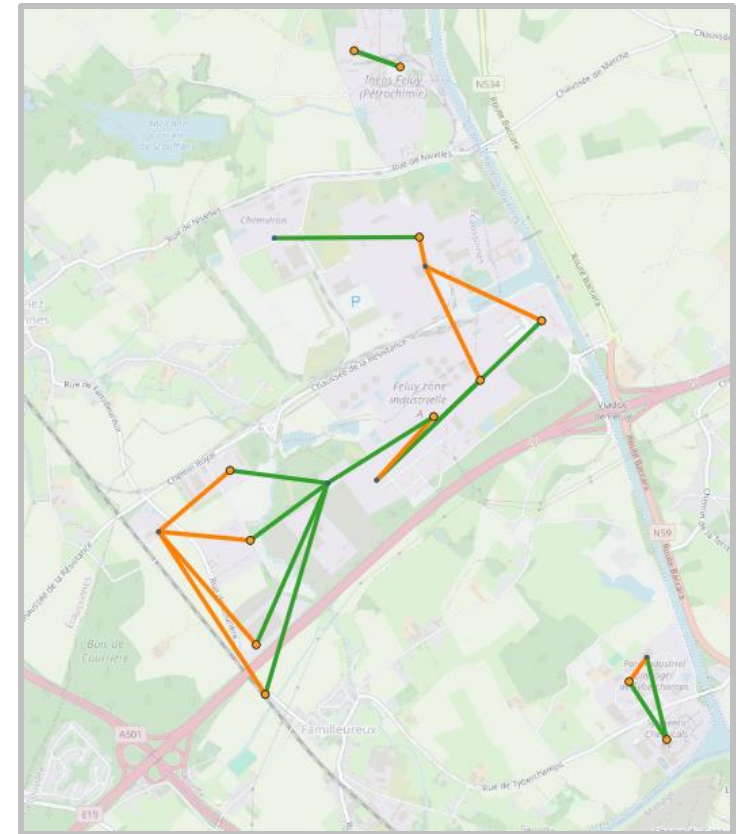


EURegistry Facility and Seveso Establishments

Links

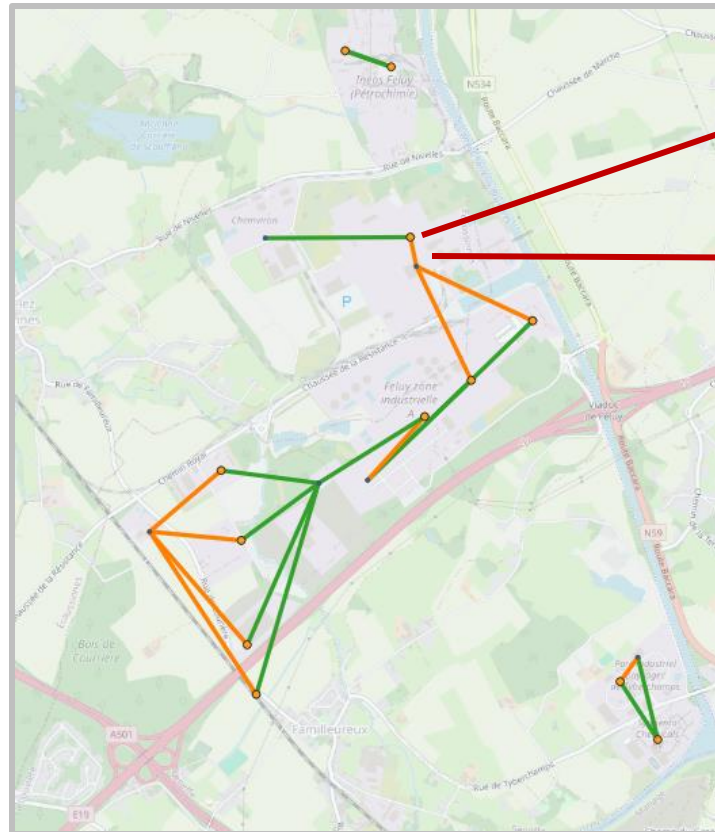


Links Detail



EURegistry Facility and Seveso Establishments

Links Detail

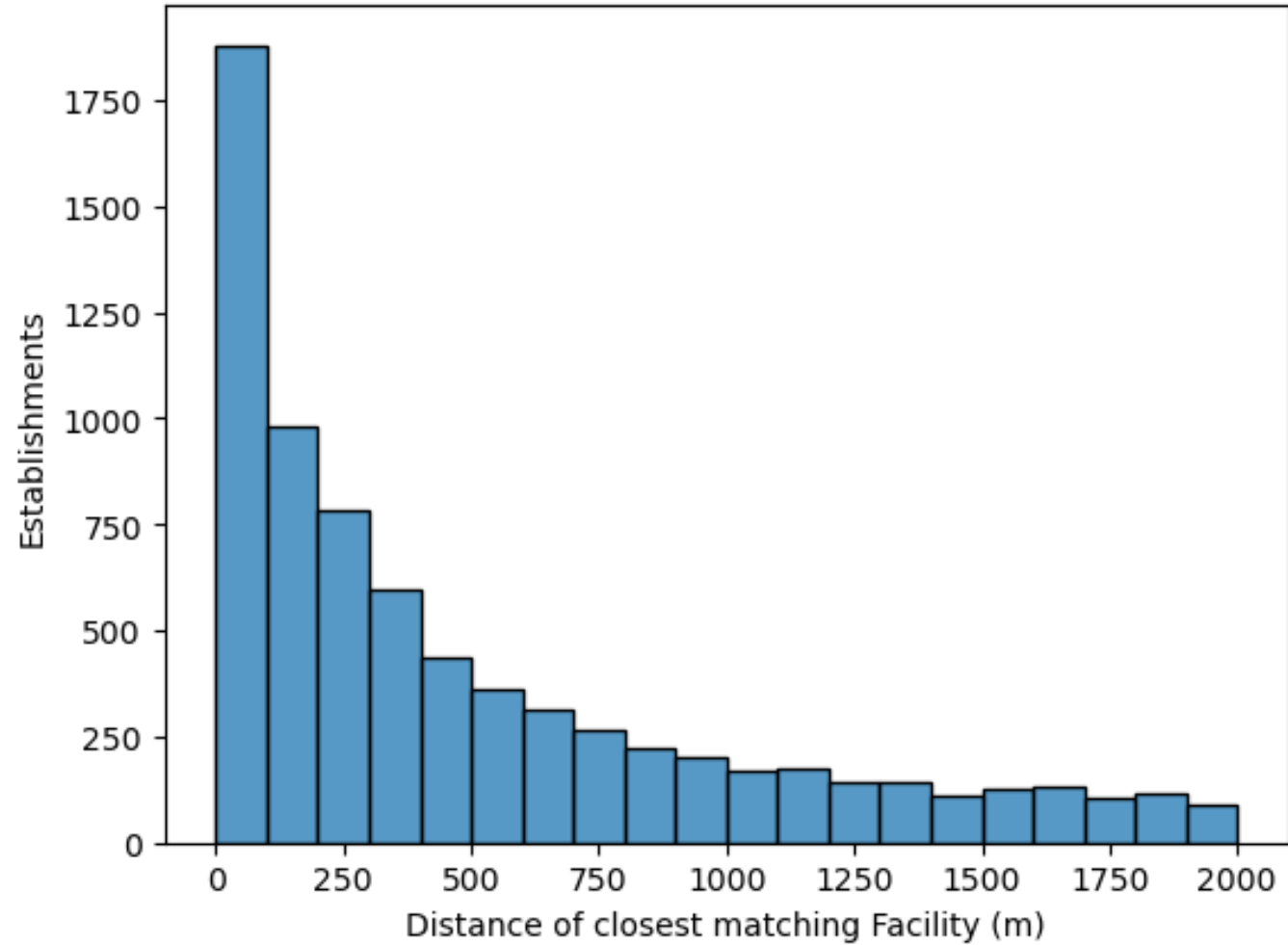


TOTALENERGIES MARKETING BELGIUM

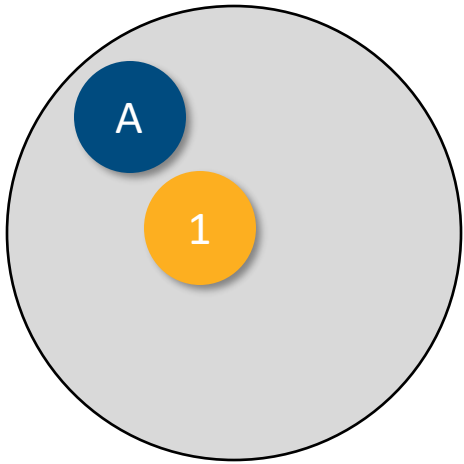
TotalEnergies Petrochemicals Feluy SA
INSPIREID: BE.WA/047010000.FACILITY



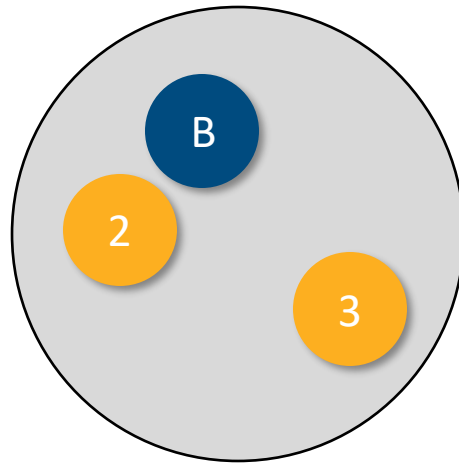
EURegistry Facility and Seveso Establishments - Feasibility



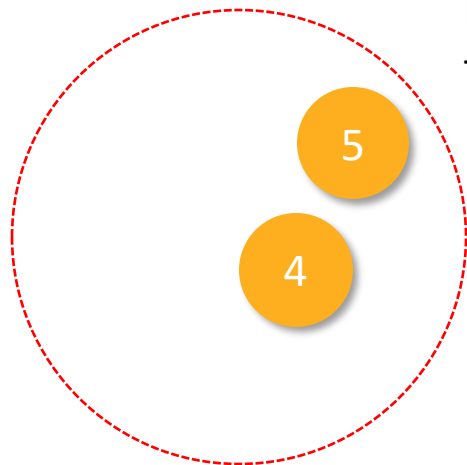
EURegistry Facility and Seveso Establishments - Scenarios



Establishment matches facility
Used Facility InspireID, Name, Status, Coordinates,
Confidentiality..., Site data obtained from the Facility Site



Establishment not matching facility but close to one that matches
Define new InspireIDs for 3, Site data obtained from nearby
matching Facility B Site



Establishments not matching facilities but located close to each other
Define InspireIDs for Establishment and Site, coordinates and name
for the site

Establishment

Facility

Site



eSPIRS data model – Inspire Identifier

Information on Establishment

CID 2014 /895/EU	CID 2022/1979		
	4.1 InspireId localId		
	4.1 InspireId namespace		
	4.2 ThematicId Identifier		
	4.2 ThematicId IdentifierSchema		
	4.3 Seveso establishment tier		
2.2a Seveso Status	4.4 Status		
2.2b Name of establishment	4.5 Name of the establishment		
2.2c Name of parent company	4.6 Name of the parent company		
2.2.d Personalized code			
<i>Country is by default the reporting one</i>	4.7 Establishment Address - Country		
2.3.a Establishment Location - City	4.7 Establishment Address - City		
2.3.a Establishment Location - Street	4.7 Establishment Address - Street		
2.3.a Establishment Location - Street number	4.7 Establishment Address - Building n.		
Post code is collected in eSPIRS	4.7 Establishment Address- Postal Code		
2.3.d Address comments			
2.3.b Establishment Location Latitude	4.8 Geometry Latitude		
2.3.c Establishment Location Longitude	4.8 Geometry Longitude		

eSPIRS data model – Inspire Identifier

- › External unique Identifier for INSPIRE spatial objects
- › Reference valid outside the scope of Seveso – can be used to link EURegistry
- › Unique within the INSPIRE domain
- › Consists in a Namespace and a LocalId
- › Stable

eSPIRS data model – Thematic Identifier

Information on Establishment

CID 2014 /895/EU	CID 2022/1979	
	4.1 InspireId localId	
	4.1 InspireId namespace	
	4.2 ThematicId Identifier	
	4.2 ThematicId IdentifierSchema	
	4.3 Seveso establishment tier	
2.2a Seveso Status	4.4 Status	
2.2b Name of establishment	4.5 Name of the establishment	
2.2c Name of parent company	4.6 Name of the parent company	
2.2.d Personalized code		
<i>Country is by default the reporting one</i>	4.7 Establishment Address - Country	
2.3.a Establishment Location - City	4.7 Establishment Address - City	
2.3.a Establishment Location - Street	4.7 Establishment Address - Street	
2.3.a Establishment Location - Street number	4.7 Establishment Address - Building n.	
Post code is collected in eSPIRS	4.7 Establishment Address- Postal Code	
2.3.d Address comments		
2.3.b Establishment Location Latitude	4.8 Geometry Latitude	
2.3.c Establishment Location Longitude	4.8 Geometry Longitude	

eSPIRS data model – Thematic Identifier

- › Similar to INSPIREId
- › Only works within the scope of the Seveso reporting
- › Unique within the Seveso reporting
- › Consists in a IdentifierScheme and an Identifier
- › Persistent in the Seveso reporting
- › Can be used to store a national identifier such as personalized identifier

Questions? Comments?

eSPIRS data model – Next steps

- › Finalise the data model document
- › Include the matching table
- › Upload /send the final version – to be used for next implementation steps

THANK YOU FOR YOUR ATTENTION



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European Environment Agency

