Data Modeling Report

EU Registry on Industrial Sites

Version 4.0 ● Proposed

Table of Contents

EU Registry

Package 'EURegistry - INSPIRE PF extension'

The EU Registry application schema imports and extends a modified version of the INSPIRE '*Production And Industrial Facilities - Core*' application schema (v4.0).
Find below changes implemented in the INSPIRE PF:

- '*pointGeometry*' --> multiplicity of the '*pointGeometry*' element has been changed from [0..1] to [1..1] both in the *ProductionInstallation* feature type and in the *ProductionInstallationPart* feature type
- '*status*' --> multiplicity of the 'status' element has been changed from [1..*] to [1..1] and stereotype is no more voidable. This has been made for the *Productionfacility*, the *ProductionInstallation* and the *ProductionInstallationPart* feature types
- '*Activity Complex import*': a modified version of the Activity Complex core is imported, in which the geometry of the Activity Complex is forced to be point.

All implemented changes do not break INSPIRE rules, since they operate on INSPIRE-allowed values (they are restrictions on the domain).

EU Registry data model diagram

GML diagram in package 'EUReg'

Fields for which no multiplicity is given, are supposed to be mandatory i.e. multiplicity = [1..1]
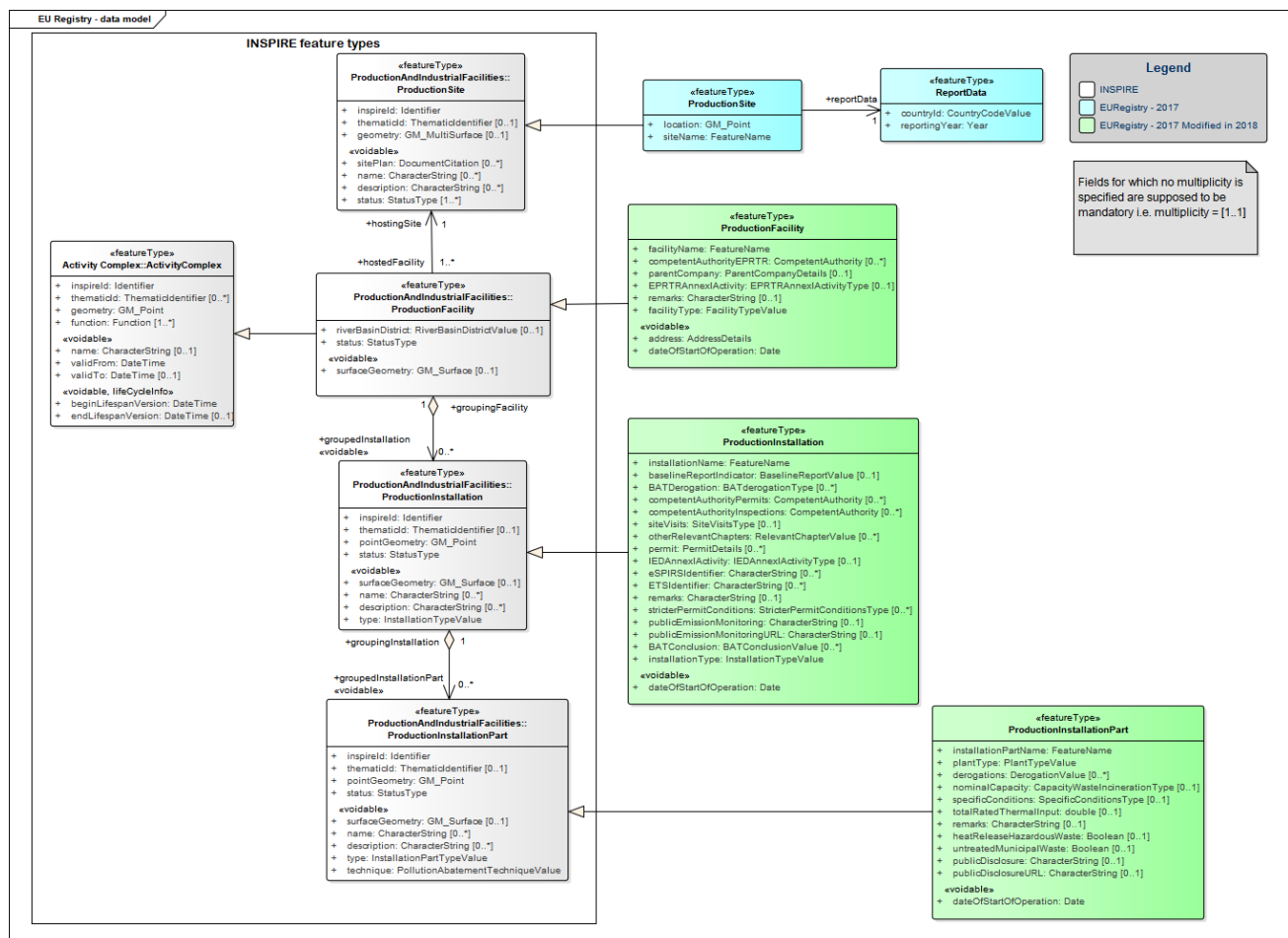

Figure 1: EU Registry data model

EU Registry data types diagram
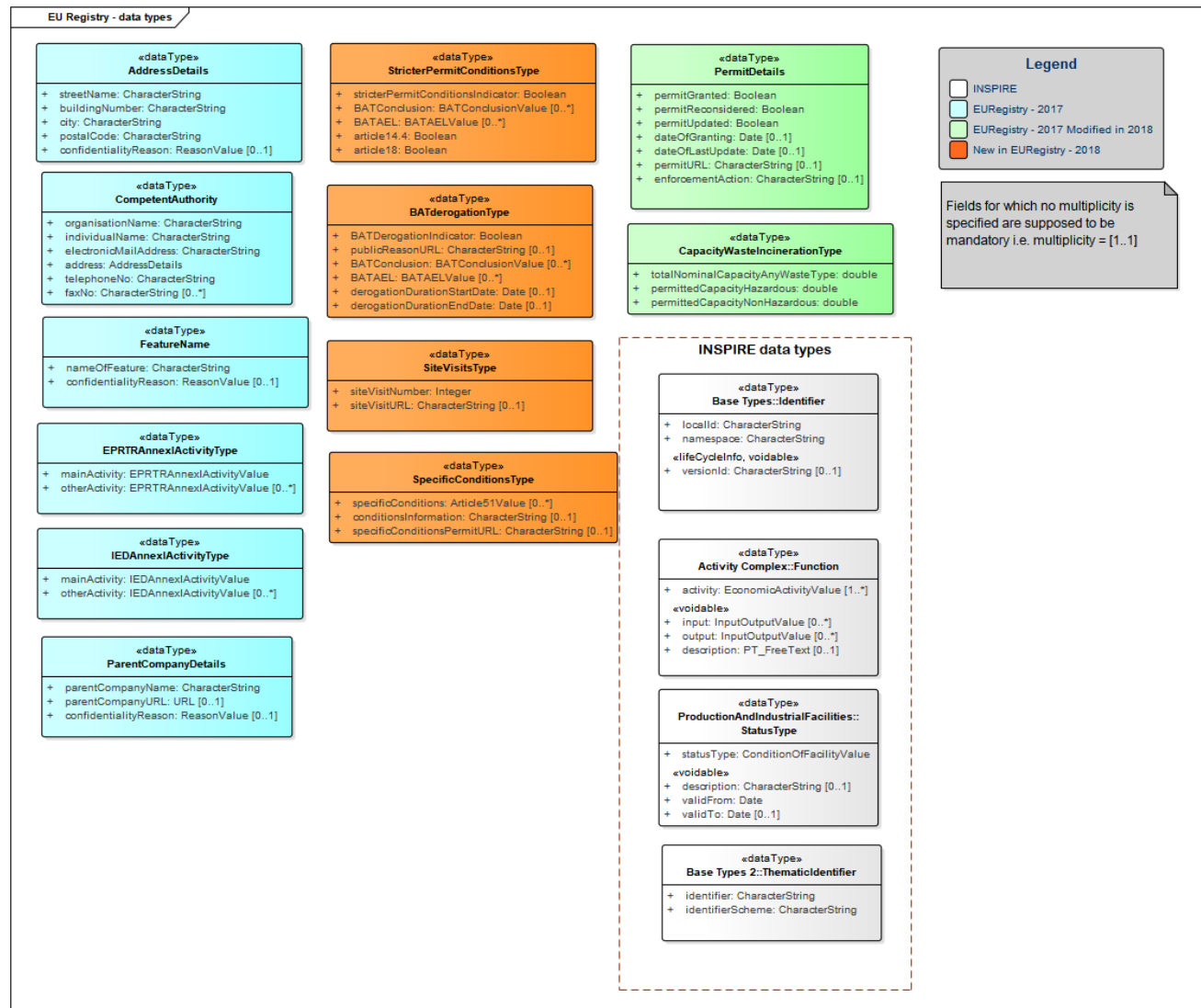
Class diagram in package 'EUReg'

Figure 2: EU Registry data types

EU Registry code lists diagram

Class diagram in package 'EUReg'
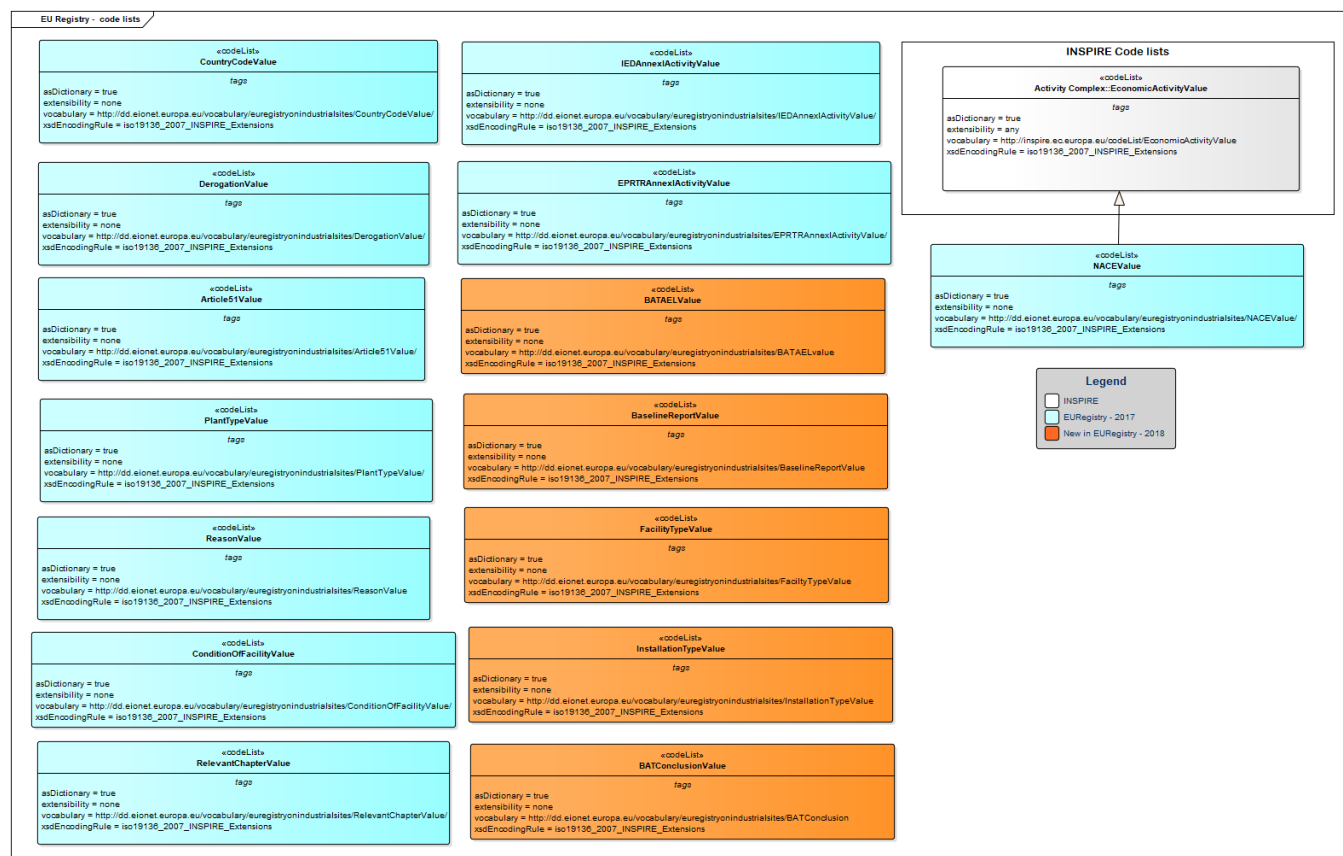
Figure 3: EU Registry code lists

AddressDetails

«dataType» in package 'EUReg'

ATTRIBUTES
◆ streetName : CharacterString
◆ buildingNumber : CharacterString
◆ city : CharacterString
◆ postalCode : CharacterString
◆ confidentialityReason : ReasonValue Multiplicity: ([0..1])

Article51Value

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/Article51Value/

BATderogationType

«dataType» in package 'EUReg'

ATTRIBUTES
◆ BATDerogationIndicator : Boolean
◆ publicReasonURL : CharacterString Multiplicity: ([0..1])
◆ BATAEL : BATAELValue Multiplicity: ([0..1])
◆ derogationDurationStartDate : Date Multiplicity: ([0..1])
◆ derogationDurationEndDate : Date Multiplicity: ([0..1])

CapacityWasteIncinerationType

«dataType» in package 'EUReg'

ATTRIBUTES
◆ totalNominalCapacityAnyWasteType : double
◆ permittedCapacityHazardous : double
◆ permittedCapacityNonHazardous : double

CompetentAuthority

«dataType» in package 'EUReg'

ATTRIBUTES
◆ organisationName : CharacterString
◆ individualName : CharacterString
◆ electronicMailAddress : CharacterString
◆ address : AddressDetails
◆ telephoneNo : CharacterString
◆ faxNo : CharacterString   Multiplicity: ([0..*])

CountryCodeValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/CountryCodeValue/

DerogationValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/DerogationValue/

EPRTRAnnexIActivityType

«dataType» in package 'EUReg'

ATTRIBUTES
◆ mainActivity : EPRTRAnnexIActivityValue
◆ otherActivity : EPRTRAnnexIActivityValue Multiplicity: ([0..*])

EPRTRAnnexIActivityValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/EPRTRAnnexIActivityValue

FeatureName

«dataType» in package 'EUReg'

ATTRIBUTES
◆ nameOfFeature : CharacterString
◆ confidentialityReason : ReasonValue Multiplicity: ([0..1])

IEDAnnexIActivityType

«dataType» in package 'EUReg'

ATTRIBUTES
◆ mainActivity : IEDAnnexIActivityValue
◆ otherActivity : IEDAnnexIActivityValue Multiplicity: ([0..*])

IEDAnnexIActivityValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/IEDAnnexIActivityValue/

NACEValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/NACEValue/

OUTGOING STRUCTURAL RELATIONSHIPS

OUTGOING STRUCTURAL RELATIONSHIPS

← Generalization from «codeList» NACEValue to «codeList» EconomicActivityValue

[Direction is 'Source -> Destination'.]

ParentCompanyDetails

«dataType» in package 'EUReg'

ATTRIBUTES
◆ parentCompanyName : CharacterString
◆ parentCompanyURL : URL Multiplicity: ([0..1])
◆ confidentialityReason : ReasonValue Multiplicity: ([0..1])

PermitDetails

«dataType» in package 'EUReg'

ATTRIBUTES
◆ permitGranted : Boolean
◆ permitReconsidered : Boolean
◆ permitUpdated : Boolean
◆ dateOfGranting : Date Multiplicity: ([0..1])
◆ dateOfLastUpdate : Date Multiplicity: ([0..1])
◆ permitURL : CharacterString Multiplicity: ([0..1])
◆ enforcementAction : CharacterString Multiplicity: ([0..1])

PlantTypeValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/PlantTypeValue

ProductionFacility

«featureType» in package 'EUReg'

Extends ProductionFacility

OUTGOING STRUCTURAL RELATIONSHIPS

◄ Generalization from «featureType» ProductionFacility to «featureType» ProductionFacility

[Direction is 'Source -> Destination'.]

ATTRIBUTES

🔷 address : AddressDetails

[Stereotype is «voidable».]

🔷 facilityName : FeatureName

🔷 competentAuthorityEPRTR : CompetentAuthority
Multiplicity: ([0..*])

🔷 parentCompany : ParentCompanyDetails
Multiplicity: ([0..1])

🔷 dateOfStartOfOperation : Date

[Stereotype is «voidable».]

🔷 EPRTRAnnexIActivity : EPRTRAnnexIActivityType
Multiplicity: ([0..1])

🔷 remarks : CharacterString
Multiplicity: ([0..1])

🔷 facilityType : FacilityTypeValue

ProductionInstallation

«featureType» in package 'EUReg'

Extends ProductionInstallation

OUTGOING STRUCTURAL RELATIONSHIPS

⬅ Generalization from «featureType» ProductionInstallation to «featureType» ProductionInstallation

[Direction is 'Source -> Destination'.]

ATTRIBUTES

◆ installationName : FeatureName

◆ baselineReportIndicator : BaselineReportValue
   Multiplicity: ([0..1])

◆ BATDerogation : BATderogationType
   Multiplicity: ([0..])*

◆ competentAuthorityPermits : CompetentAuthority
   Multiplicity: ([0..])*

◆ competentAuthorityInspections : CompetentAuthority
   Multiplicity: ([0..])*

◆ dateOfStartOfOperation : Date
   [Stereotype is «voidable».]

◆ siteVisits : SiteVisitsType
   Multiplicity: ([0..1])

◆ otherRelevantChapters : RelevantChapterValue
   Multiplicity: ([0..])*

◆ permit : PermitDetails
   Multiplicity: ([0..])*

◆ IEDAnnexIActivity : IEDAnnexIActivityType
   Multiplicity: ([0..1])

◆ eSPIRSIdentifier : CharacterString
   Multiplicity: ([0..])*

◆ ETSIdentifier : CharacterString
   Multiplicity: ([0..])*

◆ remarks : CharacterString
   Multiplicity: ([0..1])

◆ stricterPermitConditions : StricterPermitConditionsType
   Multiplicity: ([0..])*

◆ publicEmissionMonitoring : CharacterString
   Multiplicity: ([0..1])

◆ publicEmissionMonitoringURL : CharacterString
   Multiplicity: ([0..1])

ATTRIBUTES
❖ BATConclusion : BATConclusionValue *Multiplicity: ([0..*])*
❖ installationType : InstallationTypeValue

ProductionInstallationPart

«featureType» in package 'EUReg'

Extends ProductionInstallationPart

OUTGOING STRUCTURAL RELATIONSHIPS
⬅ Generalization from «featureType» ProductionInstallationPart to «featureType» ProductionInstallationPart [Direction is 'Source -> Destination'.]

ATTRIBUTES
❖ installationPartName : FeatureName
❖ plantType : PlantTypeValue
❖ dateOfStartOfOperation : Date [Stereotype is «voidable».]
❖ derogations : DerogationValue *Multiplicity: ([0..*])*
❖ nominalCapacity : CapacityWasteIncinerationType *Multiplicity: ([0..1])*
❖ specificConditions : SpecificConditionsType *Multiplicity: ([0..1])*
❖ totalRatedThermalInput : double *Multiplicity: ([0..1])*
❖ remarks : CharacterString *Multiplicity: ([0..1])*
❖ heatReleaseHazardousWaste : Boolean *Multiplicity: ([0..1])*
❖ untreatedMunicipalWaste : Boolean *Multiplicity: ([0..1])*
❖ publicDisclosure : CharacterString *Multiplicity: ([0..1])*
❖ publicDisclosureURL : CharacterString *Multiplicity: ([0..1])*

ProductionSite

«featureType» in package 'EUReg'

Extends ProductionSite

OUTGOING STRUCTURAL RELATIONSHIPS

⬅ Generalization from «featureType» ProductionSite to «featureType» ProductionSite

[Direction is 'Source -> Destination'.]

ATTRIBUTES

🔹 location : GM_Point

🔹 siteName : FeatureName

ASSOCIATIONS

🖊 Association (direction: Source -> Destination)

Source: (Class) ProductionSite «featureType»   Target: reportData (Class) ReportData «featureType»

A report refers to one or more Production site   Cardinality: [1]

ReasonValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/ReasonValue

RelevantChapterValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/RelevantChapterValue/

ReportData

«featureType» in package 'EUReg'

ATTRIBUTES

🔹 countryId : CountryCodeValue

🔹 reportingYear : Year

ASSOCIATIONS

🖊 Association (direction: Source -> Destination)

Source: (Class) ProductionSite «featureType»   Target: reportData (Class) ReportData «featureType»

A report refers to one or more Production site   Cardinality: [1]

SiteVisitsType

«dataType» in package 'EUReg'

ATTRIBUTES
◆ siteVisitNumber : Integer
◆ siteVisitURL : CharacterString Multiplicity: ([0..1])

SpecificConditionsType

«dataType» in package 'EUReg'

ATTRIBUTES
◆ specificConditions : Article51Value Multiplicity: ([0..1])
◆ conditionsInformation : CharacterString Multiplicity: ([0..1])
◆ specificConditionsPermitURL : CharacterString Multiplicity: ([0..1])

StricterPermitConditionsType

«dataType» in package 'EUReg'

ATTRIBUTES
◆ stricterPermitConditionsIndicator : Boolean
◆ BATAEL : BATAELValue Multiplicity: ([0..1])
◆ article14.4 : Boolean
◆ article18 : Boolean

BATAELValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/BATAELvalue

BATConclusionValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/BATConclusion

BaselineReportValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/BaselineReportValue

ConditionOfFacilityValue

«codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/ConditionOfFacilityValue/

FacilityTypeValue

Class «codeList» in package 'EUReg'

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/FaciltyTypeValue

InstallationTypeValue

Class «codeList» in package 'EUReg

http://dd.eionet.europa.eu/vocabulary/euregistryonindustrialsites/InstallationTypeValue