

Annex A

A.1 Data Dictionary for "EnergyInfrastructureTable"

A.1.1 "Classes" package

A.1.1.1 Location of "Classes" package

The location of "Classes" package is:

— D2Payload/PayloadPublication/AfirEnergyInfrastructure/Classes

A.1.1.2 Classes of the "Classes" package

Table A.1— Classes of the "Classes" package

Class name	Designation	Definition	Stereotype	Abstract
Connector	Connector	Parameters and description of an interface that is available at the given electric charging point to connect vehicles	D2Class	no
DedicatedParkingSpaces	Dedicated parking spaces	Dedicated parking spaces directly belonging to a facility (which is usually not a parking site itself).	D2Class	no
ElectricChargingEquipment	Electric charging equipment	A specialisation to the SupplementalFacility class adding an ElectricChargingPoint.	D2Class	no
ElectricChargingPoint	Electric charging point	Technical infrastructure at a specific location that facilitates electric charging of one vehicle at a time	D2Class	no
ElectricEnergy	Electric energy	A specific offer of energy, optional described with its electrical mix and its rates.	D2Class	no
EnergyInfrastructureSite	Energy infrastructure site	A site where vehicles can be supplied with energy, including all buildings, stations, parking spaces and other associated services.	D2Class	no
EnergyInfrastructureStation	Energy infrastructure station	A collection of associated refill points (which can be of different type). An example would be a fuel dispenser that serves different types of fuel. Often the vehicle space of the station is shared between the different refill points.	D2Class	no
EnergyInfrastructureTable	Energy infrastructure table	A table of sites where vehicles can be supplied with energy.	D2VersionedIdentifiable	no
EnergyRate	Energy rate	A rate dedicated for Energy.	D2Identifiable	no

Class name	Designation	Definition	Stereotype	Abstract
RefillPoint	Refill point	Technical infrastructure at a specific location that facilitates an energy refilling process being connected to max. one vehicle at a time	D2Class	yes
ServiceType	Service type	A specification of service types for the fuelling/charging and payment process	D2Class	no

A.1.1.3 Specializations of the "Classes" package

Table A.2— Specializations of the "Classes" package

Class name	Parent Class Name
DedicatedParkingSpaces	AfirFacilities.FacilityObject
ElectricChargingEquipment	AfirFacilities.SupplementalFacility
ElectricChargingPoint	AfirEnergyInfrastructure.RefillPoint
EnergyInfrastructureSite	AfirFacilities.Facility
EnergyInfrastructureStation	AfirFacilities.Facility
RefillPoint	AfirFacilities.Facility

A.1.1.4 Associations of the "Classes" package

Table A.3— Associations of the "Classes" package

Class name	Association end	Designation	Definition	Multiplicity	Target
Connector	externalIdentifier	External identifier	External identifier for the associated Connector	0..*	AfirFacilities.ExternalIdentifier
ElectricChargingEquipment	electricChargingPoint	Electric charging point	Electric charging point for the associated ElectricChargingEquipment	1..1	AfirEnergyInfrastructure.ElectricChargingPoint
ElectricChargingPoint	connector	Connector	Specify the connector(s).	0..*	AfirEnergyInfrastructure.Connector

Class name	Association end	Designation	Definition	Multiplicity	Target
	electricEnergy	Electric energy	Electric energy for the associated ElectricChargingPoint	0..*	AfirEnergyInfrast ructure.ElectricEn ergy
ElectricEnergy	energyRate	Energy rate	Energy rate for the associated ElectricEnergy	0..*	AfirEnergyInfrast ructure.EnergyRa te
	mobilityServiceProvider	Mobility service provider	Mobility service providers offering contract- based recharging	0..*	AfirFacilities.Orga nisationBaseClass
EnergyInfrastructureSite	energyInfrastructureSta tion	Energy infrastructure station	Specifications of charging stations on the site.	0..*	AfirEnergyInfrast ructure.EnergyInf rastructureStatio n
	entrance	Entrance	Possibility to specify the location of the site's entrance.	0..*	LocationReferenci ng.Location
	exit	Exit	Possibility to specify the location of the site's exit.	0..*	LocationReferenci ng.Location
	serviceType	Service type	Specify the type of service available at a EnergyInfrastructureSite	0..*	AfirEnergyInfrast ructure.ServiceTy pe
EnergyInfrastructureSta tion	electricEnergy	Electric energy	Electric energy for the associated EnergyInfrastructureStation	0..*	AfirEnergyInfrast ructure.ElectricEn ergy
	energyDistributor	Energy distributor	The distributor of the energy.	0..1	AfirFacilities.Orga nisationBaseClass
	mobilityServiceProvider	Mobility service provider	Mobility service providers offering contract- based recharging	0..*	AfirFacilities.Orga nisationBaseClass
	refillPoint	Refill point	Specifications of refill points at a charging station. Note that the refillPointIndex must be unique within the complete site!	0..*	AfirEnergyInfrast ructure.RefillPoin t
	roamingPlatform	Roaming platform	Supported roaming platforms	0..*	AfirFacilities.Orga nisationBaseClass

Class name	Association end	Designation	Definition	Multiplicity	Target
	serviceType	Service type	Specify the type of service available at the EnergyInfrastructureStation.	1..*	AfirEnergyInfrast ructure.ServiceTy pe
EnergyInfrastructureTa ble	energyInfrastructureSite	Energy infrastructure site	Energy infrastructure site for the associated EnergyInfrastructureTable	1..*	AfirEnergyInfrast ructure.EnergyInf rastructureSite
EnergyRate	energyPrice	Energy price	Energy price for the associated EnergyRate	0..*	AfirEnergyInfrast ructure.EnergyPri ce
	overallPeriod	Overall period	Overall period for the associated EnergyRate	0..1	Common.OverallP eriod
	paymentMethod	Payment method	Payment method for the associated EnergyRate	0..1	AfirFacilities.Pay mentMethod
ServiceType	overallPeriod	Overall period	Overall period for the associated ServiceType	0..1	Common.OverallP eriod

A.1.1.5 Attributes of the "Classes" package

Table A.4— Attributes of the "Classes" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
Connector	connectorFormat	Connector format	Information on the cable type used.	0..1	AfirEnergyInfrast ructure.Connecto rFormatTypeEnu m
	connectorType	Connector type	Specification of the connector, i.e. the charging interface type	1..1	AfirEnergyInfrast ructure.Connecto rTypeEnum
	countryOfDomesticSock et	Country of domestic socket	Countries for which the domestic socket is applicable. Only needed if explicit type of a domestic socket is not specified.	0..*	Common.Country Code
	maximumCurrent	Maximum current	Maximum current in Ampere	0..1	AfirEnergyInfrast ructure.Ampere

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	maxPowerAtSocket	Max power at socket	Maximum power at the socket in Watts	1..1	AfirEnergyInfrast ructure.Watt
	otherConnector	Other connector	Some other connector / charging interface	0..1	Common.String
	voltage	Voltage	Possible degrees of voltage.	0..1	AfirEnergyInfrast ructure.Volt
DedicatedParkingSpaces	numberOfSpaces	Number of spaces	The number of parking spaces.	1..1	Common.NonNeg ativeInteger
	userSpecific	User specific	The indicated parking spaces are specifically for the given set of users.	0..*	AfirFacilities.User TypeEnum
ElectricChargingPoint	availableChargingPower	Available charging power	Possible degrees of charging power in Watts.	0..*	AfirEnergyInfrast ructure.Watt
	availableVoltage	Available voltage	Possible degrees of voltage.	0..*	AfirEnergyInfrast ructure.Volt
	chargingMode	Charging mode	Available charging mode	0..1	AfirEnergyInfrast ructure.Charging ModeEnum
	currentType	Current type	The type of current (AC/DC).	1..1	AfirEnergyInfrast ructure.CurrentT ypeEnum
	numberOfConnectors	Number of connectors	Information on the numberof connectors at this charging point.	0..1	Common.NonNeg ativeInteger
	otherSmartRechargingS ervices	Other smart recharging services	Other smart recharging services that are available.	0..*	Common.Multilin gualString
	smartRechargingService s	Smart recharging services	Smart recharging services that are available.	0..*	AfirEnergyInfrast ructure.SmartRec hargingServicesE num
	usageType	Usage type	Usage type of the electric charging point.	0..*	AfirEnergyInfrast ructure.Charging PointUsageTypeE num

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	vehicleToGridCommunicationType	Vehicle to grid communication type	Type of vehicle to grid communication used.	0..*	AfirEnergyInfrastructure.VehicleToGridCommunicationTypeEnum
ElectricEnergy	carbonDioxideImpact	Carbon dioxide impact	Exhausted carbon dioxide in grams per kilowatt hour	0..1	Common.Float
	energyProductName	Energy product name	A name for this energy product	0..1	Common.MultilingualString
	energyRateByReference	Energy rate by reference	Specifies one ore more rates for this type of electric energy by reference to exisiting EnergyRate specification.	0..*	Common.Reference (aegi:EnergyRate)
	isGreenEnergy	Is green energy	True if 100% from regenerative sources (CO2 and nuclear waste is zero)	0..1	Common.Boolean
	nuclearWasteImpact	Nuclear waste impact	Produced nuclear waste in grams per kilowatt hour	0..1	Common.Float
EnergyInfrastructureSite	brand	Brand	The brand of the site.	0..1	Common.MultilingualString
	exclusiveUsers	Exclusive users	Limitation to a set of users (exclusive)	0..*	AfirFacilities.UserTypeEnum
	preferredUsers	Preferred users	Users that are preferred at this site (but not exclusive)	0..*	AfirFacilities.UserTypeEnum
	typeOfSite	Type of site	Specifies the type of the site.	0..1	AfirEnergyInfrastructure.EnergyInfrastructureSiteTypeEnum
EnergyInfrastructureStation	authenticationAndIdentificationMethods	Authentication and identification methods	Information on what methods of identification and/or authentication are accepted	1..*	AfirEnergyInfrastructure.AuthenticationAndIdentificationEnum
	numberOfRefillPoints	Number of refill points	Information on the number of refill points at the station.	1..1	Common.NonNegativeInteger

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	refillPointByReference	Refill point by reference	Refill points can be attached to an EnergyInfrastructureStation instance either by directly associating with a RefillPoint instance or by using this attribute to refer to a RefillPoint instance that has already been defined.	0..*	Common.VersionedReference
	renewableSources	Renewable sources	Specifies, if the energy sources (e.g. hydrogen or liquid methane) are 100 % renewable in accordance with rules established under Directive (EU) 2018/2001 and relevant secondary legislation (EU Guarantee of Origin (GO) scheme).	0..1	Common.Boolean
	totalMaximumPower	Total maximum power	The total maximum power of the station.	1..1	AfirEnergyInfrast ructure.Watt
	userInterfaceLanguage	User interface language	Languages, in which a user interface is available, if any	1..*	Common.Language
EnergyInfrastructureTable	tableName	Table name	The name of the Energy Infrastructure Table.	0..1	Common.String
EnergyRate	additionalInformation	Additional information	Free text field for additional information regarding the energy rates.	0..1	Common.MultilingualString
	applicableCurrency	Applicable currency	A general information on the applicable monetary currency.	1..*	AfirFacilities.CurrencyCode
	combinationWithParkingFee	Combination with parking fee	Indicates whether vehicle charging and parking are included in one combined fee	0..1	Common.Boolean
	discount	Discount	Discount indicated in %	0..1	Common.Percentage
	lastUpdated	Last updated	The date/time at which this information was last updated.	1..1	Common.DateTime
	maximumDeliveryFee	Maximum delivery fee	A maximum delivery fee.	0..1	AfirFacilities.AmountOfMoney
	minimumDeliveryFee	Minimum delivery fee	A minimum delivery fee.	0..1	AfirFacilities.AmountOfMoney

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	rateName	Rate name	A name for this rate, for example the name of the specific energy contract.	0..1	Common.MultilingualString
	ratePolicy	Rate policy	Indication if contract based or ad hoc price	1..1	AfirEnergyInfrastructure.RatePolicyEnum
RefillPoint	deliveryUnit	Delivery unit	Measurement unit that is used for delivery and accounting the energy provided at this refill point	1..1	AfirEnergyInfrastructure.DeliveryUnitEnum
	modelType	Model type	A description of the refill point model type.	0..1	Common.MultilingualString
	reservation	Reservation	Information regarding options for reservation of a time frame.	0..1	AfirFacilities.ReservationTypeEnum
ServiceType	serviceType	Service type	Information on different service types for the fuelling/charging and payment process.	1..1	AfirEnergyInfrastructure.ServiceTypeEnum

A.1.2 "Classes" package

A.1.2.1 Location of "Classes" package

The location of "Classes" package is:

— D2Payload/Common/Classes

A.1.2.2 Classes of the "Classes" package

Table A.5— Classes of the "Classes" package

Class name	Designation	Definition	Stereotype	Abstract
HeaderInformation	Header information	Management information relating to the data contained within a publication.	D2Class	no
InternationalIdentifier	International identifier	An identifier/name whose range is specific to the particular country.	D2Class	no
NamedArea	Named area	An abstract hook class to hook in a model for a named area.	D2Class	yes

Class name	Designation	Definition	Stereotype	Abstract
PayloadPublication	Payload publication	A payload publication of traffic related information or associated management information created at a specific point in time that can be exchanged via a DATEX II interface.	D2ModelRoot	yes
UrlLink	URL link	Details of a Uniform Resource Locator (URL) address pointing to a resource available on the Internet from where further relevant information may be obtained.	D2Class	no

A.1.2.3 Specializations of the "Classes" package

There are no defined specializations in the "Classes" package.

A.1.2.4 Associations of the "Classes" package

Table A.6— Associations of the "Classes" package

Class name	Association end	Designation	Definition	Multiplicity	Target
PayloadPublication	publicationCreator	Publication creator	Publication creator for the associated PayloadPublication	1..1	Common.InternationalIdentifier

A.1.2.5 Attributes of the "Classes" package

Table A.7— Attributes of the "Classes" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
HeaderInformation	confidentiality	Confidentiality	The extent to which the related information may be circulated, according to the recipient type.	0..1	Common.ConfidentialityValueEnum
	informationStatus	Information status	The status of the related information (real, test, exercise ...).	1..1	Common.InformationStatusEnum
InternationalIdentifier	country	Country	EN ISO 3166-1 two-character country code.	1..1	Common.CountryCode
	nationalIdentifier	National identifier	Identifier or name unique within the specified country.	1..1	Common.String
PayloadPublication	defaultLanguage	Default language	The default language used throughout the payload publication.	1..1	Common.Language

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	publicationTime	Publication time	Date/time at which the payload publication was created.	1..1	Common.DateTim e
UrlLink	urlLinkAddress	URL link address	A Uniform Resource Locator (URL) address pointing to a resource available on the Internet from where further relevant information may be obtained.	1..1	Common.Url
	urlLinkDescription	URL link description	Description of the relevant information available on the Internet from the URL link.	0..1	Common.Multilin gualString
	urlLinkType	URL link type	Details of the type of relevant information available on the Internet from the URL link.	0..1	Common.UrlLink TypeEnum

A.1.3 "CommonExtension" package

A.1.3.1 Location of "CommonExtension" package

The location of "CommonExtension" package is:

— D2Payload/Extension/CommonExtension

A.1.3.2 Classes of the "CommonExtension" package

Table A.8— Classes of the "CommonExtension" package

Class name	Designation	Definition	Stereotype	Abstract
VehicleCharacteristicsEx tended	Vehicle characteristics extended	An extension class to provide EU Vehicle categories	D2Class	no

A.1.3.3 Specializations of the "CommonExtension" package

Table A.9— Specializations of the "CommonExtension" package

Class name	Parent Class Name
VehicleCharacteristicsEx tended	Common.VehicleCharacteristics

A.1.3.4 Associations of the "CommonExtension" package

There are no defined associations in the "CommonExtension" package.

A.1.3.5 Attributes of the "CommonExtension" package

Table A.10— Attributes of the "CommonExtension" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
VehicleCharacteristicsExtended	euVehicleCategory	Eu vehicle category	Vehicle categories as defined in EU Directive 2007/46/EG and Regulation (EU) No 168/2013.	1..*	CommonExtension.EuVehicleCategoryEnum

A.1.4 "Dimension" package

A.1.4.1 Location of "Dimension" package

The location of "Dimension" package is:

— D2Payload/PayloadPublication/AirFacilities/Dimension

A.1.4.2 Classes of the "Dimension" package

Table A.11— Classes of the "Dimension" package

Class name	Designation	Definition	Stereotype	Abstract
Dimension	Dimension	A component that provides dimension information. Especially for multi-storey buildings, the usable area might be larger than the product from its length and width.	D2Class	no

A.1.4.3 Specializations of the "Dimension" package

There are no defined specializations in the "Dimension" package.

A.1.4.4 Associations of the "Dimension" package

There are no defined associations in the "Dimension" package.

A.1.4.5 Attributes of the "Dimension" package

Table A.12— Attributes of the "Dimension" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
Dimension	height	Height	Height.	0..1	Common.MetresAsFloat
	length	Length	Length.	0..1	Common.MetresAsFloat
	usableArea	Usable area	The area measured in square metres, that is available for some specific purpose.	0..1	AfirFacilities.SquareMetres
	width	Width	Width.	0..1	Common.MetresAsFloat

A.1.5 "EnergyInfrastructureTablePublication" package**A.1.5.1 Location of "EnergyInfrastructureTablePublication" package**

The location of "EnergyInfrastructureTablePublication" package is:

— D2Payload/PayloadPublication/AfirEnergyInfrastructure/EnergyInfrastructureTablePublication

A.1.5.2 Classes of the "EnergyInfrastructureTablePublication" package**Table A.13— Classes of the "EnergyInfrastructureTablePublication" package**

Class name	Designation	Definition	Stereotype	Abstract
EnergyInfrastructureTablePublication	Energy infrastructure table publication	A publication of static information on the infrastructure for vehicle energy supply.	D2Class	no
EnergyPrice	Energy price	A price definition for energy refueling	D2Class	no

A.1.5.3 Specializations of the "EnergyInfrastructureTablePublication" package**Table A.14— Specializations of the "EnergyInfrastructureTablePublication" package**

Class name	Parent Class Name
EnergyInfrastructureTablePublication	Common.PayloadPublication

A.1.5.4 Associations of the "EnergyInfrastructureTablePublication" package

Table A.15— Associations of the "EnergyInfrastructureTablePublication" package

Class name	Association end	Designation	Definition	Multiplicity	Target
EnergyInfrastructureTablePublication	energyInfrastructureTable	Energy infrastructure table	Energy infrastructure table for the associated EnergyInfrastructureTablePublication	1..*	AfirEnergyInfrastructure.EnergyInfrastructureTable
	headerInformation	Header information	Header information for the associated EnergyInfrastructureTablePublication	0..1	Common.HeaderInformation
EnergyPrice	overallPeriod	Overall period	Overall period for the associated EnergyPrice	0..1	Common.OverallPeriod

A.1.5.5 Attributes of the "EnergyInfrastructureTablePublication" package**Table A.16— Attributes of the "EnergyInfrastructureTablePublication" package**

Class name	Attribute name	Designation	Definition	Multiplicity	Type
EnergyPrice	additionalInformation	Additional information	Free text field for additional information regarding the price.	0..1	Common.MultilingualString
	priceType	Price type	The type of price for the energy supply	1..1	AfirEnergyInfrastructure.PriceTypeEnum
	taxIncluded	Tax included	[TRUE] Indication that tax to be applied is included [FALSE] indicates that the tax is added additionally to the total.	0..1	Common.Boolean
	taxRate	Tax rate	The percentage rate of tax to be applied.	0..1	Common.Percentage
	value	Value	The price for the energy according to the price type	1..1	AfirFacilities.AmountOfMoney

A.1.6 "Facility" package**A.1.6.1 Location of "Facility" package**

The location of "Facility" package is:

— D2Payload/PayloadPublication/AfirFacilities/Facility

A.1.6.2 Classes of the "Facility" package

Table A.17— Classes of the "Facility" package

Class name	Designation	Definition	Stereotype	Abstract
Amenities	Amenities	Amenities such as the facility (or a facility in the surrounding) being roofed or illuminated.	D2Class	no
ExternalIdentifier	External identifier	An external (maybe national) identifier, optional with its specific type.	D2Class	no
Facility	Facility	Provides information about a facility, which may represent any kind of site, building, or structure, and may be a composite facility that includes supplemental facilities.	D2Class	yes
FacilityObject	Facility object	Provides information about a facility object, which may represent any kind of site, building, or structure, including those which supplement a main facility.	D2VersionedIdentifiable	yes
Image	Image	An image, with encoded data and identification of format	D2Class	no

A.1.6.3 Specializations of the "Facility" package

Table A.18— Specializations of the "Facility" package

Class name	Parent Class Name
Facility	AfirFacilities.FacilityObject

A.1.6.4 Associations of the "Facility" package

Table A.19— Associations of the "Facility" package

Class name	Association end	Designation	Definition	Multiplicity	Target
Facility	dedicatedParkingSpaces	Dedicated parking spaces	Dedicated parking spaces for the associated Facility	0..*	AfirEnergyInfrastructure.DedicatedParkingSpaces
	supplementalFacility	Supplemental facility	Supplemental facility for the associated Facility	0..*	AfirFacilities.SupplementalFacility
FacilityObject	amenities	Amenities	Amenities for the associated FacilityObject	0..1	AfirFacilities.Amenities

Class name	Association end	Designation	Definition	Multiplicity	Target
	applicableForVehicles	Applicable for vehicles	A set of vehicles, for which this facility is appropriate, specified by its characteristics.	0..*	Common.VehicleCharacteristics
	dimension	Dimension	Dimension for the associated FacilityObject	0..1	AfirFacilities.Dimension
	externalIdentifier	External identifier	External identifier for the associated FacilityObject	0..*	AfirFacilities.ExternalIdentifier
	helpdesk	Helpdesk	A helpdesk service for the facility.	0..1	AfirFacilities.OrganisationBaseClass
	informationWebsite	Information website	URL of some internet site with additional information.	0..*	Common.UrlLink
	locationReference	Location reference	Location reference for the associated FacilityObject	0..1	LocationReferencing.LocationReference
	operatingHours	Operating hours	Operating hours for the associated FacilityObject	0..1	AfirFacilities.OperatingHours
	operator	Operator	The operator of this facility.	0..1	AfirFacilities.OrganisationBaseClass
	owner	Owner	The owner of this facility.	0..1	AfirFacilities.OrganisationBaseClass
	photo	Photo	A binary photo of the facility or its surrounding.	0..*	AfirFacilities.Image
	photoUrl	Photo URL	Specifies a URL at which a photo of the facility or its surrounding can be found.	0..*	Common.UrlLink

A.1.6.5 Attributes of the "Facility" package

Table A.20— Attributes of the "Facility" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
Amenities	illuminated	Illuminated	The facility is illuminated during darkness.	0..1	Common.Boolean

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	illuminatedRechargingParkingNearby	Illuminated recharging parking nearby	There is a illuminated recharging or refuelling parking location in the immediate surrounding of the facility.	0..1	Common.Boolean
	roofed	Roofed	The facility has got a roof.	0..1	Common.Boolean
	roofedRechargingParkingNearby	Roofed recharging parking nearby	There is a roofed recharging or refuelling parking location in the immediate surrounding of the facility.	0..1	Common.Boolean
ExternalIdentifier	identifier	Identifier	An external (maybe national) identifier.	1..1	Common.String
	otherTypeOfIdentifier	Other type of identifier	The type of identifier expressed as string.	0..1	Common.String
	typeOfIdentifier	Type of identifier	The type of identifier expressed as enumeration, which should be extended project specific.	0..1	AfirFacilities.TypeOfIdentifierEnum
FacilityObject	accessibility	Accessibility	Information on accessibility and facilities for persons with disabilities.	0..*	AfirFacilities.AccessibilityEnum
	additionalInformation	Additional information	Some additional information.	0..*	Common.MultilingualString
	alias	Alias	An alternative name for this facility.	0..*	Common.MultilingualString
	description	Description	A description for this facility.	0..1	Common.MultilingualString
	lastUpdated	Last updated	Information on the time when the information has been updated the last time	0..1	Common.DateTime
	name	Name	The name of this facility.	0..1	Common.MultilingualString
Image	imageData	Image data	Encoded image data	1..1	Common.Base64Binary
	imageFormat	Image format	Identifies the image format of the associated image data	1..1	AfirFacilities.ImageFormatEnum

A.1.7 "Final" package

A.1.7.1 Location of "Final" package

The location of "Final" package is:

— D2Payload/Extension/LocationExtension/Final

A.1.7.2 Classes of the "Final" package

Table A.21— Classes of the "Final" package

Class name	Designation	Definition	Stereotype	Abstract
Address	Address	A street oriented addressing structure supporting delivery	D2Class	no
AddressLine	Address line	A class defining information concerning one line of a postal address.	D2Class	no
FacilityLocation	Facility location	A location for which a time zone and an address can be specified	D2Class	no
NamedAreaExtended	Named area extended	A named area with an additional code (that is not an ISO subdivision code)	D2Class	no

A.1.7.3 Specializations of the "Final" package

Table A.22— Specializations of the "Final" package

Class name	Parent Class Name
FacilityLocation	LocationReferencing.Location
NamedAreaExtended	LocationReferencing.NamedArea

A.1.7.4 Associations of the "Final" package

Table A.23— Associations of the "Final" package

Class name	Association end	Designation	Definition	Multiplicity	Target
Address	addressLine	Address line	Address line for the associated Address	0..*	LocationExtension.AddressLine
FacilityLocation	address	Address	An address specification following ISO 19160-4.	0..1	LocationExtension.Address

Class name	Association end	Designation	Definition	Multiplicity	Target
	nutsArea	Nuts area	Nuts area for the associated FacilityLocation	0..*	LocationExtension.NutsArea

A.1.7.5 Attributes of the "Final" package

Table A.24— Attributes of the "Final" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
Address	city	City	Postal city name of the address.	0..1	Common.MultilingualString
	countryCode	Country code	EN ISO 3166-1 two-character country code.	0..1	Common.CountryCode
	postcode	Postcode	Postcode or postal code for the address.	0..1	Common.String
AddressLine	order	Order	The sequence order that the address line element should be displayed in	1..1	Common.NonNegativeInteger
	text	Text	Free-text description for the address line element	1..1	Common.MultilingualString
	type	Type	The type for the address line element	1..1	LocationExtension.AddressLineTypeEnum
FacilityLocation	timeZone	Time zone	The time zone the facility is located in.	0..1	AfirFacilities.TimeZone
NamedAreaExtended	namedAreaCode	Named area code	Code for the named area, such a postal code or other code assigned for administration.	1..1	LocationExtension.NamedAreaCode

A.1.8 "Final" package

A.1.8.1 Location of "Final" package

The location of "Final" package is:

— D2Payload/Extension/CommonExtension/Final

A.1.8.2 Classes of the "Final" package

Table A.25— Classes of the "Final" package

Class name	Designation	Definition	Stereotype	Abstract
EmissionsExtension	Emissions extension	An extension for the Emissions class to provide a comparison operator.	D2Class	no

A.1.8.3 Specializations of the "Final" package**Table A.26— Specializations of the "Final" package**

Class name	Parent Class Name
EmissionsExtension	Common.Emissions

A.1.8.4 Associations of the "Final" package

There are no defined associations in the "Final" package.

A.1.8.5 Attributes of the "Final" package**Table A.27— Attributes of the "Final" package**

Class name	Attribute name	Designation	Definition	Multiplicity	Type
EmissionsExtension	comparisonOperator	Comparison operator	A comparison operator for the applicable emission classifications in correspondence to the specified value. The comparison applies to the Roman- or Arabic-numbered portion (e.g. euro6 > euro5b), but not crosswise (e.g. euro6 cannot be compared to euroV).	1..1	Common.ComparisonOperatorEnum

A.1.9 "Gml" package**A.1.9.1 Location of "Gml" package**

The location of "Gml" package is:

— D2Payload/LocationReferencing/LocationReference/Gml

A.1.9.2 Classes of the "Gml" package

Table A.28— Classes of the "Gml" package

Class name	Designation	Definition	Stereotype	Abstract
GmlLinearRing	Gml linear ring	Closed line string not self-intersecting (i.e. having as last point the first point)	D2Class	no
GmlLineString	Gml line string	Line string based on GML (EN ISO 19136) definition: a curve defined by a series of two or more coordinate tuples. Unlike GML may be self-intersecting. If srsName attribute is not present, posList is assumed to use "ETRS89-LatLonh" reference system.	D2Class	no
GmlMultiPolygon	Gml multi polygon	An area defined by a set of polygons according to GML (EN ISO 19136).	D2Class	no
GmlPolygon	Gml polygon	Planar surface defined by 1 exterior boundary and 0 or more interior boundaries	D2Class	no

A.1.9.3 Specializations of the "Gml" package**Table A.29— Specializations of the "Gml" package**

Class name	Parent Class Name
GmlLinearRing	LocationReferencing.GmlLineString

A.1.9.4 Associations of the "Gml" package**Table A.30— Associations of the "Gml" package**

Class name	Association end	Designation	Definition	Multiplicity	Target
GmlMultiPolygon	gmlPolygon	Gml polygon	Gml polygon for the associated GmlMultiPolygon	1..*	LocationReferencing.GmlPolygon
GmlPolygon	exterior	Exterior	A boundary of a polygonal surface consisting of a ring i.e. in the normal 2D case, a closed polygonal line distinguished as exterior. Such a polygonal line has at least 4 pairs of coordinates	1..1	LocationReferencing.GmlLinearRing
	interior	Interior	A boundary of internal patches of a polygonal surface consisting of a ring feature	0..*	LocationReferencing.GmlLinearRing

A.1.9.5 Attributes of the "Gml" package

Table A.31— Attributes of the "Gml" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
GmlLineString	posList	Pos list	List of coordinate tuples define the geometry of this GmlLineString. There must be at least 2 tuples of coordinates. Form depends on coordinate reference system; typical form is space-separated pairs of latitude and longitude.	1..1	LocationReferencing.GmlPosList
	srsDimension	Srs dimension	Provides the size of the tuple of coordinates of each point. This number is 2 or 3. By default when omitted the dimension shall be interpreted as 2.	0..1	Common.NonNegativeInteger
	srsName	Srs name	Specifies the Coordinate Reference System (CRS) used to interpret the coordinates in this GmlLineString	0..1	Common.String
GmlMultiPolygon	gmlAreaName	Gml area name	Name of the multi-polygon area	0..1	Common.MultilingualString

A.1.10 "LocationExtension" package**A.1.10.1 Location of "LocationExtension" package**

The location of "LocationExtension" package is:

— D2Payload/Extension/LocationExtension

A.1.10.2 Classes of the "LocationExtension" package**Table A.32— Classes of the "LocationExtension" package**

Class name	Designation	Definition	Stereotype	Abstract
NutsArea	Nuts area	The NUTS-Code representation for the area (Nomenclature of territorial units for statistics) or its LAU code representation (Local Administrative Unit).	D2Class	no

A.1.10.3 Specializations of the "LocationExtension" package

There are no defined specializations in the "LocationExtension" package.

A.1.10.4 Associations of the "LocationExtension" package

There are no defined associations in the "LocationExtension" package.

A.1.10.5 Attributes of the "LocationExtension" package

Table A.33— Attributes of the "LocationExtension" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
NutsArea	nutsCode	Nuts code	The NUTS code for the named area.	1..1	LocationReferenci ng.NutsCode
	nutsCodeType	Nuts code type	The NUTS code type for the named area.	1..1	LocationReferenci ng.NutsCodeType Enum

A.1.11 "LocationReference" package

A.1.11.1 Location of "LocationReference" package

The location of "LocationReference" package is:

— D2Payload/LocationReferencing/LocationReference

A.1.11.2 Classes of the "LocationReference" package

Table A.34— Classes of the "LocationReference" package

Class name	Designation	Definition	Stereotype	Abstract
AreaLocation	Area location	Location representing a geographic or geometric defined area which may be qualified by height information to provide additional geospatial discrimination (e.g. for snow in an area but only above a certain altitude).	D2Class	no
ExternalReferencing	External referencing	A location defined by reference to an external/other referencing system.	D2Class	no
Location	Location	The specification of a location either on a network (as a point or a linear location) or as an area. This may be provided in one or more referencing systems.	D2Class	yes
LocationByReference	Location by reference	A location defined by reference to a predefined location.	D2Class	no

Class name	Designation	Definition	Stereotype	Abstract
LocationGroup	Location group	Multiple (i.e. more than one) physically separate locations which have no specific order.	D2Class	yes
LocationGroupByList	Location group by list	A group of (i.e. more than one) physically separate locations which have no specific order and where each location is explicitly listed.	D2Class	no
LocationGroupByReference	Location group by reference	A group of (i.e. more than one) physically separate locations which have no specific order that are defined by reference to a predefined non ordered location group.	D2Class	no
LocationReference	Location reference	Represents one or more physically separate locations. Multiple locations may be related, as in an itinerary or route, or may be unrelated. One LocationReference should not use multiple Location objects to represent the same physical location.	D2Class	yes
NetworkLocation	Network location	The specification of a location on a network (as a point or a linear location).	D2Class	yes
PointLocation	Point location	Location representing a single geospatial point.	D2Class	no

A.1.11.3 Specializations of the "LocationReference" package

Table A.35— Specializations of the "LocationReference" package

Class name	Parent Class Name
AreaLocation	LocationReferencing.Location
Location	LocationReferencing.LocationReference
LocationByReference	LocationReferencing.Location
LocationGroup	LocationReferencing.LocationReference
LocationGroupByList	LocationReferencing.LocationGroup
LocationGroupByReference	LocationReferencing.LocationGroup
NetworkLocation	LocationReferencing.Location
PointLocation	LocationReferencing.NetworkLocation

A.1.11.4 Associations of the "LocationReference" package

Table A.36— Associations of the "LocationReference" package

Class name	Association end	Designation	Definition	Multiplicity	Target
AreaLocation	gmlMultiPolygon	Gml multi polygon	Gml multi polygon for the associated AreaLocation	0..1	LocationReferencing.GmlMultiPolygon
	namedArea	Named area	Named area for the associated AreaLocation	0..1	LocationReferencing.NamedArea
	openlrAreaLocationReference	Openlr area location reference	Openlr area location reference for the associated AreaLocation	0..1	LocationReferencing.OpenlrAreaLocationReference
Location	coordinatesForDisplay	Coordinates for display	Coordinates that may be used by clients for visual display on user interfaces.	0..1	LocationReferencing.PointCoordinates
	externalReferencing	External referencing	External referencing for the associated Location	0..*	LocationReferencing.ExternalReferencing
LocationGroupByList	locationContainedInGroup	Location contained in group	A location contained in a non-ordered group of locations.	2..*	LocationReferencing.Location
NetworkLocation	supplementaryPositionalDescription	Supplementary positional description	Supplementary positional description for the associated NetworkLocation	0..1	LocationReferencing.SupplementaryPositionalDescription
PointLocation	openlrPointLocationReference	Openlr point location reference	Openlr point location reference for the associated PointLocation	0..1	LocationReferencing.OpenlrPointLocationReference
	pointByCoordinates	Point by coordinates	Point by coordinates for the associated PointLocation	0..1	LocationReferencing.PointByCoordinates

A.1.11.5 Attributes of the "LocationReference" package

Table A.37— Attributes of the "LocationReference" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
AreaLocation	areasAtWhichApplicable	Areas at which applicable	Places, in generic terms, at which the corresponding information applies.	0..1	LocationReferencing.AreaPlacesEnum
ExternalReferencing	externalLocationCode	External location code	A code in the external referencing system which defines the location.	1..1	Common.String
	externalReferencingSystem	External referencing system	Identification of the external/other location referencing system.	1..1	Common.String
LocationByReference	predefinedLocationReference	Predefined location reference	A reference to a versioned predefined location.	1..1	Common.VersionedReference (loc:PredefinedLocation)
LocationGroupByReference	predefinedLocationGroupReference	Predefined location group reference	A reference to a versioned instance of a predefined location group as specified in a PredefinedLocationsPublication.	1..1	Common.VersionedReference (loc:PredefinedLocationGroup)

A.1.12 "NamedArea" package**A.1.12.1 Location of "NamedArea" package**

The location of "NamedArea" package is:

— D2Payload/LocationReferencing/LocationReference/NamedArea

A.1.12.2 Classes of the "NamedArea" package**Table A.38— Classes of the "NamedArea" package**

Class name	Designation	Definition	Stereotype	Abstract
IsoNamedArea	Iso named area	The ISO 3166-2 representation for the named area.	D2Class	no

Class name	Designation	Definition	Stereotype	Abstract
NamedArea	Named area	An area defined by a name and/or in terms of known boundaries, such as country or county boundaries or allocated control area of particular authority. The attributes do not form a union; instead, the smallest intersection forms the resulting area.	D2Class	no
NutsNamedArea	Nuts named area	The NUTS-Code representation for the named area (Nomenclature of territorial units for statistics) or its LAU code representation (Local Administrative Unit).	D2Class	no

A.1.12.3 Specializations of the "NamedArea" package

Table A.39— Specializations of the "NamedArea" package

Class name	Parent Class Name
IsoNamedArea	LocationReferencing.NamedArea
NamedArea	Common.NamedArea
NutsNamedArea	LocationReferencing.NamedArea

A.1.12.4 Associations of the "NamedArea" package

There are no defined associations in the "NamedArea" package.

A.1.12.5 Attributes of the "NamedArea" package

Table A.40— Attributes of the "NamedArea" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
IsoNamedArea	subdivisionCode	Subdivision code	The second part of an ISO 3166-2 subdivision code for the named area, which may be used along with the country attribute from the parent class to make a full ISO 3166-2 subdivision code.	1..1	LocationReferencing.SubdivisionCode
	subdivisionType	Subdivision type	The ISO 3166-2 subdivison type for the named area.	1..1	LocationReferencing.SubdivisionTypeEnum
NamedArea	areaName	Area name	The name of the area.	1..1	Common.MultilingualString

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	country	Country	EN ISO 3166-1 two-character country code.	0..1	Common.Country Code
	namedAreaType	Named area type	The type of the area.	0..1	LocationReferencing.NamedAreaTypeEnum
NutsNamedArea	nutsCode	Nuts code	The NUTS code for the named area.	1..1	LocationReferencing.NutsCode
	nutsCodeType	Nuts code type	The NUTS code type for the named area.	1..1	LocationReferencing.NutsCodeTypeEnum

A.1.13 "OpenLR" package

A.1.13.1 Location of "OpenLR" package

The location of "OpenLR" package is:

— D2Payload/LocationReferencing/LocationReference/OpenLR

A.1.13.2 Classes of the "OpenLR" package

Table A.41— Classes of the "OpenLR" package

Class name	Designation	Definition	Stereotype	Abstract
OpenlrBaseReferencePoint	Openlr base reference point	Base class used to hold data about a reference point.	D2Class	yes
OpenlrLineAttributes	Openlr line attributes	Line attributes are part of a location reference point and consists of functional road class (FRC),form of way (FOW) and bearing (BEAR) data.	D2Class	no
OpenlrOffsets	Openlr offsets	Offsets are used to locate the start and end of a location more precisely than bounding to the nodes in a network.	D2Class	no
OpenlrPathAttributes	Openlr path attributes	Properties of the path from the associated location reference point to the next location reference point, which are specified to assist correct identification of the point in an external map data source.	D2Class	no

A.1.13.3 Specializations of the "OpenLR" package

There are no defined specializations in the "OpenLR" package.

A.1.13.4 Associations of the "OpenLR" package

Table A.42— Associations of the "OpenLR" package

Class name	Association end	Designation	Definition	Multiplicity	Target
OpenlrBaseReferencePoint	openlrCoordinates	Openlr coordinates	Provides coordinates for the base point of the OpenLR path	1..1	LocationReferencing.PointCoordinates
	openlrLineAttributes	Openlr line attributes	Properties of the line towards the topologically adjacent OpenLR location referencing point, on the shortest path to that point.	1..1	LocationReferencing.OpenlrLineAttributes

A.1.13.5 Attributes of the "OpenLR" package

Table A.43— Attributes of the "OpenLR" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
OpenlrLineAttributes	openlrBearing	Openlr bearing	defines the bearing field as an integer value between 0 and 359	1..1	Common.AngleInDegrees
	openlrFormOfWay	Openlr form of way	A classification based on the importance of the role that the Road Element (or Ferry Connection) performs in the connectivity of the total road network. (EN ISO 14825 § 7.2.88)	1..1	LocationReferencing.OpenlrFormOfWayEnum
	openlrFunctionalRoadClass	Openlr functional road class	Certain aspects of the physical form that a Road Element takes. It is based on a number of certain physical and traffic properties. (EN ISO 14825 § 7.2.85)	1..1	LocationReferencing.OpenlrFunctionalRoadClassEnum
OpenlrOffsets	openlrNegativeOffset	Openlr negative offset	The negative offset along the line of the location measured along the line reference path between the end point of the location reference and the ending node of the line reference path.	0..1	Common.MetresAsNonNegativeInteger

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	openlrPositiveOffset	Openlr positive offset	The positive offset along the line of the location measured along the line reference path between the start point of the location reference and the starting node of the line reference path.	0..1	Common.MetresAsNonNegativeInteger
OpenlrPathAttributes	openlrDistanceToNextLRPoint	Openlr distance to next l r point	The DNP attribute measures the distance in meters between two consecutive location reference-points along the location reference path described in the corresponding enumeration	1..1	Common.NonNegativeInteger
	openlrLowestFrcToNextLRPoint	Openlr lowest frc to next l r point	The lowest FRC to the next point indicates the lowest functional road class used in the location reference path to the next LR-point.	1..1	LocationReferencing.OpenlrFunctionalRoadClassEnum

A.1.14 "OpenlrArea" package

A.1.14.1 Location of "OpenlrArea" package

The location of "OpenlrArea" package is:

— D2Payload/LocationReferencing/LocationReference/OpenLR/OpenlrArea

A.1.14.2 Classes of the "OpenlrArea" package

Table A.44— Classes of the "OpenlrArea" package

Class name	Designation	Definition	Stereotype	Abstract
OpenlrAreaLocationReference	Openlr area location reference	A two-dimensional part of the surface of the earth which is bounded by a closed curve. An area location may cover parts of the road network but does not necessarily need to. It is represented according to the OpenLR standard for Area Locations	D2Class	yes
OpenlrCircleLocationReference	Openlr circle location reference	The OpenLR method of area definition by providing a center position and a radius	D2Class	no

Class name	Designation	Definition	Stereotype	Abstract
OpenlrClosedLineLocationReference	Openlr closed line location reference	The OpenLR method of area definition by providing a closed path (i.e. a circuit) in the road network. The boundary always consists of road segments	D2Class	no
OpenlrGridLocationReference	Openlr grid location reference	Area defined using an OpenLR™ method consisting in defining it by a tessellation of rectangles	D2Class	no
OpenlrPolygonCorners	Openlr polygon corners	A geodetic coordinate Tuple that defines the vertices of the underlying geometrical polygon.	D2Class	no
OpenlrPolygonLocationReference	Openlr polygon location reference	The OpenLR method of area definition by providing points that bound the area	D2Class	no
OpenlrRectangle	Openlr rectangle	Area delimited by a rectangle defined by the geodetic co-ordinates of the two ends of its diagonal from south-west to north-east (the rectangle having two sides that are parallel to lines of latitude)	D2Class	no
OpenlrRectangleLocationReference	Openlr rectangle location reference	The openLR method of area definition by providing a rectangular shape defined by two geo-coordinate pairs	D2Class	no

A.1.14.3 Specializations of the "OpenlrArea" package

Table A.45— Specializations of the "OpenlrArea" package

Class name	Parent Class Name
OpenlrCircleLocationReference	LocationReferencing.OpenlrAreaLocationReference
OpenlrClosedLineLocationReference	LocationReferencing.OpenlrAreaLocationReference
OpenlrGridLocationReference	LocationReferencing.OpenlrAreaLocationReference
OpenlrPolygonLocationReference	LocationReferencing.OpenlrAreaLocationReference
OpenlrRectangleLocationReference	LocationReferencing.OpenlrAreaLocationReference

A.1.14.4 Associations of the "OpenlrArea" package

Table A.46— Associations of the "OpenlrArea" package

Class name	Association end	Designation	Definition	Multiplicity	Target
OpenlrCircleLocationReference	openlrGeoCoordinate	Openlr geo coordinate	Openlr geo coordinate for the associated OpenlrCircleLocationReference	1..1	LocationReferencing.OpenlrGeoCoordinate
OpenlrClosedLineLocationReference	openlrLastLine	Openlr last line	Provides the line attributes for the last line section closing the polygon.	1..1	LocationReferencing.OpenlrLastLocationReferencePoint
	openlrLocationReferencePoint	Openlr location reference point	Openlr location reference point for the associated OpenlrClosedLineLocationReference	1..*	LocationReferencing.OpenlrLocationReferencePoint
OpenlrGridLocationReference	openlrRectangle	Openlr rectangle	Openlr rectangle for the associated OpenlrGridLocationReference	1..1	LocationReferencing.OpenlrRectangle
OpenlrPolygonCorners	openlrCoordinates	Openlr coordinates	Corresponding coordinates of vertices that define a polygon.	3..*	LocationReferencing.PointCoordinates
OpenlrPolygonLocationReference	openlrPolygonCorners	Openlr polygon corners	Openlr polygon corners for the associated OpenlrPolygonLocationReference	1..1	LocationReferencing.OpenlrPolygonCorners
OpenlrRectangle	openlrLowerLeft	Openlr lower left	The lower left corner of the rectangle.	1..1	LocationReferencing.PointCoordinates
	openlrUpperRight	Openlr upper right	The upper right corner of the rectangle.	1..1	LocationReferencing.PointCoordinates
OpenlrRectangleLocationReference	openlrRectangle	Openlr rectangle	Openlr rectangle for the associated OpenlrRectangleLocationReference	1..1	LocationReferencing.OpenlrRectangle

A.1.14.5 Attributes of the "OpenlrArea" package

Table A.47— Attributes of the "OpenlrArea" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
OpenlrCircleLocationReference	openlrRadius	Openlr radius	The radius of the corresponding circular area.	1..1	Common.MetresAsNonNegativeInteger
OpenlrGridLocationReference	openlrNumColumns	Openlr num columns	The number that the base rectangle should be multiplied in the east direction	1..1	Common.NonNegativeInteger
	openlrNumRows	Openlr num rows	The number that the base rectangle should be multiplied in the north direction	1..1	Common.NonNegativeInteger

A.1.15 "OpenlrPoint" package**A.1.15.1 Location of "OpenlrPoint" package**

The location of "OpenlrPoint" package is:

— D2Payload/LocationReferencing/LocationReference/OpenLR/OpenlrPoint

A.1.15.2 Classes of the "OpenlrPoint" package**Table A.48— Classes of the "OpenlrPoint" package**

Class name	Designation	Definition	Stereotype	Abstract
OpenlrBasePointLocation	Openlr base point location	Holds common data that are used both in OpenlrPointAccessPoint and OpenlrPointAlongLine.	D2Class	yes
OpenlrGeoCoordinate	Openlr geo coordinate	A geo-coordinate pair is a position in a map defined by its longitude and latitude coordinate values.	D2Class	no
OpenlrLastLocationReferencePoint	Openlr last location reference point	The sequence of location reference points is terminated by a last location reference point.	D2Class	no
OpenlrLocationReferencePoint	Openlr location reference point	The basis of a location reference is a sequence of location reference points (LRPs).	D2Class	no
OpenlrPointAlongLine	Openlr point along line	Point along a line	D2Class	no
OpenlrPointLocationReference	Openlr point location reference	A point location is a zero-dimensional element in a map that specifies a geometric location.	D2Class	yes

Class name	Designation	Definition	Stereotype	Abstract
OpenlrPoiWithAccessPoint	Openlr poi with access point	A point of interest (POI) along a line with access is a point location which is defined by a linear reference path, an offset value (defining the access point) from the starting node of this path and a coordinate pair that defines the POI itself.	D2Class	no

A.1.15.3 Specializations of the "OpenlrPoint" package

Table A.49— Specializations of the "OpenlrPoint" package

Class name	Parent Class Name
OpenlrBasePointLocation	LocationReferencing.OpenlrPointLocationReference
OpenlrGeoCoordinate	LocationReferencing.OpenlrPointLocationReference
OpenlrLastLocationReferencePoint	LocationReferencing.OpenlrBaseReferencePoint
OpenlrLocationReferencePoint	LocationReferencing.OpenlrBaseReferencePoint
OpenlrPointAlongLine	LocationReferencing.OpenlrBasePointLocation
OpenlrPoiWithAccessPoint	LocationReferencing.OpenlrBasePointLocation

A.1.15.4 Associations of the "OpenlrPoint" package

Table A.50— Associations of the "OpenlrPoint" package

Class name	Association end	Designation	Definition	Multiplicity	Target
OpenlrBasePointLocation	openlrLastLocationReferencePoint	Openlr last location reference point	Allows defining the last point of the OpenLR path	1..1	LocationReferencing.OpenlrLastLocationReferencePoint
	openlrLocationReferencePoint	Openlr location reference point	Allows defining the first point of the OpenLR path	1..1	LocationReferencing.OpenlrLocationReferencePoint

Class name	Association end	Designation	Definition	Multiplicity	Target
	openlrOffsets	Openlr offsets	Provides optional offsets relative to the path	0..1	LocationReferencing.OpenlrOffsets
OpenlrGeoCoordinate	openlrCoordinates	Openlr coordinates	Corresponding coordinates of an OpenLR point defined by its only coordinates.	1..1	LocationReferencing.PointCoordinates
OpenlrLocationReferencingPoint	openlrPathAttributes	Openlr path attributes	Additional path attributes relative to the next point	1..1	LocationReferencing.OpenlrPathAttributes
OpenlrPoiWithAccessPoint	openlrCoordinates	Openlr coordinates	The coordinate of the actual point of interest	1..1	LocationReferencing.PointCoordinates

A.1.15.5 Attributes of the "OpenlrPoint" package

Table A.51— Attributes of the "OpenlrPoint" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
OpenlrBasePointLocation	openlrOrientation	Openlr orientation	Orientation of the driving direction in relation with the direction of the underlying linear	1..1	LocationReferencing.OpenlrOrientationEnum
	openlrSideOfRoad	Openlr side of road	Provides the of road where the corresponding point lies.	1..1	LocationReferencing.OpenlrSideOfRoadEnum

A.1.16 "OperatingHoursPublication" package

A.1.16.1 Location of "OperatingHoursPublication" package

The location of "OperatingHoursPublication" package is:

— D2Payload/PayloadPublication/AfirFacilities/OperatingHoursPublication

A.1.16.2 Classes of the "OperatingHoursPublication" package

Table A.52— Classes of the "OperatingHoursPublication" package

Class name	Designation	Definition	Stereotype	Abstract
ClosureInformation	Closure information	Information about temporary or permanent closure.	D2Class	no
OpenAllHours	Open all hours	Open or available all the time (24/7)	D2Class	no
OperatingHours	Operating hours	Operating hours, either by reference or by specification.	D2Class	yes
OperatingHoursByReference	Operating hours by reference	Operating hours information that is addressed via a reference.	D2Class	no
OperatingHoursSpecification	Operating hours specification	A specification of operating hours (e.g. for a parking site, a service facility, an access or the availability for equipment).	D2VersionedIdentifiable	no
UndefinedOperatingHours	Undefined operating hours	There are no operating hours specified.	D2Class	no
UnknownOperatingHours	Unknown operating hours	The operating hours are not known.	D2Class	no

A.1.16.3 Specializations of the "OperatingHoursPublication" package**Table A.53— Specializations of the "OperatingHoursPublication" package**

Class name	Parent Class Name
OpenAllHours	AfirFacilities.OperatingHours
OperatingHoursByReference	AfirFacilities.OperatingHours
OperatingHoursSpecification	AfirFacilities.OperatingHours
UndefinedOperatingHours	AfirFacilities.OperatingHours
UnknownOperatingHours	AfirFacilities.OperatingHours

A.1.16.4 Associations of the "OperatingHoursPublication" package

Table A.54— Associations of the "OperatingHoursPublication" package

Class name	Association end	Designation	Definition	Multiplicity	Target
OperatingHours	closureInformation	Closure information	Closure information for the associated OperatingHours	0..1	AfirFacilities.ClosureInformation
OperatingHoursSpecification	overallPeriod	Overall period	The specification of operating hours by an overall period combined with valid or exceptional periods.	1..1	Common.OverallPeriod

A.1.16.5 Attributes of the "OperatingHoursPublication" package**Table A.55— Attributes of the "OperatingHoursPublication" package**

Class name	Attribute name	Designation	Definition	Multiplicity	Type
ClosureInformation	closedFrom	Closed from	Permanently or temporarily closed from the given date on. May lie in the future - in this case the scene is not closed now.	0..1	Common.DateTime
	permananentlyClosed	Permananently closed	Permanently closed, i.e. it is not intended to open again.	0..1	Common.Boolean
	temporarilyClosed	Temporarily closed	Temporarily closed for an unspecified period.	0..1	Common.Boolean
	temporarilyClosedUntil	Temporarily closed until	Temporarily closed until the given date (i.e. closure still includes this date).	0..1	Common.DateTime
OperatingHoursByReference	operatingHoursReference	Operating hours reference	The reference to an operating hours specification.	1..1	Common.VersionedReference (afac:OperatingHoursSpecification)
	operatingHoursTableReference	Operating hours table reference	Operation hours table in question defined by a reference.	0..1	Common.VersionedReference (afac:OperatingHoursTable)
OperatingHoursSpecification	label	Label	A label, name or identifier for this operating hours specification.	0..1	Common.String
	lastUpdated	Last updated	The date/time at which this information was last updated.	0..1	Common.DateTime

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	operatingAllYear	Operating all year	The facility or organisation is not closed on a seasonal base.	0..1	Common.Boolean
	urlLinkAddress	URL link address	A Uniform Resource Locator (URL) address pointing to a resource available on the Internet from where further relevant information may be obtained.	0..1	Common.Url

A.1.17 "OrganisationPublication" package

A.1.17.1 Location of "OrganisationPublication" package

The location of "OrganisationPublication" package is:

— D2Payload/PayloadPublication/AfirFacilities/OrganisationPublication

A.1.17.2 Classes of the "OrganisationPublication" package

Table A.56— Classes of the "OrganisationPublication" package

Class name	Designation	Definition	Stereotype	Abstract
ContactInformation	Contact information	Contact information	D2Class	no
ContactPerson	Contact person	A specific contact person	D2Class	no
IdentifiableOrganisation	Identifiable organisation	A versioned identifiable organisation.	D2VersionedIdentifiable	no
Organisation	Organisation	An organisation. It can be specialised to be versioned identifiable.	D2Class	no
OrganisationBaseClass	Organisation base class	Information about an organisation including its units and contact information.	D2Class	yes
OrganisationByReference	Organisation by reference	Organisation information that is based on a reference	D2Class	no
OrganisationUnit	Organisation unit	A unit within the organisation, which has got separate location, operating hours, address and/or contacts.	D2Class	no
UndefinedOrganisation	Undefined organisation	The organisation for the specified association end (within the specified validity if applicable) is not defined.	D2Class	no

Class name	Designation	Definition	Stereotype	Abstract
UnknownOrganisation	Unknown organisation	The organisation for the specified association end (within the specified validity if applicable) is unknown.	D2Class	no

A.1.17.3 Specializations of the "OrganisationPublication" package

Table A.57— Specializations of the "OrganisationPublication" package

Class name	Parent Class Name
ContactPerson	AfirFacilities.ContactInformation
IdentifiableOrganisation	AfirFacilities.Organisation
Organisation	AfirFacilities.OrganisationBaseClass
OrganisationByReference	AfirFacilities.OrganisationBaseClass
UndefinedOrganisation	AfirFacilities.OrganisationBaseClass
UnknownOrganisation	AfirFacilities.OrganisationBaseClass

A.1.17.4 Associations of the "OrganisationPublication" package

Table A.58— Associations of the "OrganisationPublication" package

Class name	Association end	Designation	Definition	Multiplicity	Target
Organisation	externalIdentifier	External identifier	External identifier for the associated Organisation	0..*	AfirFacilities.ExternalIdentifier
	organisationUnit	Organisation unit	Organisation unit for the associated Organisation	0..*	AfirFacilities.OrganisationUnit
	subOrganisation	Sub organisation	A sub organisation that could substitute its role	0..*	AfirFacilities.OrganisationBaseClass
OrganisationBaseClass	generalTimeValidity	General time validity	Specification of a time validity, for which this organisation information is valid in general. This is not a specification of the operating hours as such.	0..1	Common.OverallPeriod
OrganisationUnit	contactInformation	Contact information	Contact information for the associated OrganisationUnit	0..*	AfirFacilities.ContactInformation

Class name	Association end	Designation	Definition	Multiplicity	Target
	locationReference	Location reference	Location reference for the associated OrganisationUnit	0..1	LocationReferencing.LocationReference
	operatingHours	Operating hours	Operating hours for the associated OrganisationUnit	0..1	AfirFacilities.OperatingHours

A.1.17.5 Attributes of the "OrganisationPublication" package

Table A.59— Attributes of the "OrganisationPublication" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
ContactInformation	eMail	E mail	E-Mail address, which can be a general mail address or the mail address of a specific contact person.	0..1	Common.String
	faxNumber	Fax number	Fax number, which can be a general number or the number of a specific contact person.	0..1	Common.String
	language	Language	Language(s) that are supported via telephone or mail.	0..*	Common.Language
	telephoneNumber	Telephone number	Telephone number, which can be a general number or the number of a specific contact person.	0..1	Common.String
ContactPerson	firstName	First name	The first name of the contact person	0..1	Common.String
	name	Name	The (last) name of the contact person	1..1	Common.String
	position	Position	The position of the contact person	0..1	Common.MultilingualString
	title	Title	Title information of the contact person.	0..1	Common.MultilingualString
Organisation	available24hours	Available24hours	Specifies if the availability is 24 hours a day. If omitted, this information is unknown or heterogeneous.	0..1	Common.Boolean
	description	Description	A description of the organisation.	0..1	Common.MultilingualString

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	lastUpdated	Last updated	The date/time at which this information was last updated.	0..1	Common.DateTime
	legalName	Legal name	The legal name of the organisation.	0..1	Common.MultilingualString
	linkToGeneralInformation	Link to general information	An internet address from where further relevant information about this organisation may be obtained.	0..1	Common.Url
	linkToLogo	Link to logo	An internet address from where the logo of this organisation may be obtained.	0..1	Common.Url
	linkToWebform	Link to webform	An internet address pointing to a webform, which people can use to send messages to this organisation.	0..1	Common.Url
	name	Name	Name of the organisation.	1..1	Common.MultilingualString
	nationalOrganisationNumber	National organisation number	The national organisation number in the specified national register, if applicable.	0..1	Common.String
	nationalRegister	National register	A national register where the organisation is registered.	0..1	Common.String
	publishingAgreement	Publishing agreement	Indication whether the organisation accepted publishing its information.	0..1	Common.Boolean
	responsibility	Responsibility	Specification of services or other duties the organisation is responsible for,	0..*	Common.MultilingualString
	type	Type	Information whether the organisation in question belongs to the public or private sector.	0..1	AfirFacilities.OrganisationTypeEnum
	vatIdentificationNumber	Vat identification number	The VAT identification number of the organisation.	0..1	Common.String
OrganisationByReference	organisationReference	Organisation reference	Organisation information provided by a reference.	1..1	Common.VersionedReference (afac:Identifiable Organisation)

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	organisationTableReference	Organisation table reference	Organisation table in question defined by a reference.	0..1	Common.VersionedReference (afac:OrganisationTable)
OrganisationUnit	function	Function	Functions this unit is responsible for or a specific type, e.g. headquarter or sales	0..*	Common.MultilingualString
	name	Name	A name for this organisation unit	0..1	Common.MultilingualString

"PaymentMethod" package

A.1.17.6 Location of "PaymentMethod" package

The location of "PaymentMethod" package is:

— D2Payload/PayloadPublication/AfirFacilities/RatesPublication/PaymentMethod

A.1.17.7 Classes of the "PaymentMethod" package

Table A.60— Classes of the "PaymentMethod" package

Class name	Designation	Definition	Stereotype	Abstract
BrandsAcceptedCodeList	Brands accepted code list	Use this class to describe details of the brands that are accepted.	D2Class	no
BrandsAcceptedText	Brands accepted text	Use this class to describe details of the brands that are accepted.	D2Class	no
PaymentMethod	Payment method	Provides information on the means of payment available	D2Class	no

A.1.17.8 Specializations of the "PaymentMethod" package

There are no defined specializations in the "PaymentMethod" package.

A.1.17.9 Associations of the "PaymentMethod" package

Table A.61— Associations of the "PaymentMethod" package

Class name	Association end	Designation	Definition	Multiplicity	Target
PaymentMethod	brandsAcceptedCodeList	Brands accepted code list	Brands accepted code list for the associated PaymentMethod	0..*	AfirFacilities.BrandsAcceptedCodeList
	brandsAcceptedText	Brands accepted text	Brands accepted text for the associated PaymentMethod	0..*	AfirFacilities.BrandsAcceptedText

A.1.17.10 Attributes of the "PaymentMethod" package**Table A.62— Attributes of the "PaymentMethod" package**

Class name	Attribute name	Designation	Definition	Multiplicity	Type
BrandsAcceptedCodeList	brandsAcceptedList	Brands accepted list	List of accepted brands for payment cards.	1..1	AfirFacilities.PaymentBrandsEnum
BrandsAcceptedText	brandsAccepted	Brands accepted	List of accepted brands for payment cards.	1..1	Common.String
PaymentMethod	otherPaymentMeans	Other payment means	Other means of payment that are available.	0..*	Common.MultilingualString
	paymentMeans	Payment means	The means of payment available	0..*	AfirFacilities.MeansOfPaymentEnum
	paymentMode	Payment mode	Defines the timing of the parking or other mobility related payment	0..*	AfirFacilities.PaymentTimingEnum

A.1.18 "PointCoordinates" package**A.1.18.1 Location of "PointCoordinates" package**

The location of "PointCoordinates" package is:

— D2Payload/LocationReferencing/LocationReference/PointCoordinates

A.1.18.2 Classes of the "PointCoordinates" package

Table A.63— Classes of the "PointCoordinates" package

Class name	Designation	Definition	Stereotype	Abstract
AltitudeConfidence	Altitude confidence	Evaluation of the altitude confidence assessed according to ETSI ISO 102894-2	D2Class	no
HeightCoordinate	Height coordinate	Third coordinate for points defined geodetically	D2Class	no
PointByCoordinates	Point by coordinates	A single point defined only by a coordinate set with an optional bearing direction.	D2Class	no
PointCoordinates	Point coordinates	A pair of planar coordinates defining the geodetic position of a single point using the European Terrestrial Reference System 1989 (ETRS89).	D2Class	no
PositionAccuracy	Position accuracy	Horizontal position accuracy parameters defined according to EN 16803-1	D2Class	no
PositionConfidenceEllipse	Position confidence ellipse	Confidence ellipse position defined in a shape of ellipse with a predefined confidence level (e.g. 95 %). The centre of the ellipse shape corresponds to the reference position point for which the position accuracy is evaluated.	D2Class	no

A.1.18.3 Specializations of the "PointCoordinates" package

There are no defined specializations in the "PointCoordinates" package.

A.1.18.4 Associations of the "PointCoordinates" package**Table A.64— Associations of the "PointCoordinates" package**

Class name	Association end	Designation	Definition	Multiplicity	Target
HeightCoordinate	altitudeConfidence	Altitude confidence	Altitude confidence for the associated HeightCoordinate	0..1	LocationReferencing.AltitudeConfidence
	verticalPositionAccuracy	Vertical position accuracy	Defines the vertical position accuracy according to EN16803-1	0..1	LocationReferencing.PositionAccuracy
PointByCoordinates	pointCoordinates	Point coordinates	Point coordinates for the associated PointByCoordinates	1..1	LocationReferencing.PointCoordinates

Class name	Association end	Designation	Definition	Multiplicity	Target
PointCoordinates	heightCoordinate	Height coordinate	Height coordinate for the associated PointCoordinates	0..3	LocationReferencing.HeightCoordinate
	horizontalPositionAccuracy	Horizontal position accuracy	Defines the horizontal position accuracy according EN 16803-1	0..1	LocationReferencing.PositionAccuracy
	positionConfidenceEllipse	Position confidence ellipse	Position confidence ellipse for the associated PointCoordinates	0..1	LocationReferencing.PositionConfidenceEllipse

A.1.18.5 Attributes of the "PointCoordinates" package

Table A.65— Attributes of the "PointCoordinates" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
AltitudeConfidence	altitudeAccuracyCodedError	Altitude accuracy coded error	Error code in case the altitude confidence is out of range or cannot be determined	0..1	LocationReferencing.PositionConfidenceCodedErrorEnum
	altitudeAccuracyCodedValue	Altitude accuracy coded value	Absolute accuracy of reported value of a geographical point for a confidence level expressed by a coded scale.	0..1	LocationReferencing.AltitudeAccuracyEnum
HeightCoordinate	heightType	Height type	Type of measured height. When it is omitted it is supposed to be the ellipsoidal height.	0..1	LocationReferencing.HeightTypeEnum
	heightValue	Height value	Value in metres for the height measured vertically at to the planar coordinates the point corresponding.	1..1	Common.MetresAsFloat
PointByCoordinates	bearing	Bearing	A bearing at the point measured in degrees (0 - 359). Unless otherwise specified the reference direction corresponding to 0 degrees is North. Values increase in the clockwise direction.	0..1	Common.AngleInDegrees

Class name	Attribute name	Designation	Definition	Multiplicity	Type
PointCoordinates	latitude	Latitude	Latitude in decimal degrees using the European Terrestrial Reference System 1989 (ETRS89).	1..1	Common.Float
	longitude	Longitude	Longitude in decimal degrees using the European Terrestrial Reference System 1989 (ETRS89).	1..1	Common.Float
PositionAccuracy	accuracyPercentile50	Accuracy percentile50	Accuracy defined by the 50th percentile of the cumulative distribution of position errors.	0..1	Common.MetresAsFloat
	accuracyPercentile75	Accuracy percentile75	Accuracy defined by the 75th percentile of the cumulative distribution of position errors	0..1	Common.MetresAsFloat
	accuracyPercentile95	Accuracy percentile95	Accuracy defined by the 95th percentile of the cumulative distribution of position errors	0..1	Common.MetresAsFloat
PositionConfidenceEllipse	semiMajorAxisLength	Semi major axis length	Half of length of the major axis, i.e. distance between the centre point and major axis point of the position accuracy ellipse.	0..1	Common.MetresAsFloat
	semiMajorAxisLengthCodedError	Semi major axis length coded error	Provides a coded error in case the semi-major axis length is not defined	0..1	LocationReferencing.PositionConfidenceCodedErrorEnum
	semiMajorAxisOrientation	Semi major axis orientation	Orientation direction of the ellipse major axis of the position accuracy ellipse with regards to the geographic north.	0..1	Common.AngleInDegrees
	semiMajorAxisOrientationError	Semi major axis orientation error	Indicates whether the ellipse orientation is unavailable (True) or not (False)	0..1	Common.Boolean
	semiMinorAxisLength	Semi minor axis length	Half of length of the minor axis, i.e. distance between the centre point and minor axis point of the position accuracy ellipse	0..1	Common.MetresAsFloat
	semiMinorAxisLengthCodedError	Semi minor axis length coded error	Provides a coded error in case the semi-minor axis length is not defined	0..1	LocationReferencing.PositionConfidenceCodedErrorEnum

A.1.19 "SupplementalFacility" package

A.1.19.1 Location of "SupplementalFacility" package

The location of "SupplementalFacility" package is:

— D2Payload/PayloadPublication/AfirFacilities/SupplementalFacility

A.1.19.2 Classes of the "SupplementalFacility" package

Table A.66— Classes of the "SupplementalFacility" package

Class name	Designation	Definition	Stereotype	Abstract
SupplementalEquipment	Supplemental equipment	One type of supplemental equipment, which is available on some site, for example on a rest area.	D2Class	no
SupplementalFacility	Supplemental facility	One type of supplemental facility which can be supplemental equipment or a supplemental service facility.	D2Class	yes
SupplementalServiceFacility	Supplemental service facility	One type of supplemental service facility. You can specify the number of this service facility type (e.g. 5 restaurants) as well as the number of subitems (e.g. 200 restaurant places).	D2Class	no

A.1.19.3 Specializations of the "SupplementalFacility" package

Table A.67— Specializations of the "SupplementalFacility" package

Class name	Parent Class Name
SupplementalEquipment	AfirFacilities.SupplementalFacility
SupplementalFacility	AfirFacilities.FacilityObject
SupplementalServiceFacility	AfirFacilities.SupplementalFacility

A.1.19.4 Associations of the "SupplementalFacility" package

There are no defined associations in the "SupplementalFacility" package.

A.1.19.5 Attributes of the "SupplementalFacility" package

Table A.68— Attributes of the "SupplementalFacility" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
SupplementalEquipment	equipmentType	Equipment type	One type of equipment.	1..1	AfirFacilities.EquipmentTypeEnum
SupplementalFacility	applicableForUser	Applicable for user	Limitation to a set of special users.	0..*	AfirFacilities.UserTypeEnum
	availability	Availability	Specifies whether the supplemental facility is available or not. Note that this is no dynamic information!	0..1	AfirFacilities.AvailabilityEnum
	nearby	Nearby	If true, the Supplemental Facility is not located on the site of the original facility but nearby. They must not necessarily belong together.	0..1	Common.Boolean
	quantity	Quantity	Number of the supplemental facility (e.g. number of toilets, restaurants, park & ride places, etc.) with respect to given restrictions. Dynamic overridable.	0..1	Common.NonNegativeInteger
	regularlyCleaned	Regularly cleaned	Indicates whether the supplemental facility is cleaned on a regular basis.	0..1	Common.Boolean
SupplementalServiceFacility	distanceFromOriginFacility	Distance from origin facility	Approximate distance (given in metres) between this supplemental facility and some origin facility to which it is clearly related (typically a larger facility, e.g. a parking site).	0..1	Common.MetresAsNonNegativeInteger
	numberOfSubitems	Number of subitems	The quantity of subitems to this service facility type, e.g. the total number of restaurant places or fuel dispensers etc.	0..1	Common.NonNegativeInteger
	serviceFacilityType	Service facility type	One type of service.	1..1	AfirFacilities.ServiceFacilityTypeEnum

A.1.20 "SupplementaryPositionalDescription" package

A.1.20.1 Location of "SupplementaryPositionalDescription" package

The location of "SupplementaryPositionalDescription" package is:

— D2Payload/LocationReferencing/LocationReference/SupplementaryPositionalDescription

A.1.20.2 Classes of the "SupplementaryPositionalDescription" package

Table A.69— Classes of the "SupplementaryPositionalDescription" package

Class name	Designation	Definition	Stereotype	Abstract
SupplementaryPositionalDescription	Supplementary positional description	A collection of supplementary positional information which improves the precision of the location.	D2Class	no

A.1.20.3 Specializations of the "SupplementaryPositionalDescription" package

There are no defined specializations in the "SupplementaryPositionalDescription" package.

A.1.20.4 Associations of the "SupplementaryPositionalDescription" package

There are no defined associations in the "SupplementaryPositionalDescription" package.

A.1.20.5 Attributes of the "SupplementaryPositionalDescription" package

Table A.70— Attributes of the "SupplementaryPositionalDescription" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
SupplementaryPositionalDescription	locationDescription	Location description	Supplementary human-readable description of the location	0..1	Common.MultilingualString
	locationPrecision	Location precision	Indicates that the location is given with a precision which is better than the stated value in metres.	0..1	Common.MetresAsNonNegativeInteger

A.1.21 "Validity" package

A.1.21.1 Location of "Validity" package

The location of "Validity" package is:

A.1.21.2 Classes of the "Validity" package

Table A.71— Classes of the "Validity" package

Class name	Designation	Definition	Stereotype	Abstract
CalendarWeekWithinMonth	Calendar week within month	Specification of periods defined by relevant calendar weeks in a month, see ISO8601. Note: Calendar weeks start with Monday. First week is the week containing the first of the month.	D2Class	no
DayWeekMonth	Day week month	Specification of periods defined by the intersection of days or instances of them, calendar weeks and months.	D2Class	no
InstanceOfDayWithinMonth	Instance of day within month	Specification of periods defined by the instance of a specific weekday within a month (e.g. 3rd Tuesday in May)	D2Class	no
OverallPeriod	Overall period	A continuous or discontinuous period of validity defined by overall bounding start and end times and the possible intersection of valid periods (potentially recurring) with the complement of exception periods (also potentially recurring).	D2Class	no
Period	Period	A continuous time period or a set of discontinuous time periods defined by the intersection of a set of criteria all within an overall delimiting interval.	D2Class	no
PublicHoliday	Public holiday	Specification of a specific public holiday in case specialDayType is set to 'publicHoliday'.	D2Class	no
SpecialDay	Special day	Specification of a special type of day, possibly also a public holiday. Can be country or region specific.	D2Class	no
TimePeriodOfDay	Time period of day	Specification of a continuous period of time within a 24 hour period.	D2Class	no

A.1.21.3 Specializations of the "Validity" package

Table A.72— Specializations of the "Validity" package

Class name	Parent Class Name
CalendarWeekWithinMonth	Common.DayWeekMonth
InstanceOfDayWithinMonth	Common.DayWeekMonth

Class name	Parent Class Name
PublicHoliday	Common.SpecialDay

A.1.21.4 Associations of the "Validity" package

Table A.73— Associations of the "Validity" package

Class name	Association end	Designation	Definition	Multiplicity	Target
OverallPeriod	exceptionPeriod	Exception period	A single time period, a recurring time period or a set of different recurring time periods during which validity is false.	0..*	Common.Period
	validPeriod	Valid period	A single time period, a recurring time period or a set of different recurring time periods during which validity is true.	0..*	Common.Period
Period	recurringDayWeekMonthPeriod	Recurring day week month period	A recurring period defined in terms of days of the week, weeks of the month and months of the year.	0..*	Common.DayWeekMonth
	recurringSpecialDay	Recurring special day	A recurring period in terms of special days.	0..*	Common.SpecialDay
	recurringTimePeriodOfDay	Recurring time period of day	A recurring period of a day.	0..*	Common.TimePeriodOfDay
SpecialDay	namedArea	Named area	Named area for the associated SpecialDay	0..*	Common.NamedArea

A.1.21.5 Attributes of the "Validity" package

Table A.74— Attributes of the "Validity" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
CalendarWeekWithinMonth	applicableCalendarWeekWithinMonth	Applicable calendar week within month	Calendar week in month. See ISO8601. "All weeks of the month" is expressed by not using the CalendarWeekOfMonth class. Note: Calendar weeks start with Monday. First week is the week containing the first of the month.	1..6	Common.CalendarWeekWithinMonthEnum

Class name	Attribute name	Designation	Definition	Multiplicity	Type
DayWeekMonth	applicableDay	Applicable day	Applicable day of the week. "All days of the week" is expressed by non-inclusion of this attribute.	0..7	Common.DayEnum
	applicableMonth	Applicable month	Applicable month of the year. "All months of the year" is expressed by non-inclusion of this attribute.	0..12	Common.MonthOfYearEnum
InstanceOfDayWithinMonth	applicableInstanceOfDayWithinMonth	Applicable instance of day within month	The specified integer instance of the specified applicable day within a month.	1..5	Common.InstanceOfDayEnum
OverallPeriod	overallEndTime	Overall end time	End of bounding period of validity defined by date and time.	0..1	Common.DateTime
	overallStartTime	Overall start time	Start of bounding period of validity defined by date and time.	1..1	Common.DateTime
Period	endOfPeriod	End of period	End of a period.	0..1	Common.DateTime
	periodName	Period name	The name of the period.	0..1	Common.MultilingualString
	startOfPeriod	Start of period	Start of period.	0..1	Common.DateTime
PublicHoliday	publicHolidayName	Public holiday name	Specification of a specific public holiday by its name.	1..1	Common.MultilingualString
SpecialDay	intersectWithApplicableDays	Intersect with applicable days	When true, the period is the intersection of applicable days and this special day. When false, the period is the union of applicable days and this special day.	1..1	Common.Boolean
	publicEvent	Public event	Type of public event on this special day.	0..1	Common.PublicEventTypeEnum
	specialDayType	Special day type	Specification of a special day, for example schoolDay, publicHoliday, ...	1..1	Common.SpecialDayTypeEnum
TimePeriodOfDay	endTimeOfPeriod	End time of period	End of time period.	1..1	Common.Time
	startTimeOfPeriod	Start time of period	Start of time period.	1..1	Common.Time

A.1.22 "VehicleCharacteristics" package

A.1.22.1 Location of "VehicleCharacteristics" package

The location of "VehicleCharacteristics" package is:

— D2Payload/Common/Classes/VehicleCharacteristics

A.1.22.2 Classes of the "VehicleCharacteristics" package

Table A.75— Classes of the "VehicleCharacteristics" package

Class name	Designation	Definition	Stereotype	Abstract
Emissions	Emissions	Emission characteristics of vehicles.	D2Class	no
GrossWeightCharacteristic	Gross weight characteristic	Gross weight characteristic of a vehicle.	D2Class	no
HeaviestAxleWeightCharacteristic	Heaviest axle weight characteristic	Weight characteristic of the heaviest axle on the vehicle.	D2Class	no
HeightCharacteristic	Height characteristic	Height characteristic of a vehicle.	D2Class	no
LengthCharacteristic	Length characteristic	Length characteristic of a vehicle.	D2Class	no
NumberOfAxlesCharacteristic	Number of axles characteristic	Number of axles characteristic of a vehicle.	D2Class	no
VehicleCharacteristics	Vehicle characteristics	The characteristics of a vehicle, e.g. lorry of gross weight greater than 30 tonnes.	D2Class	no
WidthCharacteristic	Width characteristic	Width characteristic of a vehicle.	D2Class	no

A.1.22.3 Specializations of the "VehicleCharacteristics" package

There are no defined specializations in the "VehicleCharacteristics" package.

A.1.22.4 Associations of the "VehicleCharacteristics" package

Table A.76— Associations of the "VehicleCharacteristics" package

Class name	Association end	Designation	Definition	Multiplicity	Target
VehicleCharacteristics	emissions	Emissions	Emissions for the associated VehicleCharacteristics	0..1	Common.Emissions

Class name	Association end	Designation	Definition	Multiplicity	Target
	grossWeightCharacteristic	Gross weight characteristic	Gross weight characteristic for the associated VehicleCharacteristics	0..2	Common.GrossWeightCharacteristic
	heaviestAxleWeightCharacteristic	Heaviest axle weight characteristic	Heaviest axle weight characteristic for the associated VehicleCharacteristics	0..2	Common.HeaviestAxleWeightCharacteristic
	heightCharacteristic	Height characteristic	Height characteristic for the associated VehicleCharacteristics	0..2	Common.HeightCharacteristic
	lengthCharacteristic	Length characteristic	Length characteristic for the associated VehicleCharacteristics	0..2	Common.LengthCharacteristic
	numberOfAxlesCharacteristic	Number of axles characteristic	Number of axles characteristic for the associated VehicleCharacteristics	0..2	Common.NumberOfAxlesCharacteristic
	widthCharacteristic	Width characteristic	Width characteristic for the associated VehicleCharacteristics	0..2	Common.WidthCharacteristic

A.1.22.5 Attributes of the "VehicleCharacteristics" package

Table A.77— Attributes of the "VehicleCharacteristics" package

Class name	Attribute name	Designation	Definition	Multiplicity	Type
Emissions	emissionClassificationEuro	Emission classification euro	The minimum Euro emission classification the vehicle(s) have to comply with according to the 1970 Directive 70/220/EEC and its several amendments. Note that vehicleType and fuelType need to be provided in order to make this classification explicit.	0..1	Common.EmissionClassificationEnum
	emissionClassificationOther	Emission classification other	Some other (probably locally defined) value(s) for emission classification.	0..*	Common.String
	emissionLevel	Emission level	The low emission level of a vehicle.	0..1	Common.LowEmissionLevelEnum
GrossWeightCharacteristic	comparisonOperator	Comparison operator	The operator to be used in the vehicle characteristic comparison operation.	1..1	Common.ComparisonOperatorEnum

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	grossVehicleWeight	Gross vehicle weight	The gross weight of the vehicle and its load, including any trailers.	1..1	Common.Tonnes
	typeOfWeight	Type of weight	The meaning of the weight value	1..1	Common.WeightTypeEnum
HeaviestAxleWeightCharacteristic	comparisonOperator	Comparison operator	The operator to be used in the vehicle characteristic comparison operation.	1..1	Common.ComparisonOperatorEnum
	heaviestAxleWeight	Heaviest axle weight	The weight of the heaviest axle on the vehicle.	1..1	Common.Tonnes
HeightCharacteristic	comparisonOperator	Comparison operator	The operator to be used in the vehicle characteristic comparison operation.	1..1	Common.ComparisonOperatorEnum
	vehicleHeight	Vehicle height	The height of the highest part, excluding antennae, of an individual vehicle above the road surface, in metres.	1..1	Common.MetresAsFloat
LengthCharacteristic	comparisonOperator	Comparison operator	The operator to be used in the vehicle characteristic comparison operation.	1..1	Common.ComparisonOperatorEnum
	vehicleLength	Vehicle length	The overall distance between the front and back of an individual vehicle, including the length of any trailers, couplings, embedded features etc.	1..1	Common.MetresAsFloat
NumberOfAxlesCharacteristic	comparisonOperator	Comparison operator	The operator to be used in the vehicle characteristic comparison operation.	1..1	Common.ComparisonOperatorEnum
	numberOfAxles	Number of axles	The total number of axles of an individual vehicle.	1..1	Common.NonNegativeInteger
VehicleCharacteristics	fuelType	Fuel type	The type of fuel used by the vehicle.	0..*	Common.FuelTypeEnum
	loadType	Load type	The type of load carried by the vehicle, especially in respect of hazardous loads.	0..1	Common.LoadTypeEnum

Class name	Attribute name	Designation	Definition	Multiplicity	Type
	vehicleEquipment	Vehicle equipment	The type of equipment in use or on board the vehicle.	0..1	Common.VehicleEquipmentEnum
	vehicleType	Vehicle type	Vehicle type.	0..*	Common.VehicleTypeEnum
	vehicleUsage	Vehicle usage	The type of usage of the vehicle (i.e. for what purpose is the vehicle being used).	0..1	Common.VehicleUsageEnum
	yearOfFirstRegistration	Year of first registration	Year of first registration of the vehicle	0..1	Common.Year
WidthCharacteristic	comparisonOperator	Comparison operator	The operator to be used in the vehicle characteristic comparison operation.	1..1	Common.ComparisonOperatorEnum
	vehicleWidth	Vehicle width	The maximum width of an individual vehicle, including any features embedded or fixed on it, in metres.	1..1	Common.MetresAsFloat

A.2 Data Dictionary of <<D2Datatype>> for "EnergyInfrastructureTable"

A.2.1 Introduction

This clause contains the definitions of all data types which are used in the "EnergyInfrastructureTable".

A.2.2 The <<D2Datatype>> "AmountOfMoney"

A monetary value expressed to two decimal places.

A.2.3 The <<D2Datatype>> "Ampere"

Ampere.

A.2.4 The <<D2Datatype>> "AngleInDegrees"

An integer number representing an angle in whole degrees between 0 and 359.

A.2.5 The <<D2Datatype>> "Base64Binary"

Binary data in base 64 encoding, for example for image data.

A.2.6 The <<D2Datatype>> "Boolean"

Boolean has the value space required to support the mathematical concept of binary-valued logic: {true, false}.

A.2.7 The <<D2Datatype>> "CountryCode"

EN ISO 3166-1 alpha-2 two-letter country code

A.2.8 The <<D2Datatype>> "CurrencyCode"

Three letter code defining the currency according to ISO 4217:2015 (e.g. EUR for Euro).

A.2.9 The <<D2Datatype>> "DateTime"

A combination of integer-valued year, month, day, hour, minute properties, a decimal-valued second property and a time zone property from which it is possible to determine the local time, the equivalent UTC time and the time zone offset from UTC.

A.2.10 The <<D2Datatype>> "Decimal"

A decimal number whose value space is the set of numbers that can be obtained by multiplying an integer by a non-positive power of ten, i.e., expressible as $i \times 10^{-n}$ where i and n are integers and $n \geq 0$.

A.2.11 The <<D2Datatype>> "Float"

A floating point number whose value space consists of the values $m \times 2^e$, where m is an integer whose absolute value is less than 2^{24} , and e is an integer between -149 and 104, inclusive.

A.2.12 The <<D2Datatype>> "GmlPosList"

List of coordinates, space-separated, within the same coordinate reference system, defining a geometric entity. Modelled on `DirectPositionListType` in GML (EN ISO 19136), but constrained to represent a 2D or 3D polyline.

A.2.13 The <<D2Datatype>> "Integer"

An integer number whose value space is the set $\{-2147483648, -2147483647, -2147483646, \dots, -2, -1, 0, 1, 2, \dots, 2147483645, 2147483646, 2147483647\}$.

A.2.14 The <<D2Datatype>> "Language"

A language datatype, identifies a specified language by an ISO 639-1 2-alpha code.

A.2.15 The <<D2Datatype>> "LongString"

A character string with no specified length limit, whose value space is the set of finite-length sequences of characters. Every character has a corresponding Universal Character Set code point (as defined in ISO/IEC 10646), which is an integer.

A.2.16 The <<D2Datatype>> "MetresAsFloat"

A measure of distance defined in metres in a floating point format.

A.2.17 The <<D2Datatype>> "MetresAsNonNegativeInteger"

A measure of distance defined in metres in a non negative integer format.

A.2.18 The <<D2Datatype>> "MultilingualString"

A multilingual string, whereby the same text may be expressed in more than one language.

A.2.19 The <<D2Datatype>> "NamedAreaCode"

Type for a short numeric or alphanumeric code identifying an area.

A.2.20 The <<D2Datatype>> "NonNegativeInteger"

An integer number whose value space is the set $\{0, 1, 2, \dots, 2147483645, 2147483646, 2147483647\}$.

A.2.21 The <<D2Datatype>> "NutsCode"

A NUTS code (Nomenclature of territorial units for statistics).

A.2.22 The <<D2Datatype>> "Percentage"

A ratio expressed as an amount per hundred, such that for example the value 100 represents the case where a quantity is equal to the reference value it is compared with, while the value 50 represents a ratio of one half.

A.2.23 The <<D2Datatype>> "Reference"

A reference to an identifiable managed object where the identifier is unique. It comprises an identifier (e.g. UUID) and a string identifying the class of the referenced object.

A.2.24 The <<D2Datatype>> "SquareMetres"

A value of area expressed in units of square metres.

A.2.25 The <<D2Datatype>> "String"

A character string whose value space is the set of finite-length sequences of characters. Every character has a corresponding Universal Character Set code point (as defined in ISO/IEC 10646), which is an integer.

A.2.26 The <<D2Datatype>> "SubdivisionCode"

The second part of an ISO 3166-2 country sub-division code (up to 3 characters) which may be used along with a CountryCode to make a full ISO 3166-2 subdivision code.

A.2.27 The <<D2Datatype>> "Time"

An instant of time that recurs every day. The value space of time is the space of time of day values as defined in § 5.3 of [ISO 8601]. Specifically, it is a set of zero-duration daily time instances.

A.2.28 The <<D2Datatype>> "TimeZone"

Identifies a time zone by specifying the difference to UTC in hours and minutes, as defined in ISO 8601.

A.2.29 The <<D2Datatype>> "Tonnes"

A measure of weight defined in metric tonnes.

A.2.30 The <<D2Datatype>> "Url"

A Uniform Resource Locator (URL) address comprising a compact string of characters for a resource available on the Internet.

A.2.31 The <<D2Datatype>> "VersionedReference"

A reference to an identifiable version managed object where the combination of the identifier and version is unique. It comprises an identifier (e.g. UUID), a version (NonNegativeInteger) and a string identifying the class of the referenced object.

A.2.32 The <<D2Datatype>> "Volt"

Volt.

A.2.33 The <<D2Datatype>> "Watt"

Watt.

A.2.34 The <<D2Datatype>> "Year"

A year.

A.3 Data Dictionary of <<D2Enumeration>> for "EnergyInfrastructureTable"

A.3.1 Introduction

This clause contains the definitions of all enumerations which are used in the "EnergyInfrastructureTable".

A.3.2 The <<D2Enumeration>> "AccessibilityEnum"

Information on accessibility and facilities for persons with disabilities.

Table A.78— Values contained in the enumeration "AccessibilityEnum"

Enumerated value name	Designation	Definition
barrierFreeAccessible	Barrier free accessible	Accessible without any steps or other barriers.
disabilityAccessible	Disability accessible	Accessible for persons with disabilities. Wheelchair accessible is a special form of it.
disabilityFacilities	Disability facilities	There are special facilities for persons with disabilities, like handrails or special furniture.
marking	Marking	There is a visible mark for the privilege of persons with disabilities (e.g. a wheelchair symbol).
none	None	No form of special accessibility, i.e. usually not convenient for persons with disabilities, e.g. because of steps or barriers.
orientationSystemForBlindPeople	Orientation system for blind people	There is some orientation system, which helps blind or visually impaired people. Examples might be some acoustic system or tactile paving.
other	Other	Other.
unknown	Unknown	It is unknown whether there is a special form of accessibility.
wheelChairAccessible	Wheel chair accessible	Accessible by people in a wheelchair.

A.3.3 The <<D2Enumeration>> "AddressLineTypeEnum"

A list of supported address line types.

Table A.79— Values contained in the enumeration "AddressLineTypeEnum"

Enumerated value name	Designation	Definition
apartment	Apartment	Element indicating a discrete element of a building forming the address

Enumerated value name	Designation	Definition
building	Building	Element identifying the number or name and type of the edifice or construction relevant for the address [derived from ISO19160-4]
districtTerritory	District territory	Element specifying the geographic or administrative area of the country for the address [Source: 19160-4]
floor	Floor	Element indicating the floor or level on which a delivery point is located in a multi-storey building [Source:ISO19160-4]
generalTextLine	General text line	A non-predefined text line for general purpose.
houseNumber	House number	Element indicating a house number
poBox	Po box	A postal delivery location identifier, not necessarily a physical location.
region	Region	Element indicating the name of the area within or adjacent to the town in which delivery address is.
street	Street	Element indicating road or street identifier or name
town	Town	Element indicating the name of the populated place in which a delivery point is located, or near to or via which the delivery point is accessed. [Source: ISO19160-4]
unit	Unit	An element representing a section of a building or organisation.

A.3.4 The <<D2Enumeration>> "AltitudeAccuracyEnum"

Coded level of vertical accuracy

Table A.80— Values contained in the enumeration "AltitudeAccuracyEnum"

Enumerated value name	Designation	Definition
equalToOrLessThan100Metres	Equal to or less than100 metres	Indicates if the altitude accuracy is equal to or less than 100 metres
equalToOrLessThan10Centimetres	Equal to or less than10 centimetres	Indicates if the altitude accuracy is equal to or less than 10 centimetres
equalToOrLessThan10Metres	Equal to or less than10 metres	Indicates if the altitude accuracy is equal to or less than 10 metres
equalToOrLessThan1Centimetre	Equal to or less than1 centimetre	Indicates if the altitude accuracy is equal to or less than 1 centimetre

Enumerated value name	Designation	Definition
equalToOrLessThan1Metre	Equal to or less than1 metre	Indicates if the altitude accuracy is equal to or less than 1 metre
equalToOrLessThan200Metres	Equal to or less than200 metres	Indicates if the altitude accuracy is equal to or less than 200 metres
equalToOrLessThan20Centimetres	Equal to or less than20 centimetres	Indicates if the altitude accuracy is equal to or less than 20 centimetres
equalToOrLessThan20Metres	Equal to or less than20 metres	Indicates if the altitude accuracy is equal to or less than 20 metres
equalToOrLessThan2Centimetres	Equal to or less than2 centimetres	Indicates if the altitude accuracy is equal to or less than 2 centimetres
equalToOrLessThan2Metres	Equal to or less than2 metres	Indicates if the altitude accuracy is equal to or less than 2 metres
equalToOrLessThan50Centimetres	Equal to or less than50 centimetres	Indicates if the altitude accuracy is equal to or less than 50 centimetres
equalToOrLessThan50Metres	Equal to or less than50 metres	Indicates if the altitude accuracy is equal to or less than 50 metres
equalToOrLessThan5Centimetres	Equal to or less than5 centimetres	Indicates if the altitude accuracy is equal to or less than 5 centimetres
equalToOrLessThan5Metres	Equal to or less than5 metres	Indicates if the altitude accuracy is equal to or less than 5 metres

A.3.5 The <<D2Enumeration>> "AreaPlacesEnum"

Type of area place(s)

Table A.81— Values contained in the enumeration "AreaPlacesEnum"

Enumerated value name	Designation	Definition
atBorders	At borders	At national borders
atHighAltitudes	At high altitudes	At high altitudes
inBuiltUpAreas	In built up areas	In built up areas, i.e. villages, towns and cities
inForestedAreas	In forested areas	On sections of the road where it runs through or adjacent to forested areas
inGalleries	In galleries	In galleries
inLowLyingAreas	In low lying areas	In low-lying areas
inRuralAreas	In rural areas	In rural areas, i.e. outside villages, towns and cities
inShadedAreas	In shaded areas	In shaded areas
inTheInnerCityAreas	In the inner city areas	In the city centre areas
inTunnels	In tunnels	In tunnels

Enumerated value name	Designation	Definition
onBridges	On bridges	On bridges
onDownhillSections	On downhill sections	On downhill sections of the road
onElevatedSections	On elevated sections	On elevated sections of the road
onEnteringOrLeavingTunnels	On entering or leaving tunnels	On entering or leaving tunnels
onFlyovers	On flyovers	On flyover sections of the road, i.e. sections of the road which pass over another road
onPasses	On passes	On mountain passes
onUndergroundSections	On underground sections	On underground sections of the road
onUnderpasses	On underpasses	On underpasses, i.e. sections of the road which pass under another road

A.3.6 The <<D2Enumeration>> "AuthenticationAndIdentificationEnum"

A table of authentication and/or identification methods

Table A.82— Values contained in the enumeration "AuthenticationAndIdentificationEnum"

Enumerated value name	Designation	Definition
activeRFIDChip	Active r f i d chip	Phone (active RFID chip)
apps	Apps	Apps
calypso	Calypso	RFID Calypso
cashPayment	Cash payment	No specific authentication by using cash
creditCard	Credit card	Credit card
debitCard	Debit card	Debit card
mifareClassic	Mifare classic	RFID Card / Phone NFC - Mifare Classic
mifareDesfire	Mifare desfire	RFID Card / Phone NFC - Mifare Desfire
nfc	Nfc	Nearfield communication
noAccess	No access	No access granted
overTheAir	Over the air	Over the air according to ISO 15118
phoneDialog	Phone dialog	phone (dialog with platform)
phoneSMS	Phone s m s	Phone (SMS)
pinpad	Pinpad	PINPAD
plc	Plc	PLC according to ISO 15118
prepaidCard	Prepaid card	Pre-Paid card
rfid	Rfid	RFID

Enumerated value name	Designation	Definition
unlimitedAccess	Unlimited access	No authentication/identification required.
website	Website	Using a website

A.3.7 The <<D2Enumeration>> "AvailabilityEnum"

An enumeration which states if something is available or not.

Table A.83— Values contained in the enumeration "AvailabilityEnum"

Enumerated value name	Designation	Definition
available	Available	The element in question is available.
notAvailable	Not available	The element in question is not available.
unknown	Unknown	There is no information about whether the element in question is available or not.

A.3.8 The <<D2Enumeration>> "CalendarWeekWithinMonthEnum"

Calendar week within month (see ISO8601).

Table A.84— Values contained in the enumeration "CalendarWeekWithinMonthEnum"

Enumerated value name	Designation	Definition
fifthWeek	Fifth week	Fifth week of the month.
firstWeek	First week	Calendar week containing the first of the month. Several days of the first week of the month may occur in the previous calendar month. By construction, the last week of a preceding month can also be the first week of a subsequent month.
fourthWeek	Fourth week	Fourth week of the month.
lastWeek	Last week	Last calendar week within month, regardless of its actual number. The last calendar week is the week beginning with Monday and containing the last of the month.
secondWeek	Second week	Second week of the month.
sixthWeek	Sixth week	Sixth week of the month.
thirdWeek	Third week	Third week of the month.

A.3.9 The <<D2Enumeration>> "ChargingModeEnum"

Charging mode according to IEC 61851-1 terminology

Table A.85— Values contained in the enumeration "ChargingModeEnum"

Enumerated value name	Designation	Definition
ccs	Ccs	Charging with a combined charging solution (CCS). AC and DC are used simultaneously.
legacyInductive	Legacy inductive	Legacy-Inductive
mode1AC1p	Mode1 a c1p	Mode 1, AC 1 phase
mode1AC3p	Mode1 a c3p	Mode 1, AC 3 phases
mode2AC1p	Mode2 a c1p	Mode 2, AC 1 phase
mode2AC3p	Mode2 a c3p	Mode 2, AC 3 phases
mode3AC3p	Mode3 a c3p	Mode 3, AC 3 phases
mode4DC	Mode4 d c	Mode 4, DC
other	Other	Some other charging mode
unknown	Unknown	The type of the charging mode is unknown

A.3.10 The <<D2Enumeration>> "ChargingPointUsageTypeEnum"

Type of usage for an electric charging point..

Table A.86— Values contained in the enumeration "ChargingPointUsageTypeEnum"

Enumerated value name	Designation	Definition
electricalDevices	Electrical devices	Provides a plug for electrical devices (e.g. shaver, mobile phones, hair dryer, ...)
electricBike	Electric bike	Charging of E-Bikes
electricBoat	Electric boat	Charging of electric boats
electricMotorcycle	Electric motorcycle	Charging of E-Motorcycles
electricVehicle	Electric vehicle	Charging of electric vehicles
lorryPowerConsumption	Lorry power consumption	Supply for lorries with power consumption, e.g. for refrigerated goods transports.
motorhomeOrCaravanSupply	Motorhome or caravan supply	Supply for motorhomes or caravans
other	Other	Other usage for the electric charging stations.
overheadLineDrivenVehicles	Overhead line driven vehicles	The charging point supplies a overhead line, usually connected via pantographs

A.3.11 The <<D2Enumeration>> "ComparisonOperatorEnum"

Logical comparison operations.

Table A.87— Values contained in the enumeration "ComparisonOperatorEnum"

Enumerated value name	Designation	Definition
equalTo	Equal to	Logical comparison operator of "equal to".
greaterThan	Greater than	Logical comparison operator of "greater than".
greaterThanOrEqualTo	Greater than or equal to	Logical comparison operator of "greater than or equal to".
lessThan	Less than	Logical comparison operator of "less than".
lessThanOrEqualTo	Less than or equal to	Logical comparison operator of "less than or equal to".

A.3.12 The <<D2Enumeration>> "ConfidentialityValueEnum"

Values of confidentiality.

Table A.88— Values contained in the enumeration "ConfidentialityValueEnum"

Enumerated value name	Designation	Definition
internalUse	Internal use	For internal use only of the recipient organisation.
noRestriction	No restriction	No restriction on usage.

A.3.13 The <<D2Enumeration>> "ConnectorFormatTypeEnum"

A list of cable types used during the charging process.

Table A.89— Values contained in the enumeration "ConnectorFormatTypeEnum"

Enumerated value name	Designation	Definition
cableMode2	Cable mode2	The connector is an attached cable; the EV users car needs to have a fitting inlet for a mode 2 cable, common for most domestic sockets
cableMode3	Cable mode3	The connector is an attached cable; the EV users car needs to have a fitting inlet for a mode 3 cable, can be used for Type 1 and Type 2 sockets.
otherCable	Other cable	The connector is an attached cable; the EV users car needs to have a fitting inlet.

Enumerated value name	Designation	Definition
socket	Socket	The connector is a socket; the EV user needs to bring a fitting plug

A.3.14 The <<D2Enumeration>> "ConnectorTypeEnum"

A table of commonly used connectors / charging interfaces

Table A.90— Values contained in the enumeration "ConnectorTypeEnum"

Enumerated value name	Designation	Definition
cee3	Cee3	CEE3, 230 V, 16 A
cee5	Cee5	CEE5, 400 V, 16-63 A
chademo	Chademo	CHAdEMO, 600 V DC. Used mostly in Japan.
domestic	Domestic	A domestic socket of unspecified type. Applicable countries should be specified in separate attribute.
domesticA	Domestic a	Domestic socket type A (mainly used in the USA, Canada, Mexico & Japan)
domesticB	Domestic b	Domestic socket type B (mainly used in the USA, Canada & Mexico)
domesticC	Domestic c	Domestic socket type C (commonly used in Europe, South America & Asia)
domesticD	Domestic d	Domestic socket type D (mainly used in India)
domesticE	Domestic e	Domestic socket type E (primarily used in France, Belgium, Poland, Slovakia & Czechia)
domesticF	Domestic f	Domestic socket type F (used almost everywhere in Europe & Russia, except for the UK & Ireland)
domesticG	Domestic g	Domestic socket type G (mainly used in the United Kingdom, Ireland, Malta, Malaysia, Singapore & the Arabian Peninsula)
domesticH	Domestic h	Domestic socket type H (used exclusively in Israel, the West Bank & the Gaza Strip)
domesticI	Domestic i	Domestic socket type I (mainly used in Australia, New Zealand, China & Argentina)
domesticJ	Domestic j	Domestic socket type J (used almost exclusively in Switzerland & Liechtenstein)

Enumerated value name	Designation	Definition
domesticK	Domestic k	Domestic socket type K (used almost exclusively in Denmark & Greenland)
domesticL	Domestic l	Domestic socket type L (used almost exclusively in Italy & Chile)
domesticM	Domestic m	Domestic socket type M (mainly used in South Africa)
domesticN	Domestic n	Domestic socket type N (used in Brazil and South Africa)
domesticO	Domestic o	Domestic socket type O (used exclusively in Thailand)
iec60309x2single16	iec60309x2single16	IEC 60309-2 Industrial Connector single phase 16 amperes (usually blue)
iec60309x2three16	iec60309x2three16	IEC 60309-2 Industrial Connector three phase 16 amperes (usually red)
iec60309x2three32	iec60309x2three32	IEC 60309-2 Industrial Connector three phase 32 amperes (usually red)
iec60309x2three64	iec60309x2three64	IEC 60309-2 Industrial Connector three phase 64 amperes (usually red)
iec62196T1	iec62196 t1	IEC 62196 Type 1 "SAE J1772". Mostly used in USA and Asia.
iec62196T1COMBO	iec62196 t1 c o m b o	Combo Type 1 based, DC
iec62196T2	iec62196 t2	IEC 62196 Type 2 "Mennekes" - 400 V, 16-63 A. Mandatory in Europe; EN 17186 identifier "C"
iec62196T2COMBO	iec62196 t2 c o m b o	Combo Type 2 based, DC, Type 2 connector with extension for simultaneous DC-charging
iec62196T3A	iec62196 t3 a	IEC 62196 Type 3A; EN 17186 identifier "D"
iec62196T3C	iec62196 t3 c	IEC 62196 Type 3C "Scame"; EN 17186 identifier "E"
mcs	Mcs	MCS
other	Other	Other charging interface.
pantographBottomUp	Pantograph bottom up	On-board Bottom-up-Pantograph typically for bus charging
pantographTopDown	Pantograph top down	Off-board Top-down-Pantograph typically for bus charging

Enumerated value name	Designation	Definition
teslaConnectorAmerica	Tesla connector america	Tesla connector used in America (Tesla specific)
teslaConnectorEurope	Tesla connector europe	Tesla Connector EU (modification of the Type 2 connector)
teslaR	Tesla r	Tesla Connector "Roadster"-type (round, 4 pin)
teslaS	Tesla s	Tesla Connector "Model-S"-type (oval, 5 pin)
yazaki	Yazaki	Yazaki, 400 VDC, 125 A, Asian standard.

A.3.15 The <<D2Enumeration>> "CurrentTypeEnum"

The type of current (AC/DC).

Table A.91— Values contained in the enumeration "CurrentTypeEnum"

Enumerated value name	Designation	Definition
ac	Ac	Alternating current
dc	Dc	Direct current

A.3.16 The <<D2Enumeration>> "DayEnum"

Days of the week.

Table A.92— Values contained in the enumeration "DayEnum"

Enumerated value name	Designation	Definition
friday	Friday	Friday.
monday	Monday	Monday.
saturday	Saturday	Saturday.
sunday	Sunday	Sunday.
thursday	Thursday	Thursday.
tuesday	Tuesday	Tuesday.
wednesday	Wednesday	Wednesday.

A.3.17 The <<D2Enumeration>> "DeliveryUnitEnum"

Table with different units in which the delivery is measured.

Table A.93— Values contained in the enumeration "DeliveryUnitEnum"

Enumerated value name	Designation	Definition
kWh	K wh	kilowatt hour

A.3.18 The <<D2Enumeration>> "EmissionClassificationEuroEnum"

Classification of emission according to the Euro emission classification (based on several amendments on 1970 Directive 70/220/EEC). Note that vehicleType as well as fuelType are mandatory to provide to make this classification explicit.

Table A.94— Values contained in the enumeration "EmissionClassificationEuroEnum"

Enumerated value name	Designation	Definition
euro5	Euro5	Euro 5.
euro5a	Euro5a	Euro 5a.
euro5b	Euro5b	Euro 5b.
euro6	Euro6	Euro 6.
euro6a	Euro6a	Euro 6a.
euro6b	Euro6b	Euro 6b.
euro6c	Euro6c	Euro 6c.
euroV	Euro v	Euro V.
euroVI	Euro v i	Euro VI.
other	Other	Any other level.

A.3.19 The <<D2Enumeration>> "EmissionClassificationEuroEnumExtended"

extension of the EmissionClassificationEuroEnum

Table A.95— Values contained in the enumeration "EmissionClassificationEuroEnumExtended"

Enumerated value name	Designation	Definition
euro0	Euro0	Euro 0.
euro1	Euro1	Euro1.
euro2	Euro2	Euro2.
euro3	Euro3	Euro3.
euro4	Euro4	Euro 4.
euro6d	Euro6d	Euro 6d.
euro6dTemp	Euro6d temp	Euro 6d-TEMP.
euroI	Euro i	euro 1
euroII	Euro i i	euro 2
euroIII	Euro i i i	euro 3
euroIV	Euro i v	Euro IV.
euroUnknown	Euro unknown	euro qualification of engine unknown

A.3.20 The <<D2Enumeration>> "EnergyInfrastructureSiteTypeEnum"

The type of an energy infrastructure site.

Table A.96— Values contained in the enumeration "EnergyInfrastructureSiteTypeEnum"

Enumerated value name	Designation	Definition
inBuilding	In building	The energy infrastructure site is located inside some building for example in a car park.
onCompanySite	On company site	The energy infrastructure site is located on a company site.
onstreet	Onstreet	The energy infrastructure site is located alongside a street, for example some singular charging stations.
openSpace	Open space	The energy infrastructure site is an open space, for example a parking site.
other	Other	Other types of energy infrastructure sites.

A.3.21 The <<D2Enumeration>> "EquipmentTypeEnum"

Types of equipment.

Table A.97— Values contained in the enumeration "EquipmentTypeEnum"

Enumerated value name	Designation	Definition
bathRoom	Bath room	Bike parking.
bikeParking	Bike parking	Bike parking.
cashMachine	Cash machine	Cash machine.
copyMachineOrService	Copy machine or service	A possibility to create copies of documents.
defibrillator	Defibrillator	Medical equipment to provide first aid after heart attacks.
dsrReceiver	Dsrc receiver	A system to manage digital short range communication (radio beacon transceivers), e.g. for tolling roadside equipment.
dumpingStation	Dumping station	Possibility to get rid of sewage (especially for motorhomes).
electricChargingStation	Electric charging station	For charging vehicles, motorhome supply etc. The quantity attribute specifies the number of charging stations.

Enumerated value name	Designation	Definition
elevator	Elevator	Indication of the availability of elevators.
faxMachineOrService	Fax machine or service	A possibility to send and/or receive faxes.
fireExtinguisher	Fire extinguisher	Fire extinguisher
fireHose	Fire hose	A hose for water transport in case of fire.
fireHydrant	Fire hydrant	Fire hydrant
firstAidEquipment	First aid equipment	Equipment to support first aid on injured people. Note that 'defibrillator' is a separate literal.
iceFreeScaffold	Ice free scaffold	A technical equipment to remove ice and snow from the roof of lorries.
informationPoint	Information point	An information point with employees.
informationStele	Information stele	An unmanned information point.
internetTerminal	Internet terminal	Public internet terminal. Charges may be specified using the TariffsAndPayment section.
internetWireless	Internet wireless	Public wireless internet. Specifying an amount would be the number of hotspots/access points. Charges may be specified using the TariffsAndPayment section.
luggageLocker	Luggage locker	Possibility to deposit luggage in a safe way.
none	None	None.
other	Other	Some other equipment. Use the description attribute to specify it.
paymentMachine	Payment machine	A payment machine, for example a parking ticket machine.
picnicFacilities	Picnic facilities	Indication of whether any picnicking facilities, such as tables, chairs and shaded areas, are available.
playground	Playground	A playground for children.
publicCardPhone	Public card phone	Indicates whether there is a public telephone available that can be used with a card.
publicCoinPhone	Public coin phone	Indicates whether there is a public telephone available that can be used with coins.
publicPhone	Public phone	Indicates whether there is a public telephone available.

Enumerated value name	Designation	Definition
refuseBin	Refuse bin	Refuse bins for small amounts of garbage (see also 'wasteDisposal').
restingFacilities	Resting facilities	Resting facilities
safeDeposit	Safe deposit	A possibility to store valuable possession in a safe way.
shelter	Shelter	A shelter (against wind, sun, ...).
shower	Shower	Indicates whether there are shower facilities available.
snowAndIceRemovalEquipment	Snow and ice removal equipment	Equipment to remove snow and ice.
toilet	Toilet	Indicates whether there are toilets available.
tollTerminal	Toll terminal	A terminal, where toll charges can be paid manually (this does not mean a toll gate on the road)
tyreAirPressureEquipment	Tyre air pressure equipment	Equipment to measure and refill tyre air pressure.
unknown	Unknown	Unknown.
vendingMachine	Vending machine	A vending machine for snacks, coffee etc. (without manpower).
wasteDisposal	Waste disposal	Possibility to get rid of waste in a legal way (e.g. for truckers or motorhomes). Normal refuse bins are not intended here.
waterBasin	Water basin	A water basin to wash hands, clothes or dishes.
waterSupply	Water supply	Supply of fresh water, e.g. for motorhomes.
waterTap	Water tap	Fresh water out of a tap.

A.3.22 The <<D2Enumeration>> "EuVehicleCategoryEnum"

Vehicle categories according to EU legislation

Table A.98— Values contained in the enumeration "EuVehicleCategoryEnum"

Enumerated value name	Designation	Definition
l	L	Mopeds, Motorcycles, Motor Tricycles and Quadricycles.
l1	L1	Light two-wheel powered vehicle.
l2	L2	Three-wheel moped.
l3	L3	Two-wheel motorcycle.

Enumerated value name	Designation	Definition
l4	L4	Two-wheel motorcycle with side-car.
l5	L5	Powered tricycle.
l6	L6	Light quadricycle.
l7	L7	Heavy quadricycle.
m	M	Motor vehicles with at least four wheels designed and constructed for the carriage of passengers.
m1	M1	Vehicles designed and constructed for the carriage of passengers and comprising no more than eight seats in addition to the driver's seat.
m2	M2	Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass not exceeding 5 tonnes.
m3	M3	Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass exceeding 5 tonnes.
n	N	Motor vehicles with at least four wheels designed and constructed for the carriage of goods.
n1	N1	Vehicles designed and constructed for the carriage of goods and having a maximum mass not exceeding 3,5 tonnes
n1ClassI	N1 class i	Light commercial vehicles with \leq 1,305 kg reference mass.
n1ClassII	N1 class i i	Light commercial vehicles with 1,305–1,760 kg reference mass.
n1ClassIII	N1 class i i i	N1 Class III.
n1ClassIIIAndN2	N1 class i i i and n2	Light commercial vehicles > 1,760 kg reference mass and max 3,500 kg.
n2	N2	Vehicles designed and constructed for the carriage of goods and having a maximum mass exceeding 3,5 tonnes but not exceeding 12 tonnes.

Enumerated value name	Designation	Definition
n3	N3	Vehicles designed and constructed for the carriage of goods and having a maximum mass exceeding 12 tonnes.
o	O	Trailers (including semi-trailers).
o1	O1	Trailers with a maximum mass not exceeding 0,75 tonnes
o2	O2	Trailers with a maximum mass exceeding 0,75 tonnes but not exceeding 3,5 tonnes.
o3	O3	Trailers with a maximum mass exceeding 3,5 tonnes but not exceeding 10 tonnes.
o4	O4	Trailers with a maximum mass exceeding 10 tonnes.
other	Other	Some other vehicle category.
r1	R1	Trailers, the sum of the technically permissible masses per axle of which does not exceed 1,500 kg.
r2	R2	Trailers, the sum of the technically permissible masses per axle of which exceeds 1,500 kg but does not exceed 3,500 kg.
r3	R3	Trailers, the sum of the technically permissible masses per axle of which exceeds 3,500 kg but does not exceed 21,000 kg.
r4	R4	Trailers, the sum of the technically permissible masses per axle of which exceeds 21,000 kg.
t1	T1	Wheeled tractors with the closest axle to the driver having a minimum track width of not less than 1,500 mm; with an unladen mass in running order of more than 600 kg and with a ground clearance of not more than 1,000 mm.
t2	T2	Vehicle category t2 according to Regulation(EU) No 167/2013.
t3	T3	Wheeled tractors with unladen mass in running order of not more than 600 kg.
t4	T4	Special purpose wheeled tractors with a maximum design speed of not more than 40 km/h.

Enumerated value name	Designation	Definition
t41	T41	Category T4.1: High clearance tractors.
t42	T42	Category T4.2: Extra-wide tractors.
t43	T43	Category T4.3: Low clearance tractors.

A.3.23 The <<D2Enumeration>> "FuelTypeEnum"

Type of fuel used by a vehicle.

Table A.99— Values contained in the enumeration "FuelTypeEnum"

Enumerated value name	Designation	Definition
all	All	All sort of fuel is accepted.
battery	Battery	Battery.
biodiesel	Biodiesel	Biodiesel.
diesel	Diesel	Fuel used for compression-ignition (CI) engines.
dieselBatteryHybrid	Diesel battery hybrid	Diesel and battery hybrid.
ethanol	Ethanol	Ethanol.
hydrogen	Hydrogen	Hydrogen.
liquidGas	Liquid gas	Liquid gas of any type including LPG.
lpg	LPG	Liquid petroleum gas.
methane	Methane	Methane gas.
other	Other	Other.
petrol	Petrol	Fuel used for positive-ignition (PI) engines.
petrol95Octane	Petrol95 octane	Petrol with 95 octane.
petrol98Octane	Petrol98 octane	Petrol with 98 octane.
petrolBatteryHybrid	Petrol battery hybrid	Petrol and battery hybrid.
petrolLeaded	Petrol leaded	Leaded petrol.
petrolUnleaded	Petrol unleaded	Unleaded petrol.
unknown	Unknown	The sort of fuel is not known.

A.3.24 The <<D2Enumeration>> "HeightTypeEnum"

Coded value for type of height

Table A.100— Values contained in the enumeration "HeightTypeEnum"

Enumerated value name	Designation	Definition
ellipsoidalHeight	Ellipsoidal height	Value measured vertically above the reference ellipsoid
gravityRelatedHeight	Gravity related height	Height type corresponding a value measured along direction of gravity above the reference geoid i.e. equipotential surface of the Earth's gravity field which globally approximates mean sea level.
relativeHeight	Relative height	Height type corresponding to value masured vertically above the ground level at this point.

A.3.25 The <<D2Enumeration>> "ImageFormatEnum"

Identifies an image format

Table A.101— Values contained in the enumeration "ImageFormatEnum"

Enumerated value name	Designation	Definition
bmp	Bmp	The bmp image format
gif	Gif	The gif image format
jpeg	Jpeg	The jpeg image format
png	Png	The png image format

A.3.26 The <<D2Enumeration>> "InformationStatusEnum"

Status of the related information (i.e. real, test or exercise).

Table A.102— Values contained in the enumeration "InformationStatusEnum"

Enumerated value name	Designation	Definition
real	Real	The information is real. It is not a test or exercise.
test	Test	The information is part of a test for checking the exchange of this type of information.

A.3.27 The <<D2Enumeration>> "InstanceOfDayEnum"

Instances of a day of the week in a month

Table A.103— Values contained in the enumeration "InstanceOfDayEnum"

Enumerated value name	Designation	Definition
fifthInstance	Fifth instance	Fifth instance of specified day of week in month.
firstInstance	First instance	First instance of specified day of week in month.
fourthInstance	Fourth instance	Fourth instance of specified day of week in month.
lastInstance	Last instance	Last instance of specified day of week in month (regardless its actual instance number).
secondInstance	Second instance	Second instance of specified day of week in month.
thirdInstance	Third instance	Third instance of specified day of week in month.

A.3.28 The <<D2Enumeration>> "LoadTypeEnum"

Types of load carried by a vehicle.

Table A.104— Values contained in the enumeration "LoadTypeEnum"

Enumerated value name	Designation	Definition
abnormalLoad	Abnormal load	A load that exceeds normal vehicle dimensions in terms of height, length, width, gross vehicle weight or axle weight or any combination of these. Generally termed an "abnormal load".
ammunition	Ammunition	Ammunition.
chemicals	Chemicals	Chemicals of unspecified type.
combustibleMaterials	Combustible materials	Combustible materials of unspecified type.
corrosiveMaterials	Corrosive materials	Corrosive materials of unspecified type.
debris	Debris	Debris of unspecified type.
empty	Empty	No load.
explosiveMaterials	Explosive materials	Explosive materials of unspecified type.
extraHighLoad	Extra high load	A load of exceptional height.
extraLongLoad	Extra long load	A load of exceptional length.

Enumerated value name	Designation	Definition
extraWideLoad	Extra wide load	A load of exceptional width.
fuel	Fuel	Fuel of unspecified type.
glass	Glass	Glass.
goods	Goods	Any goods of a commercial nature.
hazardousMaterials	Hazardous materials	Materials classed as being of a hazardous nature.
liquid	Liquid	Liquid of an unspecified nature.
livestock	Livestock	Livestock.
materials	Materials	General materials of unspecified type.
materialsDangerousForPeople	Materials dangerous for people	Materials classed as being of a danger to people or animals.
materialsDangerousForTheEnvironment	Materials dangerous for the environment	Materials classed as being potentially dangerous to the environment.
materialsDangerousForWater	Materials dangerous for water	Materials classed as being dangerous when exposed to water (e.g. materials which may react exothermically with water).
oil	Oil	Oil.
ordinary	Ordinary	Materials that present limited environmental or health risk. Non-combustible, non-toxic, non-corrosive.
other	Other	Other than as defined in this enumeration.
perishableProducts	Perishable products	Products or produce that will significantly degrade in quality or freshness over a short period of time.
petrol	Petrol	Petrol or petroleum.
pharmaceuticalMaterials	Pharmaceutical materials	Pharmaceutical materials.
radioactiveMaterials	Radioactive materials	Materials that emit significant quantities of electro-magnetic radiation that may present a risk to people, animals or the environment.
refrigeratedGoods	Refrigerated goods	Refrigerated goods.
refuse	Refuse	Refuse.
toxicMaterials	Toxic materials	Materials of a toxic nature which may damage the environment or endanger public health.

Enumerated value name	Designation	Definition
vehicles	Vehicles	Vehicles of any type which are being transported.

A.3.29 The <<D2Enumeration>> "LowEmissionLevelEnum"

The emission level of a vehicle.

Table A.105— Values contained in the enumeration "LowEmissionLevelEnum"

Enumerated value name	Designation	Definition
freeOfEmission	Free of emission	Only vehicles that do not produce emissions (e.g. electric driven). Hybrid driven cars are allowed, when they switch to emission free mode within the considered situation.
lowLevelEmission	Low level emission	Vehicles with low level emission.

A.3.30 The <<D2Enumeration>> "MeansOfPaymentEnum"

Means of payment

Table A.106— Values contained in the enumeration "MeansOfPaymentEnum"

Enumerated value name	Designation	Definition
cashBillsOnly	Cash bills only	Cash payment using bills only.
cashCoinsAndBills	Cash coins and bills	Cash payment using bills and/or coins only.
cashCoinsOnly	Cash coins only	Cash payment with coins only.
emv	Emv	Payment by cards with EMC chip
mobileAccount	Mobile account	Payment method using an app or other functions typically via a smartphone to a linked bank or card account.
nfc	Nfc	Near field communication
paymentCreditCard	Payment credit card	Payment by electronic payment credit card which is a small plastic card issued by a bank, building society, or other financial institution (ISO/IEC 7813 and other related standards), allowing the holder to purchase goods or services on credit.

Enumerated value name	Designation	Definition
paymentDebitCard	Payment debit card	Payment by electronic payment debit card which is a small plastic card (ISO/IEC 7813 and other related standards), allowing the holder to transfer money electronically from their bank account when making a purchase.
paymentValueCard	Payment value card	Payment by electronic payment debit card which is a small plastic card (ISO/IEC 7813 and other related standards) with a monetary value stored on the card itself, that may not be linked to an external account maintained by a financial institution.
prepay	Prepay	Advanced payment for parking right.
qrCode	Qr code	Payment with a given QR-code
tollTag	Toll tag	Toll tag (RFID) or similar, with associated account.
unknown	Unknown	Unknown
website	Website	Payment by website

A.3.31 The <<D2Enumeration>> "MonthOfYearEnum"

A list of the months of the year.

Table A.107— Values contained in the enumeration "MonthOfYearEnum"

Enumerated value name	Designation	Definition
april	April	The month of April.
august	August	The month of August.
december	December	The month of December.
february	February	The month of February.
january	January	The month of January.
july	July	The month of July.
june	June	The month of June.
march	March	The month of March.
may	May	The month of May.
november	November	The month of November.
october	October	The month of October.
september	September	The month of September.

The <<D2Enumeration>> "NamedAreaTypeEnum"

Types of areas.

Table A.108— Values contained in the enumeration "NamedAreaTypeEnum"

Enumerated value name	Designation	Definition
applicationRegion	Application region	Application region
carParkArea	Car park area	Car park area
carpoolArea	Carpool area	Carpool area
continent	Continent	Continent
country	Country	Country
countryGroup	Country group	Group of countries.
fuzzyArea	Fuzzy area	Fuzzy area
industrialArea	Industrial area	Industrial area
lake	Lake	Lake
meteorologicalArea	Meteorological area	Meteorological area
metropolitanArea	Metropolitan area	Metropolitan area
municipality	Municipality	Municipality
order1AdministrativeArea	Order1 administrative area	Order 1 administrative area
order2AdministrativeArea	Order2 administrative area	Order 2 administrative area
order3AdministrativeArea	Order3 administrative area	Order 3 administrative area
order4AdministrativeArea	Order4 administrative area	Order 4 administrative area
order5AdministrativeArea	Order5 administrative area	Order 5 administrative area
parkAndRideSite	Park and ride site	A park and ride site
policeForceControlArea	Police force control area	Police force control area
roadOperatorControlArea	Road operator control area	Road operator control area
ruralCounty	Rural county	Rural county
sea	Sea	Sea
touristArea	Tourist area	Tourist area
trafficArea	Traffic area	Traffic area
urbanCounty	Urban county	Urban county
waterArea	Water area	Water area

A.3.32 The <<D2Enumeration>> "NutsCodeTypeEnum"

Types of NUTS codes (Nomenclature of territorial units for statistics) including LAU codes (Local Administrative Units).

Table A.109— Values contained in the enumeration "NutsCodeTypeEnum"

Enumerated value name	Designation	Definition
lau1Code	Lau1 code	LAU 1 code
lau2Code	Lau2 code	LAU 2 code
nuts1Code	Nuts1 code	NUTS 1 code
nuts2Code	Nuts2 code	NUTS 2 code
nuts3Code	Nuts3 code	NUTS 3 code

A.3.33 The <<D2Enumeration>> "OpenlrFormOfWayEnum"

Enumeration of for of way

Table A.110— Values contained in the enumeration "OpenlrFormOfWayEnum"

Enumerated value name	Designation	Definition
motorway	Motorway	Motorway
multipleCarriageway	Multiple carriageway	Multiple carriageway
other	Other	Other
roundabout	Roundabout	Roundabout
singleCarriageway	Single carriageway	Single carriageway
slipRoad	Slip road	Slip road
trafficSquare	Traffic square	Traffic square
undefined	Undefined	Undefined

A.3.34 The <<D2Enumeration>> "OpenlrFunctionalRoadClassEnum"

Enumeration of functional road class

Table A.111— Values contained in the enumeration "OpenlrFunctionalRoadClassEnum"

Enumerated value name	Designation	Definition
frc0	Frc0	Main road, highest importance
frc1	Frc1	First class road
frc2	Frc2	Second class road
frc3	Frc3	Third class road
frc4	Frc4	Fourth class road
frc5	Frc5	Fifth class road
frc6	Frc6	Sixth class road

Enumerated value name	Designation	Definition
frc7	Frc7	Other class road, lowest importance

A.3.35 The <<D2Enumeration>> "OpenlrOrientationEnum"

Enumeration of orientation

Table A.112— Values contained in the enumeration "OpenlrOrientationEnum"

Enumerated value name	Designation	Definition
againstLineDirection	Against line direction	Against line direction
both	Both	Both directions
noOrientationOrUnknown	No orientation or unknown	No orientation or unknown
withLineDirection	With line direction	With line direction

A.3.36 The <<D2Enumeration>> "OpenlrSideOfRoadEnum"

Enumeration of side of road

Table A.113— Values contained in the enumeration "OpenlrSideOfRoadEnum"

Enumerated value name	Designation	Definition
both	Both	On both sides of the road.
left	Left	On the left side of the road.
onRoadOrUnknown	On road or unknown	On road or unknown
right	Right	On the right side of the road.

A.3.37 The <<D2Enumeration>> "OrganisationTypeEnum"

Type of organisation.

Table A.114— Values contained in the enumeration "OrganisationTypeEnum"

Enumerated value name	Designation	Definition
privateSector	Private sector	Private sector organisation.
publicSector	Public sector	Public sector organisation.

A.3.38 The <<D2Enumeration>> "PaymentBrandsEnum"

Brands for payment cards

Table A.115— Values contained in the enumeration "PaymentBrandsEnum"

Enumerated value name	Designation	Definition
americanExpress	American express	American Express
applePay	Apple pay	Apple pay

Enumerated value name	Designation	Definition
cirrus	Cirrus	Cirrus
dinersClub	Diners club	Diners Club
discoverCard	Discover card	Discover Card
giroCard	Giro card	Giro card
maestro	Maestro	Maestro
masterCard	Master card	Master Card
other	Other	Another brand
visa	Visa	Visa
vpay	Vpay	VPay

A.3.39 The <<D2Enumeration>> "PaymentTimingEnum"

Details of when payment is required.

Table A.116— Values contained in the enumeration "PaymentTimingEnum"

Enumerated value name	Designation	Definition
other	Other	Other.
payAfterExit	Pay after exit	Payment on account
payAndExit	Pay and exit	Pay directly at the exit with a payment card or other means of payment (usually, this payment card must have been used when entering as well).
payOnEntry	Pay on entry	Pay at start of the parking session (e.g. for pay and display)
payPriorToExit	Pay prior to exit	Pay at machine on foot prior to returning to vehicle and use payment ticket to exit.
prepay	Prepay	Pay before entry

A.3.40 The <<D2Enumeration>> "PositionConfidenceCodedErrorEnum"

Error code for horizontal or vertical position confidence

Table A.117— Values contained in the enumeration "PositionConfidenceCodedErrorEnum"

Enumerated value name	Designation	Definition
outOfRange	Out of range	Indicates the accuracy is out of range, i.e. greater than 4 093 cm for horizontal position.
unavailable	Unavailable	Indicates the accuracy information is unavailable.

A.3.41 The <<D2Enumeration>> "PriceTypeEnum"

The type of price for energy.

Table A.118— Values contained in the enumeration "PriceTypeEnum"

Enumerated value name	Designation	Definition
basePrice	Base price	The given price is a base price, which has to be added.
flatRate	Flat rate	The given price is a flatrate price, independent of the fueled amunt.
free	Free	Charging or refueling is free.
other	Other	Other method of pricing.
pricePerKWh	Price per k wh	The given price is per kWh of electric energy.
pricePerMinute	Price per minute	The given price is per minute of charging.

A.3.42 The <<D2Enumeration>> "PublicEventTypeEnum"

Types of public events.

Table A.119— Values contained in the enumeration "PublicEventTypeEnum"

Enumerated value name	Designation	Definition
agriculturalShow	Agricultural show	Agricultural show or event which could disrupt traffic.
airShow	Air show	Air show or other aeronautical event which could disrupt traffic.
artEvent	Art event	Art event
athleticsMeeting	Athletics meeting	Athletics event that could disrupt traffic.
ballGame	Ball game	Ball game event that could disrupt traffic.
baseballGame	Baseball game	Baseball game event that could disrupt traffic.
basketballGame	Basketball game	Basketball game event that could disrupt traffic.
beerFestival	Beer festival	Beer festival
bicycleRace	Bicycle race	Bicycle race that could disrupt traffic.
boatRace	Boat race	Regatta (boat race event of sailing, powerboat or rowing) that could disrupt traffic.
boatShow	Boat show	Boat show which could disrupt traffic.

Enumerated value name	Designation	Definition
boxingTournament	Boxing tournament	Boxing event that could disrupt traffic.
bullFight	Bull fight	Bull fighting event that could disrupt traffic.
ceremonialEvent	Ceremonial event	Formal or religious act, rite or ceremony that could disrupt traffic.
commercialEvent	Commercial event	Commercial event which could disrupt traffic.
concert	Concert	Concert event that could disrupt traffic.
cricketMatch	Cricket match	Cricket match that could disrupt traffic.
culturalEvent	Cultural event	Cultural event which could disrupt traffic.
exhibition	Exhibition	Major display or trade show which could disrupt traffic.
fair	Fair	Periodic (e.g. annual), often traditional, gathering for entertainment or trade promotion, which could disrupt traffic.
festival	Festival	Celebratory event or series of events which could disrupt traffic.
filmFestival	Film festival	Film festival
filmTVMaking	Film TV making	Film or TV making event which could disrupt traffic.
fireworkDisplay	Firework display	Firework display
flowerEvent	Flower event	Flower event
foodFestival	Food festival	Food festival
footballMatch	Football match	Football match that could disrupt traffic.
funfair	Funfair	Periodic (e.g. annual), often traditional, gathering for entertainment, which could disrupt traffic.
gardeningOrFlowerShow	Gardening or flower show	Gardening and/or flower show or event which could disrupt traffic.
golfTournament	Golf tournament	Golf tournament event that could disrupt traffic.
hockeyGame	Hockey game	Hockey game event that could disrupt traffic.
horseRaceMeeting	Horse race meeting	Horse race meeting that could disrupt traffic.

Enumerated value name	Designation	Definition
internationalSportsMeeting	International sports meeting	Large sporting event of an international nature that could disrupt traffic.
majorEvent	Major event	Significant organised event either on or near the roadway which could disrupt traffic.
marathon	Marathon	Marathon, cross-country or road running event that could disrupt traffic.
market	Market	Periodic (e.g. weekly) gathering for buying and selling, which could disrupt traffic.
match	Match	Sports match of unspecified type that could disrupt traffic.
motorShow	Motor show	Motor show which could disrupt traffic.
motorSportRaceMeeting	Motor sport race meeting	Motor sport race meeting that could disrupt traffic.
openAirConcert	Open air concert	Open air concert
other	Other	Other than as defined in this enumeration.
parade	Parade	Formal display or organised procession which could disrupt traffic.
procession	Procession	An organised procession which could disrupt traffic.
raceMeeting	Race meeting	Race meeting (other than horse or motor sport) that could disrupt traffic.
rugbyMatch	Rugby match	Rugby match that could disrupt traffic.
severalMajorEvents	Several major events	A series of significant organised events either on or near the roadway which could disrupt traffic.
show	Show	Entertainment event that could disrupt traffic.
showJumping	Show jumping	Horse showing jumping and tournament event that could disrupt traffic.
soundAndLightShow	Sound and light show	Sound and light show.
sportsMeeting	Sports meeting	Sports event of unspecified type that could disrupt traffic.

Enumerated value name	Designation	Definition
stateOccasion	State occasion	Public ceremony or visit of national or international significance which could disrupt traffic.
streetFestival	Street festival	Street festival
tennisTournament	Tennis tournament	Tennis tournament that could disrupt traffic.
theatricalEvent	Theatrical event	Theatrical event
tournament	Tournament	Sporting event or series of events of unspecified type lasting more than one day which could disrupt traffic.
tradeFair	Trade fair	A periodic (e.g. annual), often traditional, gathering for trade promotion, which could disrupt traffic.
unknown	Unknown	Service provider does not know at time of message generation.
waterSportsMeeting	Water sports meeting	Water sports meeting that could disrupt traffic.
wineFestival	Wine festival	Wine festival
winterSportsMeeting	Winter sports meeting	Winter sports meeting or event (e.g. skiing, ski jumping, skating) that could disrupt traffic.

A.3.43 The <<D2Enumeration>> "RatePolicyEnum"

Contract based or ad hoc prices for energy

Table A.120— Values contained in the enumeration "RatePolicyEnum"

Enumerated value name	Designation	Definition
adHoc	Ad hoc	Prices are for ad hoc refueling.
contract	Contract	A contract defines the pricing.

A.3.44 The <<D2Enumeration>> "ReservationTypeEnum"

Different types of reservation.

Table A.121— Values contained in the enumeration "ReservationTypeEnum"

Enumerated value name	Designation	Definition
mandatory	Mandatory	Reservation is mandatory.
notAvailable	Not available	Reservation is not possible.
optional	Optional	Reservation is optional.
partly	Partly	There is a specific contingent, that can be reserved.

Enumerated value name	Designation	Definition
unknown	Unknown	Possibility of reservation is unknown,
unspecified	Unspecified	Possibility of reservation is not specified.

A.3.45 The <<D2Enumeration>> "ServiceFacilityTypeEnum"

A service facility. In distinction to equipment, a service is usually manned.

Table A.122— Values contained in the enumeration "ServiceFacilityTypeEnum"

Enumerated value name	Designation	Definition
bikeGarage	Bike garage	A place where bikes are repaired.
bikeSharing	Bike sharing	Bike Sharing.
cafe	Cafe	Cafe.
carWash	Car wash	Car wash.
cateringService	Catering service	Catering service
docstop	Docstop	The site is part of the Docstop project, http://www.docstoponline.eu , which means medical assistance for professional drivers.
foodShopping	Food shopping	Food shopping.
hotel	Hotel	A hotel.
kiosk	Kiosk	Kiosk.
laundry	Laundry	A possibility for washing clothes (might also be a laundromat with coins).
leisureActivities	Leisure activities	There are leisure activities offered on the site or in the very near surrounding. Use the additional description attribute to give details.
medicalFacility	Medical facility	Medical facility.
motel	Motel	Hotel located aside a motorway.
motorcycleGarage	Motorcycle garage	A place where motorcycles are repaired.
motorwayRestaurant	Motorway restaurant	Restaurant located on a motorway rest area.
motorwayRestaurantSmall	Motorway restaurant small	Smaller type of restaurant located on a motorway rest area. Might be with limited offers.
other	Other	Some other service facility. Use the description attribute to specify it.

Enumerated value name	Designation	Definition
overnightAccommodation	Overnight accommodation	An accommodation to stay overnight.
payDesk	Pay desk	A manned possibility to pay.
petrolStation	Petrol station	Indicates whether it is possible to get petrol.
pharmacy	Pharmacy	Pharmacy.
police	Police	Indicates whether a police station is on site or very close.
restaurant	Restaurant	Restaurant.
restaurantSelfService	Restaurant self service	A restaurant where people arrange and fetch their meal themselves, this might enclose a buffet.
shop	Shop	A shop of unspecified kind.
snackBar	Snack bar	A snack bar.
sparePartsShopping	Spare parts shopping	Spare parts shopping.
touristInformation	Tourist information	Tourist information with employees.
truckRepair	Truck repair	Truck repair.
truckWash	Truck wash	Truck wash.
tyreRepair	Tyre repair	A tyre repair service.
unknown	Unknown	Unknown.
vehicleMaintenance	Vehicle maintenance	Garage repair service.

A.3.46 The <<D2Enumeration>> "ServiceTypeEnum"

A table of different service levels to be expected for fuelling/charging and payment.

Table A.123— Values contained in the enumeration "ServiceTypeEnum"

Enumerated value name	Designation	Definition
physicalAttendance	Physical attendance	Presence of physical persons attending the recharging or refuelling station.
unattended	Unattended	Unattended station, fuelling and payment to be done without assistance.

A.3.47 The <<D2Enumeration>> "SmartRechargingServicesEnum"

Smart recharging services

Table A.124— Values contained in the enumeration "SmartRechargingServicesEnum"

Enumerated value name	Designation	Definition
bidirectionalRecharging	Bidirectional recharging	Bidirectional charging.
plugAndCharge	Plug and charge	Possibility of conducting automatic authentication and authorisation of the recharging session on the basis of a contract-based payment concluded between the end user and the mobility service provider in a recharging point as defined in ISO 15118.
powerOptimisationByUser	Power optimisation by user	User preference configuration for recharging power optimization.
remoteMonitoring	Remote monitoring	Remote monitoring and control recharging (e.g. by app)

A.3.48 The <<D2Enumeration>> "SpecialDayTypeEnum"

Collection of special types of days.

Table A.125— Values contained in the enumeration "SpecialDayTypeEnum"

Enumerated value name	Designation	Definition
dayBeforePublicHoliday	Day before public holiday	The day preceding a public holiday.
dayFollowingPublicHoliday	Day following public holiday	A day following a public holiday.
inLieuOfPublicHoliday	In lieu of public holiday	A holiday in lieu of a public holiday that falls on a weekend.
longWeekendDay	Long weekend day	A day between a public holiday and the weekend.
other	Other	Some other special day.
publicEventDay	Public event day	A day of a public event. You may use the publicEvent attribute to specify the corresponding event.
publicHoliday	Public holiday	A public holiday in general. You may use the PublicHoliday class to refer on a specific public holiday.
schoolDay	School day	A school day.
schoolHolidays	School holidays	A day within the school holidays.

A.3.49 The <<D2Enumeration>> "SubdivisionTypeEnum"

ISO 3166-2 subdivison types.

Table A.126— Values contained in the enumeration "SubdivisionTypeEnum"

Enumerated value name	Designation	Definition
administrativeAtoll	Administrative atoll	Administrative atoll
administrativeRegion	Administrative region	Administrative region
administrativeTerritory	Administrative territory	Administrative territory
arcticRegion	Arctic region	Arctic region
autonomousCity	Autonomous city	Autonomous city
autonomousCityInNorthAfrica	Autonomous city in north africa	Autonomous city in North Africa
autonomousCommunity	Autonomous community	Autonomous community
autonomousDistrict	Autonomous district	Autonomous district
autonomousProvince	Autonomous province	Autonomous province
autonomousRegion	Autonomous region	Autonomous region
canton	Canton	Canton
capitalCity	Capital city	Capital city
city	City	City
cityMunicipality	City municipality	City municipality
cityOfCountyRight	City of county right	City of county right
commune	Commune	Commune
councilArea	Council area	Council area
country	Country	Country
county	County	County
department	Department	Department
dependency	Dependency	Dependency
district	District	District
districtMunicipality	District municipality	District municipality
districtWithSpecialStatus	District with special status	District with special status
entity	Entity	Entity
geographicalEntity	Geographical entity	Geographical entity
governorate	Governorate	Governorate
laender	Laender	Länder
localCouncil	Local council	Local Council
londonBorough	London borough	London borough
metropolitanArea	Metropolitan area	Metropolitan area

Enumerated value name	Designation	Definition
metropolitanDepartment	Metropolitan department	Metropolitan department
metropolitanDistrict	Metropolitan district	Metropolitan district
metropolitanRegion	Metropolitan region	Metropolitan region
municipality	Municipality	Municipality
other	Other	Other
overseasDepartment	Overseas department	Overseas department
overseasRegion	Overseas region	Overseas region
overseasTerritorialCollectivity	Overseas territorial collectivity	Overseas territorial collectivity
parish	Parish	Parish
province	Province	Province
quarter	Quarter	Quarter
region	Region	Region
republic	Republic	Republic
republicanCity	Republican city	Republic city
selfGovernedPart	Self governed part	Self-governed part
specialMunicipality	Special municipality	Special Municipality
state	State	State
territorialUnit	Territorial unit	Territorial unit
territory	Territory	Territory
twoTierCounty	Two tier county	Two tier country
unitaryAuthority	Unitary authority	Unitary Authority
ward	Ward	Ward

A.3.50 The <<D2Enumeration>> "TypeOfIdentifierEnum"

An empty enumeration, which should be project-specifically extended to provide type of external identifiers.

Table A.127— Values contained in the enumeration "TypeOfIdentifierEnum"

Enumerated value name	Designation	Definition
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A.3.51 The <<D2Enumeration>> "TypeOfIdentifierEnumExtended"

Extension values for the type of external identifier.

Table A.128— Values contained in the enumeration "TypeOfIdentifierEnumExtended"

Enumerated value name	Designation	Definition
evseId	Evse id	Electric Vehicle Supply Equipment Identifier according to ISO 15118. Applicable for ElectricChargingPoint or Connector.
operatorId	Operator id	Only in case of energy related operator: Operator-ID (see https://bdew-codes.de/Codenumbers/EMobilityId)
operatorIdBNetzA	Operator id b netz a	Only in case of energy-related operator: Betreiber ID der Bundesnetzagentur (siehe https://www.bundesnetzagentur.de/DE/Fachthemen/ElektrizitaetundGas/E-Mobilitaet/start.html).
providerId	Provider id	Only in case of mobility service provider: Provider ID (see https://bdew-codes.de/Codenumbers/EMobilityId)
stationIdBNetzA	Station id b netz a	Ladeeinrichtungs-ID der Bundesnetzagentur (siehe https://www.bundesnetzagentur.de/DE/Fachthemen/ElektrizitaetundGas/E-Mobilitaet/AnzeigeNEU/start.html)

A.3.52 The <<D2Enumeration>> "UrlLinkTypeEnum"

Types of URL links.

Table A.129— Values contained in the enumeration "UrlLinkTypeEnum"

Enumerated value name	Designation	Definition
documentPdf	Document PDF	URL link to a pdf document.
html	HTML	URL link to an html page.
image	Image	URL link to an image.
other	Other	Other than as defined in this enumeration.
rss	RSS	URL link to an RSS feed.
videoStream	Video stream	URL link to a video stream.

Enumerated value name	Designation	Definition
voiceStream	Voice stream	URL link to a voice stream.

A.3.53 The <<D2Enumeration>> "UserTypeEnum"

Types of different users, for example used in the context of parking.

Table A.130— Values contained in the enumeration "UserTypeEnum"

Enumerated value name	Designation	Definition
allUsers	All users	All users.
commuters	Commuters	Commuters.
customers	Customers	Customers.
elderlyUsers	Elderly users	Elderly users.
employees	Employees	Employees.
families	Families	Families.
hearingImpaired	Hearing impaired	People with hearing loss
hotelGuests	Hotel guests	Hotel guests.
longTermParkers	Long term parkers	Long-term parker.
members	Members	Members.
men	Men	Men.
other	Other	Other.
overnightParkers	Overnight parkers	Overnight parker.
parkAndCycleUser	Park and cycle user	Park and cycle user.
parkAndRideUsers	Park and ride users	Users that are exchanging into public transport at a park and ride station.
parkAndWalkUser	Park and walk user	Park and walk user.
pensioners	Pensioners	Pensioners.
personsWithDisabilities	Persons with disabilities	Persons with disabilities
pregnantWomen	Pregnant women	Pregnant women.
registeredDisabledUsers	Registered disabled users	Registered disabled persons.
reservationHolders	Reservation holders	Those who have a valid reservation, e.g. for the duration of parking.
residents	Residents	Local residents.
seasonTicketHolders	Season ticket holders	Season ticket holders.
shoppers	Shoppers	Shoppers.
shortTermParkers	Short term parkers	Short-term parker.
sportEventAwaySupporters	Sport event away supporters	Sport event away supporters.

Enumerated value name	Designation	Definition
sportEventHomeSupporters	Sport event home supporters	Sport event home supporters.
staff	Staff	Staff.
students	Students	Students.
subscribers	Subscribers	Subscribers.
unknown	Unknown	Unknown.
visitors	Visitors	Visitors.
visuallyImpaired	Visually impaired	People with vision impairment
wheelchairUsers	Wheelchair users	Wheelchair users.
women	Women	Women.

A.3.54 The <<D2Enumeration>> "VehicleEquipmentEnum"

Types of vehicle equipment in use or on board.

Table A.131— Values contained in the enumeration "VehicleEquipmentEnum"

Enumerated value name	Designation	Definition
notUsingSnowChains	Not using snow chains	Vehicle not using snow chains.
notUsingSnowChainsOrTyres	Not using snow chains or tyres	Vehicle not using either snow tyres or snow chains.
snowChainsInUse	Snow chains in use	Vehicle using snow chains.
snowChainsOrTyresInUse	Snow chains or tyres in use	Vehicle using snow tyres or snow chains.
snowTyresInUse	Snow tyres in use	Vehicle using snow tyres.
withoutSnowTyresOrChainsOn Board	Without snow tyres or chains on board	Vehicle which is not carrying on board snow tyres or chains.

A.3.55 The <<D2Enumeration>> "VehicleToGridCommunicationTypeEnum"

A list of communication types for communication between vehicles and the grid.

Table A.132— Values contained in the enumeration "VehicleToGridCommunicationTypeEnum"

Enumerated value name	Designation	Definition
iec619802	Iec619802	Communication according to IEC/TS 61980-2.
iso15118	Iso15118	Communication according to ISO15118.
none	None	No communication between vehicle and the grid.
other	Other	Communication according to other guidelines/specifications.

Enumerated value name	Designation	Definition
unknown	Unknown	The type of communication is unknown.

A.3.56 The <<D2Enumeration>> "VehicleTypeEnum"

Types of vehicle.

Table A.133— Values contained in the enumeration "VehicleTypeEnum"

Enumerated value name	Designation	Definition
agriculturalVehicle	Agricultural vehicle	Vehicle normally used for agricultural purposes, e.g. tractor, combined harvester etc.
anyVehicle	Any vehicle	Vehicle of any type.
articulatedBus	Articulated bus	Articulated bus
articulatedTrolleyBus	Articulated trolley bus	Articulated trolley bus
articulatedVehicle	Articulated vehicle	Articulated vehicle.
bicycle	Bicycle	Bicycle.
bus	Bus	Bus.
car	Car	Vehicles designed and constructed for the carriage of passengers and comprising no more than eight seats in addition to the driver's seat, and having a maximum mass ("technically permissible maximum laden mass") not exceeding 3.5 tons (M1).
caravan	Caravan	Caravan.
carOrLightVehicle	Car or light vehicle	Car or light vehicle.
carWithCaravan	Car with caravan	Car towing a caravan.
carWithTrailer	Car with trailer	Car towing a trailer.
constructionOrMaintenanceVehicle	Construction or maintenance vehicle	Vehicle normally used for construction or maintenance purposes, e.g. digger, excavator, bulldozer, lorry mounted crane etc.
fourWheelDrive	Four wheel drive	Four wheel drive vehicle.
heavyDutyTransporter	Heavy duty transporter	A transporter for heavy duty (usually with abnormal dimensions).
heavyGoodsVehicle	Heavy goods vehicle	Vehicles with a total weight above 3,500 kg (vehicle and load).
heavyGoodsVehicleWithTrailer	Heavy goods vehicle with trailer	Heavy goods vehicle with trailer
heavyVehicle	Heavy vehicle	Vehicle whose weight means it should be classed as a heavy vehicle

Enumerated value name	Designation	Definition
highSidedVehicle	High sided vehicle	High sided vehicle.
largeCar	Large car	Large car
largeGoodsVehicle	Large goods vehicle	Vehicles for the carriage of goods and having a maximum mass exceeding 3.5 tonnes (belonging to class N2 when not exceeding 12 tonnes, otherwise class N3).
lightCommercialVehicle	Light commercial vehicle	Vehicles for the carriage of goods and having a maximum mass not exceeding 3.5 tonnes (class N1).
lightCommercialVehicleWithTrailer	Light commercial vehicle with trailer	Light goods vehicle with trailer
longHeavyLorry	Long heavy lorry	A heavy lorry that is longer than normal.
lorry	Lorry	Lorry of any type.
metro	Metro	Metro
minibus	Minibus	Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass not exceeding 5 tonnes (class M2).
moped	Moped	Moped (a two wheeled motor vehicle characterized by a small engine typically less than 50cc and by normally having pedals).
motorcycle	Motorcycle	Motorcycle.
motorcycleWithSideCar	Motorcycle with side car	Three wheeled vehicle comprising a motorcycle with an attached side car.
motorhome	Motorhome	Motorhome
motorscooter	Motorscooter	Motorscooter (a two wheeled motor vehicle characterized by a step-through frame and small diameter wheels).
other	Other	Other than as defined in this enumeration.
passengerCar	Passenger car	Passenger car
smallCar	Small car	Small car
tanker	Tanker	Vehicle with large tank for carrying bulk liquids.
threeWheeledVehicle	Three wheeled vehicle	Three wheeled vehicle of unspecified type.

Enumerated value name	Designation	Definition
trailer	Trailer	Trailer.
tram	Tram	Tram.
trolleyBus	Trolley bus	Trolley bus
twoWheeledVehicle	Two wheeled vehicle	Two wheeled vehicle of unspecified type.
unknown	Unknown	Unknown.
van	Van	Van.
vehicleWithCaravan	Vehicle with caravan	Vehicle (of unspecified type) towing a caravan.
vehicleWithCatalyticConverter	Vehicle with catalytic converter	Vehicle with catalytic converter.
vehicleWithoutCatalyticConverter	Vehicle without catalytic converter	Vehicle without catalytic converter.
vehicleWithTrailer	Vehicle with trailer	Vehicle (of unspecified type) towing a trailer.
withEvenNumberedRegistrationPlates	With even numbered registration plates	Vehicle with even numbered registration plate.
withOddNumberedRegistrationPlates	With odd numbered registration plates	Vehicle with odd numbered registration plate.

A.3.57 The <<D2Enumeration>> "VehicleUsageEnum"

Types of usage of a vehicle.

Table A.134— Values contained in the enumeration "VehicleUsageEnum"

Enumerated value name	Designation	Definition
agricultural	Agricultural	Vehicle used for agricultural purposes.
carSharing	Car sharing	Vehicles operated by a car-sharing company.
cityLogistics	City logistics	Vehicles that are used to deliver goods in a city area.
commercial	Commercial	Vehicle which is limited to non-private usage or public transport usage.
emergencyServices	Emergency services	Vehicle used by the emergency services.
military	Military	Vehicle used by the military.
nonCommercial	Non commercial	Vehicle used for non-commercial or private purposes.

Enumerated value name	Designation	Definition
patrol	Patrol	Vehicle used as part of a patrol service, e.g. road operator or automobile association patrol vehicle.
recoveryServices	Recovery services	Vehicle used to provide a recovery service.
roadMaintenanceOrConstruction	Road maintenance or construction	Vehicle used for road maintenance or construction work purposes.
roadOperator	Road operator	Vehicle used by the road operator.
taxi	Taxi	Vehicle used to provide an authorised taxi service.

A.3.58 The <<D2Enumeration>> "WeightTypeEnum"

Type of weight - describing the meaning of a vehicle weight value

Table A.135— Values contained in the enumeration "WeightTypeEnum"

Enumerated value name	Designation	Definition
actual	Actual	The weight is the actual weight of a specific vehicle
maximumPermitted	Maximum permitted	The weight is the maximum permitted weight for a vehicle