

Circular Economy Ontology Network (CEON) - Resource ODP

Metadata

IRI

<http://w3id.org/CEON/ontology/resourceODP/>

Title

Circular Economy Ontology Network
(CEON) - Resource ODP

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Version Iri

<http://w3id.org/CEON/ontology/resourceODP/0.2/>

Version Info

0.2

Preferred Namespace Prefix

resourceODP

Preferred Namespace Uri

<http://w3id.org/CEON/ontology/resourceODP/>

Description

A core ODP of the CEON ontology network
defining aspects of the resource concept.

Covers Requirements

Covers the following requirements from
Onto-DESIDE D3.1: CVN-Resource-1,3,
CVN-Composition-1,2, CVN-ResourceType-
4, C7-3, E2-2, E4-6, E5-1, E6-3, T3-1.

Classes

Batch of objects^c

IRI

<http://w3id.org/CEON/ontology/resourceODP/BatchOfObjects>

Description

A batch of objects is a collection of physical objects that are of the same type, e.g. a set of items (product objects) adhering to the same product model.

Sub Class Of

[Resource](#)^c
[has physical object](#)^{op}
some [Physical object](#)^c
and [has physical object](#)^{op}
only [Physical object](#)^c

In Domain Of

[batch size](#)^{dp}

In Range Of

[has batch](#)^{op}

Restriction

[batch size](#)^{dp} *exactly* 1
[Batch of objects](#)^c

Composition^c

IRI

<http://w3id.org/CEON/ontology/resourceODP/Composition>

Description

A composition is used to represent how a whole or mixture is made up. E.g., for chemical elements composing a chemical structure, the composition should hold information of the ratio of the composing chemical elements.

Constituent^c

IRI

<http://w3id.org/CEON/ontology/resourceODP/Constituent>

Description

A constituent is a component of object.

In Range Of

[has constituent^{op}](#)

Digital object^c

IRI

<http://w3id.org/CEON/ontology/resourceODP/DigitalObject>

Sub Class Of

[Resource^c](#)

Information^c

IRI <http://w3id.org/CEON/ontology/resourceODP/Information>

Description

Information is an abstract concept that represents any kind of interpretations. For instance, information can be data generated by software systems or data used by people for communications.

Sub Class Of

[Resource^c](#)

In Domain Of

[containsInformation^{op}](#)
[isAbout^{op}](#)

In Range Of

[containsInformation^{op}](#)
[is realization of^{op}](#)

Matter^c

IRI <http://w3id.org/CEON/ontology/resourceODP/Matter>

Description

A matter is a physical substance.

In Range Of

[has matter^{op}](#)

Physical object^c

IRI

<http://w3id.org/CEON/ontology/resourceODP/PhysicalObject>

Description

A physical object is a collection of matter.

Sub Class Of

[Resource](#)^c
[has constituent](#)^{op} only
[Constituent](#)^c *and* [has](#)
[constituent](#)^{op} some
[Constituent](#)^c
[has matter](#)^{op} some
[Matter](#)^c *and* [has matter](#)^{op}
only [Matter](#)^c

In Domain Of

[has constituent](#)^{op}
[has matter](#)^{op}

In Range Of

[has physical object](#)^{op}

Resource^c

IRI

<http://w3id.org/CEON/ontology/resource>
[ODP/Resource](#)

Description

A resource able to be handled in the context of a circular value network, e.g. data generated by software systems in the CVN, materials or products as physical objects handled in the CVN.

In Domain Of

[hasResourceLocation](#)^{op}

Super Class Of

[Batch of objects](#)^c

[Digital object](#)^c

[Information](#)^c

[Physical object](#)^c

[Set of objects](#)^c

Set of objects^c

IRI

<http://w3id.org/CEON/ontology/resourceODP/SetOf0bjects>

Description

A set of objects is a set of physical objects (items) that can be of different types, i.e. different kinds of items.

Sub Class Of

[Resource](#)^c
[has batch](#)^{op} some [Batch of objects](#)^c *and* [has batch](#)^{op} only [Batch of objects](#)^c
[has physical object](#)^{op} some [Physical object](#)^c *and* [has physical object](#)^{op} only [Physical object](#)^c

Geometry^c

IRI <http://www.opengis.net/ont/geosparql#Geometry>

Description

A coherent set of direct positions in space. The positions are held within a Spatial Reference System (SRS).

In Domain Of

[as GML](#)^{dp}
[as GeoJSON](#)^{dp}
[as WKT](#)^{dp}

In Range Of

[hasResourceLocation](#)^{op}

Object Properties

contains information^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/containsInformation>

Sub Property Of [hasPart](#)^{op}

Domain [Information](#)^c

Range [Information](#)^c

has batch^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/hasBatch>

Description

hasBatch intends to represent that a set or batch of objects can be captured by a number of batches where each batch contains a number of physical objects.

Domain

[Batch of objects^c](#) *or* [Set of objects^c](#)

Range

[Batch of objects^c](#)

has constituent^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/hasConstituent>

Description

hasConstituent intends to represent that a physical object can have a collection of composing components.

Sub Property Of

[hasPart^{op}](#)

Domain

[Physical object^c](#)

Range

[Constituent^c](#)

has matter^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/hasMatter>

Description hasMatter intends to represent that a physical object can have a collection of matter.

Domain [Physical object](#)^c

Range [Matter](#)^c

has part^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/hasPart>

Super Property Of

- [containsInformation](#)^{op}
- [has constituent](#)^{op}

has physical object^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/hasPhysicalObject>

Description hasPhysicalObject intends to represent that a batch of objects or a set of objects can have composing components of physical objects.

Domain [Set of objects^c](#) *or* [Batch of objects^c](#)

Range [Physical object^c](#)

has resource location^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/hasResourceLocation>

Domain [Resource^c](#)

Range [Geometry^c](#)

is about^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/isAbout>

Domain [Information^c](#)

is realization of^{op}

IRI <http://w3id.org/CEON/ontology/resourceODP/isRealizationOf>

Range [Information^c](#)

Datatype Properties

batch size^{dp}

IRI <http://w3id.org/CEON/ontology/resourceODP/batchSize>

Description batchSize intends to represent how many physical objects are belong to a batch of objects.

Domain [Batch of objects^c](#)

Range [xsd:nonNegativeInteger](#)

as GML^{dp}

IRI	http://www.opengis.net/ont/geosparql#asGML
<u>Is Defined By</u>	http://www.opengis.net/spec/geosparql/1.0/req/geometry-extension/geometry-as-wkt-literal
<u>Description</u>	The GML serialization of a Geometry.
<u>Domain</u>	Geometry ^C
<u>Range</u>	geo:gmlLiteral

as GeoJSON^{dp}

IRI	http://www.opengis.net/ont/geosparql#asGeoJSON
<u>Is Defined By</u>	http://www.opengis.net/spec/geosparql/1.0/req/geometry-extension/geometry-as-wkt-literal
<u>Description</u>	The GeoJSON serialization of a Geometry.
<u>Domain</u>	Geometry ^C
<u>Range</u>	geo:geoJSONLiteral

as WKT^{dp}

IRI <http://www.opengis.net/ont/geosparql#asWKT>

Is Defined By <http://www.opengis.net/spec/geosparql/1.0/req/geometry-extension/geometry-as-wkt-literal>

Description The WKT serialization of a Geometry.

Domain [Geometry^c](#)

Range [geo:wktLiteral](#)

Annotation Properties

description^{ap}

IRI <http://purl.org/dc/elements/1.1/description>

contributor^{ap}

IRI <http://purl.org/dc/terms/contributor>

created ^{ap}	
IRI	http://purl.org/dc/terms/created

creator ^{ap}	
IRI	http://purl.org/dc/terms/creator

description ^{ap}	
IRI	http://purl.org/dc/terms/description

license ^{ap}	
IRI	http://purl.org/dc/terms/license

title ^{ap}	
IRI	http://purl.org/dc/terms/title

preferred namespace prefix ^{ap}	
IRI	http://purl.org/vocab/vann/preferredNamespacePrefix

preferred namespace uri ^{ap}	
IRI	http://purl.org/vocab/vann/preferredNamespaceUri

covers requirements ^{ap}	
IRI	http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#coversRequirements

definition ^{ap}	
IRI	http://www.w3.org/2004/02/skos/core#definition

pref label ^{ap}	
IRI	http://www.w3.org/2004/02/skos/core#prefLabel

Namespaces

: <http://w3id.org/CEON/ontology/resourceODP/>
 dc <http://purl.org/dc/elements/1.1/>
 dcterms

<http://purl.org/dc/terms/>

geo

<http://www.opengis.net/ont/geosparql#>

odp

<http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#>

owl

<http://www.w3.org/2002/07/owl#>

prov

<http://www.w3.org/ns/prov#>

rdf

<http://www.w3.org/1999/02/22-rdf-syntax-ns#>

rdfs

<http://www.w3.org/2000/01/rdf-schema#>

skos

<http://www.w3.org/2004/02/skos/core#>

vann

<http://purl.org/vocab/vann/>

xsd

<http://www.w3.org/2001/XMLSchema#>

Legend

c	Classes
op	Object Properties
dp	Data type Properties
ap	Annotation Properties