

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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Date Created

2023-03-16

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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>

Description

A digital object, e.g. a computer file, that is located on some server, hard drive, or on the web. Most often the digital object is the realization of some piece of information.

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

[contains information^{op}](#)
[is about^{op}](#)

In Range Of

[contains information^{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}](#) some [Constituent^c](#) *and* [has constituent^{op}](#) only [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/resourceODP/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.

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/SetOfObjects>

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

In Domain Of

[has batch^{OP}](#)

Object Properties

contains information^{OP}

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

Description

Indicating that some piece of information is contained in a larger collection of information, e.g. a data sheet contains a statement about a certain parameter of a product.

Sub Property Of

[has part^{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 of objects can be captured by a number of batches where each batch contains a number of physical objects.

Domain [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 [has part^{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>

Description Indicating that something is part of or is contained by something else.

Super Property Of

- [contains information^{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

is about^{op}

IRI	http://w3id.org/CEON/ontology/resourceODP/isAbout
Description	Connecting the information to the object (physical, virtual, imaginary) that the information is about.
Domain	Information^c

is realization of^{op}

IRI	http://w3id.org/CEON/ontology/resourceODP/isRealizationOf
Description	Relates a thing, e.g. a digital object, or a physical object, to the information it is a realization of. C.f. a physical book that is the realization of a novel, or a pdf or Excel-file that is a realization of a certain data sheet.
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

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
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Namespaces

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

dc

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

dcterms

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

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#>

vann

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

xsd

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

Legend

c

Classes

op

Object Properties

dp

Datatype Properties

ap

Annotation Properties