

# 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/0.5/>

### Version Info

0.5

### 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.

Covers the following requirements from Onto-DESIDE D3.2: CE1-2, CE3-3, CE4-3, CE5-2, CE9-1, CE10-1, CE11-8, CE12-2, CE12-4, C7-3, E2-2, E4-6, E5-1, E6-3, T3-1.

## Classes

Location <sup>c</sup>	
IRI	<a href="http://w3id.org/CEON/ontology/location/Location">http://w3id.org/CEON/ontology/location/Location</a>
In Range Of	<a href="#">hasResourceLocation</a> <sup>op</sup>
Asset <sup>c</sup>	
IRI	<a href="http://w3id.org/CEON/ontology/resourceODP/Asset">http://w3id.org/CEON/ontology/resourceODP/Asset</a>
Super Class Of	<a href="#">Information</a> <sup>c</sup> <a href="#">Resource</a> <sup>c</sup>

## Batch Of Objects<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/Batch0f0bjects">http://w3id.org/CE0N/ontology/resource0DP/Batch0f0bjects</a>
<b>Sub Class Of</b>	<a href="#">Resource</a> <sup>C</sup> <a href="#">hasPhysicalObject</a> <sup>op</sup> some <a href="#">PhysicalObject</a> <sup>C</sup> and <a href="#">hasPhysicalObject</a> <sup>op</sup> only <a href="#">PhysicalObject</a> <sup>C</sup>
<b>In Domain Of</b>	<a href="#">batchID</a> <sup>dp</sup> <a href="#">batchLabel</a> <sup>dp</sup> <a href="#">batchSize</a> <sup>dp</sup>
<b>In Range Of</b>	<a href="#">hasBatch</a> <sup>op</sup>
<b>Restriction</b>	<a href="#">batchSize</a> <sup>dp</sup> <i>exactly</i> 1 <a href="#">BatchOfObjects</a> <sup>C</sup>

## Constituent<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/Constituent">http://w3id.org/CE0N/ontology/resource0DP/Constituent</a>
<b>In Range Of</b>	<a href="#">hasConstituent</a> <sup>op</sup>

## Digital Object<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/Digital0bject">http://w3id.org/CE0N/ontology/resource0DP/Digital0bject</a>
<b>Sub Class Of</b>	<a href="#">Resource</a> <sup>C</sup>

## Information<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/Information">http://w3id.org/CE0N/ontology/resource0DP/Information</a>
<b>Sub Class Of</b>	<a href="#">Asset</a> <sup>C</sup>
<b>In Domain Of</b>	<a href="#">containsInformation</a> <sup>op</sup> <a href="#">isAbout</a> <sup>op</sup>
<b>In Range Of</b>	<a href="#">containsInformation</a> <sup>op</sup> <a href="#">isRealizationOf</a> <sup>op</sup>

## Matter<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/Matter">http://w3id.org/CE0N/ontology/resource0DP/Matter</a>
<b>In Range Of</b>	<a href="#">hasMatter</a> <sup>op</sup>

Physical Object<sup>C</sup>

IRI	<a href="http://w3id.org/CE0N/ontology/resource0DP/PhysicalObject">http://w3id.org/CE0N/ontology/resource0DP/PhysicalObject</a>
Sub Class Of	<a href="#">Resource</a> <sup>C</sup> <a href="#">hasConstituent</a> <sup>op</sup> only <a href="#">Constituent</a> <sup>C</sup> and <a href="#">hasConstituent</a> <sup>op</sup> some <a href="#">Constituent</a> <sup>C</sup> <a href="#">hasMatter</a> <sup>op</sup> some <a href="#">Matter</a> <sup>C</sup> and <a href="#">hasMatter</a> <sup>op</sup> only <a href="#">Matter</a> <sup>C</sup>
In Domain Of	<a href="#">hasConstituent</a> <sup>op</sup> <a href="#">hasMatter</a> <sup>op</sup>
In Range Of	<a href="#">hasPhysicalObject</a> <sup>op</sup>

Resource<sup>C</sup>

IRI	<a href="http://w3id.org/CE0N/ontology/resource0DP/Resource">http://w3id.org/CE0N/ontology/resource0DP/Resource</a>
Is Defined By	ISO 59004:2024 - 3.1.5 resource
Sub Class Of	<a href="#">Asset</a> <sup>C</sup> <a href="#">hasResourceCondition</a> <sup>op</sup> only <a href="#">ResourceCondition</a> <sup>C</sup> and <a href="#">hasResourceCondition</a> <sup>op</sup> some <a href="#">ResourceCondition</a> <sup>C</sup> <a href="#">hasResourceProperty</a> <sup>op</sup> some <a href="#">ResourceProperty</a> <sup>C</sup> and <a href="#">hasResourceProperty</a> <sup>op</sup> only <a href="#">ResourceProperty</a> <sup>C</sup> <a href="#">hasResourceQuality</a> <sup>op</sup> only <a href="#">ResourceQuality</a> <sup>C</sup> and <a href="#">hasResourceQuality</a> <sup>op</sup> some <a href="#">ResourceQuality</a> <sup>C</sup>
In Domain Of	<a href="#">hasResourceCondition</a> <sup>op</sup> <a href="#">hasResourceLocation</a> <sup>op</sup> <a href="#">hasResourceProperty</a> <sup>op</sup> <a href="#">hasResourceQuality</a> <sup>op</sup>
Super Class Of	<a href="#">BatchOfObjects</a> <sup>C</sup> <a href="#">DigitalObject</a> <sup>C</sup> <a href="#">PhysicalObject</a> <sup>C</sup> <a href="#">SetOfObjects</a> <sup>C</sup>

Resource Condition<sup>C</sup>

IRI	<a href="http://w3id.org/CE0N/ontology/resource0DP/ResourceCondition">http://w3id.org/CE0N/ontology/resource0DP/ResourceCondition</a>
In Range Of	<a href="#">hasResourceCondition</a> <sup>op</sup>

Resource Property<sup>C</sup>

IRI	<a href="http://w3id.org/CE0N/ontology/resource0DP/ResourceProperty">http://w3id.org/CE0N/ontology/resource0DP/ResourceProperty</a>
In Range Of	<a href="#">hasResourceProperty</a> <sup>op</sup>

## Resource Quality<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/ResourceQuality">http://w3id.org/CE0N/ontology/resource0DP/ResourceQuality</a>
<b><u>In Range Of</u></b>	<a href="#">hasResourceQuality<sup>Op</sup></a>

## Set Of Objects<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/SetOf0bjects">http://w3id.org/CE0N/ontology/resource0DP/SetOf0bjects</a>
<b><u>Sub Class Of</u></b>	<a href="#">Resource<sup>C</sup></a> <a href="#">hasBatch<sup>Op</sup></a> only <a href="#">BatchOfObjects<sup>C</sup></a> <i>and</i> <a href="#">hasBatch<sup>Op</sup></a> some <a href="#">BatchOfObjects<sup>C</sup></a> <a href="#">hasPhysicalObject<sup>Op</sup></a> only <a href="#">PhysicalObject<sup>C</sup></a> <i>and</i> <a href="#">hasPhysicalObject<sup>Op</sup></a> some <a href="#">PhysicalObject<sup>C</sup></a>
<b><u>In Domain Of</u></b>	<a href="#">hasBatch<sup>Op</sup></a>

## Object Properties

### has location<sup>Op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/location/hasLocation">http://w3id.org/CE0N/ontology/location/hasLocation</a>
<b><u>Super Property Of</u></b>	<a href="#">hasResourceLocation<sup>Op</sup></a>

### contains information<sup>Op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/containsInformation">http://w3id.org/CE0N/ontology/resource0DP/containsInformation</a>
<b><u>Sub Property Of</u></b>	<a href="#">hasPart<sup>Op</sup></a>
<b><u>Domain</u></b>	<a href="#">Information<sup>C</sup></a>
<b><u>Range</u></b>	<a href="#">Information<sup>C</sup></a>

### has batch<sup>Op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasBatch">http://w3id.org/CE0N/ontology/resource0DP/hasBatch</a>
<b><u>Domain</u></b>	<a href="#">SetOfObjects<sup>C</sup></a>
<b><u>Range</u></b>	<a href="#">BatchOfObjects<sup>C</sup></a>

## has constituent<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasConstituent">http://w3id.org/CE0N/ontology/resource0DP/hasConstituent</a>
<b>Sub Property Of</b>	<a href="#">hasPart<sup>op</sup></a>
<b>Domain</b>	<a href="#">PhysicalObject<sup>c</sup></a>
<b>Range</b>	<a href="#">Constituent<sup>c</sup></a>

## has matter<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasMatter">http://w3id.org/CE0N/ontology/resource0DP/hasMatter</a>
<b>Domain</b>	<a href="#">PhysicalObject<sup>c</sup></a>
<b>Range</b>	<a href="#">Matter<sup>c</sup></a>

## has part<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasPart">http://w3id.org/CE0N/ontology/resource0DP/hasPart</a>
<b>Super Property Of</b>	<ul style="list-style-type: none"><li>• <a href="#">containsInformation<sup>op</sup></a></li><li>• <a href="#">hasConstituent<sup>op</sup></a></li></ul>

## has physical object<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasPhysicalObject">http://w3id.org/CE0N/ontology/resource0DP/hasPhysicalObject</a>
<b>Domain</b>	<a href="#">SetOfObjects<sup>c</sup></a> or <a href="#">BatchOfObjects<sup>c</sup></a>
<b>Range</b>	<a href="#">PhysicalObject<sup>c</sup></a>

## has resource condition<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasResourceCondition">http://w3id.org/CE0N/ontology/resource0DP/hasResourceCondition</a>
<b>Domain</b>	<a href="#">Resource<sup>c</sup></a>
<b>Range</b>	<a href="#">ResourceCondition<sup>c</sup></a>

## has resource location<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasResourceLocation">http://w3id.org/CE0N/ontology/resource0DP/hasResourceLocation</a>
<b>Sub Property Of</b>	<a href="#">location:hasLocation<sup>op</sup></a>
<b>Domain</b>	<a href="#">Resource<sup>c</sup></a>
<b>Range</b>	<a href="#">location:Location<sup>c</sup></a>

### has resource property<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasResourceProperty">http://w3id.org/CE0N/ontology/resource0DP/hasResourceProperty</a>
<b>Domain</b>	<a href="#">Resource</a> <sup>c</sup>
<b>Range</b>	<a href="#">ResourceProperty</a> <sup>c</sup>

### has resource quality<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/hasResourceQuality">http://w3id.org/CE0N/ontology/resource0DP/hasResourceQuality</a>
<b>Domain</b>	<a href="#">Resource</a> <sup>c</sup>
<b>Range</b>	<a href="#">ResourceQuality</a> <sup>c</sup>

### is about<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/isAbout">http://w3id.org/CE0N/ontology/resource0DP/isAbout</a>
<b>Domain</b>	<a href="#">Information</a> <sup>c</sup>

### is realization of<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/isRealizationOf">http://w3id.org/CE0N/ontology/resource0DP/isRealizationOf</a>
<b>Range</b>	<a href="#">Information</a> <sup>c</sup>

## Datatype Properties

### batch id<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/batchID">http://w3id.org/CE0N/ontology/resource0DP/batchID</a>
<b>Domain</b>	<a href="#">BatchOfObjects</a> <sup>c</sup>
<b>Range</b>	<a href="#">xsd:string</a>

### batch label<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/resource0DP/batchLabel">http://w3id.org/CE0N/ontology/resource0DP/batchLabel</a>
<b>Domain</b>	<a href="#">BatchOfObjects</a> <sup>c</sup>
<b>Range</b>	<a href="#">xsd:string</a>

batch size<sup>dp</sup>

**IRI** <http://w3id.org/CE0N/ontology/resource0DP/batchSize>

**Domain** [BatchOfObjects<sup>c</sup>](#)

**Range** [xsd:nonNegativeInteger](#)

## Annotation Properties

description<sup>ap</sup>

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

contributor<sup>ap</sup>

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

created<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/created>

creator<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/creator>

description<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/description>

license<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/license>

title<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/title>

preferred namespace prefix<sup>ap</sup>

**IRI** <http://purl.org/vocab/vann/preferredNamespacePrefix>

preferred namespace uri<sup>ap</sup>

**IRI** <http://purl.org/vocab/vann/preferredNamespaceUri>

covers requirements <sup>ap</sup>	
IRI	http://www.ontologydesignpatterns.org/schemas/cpannotation schema.owl#coversRequirements
definition <sup>ap</sup>	
IRI	http://www.w3.org/2004/02/skos/core#definition
pref label <sup>ap</sup>	
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#
location	http://w3id.org/CEON/ontology/location/
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	Datatype Properties
ap	Annotation Properties