

# Circular Economy Ontology Network (CEON) - Resource ODP

## Metadata

**IRI**

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

**Title**

Circular Economy Ontology Network (CEON) - Resource ODP

**Publisher**

Onto-DESIDE

**Creator**

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**Contributor**

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2025-03-20

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**Version Iri**

<http://w3id.org/CEON/ontology/resourceODP/0.5/>

**Version Info**

0.5

**Prior Version**

0.4

**Preferred Namespace Prefix**

ceon-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-ResrouceType-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** <http://w3id.org/CE0N/ontology/resource0DP/Asset>

**Super Class Of**  
[Information<sup>C</sup>](#)  
[Resource<sup>C</sup>](#)

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

**IRI** <http://w3id.org/CE0N/ontology/resource0DP/BatchOf0bjects>

**Sub Class Of**  
[Resource<sup>C</sup>](#)  
[hasPhysicalObject<sup>op</sup>](#) only [PhysicalObject<sup>C</sup>](#) *and* [hasPhysicalObject<sup>op</sup>](#) some [PhysicalObject<sup>C</sup>](#)

**In Domain Of**  
[batchID<sup>dp</sup>](#)  
[batchLabel<sup>dp</sup>](#)  
[batchSize<sup>dp</sup>](#)

**In Range Of** [hasBatch<sup>op</sup>](#)

**Restriction** [batchSize<sup>dp</sup>](#) *exactly* 1 [BatchOfObjects<sup>C</sup>](#)

## Constituent<sup>C</sup>

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

**In Range Of** [hasConstituent<sup>op</sup>](#)

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

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

**Sub Class Of** [Resource<sup>C</sup>](#)

## Information<sup>C</sup>

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

**Sub Class Of** [Asset<sup>C</sup>](#)

**In Domain Of**  
[containsInformation<sup>op</sup>](#)  
[isAbout<sup>op</sup>](#)

**In Range Of**  
[containsInformation<sup>op</sup>](#)  
[isRealizationOf<sup>op</sup>](#)

## Matter<sup>c</sup>

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

**In Range Of** [hasMatter<sup>op</sup>](#)

## Physical Object<sup>c</sup>

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

**Sub Class Of** [Resource<sup>c</sup>](#)  
[hasConstituent<sup>op</sup>](#) some [Constituent<sup>c</sup>](#) *and* [hasConstituent<sup>op</sup>](#) only [Constituent<sup>c</sup>](#)  
[hasMatter<sup>op</sup>](#) some [Matter<sup>c</sup>](#) *and* [hasMatter<sup>op</sup>](#) only [Matter<sup>c</sup>](#)

**In Domain Of** [hasConstituent<sup>op</sup>](#)  
[hasMatter<sup>op</sup>](#)

**In Range Of** [hasPhysicalObject<sup>op</sup>](#)

## Resource<sup>c</sup>

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

**Is Defined By** ISO 59004:2024 - 3.1.5 resource

**Sub Class Of** [Asset<sup>c</sup>](#)  
[hasResourceCondition<sup>op</sup>](#) only [ResourceCondition<sup>c</sup>](#) *and* [hasResourceCondition<sup>op</sup>](#) some [ResourceCondition<sup>c</sup>](#)  
[hasResourceProperty<sup>op</sup>](#) only [ResourceProperty<sup>c</sup>](#) *and* [hasResourceProperty<sup>op</sup>](#) some [ResourceProperty<sup>c</sup>](#)  
[hasResourceQuality<sup>op</sup>](#) some [ResourceQuality<sup>c</sup>](#) *and* [hasResourceQuality<sup>op</sup>](#) only [ResourceQuality<sup>c</sup>](#)

**In Domain Of** [hasResourceCondition<sup>op</sup>](#)  
[hasResourceLocation<sup>op</sup>](#)  
[hasResourceProperty<sup>op</sup>](#)  
[hasResourceQuality<sup>op</sup>](#)

**Super Class Of** [BatchOfObjects<sup>c</sup>](#)  
[DigitalObject<sup>c</sup>](#)  
[PhysicalObject<sup>c</sup>](#)  
[SetOfObjects<sup>c</sup>](#)

## Resource Condition<sup>c</sup>

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

**In Range Of** [hasResourceCondition<sup>op</sup>](#)

## Resource Property<sup>C</sup>

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

## 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</a> <sup>C</sup> <a href="#">hasBatch</a> <sup>op</sup> only <a href="#">BatchOfObjects</a> <sup>C</sup> and <a href="#">hasBatch</a> <sup>op</sup> some <a href="#">BatchOfObjects</a> <sup>C</sup> <a href="#">hasPhysicalObject</a> <sup>op</sup> only <a href="#">PhysicalObject</a> <sup>C</sup> and <a href="#">hasPhysicalObject</a> <sup>op</sup> some <a href="#">PhysicalObject</a> <sup>C</sup>
<b><u>In Domain Of</u></b>	<a href="#">hasBatch</a> <sup>op</sup>

## 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</a> <sup>op</sup>

### 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</a> <sup>op</sup>
<b><u>Domain</u></b>	<a href="#">Information</a> <sup>C</sup>
<b><u>Range</u></b>	<a href="#">Information</a> <sup>C</sup>

### 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</a> <sup>C</sup>
<b><u>Range</u></b>	<a href="#">BatchOfObjects</a> <sup>C</sup>

## 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/CEON/ontology/resource0DP/batchSize>

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

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

## Namespaces

:

<http://w3id.org/CEON/ontology/resource0DP/>

**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#>

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

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

## Legend

<sup>c</sup>	Classes
<sup>op</sup>	Object Properties
<sup>dp</sup>	Datatype Properties