

# Circular Economy Ontology Network (CEON) - Actor ODP

## Metadata

### IRI

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

### Title

Circular Economy Ontology Network (CEON) - Actor ODP

### Creator

Eva Blomqvist

### Contributor

Huanyu Li

Mikael Lindecrantz

Robin Keskisärkkä

### Date Created

2023-03-17

### License

<https://creativecommons.org/licenses/by/4.0/>

### Version Iri

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

### Version Info

0.2

### Preferred Namespace Prefix

actorODP

### Preferred Namespace Uri

<https://w3id.org/CEON/ontology/actorODP/>

### Description

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

### Covers Requirements

Covers the following requirements from Onto-DESIDE D3.1: CVN-Process-3, CVN-Actor-1,4,6,7, CVN-Competency-3, CVN-Information-4, C11-1, C11-3, E1-6,6,6,9, E4-10

## Classes

## Actor<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/actorODP/Actor">http://w3id.org/CEON/ontology/actorODP/Actor</a>
<b>Description</b>	An agent able to act in the context of a circular value network, e.g. an organisation, person.
<b>In Domain Of</b>	<a href="#">has actor type</a> <sup>op</sup>
<b>In Range Of</b>	<a href="#">capability of</a> <sup>op</sup> <a href="#">has participating actor</a> <sup>op</sup>

## Actor Type<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/actorODP/ActorType">http://w3id.org/CEON/ontology/actorODP/ActorType</a>
<b>Description</b>	The type of an actor, e.g. the type of company, or a specific subtype based on the organisations capabilities.
<b>In Range Of</b>	<a href="#">has actor type</a> <sup>op</sup>

## Capability<sup>C</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/actorODP/Capability">http://w3id.org/CEON/ontology/actorODP/Capability</a>
<b>Description</b>	Something that the actor is capable of doing, e.g. performing a certain role in a process, based on some properties, such as access to infrastructure, resources and know-how.
<b>In Domain Of</b>	<a href="#">capability of</a> <sup>op</sup> <a href="#">capability property</a> <sup>op</sup>
<b>In Range Of</b>	<a href="#">based on capability</a> <sup>op</sup>

## Collaboration participation<sup>c</sup>

IRI

<http://w3id.org/CEON/ontology/actorODP/CollaborationParticipation>

### Description

The relation involving the role of a certain actor with respect to a value network or a process in such a network, e.g. an organisation (actor) acting as the recycler (role) in a glass recycling value network (network) at a specific point or period in time. Or an organisation (actor) acting as the dismantler (role) in a dismantling step of a building deconstruction process (process step) at a specific point or period in time.

### Sub Class Of

[Participation<sup>c</sup>](#)

### In Domain Of

[based on capability<sup>op</sup>](#)  
[is a participation in<sup>op</sup>](#)

## Participation<sup>c</sup>

IRI

<http://w3id.org/CEON/ontology/actorODP/Participation>

### Description

Represents the participation of objects in some situation.

### Sub Class Of

[participation start time<sup>dp</sup>](#) *exactly 1* [1<sup>c</sup>](#) *or* [participation time point<sup>dp</sup>](#) *exactly 1* [1<sup>c</sup>](#)

### In Domain Of

[has participant role<sup>op</sup>](#)  
[has participating actor<sup>op</sup>](#)  
[participation end time<sup>dp</sup>](#)  
[participation start time<sup>dp</sup>](#)  
[participation time point<sup>dp</sup>](#)

### Super Class Of

[Collaboration participation<sup>c</sup>](#)  
[Resource participation<sup>c</sup>](#)  
[Resource Relation<sup>c</sup>](#)

## Resource participation<sup>c</sup>

IRI

<http://w3id.org/CEON/ontology/actorODP/ResourceParticipation>

### Description

The generic relation representing the participation of a resource in some relation. For example, it can be specialized to represent a reified version of an object or data property.

### Sub Class Of

[Participation<sup>c</sup>](#)

### In Domain Of

[participating object<sup>op</sup>](#)  
[participating subject<sup>op</sup>](#)

## Resource Relation<sup>c</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/ResourceRelation>

### Description

The relation involving the role of a certain actor with respect to a certain resource, e.g. an organisation or individual (actor) owning (role) a specific product (resource) at a specific point or period in time.

**Sub Class Of** [Participation<sup>c</sup>](#)

**In Domain Of** [has participating resource<sup>op</sup>](#)

## Role<sup>c</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/Role>

### Description

A role that an actor can take in a specific context. Applies both to roles in the context of resources, such as owner, manufacturer, reseller etc. of that resource, as well as roles in relation to a circular value network, such as recycler, dismantler, transporter etc., in relation to a material flow.

**In Range Of** [has participant role<sup>op</sup>](#)

## Collaboration<sup>c</sup>

**IRI** <http://w3id.org/CEON/ontology/cvn/Collaboration>

### Description

A collaboration between a set of actors.

## Process<sup>c</sup>

**IRI** <http://w3id.org/CEON/ontology/processODP/Process>

## Resource<sup>c</sup>

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

**In Range Of** [has participating resource<sup>op</sup>](#)

## Object Properties

### has actor type<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/actorType>

**Description** The type of the actor.

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

**Range** [Actor Type](#)<sup>c</sup>

### based on capability<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/basedOnCapability>

**Description** An actor participates in a collaboration based on that it has some capability that is useful for the collaboration.

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

**Range** [Capability](#)<sup>c</sup>

### capability of<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/capabilityOf>

**Description** Relates to the actor holding the capability.

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

**Range** [Actor](#)<sup>c</sup>

### capability property<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/capabilityProperty>

**Description** Relates some properties to the capability, such as the parameters of it, or the needed resources.

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

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

**IRI** <http://w3id.org/CEON/ontology/actorODP/hasLocation>

**Description** Defines the location of an actor or resource.

**Domain** [resourceODP:Resource<sup>c</sup>](#) or [Actor<sup>c</sup>](#)

## has participant role<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/participantRole>

**Description** Holds the value of the role of the participant in this participation relation.

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

**Range** [Role<sup>c</sup>](#)

## has participating actor<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/participatingActor>

**Description** Holds the value of the actor involved in this participation relation.

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

**Range** [Actor<sup>c</sup>](#)

## participating object<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/participatingObject>

**Description** Participating object in a resource participation. This is part of a resource participation that can be a directional relation, and the participating object is the end point of the relation.

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

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

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/actorODP/participatingResource">http://w3id.org/CEON/ontology/actorODP/participatingResource</a>
<b>Description</b>	The resource that this participation relation relates to, i.e. for which the actor holds the specified role.
<b>Domain</b>	<a href="#">Resource Relation</a> <sup>c</sup>
<b>Range</b>	<a href="#">resourceODP:Resource</a> <sup>c</sup>

## participating subject<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/actorODP/participatingSubject">http://w3id.org/CEON/ontology/actorODP/participatingSubject</a>
<b>Description</b>	Participating subject in a resource participation. This is part of a resource participation that can be a directional relation, and the participating subject is the starting point of the relation.
<b>Domain</b>	<a href="#">Resource participation</a> <sup>c</sup>

## is a participation in<sup>op</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/actorODP/participationIn">http://w3id.org/CEON/ontology/actorODP/participationIn</a>
<b>Description</b>	The collaboration or process that this participation relates to.
<b>Domain</b>	<a href="#">Collaboration participation</a> <sup>c</sup>
<b>Range</b>	<a href="#">Collaboration</a> <sup>c</sup> or <a href="#">processODP:Process</a> <sup>c</sup>

## Datatype Properties

### participation end time<sup>dp</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/actorODP/participationEndTime">http://w3id.org/CEON/ontology/actorODP/participationEndTime</a>
<b>Description</b>	The end of a time interval.
<b>Domain</b>	<a href="#">Participation</a> <sup>c</sup>
<b>Range</b>	<a href="#">xsd:dateTime</a> <sup>c</sup> or <a href="#">xsd:gMonthYear</a> <sup>c</sup> or <a href="#">xsd:date</a> <sup>c</sup> or <a href="#">xsd:gYear</a> <sup>c</sup>

## participation start time<sup>dp</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/participationStartTime>

**Description** The start of a time interval.

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

**Range** [xsd:gMonthYear](#)<sup>c</sup> or [xsd:date](#)<sup>c</sup> or [xsd:dateTime](#)<sup>c</sup> or [xsd:gYear](#)<sup>c</sup>

## participation time point<sup>dp</sup>

**IRI** <http://w3id.org/CEON/ontology/actorODP/participationTimePoint>

**Description** The point in time when something took place or was valid.

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

**Range** [xsd:dateTime](#)<sup>c</sup> or [xsd:gYear](#)<sup>c</sup> or [xsd:gMonthYear](#)<sup>c</sup> or [xsd:date](#)<sup>c</sup>

## Annotation Properties

### 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	<a href="http://purl.org/dc/terms/license">http://purl.org/dc/terms/license</a>
title <sup>ap</sup>	
IRI	<a href="http://purl.org/dc/terms/title">http://purl.org/dc/terms/title</a>
preferred namespace prefix <sup>ap</sup>	
IRI	<a href="http://purl.org/vocab/vann/preferredNamespacePrefix">http://purl.org/vocab/vann/preferredNamespacePrefix</a>
preferred namespace uri <sup>ap</sup>	
IRI	<a href="http://purl.org/vocab/vann/preferredNamespaceUri">http://purl.org/vocab/vann/preferredNamespaceUri</a>
covers requirements <sup>ap</sup>	
IRI	<a href="http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#coversRequirements">http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#coversRequirements</a>

## Namespaces

:

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

**cvn**

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

**dcterms**

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

**odp**

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

**owl**

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

**processODP**

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

**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#>

**resourceODP**

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

**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