# Circular Economy Ontology Network (CEON) - Actor Module

#### Metadata

IRI

http://w3id.org/CEON/ontology/actor/

Title

Circular Economy Ontology Network (CEON) - Actor Module

Creator

Eva Blomqvist

Contributor

Huanyu Li

Mikael Lindecrantz

Robin Keskisärkkä

**Date Created** 

2023-03-16

License

https://github.com/LiUSemWeb/CEON/blob/master/LICENSE

**Version Iri** 

http://w3id.org/CEON/ontology/0.1/actor/

**Version Info** 

0.1

**Preferred Namespace Prefix** 

actor

**Preferred Namespace Uri** 

http://w3id.org/CEON/ontology/0.1/actor/

Description

The Actor module of CEON (Circular Economy Ontology Network).

**Covers Requirements** 

What are the roles of this actor in this circular value network/process/in relation to this resource? What are the capabilities of this actor?

#### Classes

### Actor Circular Value Network role c

IRI http://w3id.org/CEON/ontology/actor/ActorCVNRole

Description

The role(s) of an actor in a Circular Value Network, which is a specific type of

collaboration.

Sub Class Of Actor collaboration role<sup>C</sup>

Actor collaboration role <sup>c</sup>

IRI http://w3id.org/CEON/ontology/actor/ActorCollaborationRole

**Description**The roles of an actor involved in a collaboration.

Sub Class Of <a href="http://w3id.org/CEON/ontology/actorODP/Role">http://w3id.org/CEON/ontology/actorODP/Role</a>

Super Class Of
Actor Circular Value Network role

Actor process role<sup>c</sup>

Actor process role<sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/ActorProcessRole

**Description**The role(s) of an actor involved in a process.

Sub Class Of Actor collaboration role<sup>C</sup>

Actor resource role <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/ActorResourceRole

**Description**The role(s) of an actor in relation to a resource.

Sub Class Of <a href="http://w3id.org/CEON/ontology/actorODP/Role">http://w3id.org/CEON/ontology/actorODP/Role</a>

Buying resource<sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/BuyingResource

**Description**The relation where the role of the actor is the buyer of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass**Resource Relation<sup>c</sup> and http://w3id.org/CEON/ontology/actorODP/participantRole

<sup>op</sup> value

#### Circular Value Network Participation <sup>c</sup>

IRI http://w3id.org/CEON/ontology/actor/CVNParticipation

**Description**A participation-relation, that represents the participation of an actor in a CVN with

a certain role. For instance, a specific company playing the role of recycler in a certain flow of a CVN. The participation may also be related to a certain time (or

time interval).

Sub Class Of <a href="http://w3id.org/CEON/ontology/actorODP/CollaborationParticipation">http://w3id.org/CEON/ontology/actorODP/CollaborationParticipation</a>

http://w3id.org/CEON/ontology/actorODP/CollaborationParticipation and

http://w3id.org/CEON/ontology/actorODP/participantRole<sup>op</sup> some and http://w3id.org/CEON/ontology/actorODP/participatingActor<sup>op</sup> some and http://w3id.org/CEON/ontology/actorODP/participationIn<sup>op</sup> some

### Consuming resource<sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/ConsumingResource

**Description**The relation where the role of the actor is the consumer of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass** http://w3id.org/CEON/ontology/actorODP/participantRole<sup>op</sup> value

and Resource Relation<sup>C</sup>

#### Issuing resource c

IRI http://w3id.org/CEON/ontology/actor/IssuingResource

**Description**The relation where the role of the actor is the issuer of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass**Resource Relation and http://w3id.org/CEON/ontology/actorODP/participantRole

<sup>op</sup> value

Owning resource <sup>c</sup>

IRI http://w3id.org/CEON/ontology/actor/OwningResource

**Description**The relation where the role of the actor is the owner of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass** Resource Relation and http://w3id.org/CEON/ontology/actorODP/participantRole

op value

## Process Participation <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/ProcessParticipation

Description

Participation of a certain actor in a certain process, with a certain role. For

instance, a certain department of a recycling company having the role of quality controllant, or material sorter, in a certain recycling process. The participation may

also be given a time, e.g. a start and end time.

Sub Class Of <a href="http://w3id.org/CEON/ontology/actorODP/CollaborationParticipation">http://w3id.org/CEON/ontology/actorODP/CollaborationParticipation</a>

http://w3id.org/CEON/ontology/actorODP/participatingActor<sup>op</sup> some and http://w3id.org/CEON/ontology/actorODP/participantRole<sup>op</sup> some

and http://w3id.org/CEON/ontology/actorODP/CollaborationParticipation and

http://w3id.org/CEON/ontology/actorODP/participationIn<sup>op</sup> some

### Producing resource<sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/ProducingResource

**Description**The relation where the role of the actor is the producer of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass** <a href="http://w3id.org/CEON/ontology/actorODP/participantRole">http://w3id.org/CEON/ontology/actorODP/participantRole</a> <a href="http://waid.org/ceon.org/ceo

and Resource Relation<sup>c</sup>

Providing resource <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/ProvidingResource

**Description**The relation where the role of the actor is the provider of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalent class**Resource Relation and http://w3id.org/CEON/ontology/actorODP/participantRole

<sup>op</sup> value

Reselling resource <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/ResellingResource

**Description**The relation where the role of the actor is the reseller of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass** Resource Relation and http://w3id.org/CEON/ontology/actorODP/participantRole

<sup>op</sup> value

Selling resource<sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/SellingResource

**Description**The relation where the role of the actor is the seller of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

Equivalentclass <a href="http://w3id.org/CEON/ontology/actorODP/participantRole">http://w3id.org/CEON/ontology/actorODP/participantRole</a> <a href="http://waid.org/ceon.

and Resource Relation<sup>c</sup>

Supplying resource <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/SupplyingResource

**Description**The relation where the role of the actor is the supplier of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

Equivalentclass <a href="http://w3id.org/CEON/ontology/actorODP/participantRole">http://w3id.org/CEON/ontology/actorODP/participantRole</a> value

and Resource Relation<sup>c</sup>

Updating resource<sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/UpdatingResource

**Description**The relation where the role of the actor is the updater of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass** http://w3id.org/CEON/ontology/actorODP/participantRole<sup>op</sup> value

and Resource Relation<sup>c</sup>

Using resource <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/UsingResource

**Description**The relation where the role of the actor is the user of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass** Resource Relation and http://w3id.org/CEON/ontology/actorODP/participantRole

<sup>op</sup> value

Viewing resource <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actor/ViewingResource

**Description**The relation where the role of the actor is the viewer of a certain resource.

Sub Class Of Resource Relation<sup>C</sup>

**Equivalentclass** http://w3id.org/CEON/ontology/actorODP/participantRole<sup>op</sup> value

and Resource Relation<sup>c</sup>

Actor <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actorODP/Actor

Capability <sup>C</sup>

IRI http://w3id.org/CEON/ontology/actorODP/Capability

In Domain Of capability extent op

needed resource relations op

#### Collaboration Participation <sup>c</sup>

IRI http://w3id.org/CEON/ontology/actorODP/CollaborationParticipation

**Super Class Of** 

Circular Value Network Participation<sup>C</sup>

Process Participation C

#### Participation <sup>c</sup>

IRI http://w3id.org/CEON/ontology/actorODP/Participation

#### Resource Relation<sup>C</sup>

IRI http://w3id.org/CEON/ontology/actorODP/ResourceRelation

**Description** 

A relation between a resource, an actor, and the role the actor has in relation to the resource. For instance, the role of owner that a certain actor takes for a certain resource for a certain period of time. Or the seller of a certain resource, until that resource has been sold, and the actor no longer has that role in relation to the resource.

**Sub Class Of** http://w3id.org/CEON/ontology/actorODP/participatingResource op some

> and http://w3id.org/CEON/ontology/actorODP/participatingActorop some and http://w3id.org/CEON/ontology/actorODP/participantRole op some

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

**Super Class Of** 

Buying resource<sup>C</sup>

Consuming resource<sup>C</sup>

<u>Issuing resource</u><sup>C</sup>

Owning resource<sup>C</sup>

Producing resource<sup>C</sup> Providing resource c

Reselling resource<sup>C</sup>

Selling resource<sup>c</sup>

Supplying resource<sup>C</sup>

Updating resource<sup>C</sup>

Using resource<sup>C</sup>

Viewing resource<sup>c</sup>

#### Role<sup>C</sup>

IRI http://w3id.org/CEON/ontology/actorODP/Role

**Super Class Of** 

Actor collaboration role<sup>C</sup> Actor resource role c

Circular Value Network<sup>c</sup>

IRI http://w3id.org/CEON/ontology/cvn/CVN

Description

A collaboration between actors that constitute a Circular Value Newtworks,

implicitly or explicitly set up.

Sub Class Of <a href="http://w3id.org/CEON/ontology/cvn/Collaboration">http://w3id.org/CEON/ontology/cvn/Collaboration</a>

Collaboration <sup>c</sup>

IRI http://w3id.org/CEON/ontology/cvn/Collaboration

Super Class Of Circular Value Network<sup>C</sup>

Process <sup>C</sup>

IRI http://w3id.org/CEON/ontology/process/Process

Resource <sup>C</sup>

IRI http://w3id.org/CEON/ontology/resourceODP/Resource

## **Object Properties**

capability extent op

IRI http://w3id.org/CEON/ontology/actor/capabilityExtent

**Description**The extent of this capability, e.g. stating whether there are limist to the capability,

such as a maximum amount or size of something.

Sub Property Of <a href="http://w3id.org/CEON/ontology/actorODP/capabilityProperty">http://w3id.org/CEON/ontology/actorODP/capabilityProperty</a> op

Domain <a href="http://w3id.org/CEON/ontology/actorODP/Capability">http://w3id.org/CEON/ontology/actorODP/Capability</a>

needed resource relations op

IRI http://w3id.org/CEON/ontology/actor/neededResourceRelation

**Description**In order for an actor to have a capability, it needs to have certain resources, e.g.

materials, infrastrucutre, know-how, information etc.

Sub Property Of <a href="http://w3id.org/CEON/ontology/actorODP/capabilityProperty">http://w3id.org/CEON/ontology/actorODP/capabilityProperty</a> <a href="http://waid.org/ceon/ontology/actorODP/capabilityProperty">http://waid.org/ceon/ontology/actorODP/capabilityProperty</a> <a href="http://waid.org/ceon/ontology/actorODP/capabilityProperty">http://waid.org/ceon/ontology/actorODP/capabilityProperty</a> <a href="http://waid.org/ceon/ontology/actorODP/capabilityProperty">http://waid.org/ceon/ontology/actorODP/capabilityProperty</a> <a href="http://waid.org/ceon/ontology/actorODP/capabilityProperty">http://waid.org/ceon/ontology/actorODP/capabilityProperty</a> <a href="http://waid.org/ceon/ontology/actorODP/capabilityProperty">http://waid.org/ceon/ontology/actorODP/capabilityProperty</a> <a href="http://waid.org/ceon/ontology/actorODP/capabilityProperty">http://waid.

Domain <a href="http://w3id.org/CEON/ontology/actorODP/Capability">http://w3id.org/CEON/ontology/actorODP/Capability</a>

capability property op

IRI http://w3id.org/CEON/ontology/actorODP/capabilityProperty

**Super Property Of** 

capability extent<sup>op</sup>

needed resource relations op

participant role op

IRI http://w3id.org/CEON/ontology/actorODP/participantRole

participating actor op

IRI http://w3id.org/CEON/ontology/actorODP/participatingActor

participating resource op

IRI http://w3id.org/CEON/ontology/actorODP/participatingResource

participation in op

IRI http://w3id.org/CEON/ontology/actorODP/participationIn

# **Annotation Properties**

contributor <sup>ap</sup>	
IRI	http://purl.org/dc/terms/contributor
<u>created</u> ap	
IRI	http://purl.org/dc/terms/created
<u>creator</u> <sup>ap</sup>	
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 <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 ap	
IRI	http://purl.org/vocab/vann/preferredNamespaceUri
covers requirements ap	
IRI	http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#covers Requirements

# Namespaces

actor

http://w3id.org/CEON/ontology/actor/

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/

# Legend

c Classes

op Object Properties

ap Annotation Properties