

# Circular Economy Ontology Network (CEON) - Process Module

## Metadata

**IRI**

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

**Title**

Circular Economy Ontology Network (CEON) - Process Module

**Creator**

Huanyu Li

**Contributor**

Eva Blomqvist  
Mikael Lindecrantz  
Robin Keskisärkkä

**Date Created**

2024-11-23

**License**

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

**Version Iri**

<http://w3id.org/CEON/ontology/process/0.4/>

**Version Info**

0.4

**Preferred Namespace Prefix**

process

**Preferred Namespace Uri**

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

**Description**

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

**Covers Requirements**

In addition to requirements covered by imported ODPs, covers the following requirements from  
Onto-DESIDE D3.1: T8-2  
  
In addition to requirements covered by imported ODPs, covers the following requirements from  
Onto-DESIDE D3.2: T8-2

## Classes

Energy <sup>C</sup>	
IRI	<a href="http://w3id.org/CEON/ontology/energy/energy/energy">http://w3id.org/CEON/ontology/energy/energy/energy</a>
Sub Class Of	<a href="#">resourceODP:Resource<sup>C</sup></a>
In Range Of	<a href="#">needsEnergy<sup>op</sup></a>

Assembling Process <sup>C</sup>	
IRI	<a href="http://w3id.org/CEON/ontology/process/process/AssemblingProcess">http://w3id.org/CEON/ontology/process/process/AssemblingProcess</a>
Sub Class Of	<a href="#">processODP:TransformationProcess<sup>C</sup></a>

## Buy Resource Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/BuyResourceProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Co2Emission<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/CO2Emission>

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

**In Range Of** [producesCO2<sup>op</sup>](#)

## Catalyst<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/Catalyst>

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

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

## Change Resource Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/ChangeResourceProcesses>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Contact Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/ContactProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Deconstruction Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/DeconstructionProcesses>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Disassembling Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/DisassemblingProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Dismantle Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/DismantleProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Ensure Claim Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/EnsureClaimProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Issuing Certificate Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/IssuingCertificateProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Manufacturing Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/ManufacturingProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Offset Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/OffsetProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Production Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/ProductionProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Recycle Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/RecycleProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Refurbishment Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/RefurbishmentProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Remove Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/RemoveProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Remove Resource Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/RemoveResourceProcesses>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Repair Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/RepairProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Resell Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/ResellProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Reuse Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/ReuseProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Sell Resource Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/SellResourceProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Service Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/ServiceProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Share Resource Process<sup>C</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/ShareResourceProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>C</sup>](#)

## Take Back Process<sup>c</sup>

**IRI** <http://w3id.org/CEON/ontology/process/TakeBackProcess>

**Sub Class Of** [processODP:TransformationProcess<sup>c</sup>](#)

## Transformation Process<sup>c</sup>

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

**Super Class Of**

- [AssemblingProcess<sup>c</sup>](#)
- [BuyResourceProcess<sup>c</sup>](#)
- [ChangeResourceProcess<sup>c</sup>](#)
- [ContactProcess<sup>c</sup>](#)
- [DeconstructionProcess<sup>c</sup>](#)
- [DisassemblingProcess<sup>c</sup>](#)
- [DismantleProcess<sup>c</sup>](#)
- [EnsureClaimProcess<sup>c</sup>](#)
- [IssuingCertificateProcess<sup>c</sup>](#)
- [ManufacturingProcess<sup>c</sup>](#)
- [OffsetProcess<sup>c</sup>](#)
- [ProductionProcess<sup>c</sup>](#)
- [RecycleProcess<sup>c</sup>](#)
- [RefurbishmentProcess<sup>c</sup>](#)
- [RemoveProcess<sup>c</sup>](#)
- [RemoveResourceProcess<sup>c</sup>](#)
- [RepairProcess<sup>c</sup>](#)
- [ResellProcess<sup>c</sup>](#)
- [ReuseProcess<sup>c</sup>](#)
- [SellResourceProcess<sup>c</sup>](#)
- [ServiceProcess<sup>c</sup>](#)
- [ShareResourceProcess<sup>c</sup>](#)
- [TakeBackProcess<sup>c</sup>](#)

## Resource<sup>c</sup>

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

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

**Super Class Of**

- [http://w3id.org/CEON/ontology/energy/Energy<sup>c</sup>](http://w3id.org/CEON/ontology/energy/Energy)
- [CO2Emission<sup>c</sup>](#)
- [Catalyst<sup>c</sup>](#)

## Object Properties

needs energy<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/needsEnergy>

**Sub Property Of** [processODP:hasInput<sup>op</sup>](#)

**Range** [http://w3id.org/CE0N/ontology/energy/Energy\\_](http://w3id.org/CE0N/ontology/energy/Energy_)<sup>c</sup>

produces co2<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/producesCO2>

**Sub Property Of** [processODP:hasOutput<sup>op</sup>](#)

**Range** [CO2Emission](#)<sup>c</sup>

resulting resource<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/resultingResource>

**Sub Property Of** [processODP:hasOutput<sup>op</sup>](#)

**Range** [resourceODP:Resource](#)<sup>c</sup>

uses catalyst<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/process/usesCatalyst>

**Sub Property Of** [processODP:hasInput<sup>op</sup>](#)

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

has input<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/processODP/hasInput>

**Super Property Of**

- [needsEnergy<sup>op</sup>](#)
- [usesCatalyst<sup>op</sup>](#)

has output<sup>op</sup>

**IRI** <http://w3id.org/CE0N/ontology/processODP/hasOutput>

**Super Property Of**

- [producesCO2<sup>op</sup>](#)
- [resultingResource<sup>op</sup>](#)

## Annotation Properties

contributor <sup>ap</sup>	
IRI	<a href="http://purl.org/dc/terms/contributor">http://purl.org/dc/terms/contributor</a>
created <sup>ap</sup>	
IRI	<a href="http://purl.org/dc/terms/created">http://purl.org/dc/terms/created</a>
creator <sup>ap</sup>	
IRI	<a href="http://purl.org/dc/terms/creator">http://purl.org/dc/terms/creator</a>
description <sup>ap</sup>	
IRI	<a href="http://purl.org/dc/terms/description">http://purl.org/dc/terms/description</a>
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/cannotation-schema.owl#coversRequirements">http://www.ontologydesignpatterns.org/schemas/cannotation-schema.owl#coversRequirements</a>

## Namespaces

:

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

**dcterm**s

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

**odp**

<http://www.ontologydesignpatterns.org/schemas/cannotationschema.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/>

## Legend

c	Classes
op	Object Properties
ap	Annotation Properties