

# 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

2023-03-16

### License

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

### Version Iri

<http://w3id.org/CEON/ontology/process/0.1/>

### Version Info

0.1

### 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

## Classes

### Assembling Process<sup>C</sup>

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

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

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

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

**Sub Class Of** [processODP:Transformation<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>](#)

## Cathalyst<sup>C</sup>

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

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

**In Range Of** [usesCathalyst<sup>Op</sup>](#)

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

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

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

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

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

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

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

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

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

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

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

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

## Energy<sup>C</sup>

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

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

**In Range Of** [needsEnergy<sup>Op</sup>](#)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/process/RemoveResourceProcesses">http://w3id.org/CE0N/ontology/process/RemoveResourceProcesses</a>
<b><u>Sub Class Of</u></b>	<a href="#">processODP:Transformation<sup>C</sup></a>

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

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/process/RepairProcess">http://w3id.org/CE0N/ontology/process/RepairProcess</a>
<b><u>Sub Class Of</u></b>	<a href="#">processODP:Transformation<sup>C</sup></a>

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

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/process/ResellProcess">http://w3id.org/CE0N/ontology/process/ResellProcess</a>
<b><u>Sub Class Of</u></b>	<a href="#">processODP:Transformation<sup>C</sup></a>

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

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/process/ReuseProcess">http://w3id.org/CE0N/ontology/process/ReuseProcess</a>
<b><u>Sub Class Of</u></b>	<a href="#">processODP:Transformation<sup>C</sup></a>

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

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/process/SellResourceProcess">http://w3id.org/CE0N/ontology/process/SellResourceProcess</a>
<b><u>Sub Class Of</u></b>	<a href="#">processODP:Transformation<sup>C</sup></a>

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

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/process/ServiceProcess">http://w3id.org/CE0N/ontology/process/ServiceProcess</a>
<b><u>Sub Class Of</u></b>	<a href="#">processODP:Transformation<sup>C</sup></a>

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

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/process/ShareResourceProcess">http://w3id.org/CE0N/ontology/process/ShareResourceProcess</a>
<b><u>Sub Class Of</u></b>	<a href="#">processODP:Transformation<sup>C</sup></a>

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

<b>IRI</b>	<a href="http://w3id.org/CE0N/ontology/process/TakeBackProcess">http://w3id.org/CE0N/ontology/process/TakeBackProcess</a>
<b><u>Sub Class Of</u></b>	<a href="#">processODP:Transformation<sup>C</sup></a>

## Transformation<sup>C</sup>

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

### Super Class Of

[AssemblingProcess<sup>C</sup>](#)  
[BuyResourceProcess<sup>C</sup>](#)  
[ChangeResourceProcess<sup>C</sup>](#)  
[ContactProcess<sup>C</sup>](#)  
[DeconstructionProcess<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/CE0N/ontology/resourceODP/Resource>

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

### Super Class Of

[CO2Emission<sup>C</sup>](#)  
[Cathalyst<sup>C</sup>](#)  
[Energy<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** [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 product<sup>op</sup>

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

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

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

uses cathalyst<sup>op</sup>

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

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

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

has input<sup>op</sup>

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

**Super Property Of**

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

has output<sup>op</sup>

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

**Super Property Of**

- [producesCO2<sup>op</sup>](#)
- [resultingProduct<sup>op</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/cannotation/schema.owl#coversRequirements">http://www.ontologydesignpatterns.org/schemas/cannotation/schema.owl#coversRequirements</a>

## Namespaces

:	<a href="http://w3id.org/CE0N/ontology/process/">http://w3id.org/CE0N/ontology/process/</a>
dcterms	<a href="http://purl.org/dc/terms/">http://purl.org/dc/terms/</a>
odp	<a href="http://www.ontologydesignpatterns.org/schemas/cannotationschema.owl#">http://www.ontologydesignpatterns.org/schemas/cannotationschema.owl#</a>
owl	<a href="http://www.w3.org/2002/07/owl#">http://www.w3.org/2002/07/owl#</a>
processODP	<a href="http://w3id.org/CE0N/ontology/processODP/">http://w3id.org/CE0N/ontology/processODP/</a>
prov	<a href="http://www.w3.org/ns/prov#">http://www.w3.org/ns/prov#</a>
rdf	<a href="http://www.w3.org/1999/02/22-rdf-syntax-ns#">http://www.w3.org/1999/02/22-rdf-syntax-ns#</a>
rdfs	<a href="http://www.w3.org/2000/01/rdf-schema#">http://www.w3.org/2000/01/rdf-schema#</a>
resourceODP	<a href="http://w3id.org/CE0N/ontology/resourceODP/">http://w3id.org/CE0N/ontology/resourceODP/</a>
vann	<a href="http://purl.org/vocab/vann/">http://purl.org/vocab/vann/</a>

## Legend

c	Classes
op	Object Properties
ap	Annotation Properties