Circular Economy Ontology Network (CEON) - Resource ODP

Metadata

IRI

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

Title

Circular Economy Ontology Network (CEON) - Resource ODP

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Version Iri

http://w3id.org/CEON/ontology/resourceODP/0.4/

Version Info

0.4

Preferred Namespace Prefix

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 [c]

IRI http://w3id.org/CEON/ontology/location/Location

In Range Of hasResourceLocation [op]

Asset [c]

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

Super Class Of Information [c]
Resource [c]

Batch [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Batch
Description	A batch of objects is a collection of physical objects that are of the same type, e.g. a set of items (product instances) adhering to the same product model.
Sub Class Of	Resource [c] has physical object [op] some Physical object [c] *and* has physical object [op] only Physical object [c]
In Domain Of	batch size [dp]
In Range Of	has batch [op]
Restriction	batch size [dp] *exactly* 1 Batch [c]

Constituent [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Constituent
Description	A constituent is a component of object.
In Range Of	has constituent [op]

Digital object [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/DigitalObject
Sub Class Of	Resource [c]

Information [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Information
Description	Information is an abstract concept that represents any kind of interpretations. For instance, information can be data generated by software systems or data used by people for communications.
Sub Class Of	Asset [c]
In Domain Of	containsInformation [op] isAbout [op]
In Range Of	containsInformation [op] is realization of [op]

Matter [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Matter
Description	A matter is a physical substance.
In Range Of	has matter [op]

Physical object [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/PhysicalObject
Description	A physical object is a collection of matter.
Sub Class Of	Resource [c] has constituent [op] some Constituent [c] *and* has constituent [op] only Constituent [c] has matter [op] only Matter [c] *and* has matter [op] some Matter [c]
In Domain Of	has constituent [op] has matter [op]
In Range Of	has physical object [op]

Resource [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/Resource
Is Defined By	ISO 59004:2024 - 3.1.5 resource
Description	Asset from which a solution is created or implemented. Depending on the context, reference to “resource” includes “raw material”, “feedstock”, “material” or “component”. Resource includes any energy type (e.g. the energy content or energy potential of materials). Note 4 to entry: Resources can be considered concerning both stocks and flows.
Sub Class Of	Asset [c]
In Domain Of	hasResourceLocation [op]
Super Class Of	Batch [c] Digital object [c] Physical object [c] Set of objects [c]

Set of objects [c]

IRI	http://w3id.org/CEON/ontology/resourceODP/SetOfObjects
Description	A set of objects is a set of physical objects (items) that can be of different types, i.e. different kinds of items.
Sub Class Of	Resource [c] has batch [op] only Batch [c] *and* has batch [op] some Batch [c] has physical object [op] some Physical object [c] *and* has physical object [op] only Physical object [c]
In Domain Of	has batch [op]

Object Properties

has location [op]

IRI	http://w3id.org/CEON/ontology/location/hasLocation
Super Property Of	hasResourceLocation [op]

contains information [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/containsInformation
Sub Property Of	hasPart [op]
Domain	Information [c]
Range	Information [c]

has batch [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/hasBatch
Description	hasBatch intends to represent that a set of objects can be captured by a number of batches where each batch contains a number of physical objects.
Domain	Set of objects [c]
Range	Batch [c]

has constituent [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/hasConstituent
Description	hasConstitutent intends to represent that a physical object can have a collection of composing components.
Sub Property Of	hasPart [op]
Domain	Physical object [c]
Range	Constituent [c]

has matter [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/hasMatter
Description	hasMatter intends to represent that a physical object can have a collection of matter.
Domain	Physical object [c]
Range	Matter [c]

has part [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/hasPart
Super Property Of	• containsInformation [op] • has constituent [op]

has physical object [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/hasPhysicalObject
Description	hasPhysicalObject intends to represent that a batch of objects or a set of objects can have composing components of physical objects.
Domain	Set of objects [c] *or* Batch [c]
Range	Physical object [c]

has resource location [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/hasResourceLocation
Sub Property Of	location:hasLocation [op]
Domain	Resource [c]
Range	location:Location [c]

is about [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/isAbout
Domain	Information [c]

is realization of [op]

IRI	http://w3id.org/CEON/ontology/resourceODP/isRealizationOf
Range	Information [c]

Datatype Properties

batch size [dp]

IRI	http://w3id.org/CEON/ontology/resourceODP/batchSize
Description	batchSize intends to repsent how many physical objects are belong to a batch of objects.
Domain	Batch [c]
Range	xsd:nonNegativeInteger

Annotation Properties

description [ap]

IRI	http://purl.org/dc/elements/1.1/description

contributor [ap]

IRI	http://purl.org/dc/terms/contributor

created [ap]

IRI	http://purl.org/dc/terms/created

creator [ap]

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 ap

IRI http://purl.org/dc/terms/title

preferred namespace prefix ap

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#coversRequirements

definition ap

IRI http://www.w3.org/2004/02/skos/core#definition

pref label ap

IRI http://www.w3.org/2004/02/skos/core#prefLabel

Namespaces

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

dc
http://purl.org/dc/elements/1.1/

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#`

skos

`http://www.w3.org/2004/02/skos/core#`

vann

`http://purl.org/vocab/vann/`

xsd

`http://www.w3.org/2001/XMLSchema#`

Legend