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} only Constituent ^C *and* has constituent ^{op} some 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} some Batch ^C *and* has batch ^{op} only Batch ^C has physical object ^{op} only Physical object ^C *and* has physical object ^{op} some 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	Batch ^c *or* Set of objects ^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/cpannotation schema.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

c	Classes
op	Object Properties
dp	Datatype Properties
ap	Annotation Properties