

# Modelling, Methods and Technology

2013-03-24

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# Overview

- Background and requirements for the SIG
- Relationship to other SIGs and broader community
- Status and Results
  - MMT activities
  - JORD Interim Editing Environment
  - Validation Procedures
  - Usage Patterns
- Conclusions, issues and plans for further work

# Background and requirements for the SIG

- Meetings every month
- Information available
  - <https://www.posccaesar.org/wiki/SigMmt>
- Way of working
  - Voting
  - Core group
  - Deadlock group
- Namespace discussions
- Updates and info on tools, projects etc.

## Relationship to other SIGs and broader community

- Need for complete and consistent methodology
- Corresponding set of tools
- Collaboration with other SIGs on relevant topics
- Working alongside and together with the JORD project

# Template sets (together with P8WG)

## ● Part 8 initial set

- Available as ISO 15926 Part 8 attachments
- Human access: <http://posccaesar.org/sandbox/p8/>
- Access from applications: <http://posccaesar.org/sandbox/p8/sparql>

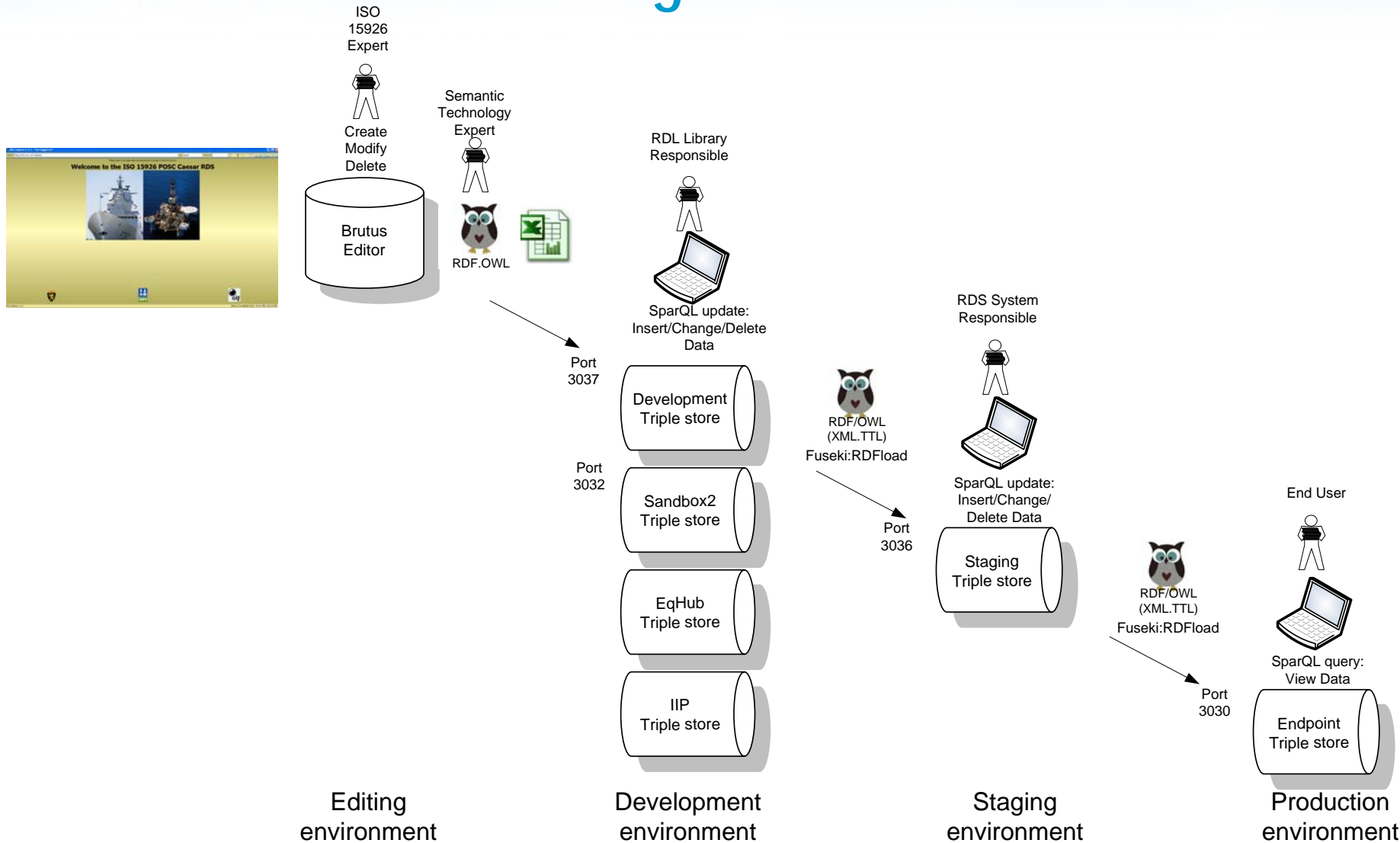
## ● Proposed life-cycle integration template set

- Available at <http://15926.org>
- Human access: <http://posccaesar.org/sandbox/p8iwig/>
- Access from applications: <http://posccaesar.org/sandbox/p8iwig/sparql>

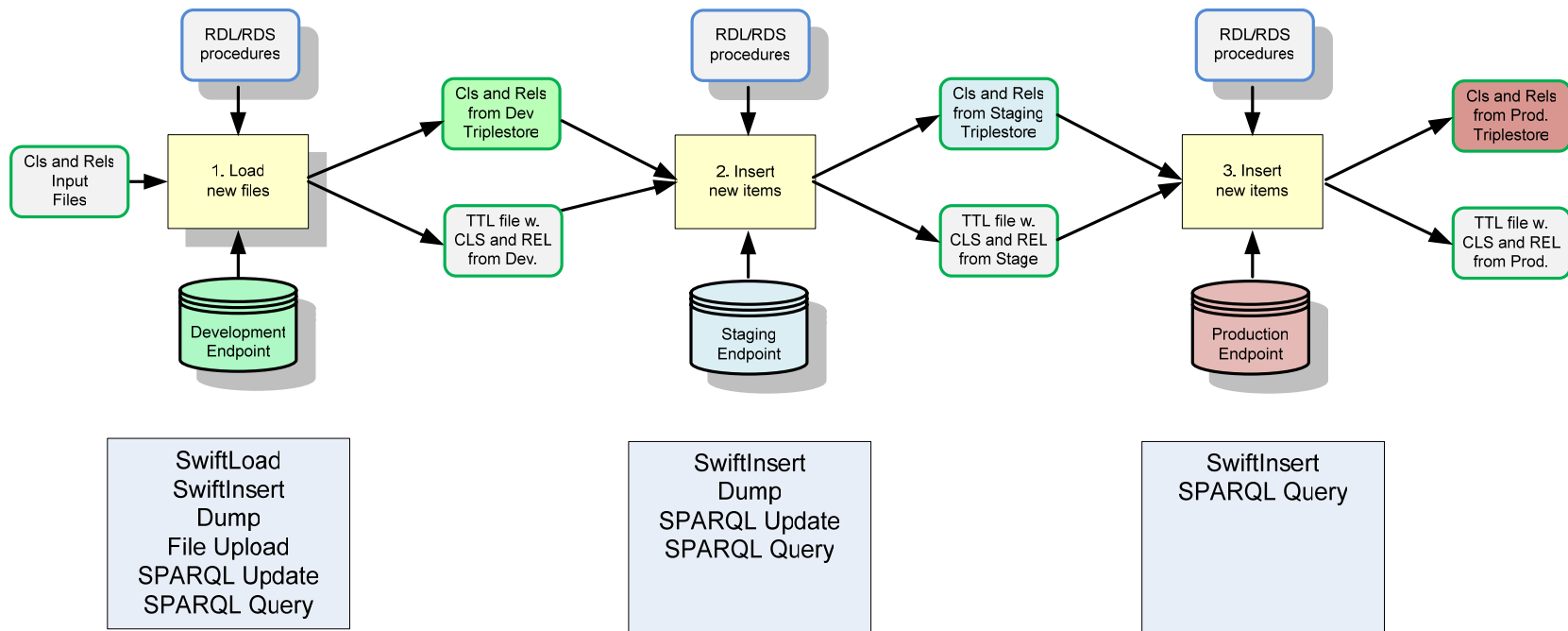
## ● IIP template set (access will change to IIP)

- Human access: <http://posccaesar.org/sandbox/iring/> (will change to iip)
- Access from applications: <http://posccaesar.org/sandbox/iring/sparql> (will change to iip)

# JORD Interim Editing Environment

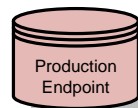
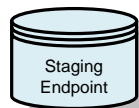
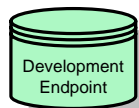
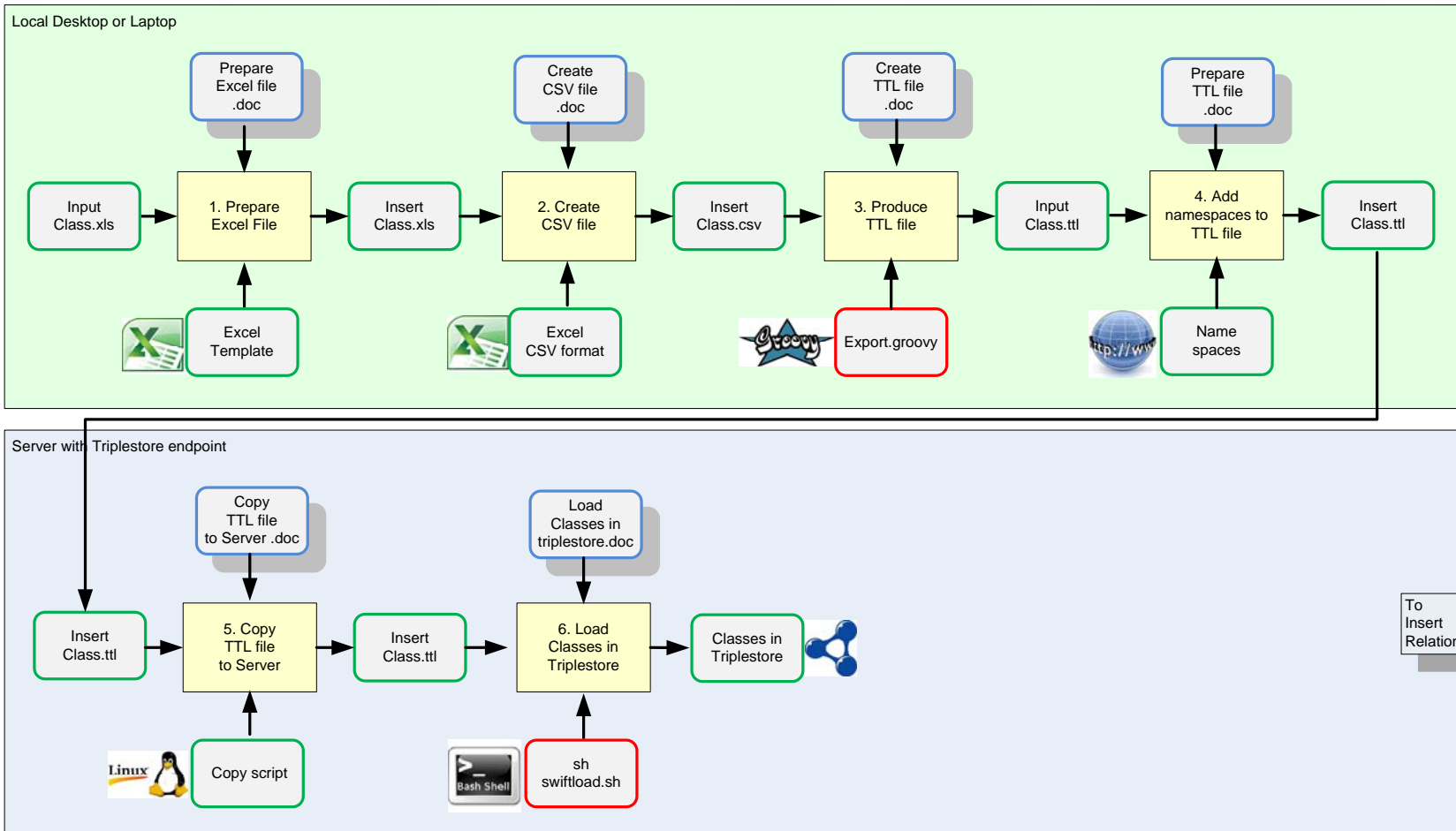


## Work Processes for PCA Reference Data System





## 1. Work Process for Inserting Classes in the PCA Reference Data System

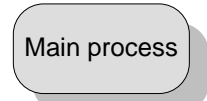
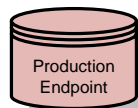
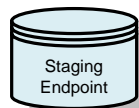
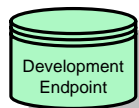
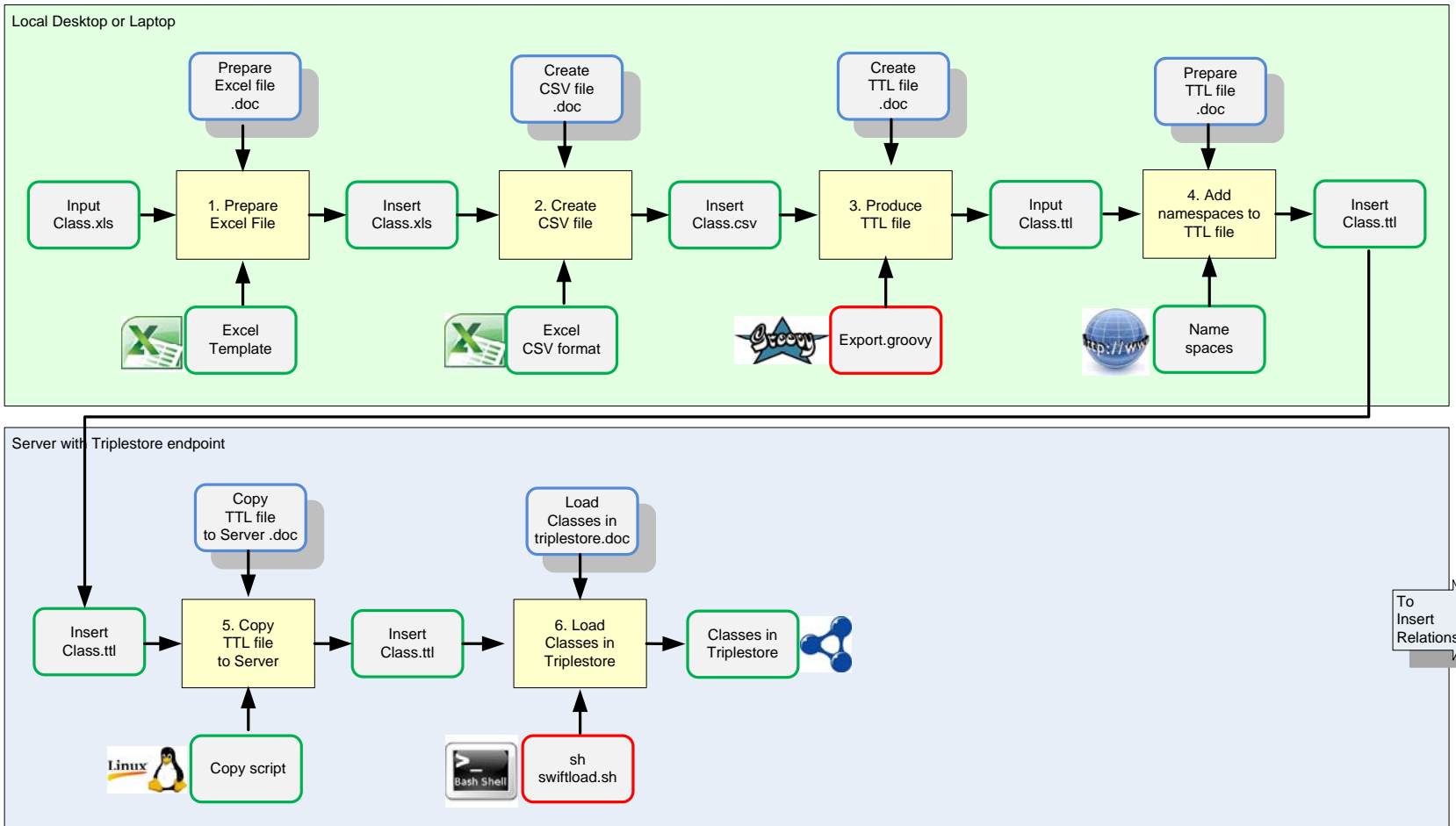


Main process



1	PCA ID	RDL Designation	Entity Type	Creator	Creation Date	Status	RDL Definition
2	15c93a0-3d09-428a-8b14-17f129caffbf	NonTransportableContainer	ClassOfFunctionalObject	LH	14.03.2013		A 'container' that is not transportable
3	3e5f10ed-3e28-461a-a575-b0de9b132ad9	HighPressureCleaningDeviceNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'temporary device NORSOK Z-015' where the main
4	5997f45f-8282-4d0d-b7fa-71ba931079fa	MobileCraneNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'mobile crane' conforming to the requirements for r
5	77b846fc-c8e3-4f9c-99b5-fd6dd8a62bc4	Basket	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'transportable container' and an 'artefact' that has a
6	ce0fba78-7276-475c-9218-9afd4ba56c8f	CertificateCodeAssignmentClass	ClassOfClassOfIdentification	LH	14.03.2013		A 'document identification code' that assigns a 'certif
7	8d132cb8-8a1e-4fae-8c17-0e161d2a12b4	WeightCarryingCapacity	ClassOfIndirectProperty	LH	14.03.2013		A 'weight range' that is the maximum weight of the c
8	17238808-c0fe-490b-a336-85111c72efa5	RentingCompanyNameReference	ClassOfRelationshipWithSignature	LH	14.03.2013		An 'identifier reference' that references the 'name' of t
9	b0f26106-07f9-4f57-9062-8c3e45487d40	ContainerOwnerNameReference	ClassOfRelationshipWithSignature	LH	14.03.2013		An 'owner name reference' that references the 'name
10	2bcf663a-cc9e-4f5e-9a1c-26e44015521d	NORSOKZ-015TemporaryEquipmentClassCodeStringClass	RepresentationForm	LH	14.03.2013		A 'code string class' defined in NORSOK Z-015, Terr
11	ebe78409-f56a-44d3-bdba-cd18288965de	WasteCompactor	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'machine' that is used to reduce the size of waste
12	183cdd64-a115-4cc2-a6d9-adcfb125553a	LocationNameReference	ClassOfRelationshipWithSignature	LH	14.03.2013		An 'identifier reference' that references the 'name' of .
13	622b0da3-16e5-4d09-9344-c9f35e6c3c4	GrossTotalWeight	ClassOfIndirectProperty	LH	14.03.2013		A 'weight range' that is the weight of an object includ
14	29653c1b-f955-4e9a-aea4-011f9a35f27	ContainerOwnership	ClassOfRelationshipWithSignature	LH	14.03.2013		An 'ownership' that states that a container is owned
15	dc5620f6-2520-48e5-822f-911cd2c870b4	WorkshopContainer	ClassOfFunctionalObject	LH	14.03.2013		A 'service container' that is intended for work operati
16	2a9583ba-6260-4c0c-92ad-ef6a1b9e78e2	MannedContainer	ClassOfFunctionalObject	LH	14.03.2013		A 'service container' intended for personell.
17	188e2037-dda6-45d1-8d6e-72641112e2b0	IntermodalContainer	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'transportable container' and an 'artefact' that is a
18	60d9dd3d-4c7a-4cf9-a10b-c7599bb14790	ContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		An 'offshore container' and a 'temporary device NOR'
19	7875e43a-7b27-4f96-8408-2a7118dffe7a	OffshoreContainerEN12079-12006	ClassOfInanimatePhysicalObject	LH	14.03.2013		An 'offshore container' that conforms to the reequirer
20	24312e8b-b71d-4a17-848a-d2b17d435ef1	OffshoreContainerDNV2.7-1	ClassOfInanimatePhysicalObject	LH	14.03.2013		An 'offshore container EN 12079-1:2006' that also co
21	769d7c1b-96a2-4f5c-90ea-d49c6600ef72	OffshoreServiceContainer	ClassOfInanimatePhysicalObject	LH	14.03.2013		An 'offshore container' and a 'service container' built
22	3268b462-f203-42f1-beaa-06d41a6f3153	MobileEquipmentClass	ClassOfClassOfIndividual	LH	14.03.2013		An 'equipment class' that is a class whose members
23	132430f5-726f-4028-823b-decec945401f	NORSOKZ-015ContainerTechnicalComplianceClass	ClassOfClassOfIndividual	LH	14.03.2013		A 'NORSOK Z-015 class' that is a class that states
24	44aa456b-a730-49d3-afe1-110fc68179fd	NORSOKZ-015HighPressureCleaningEquipmentClass	ClassOfClassOfIndividual	LH	14.03.2013		A 'NORSOK Z-015 temporary equipment class' that
25	761d890b-d59f-4400-ba37-0f5860c3359f	TemporaryDeviceNORSOKZ-015	ClassOfFunctionalObject	LH	14.03.2013		A 'device' intended for use on offshore installations fc
26	0faea72c-a2fc-4d3d-9b2b-c8c673b7194a	ServiceContainer	ClassOfFunctionalObject	LH	14.03.2013		A 'transportable container' that is re-usable and built
27	e89926a9-a7ba-4f44-9a1c-00e4a1033ee6	AccommodationContainer	ClassOfFunctionalObject	LH	14.03.2013		A 'service container' that is intended for accommodati
28	e7e79be9-6665-412c-b8bc-1d611ee4d719	OffshoreFreightContainer	ClassOfInanimatePhysicalObject	LH	14.03.2013		An 'offshore container' and a 'freight container' built fc
29	06880dc2-b231-4fee-b00e-1e93ce6f1719	DieselEngineContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' that has diesel
30	f01a4b4e-2f98-4e2f-a7e1-626f9190516b	FlammableMaterialContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' that is used for
31	7332f217-b551-45e4-860a-3c9f2e479517	PaintersWorkshopContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' conforming to t
32	9390e835-fb9-41fd-abd2-be1ddc4e1fcc	RefrigerationAndFreezerContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' that is intende
33	16ba2f55-415c-4578-8202-aa0321843f02	RadioAndCommunicationContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' conforming to t
34	0c232ca8-b107-4adb-9197-1694092532e7	ToiletContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' equipped with a
35	e4d3bd45-a973-42a1-938b-c68f01549043	ElectricalEquipmentContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' that is intende
36	67f0ea64-cb37-41db-b12b-26445036da1f	NonExplosiveProofContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' that is fitted wit
37	03ee1f8-c5e9-4868-a565-8d9f437e5212	ExplosiveApprovedContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'service container NORSOK Z-015' in which all sys
38	b2178f11-f79a-4ad9-8a20-b6890c95033a	MannedContainerNORSOKZ-015	ClassOfInanimatePhysicalObject	LH	14.03.2013		A 'manned container' and a 'container NORSOK Z-01

## 1. Work Process for Inserting Classes in the PCA Reference Data System



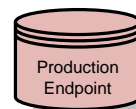
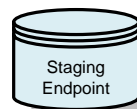
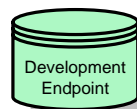
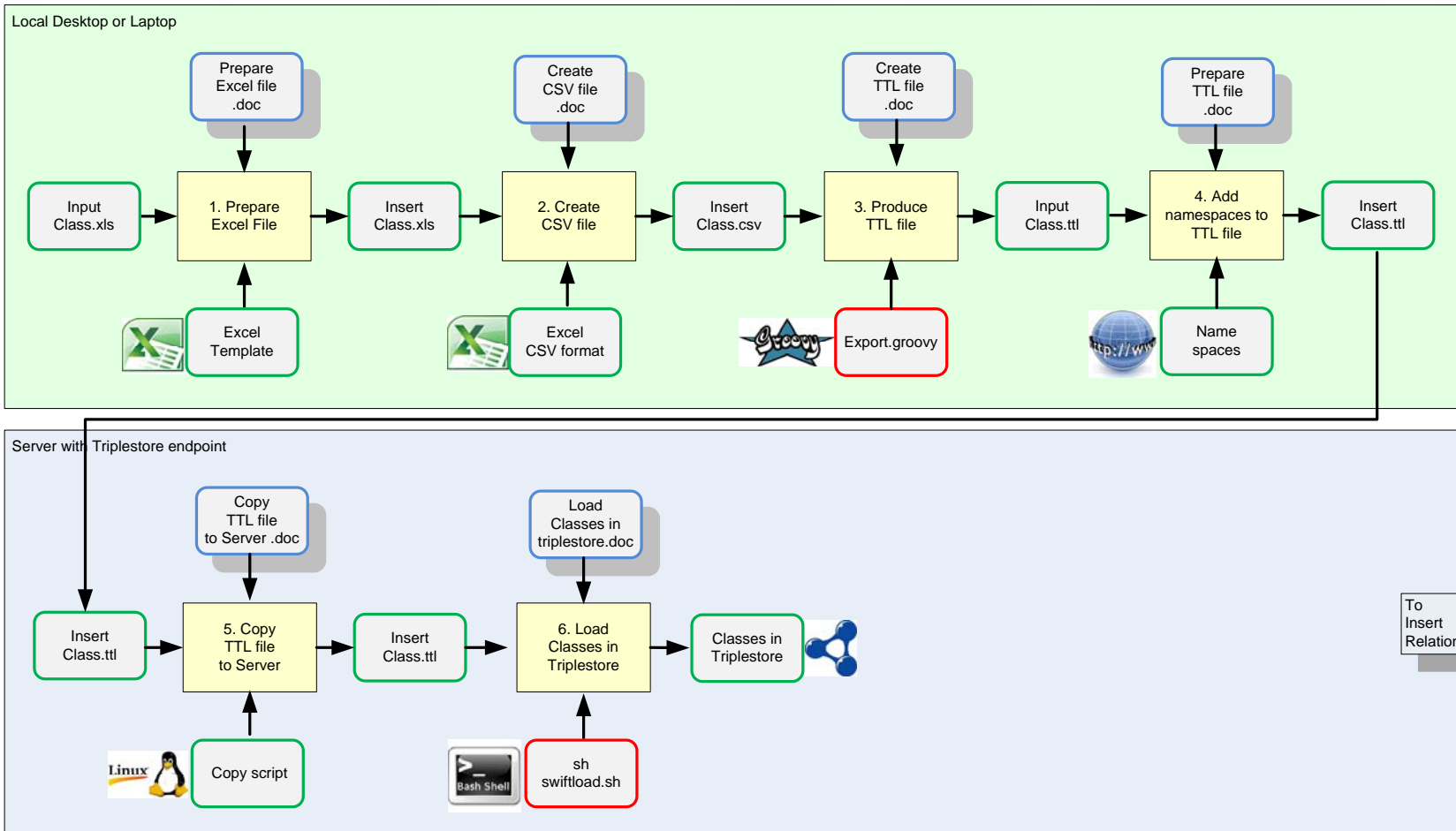
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1 |
2 | @prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
3 | @prefix foaf: <http://xmlns.com/foaf/0.1/> .
4 | @prefix p2: <http://rds.posccaesar.org/2008/02/OWL/ISO-15926-2_2003#> .
5 | @prefix pca: <http://posccaesar.org/rdl/> .
6 | @prefix dev: <http://posccaesar.org/dev/> .
7 | @prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
8 |
9 | dev:NonTransportableContainer a p2:ClassOfFunctionalObject ; pca:defaultRdsId "R-15cf93a0-3d09-428a-8b14-17f129caffbf" ; pca:hasIdPCA "R-15cf93a0-3d09-428a-8b14-17f129caffbf" ;
  . pca:hasDefinition "A 'container' that is not transportable" ; rdfs:label "NonTransportableContainer" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ; pca:hasStatus
  . "Submitted" .
10 | dev:HighPressureCleaningDeviceNORSOKZ-015 a p2:ClassOfInanimatePhysicalObject ; pca:defaultRdsId "R-3e5f10ed-3e28-461a-a575-b0de9b132ad9" ; pca:hasIdPCA "R-3e5f10ed-3e28-461a-a575-
  . b0de9b132ad9" ; pca:hasDefinition "A 'temporary device NORSOK Z-015' where the main component is a 'diesel engine' conforming to the requirements for diesel engines defined in
  . NORSOK Z-015, Section 4.3.1." ; rdfs:label "HighPressureCleaningDeviceNORSOKZ-015" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
11 | dev:MobileCraneNORSOKZ-015 a p2:ClassOfInanimatePhysicalObject ; pca:defaultRdsId "R-5997f45f-8282-4d0d-b7fa-71ba931079fa" ; pca:hasIdPCA "R-5997f45f-8282-4d0d-b7fa-71ba931079fa" ;
  . pca:hasDefinition "A 'mobile crane' conforming to the requirements for mobile cranes in NORSOK Z-015, Section 4.3.6." ; rdfs:label "MobileCraneNORSOKZ-015" ; pca:hasCreator "LH" ;
  . pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
12 | dev:Basket a p2:ClassOfInanimatePhysicalObject ; pca:defaultRdsId "R-77b846fc-c8e3-4f9c-99b5-fd6dd8a62bc4" ; pca:hasIdPCA "R-77b846fc-c8e3-4f9c-99b5-fd6dd8a62bc4" ;
  . pca:hasDefinition "A 'transportable container' and an 'artefact' that has a characteristic shape and that is made of material with an open structure" ; rdfs:label "Basket" ;
  . pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
13 | dev:CertificateCodeAssignmentClass a p2:ClassOfClassOfIdentification ; pca:defaultRdsId "R-ce0fba78-7276-475c-9218-9afd4ba56c8f" ; pca:hasIdPCA "R-
  . ce0fba78-7276-475c-9218-9afd4ba56c8f" ; pca:hasDefinition "A 'document identification code' that assigns a 'certificate code string class' to a 'certificate class'." ; rdfs:label
  . "CertificateCodeAssignmentClass" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
14 | dev:WeightCarryingCapacity a p2:ClassOfIndirectProperty ; pca:defaultRdsId "R-8d132bc8-8a1e-4fae-8c17-0e161d2a12b4" ; pca:hasIdPCA "R-8d132bc8-8a1e-4fae-8c17-0e161d2a12b4" ;
  . pca:hasDefinition "A 'weight range' that is the maximum weight of the carried items." ; rdfs:label "WeightCarryingCapacity" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ;
  . pca:hasStatus "Submitted" .
15 | dev:RentingCompanyNameReference a p2:ClassOfRelationshipWithSignature ; pca:defaultRdsId "R-17238808-cf0e-490b-a336-85111c72efa5" ; pca:hasIdPCA "R-17238808-cf0e-490b-
  . a336-85111c72efa5" ; pca:hasDefinition "An 'identifier reference' that references the 'name' of the company that is the renter of the artefact in focus." ; rdfs:label
  . "RentingCompanyNameReference" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
16 | dev:ContainerOwnerNameReference a p2:ClassOfRelationshipWithSignature ; pca:defaultRdsId "R-b0f26106-07f9-4f57-9062-8c3e45487d40" ; pca:hasIdPCA "R-
  . b0f26106-07f9-4f57-9062-8c3e45487d40" ; pca:hasDefinition "An 'owner name reference' that references the 'name' of the owner of the container in focus." ; rdfs:label
  . "ContainerOwnerNameReference" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
17 | dev:NORSOKZ-015TemporaryEquipmentClassCodeStringClass a p2:RepresentationForm ; pca:defaultRdsId "R-2bcf863a-cce9-4f5e-9a1c-26e44015521d" ; pca:hasIdPCA "R-2bcf863a-
  . cce9-4f5e-9a1c-26e44015521d" ; pca:hasDefinition "A 'code string class' defined in NORSOK Z-015, Temporary equipment for classes of temporary equipment." ; rdfs:label
  . "NORSOKZ-015TemporaryEquipmentClassCodeStringClass" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
18 | dev:WasteCompactor a p2:ClassOfInanimatePhysicalObject ; pca:defaultRdsId "R-ebe78409-f56a-44d3-bdba-cd18288965de" ; pca:hasIdPCA "R-ebe78409-f56a-44d3-bdba-cd18288965de" ;
  . pca:hasDefinition "A 'machine' that is used to reduce the size of waste material." ; rdfs:label "WasteCompactor" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ;
  . pca:hasStatus "Submitted" .
19 | dev:LocationNameReference a p2:ClassOfRelationshipWithSignature ; pca:defaultRdsId "R-183cdd64-a115-4cc2-a6d9-adcfb125553a" ; pca:hasIdPCA "R-183cdd64-a115-4cc2-a6d9-
  . adcfb125553a" ; pca:hasDefinition "An 'identifier reference' that references the 'name' of a 'location'." ; rdfs:label "LocationNameReference" ; pca:hasCreator "LH" ;
  . pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
20 | dev:GrossTotalWeight a p2:ClassOfIndirectProperty ; pca:defaultRdsId "R-622b0da3-16e5-4d09-9344-c9f3f5e6c3c4" ; pca:hasIdPCA "R-622b0da3-16e5-4d09-9344-c9f3f5e6c3c4" ;
  . pca:hasDefinition "A 'weight range' that is the weight of an object including the weight of packaging material etc." ; rdfs:label "GrossTotalWeight" ; pca:hasCreator "LH" ;
  . pca:hasCreationDate "14.03.2013" ; pca:hasStatus "Submitted" .
21 | dev:ContainerOwnership a p2:ClassOfRelationshipWithSignature ; pca:defaultRdsId "R-29653c1b-f955-4e9a-aea4-011f39a35f27" ; pca:hasIdPCA "R-29653c1b-f955-4e9a-aea4-011f39a35f27" ;
  . pca:hasDefinition "An 'ownership' that states that a container is owned by a company." ; rdfs:label "ContainerOwnership" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ;
  . pca:hasStatus "Submitted" .
22 | dev:WorkshopContainer a p2:ClassOfFunctionalObject ; pca:defaultRdsId "R-dc5620f6-2520-48e5-822f-911cd2c870b4" ; pca:hasIdPCA "R-dc5620f6-2520-48e5-822f-911cd2c870b4" ;
  . pca:hasDefinition "A 'service container' that is intended for work operations." ; rdfs:label "WorkshopContainer" ; pca:hasCreator "LH" ; pca:hasCreationDate "14.03.2013" ;
  .

```



## 1. Work Process for Inserting Classes in the PCA Reference Data System



Main process



Showing resource with URI: <http://posccaesar.org/dev/OffshoreLinedTank>

OffshoreLinedTank

**Equivalent RDS-WIP class ID**

No RDS-WIP class equivalent

**Types**

[ClassOfInanimatePhysicalObject](#)

**Property**

[hasCreator](#)  
[defaultRdsId](#)  
[hasDefinition](#)  
[hasIdPCA](#)  
[hasCreationDate](#)  
[hasStatus](#)

**Value**

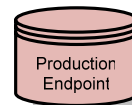
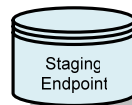
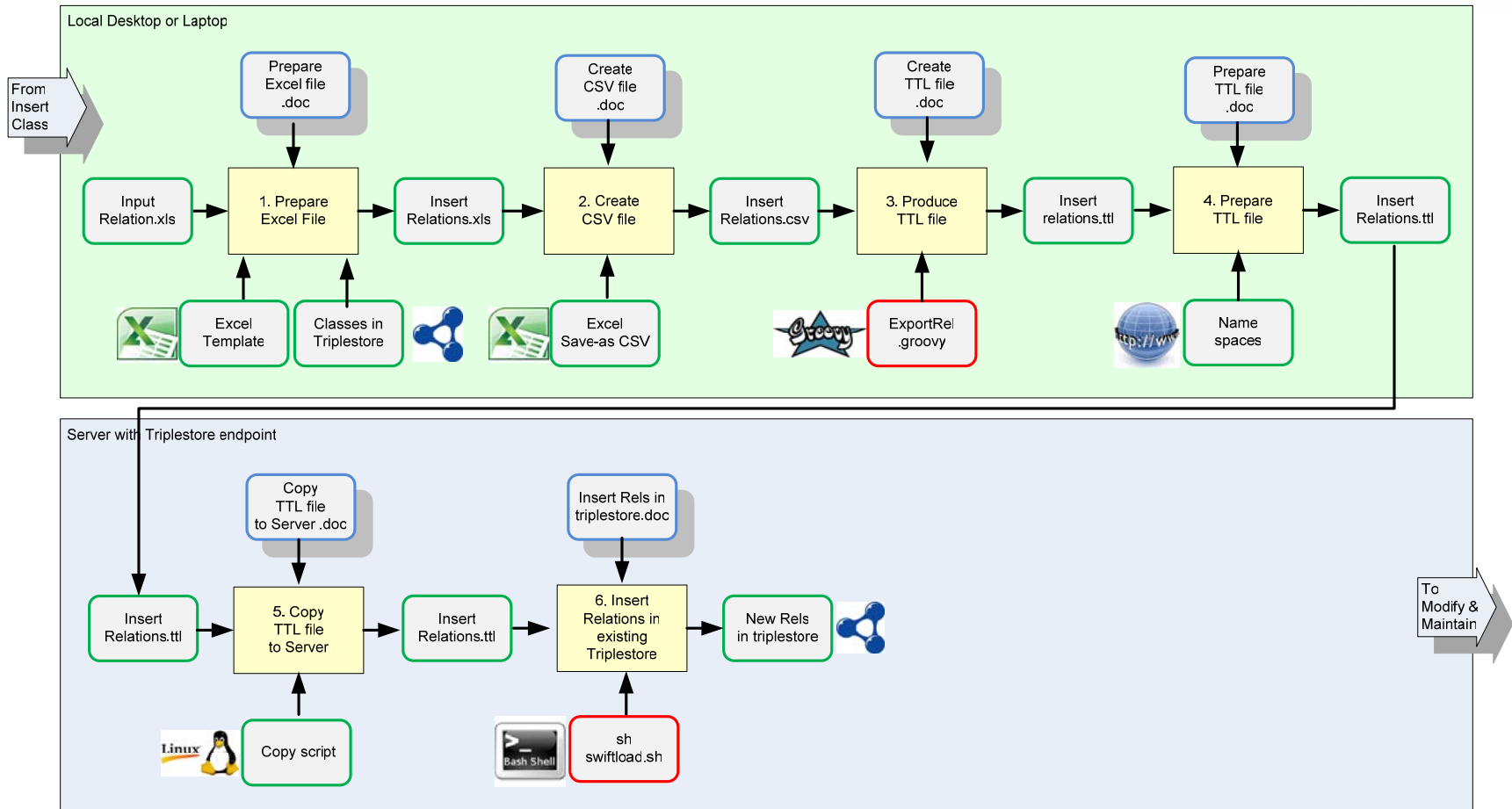
LH  
R-797d1970-3b92-4556-a90c-78f082e47015  
A 'logistics hub tank' intended for transport of acid, chlorine and other liquids. The tank is lined to avoid reaction between the tank and the liquid.  
R-797d1970-3b92-4556-a90c-78f082e47015  
14.03.2013  
Submitted

This page shows information obtained from the SPARQL endpoint at <http://posccaesar.org/development>.

[As N3](#) | [As RDF/XML](#)

<http://posccaesar.org/dev/page/OffshoreLinedTank>

## 2 Work Process for Inserting Relationships in the PCA Reference Data System



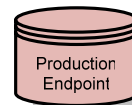
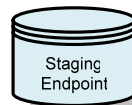
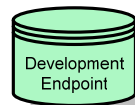
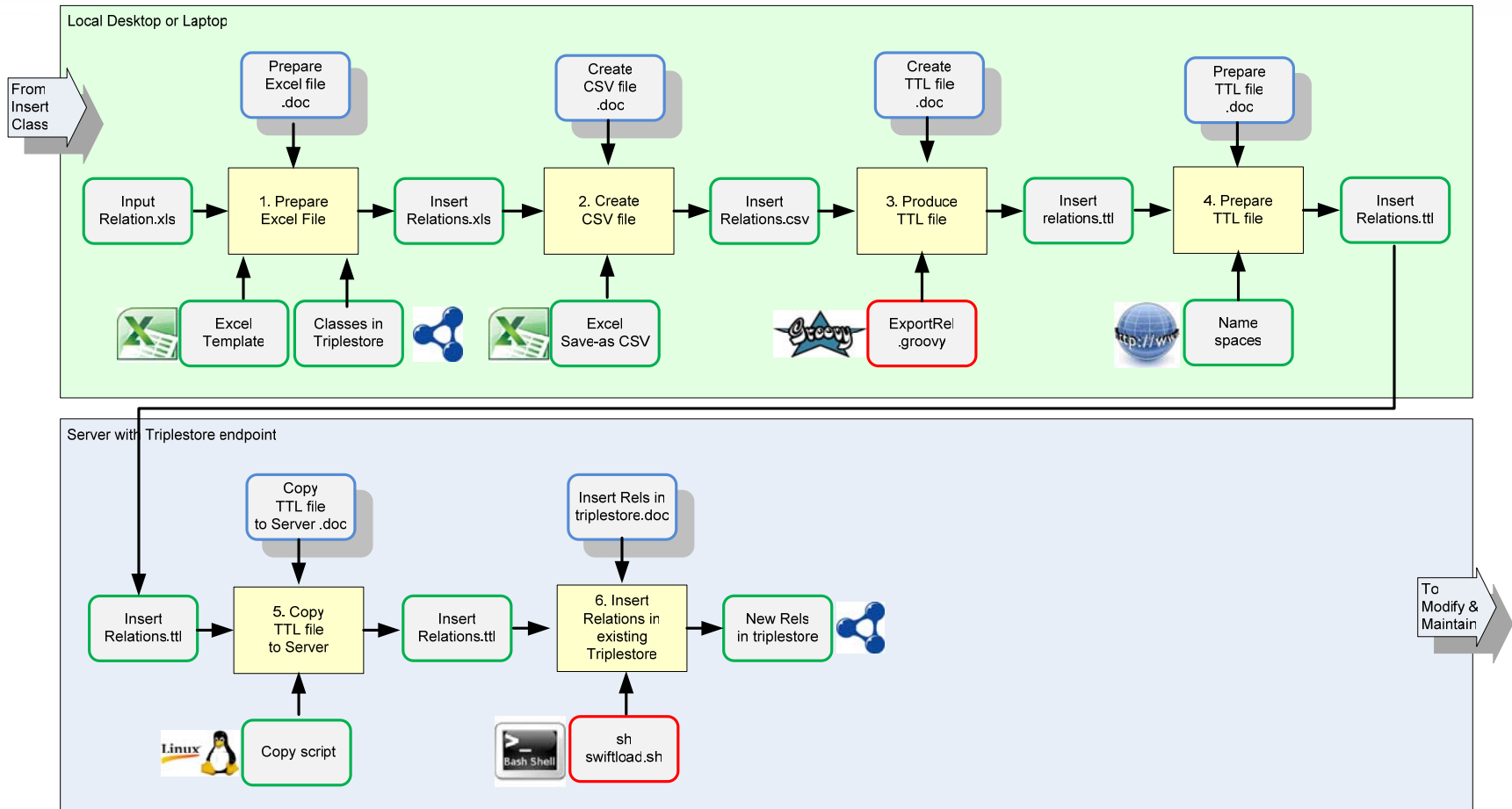
Main process

Microsoft Excel - InsertRel.xls										
File Edit View Insert Format Tools Data Window Help Adobe PDF										
100% Arial 11 B I U										
Reply with Changes... End Review...										
Clue Lookup										
A1 PCA ID										
1	PCA ID	Entitytype	ROLE1	PCA ID	RDLDesignation1	ROLE2	PCA ID	RDLDesignation2		
2	e6b6fa6f-b550-4c1b-82a9-28ad1c505aed	Specialization			NORSOKStandard	hasSuperclass		IndustryStandard		
3	e912f2ce-465f-420c-b2a1-84a722ecf460	Specialization			OffshoreCCU	hasSuperclass		IntermodalContainer		
4	35995794-2a9f-441e-8f2f-8576c5e6e5280	Specialization			OffshoreContainer	hasSuperclass		IntermodalContainer		
5	8734075d-b3a7-4669-b916-9b4f3809954	Specialization			OffshoreHeavyLiftBasket	hasSuperclass		LogisticsHubBasket		
6	7e948cf9-cd68-4f5a-9233-e2939366fbfa	Specialization			OffshoreSideDoorBasket	hasSuperclass		LogisticsHubBasket		
7	57ebf695-4854-443b-8986-8361821564a6	Specialization			OffshoreSpecialBasket	hasSuperclass		LogisticsHubBasket		
8	6e52b6f4-f6fa-4f44-bc20-cfb871f724c	Specialization			AccommodationContainerNORSOKZ-015	hasSuperclass		AccommodationContainer		
9	28ee61fe-5027-40fc-b9d6-7ef6f6e39c18	Specialization			OffshoreWasteSkip	hasSuperclass		Basket		
10	a01622d0-7683-4ed2-91d4-eab2b49d1ddd	Specialization			LogisticsHubBasket	hasSuperclass		Basket		
11	17ccfb9b-c3fc-4ef1-8408-24ad43166bfa	Specialization			MannedContainerNORSOKZ-015	hasSuperclass		ContainerNORSOKZ-015		
12	5666094c-44ad-47df-9a94-9eedc60d92dd	Specialization			NormallyUnmannedContainerNORSOKZ-015	hasSuperclass		ContainerNORSOKZ-015		
13	3bee97de-1a48-4121-a4a0-2a0b208b392a	Specialization			AccommodationContainerNORSOKZ-015	hasSuperclass		ContainerNORSOKZ-015		
14	7b0cbee6-e490-43e4-97c1-33299232955b	Specialization			ServiceContainerNORSOKZ-015	hasSuperclass		ContainerNORSOKZ-015		
15	b306064d-6018-44fc-ac92-f4e1275fbcd5	Specialization			FrameNORSOKZ-015U98	hasSuperclass		FrameNORSOKZ-015		
16	02cc56e5-09bb-416b-b80c-3f127be44539	Specialization			FrameNORSOKZ-015U99	hasSuperclass		FrameNORSOKZ-015		
17	3d18d4b4-ec24-4730-9674-cd3cb6400785	Specialization			OffshoreFreightContainer	hasSuperclass		FreightContainer		
18	543b6079-ba7c-4a1b-953c-bcac4756a3bc	Specialization			CCUUnpacking	hasSuperclass		LogisticsHubBusinessStepActivity		
19	7778a202-716b-44f9-ad65-f656ed099eb7	Specialization			CCUHiring	hasSuperclass		LogisticsHubBusinessStepActivity		
20	f31c5590-c215-470f-aa6f-9620435e0acb	Specialization			CCUholding	hasSuperclass		LogisticsHubBusinessStepActivity		
21	82a8ccc0-75ed-4149-864c-286b91b2fc67	Specialization			CCUUnloading	hasSuperclass		LogisticsHubBusinessStepActivity		
22	37287270-2c3c-47c8-bab6-0f4cb0971874	Specialization			LogisticsHubContainer	hasSuperclass		LogisticsHubCCU		
23	039e037e-2711-4dbf-a39e-982e7a7606e0	Specialization			LogisticsHubBasket	hasSuperclass		LogisticsHubCCU		
24	73b5ef7c-ee8a-4383-bbb8-dbb123fa12ac	Specialization			LogisticsHubTank	hasSuperclass		LogisticsHubCCU		
25	06b92266-0ec1-4765-8638-07fd7f73c5f8	Specialization			LogisticsHubWasteHandlingUnit	hasSuperclass		LogisticsHubCCU		
26	50713ae1-26fe-4470-9527-b9bbbe8edc39	Specialization			OffshoreSpecialContainer	hasSuperclass		LogisticsHubContainer		
27	07fcc3ca-3fae-4d6f-b53e-f98e4103b619	Specialization			OffshoreMiniContainer	hasSuperclass		LogisticsHubContainer		
28	ed464b8b-4863-4c39-a535-02ed50ad0895	Specialization			OffshoreOpenTopContainer	hasSuperclass		LogisticsHubContainer		
29	24da3690-dd86-49e4-8d7c-2e799acdcb378	Specialization			OffshoreStandardContainer	hasSuperclass		LogisticsHubContainer		
30	0f522e72-f6ca-43a9-8bdb-9a9f29929b99	Specialization			OffshoreCryogenicTank	hasSuperclass		LogisticsHubTank		
31	cc8762c-75f3-4b2d-8f2c-6ba283f21c15	Specialization			OffshoreHeatedTank	hasSuperclass		LogisticsHubTank		
32	59320733-839d-467c-b525-d4672c181cb5	Specialization			OffshoreLinedTank	hasSuperclass		LogisticsHubTank		
33	2f21f783-6a50-4d45-a500-289ab43286d9	Specialization			OffshoreChemicalTank	hasSuperclass		LogisticsHubTank		
34	2047cbc1-c10e-4805-9065-17e3749397ac	Specialization			OffshoreWasteSkip	hasSuperclass		LogisticsHubWasteHandlingUnit		
35	80ffedc1-cd71-4fd0-8269-49dc0b0d89fd	Specialization			OffshoreWasteBinCarrier	hasSuperclass		LogisticsHubWasteHandlingUnit		
36	ad750d3c-50ae-4df2-809f-272395437475	Specialization			OffshoreWasteContainer	hasSuperclass		LogisticsHubWasteHandlingUnit		
37	5fa97870-fa7d-44bd-83bc-6c5bdfc62fd2	Specialization			MannedContainerNORSOKZ-015	hasSuperclass		MannedContainer		
38	83281724-a3d3-4113-9ea8-2c47790c8b94	Specialization			PermanentlyMannedContainerNORSOKZ-015	hasSuperclass		MannedContainerNORSOKZ-015		



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	A	B	C	D	E	F	G	H	I	J	K
1	PCA ID	Entitytype	ROLE1	PCA ID	RDLDesignation1	ROLE2	PCA ID	RDLDesignation2			
2	5e16d7f1-a83d-4e07-bf1f-fc58e8b4d61f	Specializati	hasSubclass		CertificateExpirationDate-YYYY-MM-DD	hasSuperclass	RDS1003574800	P4MULTIDIMENSIONALOBJECT			
3	f4fb41a0-1d5f-4ad7-aae9-a8f9661723e6	Specializati	hasSubclass		ManufactureYear-YYYY	hasSuperclass	RDS1003574800	P4MULTIDIMENSIONALOBJECT			
4	9b9b3103-398b-4c04-bdcd-0957c09cf70f6	Specializati	hasSubclass		CertificateIssueDate-YYYY-MM-DD	hasSuperclass	RDS1003574800	P4MULTIDIMENSIONALOBJECT			
5	9b05e915-48ee-4300-82b5-9921672404c0	Specializati	hasSubclass		ControlDueDate-YYYY-MM-DD	hasSuperclass	RDS1003574800	P4MULTIDIMENSIONALOBJECT			
6	14c49d3d-6ee4-47b8-b63f-b2a19a9c910c	Specializati	hasSubclass		CarrierCapacityCubicMetres	hasSuperclass	RDS1003574800	P4MULTIDIMENSIONALOBJECT			
7	ee617e13-37bf-4d8a-9e7c-be183c7ad481	Specializati	hasSubclass		Unload	hasSuperclass	RDS1003574800	P4MULTIDIMENSIONALOBJECT			
8	2f3495f6-1a30-4298-9b02-99d0da0c8d51	Specializati	hasSubclass		Basket	hasSuperclass	RDS1013992441	P4INDIRECTPROPERTY			
9	1197f418-f424-44a3-8ec8-adc1f87a8008	Specializati	hasSubclass		GrossTotalWeight	hasSuperclass	RDS1013992441	P4INDIRECTPROPERTY			
10	b442a7c6-f772-4bdf-84fe-a33c220d1239	Specializati	hasSubclass		GeographicalLatitude	hasSuperclass	RDS1013992441	P4INDIRECTPROPERTY			
11	8abace0d-bf4f-4b65-a064-867d15442e8b	Specializati	hasSubclass		GeographicalLongitude	hasSuperclass	RDS1013992441	P4INDIRECTPROPERTY			
12	21917068-0cc5-4cab-9151-115f66bd568c	Specializati	hasSubclass		CertificateDocument	hasSuperclass	RDS1138994	DOCUMENT			
13	8729500e-ed06-40a5-a0b0-487c86578d34	Specializati	hasSubclass		ContainerDocument	hasSuperclass	RDS1138994	DOCUMENT			
14	3800303e-d4ce-48ab-9149-368d5b37152c	Specializati	hasSubclass		CertificateNumber	hasSuperclass	RDS11707163	IDENTIFICATIONNUMBER			
15	7ebdc11e-f486-492b-b1aa-656ea3ede5ef	Specializati	hasSubclass		CCUIdentifier	hasSuperclass	RDS11707163	IDENTIFIER-1			
16	7aa0afd5-5874-4355-b044-97975be203e	Specializati	hasSubclass		RFIDTagIdentifier	hasSuperclass	RDS11707163	IDENTIFIER-1			
17	cc2dd247-bfd5-4d16-b567-7469b19255c2	Specializati	hasSubclass		NORSOKZ-015ContainerTechnicalComplianceClass	hasSuperclass	RDS1264387611	NORSOKZ-015CLASS			
18	d827ebb3-b7b6-4938-9149-11dc835e0d6f	Specializati	hasSubclass		NORSOKZ-015TemporaryEquipmentClass	hasSuperclass	RDS1264387611	NORSOKZ-015CLASS			
19	46ebe95-37fb-4a15-a784-69510f66f882	Specializati	hasSubclass		WasteCompactor	hasSuperclass	RDS13610975	MACHINE			
20	82ccabd6-d6fe-4aa2-9559-049c06493dd1	Specializati	hasSubclass		RentingCompanyNameReference	hasSuperclass	RDS1376042241	IDENTIFIERREFERENCE			
21	0f8e77c6-b350-4416-b740-8210635d38f2	Specializati	hasSubclass		LocationNameReference	hasSuperclass	RDS1376042241	IDENTIFIERREFERENCE			
22	e06e8cb3-2d98-4a54-b1a3-59b4f93e9f30	Specializati	hasSubclass		OrganizationNumber	hasSuperclass	RDS1386503171	ORGANIZATIONCODESTRINGCLASS			
23	f3479e7a-1111-4c6c-8bcd-9d8233b66550	Specializati	hasSubclass		NORSOKZ-015TemporaryEquipmentClassCodeStringClass	hasSuperclass	RDS1386510831	CODESTRINGCLASS			
24	0b3b2e4f-4013-419c-ad0c-3cbdce8b9cc4	Specializati	hasSubclass		Basket	hasSuperclass	RDS1386627601	DOCUMENTCODEASSIGNMENTCLASS			
25	a2d47c2e-8614-48e2-b04e-8aab41f85aa8	Specializati	hasSubclass		ActualTimeofArrival	hasSuperclass	RDS16432820	DATEANDTIME			
26	3351e522-5e2d-40fc-89d3-b12c18791e30	Specializati	hasSubclass		EstimatedTimeofArrival	hasSuperclass	RDS16432820	DATEANDTIME			
27	df565bfc-b555-4e89-8243-6a9ff393b682	Specializati	hasSubclass		BatteryStatus	hasSuperclass	RDS16805172	VOLTAGERANGE			
28	c35ec7f4-353c-4858-b9a9-f0257dc83d30	Specializati	hasSubclass		ContainerHiringEnd	hasSuperclass	RDS1720410381	EVENT			
29	13407375-e3ff-4ae4-82e1-37195e4e7358	Specializati	hasSubclass		ContainerHeight	hasSuperclass	RDS1721254101	STRAIGHTLINEARDISTANCE			
30	5992136c-8a9a-4d96-ad2c-ae492534770f	Specializati	hasSubclass		ContainerLenght	hasSuperclass	RDS1721254101	STRAIGHTLINEARDISTANCE			
31	42cf2f26-741c-4815-9d3c-06d9df91b5fc	Specializati	hasSubclass		ContainerWidth	hasSuperclass	RDS1721254101	STRAIGHTLINEARDISTANCE			
32	c42aeaac-8f05-4d4f-99c5-010f8ab5beb1	Specializati	hasSubclass		CarrierCapacity	hasSuperclass	RDS1747922171	VOLUMERANGE			
33	95da455a-5d20-4d5b-a2c4-0117af5094a4	Specializati	hasSubclass		MobileEquipmentClass	hasSuperclass	RDS201644	ARTEFACTCLASS			
34	84de0351-a807-451e-9a23-ab23c79c235e	Specializati	hasSubclass		TransportableContainer	hasSuperclass	RDS2181197941	CARRIER			
35	03f6d1dc-dd3b-4473-ba89-ab28dc37fa3d	Specializati	hasSubclass		ContainerOwnerNameReference	hasSuperclass	RDS2181927731	OWNERNAMEREERENCE			
36	cf730dba-05da-4c86-94a1-a50bddeee63c	Specializati	hasSubclass		MaximumGrossWeight	hasSuperclass	RDS2215916651	GROSSTOTALWEIGHT			
37	d587192d-663a-42f1-829a-cf3ad69d051	Specializati	hasSubclass		MobileCraneNORSOKZ-015	hasSuperclass	RDS221644028114	MOBILECRANE			
38	bf6c4ef0-368c-46a8-92e6-df6b98f83593	Specializati	hasSubclass		IndustryStandard	hasSuperclass	RDS329759	STANDARD			

## 2 Work Process for Inserting Relationships in the PCA Reference Data System



Main process



Showing resource with URI: <http://posccaesar.org/dev/LogisticsHubCCU>

LogisticsHubCCU

#### Equivalent RDS-WIP class ID

No RDS-WIP class equivalent

#### Types

[ClassOfInanimatePhysicalObject](#)

#### Property

[hasCreator](#)

[hasDefinition](#)

[hasCreationDate](#)

[hasStatus](#)

[defaultRdsId](#)

[hasIdPCA](#)

#### Value

LH

An 'offshore CCU' that is a class of all CCUs that are handled in the EPIM Logistics Hub solution.

14.03.2013

Submitted

[R-494b9518-ce4c-460b-bd5c-346967f70c64](#)

[R-494b9518-ce4c-460b-bd5c-346967f70c64](#)

#### Superclasses

[OffshoreContainer](#)

[OffshoreCCU](#)

#### Subclasses

[LogisticsHubBasket](#)

[LogisticsHubTank](#)

[LogisticsHubWasteHandlingUnit](#)

[LogisticsHubContainer](#)

This page shows information obtained from the SPARQL endpoint at <http://posccaesar.org/development>.

[As N3](#) | [As RDF/XML](#)





Showing resource with URI: <http://posccaesar.org/dev/LogisticsHubTank>

LogisticsHubTank

**Equivalent RDS-WIP class ID**

No RDS-WIP class equivalent

**Types**

[ClassOfInanimatePhysicalObject](#)

**Property**

**Value**

<a href="#">hasStatus</a>	Submitted
<a href="#">hasIdPCA</a>	R-d80aec76-b12d-4199-a262-c4cf55767ba0
<a href="#">hasCreator</a>	LH
<a href="#">defaultRdsId</a>	R-d80aec76-b12d-4199-a262-c4cf55767ba0
<a href="#">hasCreationDate</a>	14.03.2013
<a href="#">hasDefinition</a>	A 'logistic hub ccu' and a 'tank'.

**Superclasses**

[LogisticsHubCCU](#)  
[RDS445139](#)

**Subclasses**

[OffshoreChemicalTank](#)  
[OffshoreLinedTank](#)  
[OffshoreCryogenicTank](#)  
[OffshoreHeatedTank](#)

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[As N3](#) | [As RDF/XML](#)

R-73b5ef7c-ee8a-4383-bbb8-dbb123fa12ac

Showing resource with URI: <http://posccaesar.org/dev/R-73b5ef7c-ee8a-4383-bbb8-dbb123fa12ac>

**Equivalent RDS-WIP class ID**

No RDS-WIP class equivalent

**Types**

Specialization

**Property**

**Value**

hasSuperclass

LogisticsHubCCU

defaultRdsId

R-73b5ef7c-ee8a-4383-bbb8-dbb123fa12ac

hasSubclass

LogisticsHubTank

hasIdPCA

R-73b5ef7c-ee8a-4383-bbb8-dbb123fa12ac

This page shows information obtained from the SPARQL endpoint at <http://posccaesar.org/development>.

[As N3](#) | [As RDF/XML](#)

Showing resource with URI: <http://posccaesar.org/rdl/RDS445139>

TANK

**Equivalent RDS-WIP class ID**

[R54012230321](#)

**Types**

[ClassOfInanimatePhysicalObject](#)

**Property**

[hasDesignation](#)

[hasStatus](#)

[hasDefinition](#)

[hasCreationDate](#)

[hasCreator](#)

[hasIdPCA](#)

**Value**

TANK

Qualified

A vessel intended to contain fluid for storage. Typically a receiving or collecting function for further distribution, conical bottom.

2004.06.17

u82237

RDS445139

**Superclasses**

[FLUID STORAGE DEVICE](#)

[VESSEL](#)

**Subclasses**

[ATMOSPHERIC TANK](#)

[MULTI COMPARTMENT TANK](#)

[MIXING TANK](#)

[BOUYANCY TANK](#)

[OXIDATION TANK](#)

[TOTE TANK](#)

[LIFTER ROOF TANK](#)

[FIXED ROOF TANK](#)

[SEPTIC TANK](#)

[CYLINDRICAL TANK](#)

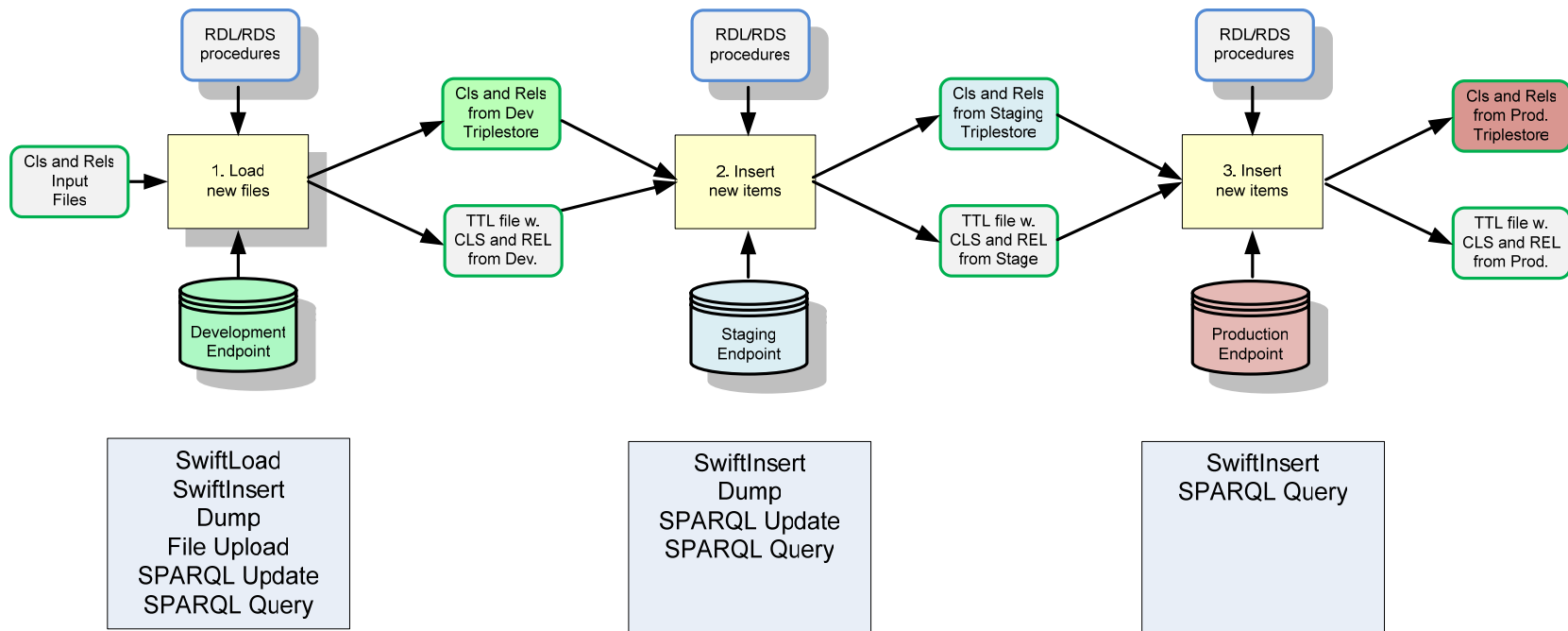
[CONICAL ROOF TANK](#)

[EXPANSION TANK](#)

[FULL CONTAINMENT TANK](#)

[FLOATING ROOF TANK](#)

## Work Processes for PCA Reference Data System





## Update usage

SPARQL Update is an update language for RDF graphs and uses a syntax derived from the SPARQL Query Language. Update operations are performed on a collection of graphs in a Graph Store. Operations are pro

Write your graph update operation in the text field, and press Submit update for execution of the operation. The update service is restricted, and you will need a username and password to execute an update operatio

SPARQL Update List Query: Insert a new class

id	<input type="text" value="TestClass"/>
Entity type	<input type="text"/>
String contained in label	<input type="text"/>
Creation date	<input type="text"/>
Creator	<input type="text"/>
Definition	<input type="text"/>
Designation	<input type="text"/>
PCAid	<input type="text"/>
Note	<input type="text"/>
Status	<input type="text"/>

Submit update

```
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX fn: <http://www.w3.org/2005/xpath-functions#>
PREFIX afn: <http://jena.hpl.hp.com/ARQ/function#>
PREFIX p2: <http://rds.posccaesar.org/2008/02/OWL/ISO-15926-2_2003#>
PREFIX pca: <http://posccaesar.org/rdl/>
```

```
INSERT DATA { GRAPH <http://posccaesar.org/ontologies/devrdl> {
  pca:TestClass a p2: ;
  rdfs:label "" ;
  pca:hasCreationDate "" ;
  pca:hasCreator "" ;
  pca:hasDefinition "" ;
  pca:hasDesignation "" ;
  pca:hasIdPCA "" ;
  pca:hasNote "" ;
  pca:hasStatus "" . } }
```

Submit update

With acknowledgements to JORD Project Charter Members:

*Sponsors* - EPIM, RosEnergAtom, Black & Veatch, CCC, Hatch and VNIIAES, and

*Supplementary subscribers* - Woodside, Dow, and Bechtel.

# Validation Procedures

## SPARQL Queries to validate new content

- **Check designation and definition**
  - All without P2 entity type
- **Check meta-data**
  - All without definition
  - Count all without definition
- **Check specialization and classification**
  - All without superclass
  - Count all without subclass that have label
  - Count all without superclass that have label
  - Count all without superclass that have label
  - Count all without superclass except certain of specified entity types as listed
  - CoMO without superclass
- **Check other relations**
  - All classes that have different entity type than the superclass

## Usage Patterns

- First tranche – the “Registration” group – identification, naming, classification and specialisation
- Second tranche – the “Composition & Properties” group - explicitly physical properties, materials of construction, whole-part component breakdown relations
- Third tranche – all other ontological relations supported by ISO15926 (maybe outside scope)

## Conclusions, issues and plans for further work

The SIG represents a valuable mechanism for raising issues and finding solutions, but ...

- Many ongoing projects (HEED, IIP, JORD, EDRC, etc.)
- Need for agreement on representation and implementation (patterns, owl)
- Need for continued coordination
- This needs planning and follow-up
- A need to conclude on all of these issues in 2013

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