

**(Vendor Name/Logo Here)**

**RCD XML Proposal  
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Submitted  
by  
(Vendor Name Here)

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## **Opportunity**

There is currently an opportunity to increase HPIDC's current capability and capacity to create RCD files for use in their CUTP system.

## **Work to be Performed**

### 1. Define the complete RCD standard

Currently, HPIDC has a preliminary Reusable Competency Description standard that they have developed. This standard has the basic items that the Instructional designer community will need to enable them to create, track, and reuse these RCD objects. However, it is understood that there are places for improvement and addition within the current standard. (Vendor Name Here) will offer guidance and insight, based on input from HPIDC, to determine the best use of each item in the RCD and add or delete items where necessary. A suggestion would be to have a requirements gathering meeting with HPIDC to determine the full scope of the RCD and then to look at existing standards that can be used as references to build a better RCD XML standard for HPIDC. See Resources for more information.

### 2. Define the interface

(Vendor Name Here) will work with HPIDC to develop the RCD XML creator interface for creating the RCD XML files. An interface will be developed based on the complexity of the standard resulting from the standard definition phase 1 above.

Sample Mockup



RCD Id: 25892e17-80f6-415f-9c65-7395632f0223

[Job Elements](#) [Job Sector](#) [Objectives](#) [Metadata](#) [Comments](#)

Keywords(seperate,multiple,keywords,with,commas)

Description

Version

Status

final	▼
draft	
final	
revised	
unavailable	

### 2.1. Implement multiple templates

RCD Generator should allow the user to generate templates to create RCDs of similar type. (Vendor Name Here) suggests implementing multiple templates to increase productivity. Templates would be saved per user and would not be global to the system.

### 3. Define the functional requirements

(Vendor Name Here) will work with HPIDC to develop the functional requirements for creating this RCD XML creation tool. Functional requirements will be defined using the Model, View, Controller architecture and will be developed based on the complexity of the standard resulting from the standard definition phase 1 above.

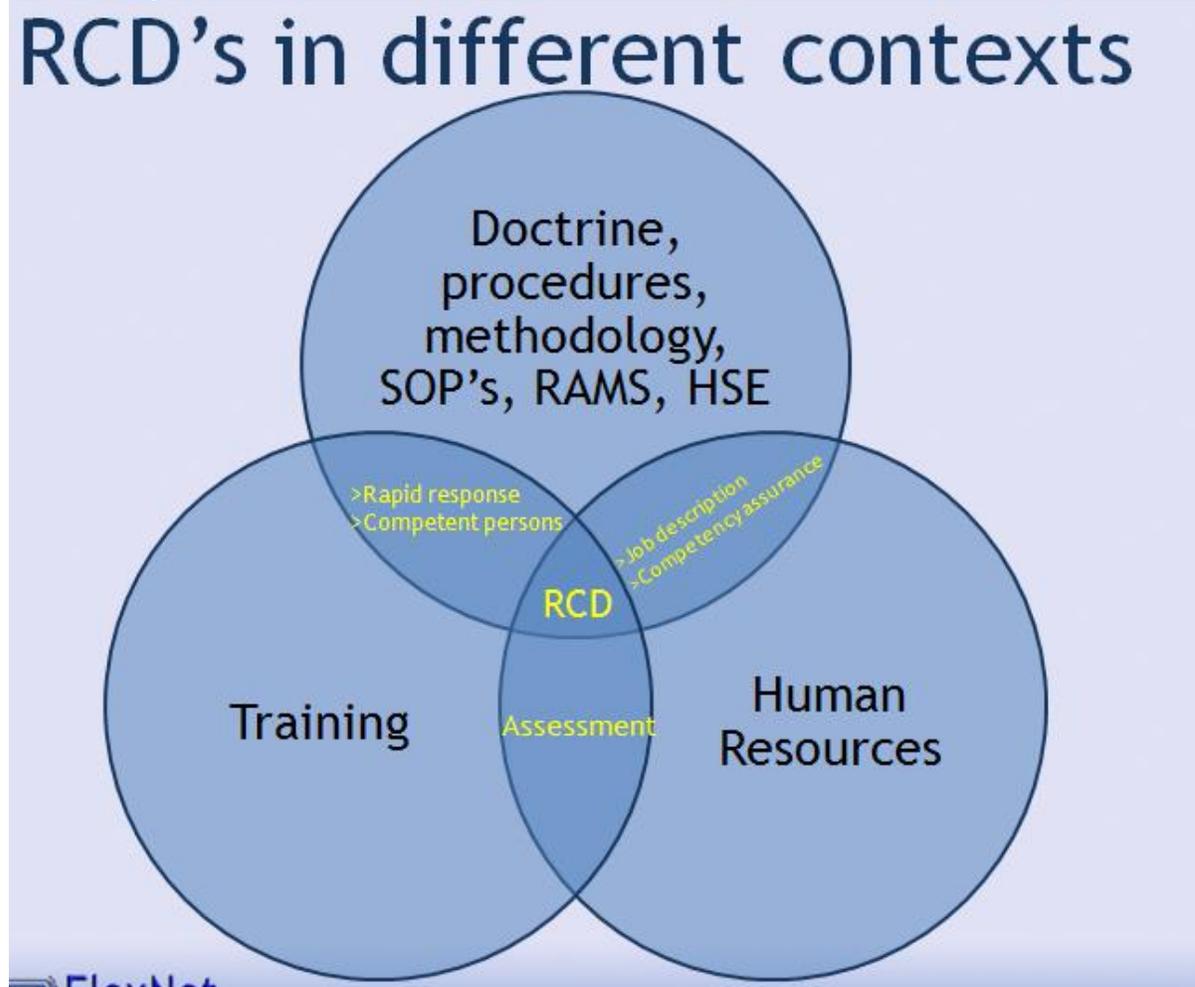
The functional requirements document will include the following items:

This functional requirements document will be a living document and will form the framework for the entire CUTP development. As new phases of development are added to the CUTP, new sections will be added to the functional requirements. See section 4 for more detail.

Owners and List of Contacts .....	<b>Error! Bookmark not defined.</b>
Signoffs .....	<b>Error! Bookmark not defined.</b>
Revision History .....	<b>Error! Bookmark not defined.</b>
Time and materials .....	<b>Error! Bookmark not defined.</b>
Payment terms.....	<b>Error! Bookmark not defined.</b>
1. Summary .....	<b>Error! Bookmark not defined.</b>
2. Project Goals, Justification, and Success Criteria .....	<b>Error! Bookmark not defined.</b>
<b>defined.</b>	
2.1 Project Goals .....	<b>Error! Bookmark not defined.</b>
2.2 Justification .....	<b>Error! Bookmark not defined.</b>
2.3 Success Criteria.....	<b>Error! Bookmark not defined.</b>
3. System Summary.....	<b>Error! Bookmark not defined.</b>
3.1 System Objectives .....	<b>Error! Bookmark not defined.</b>
3.2 Current Functionality .....	<b>Error! Bookmark not defined.</b>
3.2 Known Issues .....	<b>Error! Bookmark not defined.</b>
3.3 Current Folder Structure .....	<b>Error! Bookmark not defined.</b>
4. Methods and Procedures .....	<b>Error! Bookmark not defined.</b>
4.1 Current Methods and Procedures.....	<b>Error! Bookmark not defined.</b>
4.2 Proposed Methods and Procedures .....	<b>Error! Bookmark not defined.</b>
5. Detailed Characteristics .....	<b>Error! Bookmark not defined.</b>
5.1 File Structure .....	<b>Error! Bookmark not defined.</b>
5.2 Root Directory .....	<b>Error! Bookmark not defined.</b>
5.3 Sub Directories .....	<b>Error! Bookmark not defined.</b>
6. Proposed Architecture .....	<b>Error! Bookmark not defined.</b>
7. Design Considerations.....	<b>Error! Bookmark not defined.</b>
7.1 JavaScript Design.....	<b>Error! Bookmark not defined.</b>
7.1 FLASH Design .....	<b>Error! Bookmark not defined.</b>
7.1 Hardware .....	<b>Error! Bookmark not defined.</b>
7.2 Software.....	<b>Error! Bookmark not defined.</b>
8. Platform Dependent and Installation Requirements.....	<b>Error! Bookmark not defined.</b>
<b>defined.</b>	
8.1 Installation Requirements .....	<b>Error! Bookmark not defined.</b>
9. Cross System Interface Requirements .....	<b>Error! Bookmark not defined.</b>
10. Data Archival, Backup and Recovery Requirements .....	<b>Error! Bookmark not defined.</b>
<b>defined.</b>	
11. Reporting Requirements .....	<b>Error! Bookmark not defined.</b>
12. Project Flexibility Matrix .....	<b>Error! Bookmark not defined.</b>
13. References.....	<b>Error! Bookmark not defined.</b>

#### 4. Implementation within the CUTP

In order to be able to reuse the efforts of this project in other parts of the Comprehensive Unified Training Plan (CUTP) consideration must be given to the overall systems approach of the CUTP. Within the context of the CUTP the RCD is context specific and evidence driven. The RCD is the building block for all other training products. The RCD is also the basis for bringing together the different operations with in HPIDC.



An RCD can be used to create a

- Learning objective
- Metadata
- Assessments
- Task definitions
- And to defend litigation

The RCD is then mapped to a Reusable Competency Map (RCM) which is created for a specific task or procedure. Within each RCM there is **classification** taxonomy for defining the relationships between the items in the map. RCDs and RCMs can then be **sequenced** to form the **taxonomy** that describes the

knowledge, skills, and attitudes to accomplish a given task. These tasks can then be trained within courseware.

The Position Competency Profile is the generic definition, assigned by H&P, to describe a specific position. The PCP contains a list of courses that the employee must take and complete satisfactorily. The PCPs are checked against an employees HR records to determine eligibility for a position within H&P.

It is the intention of H&P to have a system in place where a person using the CUTP system can enter an employee's name and new position and the system will let them know what courses they need to have to be able to hold that position. The system would also allow a Superintendent to look for a Rig Manger and get a list of people qualified for this position and what position they are currently at in the organization.

The courses that are listed in the PCP must be completed by employees. This creates evidence that the employee is proficient in the particular area. This evidence resides in the LMS and in the HR system and is tied back to the PCP for validation. This evidence can be furtherer by having a person that is already competent in the task validate the skills of an individual. This evidence is then used in assigning a person to a position and in legal matters where it must be proven that that employee has been trained on the proper procedures for that position.

### **SCOS: how do SCOS fit into this architecture?**

SCOs

SCO = RCD + Instruction on Pure Procedures

A SCO is created using the objective from a single RCD. The SCO then contains the instructional content required to meet the objective defined within the RCD. These SCOs are assembled into courses and these courses meet the requirements for evidence that is needed to validate the PCP.

Pure procedure

A pure procedure is a task that is performed on a piece of machinery that is in complete isolation and is outside of the content of a specific environment. Example: Training on an ST80 that is sitting in a warehouse on the ground, not on a rig. There are no external hazards/factors other than those inherently present in the ST80. A ST80 that is mounted in a Flex Rig 3 and is not a Pure Procedure because it has specific dangers not present when the ST80 is in isolation.

- All SCOS, for the moment, will be in the context of Pure Procedure.
- The CUTP system at the moment will be based on Pure Procedure.

There about 4k jobs under the Pure Procedure training, the bulk is under the 7 classifications. To start, we will define a single taxonomy for the OPERATIONS classification.

Example:

Operations

Floors

Motors

Derricks

Asst. Driller

Driller

Rig Manager

Tourpusher

Toolpusher

Superintendant

Electrician (I,II,III)

Mechanic (I,II,III)

HSE Specialist

HSE Technician

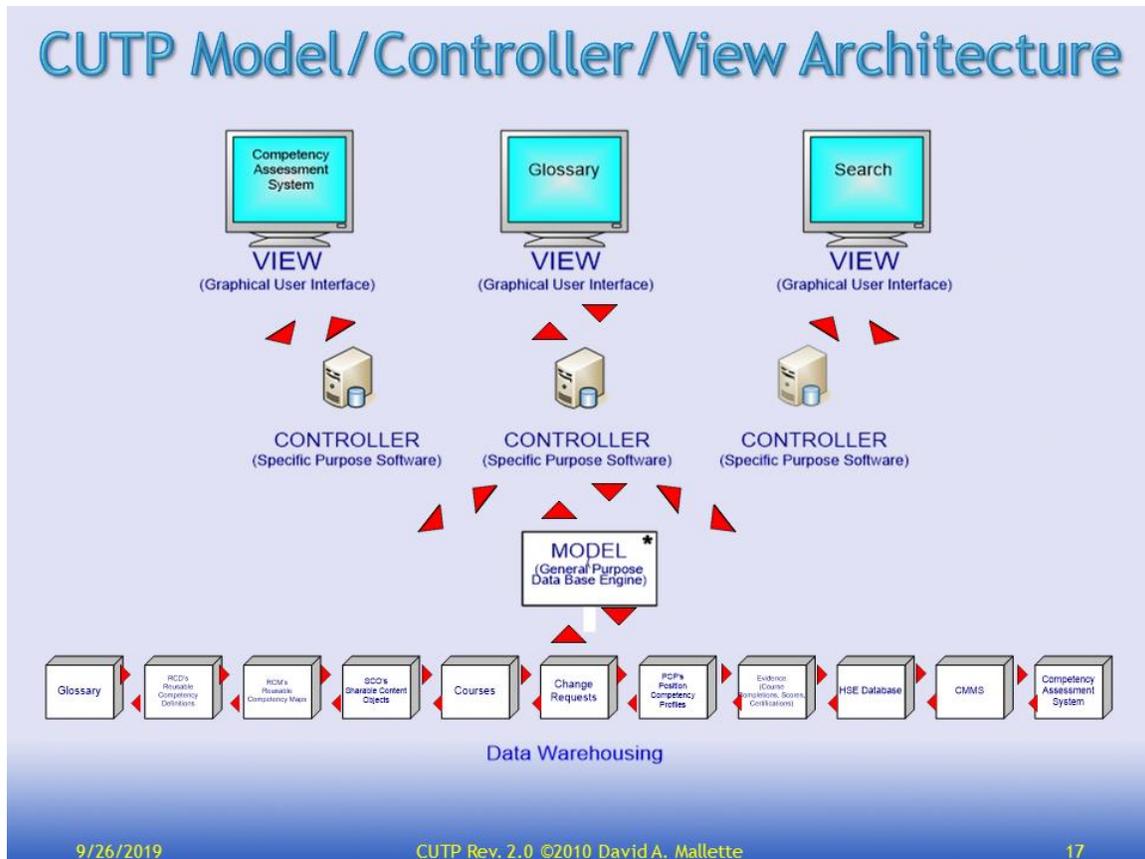
#### 5. RCD engine reuse within the overall CUTP

The entire RCD structure will be reusable in architecting and creating new components within the CUTP. We will also use the same deployment mechanism used in RCD for other applications built to work on and along side of the RCD. The RCD will be reused and extended to build other applications to work within the CUTP. The proposed RCD framework will form a base to build new CUTP applications on top of.

#### **Cost**

**(Enter Bid Here)**

#### **Resources**



### Model

A model represents an application's data and contains the logic for accessing and manipulating that data. Any data that is part of the persistent state of the application should reside in the model objects. The services that a model exposes must be generic enough to support a variety of clients. By glancing at the model's public method list, it should be easy to understand how to control the model's behavior. A model groups related data and operations for providing a specific service; these group of operations wrap and abstract the functionality of the business process being modeled.

A model's interface exposes methods for accessing and updating the state of the model and for executing complex processes encapsulated inside the model. Model services are accessed by the controller for either querying or effecting a change in the model state. The model notifies the view when a state change occurs in the model. I couldn't agree more!

### View

The view is responsible for rendering the state of the model. The presentation semantics are encapsulated within the view. Therefore, model data can be adapted for several different kinds of clients. The view modifies itself when a change in the model is communicated to the view. A view forwards user input to the controller.

### Controller

The controller is responsible for intercepting and translating user input into actions to be performed by the model. The controller is responsible for selecting the next view based on user input and the outcome of model operations.

Element	Definition	Example	Input type	Vocabulary	M u l t i p l i c i t y	Notes
RCD Unique Identifier	<p>To generate a unique identifier. While this is open to discussion, my current thinking on the format is, where "/" equals "or" and "+" ="and": RCD_K+/S_HSE/IT/HR/DR/M/E_0000X.</p> <p>Where RCD=Reusable Definition of Competency and is always the first three characters</p> <p>K=Knowledge, defined as that which can be measured by a paper or electronic test</p> <p>S=Skills, which may require a subjective evaluation by a person considered competent to make a judgment using agreed upon criteria.</p> <p>HSE=Health, Safety, and Environment to identify objectives related to that area</p> <p>IT=Information Technology</p> <p>HR=Human Resources</p> <p>DR=Drilling</p>	RCD_DR_K_00001	Drop down list or Text box			It makes more sense to let the system assign a global unique identifier to the RCD and assign the items within the "Definition" column to separate metadata fields defined below.

	<p>M=General Mechanical</p> <p>E=General Electrical/Electronic</p> <p>0000X=a sequential number generated by looking at the existing files and adding "1." RCD's should be edited but not deleted once created. If a file or files are lost, the sequence should remain accurate and not reuse previously generated names.</p>					
RCD Unique Identifier	<p>Globally Unique Identifier - A 16-byte number generated by Microsoft programs that uniquely identifies a network or user or computer or document. It is one of the elements of information that can be passed when you connect to an Internet site, and it may be stored in cookies.</p>	<p>25892e17-80f6-415f-9c65-7395632f0223</p>	<p>System defined GUID</p>		<p>1</p>	
JobElements	<p>The knowledge, skills and abilities (KSA's) necessary for the successful performance of a position</p>		<p>Drop down selection</p> <p>{knowledge, skills, abilities}</p>	<p>knowledge, skills, abilities</p>	<p>1 - n</p>	
JobElements>knowledge	<p>Defined as text or defined using an identifier that maps to a global HPIDC list of knowledge</p>				<p>1</p>	

	units.					
JobElement s>skills	Defined as text or defined using an identifier that maps to a global HPIDC list of skill units.				1	
JobElement s>abilities	Defined as text or defined using an identifier that maps to a global HPIDC list of ability units.				1	
JobSector					1 - n	
				HSE=Health, Safety, and Environment to identify objectives related to that area  IT=Information Technology  HR=Human Resources  DR=Drilling  M=General Mechanical  E=General Electrical/Electronic		
objectives			Parent Node, no entry here		1 - n	
objective	Plain text entry of instructional objective We may want to further delineate objectives into categories. Can a single objective be used in more than one RCD?	Given a form HP_022, Forklift Pre-Use Inspection form, be able to perform a forklift pre-use inspection without failing to detect any issues existing on			1 - n	

		the forklift covered on the form and in accordance with the JSA for performing inspections on wheeled equipment.				
Metadata			Parent Node, no entry here		1	
Metadata > keywords	Plain text entry of keywords to allow searching for RCD's	pre-use, inspection, forklift, procedures, certification, extended boom, warehouse, rough terrain, motors, articulated, HP_0022	Text box (comma separated)		1 - n	Do you want to have a standard for keywords, length (example must have 3 no more than 5 words)
Metadata > description	Textual description of this RCD		Open text box.		1	
Metadata > version	Numerical version number Major.minor.revision	1.2.8	Text entry box with regular expression validation  {\d.\d.\d}  Default: 1.0		1	
Metadata > status	Status of the RCD		Drop down select	draft, final, revised, unavailable	1 - n	

			tion {draft , final, revis ed, unav ailabl e}			
Metadata > relation	Notes whether this RCD is related to any other RCDs in the database.					
Metadata > relation > kind	How is this RCD related to other RCDs?			Is Part of Resource Named Below Has a Part of Resource Named Below Is a Version of Resource Named Below Has a Version of Resource Named Below Is a Format of Resource Named Below Has a Format of Resource Named Below References Resource Named Below Is Referenced By Resource Named Below  Is Based on Resource Named Below Is a Basis for Resource Named Below Requires Resource Named Below Is Required by Resource Named Below		
Metadata > relation > description	Textual description of this relationship					
Comments	Plain text entry of general comments concerning context, dimensions, etc.	"This RCD covers pre-use inspection all types of forklifts using HP_0022 per HSE Standards and Guidelines 6.a.122. "	Drop down list			Suggest using the SCORM annotations node
Annotation					0 - n	
Annotation > author	who entered the annotation				0 - n	
Annotation > date	date the annotation was entered			Auto populated	0 -	

					n	
Annotation > comment	Plain text entry of general comments concerning context, dimensions, etc.				0 - n	

**Additional Elements**

Definition					
Context					
Evidence					

This list is not all inclusive and is subject to modification.