

OIIE User Stories Brief Overview

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OIIE Standardized Use Case Architecture

Standardized Methodology to Define and Re-use OIIE Components

User Stories

- High-level
- Pictographic
- Depict 1 or moreUse Cases, Scenarios,and/or Events
- Actors, Systems, Exchanges, Data

Use Cases

- Background
- Scope
- Preconditions
- Successful End Condition

- Actors
- Triggers
- ProcessWorkflows
- Scenarios



- (System) Actors
- Data Content
- Data Formats
- Reference Data
- ISBM Configuration
- (OIIE) Events







- Individual Message Exchange
- •Specific Data Content
- •Required Data Processing
- •Expected Response Event
- •Reference implementation





OIIE Use Case Development Process

Identify challenges and opportunities

Brainstorm or known industry issue

Performed by technical team in parallel

IT and domain experts

 Begin detailing technical requirements

Standards, data, messages, protocols, mappings

Identify the OIIE
Scenarios and
Events to fulfil the
workflow



- What are the business functions to be executed?
- Who, what, when, where, why?
- Elicit through <u>User Stories</u>

 Capture user story summary in formal Main Success Scenario (BPMN)

- Write up textual narrative
- Identify major alternative flows

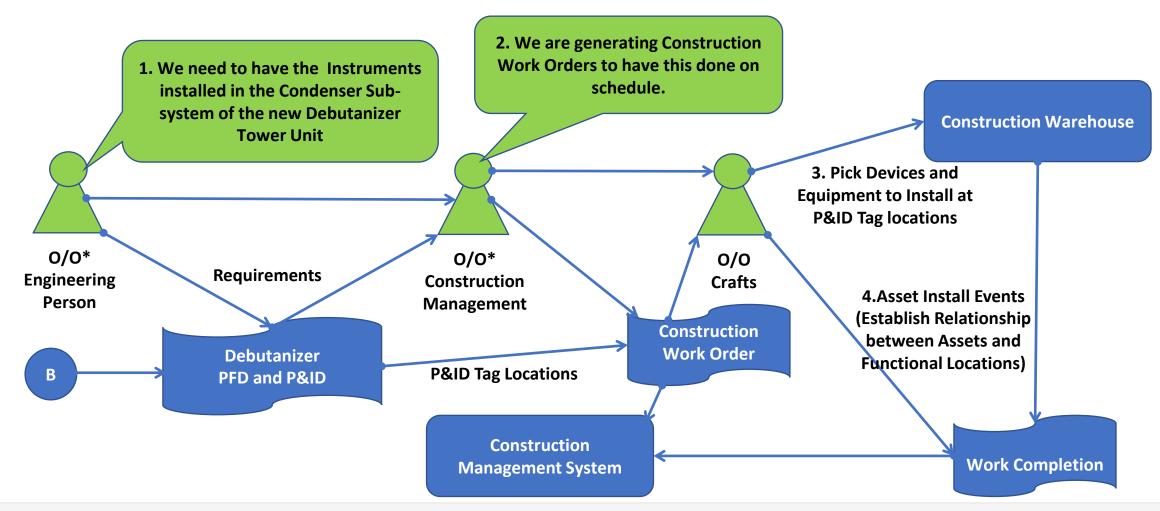


Identify Use Case scope and success criteria based on User Stories

- Draft Background context.
- Scope, success criteria, triggers, and preconditions of the Use Case
- Allocate business functions, interactions to Use Cases within bounded scope



User Story Example: Capital Project Equipment/Device Installation





We want to capture:



Who are the actors or beneficiaries?



We want to capture:



What are the tasks or goals?



We want to capture:



When do the tasks/goals (need to) occur?



We want to capture:



Where do the tasks/goals (need to) take place?



We want to capture:





User Story Statements

Help guide the identification of activities and requirements:

As an <actor>, I want/need <activity / task / goal> so that <reason / benefit> [when <event / triggering condition>].



User Story Statements

Help guide the identification of activities and requirements:

As an <actor>, I want/need <activity / task / goal> so that <reason / benefit> [when <event / triggering condition>].

- The "when" clause is optional
- The "activity" may include the "where" it (needs to) occur



User Story Statement Examples

As an O/O Construction Manager,
 I need to generate Construction Work Orders to a schedule so that equipment installation can be performed on time when provided with necessary sub-system requirements.

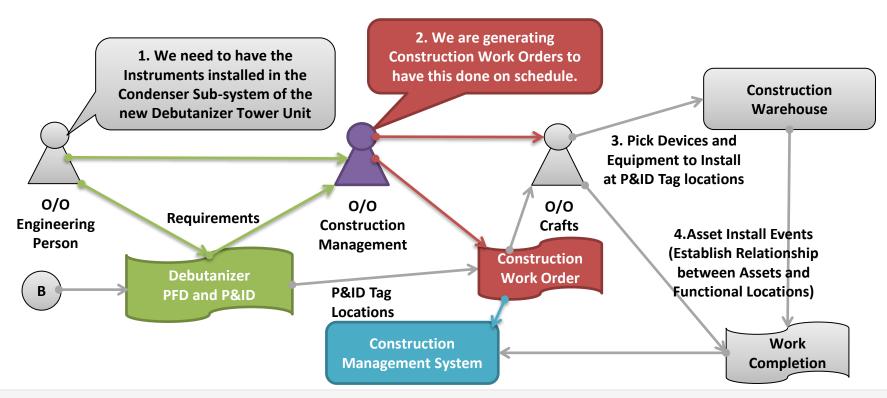


User Story Statement Examples

- As an O/O Construction Manager,
 I need to generate Construction Work Orders to a schedule so that equipment installation can be performed on time when provided with necessary sub-system requirements.
- As a Construction Management System, I need to monitor & manage the progress of Construction Work Orders so that the status of equipment installations can be updated in the digital twin
 - when provided with work completion updates by the installer.

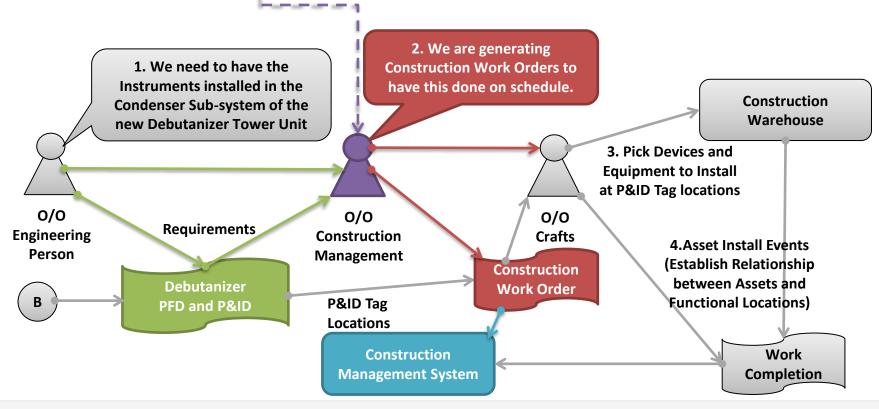


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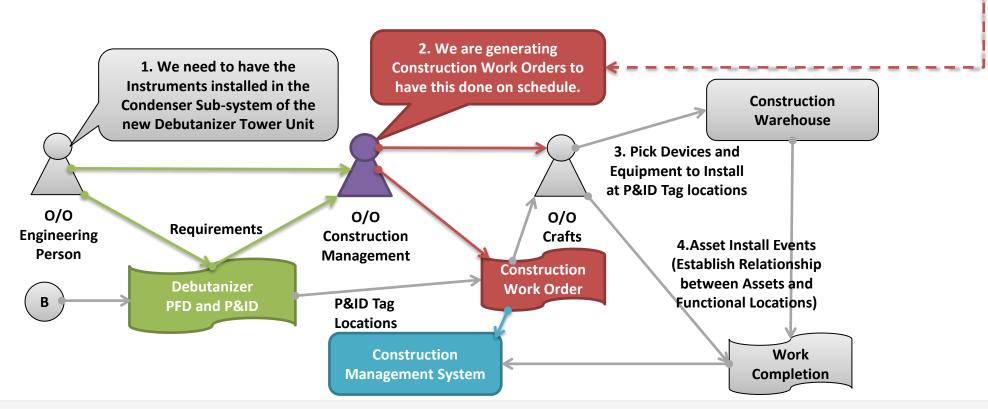


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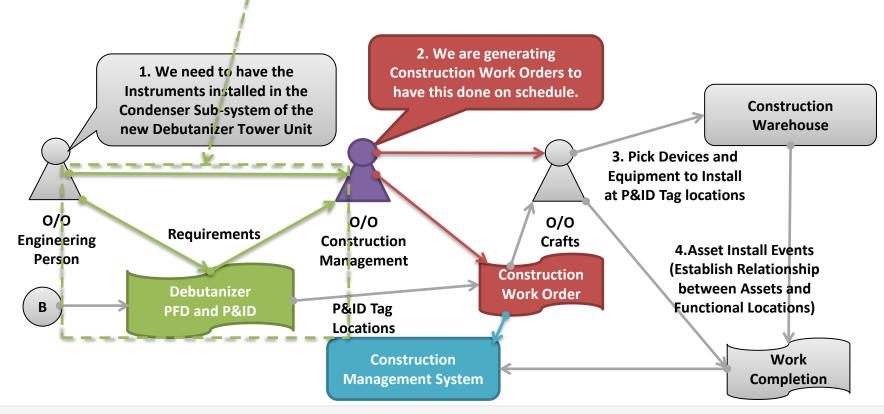


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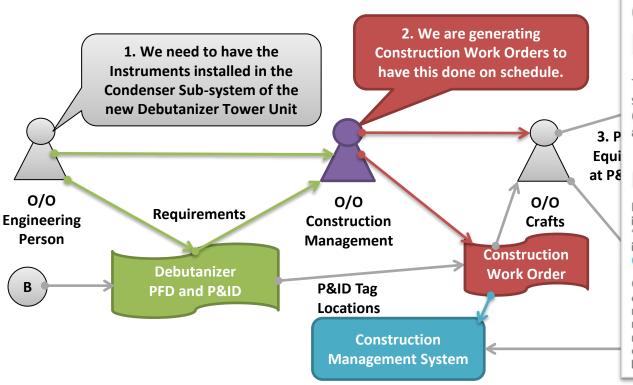


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OllE Use Case 15 – Capital Project Asset Installation

This Use Case describes the process for updating Construction systems with installations of serialized assets: on both an individual and group/package basis. The updates originate from a Capital Work Management System (CWMS) that has successfully completed a work order for asset installation/commissioning.

at P8 Background

During the construction of a plant or complex facility, it is important to keep accurate track of the uniquely identified physical assets installed in each functional location as the plant/facility is constructed. Maintaining this 'As-Built' information on an event-driven basis is essential in maintaining accurate asset configuration information in the Digital Twin. This information can then be provided to O&M systems during information handover (Use Case 1) or may be propagated to O&M systems on an event-driven basis.

One factor that differentiates asset installation during construction versus installations that occur during the operation of a plant, is the large number of assets that may be installed at the same time. These batch installs may occur for the installation of many identical assets or groups/packages of assets. Moreover, the installations may be performed by the EPC, O/O, contracted out, or a combination. Therefore, there is a need to adequately manage these packages of work in a consistent and reusable fashion as well as the resulting configuration changes. Improved management and exchange of work-flow and 'As-Built' information during construction will lead to improvements in quality, reliability, etc. throughout the life of the plant.



User Story - Requirements Elicitation



Sequence Statements



Group Statements



Identify
Use
Cases

- Actors / Roles (people and systems)
- Activities / Goals (for each actor)
- Reasons (for each Actor-Activity)
- Triggering Events (for each Actor-Activity)

Determine the order that the activities are performed

Find logical groupings of activities that make up a User Story or User Story Frame

Determine scope of one or more Use Cases



Questions?



Open Standards for Physical Asset Management