

# MIMOSA Open Meeting Spring 2021

*Overview of CII/Mimosa Interoperability AWP JWG*

John Banda

CII AWP Representative

Autodesk, Technical Solutions Executive

# Purpose

This presentation is meant to provide an overview of Advanced Work Packaging (AWP) for the purpose of interoperability using the Open Industrial Interoperability Ecosystem (OIIE).

The focus will be on high level diagrams that show the intersection of OIIE Architecture and Use Cases with CII AWP research to show how using OIIE will enable faster and cheaper, supplier-neutral AWP implementation.

# CII References

Research Team 272, Advanced Work Packaging:  
Design through Workface Execution

Special Report 19-01, AWP Data Requirements  
Implementation Guideline

AWP Concierge - SP365-1

# OIIE Core Elements

**Supplier-Neutral Digital Services API** – OpenO&M ISBM

**OIIE Standard Registers** - SDAIR

**OIIE Standard Directories** – CIR, Services

**OIIE Standard Data Models** – MESA/B2MML, MIMOSA CCOM, Proteus

**Standard Reference Data**

- RDLs (CFIHOS, ISO 15926)
- Open Technical Dictionaries (ISO 22745)
- Ontologies- Upper, Domain and Event Levels: (ISO 15926-14, IOF)
- CDD

**OIIE Standard Industrial Digital Services**

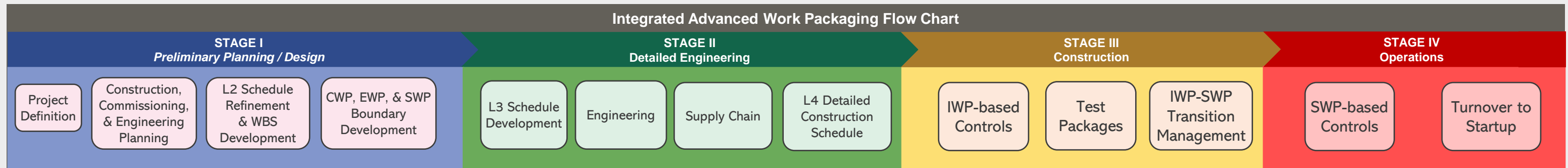
- Tied to OIIE Use Cases, Scenarios and Events

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- 1) Advanced Work Packaging Overview
- 2) OIIE AWP Use Case Example
- 3) OIIE Use Case Possibilities
- 4) OIIE AWP Development Process Update
- 5) Next Steps

# Advanced Work Packaging Overview

Defining the work process



**Advanced Work Packaging (AWP)** is the overall process flow of all the detailed work packages (CWPs, EWPs, and IWPs).

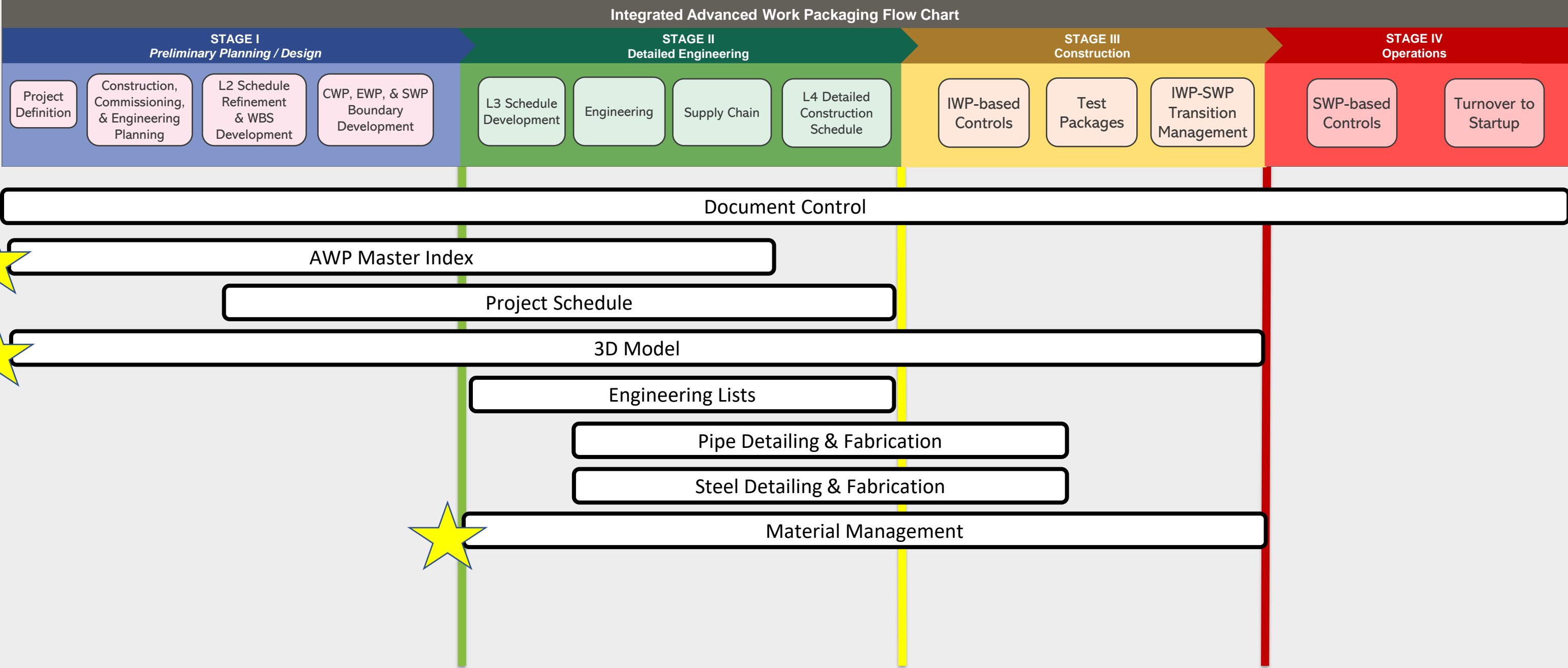
It is a planned, executable process that encompasses the work on an engineering, procurement, and construction (EPC) project, beginning with initial planning and continuing through detailed design and construction execution.

Advanced Work Packaging provides the framework for productive progressive construction and presumes the existence of a construction execution plan.

# Prerequisites to Advanced Work Packaging

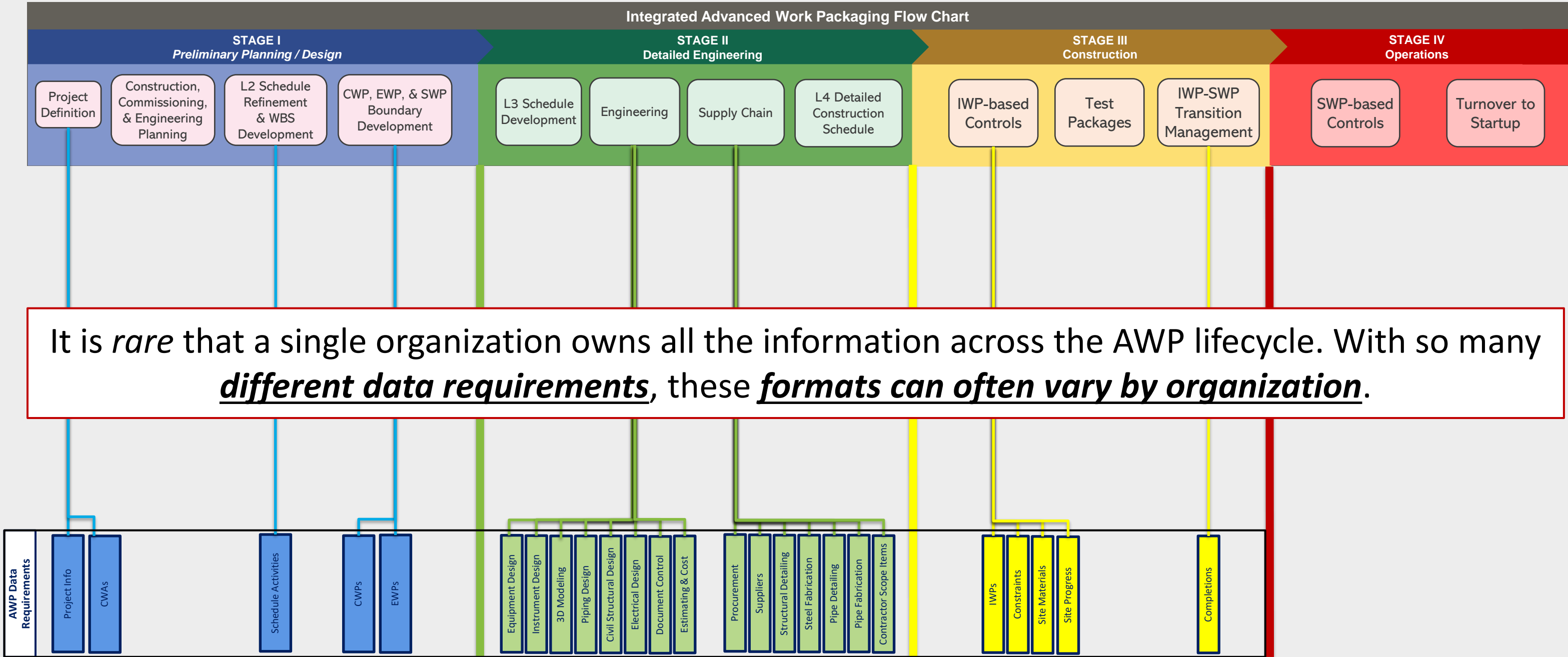
1. Advanced Work Packaging requires strategic early planning and a more focused project structure. Specifically, **advanced work packaging requires an effective flow of information.** An effective flow of information, in turn, depends upon having a disciplined set of procedures.
2. For most firms, **AWP means a combination of commercial software and proprietary systems.** Commercial workface planning software that can directly support IWP management is now available from vendors. **This software can tie to a variety of other CAD software applications using common data standards.**
3. In all cases, **attention must be paid to data specification and handoffs between applications;** such careful data integration will ensure that all individuals and software are working to a common definition and purpose.

# AWP Digital Thread Overview



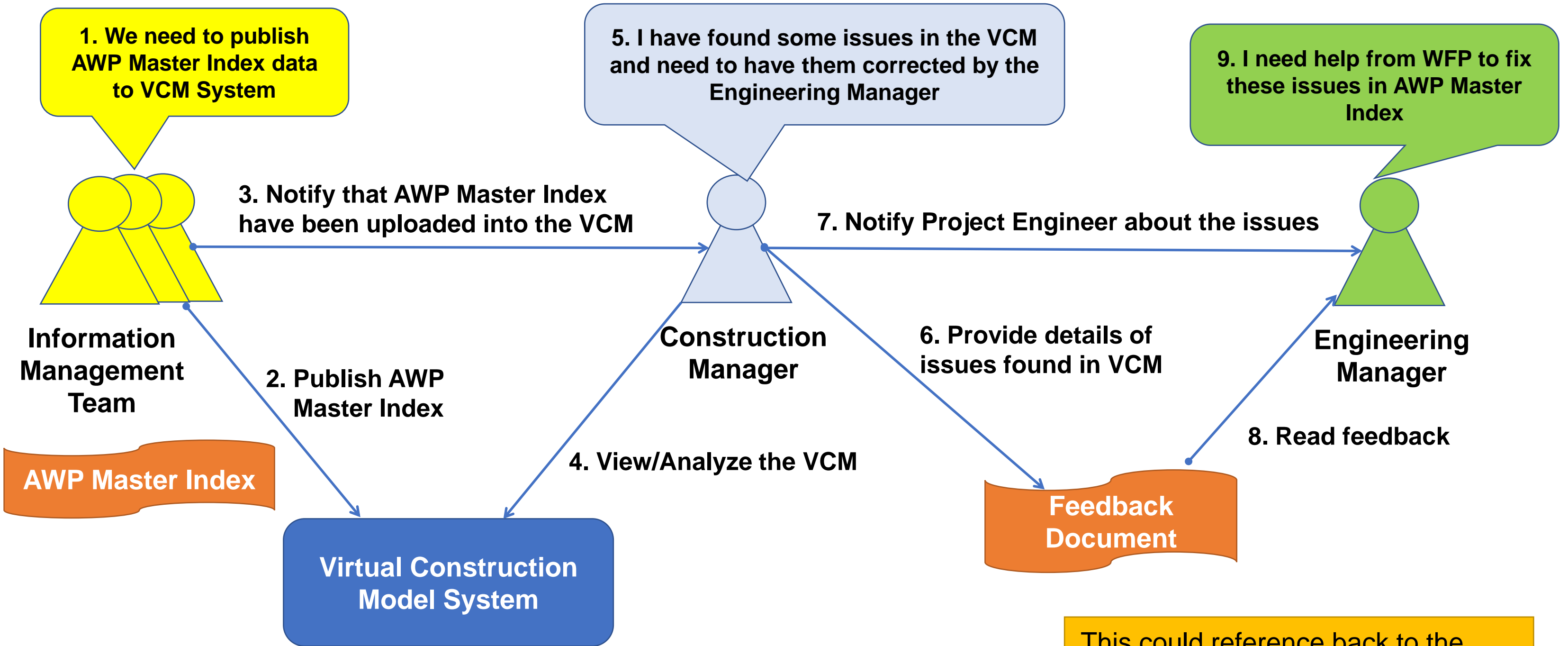


# AWP Data Requirements



It is *rare* that a single organization owns all the information across the AWP lifecycle. With so many **different data requirements**, these **formats can often vary by organization**.

# Story MXXX: Publish AWP Master Index into Virtual Construction Model



This could reference back to the previous or a new user story, depending on whether the previous becomes specific to IM Team errors.

# Proposed Use Cases based on proposed User Stories

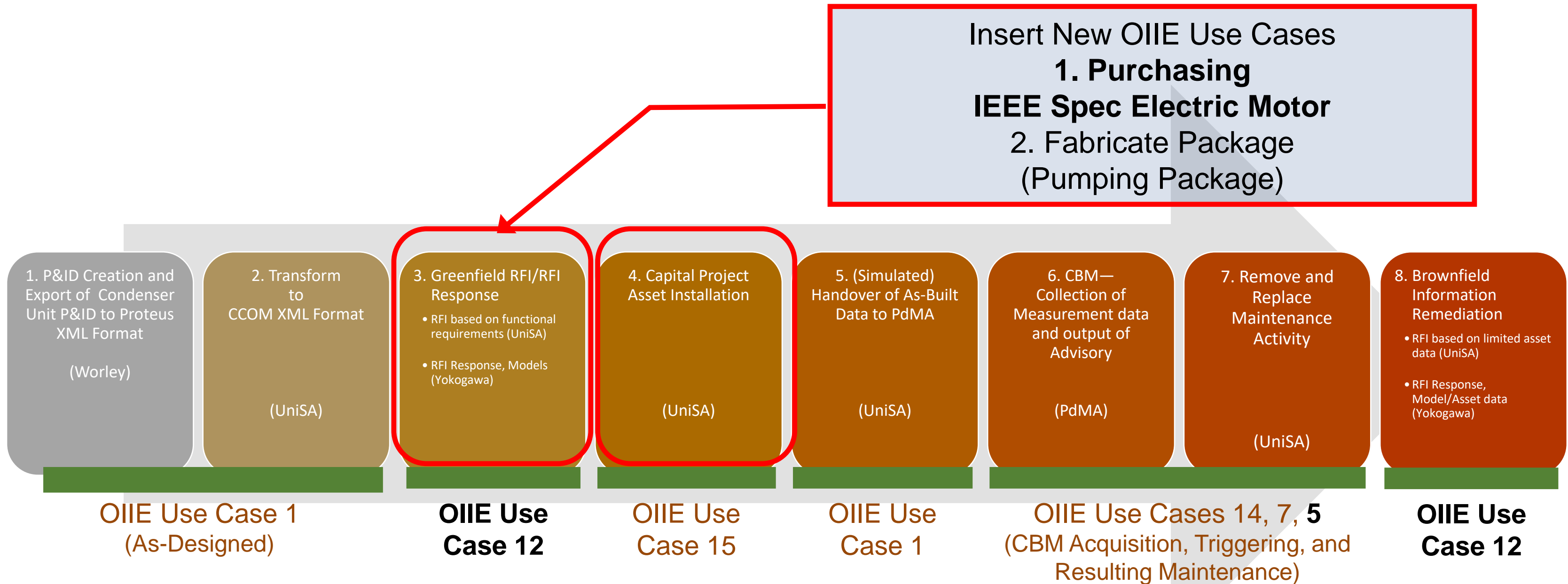
**Use Cases for the initial AWP Master Index activities may be:**

- **Use Case AWP1 – AWP Master Index Creation and Validation**
- **Use Case AWP2 – AWP Master Index Updates**
- **Use Case AWP3 – Publish AWP Master Index to Virtual Construction Model**

**Other Use Cases will intersect multiple Digital Threads, for example:**

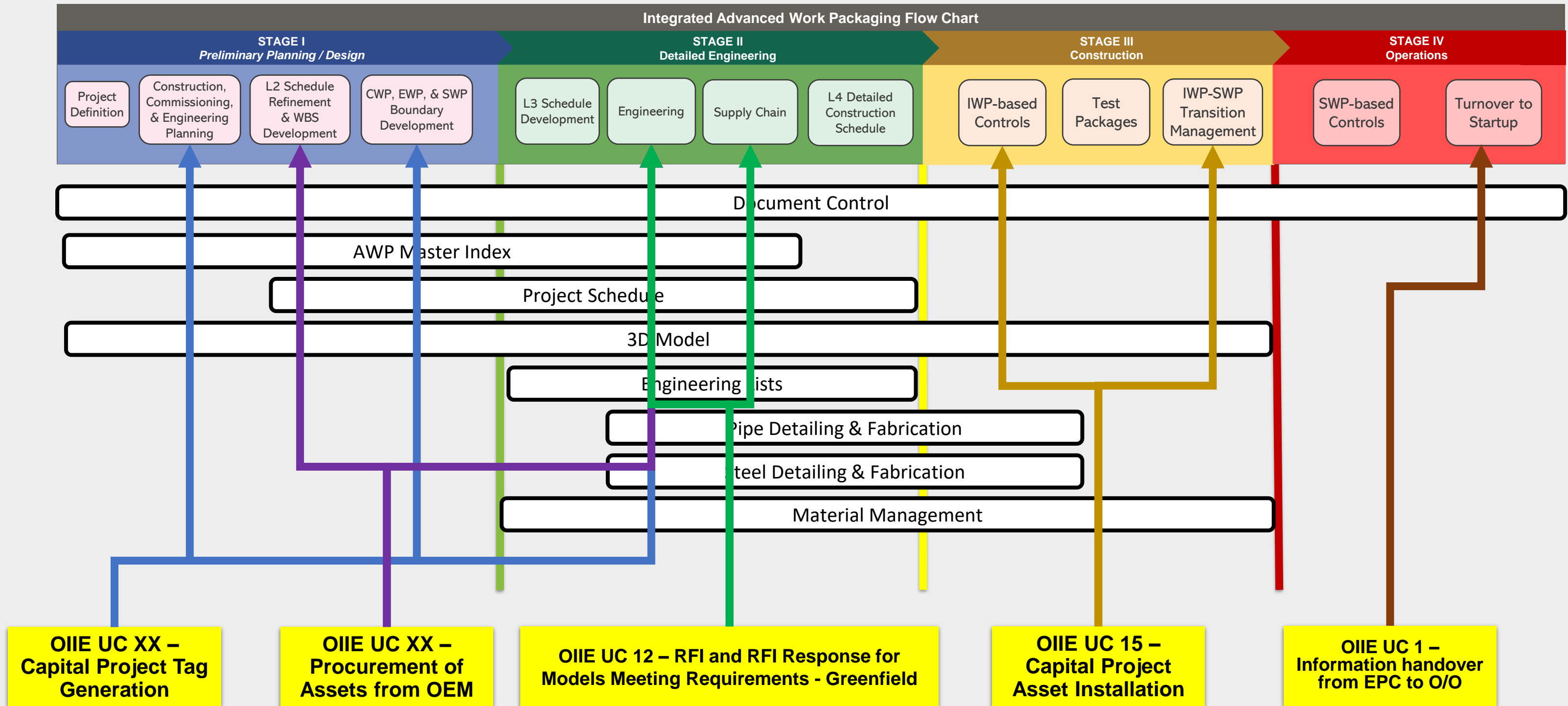
- **Creation/Update of Construction Work Packages (CWP)**
- **Creation/Update of Engineering Work Packages (EWP)**
- **Creation/Update of Installation Work Packages (IWP)**
- **Creation/Update of System Work Packages (SWP)**

# OIIE OGI Pilot Phase 3.3 and Beyond

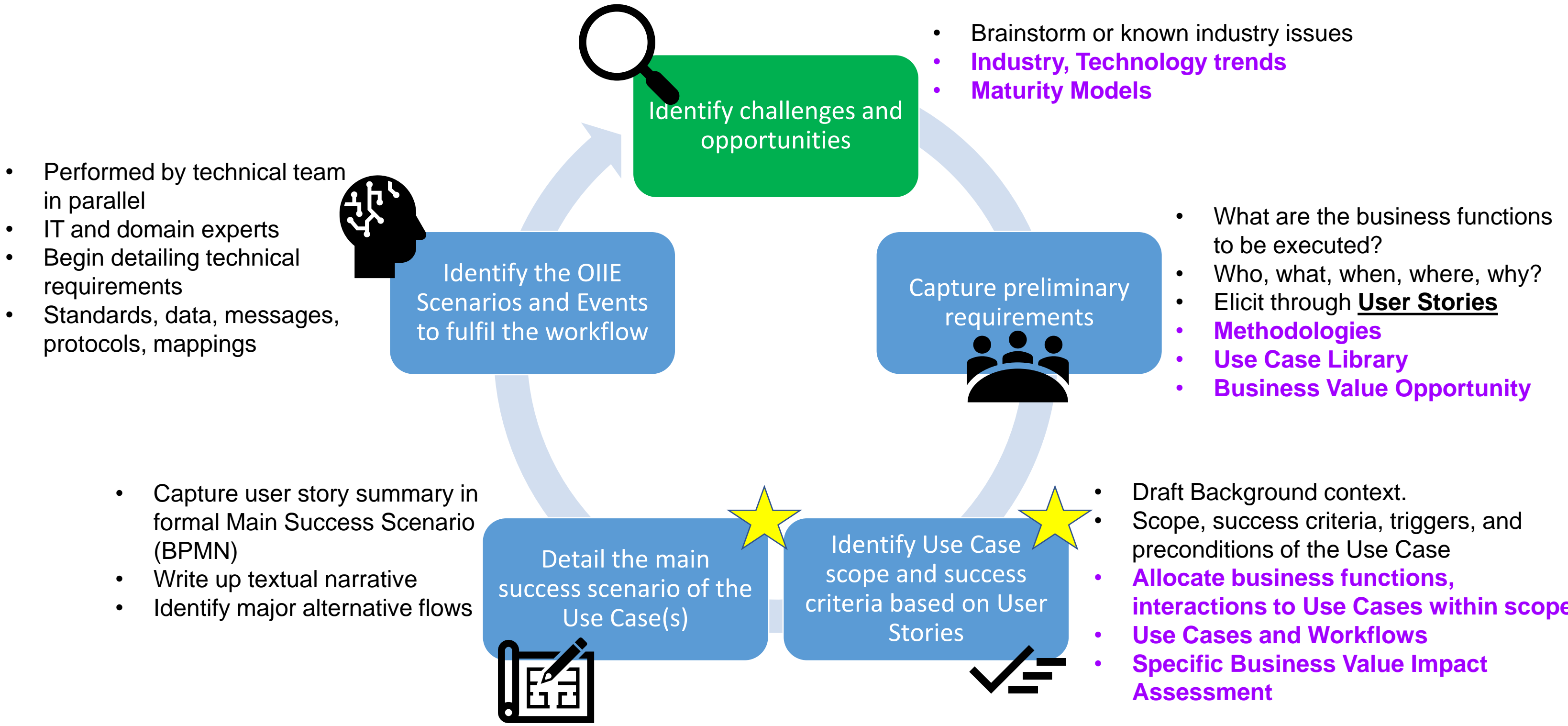


15 OIIE Use Cases have been identified spanning the Asset Lifecycle. Details are developed and validated in the OIIE OGI Pilot. We intend to submit the set above (likely including others) in forthcoming TRs, to be included in ISO 18101-3.

# AWP Digital Thread Use Case Possibilities



# THE OIIE USE CASE DEVELOPMENT PROCESS



# Next Sessions

- 1) Next Meeting **March 25<sup>th</sup>, 2021**
- 2) AWP Concept Environment Map
- 3) Digital Thread Definition
- 4) Virtual Construction Model Interfaces