

Deliverable Three: Choosing a Pilot Project for AWP

October 2021
Revision 0



O3 is a modern web-based platform that leverages Advanced Work Packaging and Agile best practices to disrupt the status quo for companies in industrial construction who want to improve productivity, safety, quality, and predictability.

O3 SOLUTIONS



Table of Contents

1	Overview.....	3
2	Key Concepts	3
3	Pilot Project Selection By Mandate	4
4	Pilot Project Selection By Choice	5
5	Type of AWP Implementation.....	6
6	Selection Criteria – After the Pilot	7
	Appendix.....	7



1 OVERVIEW

Our first two deliverables provided knowledge about AWP and management approval to implement it.

In this third deliverable, we will look at what you need to consider when selecting a pilot project for AWP implementation.

2 KEY CONCEPTS

There are two key elements to this deliverable:

- Pilot Project selection by mandate – When you have no choice about which project to use as your pilot.
- Pilot Project selection by choice – When you get to decide which project to implement AWP on, from a range of possible options.

The intent of this exercise is to understand some of the considerations when choosing the AWP pilot project.

We will also look at some of the on-going considerations for project selection, after the pilot.



3 PILOT PROJECT SELECTION BY MANDATE

(Note: If you represent the Owner organization, and you don't have a directive from your management team about which project to implement AWP on, proceed to the next section).

This is certainly the less-preferred method for selection of the pilot project. In this instance, you have no choice. Many contractors find themselves in this position when working with an Owner who is mandating AWP on a project. If you want to win the work, you will get on board.

This is a tough path, because you are learning on an active project, and will likely be assessed by the Owner for adherence to their standards.

The first thing to do in this case will be to make sure that you have a detailed understanding of what the Owner's expectations are. These should be clearly identified in the bid documents for the project, though it should be noted that some Owners will simply say "Project will use AWP", without any detail as to the plans and expectations.

Create your AWP plan to meet the agreed expectations, but also look to understand where there is room for maneuver, especially if that allows you to retain ownership of parts of the process. (e.g. Does the Owner mandate that IWPs are between 500 & 1000 hours in every case, or is a guideline? Or are they silent about that requirement?)

You could also find that, even without an Owner mandate, your Company's management team decides which project AWP should be used on, based on internal concerns over risk or the achievability of project goals.

In this case, make sure you understand the requirements and expectations from the management team, as we discussed in the previous deliverable. Make sure that management understands that this is the first implementation, and will be used as the basis for lessons learned going forward. This understanding should also be used to temper the expectations about the benefits of AWP implementation. You aren't going to save 10% TIC on your first go, so make sure they know that, and set realistic goals.



4 PILOT PROJECT SELECTION BY CHOICE

This is certainly the preferred route. In this instance, you can make your own decision about the most suitable project for implementation of AWP. You can learn your lessons and refine your plan on projects that don't have a mandate, either from an Owner or from your management, so that by the time you are bidding on a project where AWP is required, you are well positioned to show your expertise.

For selecting a pilot project, consider these key elements:

- Timing is critical. Avoid trying to implement AWP halfway through a project. If you are considering a project that is just about to start construction, you have already lost a lot of the value that AWP can bring. So look for a project that is in the early engineering stages. (If you are the construction contractor and aren't brought onto the project until the construction phase, this will sadly be a moot point).
- It is great to look for a project in the Front End Loading (FEL) stages, but you also need to make sure that you are selecting a project that is likely to go ahead. So avoid projects that might fail to pass a stage gate review, either through lack of technical definition or, more commonly, bad economics.
- Select a relatively short project. Part of the value of a pilot project is the ability to learn lessons, and use those lessons as part of a continuous improvement cycle. If you select a five year mega project, it will take a long time to get useful feedback.
- Pick a project with an appropriate level of complexity, where early construction input can have a significant impact on the outcome. Avoid, for example, a project that is a single discipline, single vendor project (like a new electrical building), where there is not enough complexity for construction planning to make a meaningful contribution.
- Select a project that forecasts an enticing Return On Investment (ROI) for AWP. We covered this in the last deliverable, and you should already have included it as a consideration in your business case. But if you have several good projects to choose from, this can be a useful tie-breaker.
- Look for a pilot project that includes the key disciplines that you want to introduce to AWP. It might be, for example, that your management instruction is to use AWP to improve pipe installation. That being the case, there is no point picking a pilot that has limited or no pipe scope.
- Lastly, but by no means least, consider the people. The project team for the pilot will help to make or break your implementation. Look for a project whose team has a proven track record of being able to embrace change, can learn new processes, and quickly understands the value that AWP can deliver. By seeking an adaptable leadership team, your pilot project will have the best chance of success, and will help to avoid resistance to change.



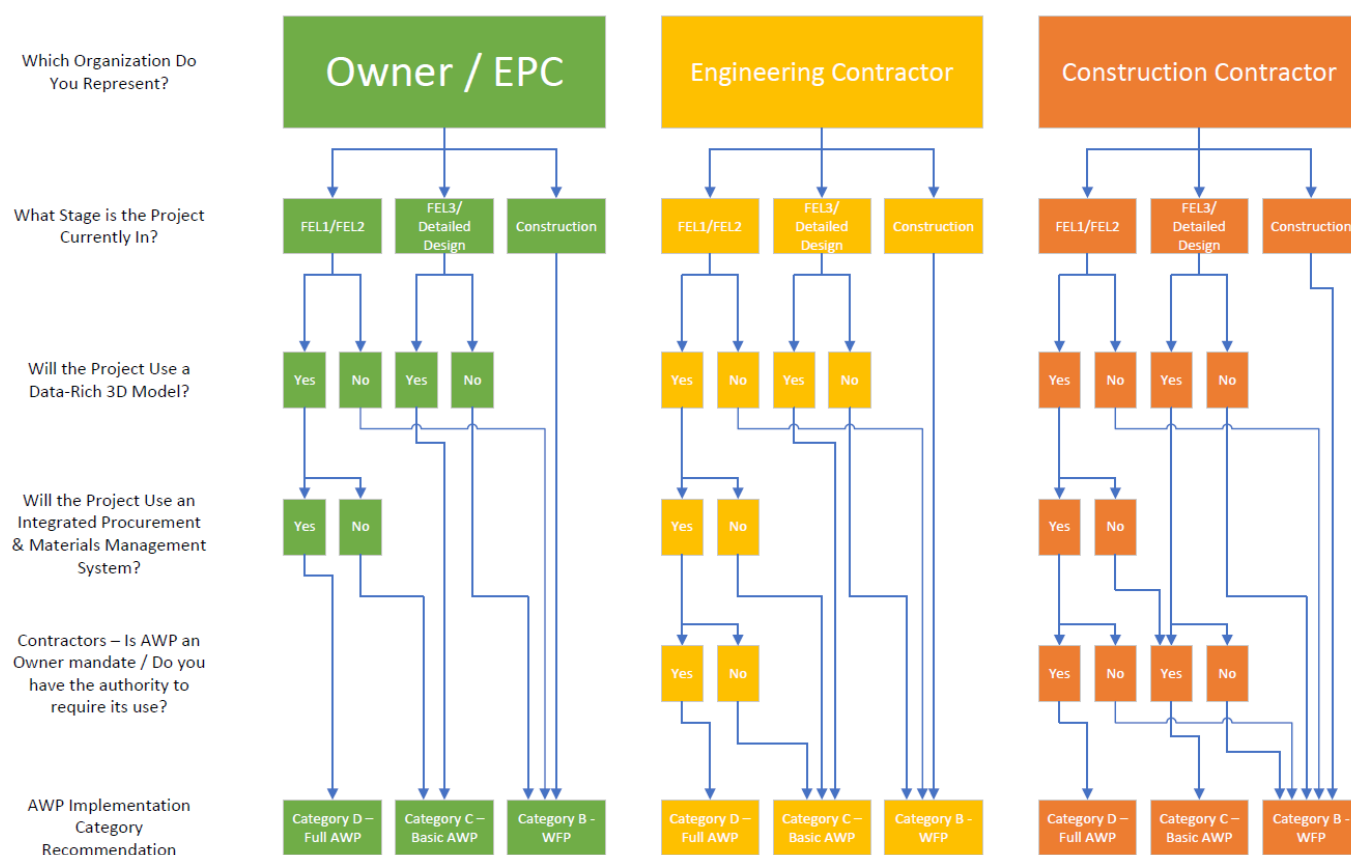
5 TYPE OF AWP IMPLEMENTATION

Not all AWP implementations are the same. Along with selecting the right project, you need to make sure you select the right approach to AWP, based on the project conditions.

The [Maturity Level Benefits Tool](#), developed by CII's Performance & Benchmarking Subcommittee, identified four categories of AWP implementation, and their associated benefits.

- Category A – No AWP – This is the baseline, where projects are performing using existing, non-AWP practices. This should be considered for projects that would not see a benefit from implementing AWP.
- Category B – WorkFace Planning – These are the projects where AWP implementation is limited to the field scope.
- Category C – Basic AWP – This includes the field scope (WorkFace Planning) as well as starting to bring some of the AWP planning concepts into the engineering stages of the project.
- Category D – Full AWP – Implementing all elements of AWP from early engineering to commissioning and start-up, to get the full benefits of the program.

So which one will be right for your project? That will depend on some key information. Use the flow chart below to determine the best path.





6 SELECTION CRITERIA – AFTER THE PILOT

Selecting the right pilot project is critical to the success of your AWP implementation. But after the pilot, you will need to assess which other projects to roll out AWP on.

For some organizations, it will be a simple case of mandating AWP on all projects. For others, it may require certain considerations, particularly if your project portfolio is varied, and includes both large and small projects.

To do this most efficiently, CII's Performance & Benchmarking Subcommittee has developed an AWP Selection Criteria Tool that allows you to answer a series of questions about your projects, which will then provide a recommendation regarding whether or not to perform AWP on the project, and which category of AWP implementation to use.

Part One: Should AWP be used on this project?

Category	Question	Description	Response	Score
Project Overview	Owner Requirement	Is AWP an Owner requirement for this project?	No	0
	Organization	Which organization do you represent on this project?	Engineering Contractor	3
	Project TIC Value	What is the total installed cost of the project? (Enter value)	\$100,000,000.00	20
Timing / Schedule	Interfaces	How many contractual / company interfaces does the project have?	Two to four, Owner to Engineering, Fabrication, Construction	3
	Schedule Achievability	Is the project schedule aggressive?	Some concern over ability to meet schedule	1
	Engineering / Construction Overlap	Will Engineering be complete before Construction starts?	Standard fast track, Engineering work passes straight to Construction	5
Contracting	Engineering Contract Strategy	What is the contracting strategy for Engineering?	Reimbursable (Cost Plus Fee)	2
	Engineering Contract Status	Has the Engineering Contract been issued? Was AWP included as a requirement?	Yes - AWP Language was included	5
	Construction Contract Strategy	What is the contracting strategy for Construction?	Lump Sum (Fixed Price)	1
Procurement	Construction Contract Status	Has the Construction Contract been issued? Was AWP included as a requirement?	No	5
	Procurement Risk	What is the project procurement risk profile / exposure?	High - Many long lead / risk items. Significant potential for project impacts.	10
	PO Status	Have material / equipment POs been issued? Was AWP included as a requirement?	Yes - AWP Language was NOT included	1
Experience	Fabrication / Modularization	Does the project have a significant off-site fabrication / modularization component?	Yes - Significant execution risk from off-site work	5
	AWP Experience - Organization	What is your organization's level of experience with executing AWP?	1 - Early Implementation	1
	AWP Experience - Project Team	What is your project team's level of experience with executing AWP?	Early Implementation (First time or limited experience)	1
Execution Complexity	Engineering Contractor Experience	Does the Engineering contractor have experience with this scope / technology?	Core Competency	0
	Construction Contractor Experience	Does the Construction contractor have experience with this scope / technology?	Some Experience / History	2
	Contractor / Owner History	Has the Owner worked with this Contractor before?	Worked Together Few Times	3
Execution Complexity	Number of Contractors	How many construction contractors will have contracts directly with the Owner / CM?	Two primaries, plus support contractors.	3
	Number of Disciplines	How many discrete disciplines are included in the scope of work?	Three or more	5
	Greenfield / Brownfield	Is the work being performed in a Greenfield or Brownfield location?	Brownfield	3
Execution Complexity	Turnaround / Outage Integration	Is the project integrated with a Turnaround or Maintenance Outage?	Some integration required with turnaround or outage	3
	Geographic Distribution	How is the construction scope distributed geographically?	Work Distributed Throughout the Battery Limits of a Single Operating Unit	5
Total Score				87

Source: Construction Industry Institute - AWP Selection Criteria Tool

For those who are not CII members, this concept can be adapted to your organization. The responses, scoring (weighting) and the recommendation levels for AWP implementation category can be tailored to align with your company's requirements and standards.

Using or creating a tool like this will provide standardized, repeatable and auditable justification for the implementation (or non-implementation) of AWP on your projects.

APPENDIX

AWP Selection Criteria Flow Chart.pdf