

Introduction to Advanced Work Packaging (AWP)

The background of the slide is a photograph of a construction site. A large black crane arm extends from the bottom left towards the center, lifting a large, dark, rectangular metal structure with yellow cables. Below the structure, several workers in safety gear are visible on a curved, metallic surface, likely the roof of a dome. The sky is a clear, deep blue.

Olfa Hamdi

Paris, October 8th 2014

About the Speaker

- Researcher in Project Management Practices
- Member of CII-COAA Joint Venture: Research Team RT272
- Co-author of CII-COAA Joint Publication on Advanced Work Packaging
- Author of the first academic thesis on Advanced Work Packaging

« Advanced Work Packaging from project definition through site execution : driving successful implementation of WorkFace Planning », Hamdi (2013), The University of Texas at Austin

From WorkFace Planning (WFP) to Advanced Work Packaging (AWP)

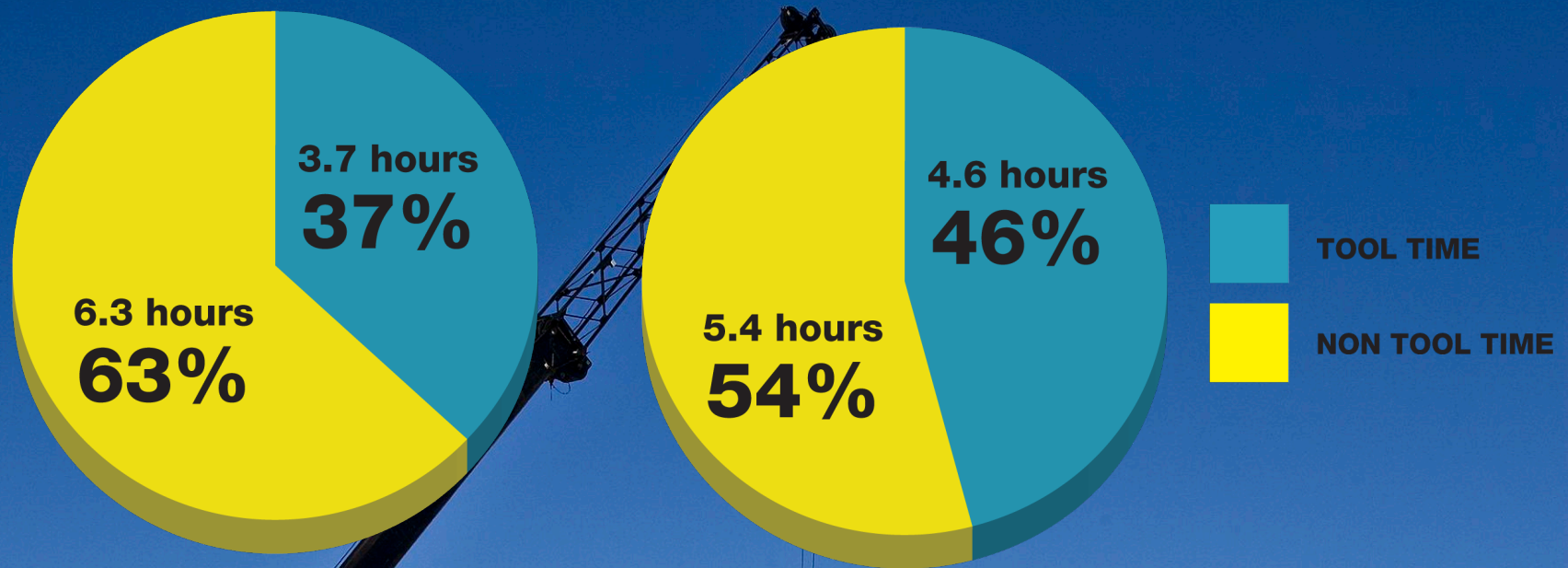
A large black crane arm extends from the bottom left towards the center, lifting a dark, rectangular component with yellow slings. Below the component, a geodesic dome structure is visible, with several workers in hard hats standing on its surface. The background is a clear blue sky.

What is WorkFace Planning?

Workface planning is the process of organizing and delivering all the elements necessary for an **installation** work package, **before** the work is started. This proactive process enables craft workers to perform their work safely, effectively, and efficiently. This is accomplished by breaking construction work down (by trade) into discrete **installation** work packages (IWP's) that completely describe/cover the scope of work for a given project. This process promotes the efficient use of available resources and permits the tracking of progress.

WorkFace Planning Overview

*How Crews Spend Their Time: Summary
(Coaa Data)*



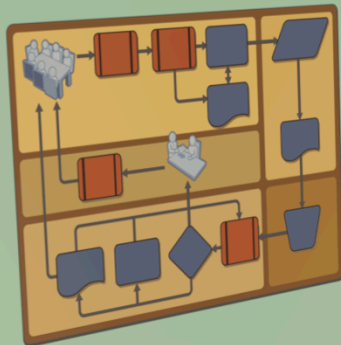
Traditional Projects

*Projects
Using Wfp*

+25% increase in tool-time
with WorkFace Planning

CII and COAA Joint Effort

Enhanced Work Packaging: *Design through Workface Execution*



CII Construction
Industry
Institute®

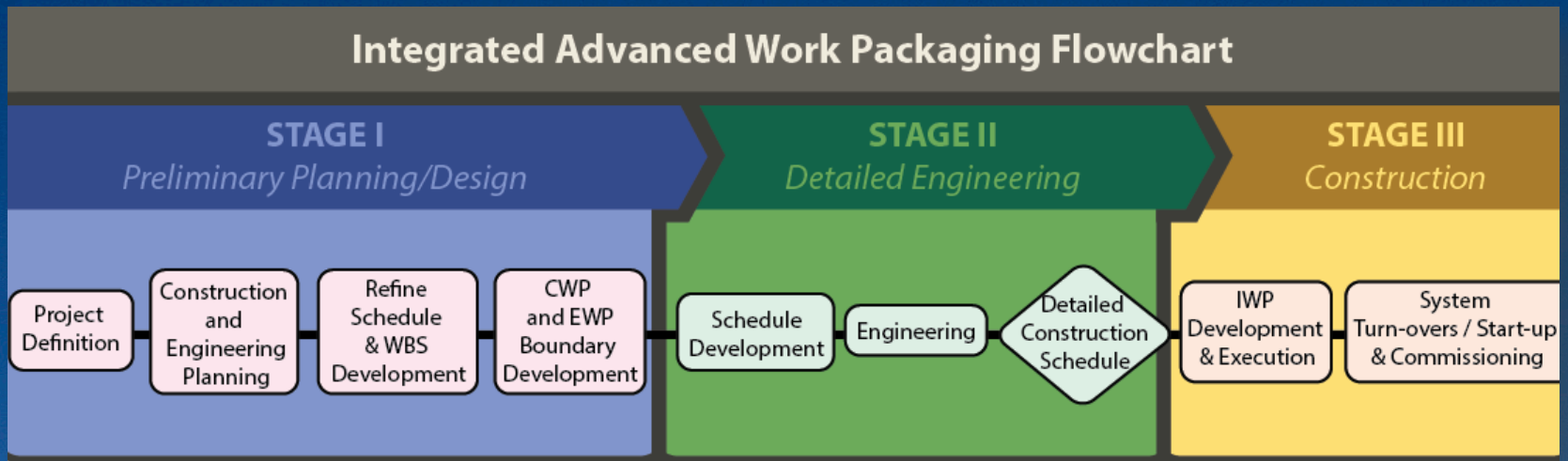
Implementation Resource 272-2



What is Advanced Work Packaging?

Advanced Work Packaging is the overall process flow of all the 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 continuing through detailed design and construction execution.

Advanced work packaging provides the framework for productive and progressive construction, and presumes the existence of a construction execution plan.



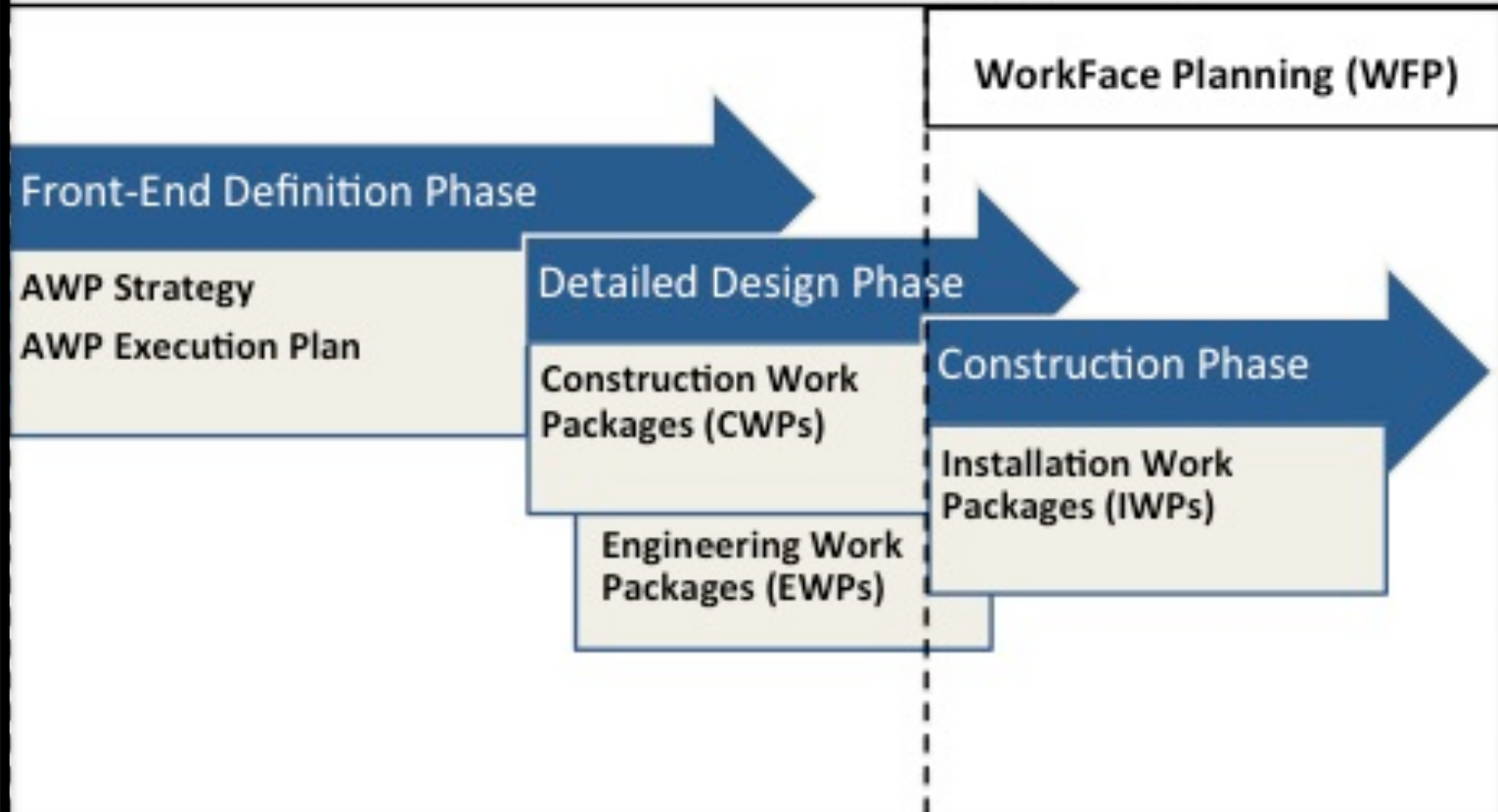
Key Terms:

CWP- Construction Work Packages

EWP- Engineering Work Packages

IWP- Installation Work Packages

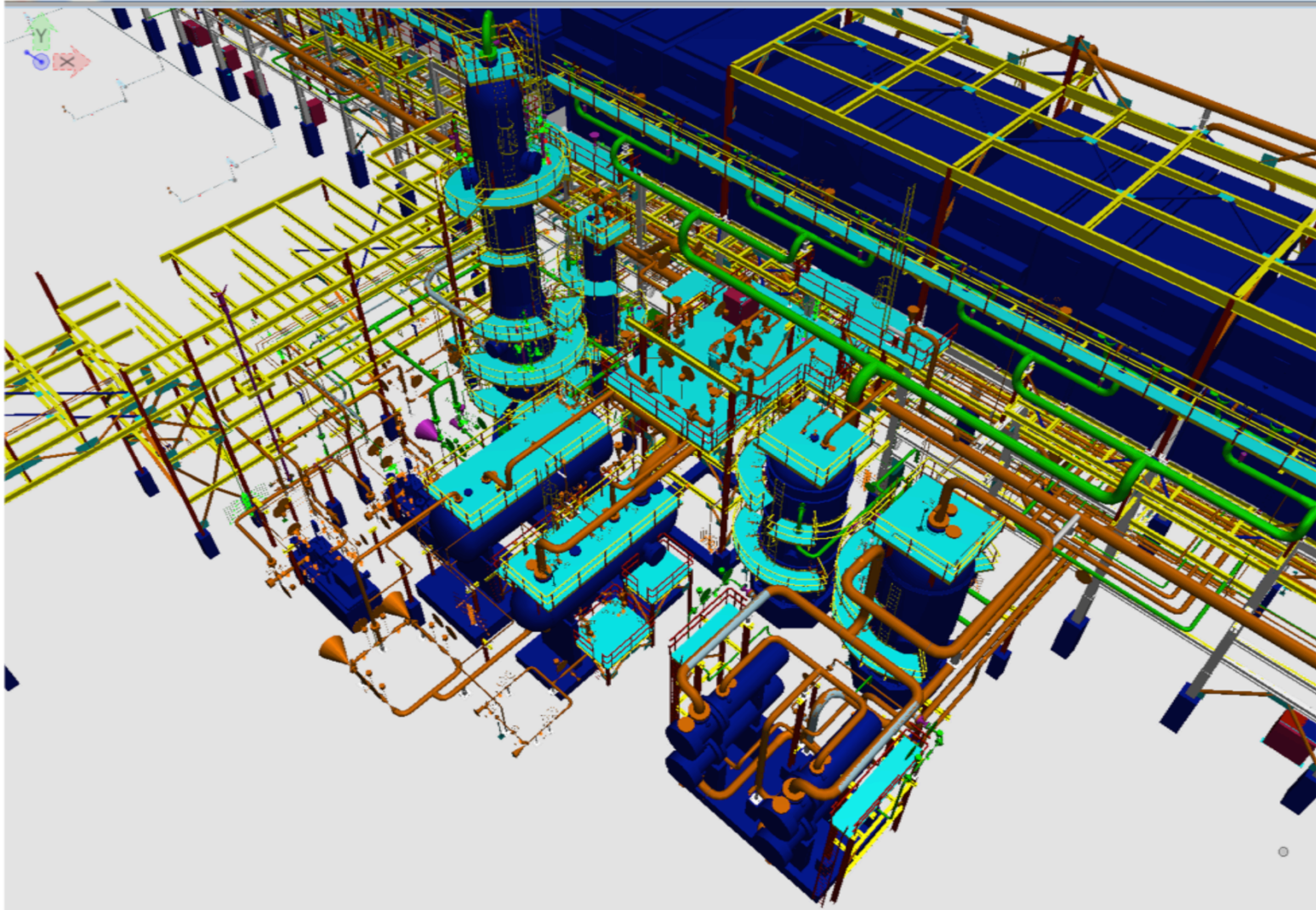
Advanced Work Packaging (AWP)



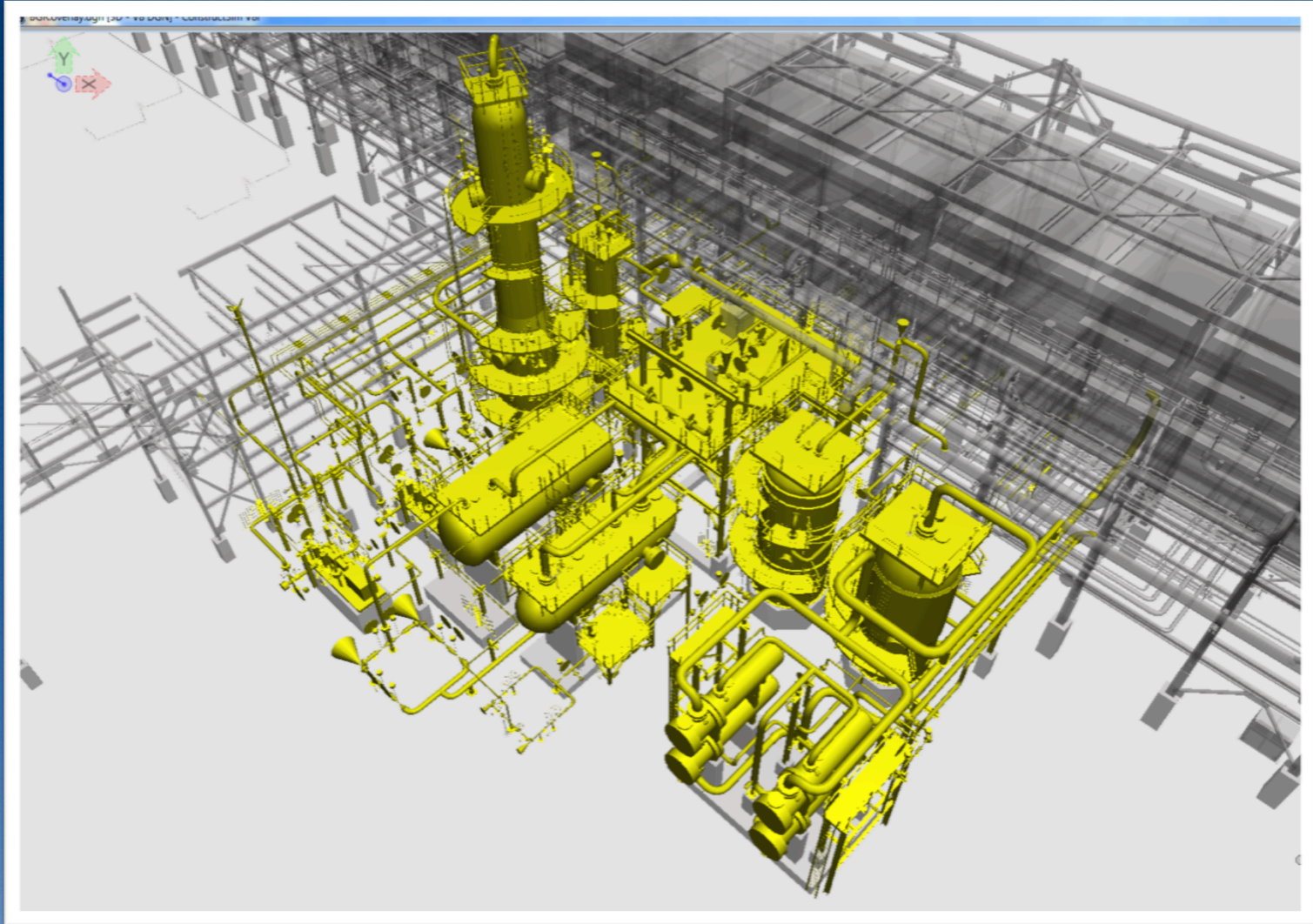
AWP Process and Major Deliverables per Project Phase

Work Package Hierarchy -

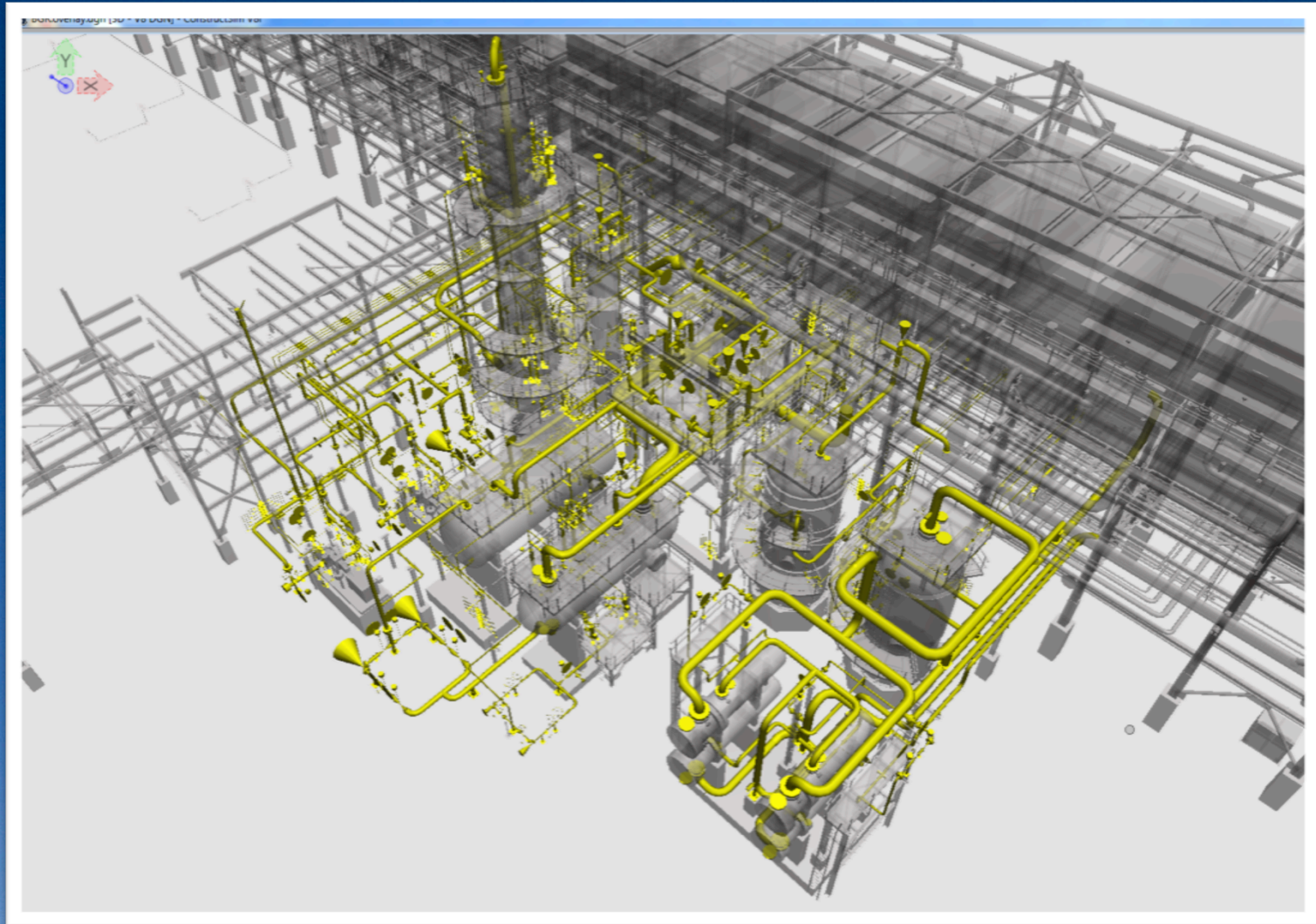
Project Overall



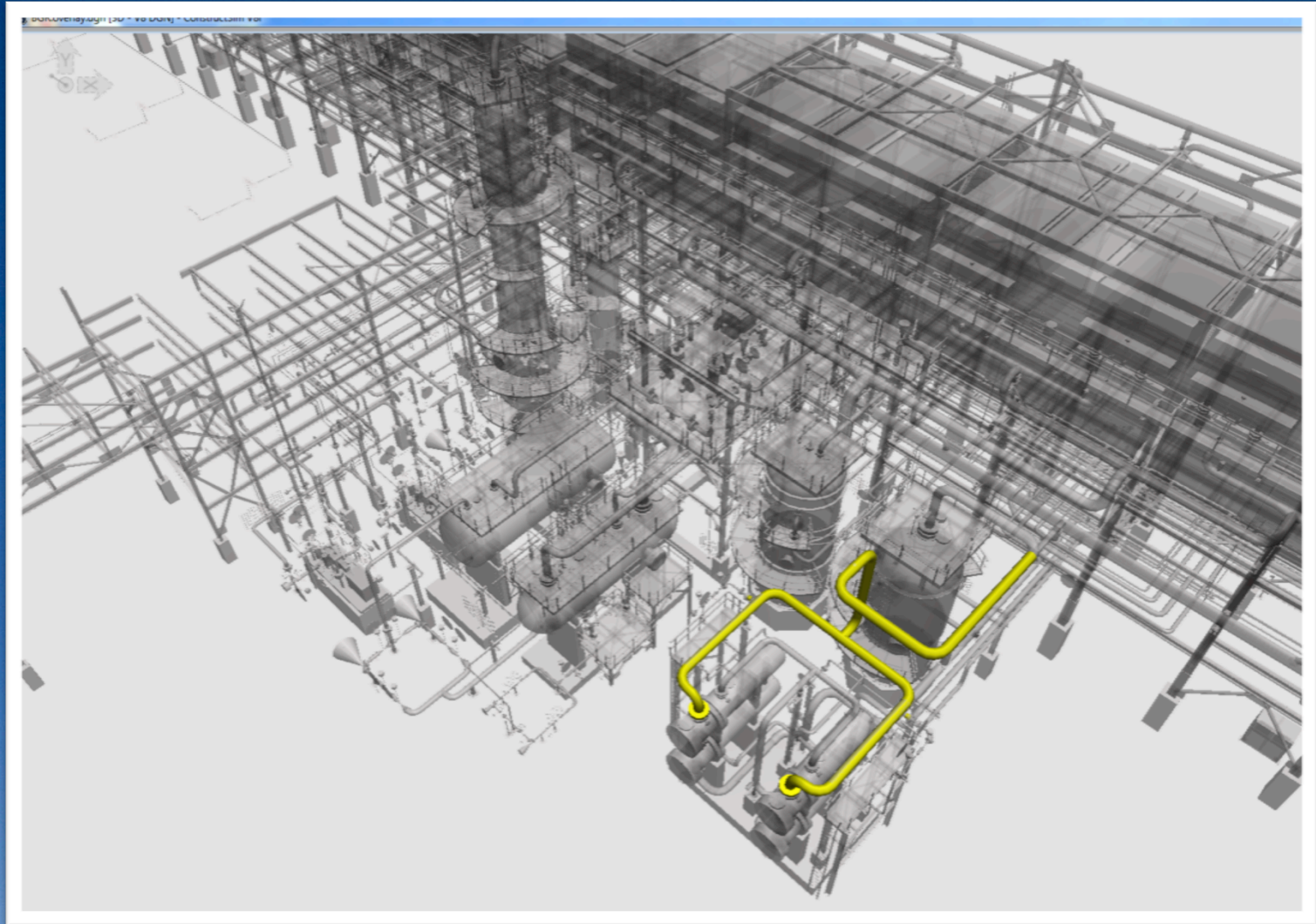
Construction Work Package (CWP)



Engineering Work Package (EWP)



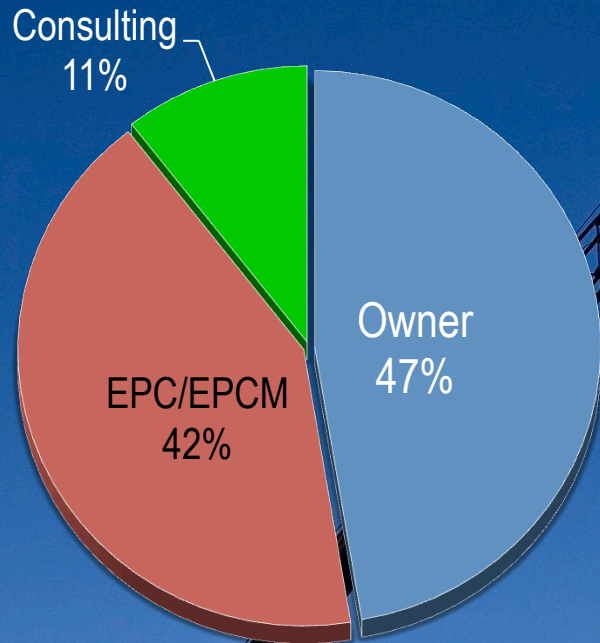
Installation Work Package (IWP)



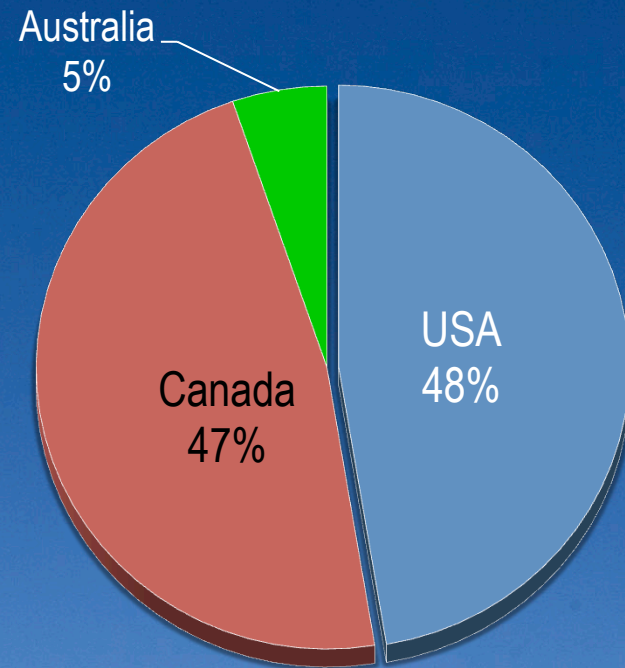
Validating Advanced Work Packaging Implementation: Part 1

Gathering Insights Through Expert Interviews

Interviews Representation – Firm Type



Interviews Representation
Project Location

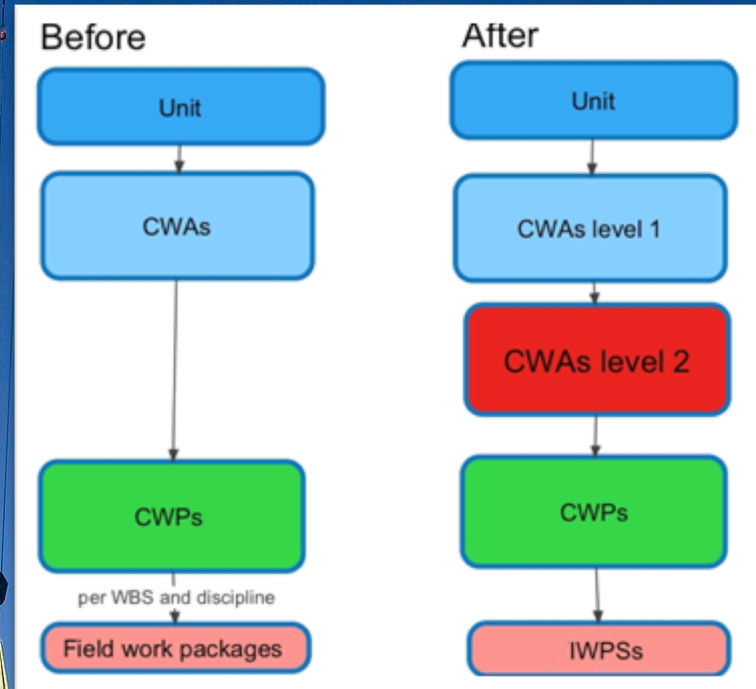
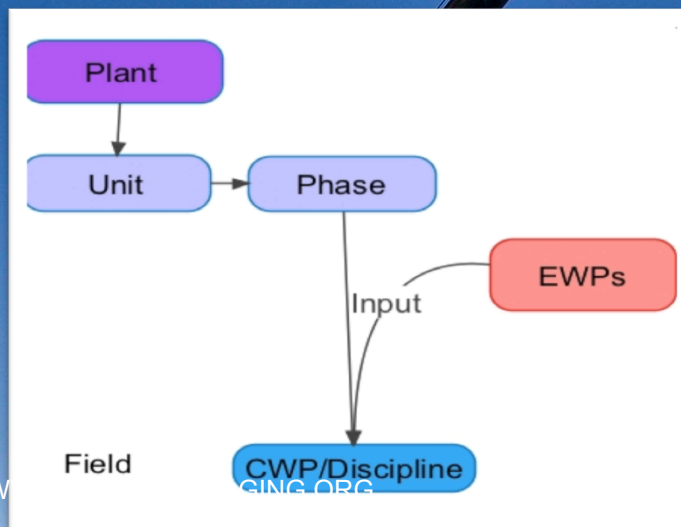
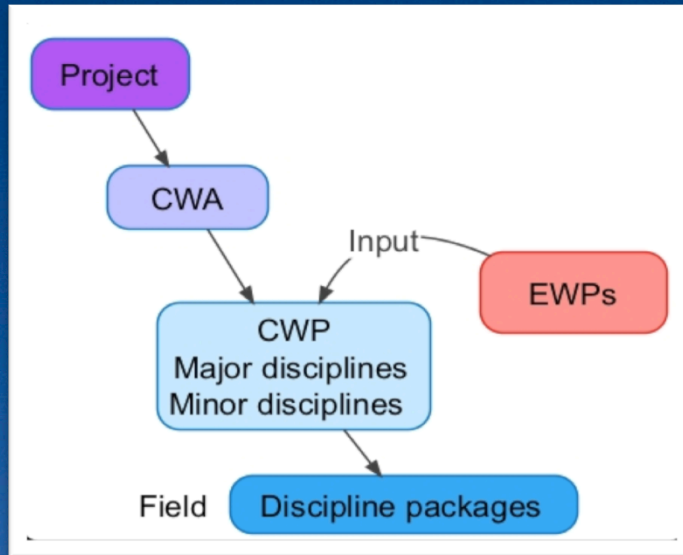


...and Surveys & Workshops

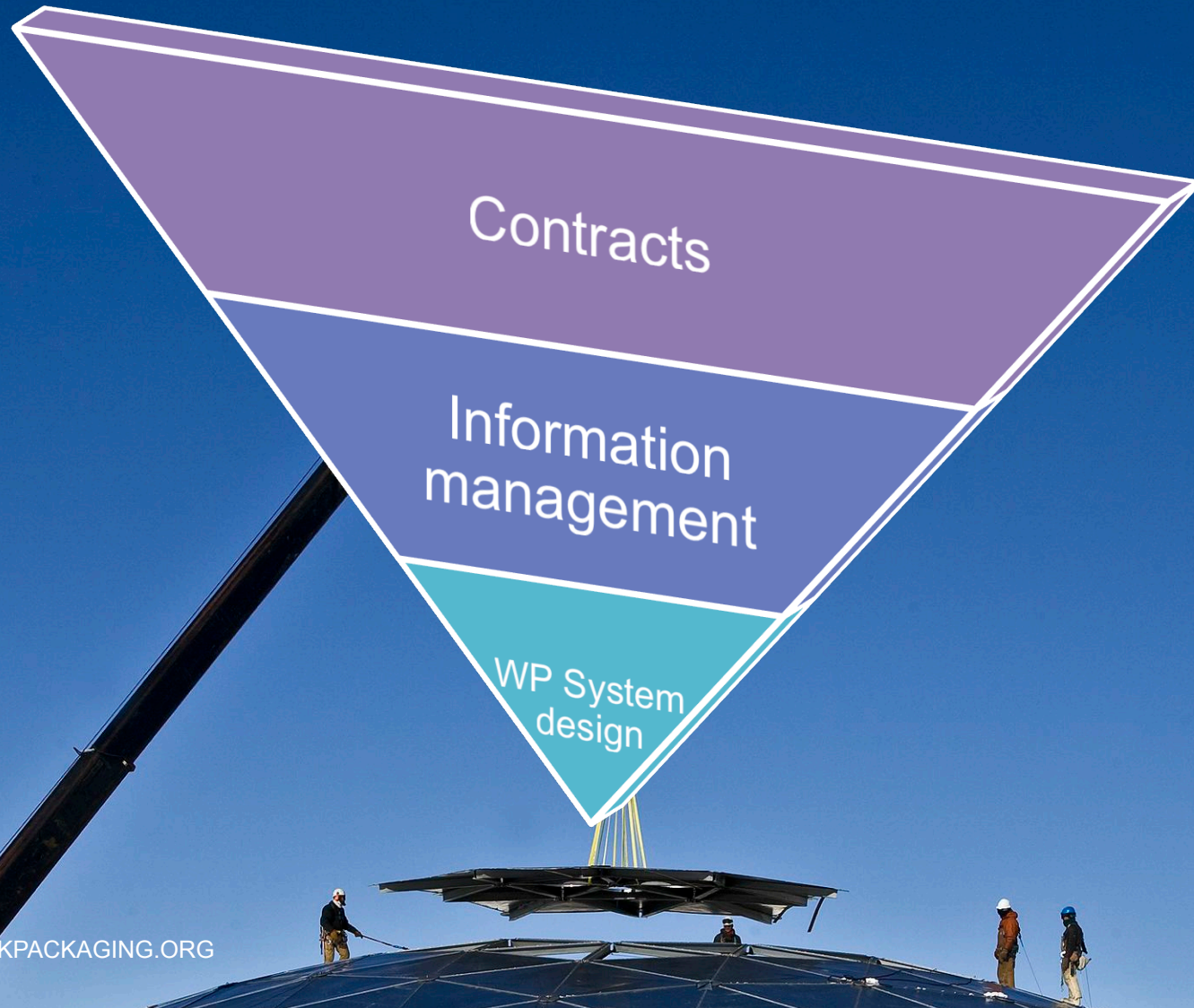
Interview Format

Background and Company General Characteristics	<ul style="list-style-type: none">• Position, experience overview, company's activities and services
Front-End Engineering Designs (FEED)	<ul style="list-style-type: none">• Work packaging structure during FEED and EWP and CWP characterization• Construction involvement within the process• Specific Information tools• Perceived benefits and challenges
Detailed Engineering development process	<ul style="list-style-type: none">• Work packaging structure during FEED and EWP and CWP characterization• Construction involvement within the process• Perceived benefits and challenges
Company Organization and Work Packaging functional capabilities	<ul style="list-style-type: none">• Organizational changes• Cultural changes
Contracts	<ul style="list-style-type: none">• The contracts' role in enhancing the work packaging process for Engineering• Perceived needs and recommendations

Findings include: Various Work packaging hierarchies and definitions

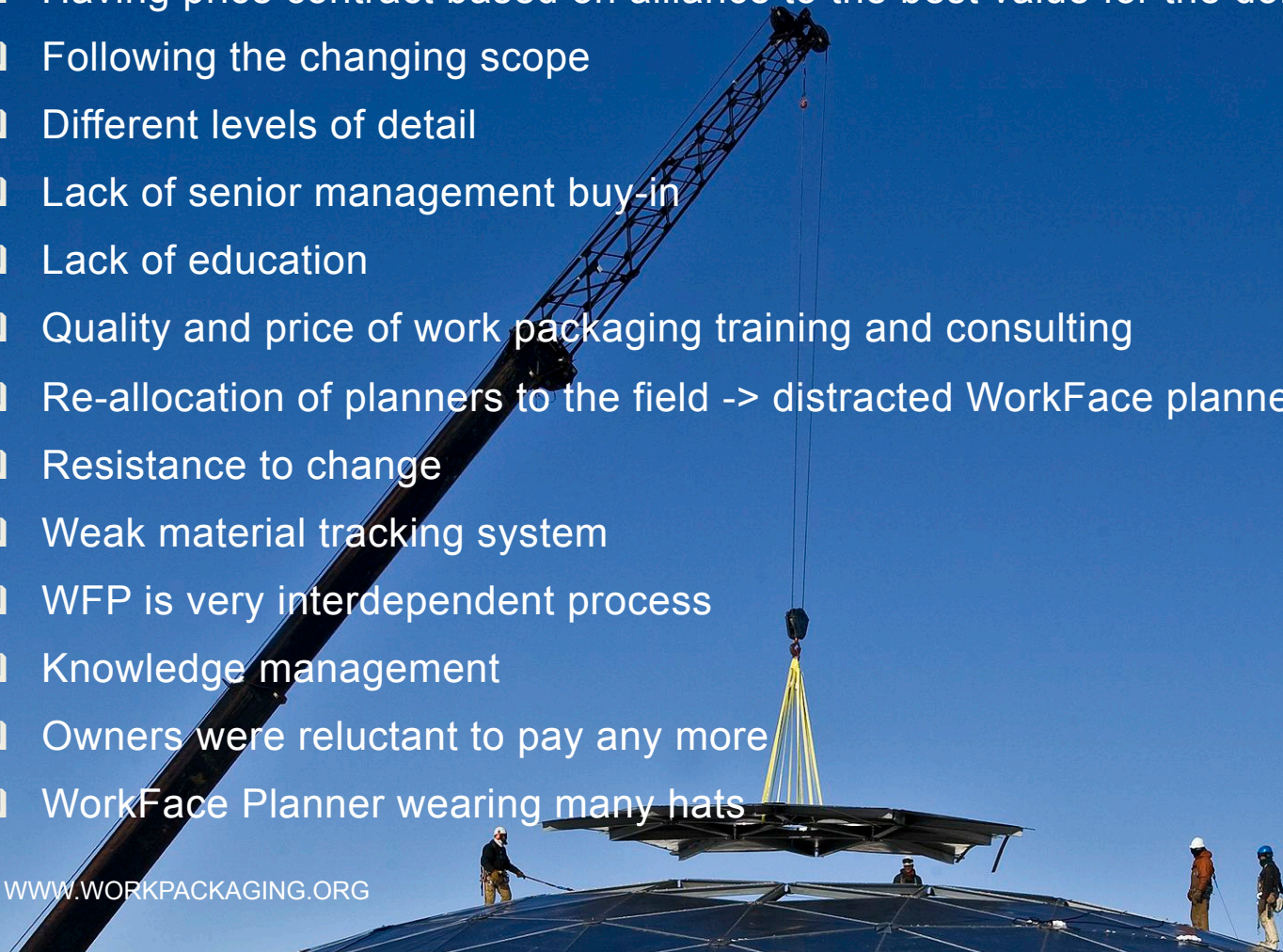


Findings Include: Various work packaging Information leveling



Reported Implementation challenges include:

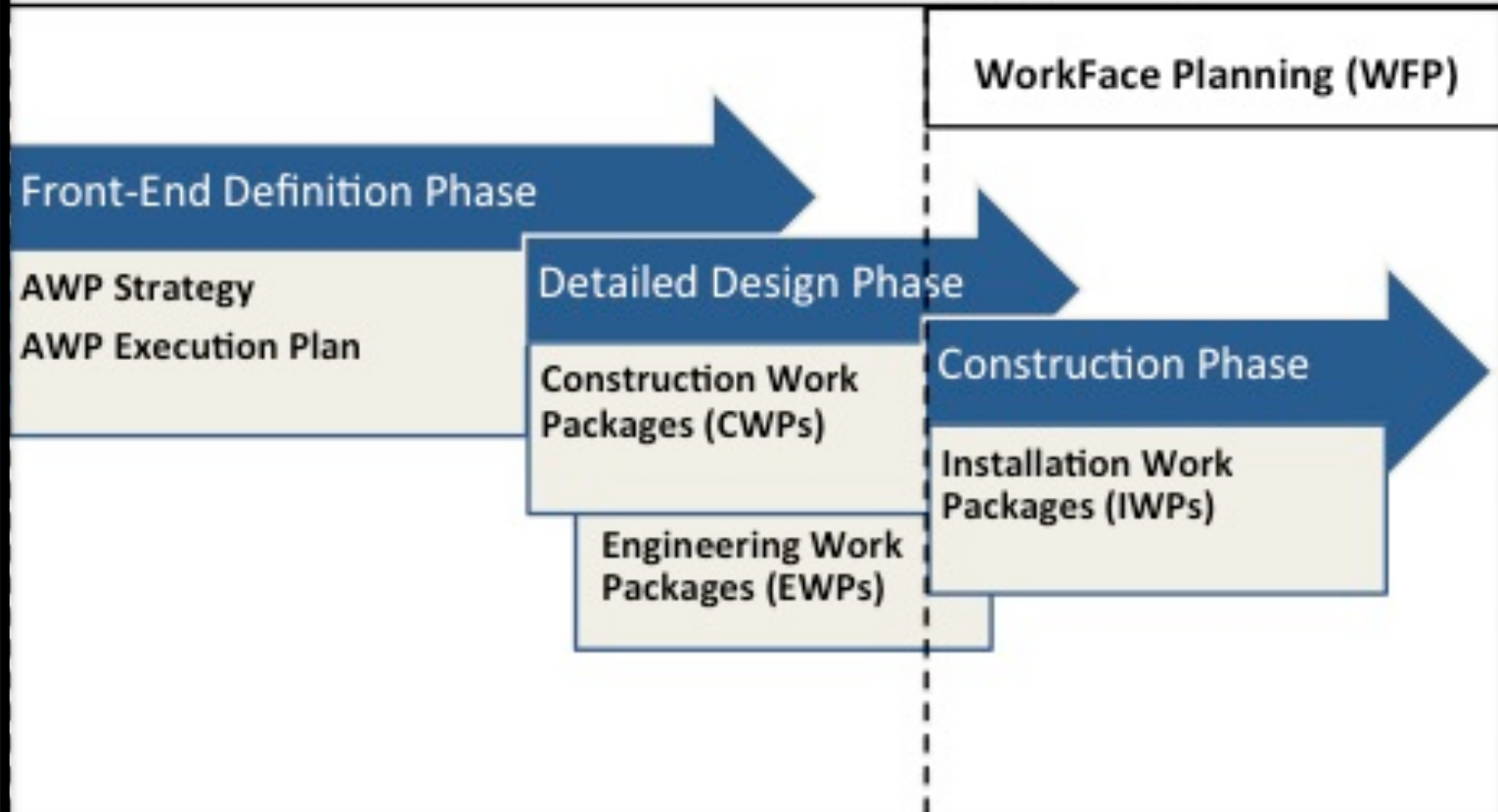
- ☐ Inconsistency in execution
- ☐ Having price contract based on alliance to the best value for the dollar
- ☐ Following the changing scope
- ☐ Different levels of detail
- ☐ Lack of senior management buy-in
- ☐ Lack of education
- ☐ Quality and price of work packaging training and consulting
- ☐ Re-allocation of planners to the field -> distracted WorkFace planners
- ☐ Resistance to change
- ☐ Weak material tracking system
- ☐ WFP is very interdependent process
- ☐ Knowledge management
- ☐ Owners were reluctant to pay any more
- ☐ WorkFace Planner wearing many hats



Findings include: General Trends per Work Packaging Theme



Advanced Work Packaging (AWP)



AWP Process and Major Deliverables per Project Phase



For more information,
visit www.workpackaging.org

Advanced Work Packaging Institute (AWPI) is a Non-Profit
Organization chartered for the Promotion of and Research
on Advanced Work Packaging

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