



Advanced Work Packaging Industry Implementation

Challenges to Achieving AWP Added-Value

By: Olfa Hamdi

A large crane is lifting a heavy, dark, rectangular load from the top of a dome-shaped structure. Several workers in hard hats are visible on the dome's surface. The background is a clear blue sky.

Advanced Work Packaging is about organizing pre-construction phases in order to ensure optimal field delivery and execution effectiveness

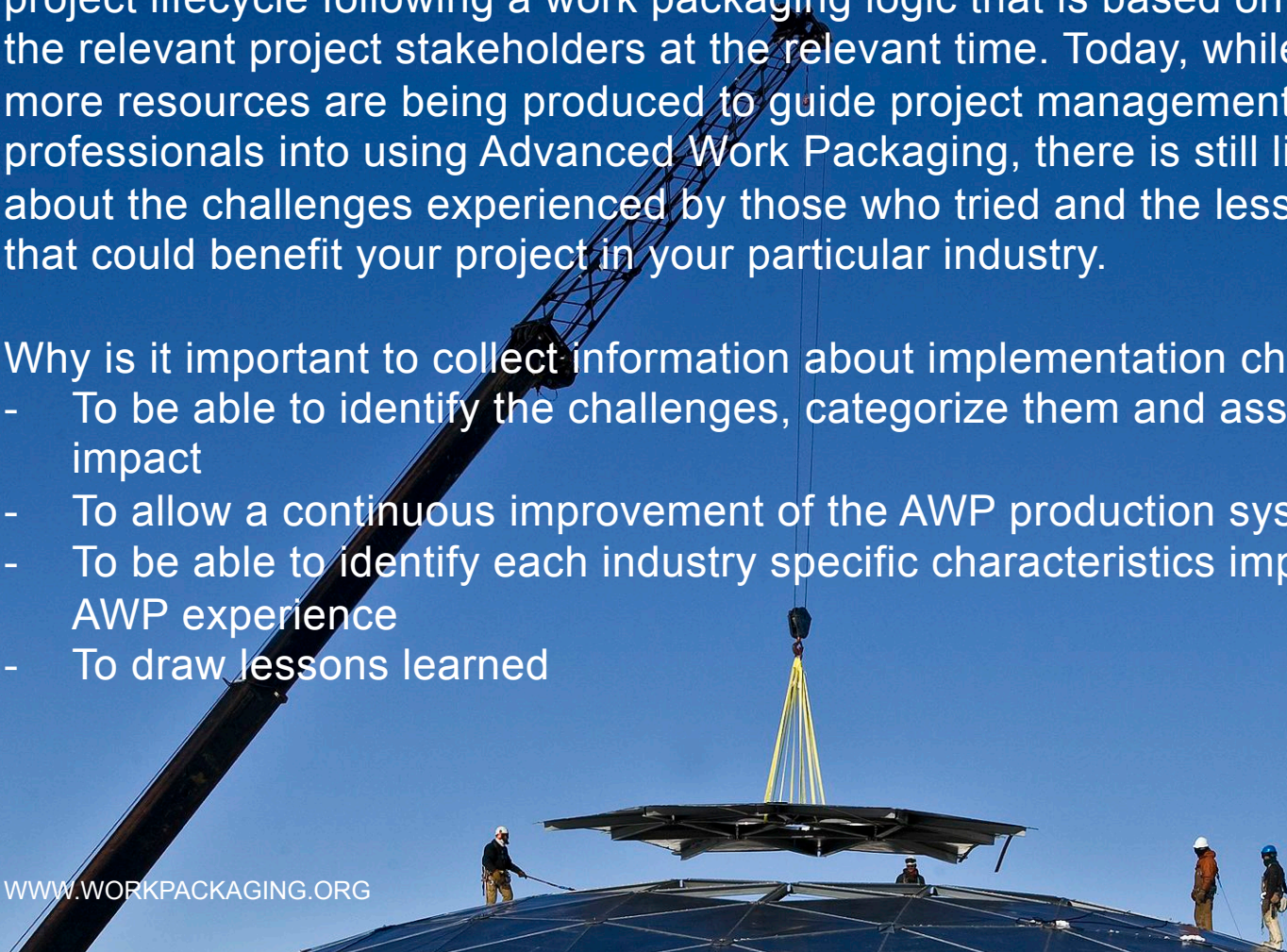
- Meaning of the « Advanced » part of AWP
- Links between engineering and construction work are at the heart of the process
- Process translates into defining and assembling the appropriate work package documents ensuring disciplined integration between various stakeholders

Little is known about AWP Implementation Challenges...

AWP is meant to organize and drive the flow of information during the entire project lifecycle following a work packaging logic that is based on involving the relevant project stakeholders at the relevant time. Today, while more and more resources are being produced to guide project management professionals into using Advanced Work Packaging, there is still little known about the challenges experienced by those who tried and the lessons learned that could benefit your project in your particular industry.

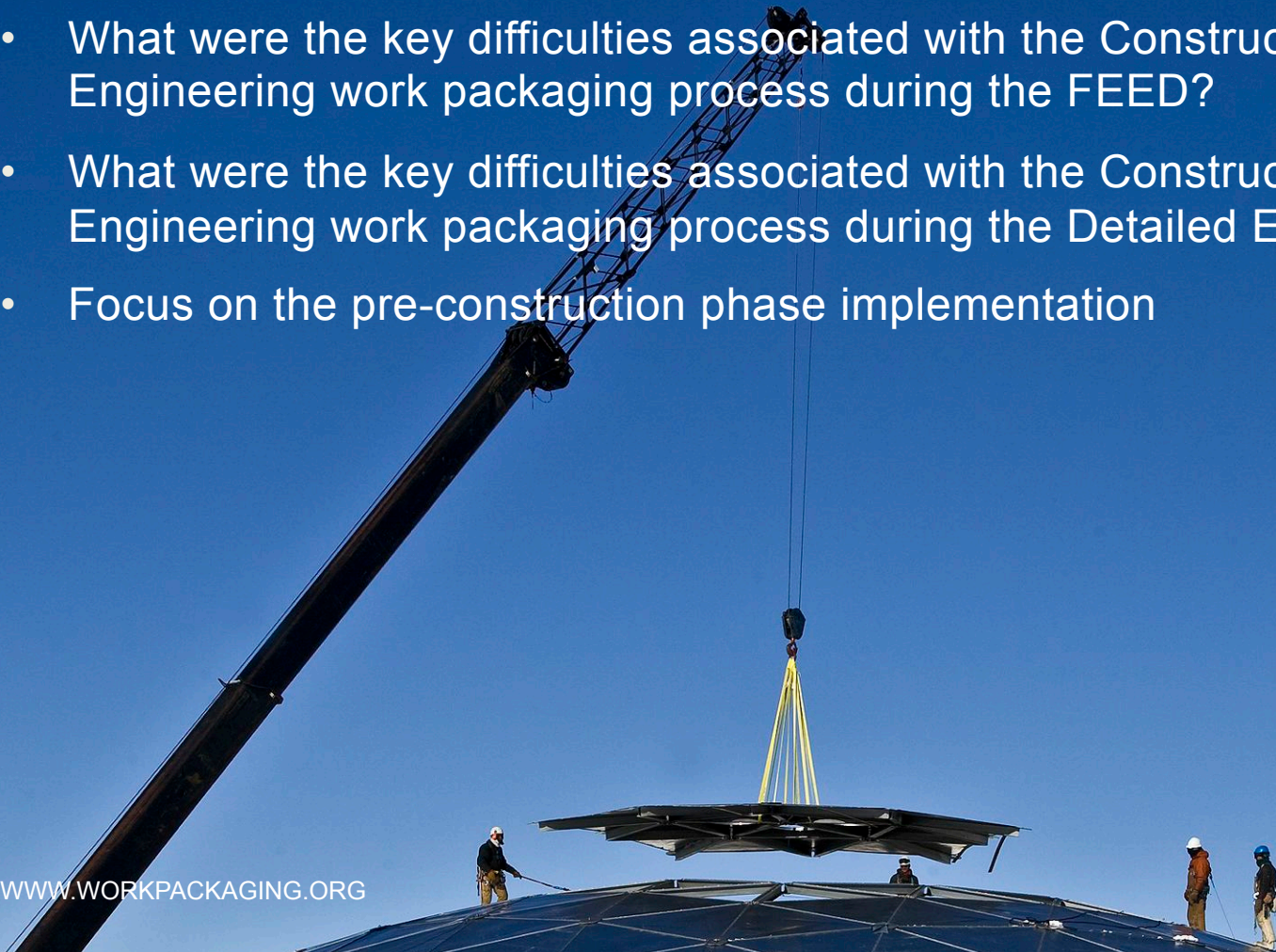
Why is it important to collect information about implementation challenges?

- To be able to identify the challenges, categorize them and assess their impact
- To allow a continuous improvement of the AWP production system design
- To be able to identify each industry specific characteristics impacting its AWP experience
- To draw lessons learned



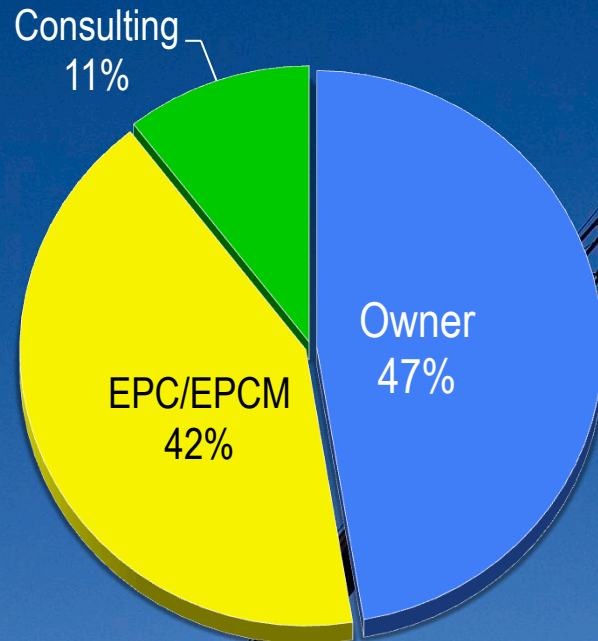
Looking for answers to the following questions:

- What were the key difficulties associated with the Construction/ Engineering work packaging process during the FEED?
- What were the key difficulties associated with the Construction/ Engineering work packaging process during the Detailed Engineering?
- Focus on the pre-construction phase implementation

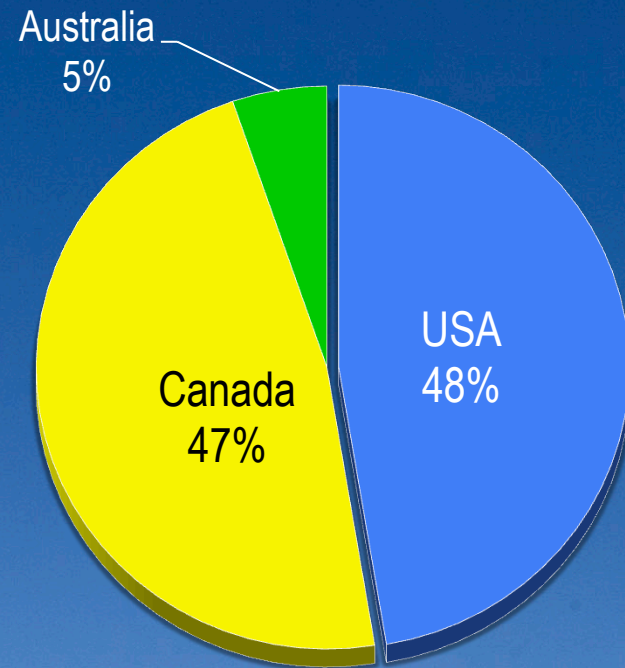


Methodology

Interviews Representation – Firm Type



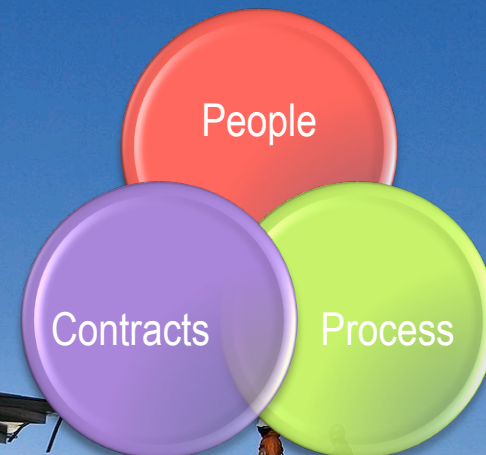
Interviews Representation Project Location



...and Surveys & Workshops

AWP Implementation Challenges Classification

- “One might classify AWP documented challenges based on the project component that is directly related to them. The example of identifying all technology and process related challenges versus people related challenges is a common one. In addition, one can benefit from breaking down challenges into challenges directly related to AWP maturity level and challenges caused by external factors.” (Hamdi, 2013)
- In this presentation, challenges are categorized by: Process (referring to system and technology related challenges), People (referring to organizational and cultural related challenges) and Contracts (referring to contracts/legal related challenges).



AWP Implementation Challenges

Process Category

- ❑ Inconsistencies in AWP execution makes it hard to keep up with all what needs to be done
- ❑ Following the changing scope is hard with an expectation to have CWP's defined early
- ❑ Managing the level of detail throughout the project lifecycle is challenging
- ❑ Current AWP system does not account for the management of the project's experience with regulations
- ❑ AWP requires strong knowledge management capabilities
- ❑ AWP relationship with the change management system could be conflicting
- ❑ Incompatibility of work packaging numbering structure with other companies
- ❑ Owners and Engineering are still not familiar with "the WFP system Tagging codes mixed"
- ❑ Engineering efficiency is very important to engineering economics. AWP early implementation challenges that.
- ❑ Late delivery drawings, weather impact, delayed material delivery is a challenge for the consistency of work packaging
- ❑ Procurement challenges ranging from the lack of effectively updated information to the missing tools and methods for properly and timely packaging procurement work.

AWP Implementation Challenges

People Category

- ❑ Stakeholders buy-in is still hard to get
- ❑ Lack of senior management buy-in
- ❑ Lack of education, experience and training / the quality and price of work packaging training and consulting
- ❑ Re-allocation of planners to the field -> distracted WorkFace planners + expanded functions of the WF planner
- ❑ Almost systematic resistance to change
- ❑ Number of simultaneously involved stakeholders
- ❑ Conflicting work cultures between engineering, construction and procurement
- ❑ Construction responsibility
- ❑ Through AWP, engineering is not systematically responsible to maintain packages
- ❑ High risk of miscommunication especially in early implementation when people do not speak the same AWP “language”

AWP Implementation Challenges

Contracts Category

- ❑ Conflict arising in partnerships and joint ventures (“another unclear layer of roles and responsibilities”)
- ❑ During the implementation, owners did not pay for the extra indirect cost
 - ❑ Who pays for AWP implementation?
- ❑ Incorporation of the execution sequencing with the payment schedule is generally forgotten leading to serious conflict during execution
- ❑ The level of engineering work in FEED is usually very high level and depends a lot on the contracting strategy (DB, DBB)
- ❑ Lack of pro-active work packaging contractual language and agreement

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

Engineering think systems..
Procurement think commodities..
Construction think “all” and geographically
...Can AWP align these different
perspectives?



Do you agree with these challenges? How significant are they?

What are the top AWP implementation challenges?

Vote Here

Assess your organization maturity in
Adv. Work Packaging using this free tool

AWP Self-Assessment Tool



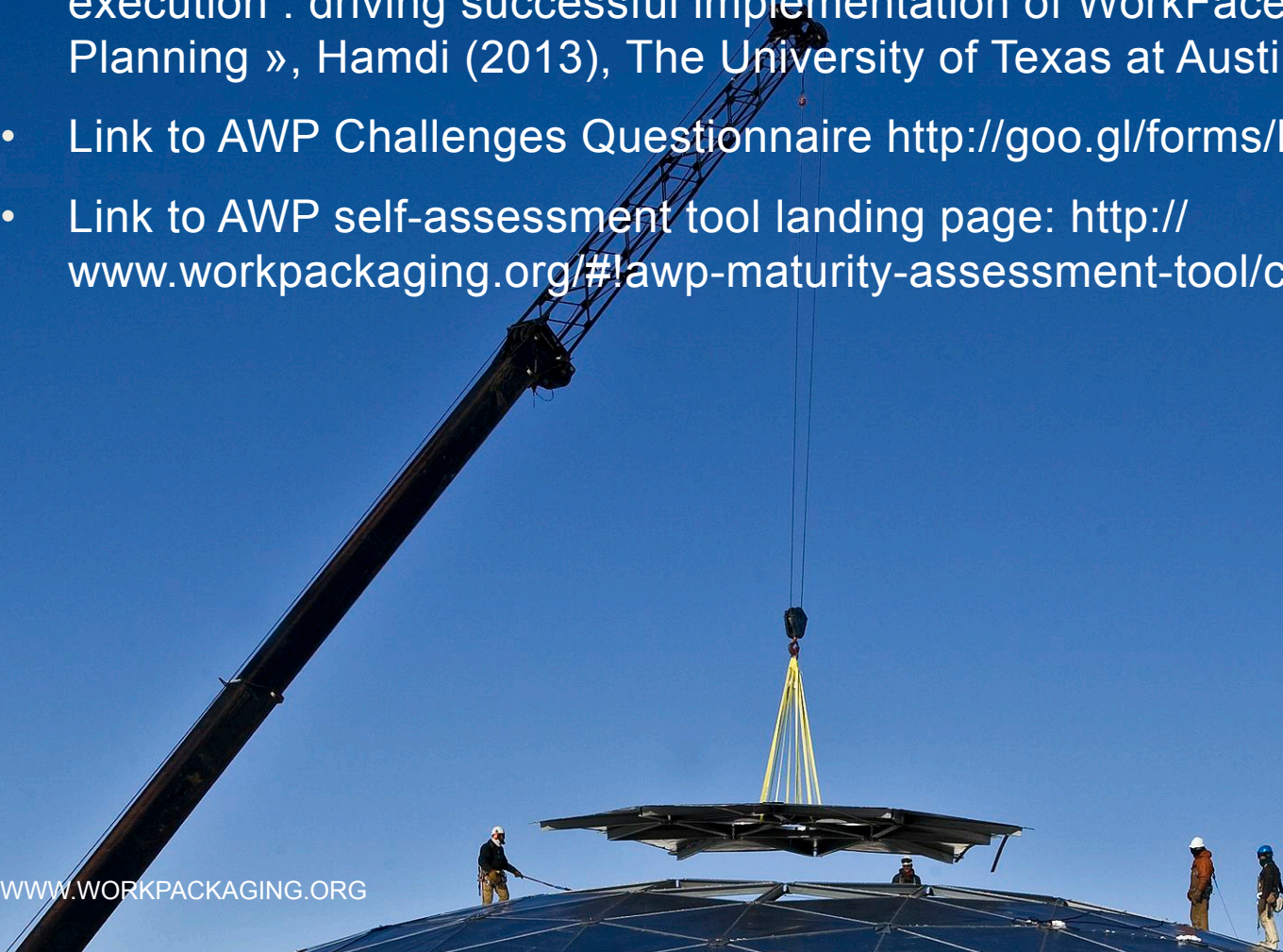
For more information,
visit www.workpackaging.org

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

Contact: info@workpackaging.org

References

- « Advanced Work Packaging from project definition through site execution : driving successful implementation of WorkFace Planning », Hamdi (2013), The University of Texas at Austin
- Link to AWP Challenges Questionnaire <http://goo.gl/forms/l1ThtJdBxK>
- Link to AWP self-assessment tool landing page: <http://www.workpackaging.org/#!awp-maturity-assessment-tool/c9t>



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

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