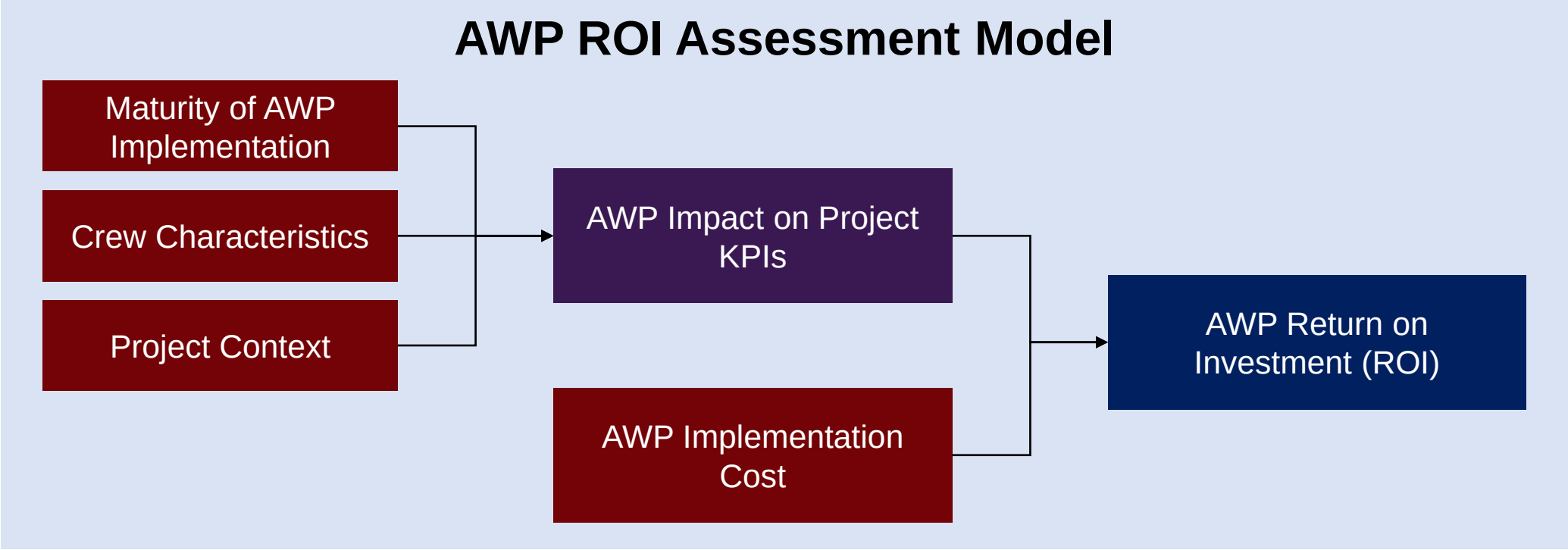
Advanced Work Packaging Assessment Tool©

Developed by the NSERC Industrial Research Chair in Strategic Construction Modeling and Delivery

Advanced Work Packaging

The NSERC Industrial Research Chair in Strategic Construction Modeling and Delivery (IRC) developed an approach to determine the effects of Advanced Work Packaging (AWP) on project performance and calculate return on investment (ROI) based on the associated costs and benefits of AWP.



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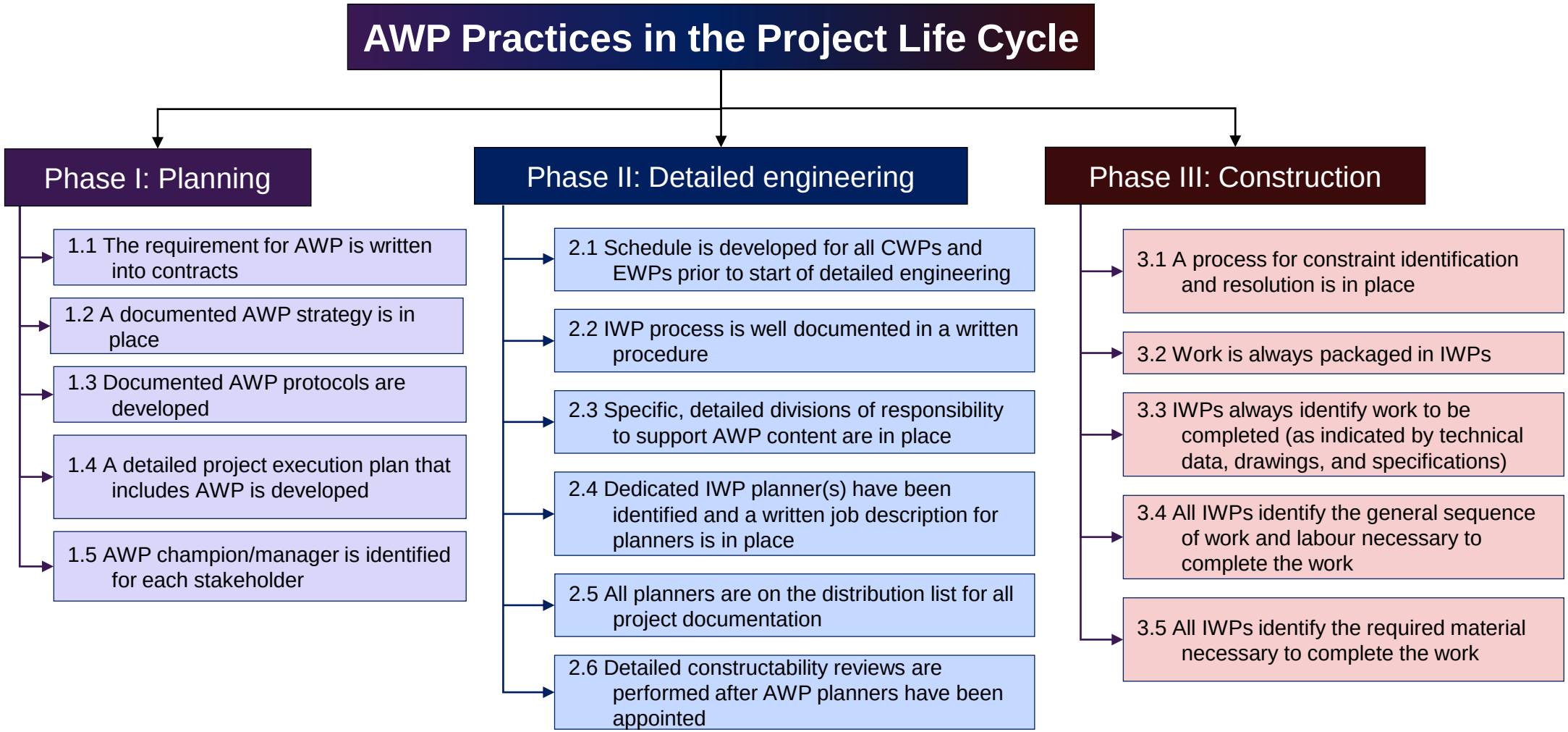

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Input Worksheets

There are four types of Excel worksheets used to assess the input variables of the AWP tool:

- ❑ **Maturity of AWP Implementation**
- ❑ **Workface Planner Qualification (Self and Expert Evaluation)**
- ❑ **Problem Sources on Project**
- ❑ **AWP Additional Costs**

AWP Maturity Assessment Tool - Individual Expert

Phase 1 Preliminary Planning/ Design			
AWP Expert Name: _____Construction Manager_____			
No.	**Factors & Evaluation Criteria**	**Scales**	**Expert Data Input**
1.1	A documented advanced work packaging strategy is in place, and all stakeholders are familiar with the content of the strategy.	Importance	4
		Maturity	5
1.2	The contract language includes AWP strategy, plan, procedure, roles and responsibilities.	Importance	4
		Maturity	3

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Output Worksheets

There are three Excel worksheets used to determine the results of the AWP assessment:

- ❑ **Overall Maturity of AWP Implementation**
- ❑ **Final Workface Planner Qualification Score**
- ❑ **A Comprehensive List of Problem Sources Encountered on the Project**

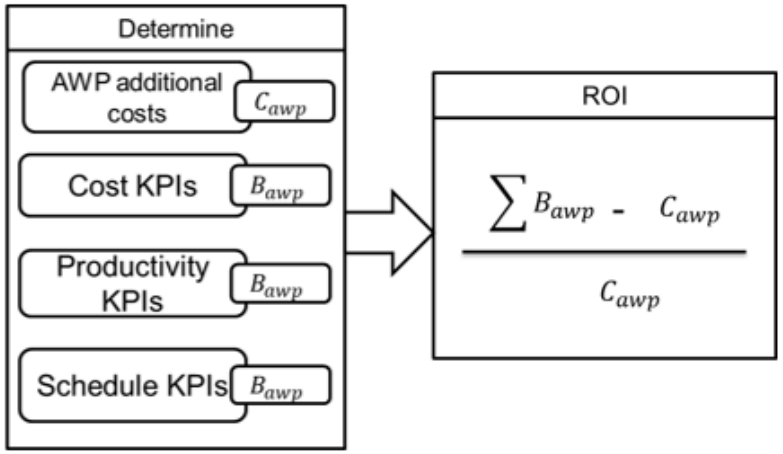
AWP Maturity Assessment Calculations

Phase 1 Preliminary Planning/ Design			
Criteria No.	**Mean Maturity Score**	**Importance Score**	**Weighted Value**
1.1	5.00	4.00	1.00
1.2	3.00	4.00	0.60

Return on Investment (ROI) Worksheet

This Excel worksheet aggregates the results of assessments from all output worksheets and calculates the ROI for the implementation of AWP.

Total Benefit of AWP (B_{awp}) of All Work Packages in Terms of Cost	$ -
Total Benefit of AWP (B_{awp}) of All Work Packages in Terms of Schedule	$ -
Total Benefit of AWP (B_{awp})	$ -
AWP Additional Costs Total (C_{awp})	



Next Steps

Project Progress

- ❑ Case study project by the University of Alberta to validate the tool
- ❑ AWP Tool Lite version released to COAA and CII
- ❑ CII members will collect data and provide it to the University of Alberta for analysis
- ❑ All COAA members are invited to participate by collecting data using the tool and sending it to the University of Alberta for analysis

Expected Outcomes

- ❑ **Isolate AWP Impact on KPIs**: Once enough project data have been collected, a comparison will be made between the KPIs of projects with and without AWP implementation and between projects with different levels of AWP maturity.
- ❑ **Compare the ROI of AWP Implementation**: Once enough project data have been collected, a comparison of the ROI for different levels of AWP maturity and for different planning methods will be developed.

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Thank you.

For further information and to participate in data collection, please contact

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STRATEGIC CONSTRUCTION MODELING AND DELIVERY
INDUSTRIAL RESEARCH CHAIR

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