Advanced Work Packaging
EWP Readiness

Developed by the COAA AWP Committee
Advanced Work Packaging – EWP Readiness

AGENDA

Why are we here?

Part 1 – What is Readiness
Part 2 – Readiness Tool
Part 3 – The Readiness Playbook
Part 4 – Readiness Implementation Learnings

Questions and Answers
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WHY ARE WE HERE?

Roll Out:

• EWP Readiness Tool
• Playbook
PART 1 – What is Readiness
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WHAT IS READINESS?

Readiness:

The state of completion of an Engineering Work Package (EWP) as measured against the various engineering milestones required to be completed during the engineering workflow.
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How does READINESS differ from PROGRESS?

Progress:

Progress is a measure of the cumulative completeness of the deliverables that together, make-up the EWP. Progress is determined by applying discipline rules-of-credit (RoC) (progress gates) to each individual deliverable with the weighted average representing the overall package progress.
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PROGRESS example

- Gates
  - Drawing initiated
  - Checking
  - Internal Discipline review
  - Issued For Review
  - Comments incorporated
  - Authentication
  - Issued For Construction

- Milestones
  - Issued Preliminary
  - Issued Final
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PROGRESS example

- Model: RoC = Gated Progress RoC
- M.R.: RoC = Gated Progress
- EWP: RoC = Gated → Avg’d Σ Deliverable
- Stress: RoC = Milestone Progression
- P&ID: RoC = Gated Progress
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PROGRESS example

- **EWP** → Avg’d Σ Deliverable (Gated RoC)
- **Drawing 1** → Gated RoC
  - Drawing initiated
  - Checking
- **Drawing 2** → Gated RoC
  - Internal Discipline review
  - Issued For Review
  - Comments incorporated
  - Authentication
  - Issued For Construction
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**PROGRESS example**

EWP \[\rightarrow \text{Avg'd } \Sigma \text{ Deliverable (Gated RoC)}\]

Drawing 1 \[\rightarrow \text{Gated RoC } = \% \text{ complete}\]

Drawing 2 \[\rightarrow \text{Gated RoC } = \% \text{ complete}\]

Drawing ‘N’ \[\rightarrow \text{Gated RoC } = \% \text{ complete}\]

\[\Sigma \text{ deliverable progress}\]

\[\text{EWP } = \Sigma \text{ deliverable progress } / \text{ ‘N’ deliverables}\]
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PROGRESS example

EWP \rightarrow \text{Avg’d } \sum \text{ Deliverable (Gated RoC)}

EWP = \sum \text{ deliverable progress} / ‘N’ deliverables

The BIG Question

EWP progress = 95% it has been for 4 weeks

ANSWER

The 95% progress = completeness ≠ readiness
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READINESS

The state of completion of an Engineering Work Package (EWP) as measured against the various engineering milestones required to be completed during the engineering workflow.
### Advanced Work Packaging – EWP Readiness

<table>
<thead>
<tr>
<th>Generic Stage Description (see glossary for terminology)</th>
<th>%</th>
<th>CUM</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial scope identified</td>
<td>5%</td>
<td>5%</td>
<td>Agreed Scope, Basis of design and deliverables with client</td>
</tr>
<tr>
<td>Preliminary vendor data received</td>
<td>15%</td>
<td>20%</td>
<td>Where applicable - used to initiate (but not finalize) engineering and may include cut sheets, catalog info, past (ref) parts or equipment used, etc. This also includes cross discipline vendor data where necessary.</td>
</tr>
<tr>
<td>Initial design (90%)</td>
<td>20%</td>
<td>40%</td>
<td>This is synonymous to the 60% model review.</td>
</tr>
<tr>
<td>Prelim BOM’s</td>
<td>10%</td>
<td>50%</td>
<td>This may be used for Key Quantity Tracking, estimating or procurement/materials management alignment.</td>
</tr>
<tr>
<td>Final vendor data received / checks</td>
<td>10%</td>
<td>60%</td>
<td>Where applicable</td>
</tr>
<tr>
<td>Final design (90%)</td>
<td>15%</td>
<td>75%</td>
<td>This is synonymous to the 90% model review.</td>
</tr>
<tr>
<td>Deliverables</td>
<td>10%</td>
<td>85%</td>
<td>Includes drawings, BOM’s, reference data, etc.</td>
</tr>
<tr>
<td>EWP Checks and Review(s) complete</td>
<td>5%</td>
<td>90%</td>
<td>This is synonymous with the final reviews including: internal checking complete, interdisciplinary reviews (or squad check) and IFR (Issued For Review) to client/contractor for review</td>
</tr>
<tr>
<td>EWP c/w all drawings/specs/MTOs issued IFC</td>
<td>5%</td>
<td>95%</td>
<td>Issued for construction (IFC)</td>
</tr>
<tr>
<td>EWP accepted by Construction</td>
<td>5%</td>
<td>100%</td>
<td>EWP deemed complete</td>
</tr>
</tbody>
</table>
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PART 2 – Readiness Tool
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Demonstration
PART 3 – The Readiness Playbook
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READINESS Playbook

What is a playbook:

The EWP Readiness Assessment Playbook is a how-to guide for your organization and project outlining the why/who/what and when.

Demonstration
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PART 4 – Readiness Implementation Learnings
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Implementation Learnings

• Model CWA (Construction Work Area) versus bulk EWP progression
  • CWA 1 – model review 60% progresses 20 EWP’s
• Incomplete milestones and AWP outcomes
  • 1 EWP = 40 drawings with 1 HOLD on 1 drawing, vendor data milestone credit and AWP dialogue
• Does not plan for the future
  • Future revisions not accounted for
Implementation Learnings

• Determining the ‘who’
  • Does not have to be the engineer (should not be the AWP Champion)
• Promote discussions
  • It is not meant as a stick
Questions?
Thank you!

For further information:
Visit the COAA website: coaa.ab.ca
contact: admin@coaa.ab.ca