



AWP + Lean: Exploring Opportunities

Organizational Culture

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Working Group 22-01, AWP + Lean: Exploring Opportunities

CII Advanced Work Packaging Community for Business Advancement

Construction Industry Institute

Lean Construction Institute

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Definition of Organizational Culture

An organization's culture is based on the shared attributes that contribute to its social and psychological environment, such as the following:

- Beliefs
- Systems
- Norms
- Experiences
- Philosophy
- Leadership styles
- Values
- Symbols
- Habits
- Expectations
- Ways of interacting
- Written rules
- Vision
- Language
- Customs
- Assumptions
- Attitudes/moods
- Unwritten rules

These shared attributes of an organization shape its employees' perceptions, guide its behaviors, and define its understanding as expressed in member self-image, inner workings, and interactions with the outside world. The leaders of the organization establish these attributes, and then communicate and reinforce them through various methods. Simply stated, organizational culture is "the way things are done around here."

AWP + Lean Organizational Culture

The Lean Construction Institute (LCI) defines **Lean** as a culture of respect and continuous improvement aimed at creating more value for the customer while identifying and eliminating waste. The Construction Industry Institute's (CII's) **Advanced Work Packaging (AWP)** methodology also supports establishing such a beneficial organizational culture. Understanding the profound importance of this shared culture to an organization requires attention, and establishing this culture can be challenging for companies in their endeavors to implement Lean and/or AWP.

Recent comparisons of Lean and AWP by Working Group 22-01 identified certain unique focus areas of these two complimentary project approaches; however, their underlying cultural emphases revealed a great deal of common thinking. Both approaches seek to improve readiness and safe performance of work by instilling an enhanced, collaborative organizational culture. To further optimize project delivery efficiency, an organization can apply certain tools, processes, and rigor from each AWP and Lean (referred to as "AWP + Lean" in this report), but beneath these specifics, the common organizational culture is essential to sustaining optimal value from applying AWP, Lean, or AWP + Lean.

An ideal AWP + Lean organizational culture values achievement of project objectives by embracing effective and efficient planning, waste elimination, constraint management, information transparency, predictive execution, and continuous learning while embodying beneficial team behaviors around respect, care, collaboration, commonality, commitment, and confidence. This culture is established early and continues throughout the project life cycle with a prevailing mindset and atmosphere of continuous improvement informed by

intentional feedback. Organizations that strive to successfully implement AWP + Lean in a mature fashion year-after-year will learn to establish and favor individual project cultures that are seamless with the organizational culture described in this report.

Lean culture has a history of promoting holistic and highly collaborative environments. Organizations and project stakeholders focus on generating value for their customers to meet “Conditions of Satisfaction” as a key success metric. Lean thinking is centered on the broad application of “Respect for People” and optimizing project delivery. With this emphasis, the Lean project approach gives team members a means to collaborate effectively, align to an optimal scope and sequence of work, and make sound work assignments that are free of constraints and performed at the right time for the project. By aligning to the set of customer Conditions of Satisfaction and the means for delivery through the Last Planner System®, Lean teams make collective decisions for the betterment of the project.

As with AWP, the Lean organization and operating system are intrinsically more collaborative and relational than other traditional project approaches. A Lean operating system is described as an organized implementation of Lean principles and tools combined to allow a team to operate in unison to create flow. This includes decision-making tools for use in making earlier, collaborative, better decisions as a distinguishing feature of Lean.

As an example of Lean practice, an effective **Integrated Project Delivery (IPD)** organization cuts through commercial silo walls to focus on delivering value, rather than strictly looking to complete contract scopes. Common elements of Lean and IPD implementation that support organizational alignment with Lean culture include the following:

- A “Big Room” organizational concept built around developing a high degree of collaborative behaviors
- A system of joint “work group teams” or “work clusters” arranged to guide the direction of a project and more rapidly exploit opportunities or solve problems
- Training topics that draw heavily on social systems research to drive continuous improvement and increase socialization of good ideas across stakeholders
- Contractors engaged in understanding the owner’s business case and supporting the development of more optimal project delivery solutions

AWP, properly embedded in company systems and processes, positions projects for agreement and alignment among stakeholders and purposeful planning via an emphasis on systematic execution using manageable, “progressable” work packages. AWP project roles and responsibilities connect personnel to ownership of tangible work package scopes for disciplined completion. AWP projects demonstrate inclusiveness and care for the field workforce by employing timely interactive planning with robust collaboration, establishing the

optimal “Path of Construction,” and managing Construction and Engineering Work Packages (CWPs and EWPs), procurement, and the issuing of *constraint-free* Installation Work Packages (IWPs). Individuals take responsibility for effectively identifying and removing constraints in this culture of providing the right things to the right customers at the right time. This supports safe, productive, predictive, and rewarding workforce execution across the project team. The prospect of issuing *constraint-free* IWPs offers an enhancement of the Lean Last Planner process known as Make Work Ready.

With AWP, owner and contractor project team members experience valuable transparency and effectual communication through planning, tracking, and reporting of real progress using the common language, data, and flow of work packaging. Team members become motivated to behave collectively in support of AWP program expectations, discovering commonality which increases their desire to support fellow team members in creating synergistic, “win-win” solutions. Team leaders ensure design engineering effectively incorporates “procurability,” constructability, and execution efficiency into the design, as procurement and construction representatives bring input and insight. Project personnel feel a sense of order, contribution, respect, and reward that benefits the project, their home organizations, and themselves. These cultural aspects of AWP help create organized office and field work environments that foster sustainable positive team morale.

AWP culture promotes a mindset of inclusion, commitment, and confidence for accomplishing project objectives, as the achievable, Path of Construction is jointly developed and aligned across stakeholders. With this mindset in place, synergies in AWP training and coordination among the owners, contractors, subcontractors, and suppliers are welcomed opportunities to ensure all parties take advantage of applying the AWP fundamentals to support the overall project and deliver best outcomes. Field personnel engage in AWP with the realization that the broader team is doing the right planning to support safe and productive field work. As AWP is applied well on a project, team members from office managers to field construction workers sense a more positive energy and mood across the team and come away with a sincere desire and expectation for implementing AWP on their future projects. When that expectation is met, an AWP operational culture has been established, because that is “the way things are done around here.”

Effective transformation from a current organizational culture to a more desired AWP + Lean culture starts with the organization’s leadership establishing and fully communicating the vision for driving toward a better AWP + Lean future state. Implementers of AWP + Lean promote team leadership styles that are inclusive in encouraging and enabling all project participants to identify and resolve issues to benefit the project. The company leaders can envision their organization and projects operating more efficiently and less adversarially as individuals and

teams interact collaboratively and productively in AWP + Lean fashion. The desired, improved culture is then established, sustained, and matured through purposeful and focused efforts across foundational elements that include the following:

- Key stakeholders (owners, engineers, architects, contractors, trade partners, suppliers, etc.) showing strong commitment to AWP + Lean.
- Training of company and project resources on understanding and implementing AWP + Lean, particularly in how combining AWP and Lean can result in increased flow efficiency that results from viewing projects as production systems.
- Embedding a persistent attitude of respecting people, valuing learning, and incentivizing those that demonstrate consistent positive behaviors toward AWP + Lean.
- Contract strategies and associated details incorporating clear expectations and support for AWP + Lean.
- Fit-for-purpose AWP + Lean processes and procedures being embraced and consistently utilized.
- Recognizing and publicizing AWP + Lean value to projects
- Investing appropriately in related time, effort, and resources.

Contributors and enablers for driving, managing, and maintaining culture change should include “catalytic tools” that increase the speed of adoption. These tools supplement AWP and Lean processes and procedures, including the following examples:

- Ongoing education and oversight programs that guide and support adherence of individuals and teams to desired AWP + Lean processes and behaviors.
- Aligned commercial contracting structures that enable project supply chain partners to achieve more optimized solutions by scoping work holistically, forming high-performance teams, integrating work, collaborating more effectively, and making collective decisions to benefit the project
- “Pull-based” operating systems that drive reliable performance as teams more effectively plan work by respecting all “internal” customers, more reliably committing to work that has been made ready, and increasing their capability to execute work to agreed completion requirements.

Value-driven enterprises understand that attaining desirable cultural behaviors positively affects people, process, and technology factors that lead to better project delivery experiences and personal job satisfaction. Most individuals are generally aware of the current culture of their organization and recognize its opportunities for positive change. The need for change becomes obvious when individuals understand the implications of staying with the current

culture versus gaining value with a better AWP + Lean enabling culture. By leveraging AWP and Lean elements and tools (such as the ones described in this Report), individual and team learning experiences can be created so fellowships of like-minded individuals can grow, prosper, and spread the AWP + Lean culture.

In summary, while both Lean and AWP have tools, processes, and rigor, their underlying culture makes them most effective. Collaborative tools can help organizations to enable collaborative culture, but focusing too narrowly on tools and process can cause them to miss an opportunity to gain the optimal sustained value of AWP + Lean, which results from proper culture.

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