

AN EXPLORATION OF COMPATIBILITY OF U.S. ARMY CULTURE AND LEAN CONSTRUCTION

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Abstract: The culture of the United States Army has evolved significantly over the course of the service of the present generation of Soldiers. Through the implementation of Lean Management practices, and Six Sigma measurement and analysis tools, Army leaders are more able to competently perform a mission or accomplish a business goal. Through careful case study of previous missions, effort spent building learning organizations, and cultivating a culture of respect, leaders have discovered a formula to optimize unit performance. The keys to unlocking the benefits of Lean's historically proven efficiency methods lie in changing the attitude and mindset of the Army's workforce to effectively apply lean methods to the myriad projects and tasks that the citizens of the United States ask its Soldiers to perform every day. Cultural transformation must occur, however, in an unforgiving environment that poses significant threats to our national security, leaving very little margin for error in applying the new managerial methodology to both state-side and war-side operations. Using as its framework Jeffrey Liker's Principles of Management described in *The Toyota Way*, this paper will explore the ways in which the U.S. Army is already equipped to implement lean, and those areas where more cultural evolution must take place to take full advantage of the philosophy. Viewing the Army culture as a whole, and then discussing more specifically Health Facility Development and Military Hospital Construction, the authors' contention is that the U.S. Army and Lean Construction are more compatible than may appear at first glance.

Keywords: Lean Construction, Military Culture, Military Decision Making

1 IS THE CULTURE OF THE US ARMY COMPATIBLE WITH LEAN THOUGHT?

The chain-of-command decision-making processes of the US Army is well known. At first glance, a strict hierarchy of decision-making may seem fundamentally incompatible with lean principles that promote a culture of inclusion, engagement, and consensus-building.

This paper explores the ways in which lean principles may or may not be compatible with the US Army operations as they now stand. It evaluates the applicability of lean within essentially two operational systems: war-side and state-side, the latter which performs operations that are in many ways similar to civilian counterparts (i.e. accounting, healthcare, etc.).

Table 1 represents a compilation by the authors of several lean principles from Jeffrey Liker's "*The Toyota Way*", with an estimation of their compatibility with Army culture in war-side versus state-side settings. Of Liker's 14 principles, only the principles that focus on the collaborative aspects of lean were addressed. Those principles that are more operationally-oriented (e.g. process flow) and do not deal with building consensus or making decisions are outside the scope of this paper and represent areas for future exploration.

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Table 1: Excerpt from Liker's 14 Management Principles (Liker 2004)

Principle Number	Content	Military Applicability	Compatibility (War-side / State-side)
1	Long-Term Philosophy	Decision to invest in Lean Six Sigma	Low / High
13	Make decisions slowly by consensus, execute rapidly	Army post-war leadership transformation initiative	Medium / Medium
9	Grow Leaders with thorough understanding of the philosophy	Formal pipeline to train lean practitioners	Low / Medium
10	Develop exceptional people and teams	Professional Military Education focuses on developing people	High / High
14	Become a learning organization	Assess current state and evolve to world class (healthcare)	Medium / High
5	Stop to Fix Problems	High Reliability Organization	High / High
6	Standardize Tasks / Continuous Improvement	Standard Operating Procedures	High / Medium

2 SUMMARY

- Seven of Liker's fourteen lean principles were addressed, and deemed by the authors and military colleagues to easily align with the attributes Liker argues a lean organization should exhibit.
- A strong argument can be made that the other seven principles are at least partially aligned with certain facets of U.S. Army business.
- When the U.S. Army is viewed as a system that includes state-side (i.e. civilian) as well as war-side operations, Lean principles are more compatible with U.S. Army Culture than may appear at first glance.

3 ABBREVIATED REFERENCE

Liker, J. (2004). *The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer*. New York: McGraw-Hill.

