

“We’re Different!” Overcoming the Challenges of Applying Lean Principles to Knowledge Work



Lean process improvement techniques can be applied to knowledge work and knowledge workers.

By Drew Locher, President, Change Management Associates

If you are applying lean management principles to R and D, life science, or other knowledge work processes, you’ve probably heard the “we’re different” argument. It usually goes something like this, “You can’t apply lean process improvement techniques to creative work because everything we do varies.”

Knowledge work and knowledge workers are different. But that doesn’t mean process improvement concepts don’t apply. It does mean we have to adapt the concepts and approaches by practicing these proven techniques.

Respect Knowledge Workers’ Needs

Knowledge workers have three needs:

- A sense of purpose;
- A sense of mastery;
- A sense of autonomy;

Frankly, you can argue that these apply to all people regardless of work, but the demand is even stronger among knowledge workers, particularly for the latter two needs. They take great pride in the mastery achieved performing their roles and responsibilities in the current process. Lean, especially, and continuous improvement, generally, often are viewed as an affront to the existing sense of mastery, expressed in statements like, “Don’t you think that if there was a better way, I would have figured it out by now?”

Standardized work, a foundation of lean, is often viewed as taking away an individual’s autonomy – that sense of freedom or independence, often expressed by statements like, “Why do you care how I do it, as long as I get the work done?” This need is particularly strong in Western cultures.

Companies ignore these requirements at their peril. People will disengage and ultimately a lot of knowledge and experience will walk out the door. We may not be able to get everyone on board a lean journey, but the fewer we lose the better.

First, Provide a Purpose

Give knowledge workers a valid and compelling reason to change. Leaders must provide a challenge such as: “Our competitors are getting new products to market 25% faster than we are” or “We need to reduce our time to market by 50%.” People rally around challenges that are based on reality.

Or maybe you can demonstrate the negative impact of current practices on quality or customer service. People are often unaware of the existence or magnitude of such impact.

For example, a company was trying to improve its quote process that involved many veteran estimators, who drew on their experience to estimate material and labor cost to develop a price. As an experiment, three estimators were given the same request for a quote. Each calculated a significantly different price. Not much needed to be said after that. They were motivated by individual and collective pride to delve into the source of the variation to improve the process.

As a leader, you have to find that sense of purpose that resonates with knowledge workers. But that is just to get started.

Regaining Mastery

When changes are made, there will be a period of discomfort for the people affected. In fact, process performance may be negatively impacted until the changes become habit. Knowledge workers will quickly point this out as a reason to return to old ways. Leaders must stay the course while being supportive as people become more and more comfortable with the new process over time and regain their sense of mastery.

How much time is needed depends on the nature of the changes. Are the changes affecting the value-adding decision processes that knowledge workers perform, or the nonvalue-adding activities that those same folks also do? Even changes that affects the latter can cause discomfort, but it tends to be shorter-lived.

In any case, gather facts from the new process as part of the 'check' phase of your plan-do-check-act (PDCA) improvement cycle. Share the information with those affected. Assuming positive outcomes, the information will reinforce new behaviors and help people regain a sense of mastery sooner.

A New Sense of Autonomy

Knowledge workers' sense of autonomy in performing their roles needs to be supported by involving them in improvement activities. However, they must do so collaboratively with others performing the same work, as well as suppliers (internal and external) and customers (internal and external). This can feel like a loss of individual autonomy and will need to be coached accordingly. But most knowledge workers generally make the transition from individual autonomy to group autonomy.

When applying standardized work to knowledge or office processes, make sure that standardization only happens where it matters. Knowledge workers will quickly challenge standards that do not affect the performance or the outcomes of the process.

In lean terms, standardizing how a process is done should only be made when it rises to the level of a "key point" that involves quality (if the process is not performed a certain way, the quality of the outcome will be unacceptable), safety (people can be injured), and efficiency (specific steps or know-how that make the work easier to do.)

If there are no quality, safety, or efficiency reasons to perform a process or step in a particular way, then it may not be necessary to standardize it. This gives knowledge workers some autonomy in how they perform a process. With compelling reasons given for each key point, people will accept standards more quickly.

There Is Always a Process

Finally, it's critical to help knowledge workers see that there actually is a process to what they do. It's not always obvious to them. They'll tell you that "everything we do is different." Indeed, outcomes can vary, but there is a process to create the outcomes.

Often the process is a decision process. It is important to recognize it and identify opportunities for improvement because such processes often constitute a large portion of what knowledge workers do. Typically, they must know:

- What information do I need?
- How do I go about obtaining it?
- What decision or decisions do I make based on the information that I receive?

Those three questions represent a process that can be standardized to a large degree. By doing so, the resulting standard work can greatly reduce the learning curve that a knowledge worker typically would go through.

Standard work captures the collective learning of the group and documents it in a simple and visual way that is accessible to all. Such standard work often takes the form of a checklist or decision tree.

Process and system thinking are keys to lean thinking. When problems arise, they cannot be explained away as a natural part of a highly variable process. Deeper reflection is needed.

Many knowledge workers are already involved in problem solving. Think: an engineer designing new product or service, or a technical support person helping a customer. But solving process related problems is challenging. Knowledge workers who don't recognize the process that exists will struggle with identifying systemic causes that represent opportunities for process improvement.

Try asking, "What similar issues have we seen that might be indicative of systemic causes that can be addressed so recurrence is prevented?" Too often the response is a form of "this has never happened before."



*This article is related to the Webinar: [Problem Solving in the Lean Supply Chain](#)
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Taking the time to really reflect on where the decision process went awry, without affixing blame to individuals, is not easy but necessary. With sufficient practice in root cause analysis, knowledge workers can begin to develop their process thinking, and their ability to improve their processes.

Acknowledging that the nature of knowledge work is different, and that the approach to lean must be adapted accordingly will help you defuse initial resistance. Attending to the three needs of knowledge workers throughout the lean transformation will also help build greater acceptance.

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About the Author



For nearly 30 years, **Drew Locher** has applied lean management principles to a wide variety of business environments, including manufacturing and knowledge work. He helps companies implementing lean through Change Management Associates.

He is co-author most recently of Shingo Research Award winner [The Complete Lean Enterprise: Value Stream Mapping for Office and Services, Second Edition](#). Drew is also the author of [Value Stream Mapping for Lean Development: a How-to Guide to Streamlining Time to Market](#). His book [Lean Office and Service Simplified: The Definitive How-To Guide](#) was a 2010 Shingo Research Award recipient.

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