

How Human Resource Departments Can Help Lean Transformation

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Companies have begun to understand that lean is about more than 5-S and U-shaped cells. It is also about people, culture, and leadership. However, Human Resource (HR) departments seldom seem to take an active role in lean transformations. How can companies and their HR departments better engage the full human potential of lean? To assist answering this question, we conducted a research study. From it, we discovered from actual practice not only how HR, but leadership creates better organizational conditions to support lean transformation.

Our results indicated that five key variables predict successful lean transformation:

1. Development of teams as a supporting structure of lean
2. Calculation and communication of metrics
3. Communication among organization members, particularly across organizational barriers
4. Communication to employees regarding their specific role in lean transformation
5. Acknowledgement and celebration of successes toward lean transformation.

Our research indicates that these are areas in which dramatic change in HR departments can accelerate a successful lean transformation.

But first, a note on the general state of HR in the context of leading change. HR departments have taken the brunt of punishment for inability to effectively engage employees in change programs. For example, the August 2005 cover page article in *Fast Company* magazine is titled, "Why We Hate HR." Everyone gets a laugh from Scott Adams' *Dilbert* cartoons portraying Catbert, the evil HR director, but laughs don't solve the problem.

Adopting lean principles well beyond core manufacturing has dramatically changed many other corporate internal functions, including product development, supply chain management, and more recently, accounting. But in too many companies, HR remains untouched by their company's commitment to lean. And for those who have engaged HR to help with

In Brief

Many anecdotes from practitioner experience attest that the human side of lean is the hardest. While the authors' survey statistically confirmed much of this wisdom, it also revealed a few surprises. Their conclusion is that to sustain lean operations, the human resources function must support them, beginning with hiring people who are likely to be happy and to succeed in a lean working culture.

Steps in Our Research of Lean

Before designing our survey, we completed an extensive literature review of existing research, to identify variables and factors relating to instituting a lean transformation. From this review, six areas seemed of particular importance to investigate further by administering a survey:

- Demographics (age, sex, ethnicity, etc.)
- Work Environment
- Innovation, Tools, and Technology
- Lean Implementation
- Communication
- Rewards/Benefits of Lean Implementation

We designed two separate surveys: One addressed employees working under direct supervision; the other addressed supervisors and managers charged with ensuring lean practices within their department(s). Each survey asked similar general questions, but different role-specific questions related to the implementation of lean.

Survey questions were written and grouped into one of the six categories derived from our literature review. Sixty-four questions were on the employee survey; 66 questions — two more — on the manager survey. Both questionnaires required ten to 15 minutes to complete.

After the survey design was completed and reviewed by the researchers, it was reviewed by two subject matter experts who had extensive experience with lean transformations, and who serve on the Pawley Institute board of directors. Both subject matter experts recommended changes to the content and wording of the survey instrument. After these modifications, the questionnaire was uploaded into a website entitled surveymonkey.com, which compiled the data as it was collected by those visiting the site to take the survey.

Survey respondents were from corporations recruited through local manufacturing membership associations, or who were involved with The Pawley Institute. Both electronic and written communications encouraged people from these sites to complete the survey by using the website, mail, or visits from the researchers if desired. The majority of those completing the questionnaire used the surveymonkey.com website. Corporations who did not provide website access to all survey participants distributed hard copies of the survey amongst their employee population.

Survey data was captured from respondents in 72 different sites or companies; 154 workers completed the employee survey; and 72 managers completed the management survey. The percentage of persons who had seen the survey prior to responding is unknown, but all persons who did respond completed every question on the survey. Only the conclusions from the survey are reported here; the statistical analysis is omitted.

lean transformation, the contribution has not reached its potential.

General Research Findings and Discussion

Our research results demonstrated that, despite the significant history of lean and its application within companies of all types and sizes, documentation of conditions for success is generally elusive. Lean transformation may be one of the most powerful means to improve businesses, but far too few companies achieve the promised gains. From the view of the research, five key variables predicted the perception, at least, of successful lean implementation.

The following findings and conclusions relate each of these five key variables to the engagement of HR implementing lean.

1. Development of teams as a supporting structure

Teams are an important element of a lean organization. We believe, and the research supports, that the development of effective teams extends deep both inside and outside of lean transformations. Within lean, teams are important because the whole process must work together to build value for the customer, and if teams cannot work together then the process cannot work for the customer. How teams

work is more important than their mere existence.

Teams in a lean environment need the following: first, a common language, common principles, and common tools. Second, a common drive provided by vision, metrics, and goals. Third, they need to design the work around them visually so that there is high agreement about what work must be done and how it should be done — and immediately exposing problems so that they may be resolved.

No surprise so far, but fourth, and perhaps most important, teams need both the capability and the skills to manage themselves. In a lean environment, teams need a great deal of autonomy to manage and improve their process, but this is not done in a vacuum. Teams are still part of the larger organization around them. Providing more autonomy than necessary before maturity can be a big mistake, for with this new authority comes new responsibility — the responsibility to function as a productive team together — and with other teams.

2. Calculation and communication of metrics

Metrics keep score and determine if progress is being made. In a lean environment, we found that several criteria should be considered when developing metric systems or scoreboards. First, a scoreboard and its relevant metrics must be “owned” by those who own the process, whether a cell team on the floor, or an office team such as customer service. Therefore, metrics must be easy to update by these process owners. Second, metrics must be as predictive as possible, with only a small fraction of the metrics looking rearward. Because these metrics should support daily decision making, predictive metrics offer much more useful decision support than those that are rearward facing. Third, management must support the metrics; they must decide who will review the metrics, when they will do so, what they will look for, and how will they respond to the metrics with action. Fourth, and perhaps most

importantly, the metrics must point in a steady and consistent direction toward the ideal state.

3. Communication across boundaries

Companies that are successful in lean are also successful improving their communications, particularly across boundaries such as departments and functions. Although understandable, this was one of our more surprising research findings. In a lean environment, process focus takes priority over functional focus. Successful lean processes have material or information flowing across functional boundaries, so naturally companies that are successful in lean will also improve communications across functional boundaries in the manner most efficient and effective for the customer.

The research found that communication in a lean environment must be vertical, horizontal — and two-way. It is not enough for a lean leader to be excellent communicating the vision and direction to the masses of the organization; he must also convey information about the changes going on at the top. Lean changes both the work and the way people think, so employees need to see that individuals at the top of the organization are changing the way they think before they will do the same.

Bottom-up communication is equally important. It provides valuable, timely information about changes that are going on, and about new barriers that arise as progress is made.

Horizontal communication must occur, not up-across-down, but directly from the source of the information to the need. The ability to communicate, and for that communication to be received and used, is important to assure process experimentation where the work is done. Increased experimentation can result either in increased chaos or in organization-wide improvement. The key variable differentiating between these two states is how well an organization communicates directly from person to person.

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4. Communication to employees regarding their role

Part of management's communication for lean implementation includes clarity of each employee's roles and responsibilities. This communication, however, is a two-person process. Lack of employee commitment was found to be one of the top barriers to implementing continuous improvement. This study traced the roots of employees' negative attitudes to the management team not consistently communicating with them. In addition, it was discovered that employees need to be trained in communication and discussion techniques; otherwise they really do not understand how to ask questions and how to elicit feedback.

When many companies begin their lean journeys, they train everyone in lean — then give everyone the same role: Go out and apply lean. However, as with any other aspect of an organization, success depends upon role clarity. Roles must change as an organization goes toward lean maturity, so the rate at which an organization reaches maturity partly depends on lean role clarity and integration throughout the journey. Maintaining role clarity as these roles dramatically change appears to be an important criterion of success.

5. Acknowledgment and celebrations of successes

Most corporate initiatives have a distinct beginning and a clear, objective outcome, but lean is a never-ending journey. If objectives remain clear, employees at all levels can feel a sense of accomplishment and if appropriate, the accompanying reward. But since lean is an endless journey, employees are unsure when to celebrate accomplishment. Simultaneously celebrating and raising awareness of the remaining performance gap is a tough balancing act. However, this research demonstrated that companies that find ways to celebrate success along the journey are more successful at lean. They clearly

define milestones, communicate progress toward them, and celebrate successes along the journey.

So how does an organization acknowledge success on a never-ending journey? First, they must learn to recognize and communicate progress. Then they must decide how to reward such progress, if at all.

Recognizing success in lean first requires that it be understood as a journey. Without implying that ultimate lean has been achieved, leadership must balance recognition of the success achieved with maintaining the tension for future progress. If tension is sustained without recognizing progress, organization-wide burnout will follow. Managers should understand that what they choose to recognize as success, and how they choose to recognize it, can either reinforce human progress or retard it.

Rewarding progress is an even more complicated challenge. All solutions to the reward problem have downsides. Some of them can be catastrophic. Suppose you reward people in proportion to the size of the ideas they contribute; all you will get are big ideas, and you will minimize the development of people not in position to make big contributions. Another big problem is that rewards can quickly become entitlements, losing the intended affect. Some of the most successful organizations give no significant direct compensation for ideas contributed or for participation in lean. Unfortunately, we know of no thorough empirical data supporting a common-sense lean practice: that the most effective encouragement is to support the people contributing ideas day-in and day-out by listening to those ideas and acting upon them.

Recommendations for HR Departments

If you are an HR manager, or connected to an HR department, what steps can we recommend that you take, based on this survey? General recommendations must be framed as "areas HR should enroll them-

selves in.” Specific solutions that emerge will vary depending on the company, its history, and its challenges.

Culture: Creating a lean culture is to create an environment that supports four of the five predictors from this study: 1) teams developed and functioning to support the structure of lean, 2) communication processes that operate across boundaries, 3) clarity of all employees’ roles in the lean organization, and 4) a process for calculating and communicating metrics is in place and followed by process owners.

Future research on how to create and maintain such a culture is needed, including defining more specifically the artifacts and beliefs of that lean culture.

Recruitment Seeking the Character Traits Needed: Ability to communicate, work in teams, create and follow measurements, work across organizational boundaries, and identify and celebrate successes. If these traits are present in some form in employees implementing lean, they may be enhanced. But if not basically present, they may not be able to be taught (Collins, 2001). Therefore, the recruitment and hiring process should identify and select these traits.

Future research on how to recruit and hire a lean-ready person is needed. This includes the criteria and methods to predict leaders of lean, as well as those which would fail in a lean environment.

Pay/Recognition and Performance Structure: The fifth predictor in this study identified the importance of rewards and recognition and the acknowledgement and celebrations of success. A fair and suitable reward and recognition program is vital in the recruitment and retention of employees, especially in a lean implementation process. This does not imply a high pay structure, but rather considered fair and equitable. Just as studies have shown that executives who were successful in creating great companies were not necessarily the highest paid (Collins, 2001), the same thing may apply to others.

Future research on how to pay and reward a lean employee is needed, and what

levers beyond pay most contribute to lean success.

Developing, Choosing, and Maintaining Lean Leaders: Leadership in a lean environment can quickly be distinguished from traditional views on leadership. Lean is a long-term, evolutionary, and inclusive environment. Leadership for it differs from crisis-based, charge-the-hill hero leadership. Understanding the choice between developing leadership for lean and choosing leaders who would support lean must be examined and methods examined. We need to further explore the skills and capabilities to maintain leadership over a long period of time (Spear, 2004), and the conflict between long tenure and high demand for such individuals in the external job market.

Next Steps in Formal Research

Boyer (1996) states that the determinants of lean production system success are the actions taken, the principles implemented, and the changes made to the organization to achieve the desired performance. This research supports Boyer’s premise along with the critical finding that the predictors of lean success are neither unique, nor specific to manufacturing. That is, respondents did not choose lean tools as a contributor to lean success. Rather, all five primary predictors are “human” issues, and those are the domain, although not exclusively, of HR departments. Yet the literature is limited on how HR supports and enables lean implementation as supported.

Future research in how human resources enables lean must address these predictors, which in turn should increase lean transformation success. Lean in human resources must be distinguished from HR-enabled lean. Lean in human resources is defined as driving waste out of HR processes. HR-enabled lean is how the human-resource processes and functions help create lean success throughout the organization.

This research should drive deeper into the predictors of lean success. Several key questions will be explored for each of the five predictors, such as:

1. Why is it a predictor of lean success?
2. What are the best practices within this predictor?
3. What factors should be avoided in this predictor?
4. How can HR organizations provide value in support of this predictor?

We plan to extend this research, and as always, participation and funding is required. If you would like to participate in the future phases of this research, please contact us.

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