Human Resource development in Toyota culture

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Abstract: Companies throughout the world are engaging in 'lean' programs for manufacturing, product development, office work, and even the enterprise following Toyota as a model. The goal is to eliminate waste. Generally speaking these programs have had success at driving impressive dollar savings, but we believe the results are still far below what is possible and generally not sustainable. The problem is a fundamental misunderstanding of what has made Toyota so successful. For Toyota the goal is always to be the best at cost, quality, delivery, safety, and morale through engaging people in continuous improvement. This paper summarises how they do that through an exceptional Human Resource (HR) development system.

Keywords: lean management; human resource development; culture change.

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1 Introduction

From the founding of Toyoda Loom Works in the 1920s to the creation of Toyota Motor Company in the 1940s, its leaders believed that the key to success was investment in its people (Liker, 2004). The Toyota culture has evolved since the company's founding and is the core competence of the company. It is the reason why operations are lean, cars hit the market on time and on budget, chief engineers developing cars deeply understand the customer, company executives anticipate long-term trends and have clear strategies, and every employee (called a team member) is vigorously working on achieving the annual plan of the company. The Toyota Way is first and foremost about culture – the way people think and behave deeply rooted in the company philosophy and its principles (Liker, 2004). At the core it is about respect for people and continuous improvement and this has not changed since the company's founding.

Organisations of many kinds throughout the world have been borrowing specific methods from Toyota that have been turned into programs like lean manufacturing, lean enterprise, and lean six sigma. Underlying these programs is a fundamentally different assumption than we see in Toyota's culture. The assumption of these lean programs is that the right tools applied to specific problems by expertly trained individuals will dramatically improve business performance in a relatively short period of time. Toyota's underlying assumption is that carefully selected and developed people over long periods of time will continuously improve processes and ultimately lead to competitive advantage and mutual prosperity.

These philosophical underpinnings lead to very different views of how to manage and develop people and different views of the role of the human resources department in the firm. Mention Human Resources (HR) in most companies and one thinks of a department that processes people in a similar way that accounting processes money. Massive computer systems and large procedure manuals with reams of data account for such things as salary structures, benefit packages, career paths, retirement programs, and health insurance. You can study HR in college and get a job as an HR professional. For most people who choose other professions such as engineering or nursing or law the HR department is a place they go to get processed into the company when they are hired or out of the company when they leave. Sometimes in between they may have a question about benefits or salary scales and contact HR. Otherwise the less contact the better. The traditional firm views HR largely as a human accounting function. In fact it is becoming popular to outsource the 'HR function' to information technology firms as a cost reduction strategy.

The purpose of this paper is to address the question of how a change to lean management impacts the HR function. We will use as a model for lean management the original – Toyota. We will see that in fact there is a very profound difference in HR at Toyota compared to traditional companies but perhaps not in the way we might think. Toyota's view is that lean management requires more highly developed people and deeper trust than in a mass production system. People become the most critical part of the system and their willingness to identify and solve problems is what drives continuous improvement. As such, HR is arguably the most critical function in the enterprise. The accounting roles of HR are fairly trivial at Toyota compared to roles in developing people and creating a fair environment based on mutual trust.[1]

This paper starts by addressing the role of HR in a lean enterprise. Next a detailed case study is presented on how HR at Toyota's plant in Georgetown, Kentucky (TMMK)

responded to a major crisis of trust by reorganising the HR function. This example reveals that Toyota is far from perfect and experiences serious problems and gives insights into how Toyota responds to problems by getting to the root cause. The paper concludes with a discussion of some of the cultural issues that affect the ability to create a Toyota-like HR system in the USA.

2   What is the role of HR in a lean enterprise?

The concept of 'lean production' was first introduced in *The Machine that Changed the World* (Womack et al., 2007) to refer to a new way of looking at the manufacturing enterprise. It was distinguished from mass production by its single-minded focus on eliminating waste in all aspects of the enterprise. An enterprise exists to add value to customers through a series of activities that transform inputs into outputs and anything other than the minimum needed to perform that value-added function is waste. Toyota was the original model for lean and the concept of 'Just-In-Time (JIT)' epitomised the focus on waste elimination – only make exactly what is needed, in the amount needed, when it is needed.

In fact, the JIT principle is one aspect of a broader philosophy represented by the Toyota Production System (TPS). In TPS the JIT concept is one pillar and the other is to build in quality at every step of the process, not allowing defects to propagate through the value stream. The foundation is stable and repeatable processes. In the centre of TPS is the person who must be motivated to identify and solve problems.

The question of how lean production changes the role of HR is an interesting one. If we take an abstract view of lean production and focus only on waste reduction (Womack and Jones, 2003) we might then suggest ways HR can help eliminate waste. For example, there is ample data on ratios of indirect labour to direct labour to decide if you are 'lean' in overhead. Or we might subject HR itself to lean methods and ask how we can cut waste in the HR process. For example, we could use value stream mapping to reduce waste in the hiring process by eliminating non-value added steps – or perhaps outsource HR to a cheaper source. If we consider the original model of lean – Toyota – we would ask a different question: What does HR contribute to the creation and maintenance of Toyota Culture?

The HR Department at Toyota plays a far more important role than that of processing people as a stream of assets. The Toyota Way views the way team members are developed as the key competitive competency of the company (Liker, 2004; Liker and Meier, 2007). And since developing exceptional people is the most important work of the company, the organisation charged with that responsibility had better be exceptional (Ulrich, 1997). One only has to look at the people who pass through HR as managers to notice something is different at Toyota. Managing Directors, Vice Presidents of manufacturing and engineering, and some of the leading experts on the TPS have spent time working in HR. That is because HR has a key role in developing people who work in operations so HR managers must be experts on operations.

Since lean management is a method for eliminating waste and the object of much of waste elimination is labour cost, one might think the main purpose of lean methods is headcount reduction. Toyota also wants productivity improvement over the long term but achieves this through waste elimination. The tools of TPS are designed to surface problems so that people can solve those problems thereby continually strengthening

the system. In part because of Toyota's heritage in Eastern culture the world is viewed as complex and dynamic (Nisbett, 2003). It is impossible to anticipate exactly what the future holds. So things like forecasts of demand and detailed schedules based on those forecasts are viewed with great suspicion. To create as much control as possible Toyota views all plans as tentative and then uses problem solving to respond to the inevitable deviations that will occur from the plan.

The JIT system is a good example of this. Many companies view JIT as an inventory reduction system. Lower batch size and use pull systems to reduce inventory. Toyota also works hard to reduce inventory but for a different purpose. Large inventory buffers will hide problems. A piece of equipment breaks down or a person gets behind in their work and as long as there is inventory the next process can keep working without interruption. In a JIT system a problem in one process will quickly shut down the next process. Toyota expects team members to pull a cord when they notice any deviation from standard which can stop the production line. The andon (light) goes on for all to see and the problem is immediately elevated to a high level of urgency and must be addressed. People who are well trained in problem solving will first contain the problem to get production running and then take the time to identify the root cause of the problem and develop and implement countermeasures.

When a process is first introduced we cannot predict all the ways it will fail. Through continually surfacing problems and solving the root causes the system gets stronger and stronger. The next question is: how can we capture what we have learned and sustain it? The final step in Toyota's problem solving process is to make the new method a standard. The new standard is followed until another problem occurs that exposes another weakness and a better solution is developed. Those trained in quality will recognise this as the plan-do-check-act cycle taught by J. Edwards Deming.

The implication of this philosophy of management is quite profound. If TPS, or what we now call 'lean', is intended to surface problems and people serve the function of problem detectors and problem solvers certain conditions are necessary:

- there must be a standard so team members can recognise deviations as problems

- team members must be well trained to understand the standards

- team members cannot fear that exposing a problem will get them in trouble or lead to job loss

- team members must be trained in problem solving methods

- team members must be motivated to help the company achieve its goals.

The connection between the technical systems of TPS and the role of people in problem solving is captured in Figure 1. What are often thought of as tools of TPS – JIT, visual management, standardised work – are shown in the foundation. As the system is tightened up, with less and less inventory, problems surface more quickly. Visual management highlights problems. Standardisation defines problems as the gap between the target and actual condition. The pillars are problem identification and problem solving.

The manufacturing process is expected to be imperfect and problems will continually be surfaced. It is up to people to identify those deviations from the standard and solve them (Liker and Meier, 2006). In so doing the people themselves are learning and getting stronger. In this way people development and lean manufacturing system development

go hand in hand (Liker and Meier, 2007). For this to work there must be a high level of trust – trust that there will be no negative repercussions of surfacing (admitting) problems and trust that if the company gets stronger all will benefit.

Figure 1   Problem solving connects the product and people value streams
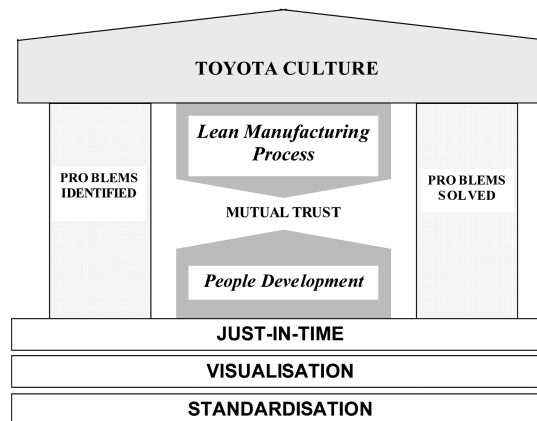
Kiyoshi (Nate) Furuta was the first Vice President of HR at the Toyota plant in Georgetown, Kentucky. He was very well schooled in TPS and understood the importance of trust for the system to work. So from the very beginning he knew that HR had to ensure an environment of trust for Toyota to succeed in the USA. As Furuta explains:[2]

> "In the very beginning our concern was how we can make the worker not be afraid of management and freely tell us the problem. TPS requires that we make things visible so we have to convince people their job is secure so they will admit to a mistake and that is never the cause of being fired. I explained to Cho-san (then President of TMMK) that we need a strong HR department. HR must have the final decision to change employee status. Supervisors can recommend, but cannot make final decisions. Even then people in HR in the USA did not believe in this kind of concept because they were so used to being the processor after department managers make decisions about hiring, firing and promotions. Our system says HR can say no."

This all sounds very lofty and ideal and it is easy to get the impression that Toyota is either like a utopian company or this all must be a facade. Neither is the case. Toyota is very sincere in believing that competitiveness depends on strong TPS which depends on developing highly capable people with a high level of trust. HR acts as the guardian of trust. This does not mean that people are perfect or that Toyota's system is perfect. Again, the underlying premise based on Eastern thinking is that nothing is ever perfect and we can never know all the ways that the system will fail. Nor can we predict exactly what people will do. One case really drove that lesson home at the Toyota plant in Georgetown, Kentucky (TMMK). We next go into some detail about that case. It illustrates that Toyota is based on people and people are not perfect. It also illustrates the seriousness with which Toyota takes protection of trust and the power of a problem solving culture.

3   Restructuring HR as a result of a critical problem

3.1   Understanding the problem

As the first wholly owned Toyota assembly plant in the USA, TMMK was looked at as an important source of learning for future overseas plants. In 1997, the plant had its first real HR crisis that revealed serious weaknesses in the system and a lack of awareness by management about these weaknesses.

The problem that finally came to the attention of management was a sexual harassment situation that was taking place in the paint department involving supervisors and members of management. As soon as the HR reps and management team found out about the problem, it was attacked in the standard Toyota fashion. The HR reps started to interview team members to get the facts, but were quickly told that they were not trusted and that is why nobody had come to them earlier. The HR reps were seen as members of management, and therefore part of the problem and not the solution. HR management decided to hire an outside investigation team to do the interviews with paint team members and management.

Through this process the facts came out and were shocking to the management that up to this point thought they had created a fair and safe environment for team members. There were a number of supervisors and members of management that were not behaving according to Toyota's stated values and standards. Disciplinary action all the way up to termination for some was initiated. It was ten years into the plant's history, and the plant had been viewed as a model for employee relations up to that point. Many thought the company was going to try to minimise, justify, and defend what had happened. This would be counter to the Toyota Way principle of surfacing and solving problems. The message to the press and the team members was the same: We messed up; the systems we have in place to highlight and deal with these issues failed us; and we are going to investigate, find the root cause, and correct the problem.

That is exactly what took place. The company hired outside consultants to help because part of the problem was that team members had lost trust in HR and its representatives in their area. There were special team member meetings and focus groups held to talk with the team members and get their perspective on the cause and possible countermeasures.

Two main themes of issues came to the surface. The first was that the plant had to get back to following Toyota Way values, and the management team had to be held more accountable for doing so. The second was that the plant needed to address the HR organisation and the fact that the reps did not have the trust needed to be told about the problems early on.

Notice that the problems were defined much more broadly than the specific incidents of sexual harassment. In Toyota problem solving, the 'five-why' process leads to continuing to dig into root causes until you arrive at the underlying system causes. Simply fixing the proximate cause – like sexual harassment and the individuals involved – would not prevent the problem (or a similar one) from occurring again. Beyond this, there are other problems that occur when management is not living Toyota Way values and HR is not trusted, and those problems would still exist if only the sexual harassment issue was addressed.

3.2   Back to the basics – values

For the improvement activity of following the values, more management and member focus groups were held, the values of the company were specifically defined, and then ideas were generated on how to better hold everyone accountable for following them. The team members and managers mutually agreed to a vision and a specific set of values that would define the Georgetown plant. They were:

Our vision: Be a company respected worldwide for producing the highest quality vehicles at the lowest cost in a safe environment. We will achieve this by following the principles of TPS, promoting mutual respect, living our values, and by maintaining an environment of continuous learning.

Our values:

- *Safety*: To make safety and health <u>the</u> priority, we accept individual responsibility for our own safety as well as others.

- *Customer satisfaction*: To gain and hold our internal and external customers' respect and loyalty, we live by our philosophy that the "next process is our customer".

- *Respect*: To achieve an environment where all team members treat other with dignity, trust each other, and care about the work we do, we foster initiative and creativity.

- *Integrity*: To demonstrate the highest ethical standards in all interactions, we deliver on our commitments, admit our shortcomings, and act as an environmentally, socially, and economically responsible corporate citizen.

- *Teamwork*: To ensure the success of our company, each team member has the responsibility to work together, and communicate honestly, share ideas, and ensure team member understanding.

- *Continuous improvement*: To contribute to our competitiveness and long-term success, we take responsibility for improving ourselves, our processes, and our products through innovative thinking, and continually challenge ourselves to improve, take pride in our work, and play an active role in making TMMK a better company.

Then everyone agreed to follow the systems already in place to 'pull the andon' (like pulling the cord to stop the line) in case the plant was not meeting the standards represented by these values. The systems already in place included regular communication channels such as team member meetings and a Hotline Call system. Because of the mistrust of the HR department, a new hotline was also set up which was known as the 'Corporate Compliance Hotline', and it went directly to the office of the president. It in effect became a check and balance on the HR division.

   The team members also came up with an idea to institute a value 'card system' in order to give immediate feedback to anyone in the company, including managers, if they were not following the values. The cards worked like those that are used for a soccer referee. Each team member had a pocket-sized booklet that included a set of the values, the expected behaviours, and three cards in the colours green, yellow, and red. Whenever anyone observed anyone else demonstrating the values of the company, like

stopping what they were doing to help a teammate, they were greeted with a green card. A yellow card was used to 'warn' another person or the whole group if they were getting close to the 'line', while the red was used to let the others know that the 'line' had been crossed. It was not uncommon to be in a meeting and see yellow or red cards come out if there was some gossip starting, or some derogatory comments or even jokes that were at the expense of others. It sounds a bit corny, but the system was a great tool that was serious, but also fun enough to be utilised in order to help cement the behaviours desired by all. This is not a permanent tool and has a clear lifespan after which people get tired of it, but that is the reason why continuous improvement is needed.

3.3 The HR re-organisation

At the same time the values activities were going on, HR was also looking at itself in the mirror to determine what needed to be done. In proper Toyota fashion, there was an honest look at the situation as compared to the standard. The standard for HR is to uphold the company's values and to partner with manufacturing in order to reach the business goals. The reality of the situation was that neither of these two was being accomplished. There was much data from the company indicators to substantiate this, including data from the Hotline Call system, a regular opinion survey, and team member meetings. With this gap identified, it was time to get to work on problem solving.

Routinely at Toyota problems identified are solved by getting a cross-functional and cross-level team together, allowing them to use the problem-solving process, and empowering them to make the decisions necessary to take care of the problems. In this case a senior management team developed the goals of the activity and guidelines acting as a 'steering committee' to a working team. The goals or outcomes of the activity were identified as:

- improved teamwork within HR and with manufacturing
- development of individual skills in HR
- integration of HR principles into each section
- greater flexibility in the workforce
- improved communication and access to HR for team members
- improved consistency of policy applications across manufacturing areas.

The working team was made up of the assistant manager and specialist levels within the HR department. They were given the following directions:

- gather input from customers (the team members and manufacturing management)
- benchmark other organisations
- map out all current processes and flow
- list all current member roles
- identify the key roles of HR and then align the organisation accordingly
- operate within budget constraints.

The working team spent several months getting input from the customers and benchmarking, and then two more months of analysis. They looked at the current structure of the HR organisation as shown in Figure 2. The team found that the biggest problem with the current layout was that HR was literally and figuratively apart from the manufacturing sections and not doing a good job in partnering with them or being available to the team members and building the relationship of trust.

The team also found a problem with the structure and the role of the HR rep. TMMK had the rep being the team member advocate one day, but if the team member went into a corrective action situation, the same rep may be sitting on the other side of the table from the team member as part of the investigation and disciplinary process. It was a logical consequence for the team members to see the HR reps as more of a management advocate than a team-member advocate, and as a result they were not confided in when there was a problem.

Figure 2   Past layout of HR at TMMK (see online version for colours)

Current Situation

Plant Layout
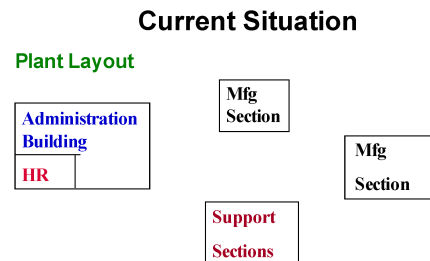
The last thing the team discovered was that the reps were spending the majority of their time on team member administrative issues. They were answering questions about picnic dates and funeral leave benefits for a sister-in-law, but not solving issues and problems that the team members were having. Responding to administrative questions is a common role of HR in traditional companies, but not what Toyota was looking for.

As a result, the team then proposed that the 'new HR' organisation be structured around four key roles with the corresponding functions (These four functions based on book by Ulrich (1997)):

Strategic partners

- Act as an integral part of the business team

- Engage the business team in systematic organisational audits resulting in clear priorities

- Provide HR resources to the business

- Possess clear understanding of current business conditions (internal and external).

Administrative experts

- Develop and manage guidelines, plans, and policies for effectively managing HR

- Act as consultants in fields of expertise, supporting other HR professionals and other HR clients

- Take responsibility for continuous improvement in programs and operations.

Employee champions

- Speak for employee needs and management concerns about employee relations

- Know the employees and anticipate their concerns and issues

- Be available and approachable by employees

- Be experts in assisting employees with concerns

- Provide employees with the resources they need to commit themselves to meeting company objectives.

Change agents

- Influence and drive organisational change strategies in support of business objectives

- Manage the process to ensure successful change management

- Continuously take the organisation's pulse regarding both internal and external matters

- Remain current about tools and practices of change in order to effectively and efficiently manage change and respond to the organisation's requirements.

The team also proposed a new HR structure and physical layout be set up in order to facilitate these four roles. The new structure is illustrated in Figure 3.

Figure 3 Revised layout of HR at TMMK (see online version for colours)
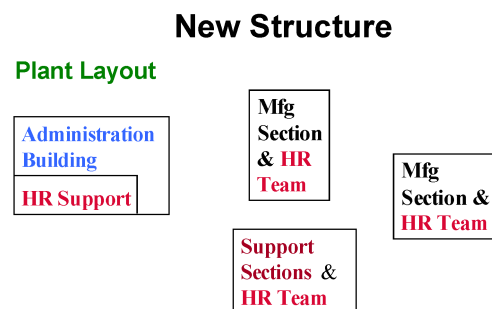
This new structure had a 'mini HR team' set up in each of the manufacturing areas in order to do a better job of both partnering with manufacturing management and performing the role of team member advocate. This team performed the HR roles of both employee champions and strategic partners. The roles of the teams included:

- *development*: on-the-job development, process improvement, section-specific training, coaching, section business and strategic planning

- *employee relations*: employee advocate, concern resolutions, peer reviews, safety and health

- *HR systems*: salaried promotions up to assistant manager, salaried relations, training for salaried members.

The change resulted in a mutually beneficial partnership between manufacturing and HR. HR and manufacturing now work on the annual business (hoshin) plans together resulting in better collaboration and integration of the two departments, while at the same time preventing some of the team member concerns from coming up like they used to.

The move had addressed the problem of having 'silos' in the organisation. At the same time, the design was meant to prevent just taking the HR and Manufacturing silos and turning them horizontally and creating 'sewer pipes'. In other words, if HR and manufacturing are two silos and Toyota splits HR into mini teams to work closer with management, it will help the collaboration of each but make it harder to ensure fairness and consistency across all of the departments. For this reason, the team recommended that there still be a central HR administration group that would be split into certain functions in order to address the issues that were highlighted.

This central HR group was formed in order to connect the rest of the teams for consistency and fairness and to be the window to Toyota North American Headquarters. The group consisted of the following functions:

- *Personnel*: Comp/Benefits, Payroll, Staffing and Recruiting, Transfer System

- *Health and safety*: Medial Leave of Absence, Ergonomics Support, Early Symptom Investigation support, Family and Medical Leave, Americans with Disabilities Act, Data Reporting, New Hire Health Evaluation, Health Assessment, Workers Comp

- *Employee relations*: Policy Development and Training, Communications, Recognition

- *Training*: Promotion Process, Team Leader Training, Problem Solving Training, Quality Circles and Suggestions, Plant-wide Training.

This central group now had the ability to focus on planning and policy setting and become the experts of their respective areas. For example, in order to address the issue of the HR reps spending most of their time with administrative issues, the group recommended setting up a central call centre which all team members could call or visit to ask their 'general questions'. All concerns were tracked by computer for two reasons. One was to make sure that the question or concern was brought to closure within a standard time. This rebuilt the trust team members had in HR and did not leave them waiting for an answer.

The second reason was for continuous improvement. The computer tracking also enabled the group to track the most frequently asked questions and then apply the problem-solving methods to countermeasure the system breakdown that necessitated the team member having to make the call. Every call was treated like a defect, with the assumption being that there must be a problem with some system, training, or communication that is causing the team member to have to ask the question. One of the most frequently asked questions was about the transfer system and where a team member was 'in line' to transfer to another department. Another major question concerned benefits – which things were paid for and which were not.

The team solved the bulk of both of the problems by implementing computer kiosks in all of the cafeterias. These were designed to be simple to understand and use so that the transfer system became a paperless 'self-service' process. As a result, the team members could sign themselves up and then check their own status anytime without needing help from the rep or the help desk. By taking the calls on a priority basis and solving the issues

one by one, the HR group was able to greatly reduce the number of issues the team members needed help with, thereby resulting in fewer HR specialists needed to answer these concerns. These specialists were then freed up to perform more 'value-added tasks' as described in this section. A summary of the results is shown in Table 1.

Table 1 Improvements resulting from implementing the team member 'one stop'

	Before Kaizen	*After Kaizen*
Average number of calls per month	7864	3052
Number of hours per week needed to handle all the calls	65	18.5
Employees needed to cover calls	6	2

Two other teams were put together as part of the central administration group. In order to prevent the need for the HR rep on the manufacturing teams to be a part of the investigation or discipline of a team member, a separate 'I' (Investigation) team was formed for this purpose. By having a team of four to five specialists perform this role for the entire plant, it not only helped rebuild the trust with the HR rep in each section, it also improved the fairness and consistency of the investigation process because there were only a few people doing it instead of 20–30.

The final team in the central administration group was set up to be a projects and planning group. Their role was designed to be the 'change agents' of the company, partnering with the manufacturing sections in order to work on improvements in areas such as:

- management and organisational development
- internal TPS development
- supplier development
- safety benchmarking and interfacing with affiliates as part of a global network.

Pete Gritton, Vice President of HR for TMMK and for North American manufacturing, summarises how this restructuring helped the Georgetown plant with developing and sustaining the Toyota Culture:[3]

> "Who is the customer of HR? It is everybody. Our mission is to make sure that we get the maximum utilisation out of all of our people whether it is team member on the floor, or a VP, or whoever. Everybody is the customer and we are trying to achieve a successful business, which requires everybody operating at the maximum level. It is company success that we are after. With HR there is a potential danger of bureaucracy, but if HR is set up correctly, it does not have to be that way.
>
> The restructuring took us out of the role of "The HR Police" and put HR on the floor where we need to be. Instead of managing from the "Administrative Ivory Tower", we sent HR people to the floor to work directly with management. We had gotten to the point in our maturity that it was time to work more closely with manufacturing, and it was time to share with manufacturing that authority – to partner with manufacturing.
>
> It gave the manufacturing people one-stop shopping. Before, we were set up here within silos. If a performance problem occurred, a person may start out talking with employee relations people and might be told the problem was with

training and then they would go to the training person and be told it may be a skills issue and be told they need to go to the development people, and the manager is going from group to group, and this is where the bureaucracy comes in. With the new system, all the manager had to do was talk to a team sitting right near him and the team covered all the functions, and they had the connection back to central HR, and the manager does not have to worry about that. At the same time, our role became that of employee advocates, making sure the team members get a fair shake. There are systems to make sure values are being followed correctly."

4   Trust and improvement culture make it all work

There are many distinctive characteristics of Toyota culture but one at the centre is that Toyota people trust each other to an unusual degree for a large corporation. Moreover, it is assumed that everyone is responsible for continuous improvement via Plan-Do-Check-Act (PDCA). PDCA has gone beyond a tool and become integral to the culture–probably one of the most difficult things to teach in the USA.

PDCA is actually contrary to many aspects of Western culture. With an uncanny desire to get results and move on to the next problem we are strong on the doing and weak on planning, checking and further action. Just 'get on with it' is a common refrain. Continuous improvement via PDCA has become engrained in the Toyota culture at a very deep level and goes hand in hand with a deep level of trust. Replicating this in other companies is undoubtedly the most challenging part of learning from the Toyota Way.

One of the most common questions asked about Toyota is how people are rewarded for continuous improvement. How does TMMK get 90,000 employee suggestions per year? How does Toyota get hourly employees to contribute to business-affecting issues? There must be large cash payments associated with employee suggestions. They are surprised to learn that Toyota intentionally deemphasises cash rewards. In fact most USA companies have much more elaborate systems of performance evaluation and pay for performance.

In the book *A Great Place to Work*, Levering (1988) researched a number of companies where the employees reported that they worked at great places. He found the common denominator among these companies was that they all emphasised relationships built on trust. He also found that these relationships ebb and flow, based on the amount of trust in the 'trust bank'. The policies, programs, and processes, and how they are communicated and carried out by the leaders in the organisation, determine how much trust is in the bank account.

Companies like Toyota build their trust accounts through daily interactions between members. They build a culture of interaction that enables the members to feel like they are part of a family or partnership, rather than just of a business or a job. Robert Levering describes two types of interactions in companies. First, the typical ones are based on 'commodity interactions' where there is a 'this for that' mentality; that is, of clocking so many hours and earning a paycheck. The second based on 'trust interactions' is a type of 'gift' economy where things are exchanged without direct compensation based on trust and partnership. The example given is the relationship that exists between neighbours: One neighbour goes on vacation while the other willingly collects newspapers and mail and waters the flower garden. There is no exchange of money, just an exchange of trust

and relationship. The next time the other neighbour starts a project, say, building a shed, the first comes over and spends the day helping her out.

Table 2 compares and contrasts these two types of interactions. Trust interaction is much more challenging to sustain compared to commodity interaction. In commodity interaction the company offers a formally documented compensation package, each year the boss clearly points out how you will be measured and what you will get if you achieve the measures, and the year plays itself out. Even better if the job permits giving a reward for every instance of good behaviour, like a sales person who gets a commission for every sale, then the system is pretty well self sustaining. The problem is that it is not possible to measure everything desired. In manufacturing that would include quality, safety, cost reduction, on-time delivery of the right products at the right time and low inventory. Companies with piece-rate systems pay employees by the number of pieces they produce and they get a lot of pieces but not necessarily the right pieces or high quality pieces and they definitely do not get employees stopping to work together and solve problems.

Trust interaction requires trust by both parties that over the long term the other will hold up their end of the bargain. If trust breaks down it can erase years of fair play in the mind of the person who feels wronged. The earlier sexual harassment example from TMMK illustrates how fragile trust can be and the great length Toyota management went to repair the damage. The role of HR at Toyota is to monitor and maintain the trust economy.

Table 2   Two views of the company-employee relationship

Commodity interaction	Trust interaction
One for one exchanges	Fair exchange works it self out over time
Low risk	High risk
Easy to rectify bad exchange	Betrayals hard to repair
Relationship must be renewed after each exchange	Open-ended relationship
Terms available to all	Terms highly personalised
Each side maximises its advantage at the expense of the other side	Both sides give up something for the common goal
Goal is individual advantage	Goal is mutual growth
Currency is money	Currency is trust

   Source: Adapted from Levering (1988)

## 5   Lean viewed as a technical toolkit is destined to fail

Most companies view lean as a program to eliminate waste, that is, a methodology to be implemented. Operations are "leaned out" and the assumption is that if well-trained experts properly implement the tools the efficiency gains will be self-sustaining. Unfortunately these companies are missing the very essence of TPS.

TPS aims to intentionally develop fragile systems that depend very heavily on people. Without highly capable and motivated people rigorously solving problems the lean system will fail and there is by design little back up. Repair bays disappear. Inventory that buffers operations disappears. This is a system that can be risky and

stressful if management and the work force are not highly capable and lack trust in the system and each other.

The underlying logic behind the deployment of lean and six sigma as tool kits is summarised in Figure 4. The deployment process is viewed as a program and the goals are typically quantified in dollars. How can we eliminate waste and variation thereby reducing unit cost of production? Targets for improvement can include reducing labour, inventory, or quality problems. These are translated into dollar savings which are rolled up to the company level to report overall return on investment of the program. The program is operationalised by training black-belt specialists who deploy the tools. Executives delegate responsibility to these black belts. Many companies have reported impressive cost savings from lean six sigma. In our experience visiting and working with these companies the actual implementation on the floor is usually very shallow. There are isolated instances of problem solving and waste eliminated, but there is still weak overall flow across the enterprise. Moreover, people doing the work are not engaged in improvement and as a result the new processes often revert back to their old form.

**Figure 4**   Traditional company approach to lean six sigma
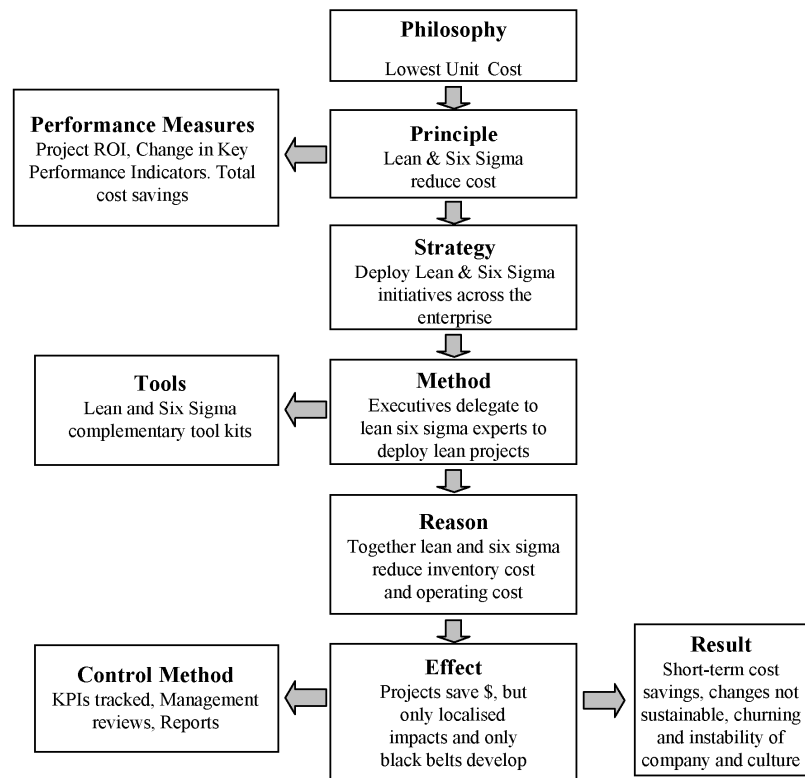
Toyota's approach is much more broad and holistic as represented by Figure 5. It starts with a philosophy that the strength of the company is based on kaizen and respect for people. Measurement of success is multidimensional and reflects the success of the enterprise, not specific projects. The leadership hierarchy is not there to delegate improvement to black-belt specialists but rather leaders at every level play an integral

role in daily improvement and leaders are teachers to develop team members. There are a broad set of methods available for improvement but the social unit of improvement is primarily at the level of the work group led by a group leader. The group leader is supported by hourly-team leaders who facilitate kaizen at the team-member level. Improvement is not focused only on large lean projects, but most are small improvements led by shopfloor-team members so there is strong ownership of the process and results (Liker and Meier, 2006). Over time continuous improvement by identifying and solving problems strengthens the company, which can be regarded as a learning organisation.

We must reemphasise that Toyota is made up of people and people are highly variable from person to person and even the same person over time. So not every action of every person every day supports the ideal of Toyota culture. What does stand out at Toyota is the ability to recognise problems accurately and honestly and solve them with great rigor.

Figure 5   Toyota approach to developing the Toyota way
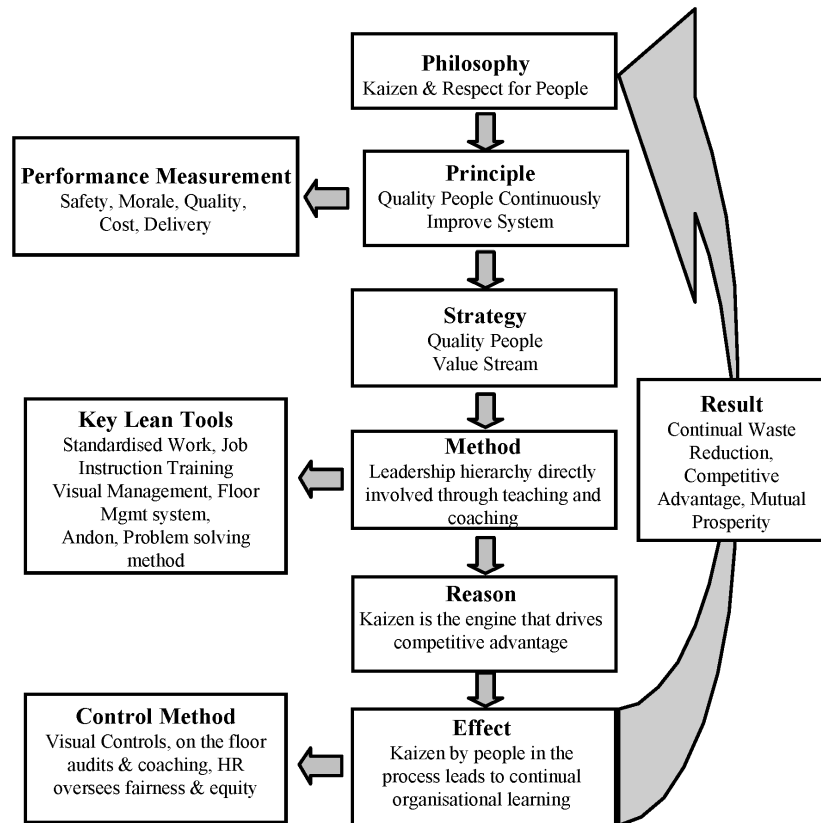
Toyota provides an example of a learning organisation that is real and successful. It is successful for the owners of the business and for the team associates. It starts with the assumption that people are the most important resource and need to be nurtured and developed and challenged. HR management is one of the most visible and important functions in the company because humans are the only competitive resource that cannot be copied.

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Notes

[1]This paper is a summary of portions of Liker *et al.* (2008).

[2]Personal interview, Toyota Engineering and Manufacturing of USA headquarters, 21 June, 2006.

[3]Personal interview at Toyota plant in Georgetown, Kentucky, 21 June, 2006.