How Buckman’s Value Stream Initiative Re-Visioned IT for Value

This article describes how Buckman, a U.S.-based chemical manufacturer, redefined itself and its IT organization using “value” as the focal point for analysis. Buckman’s Value Stream Initiative (VSI) used a micro-level, individual view of value as assessed by customers. VSI enabled Buckman’s IT management team to discover the value being derived from IT activities and make necessary changes. Lessons learned from Buckman are provided for IT leaders interested in driving benefits in service delivery, IT efficiency and effectiveness, and overall value to the organization.\(^1,2\)

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The Need for a Different Perspective of IT Value

For over 30 years, the annual survey of members of the Society for Information Management (SIM) has identified key issues in information management. Throughout this time, the issues of being more responsive to and aligned with the organization’s needs and being more cost-effective to the organization have surfaced repeatedly.\(^3\) These issues imply that IT leaders recognize that IT should provide more value to the organization.

Research efforts seeking to understand the nature of IT value have taken many forms over this period. In some cases, rather than focusing on the value of IT, researchers instead focused on secondary measures as surrogates for value. For example, in the 1980s and 1990s, the value of IT lay in its ability to deliver strategic competitive advantage;\(^4\) in the early 1990s, IT’s strategic value as the enabler for reengineering was central to the definition of what reengineering meant;\(^5\) for the last 20-plus years, the focus of an IT organization’s value was...

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\(^1\) Varun Grover is the accepting senior editor for this article.
\(^2\) An earlier version of this article was selected Best Paper in the 2014 SIM Paper Competition and was presented at the 2014 SIMposium Conference in Denver, Colorado, on November 4, 2014.
measured in terms of its strategic alignment to the business; and, more recently, how IT systems impact organization value chains and value networks at a strategic level was most important.

While all of these perspectives have been useful over the years, what appears to be missing is a more micro view of IT value. What’s needed is the IT department’s customers’ views of what they think of the value of IT’s processes and deliverables, and to use this direct assessment as a way to rethink how the IT organization is structured and operates within the overall organization. In fact, Kohli and Grover make this explicit by calling for an expanded view of IT value that includes value as observed in practice, with organizations and customers serving as the “final arbiters of value creation.”

In this article, we describe how Buckman Laboratories International, Inc. set out to redefine itself and its IT organization using this direct notion of “value” as the focal point to improving the efficiency and effectiveness of the IT organization. While the value stream analysis presented here (which has its roots in Lean thinking) is not new, it is—to the best of our knowledge—new to the field of IT. (Appendix 1 provides an overview of the Lean philosophy.)

Why Buckman Selected a Lean-based Improvement Methodology

Buckman is a global specialty chemical company founded in Memphis, Tennessee, in 1945. Its initial focus was finding chemistry-based solutions for the pulp and paper industry. Today, Buckman serves multiple additional industries, including water treatment, leather finishing, refining, mining and metallurgy, textiles, power utilities, food and pharmaceuticals. Its 1,600 worldwide associates are located in more than 90 countries.

In early 2007, Buckman’s executive management faced a brutal fact: despite top-line growth in sales and gross profit for the previous 15 years, the company’s operating profit had remained flat (see Figure 1). The executive team knew this trend could not continue and believed the company was entering a critical period in which management had to act. In the words of the CEO:

“Now is the time to take action. While we are still profitable and strong, we must find a way to reverse this trend because, currently, we are losing our ability to survive over time ... in other words, if we do not take action, we will eventually spiral into a downward cycle from which it will be difficult and painful to recover. It is also obvious that we cannot continue doing what we have been doing and expect a different result.”

Buckman refers to its employees as “associates.” This decades-old practice was a conscious effort by Buckman management to emphasize the inclusive and collegial nature of the organization’s culture.

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Figure 1: Buckman’s Financial Performance, 1990-2005

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9 Ibid, p. 33.

10 Buckman refers to its employees as “associates.” This decades-old practice was a conscious effort by Buckman management to emphasize the inclusive and collegial nature of the organization’s culture.
Prior efforts to address flat operating profits had been aimed at reducing costs and had tended to focus on one-time, short-term (or both) initiatives. Senior managers characterized these as “half-hearted” attempts, and they knew they must do better.

The executive management team recognized that it needed a new and radical approach to understand how the company operated. It also believed the approach must be comprehensive, in that it should take a global, cross-functional view, rather than approaching the analysis and decision-making on a department-by-department basis. Also, rather than being just another one-time effort, the executive team wanted a sustainable ongoing approach that would take a long-term view and focus intently on what Buckman needed to do to thrive in the future.

Buckman’s mission states, “We, the associates of Buckman, will excel in providing measurable, cost-effective improvements in output and quality for our customers…” Accordingly, management decided that a key component of the approach should include eliminating those activities that did not add value for customers and for which customers were not willing to pay. This would include whether Buckman effectively used IT to enhance value to the customer.

Buckman’s management was particularly attracted to a Lean methodology because it would ensure the analysis looked across the entire organization and would specifically identify those activities that were producing value their customers would pay for, as well as those that were not producing value. Lean thinking also stresses, through a continuous improvement culture, the long-term focus Buckman hoped to achieve. Because the chosen Lean methodology included identifying the value stream and improving its “flow,” the improvement project was called the Value Stream Initiative (VSI). (The VSI process is described in Appendix 2.)

**Overview of the Value Stream Initiative**

The VSI was launched first at Buckman’s corporate headquarters in April 2007, with the stated objective of increasing operating profit. The initial effort culminated in organizational changes that began in September of 2008. The project was then extended to all operating companies. Figure 2 illustrates the project timeline, through implementation of continuous improvement (CI) and Lean Six Sigma (LSS) activities.

Buckman’s VSI project had many unique characteristics, including the complete support of the executive management team, especially the CEO, who was both the VSI champion and project leader. Another extraordinary characteristic was the comprehensive nature of the project—all major processes were mapped. All 1,600 associates around the world, from the CEO, to the chemists, to the plant personnel, to the maintenance and mailroom staff, completed...
work activity logs (WALs) that identified all of their activities in the processes in which they participated. This micro level analysis of activity fed into a micro-analysis of the value of each activity, which supported decisions on whether to retain that activity because it was creating value, to eliminate it because it wasn’t adding value or to improve it to make it more efficient and valuable.

For each activity identified, associates described its key characteristics, including:

- The purpose of the activity
- Who (or what) initiated the need for the activity
- The inputs required to perform the activity
- The outputs of the activity
- Who received the outputs from the activity
- How frequently the activity was performed
- How much time (in hours per year) was spent on the activity
- Suggestions for improving the inputs to, or outputs from, the activity
- Suggestions for improving the activity (including eliminating it).

IT associates completed WALs just like everyone else. One advantage they had, perhaps, was that the project management and time-keeping systems they already had in place produced a much more granular and accurate view of how they spent their time than was possible with other company associates. This made completing the IT associates’ WALs much easier. The IT organization also had the benefit of serving customers who were predominantly internal (Buckman’s end-users), which meant the assessments of value could be more easily verified by consulting directly with the end-users in question.

The number of activities identified by each associate varied from a few dozen to over one hundred. In total, the WALs identified hundreds of processes and tens of thousands of work activities carried out by associates. At this point, no assessment of value had been made, but the potential individual stakeholders who might see value in the processes and activities—e.g., the initiators of the activities and the receivers of the activities’ outputs—had been identified.

Following the completion of the WALs, each associate was interviewed by a member of the VSI project team and an external consultant to discuss the associate’s activities in each process and to determine what value the activities and processes added to Buckman, its customers or both. The VSI project team member and consultant then provided an initial categorization of the activities and processes and identified potential opportunities for improvement.

The activities and processes were categorized as:

1. **End-customer value-adding**—those activities and processes that created products and services that external customers were willing to pay for
2. **Non-value-adding, but required to support the business**
3. **Non-value-adding**—processes and activities that are considered waste in the Lean methodology and are the primary targets for elimination.

Examples of each process category are shown in Table 1.

Although the categorization and determination of value resulted from dialogues between the

<table>
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<tr>
<th>Process Categories</th>
<th>Examples</th>
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<tbody>
<tr>
<td>End-customer value-adding</td>
<td>Development of specialty chemical products to solve customer-specific problems</td>
</tr>
<tr>
<td>Non-value-adding, but required to support the business</td>
<td>Accounting and HR processes</td>
</tr>
<tr>
<td>Non-value adding</td>
<td>Development and distribution of monthly reports that are no longer used</td>
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VSI project team member and the consultant, ultimately, responsibility for categorization lay with the VSI project team member who participated in the interview. Although the consultants were well versed in process mapping, Lean thinking, quality management and functional best practices, the VSI project team members were experienced Buckman associates with a detailed understanding of the company’s operations and its internal and external customers, and were thus in the best position to judge an activity’s impact and value. It also helped that, at the start of the VSI project, these associates had participated in the development of comprehensive, high-level process maps that covered all major Buckman business processes. These process maps helped highlight which parts of the business were adding value to Buckman’s customers.

Once the associate interviews were completed and the results categorized, the entire VSI project team reviewed the WALs and the interviewers’ initial recommendations for process categorization, performed additional analysis, including further validation of customer value assessments, and finalized the categorization of activities and processes.

Next, the VSI project team met with the head of each functional area to discuss the findings for the associates, processes and activities related to that function. The functional leader was given a month to evaluate the findings and present a plan for improvement. It is interesting to note that Buckman’s executive management team did not dictate what improvements to make, but rather allowed the functional managers, including the IT manager, to do so.

**VSI Analysis within the IT Function**

Extensive analysis of the IT associates’ WALs revealed that (internal) customers felt the IT function was not consistently delivering the products and services that Buckman’s business functions needed and that the cost of what they did deliver was higher than IT’s customers felt they should pay. In other words, IT-business alignment was poor. Projects often took too long, cost too much and failed to produce the benefits expected. It was clear from the VSI analysis that the IT organization needed to: (1) better understand what Buckman business management needed it to do and (2) be as efficient as possible at doing it. Only in this way could IT become better aligned with business management and associates to co-create value for Buckman’s customers.

Analysis by IT managers showed that a big contributor to inefficiency was an application and systems architecture that had grown too complex, primarily due to a lack of standards and the need to support multiple business processes across Buckman’s global operations. The IT function used this insight to plan architectural and process changes that would lead to significant cost reductions as well as greater speed, capability and reliability.

As a result of the analysis, IT management focused its efforts first on increasing business alignment by retaining and improving those activities and processes that added value for Buckman’s customers and associates and on eliminating those that did not. Second, IT management set about changing the jobs and skills of IT associates so that IT could better deliver value. Finally, IT management focused attention on the technological changes needed to improve efficiency and IT’s ability to deliver value.

**IT Changes Resulting from the VSI Project**

The micro-level VSI analysis helped IT managers to understand in detail how each IT associate, process and activity related to the creation of business value. They used this understanding to address their dual objectives of better understanding what Buckman’s business management needed IT to do and doing it as efficiently as possible, with the aim of increasing IT-business alignment. As a result of VSI, several changes were implemented within the IT function. These included eliminating some IT positions that did not add value, eliminating some activities that did not add value, changing some roles and taking steps to make IT more efficient in delivering applications and services.

**A New Role for IT Managers**

The VSI project led to a change in the role of IT managers. Henceforth, they would spend...
less time on technology and more time with Buckman business associates and management, understanding how to help deliver value to the company's customers. This understanding would inform their decisions and actions on what capabilities and technology to employ to enable IT to deliver the required value. Their new role also included focusing more on IT associate engagement, ensuring associates were fully absorbed by, interested in and enthusiastic about their work, and on having the right associates in the right positions, doing the right things in the right way.\textsuperscript{11} These changes in focus would ensure that the IT products and services most needed to create customer value had the highest priority.

Elmination of a Major IT Activity

Before VSI, the IT function had been called the "Knowledge Transfer Department." As a consequence of the project, it was changed to the more traditional "IT Department." This change better reflected the need for a more IT-focused group but also recognized that the organization's knowledge management capabilities had been successfully embedded in the company's culture and that a corporate department was no longer required to sustain it.

Before VSI, IT had maintained a library of books, journals and publications for all Buckman associates and had employed information science professionals to help manage and disseminate knowledge. This activity, along with leading electronic collaboration capabilities, had supported Buckman's customer-intimate, high-service strategy and had led to the company winning several international awards for knowledge management.

However, the VSI project showed that the library was not valued by Buckman's associates or customers and that it no longer provided a competitive advantage. The library activity was therefore eliminated. Much of the information the library had offered was already available electronically, and customers no longer needed Buckman engineers to provide it. One research librarian was retained but was moved to Global Marketing to support market research efforts.

Changes to IT Organizational Structure

Analysis of VSI data confirmed that IT overhead was too high. The primary reason was that, over time, attempts to deal with the complexity of both legacy and new systems had resulted in the creation of several IT groups, each with its own manager, and these groups were becoming increasingly "siliced." Moreover, there was a lack of global IT standards, a lack of global standard business processes and a lack of consistency across IT operations. The groups had originally been justified as a way of developing a pool of competent IT managers to fill the vacancies that were expected to occur because several senior IT managers were due to reach retirement age almost simultaneously in the near future. However, this was not something that customers—whether internal end-users or Buckman customers—were willing to pay for.

The VSI data forced IT management to look for better ways to address these complexity and HR pipeline issues other than with a ballooning and costly IT structure. As a result of the VSI project, one level of the IT hierarchy was eliminated, more effectively connecting all of IT to its customers, as well as reducing cost and complexity and improving the value stream flow.

It's instructive to note that traditional organizational restructuring efforts, or "rightsizings," often occur before any research or analysis is conducted. The lack of research or analysis has often been cited as the reason for reengineering failures.\textsuperscript{12} At Buckman, action was only taken after carefully considering what was needed from a customer value perspective and then designing the changes necessary to realize that vision.

IT Process Changes

VSI analysis revealed that existing IT processes were not as effective as they should be and thus constrained value creation. For example, it was confusing to end-user associates how to engage IT in a project and how to determine a project's status. There was no standard project delivery process to ensure that the proper associates were engaged, that requirements and benefits


\textsuperscript{12} For an example of an organization in which a lack of analysis of existing functional areas or processes was a key reason for BPR failure, see Sarkar, S. and Lee, A. "IT-Enabled Organizational Transformation: A Case Study of BPR Failure at TELECO," The Journal of Strategic Information Systems, (8:1), 1999, pp. 83-103.
were identified, that the most effective work planning and execution steps were taken or that expected benefits were delivered. Project portfolio management disciplines were nonexistent. These deficiencies all restricted the flow of the value stream. In addition, inventories of applications and infrastructure elements were done infrequently and only as one-time efforts. Comprehensive application and infrastructure architecture analyses and planning were not done. No meaningful service level or other metrics were tracked. IT improvement efforts were piecemeal.

IT management initiated long-term efforts to improve all of these critical IT processes as well as the technologies employed to manage the processes. IT management believed that these efforts would increase the speed with which IT could deliver projects that would enable Buckman business associates to increase value to the company’s customers, thus increasing IT’s ability to respond quickly to “pull” demands from Buckman customers and associates.

Technology-specific Changes

The VSI analysis caused IT management to ask difficult questions about the technologies that Buckman used. For example, various operating companies had been allowed to claim they were so different from the rest of the world that they needed custom-developed software instead of commercial off-the-shelf packages that implemented industry standard processes. IT managers realized they needed to exercise more consultative leadership and to emphasize to their business peers that customized software took more time and effort to create and maintain and required the development and maintenance of different skill sets, all of which could preclude adding value for Buckman’s customers.

As a consequence, IT management determined that Buckman needed fewer technologies and fewer platforms. For example, separate ERP systems at each operating company would be replaced by a single-instance, integrated, global ERP system.13 This system would provide better information for optimal global decisions, reduce the complexity of integration needs, narrow the range of technology skills required, increase efficiencies, and permit rightsizing of the IT department staff to focus only on those technologies associated with producing value to customers. This simplification effort would increase IT’s ability to respond to demand for its services.

Reducing Time Spent in Routine Meetings

The analysis of VSI WALs revealed that a great deal of IT associates’ time was being spent in routine meetings. Management at first believed that to reduce this, improvements needed to be made in meeting efficiency by focusing more on the company’s established norms for conducting meetings. These included:

- Doing the necessary pre-work to establish the meeting’s purpose, goals and agenda items so that associates could come prepared
- Having only those in the meeting who were necessary to meet the goals
- Starting on time
- Ensuring that meetings stayed focused by “parking” off-topic items for later.

However, closer investigation showed that some associates were recording more time in meetings on their WALs than had actually occurred. These exaggerations were most pronounced among associates that the value-analysis showed did not engage in enough productive and/or value-adding activities. As the changes resulting from the VSI project were implemented, these IT associates were either fired or redeployed to more productive roles. This not only eliminated waste, but also improved the flow of the value stream. One result was that several IT associates noted that meetings had become shorter and more productive because those who had caused the most friction and wasted time were no longer with the company.

13 Instead of using multiple enterprise systems (CRM, supply chain, etc.), a “single-instance” ERP system provides a single, monolithic system with a single, integrated data source. Justifications for moving to single-instance implementations include centralized management, decreased costs and benefits stemming from increased integration.
Benefits Realized from the VSI Project

The benefits flowing from the VSI project fall into three areas: corporate savings, IT savings and cultural changes.

Corporate Savings

Company-wide savings from Buckman’s VSI project were significant and wide-ranging. Initial results included the reorganization of the IT, Operations and Global Marketing functions, resulting in savings of over $2.6 million. Several non-value-added activities were eliminated, resulting in over $1 million of additional savings. The project also led to changes in Buckman’s travel and entertainment policy (producing savings of $315 thousand), off-site meeting practices ($49 thousand) and printing ($25 thousand).

But this was only the beginning. In the two years following the VSI project, Buckman realized additional savings of $14.2 million and saved an estimated 11,600 person-days. As shown in Figure 3, Buckman’s financial performance improved markedly as a result of the VSI project.

Figure 3: VSI Led to Improved Financial Performance

IT Savings

As a result of the VSI project, the IT organization was restructured to be leaner, more productive and one level flatter, with 9% fewer managers, 7% fewer technical associates and 9% fewer information management (library) associates. These changes resulted in IT costs being about 10% lower in the following year. Future cost savings were expected from eliminating redundant technologies, simplifying the application and infrastructure portfolio, improving processes and deploying fewer maintenance-intensive solutions.

In the years since the VSI project, several IT initiatives have not only realized the expected cost savings, but have also provided much-increased IT capabilities. For example, the IT department now makes greater use of server virtualization, which reduces costs and enables it to meet demand more quickly. The department has implemented a company-wide, cloud-based project portfolio management system, which enables associates to be more purposeful and efficient, has upgraded its document management system to a more capable and less costly alternative and has moved its email system to a cloud-based solution, resulting in significant gains in functionality and productivity. The cloud email solution not only provided improved messaging capabilities, but also offered easy implementation of a shared calendar system that allowed associates worldwide to more easily schedule meetings and conference room resources and to better manage their time. The IT department has also upgraded its internal portal to provide current information to associates globally. Among the features of the new portal is a consistent, global way for business associates to request IT engagement in projects and to easily see the status of those projects.

Longer-term efforts were also set in motion to move from two database management systems to one, and thus reduce costs, and to implement a single-instance ERP system, which will reduce costs and significantly enhance both the company’s value stream through business processes standardization and the support of ongoing improvement efforts by Buckman.

The VSI project led to a better understanding of the relationship between an IT activity’s cost, quality and time, and the ultimate value that is derived by Buckman’s customers. As a consequence, IT architecture planning, and analysis of the IT application and infrastructure portfolios, are now done regularly and include an added focus on the cost, quality and time involved to maintain applications and technologies. In fact, IT investments now require an impact assessment of all costs and benefits and how the investment fits within the overall company strategy, ensuring that the focus on value creation is maintained and is aligned with strategic
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objectives. This also ensures that business-IT alignment is maintained.

Cultural Changes

As well as corporate and IT savings, the VSI project also led to important cultural changes. Buckman had long been commended for its positive working culture. Its local reputation as an employer had been that, once you got a job at Buckman, you would neither need nor want to work anywhere else. A belief had arisen that the company would not fire associates whose role was no longer needed or, to some extent, whose performance was inadequate. As a result, a culture of dependency and entitlement had developed over the years.

As a result of the VSI project, changes were made that sent a clear message that Buckman was intent on becoming a high-performing organization and that every associate had to be a high performer whose role could be tied to providing value for Buckman and its customers. These changes led to a much higher level of personal accountability for performance, how that performance related to customer value, an improved understanding of how Buckman’s performance management system helps associates be more successful and a greater level of professionalism and team spirit. These improvements were evidenced in the results of regular associate engagement surveys and recognition by the Hay Group (an HR consulting firm) that Buckman was a high performer in the area of associate engagement when compared to other companies.

In the ongoing pursuit of perfection that is so central to the Lean methodology, Buckman now regularly initiates and tracks the results of continuous improvement efforts. Periodic waste-elimination workshops are held to reinforce continuous improvement and to identify areas where Buckman and IT can further improve. A new IT customer satisfaction survey tracks how well the IT department is performing in the eyes of associates globally.

Interestingly, the focus on continuous improvement across the company and within IT increased the number of requests for IT projects to help improve business processes. As a result, IT now focuses on reducing non-value-adding maintenance time so that it can more quickly and effectively address the backlog of project requests. Greater focus and manpower support is also given to completing the highest priority projects that business associates have identified as adding value to customers and the company, especially those associated with strategic customer-facing systems. The business priorities are assigned by a high-level team comprising representatives from Sales, Global Marketing and IT, thus ensuring that strategic alignment between the business and IT and the co-creation of value is maintained.

Additional benefits are expected in the future. IT management fully expects further reductions in IT costs per associate, as well as delivering increased value to its customers. The continuous improvement culture that VSI and the Lean methodology engendered is now firmly entrenched in the IT department, and corporate associate engagement surveys reveal that IT has one of the strongest levels of engagement within Buckman. Associates and management recognize the importance of end-customer value and the need for continuous improvement. Today, continuous improvement is viewed as everyone’s job.

Lessons Learned from Buckman’s VSI Effort

The VSI effort highlighted for Buckman management those areas where it was worth investing innovative effort, energy and resources, and those that were better left alone—or better still—eliminated. Looking back at the VSI project, it is instructive to highlight the practices that worked well, one that didn’t, plus other factors that IT managers in other organizations might consider when thinking about undertaking a similar effort. First, though, we provide lessons relating to associates’ reactions to VSI.

Reacting to Associates’ Concerns about VSI

During the data collection and analysis phase of the VSI project, it was natural to expect that there would be some anxieties among associates who were being asked to document and assess the value of their work activities. The VSI project team frequently observed this. In order to ease these concerns, the team spent a great deal of time communicating the importance of the VSI
work and the need to invigorate the company to ensure its viability for the long-term benefit of all stakeholders.

But the team also noticed some other behaviors. While some associates clearly understood the importance of their role in generating customer value and were confident in the results they had achieved, others seemed unconcerned with the VSI effort and openly admitted that a great deal of their time was regularly wasted. These associates even talked about their efforts to “game” Buckman’s performance measurement and budgeting processes. This group may have assumed that the data being gathered would be anonymous, even though that was clearly not the case.

Once the VSI changes were announced, reactions from associates ranged from relief among those who anticipated that there would be (and needed to be) a significant amount of change, to shock and disbelief among those who could not bring themselves to believe that significant changes were going to occur.

Within IT there was a belief that high-level executives had made the decisions on VSI changes unilaterally and that the CIO had then been forced to carry them out. But this was not the case. The CIO recalled:

“In the initial department meeting on the day the changes were announced, a question was posed to me, ‘Who decided which positions would be eliminated and who would leave?’ I responded with a truthful ‘I did.’ The questioner then replied, ‘Well it must have been very difficult.’ I replied, ‘Yes, it was.’”

Eight Practices that Worked Well

1. Frequent Communication from the Top. One of the unique characteristics of Buckman’s VSI effort was the role of the CEO as project champion. Even before the project started, there was a great deal of communication directly from the CEO on the purpose of VSI and how the process would work. These communications continued throughout the project and well after the initial changes were implemented.

2. Frequent Communication from the VSI Project Team. In addition to communication from the CEO, clear, consistent and ongoing communication from the VSI project team about the project, the VSI methodology and its importance was crucial to reducing associate anxieties and maintaining productivity.

3. Well-trained Project Team Members. All members of the VSI project team, including the external consultants, participated in internally led training workshops to insure consistency and accuracy in the interview method, value assessment and value analyses.

4. A Superior Project Management Discipline. The VSI project represented a very large corporate project and required the best project management talent. Specific project management roles were created and staffed to keep the project organized and on schedule.

5. A User-friendly Process for Data Collection and Analysis. Specific members of the VSI project team were charged with developing and managing macro-driven spreadsheets for the work activity logs. These spreadsheets streamlined the data entry effort required from associates. In addition, the spreadsheets allowed existing time and project reporting systems in IT to be used to help populate the logs.

6. Objective, Data-driven Decision Making. To reinforce the objective intent of the VSI analyses, Buckman enlisted outside resources and paired them with internal Buckman associates who would then help associates from other departments complete their work activity logs and reviews. This not only helped keep the process objective, but made associates feel more comfortable in providing their information.

7. A Focus on Weaknesses in Performance Management. In the past, Buckman had relied on goal-based performance management. The VSI experience, and particularly the issues around recording time in meetings, highlighted that it’s also important to consider behavior-based management, paying particular attention to those who may be causing friction. Buckman later incorporated the “Seven Principles of Highly Effective Teamwork,”14 in its performance management system. These principles were developed by Buckman’s CEO in collaboration with Gary Gore, CEO of Team Trek, Inc. (an Arkansas-based provider of corporate team-

14 The seven principles are 1) 100% Responsibility, 2) Trust, 3) Clear communication, 4) Healthy conflict, 5) Commitment, 6) Accountability and 7) Focus on results.
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building, leadership training and executive and team coaching). The performance-management system has helped the IT department to manage behavior-based expectations, in alignment with the rest of the company.

8. A Focus on Improving Change Management. Early on, there were two elements that helped IT associates cope with the change flowing from the VSI effort. The first was coincidental in nature: similar changes were happening in other departments, which meant IT did not feel singled out. The second was much more purposeful: a program was implemented and delivered by Buckman’s HR department called “Fast Forward,” which was designed to help associates deal with the post-VSI changes, manage survivor guilt, express their feelings—even by venting their frustration—and better understand how to move forward in a positive way. During one Fast Forward session, an IT associate expressed his belief that, even though it was painful, he now felt more trust in the capabilities of their new team than in the old one. Over time, this sense of increased trust became pervasive within the IT department.

One Practice that Didn’t Work Well

Lack of an Organizational Change-Management Methodology. Although the VSI project team spent considerable time and energy focusing on managing change, it did not have a formal change-management methodology that would have provided a clear approach to actually making the organizational changes. In trying to implement the changes with the least amount of disruption and pain, this lack of a clear approach caused delays. Given that Buckman associates already knew that something was coming, these delays exacerbated the situation and caused a great deal of anxiety.

Buckman now has an organizational change-management discipline that helps make changes more successful. This methodology provides guidance and tools to help ensure the right things are done in the right order to make the change successful.

Concluding Thoughts for IT Leadership

Many companies initiate cost-cutting measures in the hope of increasing enterprise value. In contrast, Buckman initiated an effort to increase customer value that led to significant cuts in costs. Typical cost-cutting measures simply spread the pain around—every department must find a way to trim 5% or 10% from its budgets. VSI, on the other hand, through its micro-level focus, only trims those functions that are not delivering value.

A VSI-type improvement initiative is not a “quick fix” nor is it for the faint hearted. Value stream analysis is a major undertaking that requires a significant amount of time and effort. Buckman’s experience, however, demonstrates the potential benefits that can result from a successful VSI approach.

While the VSI initiative at Buckman was company-wide, and IT was only a part of the effort, other IT organizations could easily employ this micro-level, value-based approach to the analysis of how IT is performing and how it can improve. The VSI methodology can ensure that IT leaders understand what value the entire organization expects them to deliver, the IT products and services that enable IT to deliver to its customers what they are willing to pay for and the IT processes needed to efficiently deliver those products and services. This understanding helps drive increased business and IT alignment. More importantly, the Lean focus on continuous improvement and striving for perfection enables IT to lower its costs and increase its capabilities going forward.

The VSI project, in a very objective way, brought to the attention of Buckman’s IT management team the difficulties that IT faces when it isn’t well aligned with business strategy and doesn’t understand what is needed from IT. The project also surfaced a company-wide need for better organizing and prioritizing work,

...
for managing projects more effectively and for using better tools and processes—things that IT solutions could help improve.

The VSI initiative provided an opportunity for Buckman’s IT organization to embrace the CEO’s call for cutting unnecessary costs by focusing on value. Not only was this important for IT’s current and future success, it went a long way to ensuring that IT’s long-term strategy was better aligned with Buckman’s corporate strategy, which focuses on employing a customer-intimate approach to deliver value. The resulting changes in the IT organization also raised the standing of IT within the company and enhanced the view that IT could be a thought leader and contributor to the company’s bottom line. The end result was that the IT organization enhanced its reputation and its ability to continuously deliver value to the entire company and its customers.

Appendix 1: The Lean Philosophy

Lean is not so much a theory but a philosophy that focuses on waste reduction. In tracing the origins of the Lean philosophy, one could argue that Frederick Taylor’s “scientific management” in the early 1900s17 or the total quality management (TQM) teachings of Joseph Juran and W. Edwards Deming applied to the reconstruction of post-war Japan were forbearers of Lean thinking.18 More recently, elements of the Lean philosophy can be seen in the business process reengineering (BPR) movement of the 1990s and early 2000s.19 A prominent application of Lean thinking in recent years is Toyota’s approach to automobile manufacturing known as the Toyota Production System. At Toyota, the term “Lean Production” was characterized as doing more with less when compared with the practices in North American and European automobile companies.20 The Lean philosophy has five key principles:21

1. Specify Value from the End Customer’s Perspective

The first Lean principle ensures that an activity or process is providing end customers with what they really want. Achieving this requires organizations to understand what their customers, both internal and external, truly value. In the case of IT, the customer may be the internal end-user of a non-customer-facing system such as an associate portal, in which case the value is internal to the organization, or it may be an external customer using a customer-facing system such as an ecommerce retail website, where the value flows directly to the customer.

2. Identify the Value Stream

The second principle requires an organization to have a detailed understanding of how customer-specified value is created and delivered. Toyota uses a process mapping technique known as value stream mapping to help develop this understanding. Typically, a current-state value stream map is created to serve as the basis for improvement because usually the map makes it clear where “waste” (non-value added activities) is occurring. In the IT arena, value is often created

18 As well as the seminal literature on TQM, such as Juran, J. Juran on Planning for Quality, The Free Press, 1988, and Aguayo, R. Dr. Deming: The American Who Taught the Japanese About Quality, Fireside, 1991, the topic of TQM has been explored by IT scholars. See, for example, Ravichandran, T. “Swiftness and Intensity of Administrative Innovation Adoption: An Empirical Study of TQM in Information Systems,” Decision Sciences (31:3), Summer 2000, pp. 691-724.
21 For more information, see Womack, J. and Jones, D. Lean Thinking: Banish Waste and Create Wealth in Your Corporation, Simon & Schuster, 2003.
by delivering the information “any time, any place, any way” needed to make good decisions, whether they are internal resource allocation decisions or external “Should I purchase this product now?” kinds of decisions.

3. Improve the Value Stream “Flow”

Once the current state of the value stream is known, efforts are made to improve performance by removing activities that do not add value, thereby improving the “flow.” Future-state maps are developed to indicate where waste will be removed and the effect that it will have on value stream performance. The organization then works to make the future state a reality. In the case of IT, any activity that gets in the way of delivering systems on time and within budget would inhibit the flow of IT-related value—e.g., unnecessary meetings, system testing delays, etc.

4. Establish a Pull System

Rather than acting in anticipation of a need—e.g., producing a particular product that might be needed in the future—Lean thinking says it’s better to wait until there is an actual need for it. Although this principle is somewhat easier to envision in a manufacturing environment, it can be applied to services as well. For example, IT might develop an agile-based development methodology that can quickly deliver prototypes in response to user-requested system enhancements. In this way, the organization could establish the ability to respond rapidly to real demand rather than operating on the basis of a forecast of what the future may hold.

5. Strive for Perfection

The final principle of the Lean philosophy establishes a continuous improvement culture where improvements in how the organization does business are part of everyone’s job. Lean organizations recognize that they will never achieve perfection, but that does stop them from trying. For example, an IT organization may rely on its project management office to continuously improve project management practices in an effort to deliver systems on time and within budget in a more consistent manner.

Benefits of the Lean Philosophy

While the five Lean principles are quite basic, they have been shown to be extremely effective. Organizations that have successfully implemented Lean thinking report significant performance improvements. Examples include:

- Cycle times reduced by 90%
- Defects reduced by 90%
- Inventories reduced by 75%
- Cost reduced by 50%
- Space requirements reduced by 50%

IT examples that map directly to these kinds of improvements include improvements in system prototype cycle times, software defect rates, the reduction of unnecessarily large software portfolios and less costly and less storage-intensive systems.

While the vast majority of extant Lean literature has focused on manufacturing activities, the underlying principles are applicable to virtually any process, in any organization and in any industry. There are many examples of organizations adopting Lean approaches for a wide range of non-manufacturing processes, including IT, financial services, healthcare, higher education, and governmental agencies at all levels. Although implementing Lean approaches beyond the manufacturing shop floor is still relatively new, it appears to hold great promise.

Appendix 2: The VSI Process

Buckman’s VSI project team developed the VSI methodology and was responsible for all aspects of the project. The central data collection tool was the Work Activity Log (WAL) that was completed by all Buckman associates prior to their

22 Ibid, p. 27.
interviews with a VSI project interview team. During the interview, the WAL was reviewed to ensure that the associate’s inputs were accurately represented.

Following the interview, the interviewers completed an initial categorization of each activity or process (End-customer value-adding, Non-value adding, but required for business operations, and Non-value adding) and made preliminary recommendations for the activities and processes (keep, improve or eliminate). The completed WAL was then uploaded to the VSI master database for further analysis.

The entire VSI project team then met to discuss activities and processes and to make final recommendations on whether activities should be kept, improved or eliminated. The team also conducted additional analyses to identify “common themes” for improvement within relevant functional groups and across the corporation.

Once the analysis for a group was completed, the project team met with the manager of the group and presented its report along with supporting data, including the WALs for all of the group’s associates. The manager was given a month to review the report and to develop an improvement plan. An overview of the VSI process is shown below.

After a month, the group’s manager presented the improvement plan to the VSI project team, and improvement projects were then launched. All improvement projects were tracked and reported to the VSI project team using the Excel-based template shown below.

**Overview of the VSI Process**

![VSI Process Diagram](image)

**VSI Improvement Project Tracking Form**

![Project Tracking Template](image)
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