

Using Labor Data Technology to Better Run Organizations

Every organization is unique in size, complexity, and maturity. It's important to understand the organization's readiness and requirements. Many outfits are still operating the way they used to before much of today's technology was available. In this chapter, we'll explore how the business world has changed and what needs to change within the business to keep up. Time and labor management systems are spreading throughout every industry, meeting needs and solving problems far beyond simply processing payroll. Case studies focus on success stories and provide insight into how companies are benefiting from these systems. We'll even look at global operations and the challenges that these systems overcome to help overseas organizations run better.

What Is the Perfect Setup for Managing Your Business?

If you could read this book and walk away with the ideal frame of mind for managing your business, what would that look like? That's really the key to this book. What is it you need to know?

It's been said that an organization's most important asset goes home at the end of every work day. If that's true, then your second-biggest asset could very well be the technology you use to track your employees' activities. Your time and labor management technology should be saving you significant amounts of money related to your labor expenses, and it should be an important tool for reaching your organization's strategic, operational, and financial goals. But is it?

You're probably aware of the four levels of knowing as illustrated in Exhibit 2.1. The lowest level is, "You don't know what you don't know." The second is, "You don't know what you know." This is followed by, "You know what you don't know," and at the top, "You know what you know."

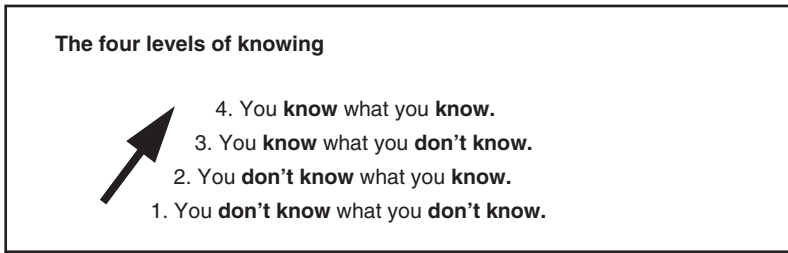


EXHIBIT 2.1 The Four Levels of Knowing

When it comes to time and labor management technology today, many chief executives simply don't know what they don't know. Perhaps one of the biggest obstacles to that perfect mind-set is lack of visibility.

Until recently, management has not had a clear line of sight into hidden costs and internal success stories. There has been no mechanism until now to bring the activities and expenditures related to workers and activity into view in a meaningful way. Many managers are detached from truly understanding how work is being managed. *It is being managed today, but how? And at what cost financially, operationally, and strategically?*

It is no longer acceptable to passively manage the workforce. If your business is not fully engaging the available technology to manage its business and human capital, you are abdicating control over time and labor decisions to influences that are not concerned about the productivity and profitability of your organization. Without a tool to intelligently direct the workforce, to channel decisions and actions toward the highest-level strategic goals from even the lowest-level work effort, and to watch as the outputs from that work effort move your business, you are working in the dark.

The optimal place from which to work is to be engaged in a holistic approach to your human capital. You may have become interested in this topic because of economic pressures on your business or some other catalyst driving the organization to improve. Take a thorough look at your processes from end to end. **Break down any boundaries that exist that have historically defined “what can't be changed” or “what is of little importance” in those processes.** Hold each problem up and look at it from the absolute inception of that issue to the final outcome regardless of where it takes you. Don't focus only on the tangible evidence. Take the time to investigate the virtual and human processes that coalesce only inside workforce management systems.

What many managers don't realize is that the biggest dangers, as well as the greatest opportunities, exist at the point where data, decisions, and execution are handed off to another person, team, or process. This is where

things break down and become inefficient and poorly managed. This is where the hidden factories lie (i.e., workarounds, rework, side work, or unintended processes, byproducts, and cost) in the dark crevices of operations. Fortunately, this is also where time and labor management technology gets its power. By providing a convergence of information about work activity, the cost of that activity, and the people involved in the process within a transparent system, time and labor management technology offers the optimal solution for managing your business.

Notice I didn't say "manage your payroll." Nor did I limit the declaration to "manage your labor productivity and expense." **The ideal mind-set for managers looking to improve their business is to look at workforce management technology as having no boundaries.** Yes, it can help manage payroll expense and productivity. Easily. But that's not all. What you need is a vision of success for your organization and the understanding of how to map that success to the tools within this technology. That is how this technology is being used to run companies better.

The Workforce Management Maturity Curve

You may very well agree with the preceding statements and have already purchased a time and labor management system. The next questions to ask are "Do you have the right system for your business?" and "Has it been fully and properly deployed?" and "Do you know what your return on investment (ROI) is?"

There is a broad continuum of stages of development—everything from managing the workforce entirely manually and without any defined processes or goals to deploying a time and labor system with the KISS (Keep It Simple, Stupid) principle. When KISS is the mantra, much of the ROI is discounted. Some organizations roll out a sophisticated system with little or no training and expect the "system" to magically change the organization. Fortunately, some do manage to achieve a well-orchestrated, strategic implementation that uses business intelligence from its workforce management technology (WMT) system to measure and extend success throughout the organization. What does it take to be on the mature end of that spectrum?

First, there must be a vision for success. Where the technology will take the organization must be clearly defined and measurable. **Second**, planning for a successful deployment takes time and money. A willingness to invest in planning and to purchase based not on price but on value is key. Many managers think they know how to procure IT systems, including WMT. Don't make the mistake of thinking the only requirements for this technology are to replicate today's processes more efficiently. **Everyone in the purchasing process must understand this is not a commodity item and price alone should not be the deciding factor.** That vision

Where Is My Organization on the Maturity Curve?

Here are some fundamental questions to consider. The answers will help explain how well developed the organization's time and labor management systems are and how they are being used.

- Are current time and labor management processes designed to help control costs?
- Have existing time and labor management processes proven to deliver ROI?
- Are processes designed to increase employee and manager engagement, satisfaction, and productivity?
- Have the systems in place been proven to create a stronger workforce?
- Do you have line-item visibility into costly operational issues such as unapproved overtime, premium stacking (i.e., the concurrent payment of multiple additional hourly rates on top of base pay), absenteeism, and leave management?
- Is there real-time visibility into excessive overtime, nonproductive time, or the manipulation of work and pay?
- Has the system been shown to improve customer satisfaction or product quality?
- Is the system being used daily to deepen follow-through on C-level strategic goals at all levels?
- Were design reviews conducted during and after implementation to ensure that the vision for the time and labor system will be achieved through specific features and uses of the system?
- Is the technology used for manual tasks or knowledge tasks? Do you know what and where your workforce-related knowledge tasks are?
- Do you know how much payback you expect from your investment and how long it will take to achieve?
- Do you measure for ongoing payback? Do you look for new ways to get payback?
- Is the system used to enhance the return from other business systems?
- When you train employees on the system, do you focus equally on business expertise and technical competency?
- Is the system a part of daily decision making at every level?
- Do users know not only what and how to use the system but also why and when?
- Have you deployed everywhere?

of success will describe and prioritize the value proposition that different systems offer.

Third, take a daily interest in your key performance indicators relative to labor. This will keep your organization focused on the strategic benefits. Using the right performance indicators will make sure you get the most “bang for your buck” as you manage your workforce according to those signals. And **finally**, listen to the people in operations and finance and make certain their needs are met. Take it from an expert at researching ROI from WMT systems, David O’Connell: “If you are not doing a lot of cost accounting analysis as a result of your time and attendance system, then you’re leaving money on the table.” The evolved end of the maturity curve includes tracking activities, managing leave, optimizing schedules, and using labor analytics in the day-to-day operations.

Developing the perfect frame of mind may involve breaking some old habits and stepping into some tricky political ground. Making certain that the needs of operations and finance are fully met may conflict with the game plan that IT and Payroll have in mind. For a long time, these two business units provided infrastructure to the organization without much outside input. They may indeed initiate the latest improvements to your workforce management systems. However, they may have an overly narrow view of the front-line audience for these systems and see their requirements as unnecessary demands or a threat to their sphere of control. Operations is where the work gets done, the products are made, and the services are delivered. **While efficiencies in IT and Payroll processes will be an improvement, the greatest opportunity for ROI is in operational and revenue-generating areas.** The administrators of the system should not be allowed to dictate the boundaries of how the system is applied to the business. Again, having no boundaries on the system means understanding that in order to deliver value there may be new demands, new stakeholders, and new relationships within the organization. Those organizations that understand that are getting the most benefit.

Paving the Cow Path

Some organizations have all the best intentions but still manage to get little more than the basic benefits. I’m not saying that is entirely bad. I would rather see an organization see a small improvement than nothing at all. I ask my friends in the time and labor technology industry all the time, What holds an organization back? Why didn’t they see more ROI? I get a lot of answers: a system not deployed fully, failure to integrate well with other systems, no internal champions to fight strong resistance to change, not enough input from operational experts, among other things. But one of the

most interesting explanations is that organizations spend a lot of time and resources and end up doing little more than “paving the cow path.”

Now, if you are like me and didn't grow up on a farm you may not understand exactly how walking trails for cows relates to workforce management systems. I have to give credit for this humorous analogy to Jerry Nepon-Sixt. Before Jerry became an expert in time and labor systems, he spent his childhood growing up on a farm. As he explains it, cows will walk the same path day after day. But if a tree falls across the path they will blaze a new trail around the barrier. Later, when the tree is removed, the cows will continue to take the long way around the spot where the tree fell, even though the obstacle is no longer there.

Humans, apparently, aren't much different. Processes meander for one reason or another through the organization. These processes were constructed because of technology (or a lack of it) and various operational barriers that forced movement in a certain direction. When new technology is introduced and the obstacles are removed, people stick to their old way of doing things. The reasons for those processes are now gone, but the indirect route is still being followed. The cow path has remained the same, except now it is nicely paved with asphalt or concrete. In WMT systems, the concrete might consist of shiny new time clocks and a cool Web interface. But the organization failed to leverage the technology to redirect the processes along a more logical, efficient, and effective route.

Organizations that pave their cow paths actually make things worse, because putting them inside a formal system actually makes them more permanent, more universal, and more destructive. When you think about your time and labor systems, investigate carefully what you model. Make certain the systems aren't aimlessly following a course around obstacles that have been removed. For example, finding a lot of very particular reports in a system requirement is where this syndrome often reveals itself. Challenge these requests to make certain a stubborn behavior isn't the true source of the need.

The manager with the perfect mind-set realizes that it is very likely that WMT is an untapped engine for improving their processes and financials. He can quickly read case studies and vendor pamphlets to find out who has done it and what their results were. But *how* they did it is more important; and *how we can* do it is an even more valuable discussion.

If I had to sum it up succinctly, I would say that there are four workforce management technology best practices:

1. **Pay people accurately and appropriately.**
2. **Use labor wisely.** Know what you've got, how to use it, and what it costs. Understand the workforce completely. This entails using the full suite of applications where appropriate.

3. **Actively steer the workforce toward your strategic goals.** Align decisions and activity with corporate objectives by using business indicators; move away from risks and toward opportunities minute by minute.
4. **Integrate and accelerate.** Use the technology to merge business intelligence from other systems with workforce management to gain the efficiencies and aptitude needed to run the business better. Create “organizational workforce intelligence” experts at every level.

Everything timekeeping, scheduling, attendance, analytics, and hiring systems have to offer falls into one or more of these areas.

What Is Workforce Management Technology?

With any emerging technology, the language used to describe that technology must evolve as well. You may know exactly what Time and Labor Management Technology is and you're eager to find out more about the rapid and powerful developments in this sector and how to apply them to your business problems.

For those of you who are new to Time and Labor Management and unfamiliar with the terms, welcome. You are not alone. In this practice, we struggle with vocabulary every day. How do we effectively describe what these systems do? How do people find what they need if they don't know what to call it? How do we gain better visibility and understanding in the marketplace if we don't agree on the labels we put on these applications? Unfortunately, adoption of a common, stable verbiage within the industry has not yet happened.

What is Time and Labor (or Workforce) Management Technology? Is it about “time and motion” studies? No. Does “Labor” refer to union issues? Indirectly, yes, but that is not a primary focus in this book. Exactly what kind of technology are we talking about—hardware, software, or networking? All of the above.

Time and Labor Management Technology is the evolving focal point of managing workers, activity, and cost. It is the best tool for treating human capital as a valuable asset. WMT systems encompass many different technologies and business solutions designed to help organizations effectively administer their labor-related processes. From talent acquisition, training, compensation, time and attendance, and scheduling to automated workflow, productivity analysis, and retention, these systems help companies more effectively manage their workforce.

Automated workforce management systems can be the vehicle for the collection of extremely valuable data and information about worker activities and the costs associated with these activities. This can, in turn, become the source of a new way to manage worker activity. WMT can become the

very centerpiece of managing workers. The information can be used to evaluate all kinds of business issues. Data about what goes on in a business every day is gathered and stored in one central repository. Key business indicators from a variety of sources are linked to people, their decisions, and their activities. The database allows managers to make a direct connection between their workers, resources (e.g., material, equipment, and money), and their customers. The tools enable them to make decisions using that information while also conforming to the rules and constraints the business demands that they follow.

WMT systems deposit information into their memory banks, creating an ongoing history of the business and its workers. Best of all, when the data captures a pattern of success, it can be shared throughout the organization, thus “institutionalizing” the success. On the other hand, if analysis of the data reveals patterns that are problematic, the technology can be used to provide solutions. For instance, if data shows that employee turnover is highest in people who work long shifts, the system can limit the scheduling of excessive-duty periods. If a certain phase of a production is consistently creating delays and resulting in overtime, this may call for reevaluating the staffing assignments. Thus, the system can be used to develop solutions or to model alternatives.

As you can see in Exhibit 2.2, WMT provides a natural platform for integrating all sorts of business intelligence. The more WMT information that’s gathered, the more the WMT knows about the business and the more meaningful the data will become. Data from external and internal systems can be plugged in. Scheduling software provides the background logic, and

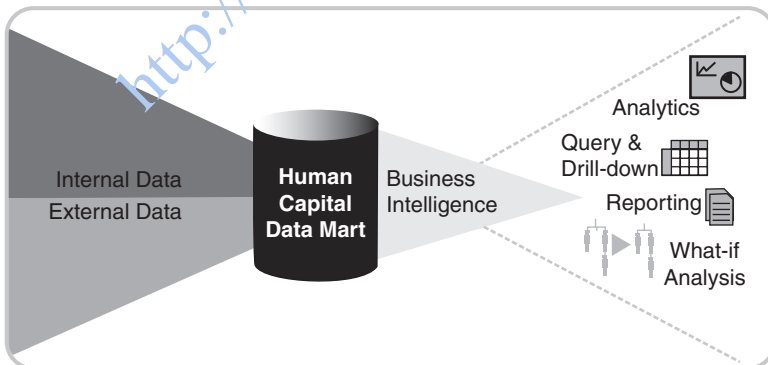


EXHIBIT 2.2 Develop a Platform for Workforce Analytics

This is a diagram showing where workforce data originates and how it produces business intelligence to the organization through various WMT features: analytics, query and drill-down, reporting, and what-if analysis.

Source: Used with permission.

the human resources database supplies employee demographics and job information. The enterprise resource planning (ERP) system provides tracking labels and production volumes. Labor analytic tools can draw upon WMT data and analyze the outputs. Training—or learning management systems (LMS)—can be integrated with job data, employee skill sets, schedules, and payroll. Access control systems use WMT systems to control entry into the facility and track the flow of people onsite. Billing systems use the data to eliminate redundancy and insure consistency between paid hours and billable hours. **The WMT system becomes a human capital data mart of knowledge for further use.** The business can draw upon the repository for query, drill-down, and roll-up of details, reporting and modeling, and what-if analysis.

Moreover, WMT is extremely efficient. Exhibit 2.3 illustrates how detailed information at the lowest levels is collected and summed up as it moves higher in the organization's hierarchy. Each piece of data needs to be entered just one time, and then it can be shared among the various systems and totaled, making the data more meaningful. Instant access is possible because information is distributed immediately. Additionally, everyone will be analyzing the same data—that is, everyone will have the same version of knowledge so that business units can better communicate and all will know that various decisions will be based on the same information. When disparate units attempt to converse without integrated systems and a central repository of common human capital data, the organization can become

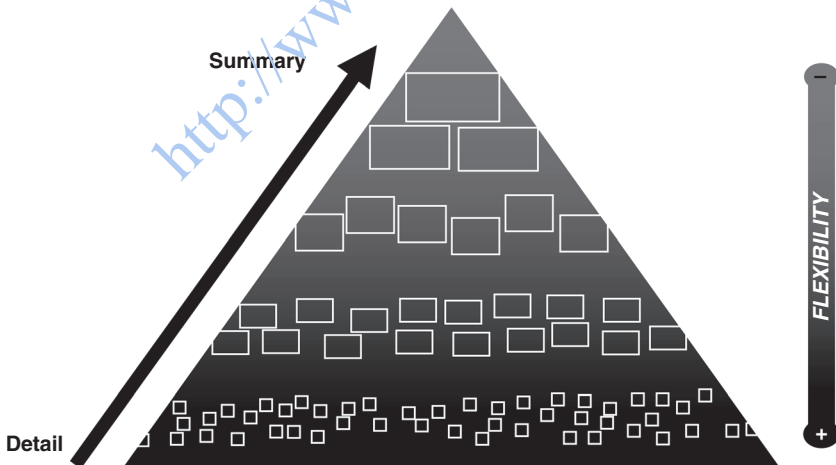


EXHIBIT 2.3 Collect the Details

This exhibit illustrates how detailed data that is collected across the organization is rolled up within WMT to give visibility to all levels within the company.

Source: Used with permission.

like the Tower of Babel, each entity speaking its own language with its own facts and figures. WMT eliminates this barrier to communication and gets everyone speaking the same business language.

Making Certain Your Organization Is Data Literate

Not only is language important relative to how we communicate about the workforce, it's essential to make certain that people in the organization understand how to read and interpret data and translate it into meaningful information. Although the technology has advanced rapidly in delivering integration and presenting data relative to various business indicators, the people using these systems most often have not kept up; they are not number literate. Except in areas such as accounting and engineering that use numbers in their work, business people who deal with workforce issues typically aren't trained to comprehend labor data. They are often more socially oriented than business oriented; quantification and objective data analysis aren't areas with which they are comfortable. Because tools haven't previously existed to measure and evaluate the workforce scientifically, business people have long been operating on intuition and habit (trial and error) and simplistic notions of change.

When business people describe changes as "better" but can't come up with an answer to "how much better?" or reply "Well, a lot better," they are operating on simplistic, gut reaction "data." Worse than that is the absence of a logical approach to the collection, interpretation of, and response to data. Knowing what should be measured and how, when, and what is the information related to are all part of a valid method for using data. **The ethos should be to make the important stuff measurable, not what is easy to measure important.**

WMT systems deliver a wealth of information in a variety of formats, such as alerts when certain milestones are met; totals and percents; and even dashboards with charts, graphs, and trend indicators. These can be very powerful signals, but the users must understand what they mean and how to use them. It's easy to look at a line chart and tell whether the numbers are going up or down. What's difficult is to know whether the movement is significant and, if so, what can and should be done about it? Should I care about a bar chart that consistently goes up over several hours, days, weeks, or months? If a particular line graph goes up and down constantly, how much volatility should be tolerated? Is there a peak, valley, or trend line to watch out for?

If the data being gathered is irrelevant, then no matter how fancy the dashboard is or how well people react, it won't make much of a difference. If the information is relevant but the user fails to interpret the information correctly, the organization could be steered off course.

It's not really that difficult for employees to get a handle on what important data is; it just takes time, intent, and training. Be aware that the systems are easy to navigate, but not completely intuitive to use. And it's not uncommon to see a report or a screen with a lot of data in several formats (lists, charts, graphs, highlights, etc.). Information overload or "analysis paralysis" can ensue. Reading charts and reacting to indicators are skills. Unfortunately, perhaps because the indicators are visual or color-coded, we think somehow they are tools people instinctually understand. If the new WMT system is going to deliver information to users, it must be implemented with adequate training and practice. People have to understand where the information comes from and where it maps to out on the shop floor, in the store, in the office, or in the ward. The system and training should filter out the chaos and bring what is important to the surface, and that is applicable yet unique to every business.

Taking this discussion beyond the practitioner level and into the boardroom, the problem with data literacy is not ineptitude but perhaps more a reluctance to embrace analytics relative to the workforce. Leadership in the organization may need some convincing that the function of human capital management is no longer just an expense issue; it is a value issue and a revenue-generating opportunity.

Time and attendance management is about managing expenses and WMT systems are the best tools to accomplish that. Reducing overtime, employee turnover, and absenteeism; improving processes; and reducing supervisor time spent dealing with schedules is where 90 percent of the mind-set is for business leaders. This is according to Dr. Jac Fitz-enz, a notable author and the first person to develop human resource metrics, in the 1970s. Business leaders should also look at the other side of the balance sheet and understand how WMT information can become a revenue-generating mechanism.

Cost is perhaps the easiest measurement to quantify related to labor and the constraint it puts on the organization's ability to produce more or enjoy more profit. It's easy to track and understand. Timing is also fairly easy to comprehend—the faster workers can get the job done and respond to the demand, the better. A workforce operating in a timely manner maps directly to higher production and greater profits. Efficiency has value; it increases the opportunity to sell more for less. When WMT systems are used to measure cost and timeliness, there can be a direct impact on the bottom line. This discussion, however, still falls within the cost-reduction mentality. Not that there is anything wrong with that, but it doesn't represent the entire value of improvements in cost and timing.

Costs and timing can be reduced while revenue still remains the same (spend less and make the same amount of money), but they can also be reduced and income increased (spend less *and* make *more* money), and

that's even better. The total value of these kinds of changes occurs on both sides of the balance sheet, meaning that the ROI is even greater.

Output is another area that can be captured with relative ease, recording how much a worker produces and the quality of that work effort. What if output is improved but timing and cost are not changed? In other words, the company gets better at producing with the same number of workers paid the same amount (spend the same, create more, and make more money). Does that have value? Expenses have not been reduced overall, but the per-worker output or the amount of revenue per employee has increased. So managing workers better creates more revenue from that given set of human capital.

Key Idea

Data about Worker Output Must Be Understood

High-performance workforce requirements have significantly increased as a result of a skills gap as well as the challenge of competing in a global economy, according to nearly 75 percent of survey respondents.

Source: Deloitte's 2005 Skills Gap Report

Data literacy relative to these scenarios means knowing how the data relates and what matters. Little improvement in overtime dollars spent might be all right if production and revenue are headed in the right direction. Effective workforce management is about both sides of the balance sheet. People have to understand what to look at, when it matters, and what to do about it. When WMT is limited to managing only one side of the balance sheet, that could be a costly mistake. When it isn't done at all, the organization is living in the dark ages.

The Evolution of Business Technology

When was the last time a secretary took a memo in shorthand?

Okay, maybe there's someone out there still working that way, probably pushing 90 years old. But people who have been around longer than I have tell me it's been 30 years at least. Communications and technology in the workplace have come a long way.

How did payroll get done back then? How did companies collect information on workers' time and tabulate it? Manually, and on paper, right?

How is it done in your company today? Perhaps your company is now collecting the information electronically, but even so, chances are *what is done* with all the information that's being collected hasn't changed much. It could well represent a gold mine of data that management could use in ways you will soon learn about that can make things run more smoothly and efficiently.

Paper time cards may have been replaced, and your company may now be using electronic time clocks. This may be a "mechanical improvement," but the only real difference is the way data is being moved from point A to point B. Such small incremental developments in collection methodology have delivered only limited benefits compared to what is actually possible.

The extinction of secretaries who took dictation, answered phones, and took messages between typing letters, filing, and getting coffee came about as technology evolved. Desktop computers with word processing and list management programs began to proliferate. Telephone systems with voice mail made the companies that printed pink telephone message slips look for a new line of business. The *coup de grace* came when nearly every office worker had a computer on his or her desk, linked to the Internet. Integrated, multimedia, real-time communication was now available to all. A whole new way of communicating emerged, and this sent secretaries the way of the dinosaur. It was a dramatic change that occurred in just a few short years.

One development just as dramatic is now in the making. Exhibit 2.4 illustrates the dramatic changes in timekeeping technology that have occurred during the past 30 years. Time clocks remained essentially unchanged for almost a century until the late 1970s. Since then, the clocks have evolved into a variety of collection devices, and communication with related systems is instantaneous.

The Way We Used to Work

My friend told a story about going to work for an advertising agency right out of college. Like others, his firm developed and produced ads for its clients, some of which ran on TV, others in magazines or newspapers, some ran on radio, and of course there was the occasional outdoor billboard. Each job, whether it was a TV or radio spot or a print ad or billboard, had a job docket that traveled from one person who worked on it to the next. Everything to do with a job (which might have included briefing documents, background material, the copy, and the layout, once these were developed) traveled with this job docket. Also inside was a time sheet in triplicate, complete with carbon paper.

TIME CLOCK EVOLUTION

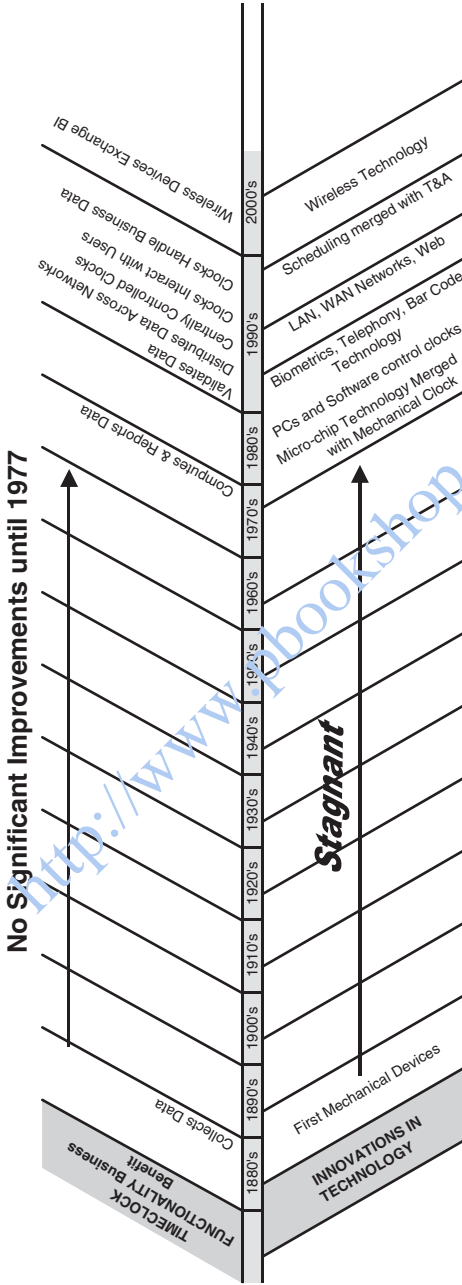


EXHIBIT 2.4 Time Clock Evolution

The timeline shows how time clock technology remained relatively stagnant for almost a century until 1977, when Mark S. Ain of Kronos Inc. first merged microchip technology with mechanical time clocks. This created the first intelligent device that could capture, record, and add employee time.

Remember carbon paper? Perhaps you recall the admonition “Press hard, you’re making three copies.” Or maybe not.

It was up to each person who worked on a job in the ad agency to record his or her time on that card, along with what was done and the date. This meant people had to record time twice. Once for the job and again on a time sheet that was turned into accounting and used to calculate a person’s pay. That’s because the time card in the job docket remained in the docket until the job was completed and closed. Eventually, layout time would be billed at one rate, copy time at another, and production time at yet another, even though the same person might be responsible for all three and would be getting paid at one hourly rate.

This is a good example of how payroll is often compartmentalized and viewed as being unrelated to actual work. It’s also an example of duplication of effort since employees had to do the same thing twice. Now, it’s possible to call up what in effect are time sheets on a Web-based system that allows employees to post their time against specific jobs and tasks. The same posting also records their time for payroll purposes. The system will calculate client billing and employees’ paychecks, it also provides real-time data, so that if someone in management wants to know how much time has been posted to a particular job, he or she can find out up to the minute with a few clicks of a mouse.

In that ad agency of yesteryear, there were probably hundreds of these job dockets floating around the agency at any given time. They represented what in manufacturing would be called work in progress (WIP). As would also be the case in a factory, this WIP was worth many thousands, if not hundreds of thousands, of dollars. The accounting system at this firm considered time that had been posted to a job to be earned income even though it hadn’t yet been billed. The work had been done, and it had been earned. It would be billed and would become money in the bank unless some part of it had to be written off. Of course, no one really knew how much WIP there was at any given time. The best anyone could do was guess.

This being the case, what do you suppose happened at the end of each year? The controller of the company needed a tally of this work in progress in order to put it on the balance sheet as an asset. So a mad and frantic dash would take place to round up all the job dockets and total up all the time cards.

My friend hasn’t been in advertising for a number of years, but he says that for all he knows this yearly ritual is still taking place during the last two weeks of December. Maybe so, but let’s hope not. Just imagine how much easier it would be to have all that data entered into a central database. Not only would there be less chance of loss or error, all the totaling and all the billing could be automated and immediately available. In

addition, the controller of the firm would be able to know how much work in progress existed at any given moment simply by consulting the computer on his desk.

The Way We Work Now

What would you think of a company that still had secretaries taking down memos in shorthand and typing them up on an IBM Selectric? Okay, what would you think of a company that still processed payroll and looked at its data the way it did 30, 15, or even 5 years ago?

You might think a lot of people in such a company would be doing work that could easily be eliminated, given the technology that exists today—effort that could be spent in more productive ways. You might also think the people who run that company were probably missing out on a great deal of valuable information they could put to work if only they brought the way the company processes time and attendance and manages labor activity into the twenty-first century. This has happened in other departments, even in advertising agencies. Art directors no longer use T-squares and drawing tables; they use computers. And it's a pretty good bet the general ledger isn't handwritten in ink and totaled by an adding machine. Human Resources probably uses up-to-date software and computer power to store and access the records it needs. And computers have done more than just make typing or compiling and storing records easier. They have assumed other functions as well that used to be done by hand or with a slide rule or an adding machine.

For example, engineers don't simply draw on a computer, they input variables and extrapolate results and make projections about viability and performance. CAD (computer aided design) software replaced the draftsman and the manual process of making mechanical drawings, but engineering technology went further, putting the computerized drawing into intelligent design applications where stresses, temperature, and materials are analyzed, enabling engineers to determine where a plan could be prone to failure or exceed expectations.

Finance departments and investors use data not as simply data points plotted on a line but as analytical tools that demonstrate trends and deliver buy or sell signals. Procurement and logistics departments use systems that evaluate production data and supply needs and enable companies to operate "just in time," increasing efficiency and reducing costs.

Why should payroll be different? Instead of just getting checks written, why shouldn't a time and attendance system deliver valuable information management can use to run things better? Why shouldn't it be analyzing and providing actionable data? Could it be that an integrated timekeeping and

scheduling system could generate forecasts that enable managers to make informed decisions about staff, workload, and compensation? The fact of the matter is, it can.

Establishing an Effective Human Capital Management Strategy

Time and activity data can be invaluable. Company management needs to take a hard look at the issues being faced to see where the costs are and what's driving the business and to link that to labor activity and compensation. Studies have shown that not everyone in the typical company is working to move the ball forward. According to a Gallup survey shared at an industry conference, about 25 percent of the workforce is actively engaged and working the way management would like and hope, and approximately 50 percent are what is termed "neutrally" engaged. They come to work. They warm their chairs. They muddle along and don't hurt the company. The remaining 25 percent of the workforce is actively working *against* the company that employs them. You might label them "disgruntled." That's an enormous number, and a very scary one if true. These people might be stealing from their employers; they might be involved in fraud or in some other counterproductive activity. Is your company doing anything to combat this threat? The disparity in employee engagement is illustrated in Exhibit 2.5.

Perhaps you can't believe you have employees who are actively working against you. But think about this: Another study, a survey done in 2005, indicates most American workers could fit a lot more work into each day. Conducted by America Online and Salary.com, it says **the average worker wastes 2.09 hours a day** chatting with coworkers, running errands, surfing the Internet, or making personal phone calls. That lost time costs U.S. employers about \$759 billion a year in unproductive labor expense.

To tackle the problem of employees spending too much time on things other than their work, it's important to understand what makes workers

24%	51%	25%
Actively Engaged	Not Engaged	Disengaged

EXHIBIT 2.5 Workforce Engagement

This exhibit illustrates the extent of nonproductive time. Only 24 percent of the workforce is actively engaged in productive activity; 51 percent of the workforce is not engaged, and 25 percent of workers are actively disengaged and working to the detriment of the organization.

Source: Gallup Organization

perform. But not only are the drivers of performance important; so too is the uniqueness of your organization and the need to know what work is most important. As seen in Exhibit 2.6, there are four basic tenets of establishing an effective human capital management (HCM) strategy.

1. **Every company's workforce structure, attributes, and culture are unique.** We all know our company is special; no two organizations are exactly the same, and the response made to the differences is critical. Use your understanding of your company to design what will work best for your organization.
2. **Measure human capital according to the three principles.**
 - A. **Operate from a top-down approach when developing a plan.** Identify what you want to achieve; what you have, in terms of people, to get it done; and what has the greatest potential value. Designing from high-level objectives down to the detail of specific tasks will ensure there is a connection between how employees are tasked, who is tasked, and the outcomes of their efforts. Make certain you are operating from the top level of the "four levels of knowing."
 - B. **Find out who is engaged.** Focus on the activities, skills, and preferences that are yielding results, not on job titles.
 - C. **Get in touch with the things that make your business successful. Understand what is needed and when—such as the retailer we discuss later in this chapter.**

Four Basic Tenets	
1	Every company's workforce structure, attributes, and culture are unique.
2	Three principles of Human Capital Measurement: <ul style="list-style-type: none"> ▪ Think and operate systemically (connect the dots) ▪ Get the right facts (you have them) ▪ Focus on value (creation and destruction)
3	Go beyond perception (<i>what people "say"</i>) and focus on actual behavior (<i>what they "do"</i>).
4	It is possible to identify and understand the real human capital drivers of business performance.

EXHIBIT 2.6 Human Capital Management

The four basic tenets of human capital management outline areas to focus on for an effective workforce management strategy.

3. **Don't be misled by what people tell you; discover what is actually getting done.**
4. **Remain confident that thorough discovery and validation will enable the organization to improve employee behavior.**

Data Collection: A Source of Motivation and Reward

I hate to admit it but some very smart people have actually been rather skeptical when I tell them about the principles of human capital management and workforce technology. They say, "Those systems don't offer anything new" or "We've already implemented BPO (business process improvements)." The use of labor activity data to drive business productivity and profits makes so much sense they simply cannot believe that companies aren't already using it. In fact, many companies have tried, and many continue to put effort into this area. Walk any manufacturing floor and you'll see they are evaluating production levels, parts complete, and all sorts of business data. However, one industry analyst told me that 75 to 80 percent of that data is out of date within two weeks to a month or more. The systems and processes used to collect and analyze the data aren't yielding much value to the organization when the data is that stale. The tools for collection are cumbersome, the data originates from disparate systems, and participants in the process don't have much motivation to keep things 100 percent complete and up to date.

Go into any organization and ask workers to walk around with a clipboard and collect data. After a period of time, the participants begin to lag in their duties and the entire process declines in value. What's new with workforce management technology entering into the mix is that **workers care** about the data, and they are able to report data *and see the results in real time*. Why does that matter?

Workers care about the data in WMT systems because it is used to compute their paychecks. Money matters, plain and simple. They are highly motivated to continually input the right data at the right time.

Key Idea

Time and labor data is important to workers and therefore must be accurate and credible. Workers care about the data in WMT systems because it is used to compute their paychecks. Money matters, plain and simple. They are highly motivated to continually input the right data at the right time.

They will even check for omitted data because ultimately that may result in less pay. Data will *not* degrade over time, because workers will always care about their paychecks. Managers care about the data too and help to validate accuracy to ensure their budgets are met.

Workers also see the effect of the data they are collecting today. Let's return to our discussion about worker behavior and attitudes. Workers who have been around a while have seen more than one young whippersnapper come along asking for information. They know they are going to outlive the latest fad in productivity studies. It may be that no one has ever *done* anything with the information that's made their life any better.

Most people, at some point—usually early on in a job—want to be successful. What happens is that older systems asked workers to collect and report information, but the effort did little to quantify the challenges they are facing on the shop floor to help reduce cycle times, to reveal both problems and high producers, and to make reaching their goals easier. When employees know the information is being tracked and measured, that non-value added activities are being identified (i.e., the daily challenges and obstacles they encounter are being illuminated) they are more willing to participate. More important, the technology can give them a visualization of exactly what is happening, the cumulative effect or outputs, in real time.

What's noteworthy is that the technology gives them a way to see how they are moving the needle. Workers can see, for example, that "it's Wednesday and I'm behind on reaching my target, I'd better report the problems I'm having and see what can be done to help."

In a real-world example, a manufacturer used workforce analytics to identify a "hidden factory" within its production process. A wiring harness was being shipped with wires crossed, and line workers were fixing this problem. This non-value added time (unintended rework that was not part of the planned operation) was affecting their productivity. When the activity was reported, the problem was identified in real time and a value engineer was called to the floor to evaluate the low outputs. The problem was quickly resolved. Another discovery at the same plant was that when work orders were released to the floor without 100 percent parts complete, the job took twice as long. The analytics tool played a major role in uncovering this non-intuitive problem and allowed the manufacturer to resolve this impediment to productivity. The result was that the company exceeded its cycle time goal for that product by reducing it by over half.

What's new is that **the technology empowers the employees to reach their goals, to be successful at an individual level.** They can monitor their performance and know their supervisor is monitoring it as well in real time. Instant feedback, instant recognition, spotlights on obstacles and challenges—add those individual benefits up and the company benefits as well. **What's different is that unlike the lean and quality**

initiatives that satisfy the needs and interests of workers higher up on the management ladder, these systems impact the front-line worker. The advantages for *them* compel them to support the system, to continue to give the system the information everyone needs, and to react to the data, changing their behavior to reach their goals. That's different.

It's also important to keep in mind the changing dynamics of worker attitudes as more and more Generation X and Y employees join the workforce. This generation has been groomed to expect feedback and to offer input. They have grown up in the information generation, and working with a technology that provides them the instant gratification they are accustomed to will satisfy their expectations. For those companies that stubbornly resist upgrading their technology, it may be the Gen X and Y employees who rise into management that finally turn their companies on to these systems.

Incentive Plan Cost-Efficiency Analysis

One thing is true in just about any business. You get what you measure and pay for. When people's jobs and livelihoods depend on something getting done, it is more likely to be done. This means it's important to keep score to know precisely how the business is doing in each key area and to hand out rewards to employees when the goals they've been given are met. That's why management might also consider tying a percentage of workers' compensation to achieving company goals.

A good incentive plan can have a major impact on a company's bottom line, and the right WMT system can be helpful in developing a plan, because modeling can be used to determine the financial impact. Suppose someone comes up with an incentive plan to get people to work weekends. Before instituting it, management would be wise to see how much it's going to cost. This won't be difficult with an automated system. Take last year's weekend time and attendance data, for example; overlay the proposed incentive program on top of it; and presto, the cost of the new incentive program can be compared to the current compensation plan.

Key Idea

Modeling can test compensation plans. The technology is, for the first time, introducing simulations into front-line human capital management.

This is particularly helpful when the plan involves qualifiers such as minimum number of hours, overall attendance, or limits on stacking the new plan on top of other premium programs. These qualified plans are useful when the incentive is designed to provide a consistent labor supply.

They are weighted to discourage employees who might consider working something less than 100 percent of what is required. They become “vested” and risk losing all of their “bonus” if they fail to work as they promised. Overlaying a new commitment plan against employee work patterns yields a more realistic estimate of the cost than any educated guess or “calculation.” The question can then be asked (assuming the plan produces the hoped-for behavior modification): If employees do begin to work weekend shifts consistently, can the company afford the additional expense? Or does the additional expense offset the avoided costs of what happened when workers could not be persuaded to work the weekend?

The converse can also be determined. Say there is already a weekend differential, but management senses there is an ample supply of workers willing to work the weekend. By removing or reducing the incentive pay and running the numbers, it’s possible to see what the potential savings would be.

It’s not always necessary to use historical data. These systems are designed to help management determine how they should operate in real time or in the future. **It’s the integration of the business knowledge, creating correlations between operational demand and labor supply, that provides the manager with a forecast and a barometer of his or her labor situation.** In health care, for example, a certain number of each category of health care worker, based on skills and roles, must be present during a hospital shift, depending on the number of patients on a particular floor, or in a unit, and the patients’ acuity level (i.e., how sick the patients are and how much care they require). Set ratios can be programmed into the software so that “what if” scenarios can be run. If the cost of the incentive program seems too high, the conditions can be tweaked. Instead of a 24-hour minimum before the incentive is earned, bump it up to 30 hours and see what happens. How many employees would still meet the minimum and be eligible for the bonus? How much would be saved? This ability to tweak and adjust is one of the things that make this feature so useful.

Software vendors offer scheduling solutions for use by manufacturers that help them optimize output based on the variables of workload and staff. They use optimization routines with sophisticated algorithms to run and compare scenarios in order to calculate the best possible schedule in terms of the work to be done and the employees needed to perform it. An employer can define the parameters and the priorities so that the system takes into account desired limits and goals. This brings scheduling to an entirely new level—to demand-driven labor forecasting.

■ **CASE STUDY: A MANUFACTURER USES ITS TIMEKEEPING SYSTEM TO TRACK PROJECTS AND PRODUCTIVITY AND MEET ORGANIZATIONAL GOALS** One company client of ours builds water towers—those big things that look like

giant mushrooms rising up around communities and industrial parks across America. The company uses WMT to track the status of its projects. As you can imagine, one of these huge tanks takes weeks to fabricate. Managers from engineering, supervisors, and sales personnel now track the time spent on each project and its progress toward completion. Employees enter into the system the amount of time it takes to complete certain tasks—for example, coating a large assembly. On any given day, this enables the company to see how many hours have been put into a particular tank and what steps in the build have been performed. It identifies who is working on a project right now and who is going to work on it tomorrow.

Let's say a customer wants to know the status of a particular water tower under construction, and he calls his service rep. The people at the company can tell him exactly where it stands up to the minute by calling up real-time information in the computer. Yep, it's on time and on budget. Hallelujah! And that's not just a "best guess" based on last month's reports.

You see, the company's president had a vision. He realized how outdated the company's systems were when he heard about the new technology. He imagined and he planned what it could do at *his* company. This was not a huge corporation. At the time the new time and labor system was installed, the HR department was still doing things on paper for the more than 400 employees on the payroll. But the obvious lack of investment in information technology to that point didn't deter him from seizing the opportunities he saw.

For this particular business, **the technology can also be used to create incentives for workers to get things done faster and more efficiently.** Let's take a welder. Say Steve is scheduled to weld one of the panels today. He clocks in when he starts on the welding work order by swiping a bar code representing the specific task he's about to perform. This task is part of the purchase order and the project plan. The time and labor system now tracks his time on that task. Then he swipes again when he finishes. If he completes the job before the standard time, he might get points toward a bonus. Operational objectives and time and labor data have now been linked.

What are the business objectives in this process?

- The work is more likely to be completed on time.
- The project is completed at the lowest cost and shortest timeframe.
- Steve is motivated.
- Management can see labor activity and cost in real time and measure progress against budgets and milestones.
- Steve's performance is tracked.

How did the time and attendance system help reach these five goals?

The manufacturing schedule became the employee's work schedule. The assembly process put the work order on Steve's task list. Of course, that process probably hasn't changed and has been ongoing for the company. What has changed was that instead of Steve just reporting that he is at work today—"Hi, time and attendance system, Steve here. It's 8:00 A.M. and I'm at work"—Steve now tells the system, "I will be working on Work Order 4566 starting at 8:00 A.M." The Supervisor can even put the work order in Steve's work schedule in the WMT system along with the next work order he has to complete—and the next. When Steve goes to the time clock or swipes a bar code, the work order becomes "in progress." The computer system can now compare what was scheduled to occur against what is actually occurring or has already occurred.

Anyone who needs to monitor this project can now see, in real time, what is being worked on, what is complete, how much time it took, and what is scheduled to be worked on next. And the person doesn't have to be in Farmville, where the water tower is being built, or out on the shop floor. He doesn't have to be in the same building, or even on the same continent. He doesn't have to call Steve's supervisor.

Is the work being done at the lowest cost? The WMT system can help manage that, too. The system contains Steve's pay information. Time multiplied by hourly rate equals the cost. The system may even have suggested assigning this work order to Steve because he is the welder with the lowest hourly rate. Once Steve is finished with the task, the system can compute the cost of that particular work order by adding in all the welders, fabricators, painters, and so forth who logged time against that project.

Steve knows the system is tracking the time it takes him to complete the job and that if he finishes quickly, he may qualify for a bonus. This bonus may add to the cost, but it also will move Steve along faster to the next work order and help keep the project on schedule. This may make sense, given that not meeting the schedule could cost the company more than a small bonus. Further, if Steve's manager reviews the schedule and notices that he is about to exceed 40 hours this week if Steve picks up the next work order, the manager has the opportunity to change Steve's schedule and to assign another worker to that task, keeping Steve's total hours in check and avoiding an overtime payment.

In this case, **the WMT system helped meet three objectives—on-time completion, cost control, and visibility**—and it did so by putting front-line management in control.

Employee Score Cards

Sports teams and fans have long understood the value of performance data. Look at baseball cards. Players are rated, traded, and idolized for their "stats."

Who goes up to bat is decidedly scientific—based on batting averages, runs batted in (RBI), and on-base percentage. The player’s performance determines how and when he is used in the game. Imagine employers keeping scorecards for employees (see Exhibit 2.7).

Integrating performance data such as stats on workers or teams or business units with workforce systems can provide valuable information. It can tell the employer who does what and when they do it best—at the individual, group, or organizational levels.

Key Idea

Workforce analytics is based on taking the labor data, measuring it, analyzing it, comparing it to key business targets, and using it to improve performance.

It’s the coupling of the data from the various areas that reveal correlations and show where the company is “baiting a thousand” and where some pinch hitters are needed.

It may reveal that more training is needed or where the presence of too many pitchers on the mound actually slows down production. What’s important is that it will enable companies to distinguish between what managers “think or say their people do” and what they “actually do.” Data provides the story, a history. Analytical studies and dashboards reveal causes and relationships and provide forecasts. Baseball managers don’t just look at RBI numbers. Pro golfers don’t just study their past scores; they understand



EXHIBIT 2.7 Employee Performance Cards

This exhibit illustrates how time and labor data can be transformed into employee performance scorecards, representing key players to the organization.

what makes them great players and they constantly work to keep their eyes on the ball and improve their swing.

■ **CASE STUDY: A RETAILER USES LABOR DATA TO INCREASE SALES AND PROFITS** An outdoor equipment retailer in the northwestern United States, with dozens of stores located across the county, sells recreational and extreme sports equipment. Perhaps you've been in one of these stores. The stores look like lodges, and the salespeople are all 20-something with buff bodies and good tans. They sell hang gliding, skiing, cycling, camping, hiking, backpacking, and mountain climbing gear, along with other, extreme outdoor recreational equipment.

The company's management team recognized a connection between individual store sales and staffing. So the team decided to go to an automated time and attendance system. In other words, WMT would be used to increase sales. Part of the strategy was to make the operation and implementation of WMT by store managers a mandatory core competency.

Key Idea

Management recognized a connection between individual store sales and staffing. WMT would be used to increase sales. Managers would be required to gain competency on using the new system to drive sales.

The management team of this outfit “knew what they knew.” They knew their numbers and understood their customer traffic patterns and sales trends. They also had a good feel for the “soft side” of the sales process. Their marketing approach included employing sales people who enjoyed and participated in the outdoor sporting activities for which the equipment being sold was designed. So they hired guys and gals who like to rock climb and rappel and hang-glide and put them in the department that sold these goods. They knew their customers were enthusiastic about such purchases and reacted positively to the workers who shared their interests. A certain “match” existed between sales staff, the products, and the customers. When everything was aligned, the perfect “sales chemistry” was created. The goal was to create this chemistry and to staff at a level that would return the maximum ROI. They also knew that customers eventually get tired of waiting for someone to help them and will go somewhere else if they don't get service within a reasonable length of time, which made having the right number of sales personnel for the amount of traffic on a given day a must.

Along with knowledge about what made the cash registers ring was an appreciation for how difficult it was to create this perfect chemistry without assistance. The team also realized that not every store manager was a natural “chemist.” Some were better than others at conjuring up this staffing magic. So they studied what the best managers did and figured out why and how they were successful.

In this way, the management team came up with its own “best practices” based on what had worked in the past. Coupling statistical data on customer traffic along with sales and best practices, they knew their employees’ “score card stats” and were able to build a model for staffing. They knew what types of workers to schedule during specific seasons and during special sales events.

Key Idea

Employee Scorecards Drive Revenue

Coupling statistical data on customer traffic along with sales and best practices, the management team knew their employees’ “score card stats” and were able to build a model for staffing. They knew what types of workers to schedule during specific seasons and during special sales events.

You might say they viewed the workday as a sports team would on game day. The team could predict with a fair degree of accuracy what store traffic would be at different times of year and on different days of the week. They knew what could be expected during a sales event such as a ski equipment sale, or a mountain-climbing bonanza. They developed a game plan, knew their players, and set out to break records. All they needed was the mechanism to make it happen.

The retailer selected a workforce management technology vendor that understood the relationship between time and attendance and business objectives (e.g., maximizing sales) and offered a software product that fit the bill. Management was purchasing a new tool, not simply installing a new timekeeping and scheduling system. Knowing what the expected outcomes were mandated that the system be rolled out with a means for ensuring results.

There’s a saying, “You cannot expect what you are not willing to inspect.” The new owners of the time and attendance system must have come across this expression, because they decided early on to institute new job expectations for managers along with the new system. Not only would they train the managers on how to use the system, they planned to change how

managers were evaluated at their annual performance reviews. Using set goals and best practices, a measurement for competency was determined. Management provided the targets (increasing store sales) along with the methods for reaching the targets (best practice tasks configured into the time and attendance system) and the timetable for evaluating their aim at the annual review.

What this employer instituted was measurable accountability with tangible processes and tracking tools. Much more was involved than establishing a sales target. Ways were developed to evaluate how the managers worked within the system by considering actual inputs, decisions, deployments, mitigating factors, and results. The managers knew their planning and reactions to the system indicators would be tracked and compared with the effect they had on store income. A hands-on tool was given to them to use every day in the pursuit of company targets. They knew it provided their leaders with visibility into how they were doing. As a result, this business tool became a part of the daily routine—a front-end business driver. It became a tuning instrument to channel each store manager's use of labor through a system with built-in standards, allowing the company to institutionalize best practices and to produce the desired sales results.

Not only did the company achieve success and reach its sales goals, the technology also resulted in smarter, more cost-effective use of labor resources. If they scheduled the “kayaking king” to work even though he was paid a higher wage than the local novice, they expected better results. Better results meant more money, and more money meant more value from the labor dollars expended—in other words, a better return on investment.

The management of this chain had its store managers match the right people in the right numbers to anticipated store traffic at the right time. They also wanted to get the supervisors and managers out of the back office, away from the tasks of scheduling and checking time cards, and out on the floor where they, too, could sell. Come game time, when the doors open at stores across the country, the strategy works.

The Need for WMT Exists in Every Market Sector

Time and labor management systems answer the needs and solve problems for employers in every market sector. While some segments of the market have already integrated human capital principles and WMT systems to replace outdated processes and improve operational success, others have been slow to recognize the relevance to their industry. In the next sections we'll explore a few of the sectors that have interesting stories to tell about how WMT systems make a difference in their organizations. We've already

pointed out examples in retail, manufacturing, and health care. You'll find discussions throughout this book on almost every major market sector.

Government and Education Sectors

There are two segments of the economy that are relatively new to time and labor management technology: government and education. These employers typically exist in the public sector and operate under a unique set of mandates. While WMT has been rapidly evolving, times have been relatively good in this sector, and growth and spending were more predominant than lean or quality initiatives. However, times are changing. According to David O'Connell, senior research analyst with Nucleus Research, "higher ed has the most to gain and government is the most behind."

The pain resulting from the absence of systems to manage the workforce effectively is becoming acute, as 70 to 80 percent of operational budgets are tied to labor in higher education, 80 percent or more in K-12 school systems, and approximately 45 to 50 percent of expenses are related to labor in state and local government budgets. These figures are reported by Christine Carmichael, an industry specialist with one of the leading WMT vendors. For these employers, gaining operational efficiency soon is critical.

Universities and college campuses often look like miniature cities with a wide variety of worker groups. Safety, facility and plant maintenance, food services, staff and administration, and student workers create a high degree of complexity. Ten to twenty percent of the workforce is made up of student workers who work a variety of jobs on anything but a routine schedule. Collecting the data can be a challenge, given that workers are assigned to scads of buildings and offices and report to numerous supervisors. The real value proposition is in WMT's ability to rein in labor costs, do more with less, and maintain continuity of service despite all of the complexity and proximity issues. Overpaying or overstaffing causes higher-ed employers to spend money they can't afford to waste. With revenue constrained by state allocations, endowments, and tuition, the only income they have much control over is tuition. In a competitive market such as higher ed, pricing themselves out of the market is not an option for these institutions. The only option is to pay correctly and use labor wisely. WMT is the best way to ensure that gets done.

Key Idea

For higher ed, the real value proposition lies in WMT's ability to rein in labor costs, do more with less, and maintain continuity of service despite all of the complexity and proximity issues.

For educators in the K–12 market there are similar pressures to better manage labor budgets. What is key for these employers is to be transparent and consistent and to ensure that workers are at the right place at the right time. School systems employ many workers in mission-critical roles. If a bus driver fails to show up, a teacher becomes ill in the middle of the day and has to leave the classroom, or even a cafeteria worker is called to jury duty, each one of these positions must be filled immediately and with the right person before things get very ugly. WMT can provide real-time visibility into these situations and their resolution before a crisis is at hand.

Further complicating the K–12 workplace are unions that are vigilant in supporting employees with grievances. The cost of not managing labor issues to ensure accuracy and fairness can be substantial. The problem is that the management is local but the headaches are centralized. A principal who administers policy to the letter of the law, angering employees and setting in motion union complaints, creates a downstream cost where school corporations employ high-priced lawyers to respond to these costly distractions. WMT enforces consistency and accountability. Subsequently, we'll explore one school corporation that literally saved millions just in the first year with its WMT solution.

Key Idea

The K–12 segment is significantly behind in adopting WMT. Therefore, benefits from adopting it will be swift and sizable.

Unfortunately, according to Carmichael, too many school systems are way behind the private sector in their adoption of time and labor management technologies. Luckily, the benefits will be swift and sizable, making the investment a sound financial decision.

From a strategic standpoint, WMT may be able to assist schools facing the difficult decision of where to cut costs. Carmichael suggests that the technology can be used to help them decide where to shut things down for a period of time. In conversations with members of CUPA (College and University Professional Association), they indicated that they are monitoring real estate costs with few workers in buildings during certain times. Integration with enterprise resource planning (ERP) systems that can create this kind of intelligence can be very important.

Like the private sector, schools can benefit from more sophisticated ways to handle scheduling and attendance. Carmichael also maintains that the systems help support their efforts to comply with No Child Left Behind mandates and security concerns in this era of precaution for school safety.

The major touch points for school decision makers are often some of the features that bring the fastest time to value, or ROI, on their investments in WMT. They care about eliminating paper and manual processes, along with all of the problems inherent in those methods; reducing overpayments; and monitoring the number of staff tasked with those processes. **Broward County (Florida) Schools, the nation's sixth-largest school district, had a 52 percent ROI and payback of only 1.88 years from their purchase.** This school system realized significant administrative productivity gains and was able to eliminate overpayments and manual processes. (Source: Nucleus Research I 34, April 2008.)

In the government sector, decision makers are concerned with transparency and accountability. Their activity must be accessible to their governing boards and taxpayers. Government workers are also unionized, and compliance with contract requirements is another concern. Carmichael stressed that overtime is “astronomical” in state and local governments, and the negative press treatment of this is gaining more attention. As we mentioned earlier, overtime control represents one of the easiest and surest ways to save, using WMT.

Key Idea

Government sector employers benefit from greater transparency, accountability, security, and cost control. WMT enables this sector to succeed in its mission and become excellent stewards of limited resources.

In court systems, school buildings and any public building, WMT provides immediate reporting of “on premises”—that is, accounting for who is onsite. In many of these workplaces, managers are required to have safety plans in place, and WMT supports these initiatives. The ability to quickly read where leadership is and how many employees need to be accounted for could be a matter of life and death.

Public safety isn't just the purview of principals and security guards. It also applies to public safety professionals such as fire, police, and corrections. In these areas, WMT can be used to track the assignment of equipment (squad cars, tasers, laptops, etc.). Again, WMT supersedes boundaries that other resource systems conform to.

Because these segments of the workplace have been slow to adopt technology, a surprising benefit is that introducing a WMT system may present a welcome opportunity for workers to ramp up on their computer skills. Carmichael shared the story of a sheriff's office in Georgia that experienced some tragic upheaval within the ranks. When a new sheriff took over and

implemented a time and attendance solution, the system actually brought people together around the new technology. “It was a wonderful win for everyone. For some of the workers it was the first time they had touched some aspects of the technology,” she added. It’s not uncommon for employee self-service features (e.g., access to benefit balances and time card records or self-scheduling, in particular) to be viewed as significant fringe benefits. The indirect benefits can include greater employee satisfaction, lower turnover, and fewer errors and adjustments.

Government and education workers have a strong sense of mission. WMT systems that help them succeed in their mission and service their constituents are certain to be a welcome addition. Supporting good stewardship of limited funds and resources while meeting the needs of their “customers”—whether taxpayers, school boards, students, citizens, or faculty—is a mission they must achieve.

■ **CASE STUDY: CHICAGO PUBLIC SCHOOLS** One big user of time and attendance technology is the Chicago Public School System. Chicago has one of the largest school districts in the country, and it is the largest employer in Chicago, with approximately 44,000 employees, over 600 locations, 420,000 students, and an annual payroll budget of over \$2 billion. The Chicago schools have been using automated time and attendance for more than 15 years as of this writing. I spoke with Mike Edwards, Deputy Chief Fiscal Officer, about the WMT system. He says the technology has been helpful in a number of instances, but one in particular is its handling of the different ways Chicago teachers get paid. Edwards estimates there are about 8,000 types of “buckets” or positions they can work in. Which one a worker falls into depends on whether he or she is an hourly worker or salaried, what subjects she may teach, union rules, and so on. This was not easy to administer in a manual setup, but a computerized system keeps it all straight without missing a beat.

But there’s more. Before Chicago’s system was put in place, each employee at each of the more than 600 schools had to fill out paper time sheets. At that time, the system had about 42,000 employees. Clerks would collect these and transcribe them to summary sheets. All this paper had to be transported to a central location and be key punched by data entry clerks. In a paper system of this magnitude, mistakes were bound to occur. Edwards estimates there were about 48,000 adjustments annually because of errors and omissions. Not surprisingly, people got upset when they were not paid correctly. In a highly unionized situation such as this one, workers and teachers would complain to their unions, and the unions would file complaints. Edwards says you cannot imagine the disruption.

The school system’s labor agreements allowed employees who experienced a payroll error to leave the classroom—during school—and go

to the downtown office on company time and dispute their pay. For that “missing in action” teacher a substitute had to be called in—and paid—while the teacher was out of the building. Now *that’s* an expensive payroll adjustment!

Another factor that led to complaints under the old system was that people were treated differently at different schools. One clerk might allow a five-minute grace period for tardy workers. Another might give ten minutes. Or it might depend on how the clerk felt about a particular employee. One she liked might get a pass. Another might be held accountable to the letter of the rule book. Of course, teachers and school workers frequently moved from one school to another and would notice these inconsistencies. The result was hundreds of grievances filed each year by the union. Every complaint required a hearing and testimony to be given as to what had occurred. The school system employed four full-time individuals in labor relations devoted to handling these complaints, and top management spent a large amount of time and effort on this sort of thing.

But a computerized time and attendance system does not make human errors and it does not play favorites. It administers the rules fairly and consistently as they are written and programmed into it. **Edwards says that in 2005, under the newly automated system, a total of only 37 grievances were filed. The number of labor relations agents handling these cases has dwindled to only one staff member. The burden of these cases has been virtually eliminated. Imagine the time and money this has saved.**

Mike told me that when the system was just being implemented, the employees were dead set against it. The union filed a legal grievance, and the case went to arbitration; the union lost its case. *The Chicago Sun* newspaper wrote a scathing article about the folly he was getting the school system into (“Untimely Clocks” was the name of the editorial) with this new technology. The unions and employees were upset. He wasn’t popular by any means. But Mike had big plans.

Mike convinced the unions and employees that things were going to get better. People would be paid fairly and consistently and the error rate would improve. **In fact, the errors went from 48,000 to around 10,000.** Not bad for an organization this large and with employees moving about and having varying schedules.

Mike looked beyond payroll for additional opportunities for improvement. The education world is commonly funded through grant money. These funds are made available to individual schools for specific programs and administered largely at the local (school) level. Teachers are compensated out of these, but it requires tracking, reporting, and reconciling the hours spent on the program against the pool of grant money. In Chicago, it was common for school administrators to struggle to keep track of teacher

activities, and they often exceeded their grant budgets. Spending money you don't have is a big problem.

But Mike understood the power behind the workforce management system he'd purchased. He implemented the system in a way that enabled local school officials to track and schedule their teachers and programs so that they spent only their allotted amount of grant money. When the system registered that budget spending reached 75 percent, a caution was issued; at 85 percent a warning; and at 95 percent all activity was cut off. In the first year alone, the system saved \$15 million dollars for the school system.

On the flip side, the school system didn't want to leave grant money on the table. Analytics looked at spending over the grant period and checked how program managers planned to spend all the money. Instead of discovering at the last minute that programs had a lot of money and then going on a spending spree that involved attending workshops and the like, administrators found that the dollars could be spent more effectively as they were intended. Quality was being managed as well as the financial side.

Key Idea

Significant Savings Can Happen Early

In the first year alone, the system saved \$15 million dollars for the school system.

Mike soon got an award from the Mayor of Chicago. The city was now touting his success. The Mayor remarked to him, "Mike, you've gone from being on the hit list to the hit parade." **Mike made the connection between a business problem and a workforce technology solution.**

Professional Service Sector

Some organizations don't have hourly laborers, but even so, they don't have to miss out on benefits that stem from the advances in automation. This is true for the professional service sector. Employers in this sector often employ professionals who work on a project basis. Several vendors specialize in providing solutions for project-oriented organizations. The market for products that satisfy the challenges in the government sector, internal service organizations, consulting organizations, and advanced technology firms is growing. These organizations face three primary challenges:

- Paper-based accounting processes
- Legal requirements
- Ensuring top operational performance

It's easy to understand how automation would improve the inefficiencies, inaccuracies, and untimeliness of processes that have historically been done manually. **Once an organization grows beyond 25 or more employees, business leaders dealing with paper or even electronic spreadsheet-based processes can become overwhelmed with managing the “paper” instead of the core business.** Errors in processing in these business models can mean not only overpaying employees but undercollecting earned revenue from customers.

The regulations imposed on this industry are also a major concern. Here is a list of but a few of the alphabet soup of agencies and laws that can have an impact:

- Defense Contract Audit Agency (DCAA)—DCAAP 7641.90
- Per diem rates dictated by the Department of Defense (DoD), General Services Administration (GSA), and the Department of State (DoS)
- Sarbanes-Oxley (SOX)—internal controls
- Office of Management and Budget (OMB) Circular No. A.11—Planning, Budgeting, Acquisition, and Management of Capital Assets
- ANSI Standard 748—mandating earned value management reporting

For anyone who may not be familiar with or is considering government work, the DCAA governs the rules for the charging of any government contractor for labor. Some of the key rules include:

- Proper accounting of direct costs is required by contract.
- Time must be recorded on a daily basis, and changes in time must be appended with comments.
- “Total Time Accounting” (a.k.a. adjusted rate, time dilution) is enforced.
- All hours worked must be recorded.
- Signatures and approvals are required from employees and supervisors.
- DCAA dictates how policies must be written concerning time card responsibilities.
- Penalties for incorrectly charging labor are enforced.

The strict guidelines, reporting requirements, and the likelihood of being audited necessitate having an intelligent system to enforce policy and consistency and to ensure proper reporting. Without automation, imagine the manpower that would be required and the attendant cost an organization would incur just to stay in compliance.

Finally, like any other business, these organizations have to stay on top of performance. Resource scheduling is crucial in the project world. What may be unique is that workers may be assigned to multiple projects

concurrently, and the mix of how they spend their time can vary widely. Complicating project work is that resources can be overbooked or underbooked if labor isn't managed effectively. This can lead to project delays or underutilized resources. These specialized solutions not only manage this, but they also provide forecasting tools to predict and evaluate revenue and project completion targets.

One feature needed in a professional service labor tracking is the ability to keep tabs on hours worked relative to project completion. For agencies servicing government entities, requirements exist for *how* hours are to be tracked. The technology allows users to append comments and "Estimated Time to Completion" to the labor hours, adding another level to the usefulness of the data. Project expenses must also be tracked along with project hours. Unlike internal project expenses generally absorbed by overhead accounts or built-in rate margins, these may be billed directly to the customer and must be tracked alongside the work. Having one place to store all of this data is immensely helpful. The systems also integrate to project tracking format such as Gantt charting so that data transfers seamlessly between different schedule mechanisms.

Project profitability for service organizations can be managed using dashboards and tools that can track profitability by project, person, and task. It's important to know when companies are working under cost and truly making money. Summary reports offer high-level overviews and drill-down so that managers at every level can understand, at whatever level of detail is required, how the work is getting done. **Revenue management is also key in project-oriented companies.** Finally, the best systems provide "*Earned Value Management*" (EVM) tools to analyze this component of the work.

Workforce management technology is growing in the professional services industry. Companies in this segment concerned with efficiency, compliance, and long-term profitability cannot afford to overlook the importance of automating their processes and integrating the areas of payroll, accounting, and project management.

Benefits of a software tool include the following:

- Rapid invoicing and payables—typically improves from 20 to 2 days.
- Profitable projects—overruns are avoided early on.
- Optimal use of human resource deployment and capacity.
- Better decision making—real-time reports provide data for making decisions when it matters, not after it is too late.
- Improved compliance—rules are enforced so that compliance nears 100 percent.
- Enforcement of corporate policies—corporate rules are enforced across the organization.

- Reduced costs (eliminates paper, fax, storage), typically 90 percent improvement in costs—companies have saved \$100.00 to \$150.00 per employee in each year for time reporting and \$30.00 per expense report.
- Reduced errors (typically 90 percent of the errors are eliminated)—companies have been able to bill hundreds of thousands of dollars formerly unbillable or unrecorded.
- Employee satisfaction—many companies report that their accounting staffs no longer have to work weekends to record the time and expenses to a project.

International Sector

We've discussed sectors that are primarily domestic, but many industries cross into the territory of international business. Companies operating abroad have many of the same challenges, along with a few curve balls to deal with. Participating in a global economy means that some managers will be faced with issues surrounding their workforce overseas. Multinational firms must find vendors that can meet their needs in distant markets where they are subject to foreign regulations, industry standards, and worker expectations. David Mitchell is Director of International Operations for a major WMT vendor. We talked about the various challenges facing employers who venture into foreign lands.

The biggest challenge in markets such as the European Union (EU) or Australia may be converting our concept of paid time. In Europe, the focus is on paying people accurately for the time they work, with the added complexity of accurately paying for time they don't work. We didn't get into the genesis of these workplace differences, but I do want to provide some insight into the various levels of complexity.

Employers in these countries have myriad governing bodies dictating rules and regulations concerning employee activity. At the highest level, the (EU) Working Time Directive regulates the number of days off per year, rest time between shifts, and how employees get paid. Below that, each country sets up guidelines that must be enforced, such as France's "modulation" formulas for calculating overtime or Belgium's rules for maternity leave. France's averaging method can require an employer to compute the pay and ensure compliance with work-hour regulations (e.g. 35-hour workweek) based on a rolling average of time worked over several weeks or months.

Within each industry there may be rules as well. The transportation industry sets limits on the number of consecutive hours employees are allowed to work before taking a mandated rest period. At every level there are violations just as there are in the United States, with heavy fines and penalties for noncompliance. The European workplace is heavily unionized—more so than in the United States—with unions permeating even white-collar jobs

and carrying on in what we might consider an aggressive, confrontational manner. Mitchell shared that “you’re constantly reading about workers going out on strike.” This means compliance and employee satisfaction are important issues a workforce management solution can support.

The reverse concept of paying for time off with premiums and bonus payments could be a challenge for many WMT systems. The level of complexity in the European rules equates to a requirement to have the same degree of regulatory complexity on the attendance side of the application as there is for the worked time. Add to that the fact that there are few vendors who do it all; most specialize by country. Therefore, an employer with sites in more than one European nation might have to manage several different systems just to administer time and attendance. According to Mitchell, hardly any vendor takes a “Pan-European” approach to its product, providing sufficient flexibility and complexity to handle every layer in one system. But at least one vendor is beefing up its product to meet these needs, and customers with this degree of diversity will benefit greatly from owning such a system.

WMT HANDLES OVERSEAS BUSINESS RULES The business requirements for WMT systems outside of the United States are quite different from industry standards familiar to most of us. For European operations the key benefits of WMT systems designed for these markets are in the advanced rostering (Europe’s term for scheduling) tools. These tools allow employers to manage employee activity according to complex and expensive rules. An additional benefit is absence management; paying for time off correctly and consistently is critical to effectively controlling profit margins in these overseas operations. Workers in Europe apparently don’t come cheaply, and staying competitive in the global marketplace is made more difficult by these intricate practices. The good news is that European workers are some of the most productive on the planet, says Mitchell. (*Source*: UN Study <http://www.cbsnews.com/stories/2007/09/03/business/main3228735.shtml>. Note that U.S. employees are the most productive in the world, followed by workers in Ireland, Belgium, and France.) So managing productivity is less of an issue. It appears that all of that paid time off creates some very good workers.

Closer to home, Canada is a hybrid. In the case of health care, Mitchell says Canada’s half-socialized system creates some drivers to greater efficiency, which means health care employers in this region will benefit from the productivity benefits within WMT systems as well as the value from gaining efficiencies and accuracy in their workforce processes.

On the other side of the globe, companies are finding that countries such as China, India, and leading Southeast Asian nations are in their infancy

in terms of workforce management technology. In these countries, the sheer volume of people is enormous, wages are extremely low, enforcement of overtime is not consistent, and paid time off is not of great concern, at least up until the past five years.

More recently, growth has been creating constraints in the labor supply, as manufacturers compete for skilled workers and business expands at a breakneck pace. Pay rates have considerably appreciated during the past few years, adds Mitchell, to the extent that “in India if you looked at an engineer in Bangalore vs. an engineer in Silicon Valley you are paying them the same rate.” Turnover rates can be as high as 50 percent as workers chase higher and higher wages. At the same time, China is watching as its own manufacturing jobs “go south” to lower-wage markets such as Cambodia and Vietnam.

With these rising wage rates overseas, employers must start thinking about how to control labor costs. Second, the rule of law begins to kick in as these countries enter into the modern economic system and join the World Trade Organization, where they must begin to put in place labor laws and ensure compliance. In January 2008, China passed new labor laws around unions, overtime, and numerous other work regulations. Competitive forces are at work as well, as multinational firms with global workplace standards demand that their domestic counterparts, competing with them locally for workers and margins, must institute the same practices to level the playing field. Taking on these new constraints while dealing with a challenging marketplace necessitates having a system that helps these companies ramp up quickly on effective management processes and valuable business intelligence. (For more information see “China’s Contract Law, Something for Everyone,” *Workforce Management Magazine*, Sept. 6, 2007.)

GETTING “TIME TO PAY CYCLES” RIGHT There is an awakening demand for the benefits of workforce management systems in relatively immature markets such as China, India, and Southeast Asia. These economies are flush with people, but as a whole they are well behind Western markets in their use of labor-related technology. But things are changing. Following the adoption of ERP and HR and payroll systems, time and labor systems are increasingly being sought by companies that need to automate the collection of time, pay correctly, and roster effectively. China and India are both hyper-growth markets, and what took 30 years to mature in the United States (from the first microchip in a time clock in 1977 to today) will take less than 5 to 10 years. First, these companies will begin to get the basic “time to pay cycle” right. Managing absence and scheduling represents the second stage. Once managing people is under control, these employers will begin to optimize.

However, this compacted timeline for advancement is not without problems. Many workers in these countries lack sufficient knowledge about technology as well as about the fundamental business processes they support. This is where the experience vendors have gained during the past 30 years in this country in creating products that are easy to use, intelligently designed, and inexpensive to operate is paying off.

Some of the key differences between these foreign markets and the United States are that Europeans tend to like “slick and stylish.” What is a sturdy, functional time clock to us “looks like a microwave” to the fashion-conscious European worker. But vendors are working to make their products more appealing. In both the EU and Asian markets, Web and wireless technologies are less popular than clocks, whereas biometrics, while generally accepted, are subject to local privacy laws that can sharply constrain their use. Access control is a huge data collection driver overseas. These markets view security and time and attendance as an integrated solution. WMT systems have a long history of integrating tightly with access control devices.

In India the hyper growth is incredible. When visiting there, Mitchell talked with a company, Infosys, that was hiring 25,000 people each quarter. Nokia, another company, went from approximately 2,000 to 14,000 employees within a two-year period. Onboarding 800 to 900 people a day is not something that can be done with paper and pencil. It’s almost impossible to imagine the headaches generated by that kind of growth. Labor processes, such as complex rules governing shift premiums and breaks, are not very prevalent; the biggest advantages arise from economies of scale and process efficiencies. Self-service is also very attractive across all markets.

TAKE-AWAYS FOR THE INTERNATIONAL MARKET The value of instituting WMT to manage a multinational, foreign-based workforce is that the complexities, processes, and decisions involved in deployment and compensation cannot be adequately managed without these tools. In the international arena, the most important benefits are

- **Single source of truth.** A globally deployed application allows management to use the power of information to evaluate, manage, and predict. For example, productivity intelligence might help a multinational business leader decide whether to move a foreign operation to a lower-cost, higher-productivity location. In addition, having the ability to gain insight into the total cost of operations in a foreign market with so many different compensation practices is extremely valuable. Real-time visibility into the detailed costs (creating line-item financial data) of doing business in a particular location is the only way to fully understand the price of those operations.

- **Risk management.** This is a major area of concern; it involves allowing companies to apply global standards for workplace practices throughout their operations.
- **Maximizing production.** This is accomplished in the cheapest and most efficient locations.

The fundamental challenges are the same although the issues are unique and the competitive forces are accentuated. Being an early adopter may be the advantage that spells success.

Chapter Summary

- Workforce management success is achieved by breaking down the boundaries that separate the owners of the problems and solutions to redefine what can be changed, what is important, and where to go for help.
- Companies should be moving themselves up the technology maturity curve to reap the full benefits of workforce management systems.
- WMT institutes “organizational workforce intelligence” when the technology merges business intelligence from other systems with workforce management to gain the efficiencies and aptitude needed to run the business better.
- Human capital is now a predominant asset within the organization. Failure to manage this resource is a costly mistake.
- Organizations that neglect to empower themselves with WMT technology are leaving dollars on the table in terms of overspending on labor and lost revenue.
- In order to deliver value there may be new demands, new stakeholders, and new relationships within the organization relative to your WMT system.
- WMT makes the important data measurable.
- Make certain employees are “data literate” if you expect positive results from systems that deliver information in the form of charts, graphs, and technical indicators.
- Every industry has its own compelling reason to adopt WMT.
- Government and education have been slow to adopt and thus have more to gain.
- Overseas operations can benefit from WMT’s efficiencies, ability to handle a diverse array of rules, real-time visibility into a single source of data, and its ability to improve productivity and profit.

<http://www.pbookshop.com>