

LMS Advanced Functionality

Five Features to Improve Organizational Performance

In today's world of Supply Chain Execution, every penny saved definitely counts. Some of those pennies being saved are due to the implementation of a Labor Management System (LMS). The combination of a LMS with a comprehensive workforce productivity management program can save companies significant money over time. Over the past few years, several articles have been published regarding the three primary components of a LMS. They are:

- Lean Process Improvement and Preferred Methods
- Engineered Labor Standards (ELS)
- Real-Time Labor Reporting

Many of the early adopters in LMS implementations originated in the Grocery and Food Service industries, which were characterized as low margin businesses. Thus the need to save pennies, or better yet, fractions of pennies, was always near the top of the improvement list for those supply chain executives.

However, over the past five years, labor management programs and software applications have moved well beyond the three traditional components listed above. Many LMS applications are now blurring the lines of the Human Capital Management market with features such

as Time & Attendance (T&A), incentive based pay and employee scheduling. These features are more common as a baseline offering in a number of leading LMS solutions available in the market today. These advanced features can provide an additional 5-15% productivity improvement and subsequent cost reduction on top of the base functionality listed above.

For today's supply chain executives who are beginning the search for a LMS solution, there are 5 top advanced features that should be thoroughly reviewed and understood as you prepare for your LMS project kick-off.

On-Demand LMS

On-demand software solutions can deliver tremendous benefits to companies and the market for on-demand software applications is growing rapidly. In a recent survey conducted by IDC¹, they predicted "the SaaS (Software as a Service) market for enterprise applications" and other software will reach \$40.5 billion by 2014, growing at a 25.3% annual clip. The market stood at \$13.1 billion in 2009, according to IDC." The IDC research went on to say that manufacturing applications including logistics, warehousing and transportation are "expected to gain the most SaaS traction." IDC also stated that "by 2012, nearly 85% of new software firms coming into the market



will offer their products in the SaaS model." On-demand LMS solutions are a reality today. Among the benefits companies can realize are:

- Minimal capital expenditures up front, including no upfront license fees
- No annual software license maintenance fees
- No upfront hardware purchases or maintenance fees
- No upfront 3rd party software license purchases or maintenance fees
- Minimal impact on IT resources
- Minimal IT support costs over time
- Ability to scale up as project rolls out = pay as you go
- Hassle-free upgrades
- "Always on" – LMS accessible from anywhere, anytime

The net result is enhanced ROI and "time to value" for on-demand LMS projects. Cash flow and net present value (NPV) calculations for on-demand LMS projects are significantly better than those of traditionally deployed LMS software.

"On-demand LMS is an excellent alternative for those customers looking to implement a cost-effective solution. On-demand LMS solutions are very robust and offer a full complement of LMS features and functions including those presented below," commented Steve Simmerman,

Business Development Leader for Next View Software. "Companies are always looking for ways to improve productivity and reduce costs. On-demand LMS makes these savings and improvements available to more and more companies."

Incentive-Based Pay – the competition for labor is at a premium. With unemployment rates ranging from 8.8% in the Northeast, to 10.8% in the West, and 9.5% as a whole in the United States in July 2010,² being able to reward high performing employees is a must in today's economic environment. "Companies that offer some type of incentive compensation program, will be more apt to retain their existing workforce than those that don't," notes Manhattan Associates Peter Schnorbach, Senior Director of Transportation and Labor Management.

When evaluating incentive-based pay program functionality, make sure to question the prospective vendors regarding the following different features or capabilities that should be available via software configuration or enhancement. If a system enhancement is required, inquire if the vendor has ever produced the enhancement. Key incentive features are:

- Individual and Team-based incentives
 - The ability to award individual

incentives for high quality and performance and a team-based incentive for achieving company targets, such as throughput or minimal OSHA reportable incidents offers the best solution since employees have multiple opportunities to earn additional pay.

- Multi-variable components – if you are considering an incentive-based pay system, make sure the functionality allows for multiple variables to be considered for pay calculation purposes. The most common variables for incentive based pay are:
 - % Labor Performance – performance above a specified threshold
 - Quality Rates – errors per 1000 units are a common factor
 - Attendance – issues such as absences and tardiness may wish to be considered
 - Safety Violations – any OSHA reportable incident typically disqualifies the individual or team from the incentive for the period in question
- Linear-Based Incentives – this type of incentive plan is the most common and allows for increased pay for each

percentage of improvement above the defined minimum threshold, typically 100%.

- Step-Based Incentives – in this type of plan, defined ranges are established, generally in increments of 5%. With each new level attained, a step pay increase occurs with the step often being a larger percent increase, than the previous step. This type of plan rewards the highest performing employees on a higher scale than a linear-based approach.
- Thresholds or “Caps” – an incentive cap should always be considered, since runaway incentive programs cannot easily be reigned back in. Typical caps are set at 125-130% of the ELS. Consistent performance above this level should be thoroughly investigated. Common reasons for performance above these levels include:
 - A new method (or methods) being used by the workforce
 - Bypassing or sidestepping of the existing methods by the workforce
- Reporting – the ability to produce ad-hoc reports, by individual, is a must. “When incentives are earned, employees want to know how much

of their paycheck for that period was due to incentives,” states Schnorbach.

- Integration to Payroll applications
 - the LMS must be able to seamlessly calculate the incentive amount earned, either in dollars or hours, and then export the data to the company’s payroll application. The payroll application will then account for all of the required deductions, including federal, state and local taxes. When working with the payroll department, you’ll need to understand the required format for the data export. Knowledge of the payroll export format from the LMS vendor’s perspective is preferred but not mandatory.

Observation Management – conducting Preferred Method observations and reviewing the results with the employees is the crux of any LMS program. However, one of the fundamental change management issues that have to be overcome when implementing a Performance Labor Management Program is ensuring that the required observations are scheduled, results recorded and completed in a timely manner. Often times, there is reluctance upon the warehouse supervisory staff to get out onto the floor to conduct the observations because they are “too busy;”

especially if there was no pre-established date and time to conduct the observation. “Automating the employee observation process allows the supervisors to focus on what’s important: employee training and improvement, and not the administrative burden of maintaining a paper-based program,” comments John Roesler, VP of Implementation Services at RedPrairie Corporation.

With the advent of observation management in LMS software solutions, establishing the necessary employee observation calendar is no more difficult than scheduling a meeting using Microsoft® Office Outlook®. When reviewing Observation Management functionality, here are some points to consider during the vendor evaluation process:

- Observation Templates – the ability to creation standard questions to be reviewed with the employee following the on-the- floor methods observation such as:
 - “Are you fully trained to perform the task just observed?”
 - “Are there any methods you need additional training in?”

- Scheduled Observations – the ability to establish observations and assign them to supervisors on a periodic basis such as weekly, quarterly, semi-annually or yearly. Additionally, the ability to reassign an observation to another person is highly desirable.
 - System Generated Observations – if employees are not meeting expectations, the ability of the software to auto-generate an immediate observation. These auto-observations fall into one of two categories:
 - New employees not meeting their weekly ramp-up expectations
 - Trained employees not meeting their weekly expectation level
 - Automatic Notification – once the observations are scheduled, a notification process such as an email, auto-generated report, or executive dashboard showing the required observations for the day or the week.
 - Recording Results – the ability for recording real-time observation notes via tablet PC's and the usage of embedded video clips that show the proper preferred method usage, in conjunction with Observation Management, is highly desirable and a LMS major differentiator. "With the advent of web-based and on-demand LMS solutions, enhancements to functional areas like Observation Management has become very interesting," comments Simmerman. "For example, customers can manage and actually perform their Observations on an iPad™ or other mobile platforms that can access the internet. It's a great technology to take to the floor and perform observations and record results."
 - Reporting – reports that show the status of observations scheduled, completed and pending by supervisor and date.
- Integrated ELS Development** – Creating engineered labor standards within a LMS application is a natural extension of the product. By having the ability to create labor standards within the LMS application itself, there is no need to manually enter the ELS data which reduces the potential for data entry errors as compared to transposing data from an external tool or application. When reviewing integrated ELS development functionality, key items to review are:
- Database of Timings – a tier 1 ELS development tool should come with a database of timings or pre-determined elements for items such as:
 - storage medium (floor vs. racking)
 - Standard Machine Timings (pallet jacks, forklifts, OS trucks, Turret Trucks; etc)
 - Other common warehousing tasks such as wrapping pallets or using RF or voice units
 - Support for Time Study and Pre-determined Time Elements – flexibility in establishing ELS in a variety of manners allows for ease of implementation. Some warehousing tasks, such as machine based operations, are well suited for time study methodology and other tasks, such as unit picking, are well suited for a Pre-Determined time system such as MSD or MOST.
 - ELS Reporting – standard ELS reports in text or flowcharting format are standard functionality that should be available. The ability to imbed Preferred Methods text within an engineering flowchart, as shown below, integrates the preferred methods with the engineering and eliminates the need for text-based documents.

Process Seq.	Seq. Type	Process Desc.	PM Seq	Element Code	Short Element Description	Base Time	Long Description	Assigned Variable	Factors				Total Time
									F1	F2	F3	F4	
1	Text	Preferred Method	1				Step 1 of Method						
2	Text	Method Explanation					The operator drives to the nearest empty pallet stack						
3	Text	Factor Explanation					The operator must pickup an empty pallet for 10% of the pallets shipped						
4	Timing			OSTACK-RT	Pickup Pallet	416.6	Obtain Empty Pallet from stack to Begin Assignment with Reach Truck	1	.1	1	1	1	41.66

Simulation - The ability to understand the effect of a process, material handling equipment, or physical layout change within a distribution center, prior to project approval, is a powerful tool that can provide the necessary data for project cost justification in a timely manner. For example, a common scenario in today's supply chain world could involve the evaluation of voice application systems versus the current usage of RF-based applications for certain tasks, such as picking.

An LMS with ELS development and simulation capabilities could be used in two different means to evaluate the potential benefits of the implementing voice application, from an engineering time savings perspective.

The first method would involve the usage of the ELS development tool in a static environment. Upon development of the preferred method for voice usage, the engineering flowcharts for voice usage could be compared to the RF-based engineering flowcharts for

overall processing time in a side-by-side comparison using historical data. Secondly, if an LMS were installed with simulation capabilities, these two scenarios could be compared using actual live data from the host system that was reprocessed against the voice engineered labor standard. Typically, this is conducted in an off-line instance of the LMS software that is configured to utilize actual tasks and the updated ELS data.

Other common scenarios that could be evaluated include using different Material

Handling Equipment, re-racking or other physical layout changes, such as adding a mezzanine. When evaluating simulation capabilities using an LMS, look for the following features:

- Ability to create multiple warehousing layouts
- Ability to export production data for simulation processing
- Ability to create assignment subsets for simulation processing (by task, by date range; etc)
- Ability to compare the data on-line and in report format

Summary

As LMS systems continue to evolve, it's important to understand that there are several advanced features being developed and implemented that can provide the next incremental improvement in supply chain performance and cost reduction.

All five of the features and functions described above require a relatively short implementation period of anywhere from two to six weeks, but each one can deliver a solid return on investment of 5-15% with little to no IT involvement and minimal client resources.

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1. http://www.managingautomation.com/maonline/news/read/SaaS_to_Over-take_Traditional_Software_Delivery_IDC_Predicts_33617, Emily-Sue Sloan, July 26, 2010
 2. US Department of Labor; Bureau of Labor Statistics, August 20th, 2010