

Smart move

Why Internal Services Productivity matters—and why support functions play a role in boosting competitiveness





The intent of the Internal Services Productivity growth and productivity initiative is to bring Lean tools and concepts into the office environment, said ISP leader Rick Gross.

MICHAEL SLAUGHTER PHOTO

It's been nearly two years since Boeing launched the four companywide growth and productivity initiatives—Lean+, Internal Services Productivity, Global Sourcing and Development Process Excellence. *Boeing Frontiers* recently talked with Rick Gross, leader of Internal Services Productivity, about how Boeing's enterprisewide functions and Shared Services Group are enabling competitiveness, growth and world-class financial performance.

Q: Remind us what Internal Services Productivity is all about.

A: Internal Services Productivity is about bringing Lean into the office environment. That means increasing productivity and output and reducing support/service costs that are centrally managed or embedded in the businesses. This is achieved by eliminating waste, redundancy and “touches,” and by reducing flow times. By doing this, we can provide more timely service that users really need, while improving functional productivity, efficiency and effectiveness.

Our support functions and SSG need to recognize that they can use the same Lean principles that Commercial Airplanes and Integrated Defense Systems use in the factories to become more cost-competitive in an environment of increasing demand and decreasing budgets.

Q: What kinds of activity are we seeing across the businesses? How can we tell whether we're making progress?

A: Generally speaking, we know we're on the right track because the number of projects in the Initiatives Database is increasing monthly, the dollar amount of the projected benefits of the projects is rising, and so is the number of improvements being replicated across the company.

We've certified more than 400 additional Lean + practitioners in the last year and a half, many of whom are dedicated to improving office productivity. Teams from every corner of the company have completed hundreds of Value Stream Mapping exercises and Accel-

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erated Improvement Workshops. The challenge now is to implement and close the ideas/actions identified in those efforts to determine if we realize the expected process and performance improvements.

Q: Are any parts of the business showing particular promise?

A: There's a fundamental shift in SSG, Information Technology and many of the support teams when it comes to driving productivity so they become more cost competitive. That's a victory. More broadly, across the company support teams better understand their costs and cost drivers than previously. They know where to go to get information and which focus areas or key levers to apply Lean tools to. Had we not started on this journey 18 months ago, we wouldn't be where we are today, even if we do still have a long way to go to fully optimize Lean into the office environment. We have made good progress.

Q: What's been your focus in 2007? What's ahead for 2008?

A: This year we've tried to get folks to think about the products or services they provide, understand the output, adopt metrics to gauge efficiency and effectiveness, and find ways to boost productivity and yield. We've made some progress but must continue to engage our teams to measure the quality, cycle-time and efficiency (such as units per person, cost per transaction, etc.) of delivering products and services to support the business.

For example, in Finance we've asked every business unit and function that works for Chief Financial Officer James Bell to establish measures of efficiency and use those as a framework to drive process improvement. Shared Services, meanwhile, has spent the last two years benchmarking the competitiveness of its services in terms of cost and quality of service. They're using that information to formulate their plans and implement improvements, to improve the competitiveness of their services. Now it's an integral part of the planning and operating processes.

Q: How's the Initiatives Database coming along?

A: The quantity of improvement projects, the projected benefits and the quantity of replicated improvements are improving each month. We still need to do more in terms of the way projects are described in the database. We need to make sure that projects are input and described in a way that a non-subject matter expert can understand the concept enough to determine possible replication. In some cases, people are still concerned that if they put a dollar value or a quality or cycle-time improvement estimate into the system, they will be held accountable for achieving it down to the last penny or hour. So they're hesitant to provide any estimated benefits. We need to work these issues so good ideas can be more readily replicated.

Q: What's demand management, and why is it important?

A: This is a huge area of opportunity. Working the three "v's"—

It's our future

Actions cited in this story show how employees are applying concepts of the Boeing Management Model to support the company's business strategies. Here's how.

- **Growth and productivity: Lean+ and Internal Services Productivity, through office-based teams using Lean tools and adopting Lean concepts to streamline their operations, provide better service and improve their cost structures.**

To learn more about the Management Model, visit <http://bmm.web.boeing.com> on the Boeing intranet.

visibility, variability and volume—could improve cost performance by as much as 10 to 20 percent.

First, we have to give our partners that use our services better visibility into the cost of those services and specifically what they're using. After that, we need to focus them on reducing the variability of what they're requesting with a goal of driving to a standard process, consumable or deliverable. We won't get to one-size-fits-all across the board, but nonstandard products should be the exception rather than the rule.

“We should think like we're delivering products and services. We need to take up the competitiveness drive around maximizing value for the customer.”

—Rick Gross, leader, Internal Services Productivity

The final step is helping them understand the volume they're consuming and the areas we can cut back. It gives the user accountability for appropriately managing consumption.

For example, if I'm a Finance employee I need to work with my program manager, business partner or site leadership to show them what they're consuming in financial services—things like cost performance reports or integrated scheduling updates. Then I can facilitate a hard conversation around, do you really need that much support at that frequency custom-tailored to meet every need? Or can your needs be met with more standardized services at lower cost and variability? There's a level of managing our internal business partner's expectations regarding requirements and ensuring competitiveness of our support/services.

Our challenge is to provide quality service at more affordable rates year over year. What we're trying to achieve in the office is a fundamentally different way of operating and thinking about what we do. We should think like we're delivering products and services. We need to take up the competitiveness drive around maximizing value for the customer. Then we need to turn that to an internal conversation between support groups and the people they provide their services to, with the fundamental basis of creating value through improving productivity and managing demand. That will become a key competitive discriminator for Boeing.

Q: Our customers make their buying decisions on best quality, best price and best service. Why isn't it instinctive to think that way in the office environment?

A: We have a culture that perhaps hasn't fully focused on thinking like a consumer when it comes to purchasing internal services. We must now think about the services we're providing on a comparatively competitive basis and implement improvements to achieve desired levels of quality and cost.

Q: In a big company like Boeing, I don't know if I (as just one person or part of a small team) have any impact.

A: But you do! We all do. All leaders must create a sense of urgency around this. A lot of our organizations recognize how difficult it's going to be to meet their long-range plans. Applying the Lean+ tools to our ISP focus areas is a key enabler in order for our teams to reach their goals. Productivity enables growth, and these together will ensure our long-term success.

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At the Boeing facility in Renton, Wash.—the home of the Boeing 737—Gary Hendrickson, 737 finance analyst, and Cyndy Murphy, Standard Labor Rates project leader, stand with a tool kit typically used by airplane production teams. Thanks to the work of the Standard Labor Rates project team, Commercial Airplanes Finance analysts soon will get their own tool kit of sorts.

MARIAN LOCKHART PHOTO

BCA's tool kit for financial analysts

On the 737 factory floor in Renton, Wash., installation tool kits along the production line await the arrival of technicians. Inside are all the tools and instructions needed to complete an installation.

In the Finance offices overlooking the factory line, analysts will receive a tool kit of another sort at the beginning of 2008. Boeing's Commercial Airplanes Finance team is making it easier for BCA analysts to build reports and develop forecasts by giving them three prepackaged labor rates.

These labor rates do not change the wages Boeing employees are paid. Using Standard Labor Rates will affect only consolidated monthly cost-review reports, as well as the quarterly forecasting of how much projected labor hours will cost in dollars to manufacture a Boeing product.

Today, approximately 200 BCA Finance analysts spend several hours per quarter using multiple systems and various methods to create labor rates; this results in more than 2,000 labor rates. Beginning in January, analysts will build their financial outputs with just three Standard Labor Rates. The three rates will be maintained annually by just a couple of analysts and will be changed only when a variance of 5 percent is exceeded. Saving even eight hours a year becomes significant when multiplied across the BCA analyst community.

"This will free up time, because we don't have to worry about labor rates," said Gary Hendrickson, 737 finance analyst. "The forecasted labor rates will be the same they use to report 'actuals' to us. What's nice is we won't have to spend extra time reviewing variances, because there won't be a variance."

One labor rate will be used for each of three groups: manufacturing, engineering, and administrative. This will eliminate the redundancy of individual Finance analysts being responsible for their own rates within their business unit and give them more time to be business advisors to their customers. In other words, this will allow analysts to analyze rather than collect data.

The outcome of giving analysts more time—also known as creating

capacity—maps directly to the goals of the Internal Services Productivity initiative. Eliminating non-value-added tasks improves analysts' functional efficiency and productivity. Giving customers more timely financial advice ultimately helps decision makers improve their businesses.

"What we're doing is freeing up time to analyze cost drivers they can control, such as expenditure of labor hours and overtime," said Cyndy Murphy, the Standard Labor Rates project leader.

Establishing Standard Labor Rates is one step forward in the Lean+ journey of BCA Finance. The Labor Rates team is one of many projects under way within the Lean Cost Management Implementation team, whose charter is to apply Lean+ thinking and methods to current processes and develop standard processes and tools for use across BCA.

The Lean Cost Management team was formed in May and now involves a large group of Finance employees working to sweep out waste and simplify and standardize BCA Finance processes. The team is also preparing financial foundations to support Value Stream alignment.

Such culture shifts can take years. Murphy has been leading the Standard Labor Rates change for almost two years. The project came out of a January 2006 Accelerated Improvement Workshop and Value Stream Mapping by those looking for ways to reduce rates and factors. Murphy and her team conducted workshops with analysts in St. Louis, Long Beach, Calif., and around the Puget Sound region of Washington state, and leveraged their lessons learned.

"It's been a long road, but one well worth taking," Murphy said.

To learn more about Standard Labor Rates and the Lean Cost Management Implementation team, Boeing employees can visit their portal on the Boeing intranet. Go to my.boeing.com, and in the search field in the upper right, enter the phrase "BCA finance lean cost management." The team's portal should be the first site listed, when sorted by relevance.

—Greg Brown

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Q: Is it fair to say in the first 18 months we picked most of the low-hanging fruit, and now the challenge gets tougher?

A: That's how it would appear, looking at support functions individually. We've been able to capitalize on some obvious efficiencies, and now we're really thinking hard about how to make continued improvement a year or two years from now. In many cases, there's a big gap between folks' productivity commitments in the out years and what they know they can do today. And that's going to take a fundamental shift in how we operate. We need to start working more outside our direct teams and focus more on value stream and enterprisewide improvements. That is where the big leverage is—optimizing for the enterprise!

More stories about teams supporting Internal Services Productivity. Pages 16-17

Q: Why all the talk about increasing productivity when our revenues and earnings have been rising?

A: Even though we're growing, we have to work today and every day to position ourselves for the inevitable downturns in our cyclical businesses. Setting stretch targets based on competitive benchmarks is an important way leadership can focus on how we provide support more competitively over time. Our stakeholders' expectations of our performance don't change even if our businesses cycle does. We can become world-class, and operating in this manner will help enable that level of performance.

Q: How do we get people really focused on the need to pursue ISP?

A: Boeing does a great job of executing on what we measure. So if

we measure and integrate into our goals and objectives what we're trying to accomplish through our ISP initiative, our teams will find a way to get it done. They always do. What gets measured gets worked at Boeing, and if we prioritize it and focus on it, it'll get accomplished.

Q: How can we take this to the next level?

A: We need to continue celebrating and rewarding the success of our teams and further sharing of best practices. More communicating, prioritizing and rewarding will enable us to achieve the progress our customers and senior leadership expects. While our leadership understands ISP conceptually, many are still looking for applicability to their work team. It's through sharing successes in the database, using other's improvement ideas and other communication forums—that includes lessons learned, good and bad—that we'll be successful.

Q: Is there additional opportunity to work cross-functionally or across businesses?

A: We are seeing some teams across businesses adopt functional best practices or good ideas, but there's a lot more to do. Taking variability out of how support functions do their work across sites, programs or businesses is still a huge area of opportunity. If we drive to standard work, processes and systems, and if we leverage common infrastructure across the company, we'll see a significant shift in productivity. It will also enable us to move people around the company more effectively and enable the central service functions like SSG and IT to consolidate their infrastructure and lower costs.

Q: Isn't that what functional excellence is all about?

A: Functional excellence includes having productivity metrics and productivity improvement plans in place to enable our businesses to be more competitive. Functions need robust plans working across the company to take out variability, instill more discipline, improve quality and aggressively replicate good ideas to drive business performance. ■

Accounting for common system at IDS

Process improvements and common systems are crucial to improving productivity. That's exactly the focus of an Integrated Defense Systems team that's launching the Integrated Control Account Authorization (ICAA) system, which provides a single source for work authorizations required by all IDS salaried direct-charge employees.

ICAA facilitates the charge line setup process that requires collaboration of many finance functions. Before ICAA, the data elements required in an IDS charge line were collected and communicated using various methods and tools. There also were multiple systems at various sites, with varying ways of generating work authorizations. The disparity of systems and data entry among sites was costly and often required rework.

With this common financial tool, IDS streamlines processes, cuts process times and improves access to information. In turn, the improvements will save time and money.

"IDS did not have a common finance system to provide employees easy access to standard work authorization across all sites," said Dori Scherer of IDS Business Operations. In July 2005, Scherer explained, an IDS-wide workshop was held, allowing each site to present its unique charge line setup and work-authorization processes and systems. Since then, a cross-functional team has worked diligently to find the right solution.

"In selecting the right tool," Scherer said, "it was determined that ICAA was technically advanced, had functionality for requirements and was already interfacing with the Enterprise Accounting System. As a result, it was selected as the IDS common solution."

ICAA will "push and pull" information sourced in multiple IDS common finance systems by interfacing with the Common Contract System, the Enterprise Accounting System and the Cost Schedule Planning and Reporting systems. The tool also will provide comparison reports to identify differences between systems on key data fields. The goal, said Scherer, is for employees to input information into one source system that will be used by other systems to ensure data integrity.

Together ICAA, the Enterprise Accounting System, the Common Contract System, and the Cost, Schedule, Planning and Reporting System provide a complete and integrated set of tools that will help program managers more efficiently transfer and manage work across sites and lead virtual work teams.

"In the past, the focus was on establishing functional systems and processes. This led to functional islands that remained 'siloed', supporting their own internal needs," said Steve Baker IDS Business Operations director. "To be lean, our processes must be integrated so we can minimize touch points, and our data must be shared from system to system—eliminating duplicative entry and error introduction."

—Katherine Sopranos



Jerry Martin (right) of the Commercial Airplanes Program Management Office addresses attendees at a recent Policies, Procedures and Process Management Project leadership team meeting in Renton, Wash. The project's aim: streamline Boeing's procedural and process writings.

MARIAN LOCKHART PHOTO

Streamlining, as a matter of policy

The Policies, Procedures and Process Management (PP&PM) Project—with members representing business units and companywide functions—has been consolidating and streamlining Boeing procedural and process writings since August 2006. This effort, which supports the Internal Services Productivity, Lean+ and Development Process Excellence companywide growth and productivity initiatives, promotes cross-company commonality of requirements, responsibilities and process definition.

The goals of the program:

- Significantly reduce the number of procedural and process writings
- Transition writing ownership to the functions
- Implement a common business, system and documentation strategy and architecture
- Enable commonality and sharing of documentation across the company
- Reduce overall administration and systems cost

“The work of this team is important,” said Rick Stephens, Boeing senior vice president, Human Resources and Administration. “Not only does it save costs, but it supports Boeing’s drive toward enterprisewide commonality and standardization. And, in the end, this will make it easier for all of us to find the important policy and procedure information we need.”

The team’s efforts focus on consolidating existing information technology systems, Web sites and servers used to house and manage procedural and process writings across Boeing. Through the end of September, the team has reduced the number of IT systems, Web sites and servers used by 45 percent. In addition, by mid-2008, more than 60 stand-alone systems will migrate to a target of two. A third system will support process management, including the mapping of procedural and process writings to functional processes used by the businesses and programs. This

will enable the owning functions to view all existing writings mapped to a process so they can focus on achieving the appropriate level of commonality across these process writings.

The ongoing reduction in the number of writings overseen by the PPPM team will result in considerable cost savings. It costs about \$10,000 to create and \$3,000 to maintain each writing. As of Sept. 30, the number of writings has been reduced from over 25,000 to about 18,000. The result is a \$9.1 million recurring savings in 2007 and a projected \$11.7 million recurring savings in 2008. Just as important, greater commonality will result in lower risk, less rework, less retraining, increased efficiency and increased standardization across the company.

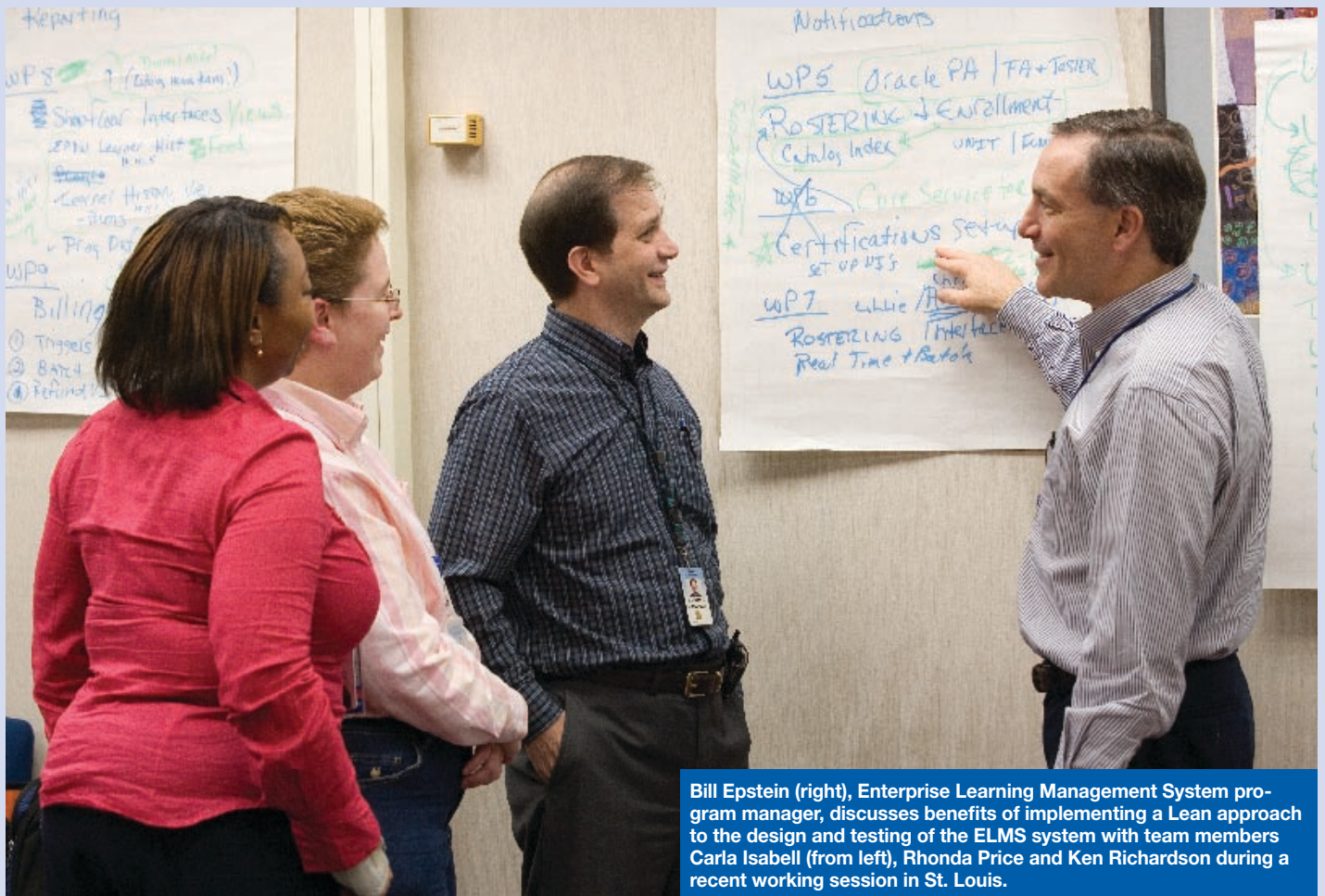
As the functions took ownership of the processes and their associated writings, they set reduction targets to measure and report performance. These targets were exceeded by mid-year, and to support the Lean+ concept of continual improvement, their 2007 targets were raised.

In 2008, the team will continue to reduce the number of writings, to support Boeing’s move to greater procedural and process commonality through functional alignment of processes and their associated writings. The project also will analyze the potential for achieving a single-system solution to meet the company’s integrated policy, procedure and process-management needs.

Future project deliverables include a simplified user interface that will be made available through MyBoeing.com and will serve as a single point of entry to the three systems housing policies, procedures and process information.

“We’ve made significant progress in 2007, and I am sure we all look forward to more progress in 2008,” Stephens said. “We have plans and metrics to ensure we sustain the gains being made, and we look forward to your feedback on how it’s going.”

—Junu Kim



Bill Epstein (right), Enterprise Learning Management System program manager, discusses benefits of implementing a Lean approach to the design and testing of the ELMS system with team members Carla Isabell (from left), Rhonda Price and Ken Richardson during a recent working session in St. Louis.

DAVE MARTIN PHOTO

Lesson learned: Training system streamlined

Forthcoming changes will make it easier for Boeing employees and their managers to access company training information and plan their learning activities and career development. Human Resources' Learning, Training and Development is partnering with Boeing Information Technology and Boeing's business units to develop the Enterprise Learning Management System (ELMS).

As a result of mergers and acquisitions over the past 10 years, the company's learning systems have become inefficient and difficult to navigate. Employees and managers often have difficulty determining and locating the training they need for themselves or their direct reports.

"The new system will give employees and managers better visibility into all their training and certification requirements," said Norma Clayton, Learning, Training and Development vice president. "More importantly, it will encourage managers and employees to have those important conversations around performance and career development."

This new companywide integrated learning management system, which supports the Lean+ and Internal Service Productivity initiatives, will consolidate 27 legacy learning tools and applications into one user-friendly system.

"ELMS is a vital part of our company strategy to drive business results through more simplified common processes and systems," said Cheryl Britton, Human Resources Systems leader for Boeing Information Technology. "In addition to supporting the retirement of legacy systems, ELMS will provide a single-access point for training across the company."

The current maze of training systems includes legacy systems that were pieced into the current configuration. In addition, some antiquated systems are at risk of technical obsolescence. Consolidating into one system will result in significant company cost savings. Boeing projects ELMS to save \$8 million in 2009 and \$6 million per year thereafter.

After a recent thorough review of the ELMS system design, Bill Epstein, ELMS program manager, said the project team is moving forward with the development phase.

"The team is putting together a solution that will provide an efficient and effective system for accessing the right training at the right time and for delivering training and development opportunities to employees," he said.

The first phase of ELMS is scheduled to go live early next year for some Boeing employees, and all employees will have access by the end of 2008. Once it is fully operational, employees will be able to access their training requirements, courses and records through a new Learning Portal on TotalAccess.

—Katherine Sopranos and Tim Deaton

Trash to cash

Demonstrating that benefits from a Lean+ transformation can be found throughout Boeing, the Refuse Collection/Disposition team in St. Louis has streamlined their processes, leading to savings in time and costs as well as service improvements.

“We knew there must be ways we could improve the collection of trash and scrap,” said Bernie Wright, Senior Manager for Service Center 3, Site Services, in St. Louis. “First, we needed to identify tasks that were daily, repetitive, time-consuming and involved everyone.”

To achieve this key step in the Lean+ journey, the team went on inspection walks to identify opportunities for improvement. Soon the walks turned into rides, following the trash container drivers. “Walk or ride, the process found simple, low-cost solutions which enabled our team to design better systems, and also encouraged them to think leaner,” said Wright.

The team identified opportunities to reduce the hours required to haul refuse, increase recyclables awareness and develop standard refuse routes. Through the implementation of these improvements, collection time has been cut by 72 percent, the number of trash containers has been reduced, and the amount of recyclable materials captured has increased.

“We were pleased that not only did we improve our productivity, we created

time for the team to focus on additional process improvements,” said Ken Rowilson, team leader. “We also reduced the amount of scrap going into landfills. That was a plus for the entire team.”

To reduce the amount of recyclable material going to landfill, the team increased the number of blue containers for recyclable plastic, cans and bottles.

Arrows painted on the pavement now indicate trash pickup routes. Bulky, intact cardboard carton throwaways were reduced by promoting use of a cardboard compactor and designing a cart to transport broken-down cardboard flats.

Trash pickups were reduced from three times a day to once a day. To make certain a high level of quality was maintained, a new “hot spot” pickup run, focusing on locations where refuse quickly accumulates, now operates in the afternoon. Combining these routes freed up man-hours, going from 34 to 9.5 daily. “This reduction allows us to accomplish the other work we have in a more timely manner and without overtime,” said Alan Bess, group manager, Shared Services Facilities.

The team continues to monitor and critique the process, ensuring constant improvement. More “hot spot” pickups may be added, including those in other buildings. And, through Wright’s work on the Enterprise Maintenance Council, the team is already sharing its Lean+ expertise with counterparts in Philadelphia.

—Christine Frank



RON BOOKOUT PHOTO

Members of the St. Louis Refuse Collection team are shown with the hydraulic trash compactor into which all rolling trash containers in Building 101 are emptied. In the front row, from left, are Tom Kriegemeier, Brad Smith, Kim Sevic, Bernie Wright, Al Kuhn, Joe Haake and Aubrey Ladd. In the back row, from left, are Ken Rowilson, Dewey Shields, Renee Nedeau and Alan Bess.