

# Lean Enterprise Division

## December 2011 Highlights

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## Chair's Message

Happy Birthday, LED! It was back in November 2006 that the Lean Enterprise Forum was formally recognized by ASQ as an official division, thus becoming the Lean Enterprise Division. We've made great strides to provide member value to you by providing free webinars and social networking venues. We hope you have been able to attend these webinars or download the recordings and presentations from the LED website at [asq.org/le](http://asq.org/le).



Have you joined our LinkedIn group? This is a closed group extended only to ASQ LED members. Out of our 6,000 LED members worldwide, more than 2,000 have joined this exclusive LinkedIn group. There is an active discussion board on our LED LinkedIn group. Don't be left out, join us today!

Mark your calendars! We plan to be at the 2012 ASQ Lean and Six Sigma Conference, in Phoenix, AZ, from February 27 – 28, and once again host a Café Dialogue, with a discussion topic on lean certification. We are also planning to host our hospitality suite again next year, so please stop by. Last year, we had all of the keynote speakers attend our hospitality suite and it was standing-room only!

We have listened to your feedback. New, this year:

1. We will have a double lean certification session. The first session will be an overview of the lean certification. The second session will be the Café Dialogue.
2. We are also sponsoring our first post-conference full-day workshop, produced by Xtreme Lean. Our goal is to extend value to our membership by offering this workshop at cost to you. So please plan to stay an extra day after the conference to attend this workshop.

We encourage our LED community to contribute to our educational programs, such as our webinars and our newsletters. If you are interested in presenting one of our webinars please submit your abstract and brief biography to our Education Chair, Don Smith, at [dsmith@netresults.com](mailto:dsmith@netresults.com). You can be a winner in our next raffle for a \$50 Amazon gift card or a conference registration, to WCQI or the Lean and Six Sigma Conference! Please contribute to our newsletter by emailing your article, case studies, and book reviews directly to our Education Chair, Don Smith, at [dsmith@netresults.com](mailto:dsmith@netresults.com).

The Lean Enterprise Division is a global network of professionals helping individuals and organizations apply proven and leading-edge lean principles and practices to achieve dramatic results for your personal and organizational success. We have been fortunate to grow our LED leadership team by including new faces and voices. You can review our current leadership team on the LED website at [asq.org/le/about/leadership-le.html](http://asq.org/le/about/leadership-le.html). If you are interested in volunteering to help this team increase member value, please contact me directly.

*Keep on "leaning" with us,*

**Kiami Rogers**

Lean Enterprise Division Chair

[krogers\\_asq@verizon.net](mailto:krogers_asq@verizon.net)



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Division  
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# T<sup>3</sup> Tools, Techniques and Templates: Layout

by Frank Murdock, Chair-Elect

T<sup>3</sup> Time is a regular feature of the newsletter dedicated to provide quick overviews of some of the common Tools, Techniques, and Templates used to help organizations on their lean journey. One of the basic building blocks of lean is process layout. Layout is a critical enabler for achieving lean processes.

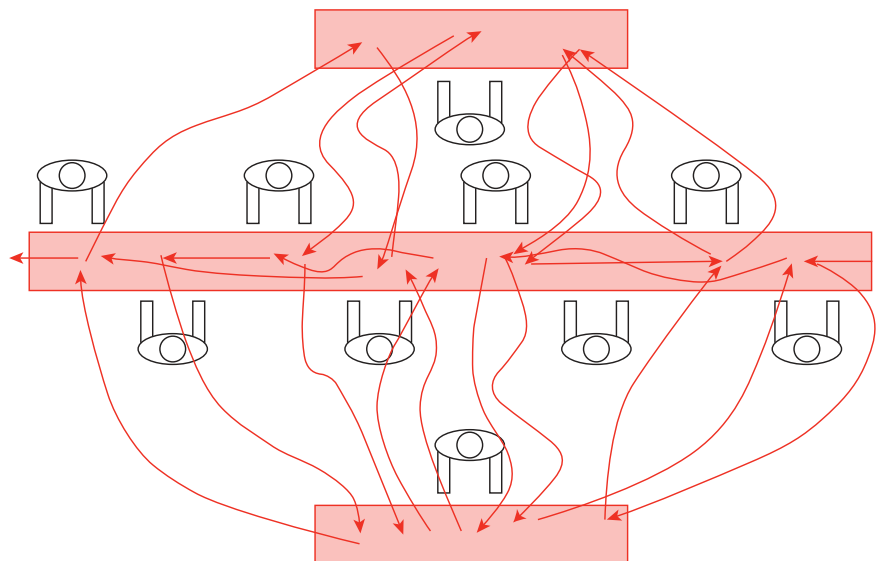
## What is layout?

Layout is both the physical and logical organization of process steps in the value stream. In manufacturing, layout is the physical organization of the operations within a value-stream or process flow. The same is true in healthcare, where there are various physical processes that exist in the operating room, emergency room, and the pharmacy. In retail, layout has to do with product placement to enhance the shopping process. In warehouses, it is the physical organization of SKUs to enable the pick, pack, and ship process. In information technology, it is how the real estate of the user interface is organized to prevent confusion and enable users to quickly find what they need.

## Why is layout important?

The physical or logical layout of the steps of a process will determine the extent to which continuous, one-piece flow can be achieved. Continuous, one-piece flow is an ideal state in lean where the product or service needed by the customer is produced and delivered only when it is needed without batching, queuing, or waiting. The importance of layout is most easily identified using a Spaghetti Map—a diagram that traces the flow of material or information physically through the process or value stream while keeping track of distance traveled (example in Figure 1). In information technology, it could be tracing the cursor while a user performs a typical transaction. In the hospital, it could be tracing the administration of a drug from the point at which the doctor prescribes it to the point it is administered to the patient. In each of these cases, the Spaghetti Map identifies wasted motion and transportation. Good process layout design will minimize the waste in a process. A bad layout will generate lots of waste and will quickly frustrate an organization's attempts at implementing lean.

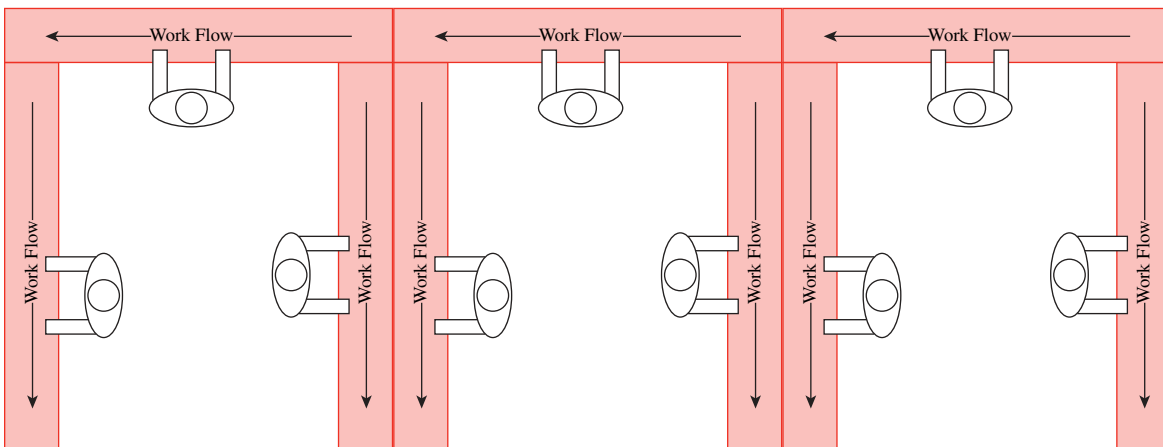
Figure 1. Spaghetti Map



## Layout Principles

1. All lean solutions must include layout design. This goes hand-in-hand with standard work—make sure both are addressed as part of kaizen activities.
2. Layout design cannot be completed without the future state value-stream map or process flow diagram. All nonvalue-added operations or process steps should be eliminated before the physical layout design is undertaken.
3. Layouts should minimize motion and transportation—particularly for products or services that make up 80 percent of the business—the key value streams.
4. Traceability—Maintain clear relationships between upstream and downstream process steps. Avoid mixing lines or process flows. This will enable quick resolution of problems when they occur.
5. Connected, U-shaped work cells make the best use of workers by minimizing motion and travel and enhancing supplier-customer communication by being close to each other (Figure 2).

Figure 2. U-shaped Work Cells



## Layout Examples

- **Education**—U-shaped classroom layout to give everyone a “front row seat” access to the instructor and visual aids while providing easy eye contact with all other participants to facilitate discussion.
- **Information technology**—Web page layout standards, which eliminate the use of scroll bars and restricting the number of “clicks” the user takes to access specific information.
- **Government**—Single-line queues to prevent confusion and line-hopping while also providing several clearly marked Web-based self-service workstations to handle routine business.
- **Healthcare**—Triage areas in hospitals to provide emergency service.

## Summary

Layout is a critical enabler when it comes to implementing lean anywhere. The right layout of a process flow will minimize wasted motion and travel in the delivery of goods and services to the customer in the shortest possible time.

## Newsletter Publishing Guidelines

1. Technical Merit
  - Factually correct
  - Relevant to our mission
  - Meets all guidelines
2. No selling of services
3. Nothing offensive

Additional factors to be considered are:

4. Not too similar to something recently done
5. Desired subject matter—how timely is material?
6. Well-written and not boring
7. Needed length

### Review and Selection

Our review and selection process will also be simple. Upon approval of a submitted work, the subcommittee forwards the piece to newsletter editor Wendy Gomez for final review and approval. Our goal is to allow Wendy to have a reserve of 4 – 5 articles for the newsletter. As works are submitted, I will forward them on to all of you for review. I want us to strive for a turnaround time of two weeks for those works that need little or no editing. I would propose that every submitted work be reviewed by at least three of us, with majority vote determining whether or not to pass the work on to Wendy, reject the work, or send back for editing/modification. In the event of a tie, I will cast the deciding vote. I will also be responsible for maintaining a tracking log of all submittals.

### Length

The desired length for tips, book reviews, articles, and case studies is 400 to 800 words. Tips and book reviews would be in the 400 to 600 range, articles anywhere from 400 to 800 words, and case studies 500-plus. If a submission goes beyond 800 words, then we should look at breaking it into more than one part. I see these proposed values not as rigid restrictions but rather as a sorting mechanism with occasional overlap between categories.

# Lean—The Newest ASQ Certification

## Second in a Series

by Mark Paulson, ASQ CMQ/OE, CQE, CQA, Lean Bronze (AME, SME, ASQ, and Shingo)

### The three levels of certification are:

- **Bronze** – Lean from a Tactical level
- **Silver** – Lean from an Integrative level
- **Gold** – Lean from a Strategic level

The levels are progressive: Bronze must be achieved prior to Silver, and Silver achieved prior to Gold.

### Lean Bronze Overview

Lean from a *tactical* viewpoint within these dimensions as identified in the Bronze Lean Body of Knowledge (BoK). These are the approximate weighting for the questions in the Lean Bronze exam.

- Cultural enablers (15%)
- Continuous process improvements (60%)
- Consistent lean enterprise culture (10%)
- Business results (15%)

### Lean Bronze Process Overview

1. Assess your knowledge and experience in lean
2. Read the recommended material
3. Apply to take the exam
4. Attend a classroom review course (only available for Bronze) or register for Lean Online Review Program (LORP) (optional)
5. Take the exam
6. Receive the Knowledge Certificate
7. Construct and submit your portfolio of education and experience
8. Work with a mentor (optional)
9. Plan your next step. The Lean Bronze Certification is valid for three years. You can pursue recertification or advance through Lean Silver Certification.

Exam questions are based on specific materials:

- Gemba Kaizen, Masaaki Imai
- Lean Production Simplified, Pascal Dennis
- Lean Thinking, James P. Womack and Daniel T. Jones
- Learning to See: Value Stream Mapping to Create Value and Eliminate Muda, Mike Rother and John Shook
- The open-book, 170-question exam has to be completed in three hours.
- It is strongly recommended that you bring your recommended reading material to the exam.
- All exam questions are taken from the reading material sources.

When you pass the exam, you receive a certificate (not certification) that serves as a base for pursuit of the Lean Bronze, Silver, or Gold Certifications. It is valid for three years and is not renewable.

You must submit your portfolio and have it accepted within the three-year time frame beginning from the date on your knowledge certificate. It should document:

- Completion of 80 hours minimum of education/training requirements.
- Five (5) tactical projects: Events, projects, and/or activities to which specific lean principles and tools were applied.

- Portfolio reflection: Results of the events, projects and/or activities.
- Projects should demonstrate continuing practice in lean. For example, if you are applying for certification in 2010, and you started your lean practice in 2005, you may choose to include projects from 2006, 2008, and 2010 in your portfolio to demonstrate that you continue practicing lean.

A minimum of 80 hours of training and education that includes three or more professional development activities, such as:

- Classroom training
- Hands-on programs
- Web-based seminars
- Conference programs
- Training you've delivered
- Videos
- Books
- Structured plant tours

The portfolios follow the PDCA (Plan, Do, Check, Act) format and include an explanation of your personal role and involvement in the project

- Each person must submit five project portfolios—typically using different lean concepts and tools
- Each applicant must also write a portfolio reflection document, discussing what they learned through the experience and identifying future lean plans
- Portfolios are reviewed and scored (by Lean Bronze certified volunteers), then returned to the author
- A total score of 80 out of a possible 100 points is required to pass the portfolio portion
- Each individual project must pass and the reflection must pass for the portfolio to pass
- Project pass point: 12/15 points
- Reflection pass point: 20/25 points

A project is a focused effort to support a lean transformation of a process or resource.

- Focused – Requires a PDCA approach.
- Support – Supports/connects with an overall lean effort in a “tactical” area.
- Process or resource – Target is clearly identified and defined.

The project should show a progression/growth through the portfolios. Reviewers are looking for:

- Diversity of projects.
- Use “I” extensively when writing your portfolio projects—it is about your personal role in the project.
- Understanding of principles and appropriate application (scored for each question).
- Ability to reflect and learn.

## Portfolio – Detailed sections and questions

- **Project title**
- **Industry/organization function affected:** Indicate the industry in which the project occurred and the part of the organization that was affected by the project.
- **Problem statement:** Describe the problem the project is addressing.
- **Start date:** Provide the project start date. If you are no longer involved in the project, also provide the date you transitioned off the project. Projects should show a progression in dates to reflect a history of lean experience.
- **Role in the project and team selection:** Describe your specific role in the project and how the team members were selected.

*cont. on p. 6*

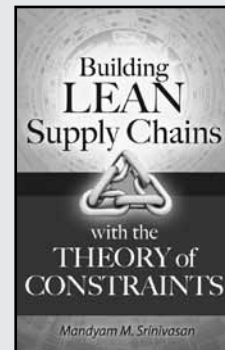
## Building Lean Supply Chains with the Theory of Constraints

Mandyam M. Srinivasan

**Item:** P1448

**Price:** \$60.00

Just In  
INNOVATION  
STRATEGIES for  
building and  
managing the  
supply chain  
using Lean and  
the Theory of  
Constraints (TOC)



With an emphasis on systems thinking, *Building Lean Supply Chains with the Theory of Constraints* uniquely integrates TOC with lean, illustrating how these two philosophies complement and reinforce each other to create the smooth flow of goods and services through the supply chain. The majority of the chapters draw on the tools and techniques of TOC, including throughput accounting, drum-buffer-rope, TOC in distribution and replenishment, the thinking process, and critical chain project management. All of these topics are presented in the context of building and managing a lean supply chain to achieve true bottom line results.

### COVERAGE INCLUDES:

- The lean supply chain roadmap
- Envisioning the lean supply chain systems thinking
- Adopting a throughput world perspective
- Designing products and processes to fulfill customer needs
- Building a competitive operations strategy
- Partnering in the lean supply chain
- Streamlining the value stream
- Creating flow through the supply chain
- Managing projects the TOC way: critical chain project management



## Meet Us Now on Twitter @asqled

The ASQ Lean Enterprise Division exists as a strong advocate of eliminating nonvalue-added activities that add waste in the form of unnecessary time, effort, or cost, and creating products and services that will add direct value to a customer. Value from the perspective of the customer is the Voice of the Customer (VOC).

In my role as the chair of the Lean Enterprise Division VOC Committee, I am continually trying to understand clearly and exactly what product or service our members desire, when it needs to be delivered, and at what price. I am always looking at technologies and creative ways that will help us understand our members better, and this is why we started using Twitter.

As we all know, Twitter is an online social networking and microblogging service that enables its users to send and read text-based posts of up to 140 characters, informally known as "tweets." Twitter is really just another form of online communication in a new shape, but is also a platform for listening to the communication of others in new ways. As a Twitter user, one can post updates, follow, and view updates from other users and send a public reply or private direct message to connect with another Twitterer. Tweets have evolved to more than everyday experiences, and take the shape of shared links to interesting content on the Web, conversations around hot topics (using hashtags), photos, videos, as well as real-time accounts from people who are in the midst of a newsworthy event, conference, crisis, or natural disaster. Users who enjoy reading what you share on Twitter become your followers and, likewise, you follow those who share content that is of interest to you.

I have outlined some of the goals that the ASQ Lean Enterprise Division is aiming to achieve using Twitter:

1. Connect with our members all over the world and those who are interested in what we do.
2. Share lean content from ASQ and Lean Enterprise Division which may include, but are not limited to, articles, newsletters, best practices, case studies, podcasts, videos, tools and techniques, education, conferences, certifications, and calls for papers.
3. Retweet and share content from quality professionals and lean practitioners around the world.
4. Share ASQ and Lean Enterprise Division's special offers, exclusive promotions related to lean education, membership, and lean conferences.
5. Announce and recognize winners of lean contests at conferences, best lean writers, speakers at lean conferences, certified lean professionals.
6. Announcements and reminders for conferences, training, and call for white paper submissions.
7. Announcements for case studies and articles.
8. Announcements for lean jobs and career advancement opportunities.
9. Get direct feedback from our members and those who are interested in what we do.
10. Tweet ups and Twitter discussions.

Twitter is a small attempt by the Lean Enterprise Division to make ourselves available for our members, help whenever possible, and to show that the Lean Enterprise Division is built and run by real people who believe in quality and lean, and who care about our members. So come follow us on Twitter and get immediate access to rich content from quality professionals and lean practitioners around the world. We can be followed on Twitter at @asqled. We look forward to meeting you.

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**Madhavi Chodankar**

Chair – Voice of Customer Committee, ASQ Lean Enterprise Division

*Lean—The Newest ASQ Certification cont. from p. 5*

### Plan (4 possible points)

- How were you involved in project selection and definition?
- How did you participate in the documentation of the current condition and target condition?
- What metrics did you use in the project?
- What planning methods did you use?

### Do (3 possible points)

- Describe your contribution to the project.
- Describe proposed countermeasures/solutions and implementation.
- Describe the lean principles and methods you used in the project.

### Check (3 possible points)

- What was your role in the check process?
- How did your results compare to your target condition?
- What is your assessment of the level and trend of improvement?

### Act/Lessons Learned (5 possible points)

*The Act (Adjust) portion of your project is limited to 250 words (½ page) maximum.*

- What have you personally done to sustain this project?
- What do you think are the next improvement steps for this project?
- What lessons did you learn from/about the project?

### SME website – [sme.org/leancert](http://sme.org/leancert)

- Sample portfolio projects and reflections
- Body of knowledge
- Recertification requirements
- Portfolio instructions
- Guide for effective mentoring
- ...and more

The last article (third) in the series will provide information on the Silver and Gold levels of certification.



## 2012 Lean and Six Sigma Conference February 27 – 28, 2012 • Phoenix, AZ

### **Positive Outcomes: Putting Lean and Six Sigma to Work**

Lean and Six Sigma have never been more important than they are in today's business environments. Find out how lean and Six Sigma tools and resources can help you improve your organization's competitiveness and make an impact on the bottom line. No matter if you are a beginner or a seasoned veteran, the 2012 Lean and Six Sigma Conference can make a difference, with more than 50 sessions, hands-on workshops, keynote speakers, and multiple networking opportunities focusing on:

- Global Imperative
- New/Unique Applications With Lean and Six Sigma
- The Tools of Lean and Six Sigma
- Cost/Waste/Defect Reduction
- Sustaining the Culture

It doesn't matter if you are in manufacturing, service, government, or healthcare. You will get the new ideas you need to deliver positive outcomes.

### **Early-bird pricing available through January 15, 2012**

ASQ Members \$1,095 • Nonmembers \$1,295

To register for the 2012 ASQ Lean and Six Sigma Conference, visit [sixsigma.asq.org](http://sixsigma.asq.org)

### **Testimonials:**

*As a new member to the quality community, I was thrilled with my experience at the 2011 conference. It gave me two major things I was looking for: networking opportunities and learning opportunities in relevant areas of quality. The session choices offered were things I can take right back to the office and put into use.*

**– Mary Stepnick, SSOE Group**

*I enjoyed the Lean and Six Sigma Conference. I only wish it lasted longer than two days.*

**– Scott Smith, SNF Holding**

*The ASQ Lean and Six Sigma Conference absolutely gets better and better each year. That's continuous improvement at its best. The efforts put into this conference in keeping the presentations fresh and current really shows.*

**– Beth Reid, Northrop Grumman**

### **Note From the Editor**



Greetings all!

It is hard to believe that another year is coming to a close; 2011 was an exciting year for the LED and I can only expect the same excitement—if not more—for 2012. I wish to thank all of our readers for your continued support throughout this year!

Wishing you the best for 2012,  
**Wendy Gomez**



**2012 ASQ  
WORLD  
CONFERENCE  
ON QUALITY AND  
IMPROVEMENT**

MAY 21-23, 2012  
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ANAHEIM CONVENTION CENTER






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Milwaukee, WI 53203-2914

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A detailed black and white photograph of a telescope mounted on a tripod, positioned on the left side of the advertisement.

**Chart Your Course  
with Confidence**

**The Comprehensive Learning Resource  
for Quality Practitioners Worldwide**

Backed by the world's leading authority on quality, the ASQ Learning Institute provides thousands of quality practitioners like you with the latest, best knowledge and tools available. Use it as your command center for planning and executing all the high-quality learning you need.



**Please consider the environment.**

Do you really need a paper copy of this newsletter?  
Please send a message to [lmilanowski@asq.org](mailto:lmilanowski@asq.org) with  
"Electronic Only" in the subject line.