



State of the Industry

Observations, trends and information for the construction industry

May 2017

Volume 5 Issue 1

Welcome to our First State of the Industry report of 2017. Please let us know what you think by sending us a quick email—click [HERE](#).

Update on the Mission: Agile Construction®

Contractors Moving Ahead:

Sprig Electric – recently began an assessment of their work on the “Jewel” of the new Apple Campus

Staff Electric – design teams have begun to examine their existing processes in preparation to begin using SBPI®

Taylor Electric – has formed design teams to begin their journey on becoming an Agile Construction® practitioner

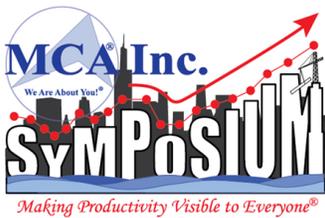
LiveWire Electrical Systems Inc. – is continuing with more internal training and tracking more projects in JPAC®

Bronco Electric – is moving forward with tracking more of their projects in JPAC®

Aldridge – has been taking very aggressive steps to expand the administration and management of their JPAC® and SIS® by involving more project management support to help their Agile Department set-up and monitor new projects. Additionally, Aldridge is beginning to significantly expand the use and capacity of prefabrication as well as vendor partnership over the coming year. Foremen, Project Managers and Agile Department experts at Aldridge continue to provide input to MCA’s future product development efforts and are participating in helping to establish an effective process for Co-Development of new software features and enhancements which you may be using soon.

Hardt Electric- Hardt has begun to move forward with an optimization of their prefab department

Holmes Electric - completing the second page of a build out for Facebook, with some of the best usage and application of JPAC® and SIS®. Holmes is preparing to expand on this learning with field and PM resources being deployed across several upcoming projects this quarter and into 2017.



MCA Spring Symposium

See pages 5 & 6

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Agile Construction® Classes are Coming to a Town Near You!

2017—2018 Calendar

- May 25th & 26th – Grand Rapids, Michigan:
- June 22nd & 23rd – Milwaukee, Wisconsin:
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Distributors Implementing Agile Support Programs:

Standard Electric – conducted an assessment for utilization and optimization of their prefabrication facility making it available to their contractors. Currently Standard Electric is preparing to launch a flagship facility with tools, equipment and processes that are at the forefront of the industry, what could prove to be the earliest seeds that could grow into a new Mega Center Business Model that becomes accessible to their progressive thinking customers, regardless of their size.

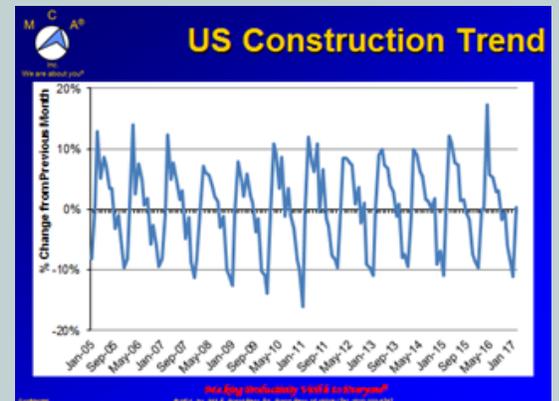
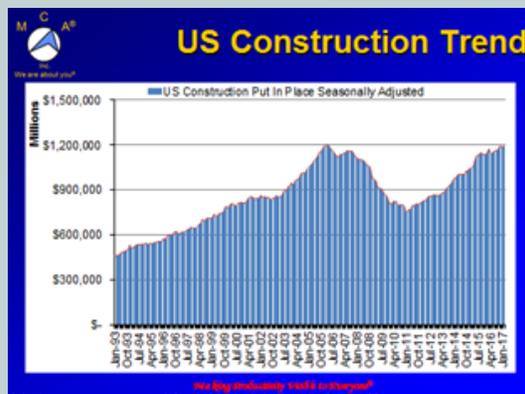
ConneXion – cross functional design teams are moving forward mapping their processes and analyzing delivery data in order to develop a true next generation distribution model for their contractor customers

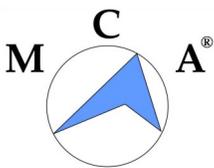
Graybar Milwaukee – established their Anchor Customer and First Pass cross-functional design teams to begin using SBPI® of their high priority processes.

Graybar Partners with Hardt Electric — On December 15th members from MCA Inc, Steve Stone of Graybar and David Hardt, President of NECA, Owner and President of Hardt Electric, along with Project Managers, and Forman got together to break down work and strategically plan what needs to be done and when for vendor management support.

Overall Construction Market Size, Trends, and Composition:

2016 proved to be a robust year for construction with overall U.S. Construction coming in at \$1,162.4 billion a solid 4.5% over 2015. The Construction Put In Place (CPIP) trend shows that not only did the market maintain peak spending levels not seen since before the financial crash, but the duration of this spending cycle is poised to outperform the historical market. Already February's Seasonally Adjusted Annual Rate is up 3% from what it was in 2016.

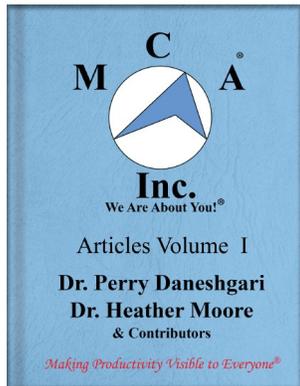




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The month to month percent change shows the seasonal variation, with the trend indicating the industry has taken off for the season. Construction reached its slow point in the cycle during January with a -11.1% change from the previous month; followed by an uptick of .4% for February indicating the onset of work breaking loose for the year. This next chart looks at the trend of some of the more popular detailed categories within the commercial segment over the past 14 years. General Commercial and Office detailed categories continue to show consistent gains, followed by the Educational and Lodging categories. Healthcare despite not showing any real upward momentum in recent years has remained relatively stable since even before the financial crash.

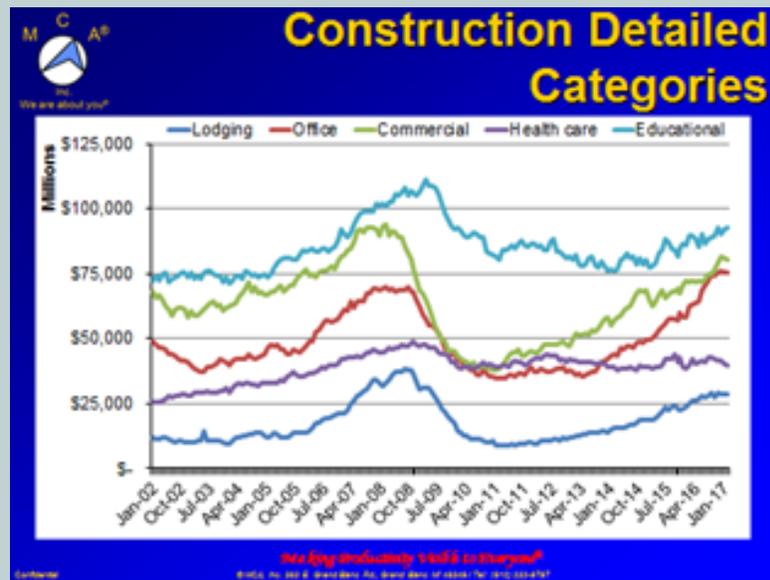
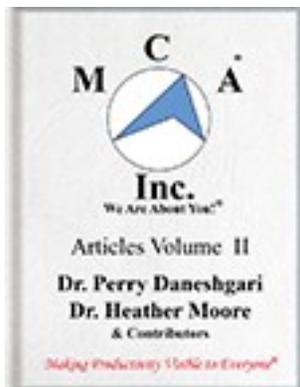


Complimentary EBOOKS!

These ebooks are packed full of Agile Construction® related articles on...

- Transformation
- Productivity
- Profitability
- Process
- Procedures
- Tools
- Measurements

[Click here](#) to download.



Construction Trends Across the Globe:

For years now China has been referenced in almost any article or discussion within the construction industry, from prefabrication to competing against local builders across the country. We can see from the trend in the chart below that since the mid 2000's, China has aggressively accelerated their construction market until finally tapering off in 2015 at \$18T Yuan. Translated to USD this is equivalent to about \$2.8T in 2015 for their construction market size. As we have been showing the threat from China revolutionizing the construction industry and taking their talents abroad is real. The next chart shows just how much construction China has been exporting across the globe. In 2005 they were exporting a mere \$2.6B in construction, fast forward ten years to 2015 and that figure is \$16.7B almost 6 and a half times that amount.



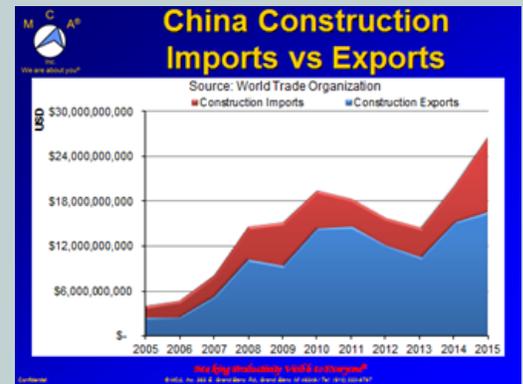
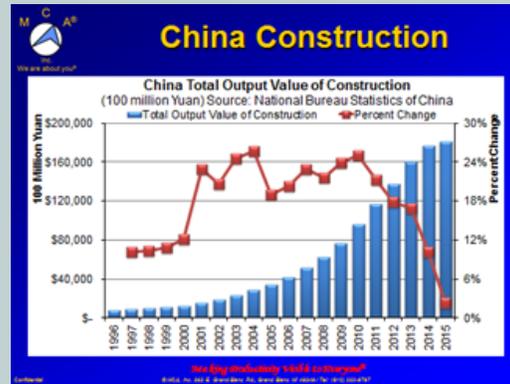
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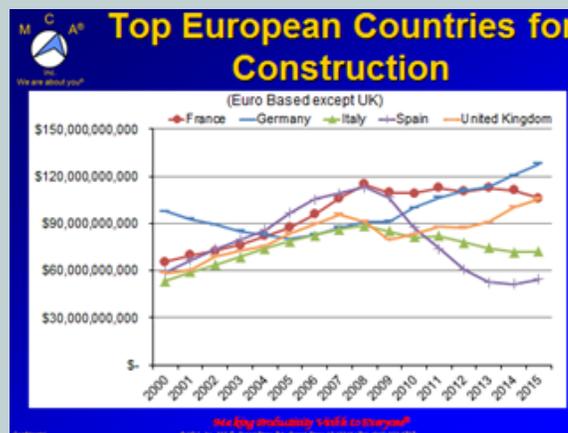
Construction Trends Across the Globe Cont:



Looking at our neighbors to the north or east depending on where you are in the US. We see the Canadian market shows a similar decline in market size as a result of the 2008 financial market crash. Although Canada's Construction Market was impacted, it was not as severe, nor did it have the duration of the United States construction market recession.

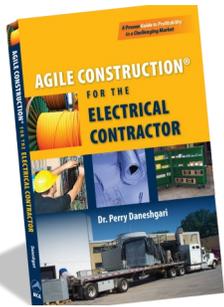


Moving on to the European Union' top countries for construction, France, Italy, Spain, and the UK showed steady growth from 2000 – 2008. Germany on the other hand was actually experiencing steady declining from 2000 – 2005. After which Germany showed relatively steady gains through 2015, except for some market stagnation in 2009.





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Agile Construction® For The Electrical Contractor

by
Dr. Perry
Daneshgari

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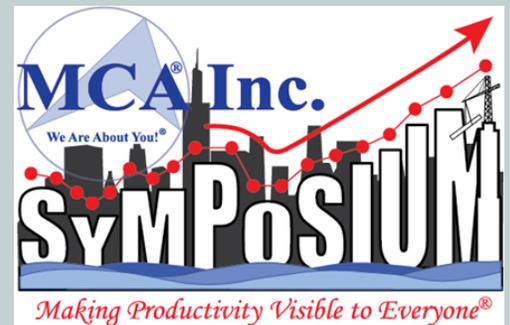
After 2008 France's construction market remained fairly constant in size. Italy's construction market declined through 2010, before stabilizing in 2011, followed by a steady decline through 2014 and remained constant in 2015. Spain's construction market after 2008 continued on a steady downward decline, before bottoming out in 2014. While the United Kingdom continued to decline in 2009, their market remained relatively stable through 2013, before experiencing accelerated growth through 2015.



Looking at some of the larger markets of the southern hemisphere Australia and Brazil; while Australia showed linear pattern of steady growth indicative of controlled government spending. Surprisingly for the area Australia encompasses their market is relatively small, \$140B Australian Dollars translates to \$120B USD. While the data reported for Brazil is not as complete as other countries, we can see them following a similar pattern of steady growth from 2004 – 2008. However after 2008, Brazil's construction market experienced an unprecedented level of expansion, undoubtedly financed by the rising fuel prices in the US during that time.

2017 MCA Spring Symposium:

The 2017 Spring Symposium kicked off April 18th and 19th with Agile Construction® classes, where registrants learned the benefits of Externalizing Work® with Prefabrication and Agile Procurement®. The



participants also benefited from hands-on experience with MCA's ASTM industry standard productivity software, SIS® (Short Interval Scheduling), and JPAC® (Job Productivity Assurance and Control). A reception, sponsored by Greenlee® followed Wednesday's classes in the Scoreboard Lounge leading into Thursday's



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2017 MCA Spring Symposium Cont:

main Symposium session. This Symposium took on a different format utilizing a volunteer panel, asking them to step up to the plate and field questions on topics ranging from BIM to prefabrication to vendor partnerships. MCA would like to thank their invited speakers and panelists for sharing their time and knowledge to help better the industry. The Symposium ended with an introduction to the CEO and Technical Forums; more on this to come.

CEO Forum:

April 21, 2017, Chicago, IL will mark the CEO Form's first conference held by industry leaders representing contractors, distributors, and manufacturers across many trades in the construction industry establishing the framework to predict, prepare, and adopt disruptive business models for the industry. Megacenters; what would they look like and mean to the industry? Industrialization of Construction®, and developing and managing a user forum to capture and share valuable information for future discussions were hot topics in the first CEO conference. The group plans to meet two more times this year in hopes to get the first user forum of this type up and running by the end of the year. [Click here](#) for more information.



Technical Forum:

Coming this Fall, MCA will be hosting the Technical Forum providing end-users the opportunity to participate in a collaborative environment to refine and develop current and future MCA software platforms.

New feature enhancements to SIS®:

In order to better serve our customers MCA has introduced in SIS® a new material and tool tracking option that allows the field to make their material and equipment needs more visible. By making their needs more visible this feature allows for better planning from the field reducing the number of emergency orders for material and tools, reducing crew idle time, and increasing crew productivity on the job site. As well as, reduced retention of tools no longer needed.



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**Agile Response To
Daily Work Changes
on the Jobsite.**

**Now available for
iPhone, iPad and
Android devices**

“Know your obstacles
before they get
the best of you.”

For more
information
[click here.](#)

**Watch Training
Videos [here!](#)**

Agile Construction® Across the Country

Agile Construction® is coming to a town near you! MCA is conducting Agile Construction® classes at various locations across the United States and Canada. This is a great opportunity to see first-hand on what Agile Construction® can do for you and your company. For more information and to register [click here](#), or contact Dan Waltz at dwaltz@mca.net

Web Based Training:

MCA is proud to announce that we have web based training available to all our clients. This offers participants the benefit of reduced training costs, greater flexibility in training schedules, and a greater variety of courses to choose from:

JPAC® & SIS® mini classes

[Tuesday's](#)- SIS® Mini-Classes @ 10 & 10:15am

[Wednesday's](#)- SIS® Mini-Classes @ 9 & 11am

[Thursday's](#)- JPAC® Mini-Classes @ 3pm

Register here... <http://www.mca.net/Complimentary-Mini-Class-Registration-Page>

- Web based Agile Classes: *Call MCA for Details*
- Web Based Design Teams: *Call MCA for Details*
- Web Based Project Management courses: *Call MCA for Details*

Calendar of Events:

Upcoming MCA, Inc. events and engagement can always be found on our website.

[Tuesday's](#) - SIS® Mini-Classes @ 10 & 10:15am

[Wednesday's](#) - SIS® Mini-Classes @ 9 & 11am

[Thursday's](#) - JPAC® Mini-Classes @ 3pm

May 11th - How to Build a Productive and Profitable Work Breakdown Structure – San Leandro, CA

May 25th & 26th, 2017 - Grand Rapids, Michigan

June 2– Strategic Planning for Electrical Contractors – New York, NY

June 22nd & 23rd, 2017 - Milwaukee, Wisconsin

July 26th & 27th, 2017 - Detroit, Michigan

August 17th – Design for Value Engineering to Increase Job Profitability – Portland, OR

August 30th & 31st, 2017 - Glendale Heights, Illinois

September 8th – How to Compete in Large Cities & Win Back Markets – Minneapolis, MN



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October 26th - Market Shift in the Electrical Construction Industry – King of Prussia, PA

September 27th & 28th, 2018 - 200 Level of Agile Construction® - New Jersey

December 1st - Project Scheduling & Time Management Made Easy – Minneapolis, MN



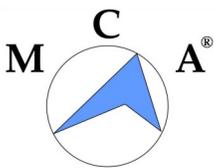
For up-to-date class information visit our website at...

<http://www.mca.net/events/upcoming-classes/>

Register for our Agile Classes at <https://mca-soft.com/classes/>

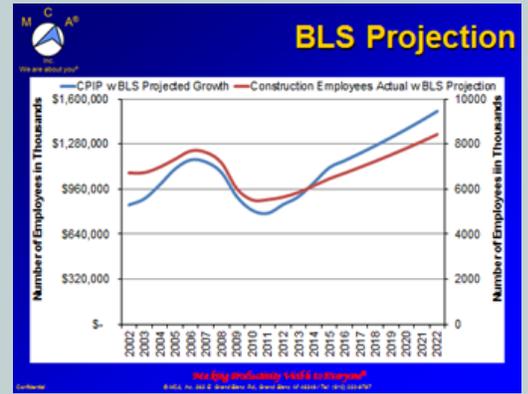
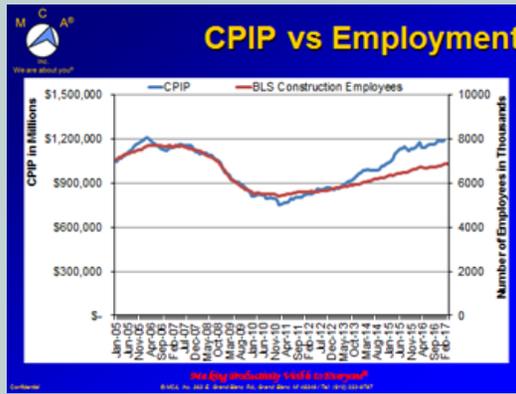
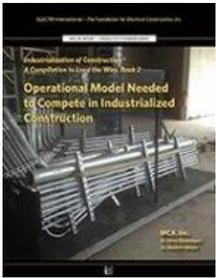
The Workforce Shortage:

From what we saw above, we know our down time for the year is over, and it is all hands on deck for the rest of the season. So now that you've got the work, the question becomes how you are going to handle the labor portion of your projects. Gone are the days where you could just simply throw more manpower at a job to get it done on time, and still manage to come out ahead. In order to manage the job, you have to manage the work, if you want to manage the work; you have to manage the labor. In today's market, simply throwing more manpower at a project could cost you your bottom line. Looking at the CPIP vs Employment, we see that not only has construction come back, but the demand has continued to outpace the supply in the labor force since June of 2013. Successful companies in today's market will be the ones who can not only manage their labor, but optimize the productivity of their labor force by employing the principles of Agile Construction®. Not only has this opened the floodgates to competition from abroad, but it is in essence creating the perfect storm for disruption in the construction industry.



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Based on the Bureau of Labor Statistics (BLS) projections, this disparity is going to become an industry norm which will in turn be the catalyst for the next cycle of disruption in our industry. On one front, owners and project managers now have to worry about the availability of labor, which now adds an additional layer of risk associated with having to flood a project with high skilled labor to meet deadlines and risk corporate profits. The second front comes in the form of competition from overseas, not bound by labor agreements with prefabrication abilities rivaling that of any modern manufacturing facility. Already, overseas competition is slowly beginning to take on more and more of our own infrastructure projects. The third front that will bring about the disruption of the industry will be from our own reaction to overseas competition in the form of the mega center with automated fabrication leaving only final assembly at the job site. Industrialization of Construction® is here, and it is here to stay. The only way to remain competitive and survive is to train your workforce to manage the labor, manage the work, and continuously improve the productivity and processes of your organization

Recent Publications:

Robots: The Next Wave! – Innovation; it can't be avoided. It hits almost every industry at the most opportune time; and when it does, it can disrupt the way we do work in such a way that it can bring even large corporations to their knees. Innovators will always seek out weaknesses and leverage new ideas in their efforts to meet customers high demands or expand the market by finding ways to serve previously underserved segments. Like automobiles were to the horse and buggy and like MP3's are to the music industry, history shows us that advanced technology has been the inevitable disruptor in every industry.

[Click here.](#)

ELECTRI International has released the first, second, and third book in a series of four books on topics pertaining to the Industrialization of the of the Construction Industry. MCA Inc., under the leadership of Dr. Perry Daneshgari, President/CEO, is producing this series for ELECTRI. The three subsequent texts will include Benefits from Globalization & Industrialization, Foundation and Future, and Efficiency and Continuous Improvement. These will be produced and released over the next 1-2 years.

For more info [Click here.](#)



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Recent Publications Cont:

Avoiding Killer Jobs with Better Accuracy - “Killer jobs,” we’ve all heard of them, or maybe even been unfortunate enough to have been involved in one. It’s these jobs that can single-handedly make the difference in a year-end profit or detrimental loss. And most result in tarnished relationships with employees, customers, and vendors. Sometimes bringing companies to their knees. [Click here.](#)

Partnering with Electrical Distributors for Improved Efficiency - Industrialization begins with management of labor and work, including identifying who should do what, when, and where. In other words, it doesn’t all have to be done on site as the schedule suggests. Using vendors to support the work — not just sell material — is one way to accomplish this. [Click here.](#)

Organizational Transformation Through Improved Employee Engagement – The purpose of this paper is to help businesses understand that as markets change, the way a company does business also must change to stay competitive in their industry. [Click here.](#)

MCA Articles Vol I & II Ebook - Agile Construction® related articles on Transformation, Productivity, Profitability, Process, Procedures and Tools, and Measurements. [Click here.](#)

Prefabrication Increases Productivity - Prefabrication is really a misnomer for what is happening in the industry. It’s not prefabrication that is happening, but rather separation of production from installation. Most find there’s no longer a choice to participate in productivity improving activities to improve time, cost and quality of the construction project delivery. [Click here.](#)

Agile Construction® for the Electrical Contractor - Agile Construction for the Electrical Contractor provides the tools and guidance needed to transform a traditional, reactive project management style to a new, proactive, profitable, and productive business management model - one that can quickly respond to changing industry needs and remain a profitable enterprise, even during the toughest of times. [Click here.](#)



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The Chase - The Chase is a business novel, which is based on a real case study. Its intended audience included the general public, management and administrators, students and teachers in business and engineering schools, and consultant practitioner. This book is unique because it targets the product development aspect of the product productions process. [Click here.](#)

Industrialization of Construction® Books

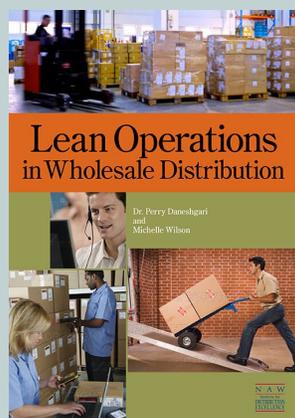


Book #1: Competing in the New Construction Environment: A Compilation to Lead the Way — [Click here.](#)

Book #2: Industrialization of Construction: A Compilation to Lead the Way — [Click here](#)

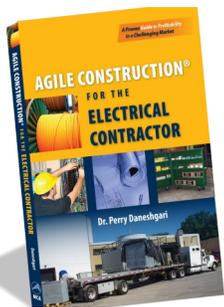
Book #3: Foundation and Future: Dealing with the Challenges of More Work — [Click here](#)

Lean Operations in Wholesale Distribution -



Becoming lean in wholesale distribution is more important than ever in today's challenging economic market. Applying lean concepts makes sense because becoming lean means becoming a more effective distributor. And becoming lean will lead to higher profitability. This book discusses the steps distributors must take to design and manage a lean culture. It deals with one lucrative area: Operations, which includes all aspects of the order processing system-from the time you seek an order, to order entry, and all the way through to delivery of products and services. Apply the tools and techniques in this book to your company so that it will operate with minimal waste and few errors, while at the same time meet your primary goal of adding value to the products and services you provide. [Click here.](#)

All publications can be found on MCA's website. [Click here.](#)



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