



State of the Industry

Observations, trends and information for the construction industry

September 2018

Volume 6 Issue II

Please let us know what you think by sending us a quick email. Read past State of The Industry Reports , [Click HERE.](#)

A Proven Method to Avoid Killer Jobs:

Everyone has heard of a “Killer Job”, the one that can single-handedly wipe out an entire company’s profit in one fell swoop. They are born to companies who have large variation in job profitability, with no systematic understanding of what causes the ups and downs, and no visibility to where a job will finish until it is beyond 80% complete. These systems breed “Killer Jobs” because the system itself is unpredictable, and when an exciting large project is won, the invisible, unpredictable system wreaks havoc.

MCA has had the honor to be involved with several mega-projects (shown in Figure 1), using the Agile Construction® principles and tools to avoid them turning into Killer Jobs. Below is a list of guidelines:

- A large job is simply multiple small projects put together. Break it down into smaller projects by area, or level, or type of work, and then break that down even further – using Work Breakdown Structure.
- Make plans for organizational structure, reporting structure, information flow, and other elements.
- Use data. Large jobs are a matter of managing a large number of numbers. It is humanly impossible to manage with traditional, “seat-of-the-pants” techniques. JPAC® and SIS® (explained more on the next page) have proven very effective and necessary to knowing where large jobs stand at any given time.
- Conduct project audits, every 25% complete of the project (or more frequently). The project team plus outsiders need to review the project status, data about the project, and collective knowledge of the project, to reduce risk for the next 25%. (see page 23 of Book 4; [Efficiency and Continuous Improvement: Survival of the Unfits](#))



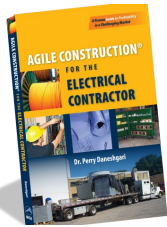
Large Jobs that have used Agile Construction® over the past decade

Project Name	City	State/Prov	Spent Hours	# Change Orders	Completion Date
Commercial High Rise	Seattle	Washington	104,723	772	2009
Datacenter	Northbrook	Illinois	435,000	N/A	2009
New Outlet Mall	Niagara	Ontario	67,756	517	2014
Military Lab Facility	Frederick	Maryland	521,512	N/A	2015
Datacenter	Baltimore	Maryland	131,004	971	2016
New University Building	Waterloo	Ontario	71,273	405	2017
Convention Center	Seattle	Washington	291,153	668	2018
Sports Arena	Milwaukee	Wisconsin	199,277	710	2018
High Rise Condos	Seattle	Washington	59,589	19	2018
High-Tech Company HQ	Palo Alto	California	53,421	155	2018

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Figure 1



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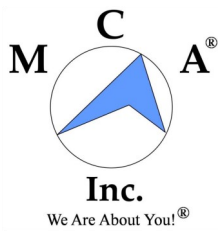
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August 19th & 20th, 2019 – Boston, MA

September 12th & 13th, 2019 - Appleton, WI

For more information or to register

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A Proven Method to Avoid Killer Jobs, Cont.:

- Be aware of the issues that require unique, or additional management, such as:
 1. Resources
 2. Schedules
 3. Purchases
 4. Billing and cash flow
 5. Productivity
 6. Subcontractors
 7. General contractors
 8. Turnover
 9. Personnel issues
 10. Cost
 11. Lack of visibility at the task level
 12. Coordination with other trades
 13. Material price escalations
 14. Jobsite logistics, including tool and material movement

There are very few tools in this industry that can help you manage a large job. JPAC® measures the productivity on your job and aids in risk management. Large jobs benefit from more frequent recording of progress (observed percent complete), especially if they are fast-paced. Some jobs even have done daily updates allowing the Project Managers to pinpoint areas where they need to respond to problems that occurred during the day. Using SIS® to manage the tasks allows the Project Managers to determine the largest obstacles that happen on the large job and can determine common repeatable issues that needed to be addressed. MCA's own research (<http://mca.net/resources/state-of-industry-report/>) indicates that absenteeism is one of the top three reasons for not completing work according to the schedule.

With all of the risks taken into account, it is critical to plan and predict using the tools available to your advantage. Set up a JPAC® and SIS® account as your first step to reducing the risk and increasing the success on your job.

Please visit a longer and more detailed version of this article at: <http://www.ecmweb.com/business-management/mastering-electrical-work-mega-project>

CEO Forum:



The CEO Forum Steering Committee reviewed the successful result of its first Forum Event (June 2018), and is planning a second one before year-end 2018.

A key metric being monitored and influenced through this group is the labor cost contribution per dollar sold. It is a reflection of the progress of Industrialization of Construction®. Other industries that are driven by skilled trade such as agriculture, textiles, manufacturing, and others have

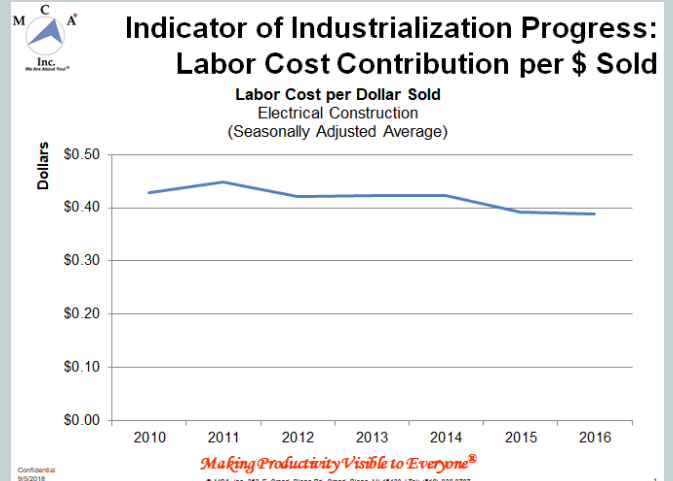
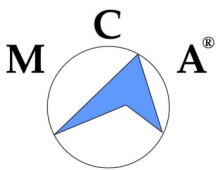


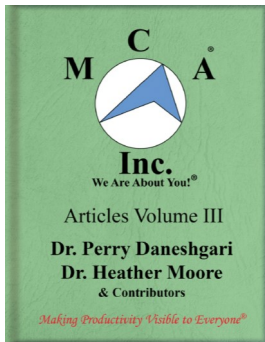
Figure 2

Source: Bureau of Labor Statistics, Department of Labor



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NEW! EBOOK

*Vol III of MCA Articles
ebook is now available!*

Agile Construction®
related articles on Trans-
formation, Productivity,
Profitability, Process,
Procedures and Tools,
and Measurements.

[Click here.](#)

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

- Transformation
- Productivity
- Profitability
- Process
- Procedures
- Tools
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CEO Forum, Cont.:

reduced this indicator to below \$0.07 labor cost for every \$1 sold. Figure 2 shows the labor cost per dollar sold trend in electrical construction from 2010 thru 2016. Over this seven year span, labor costs ranged between 39 and 45 cents for every dollar sold. Labor costs peaked in 2011 at 45 cents and in 2015 and 2016 labor costs leveled off at 39 cents for every dollar sold. This trend indicates that the industry is applying different tactics to lower the composite rate on projects. Why does this concern the industry? In comparison with other Industrial Industries, construction is over 5 times more expensive in labor cost contribution. This is one of many topics discussed in MCA's CEO Forum and is an indicator of it's influence in how it is measured. If you are interested in joining the forum please inquire at info@mca.net.

NEW! MCA Prepares to Showcase Agile Construction® at Upcoming IEC Convention

IEC will hold their annual Convention this year at the Indianapolis Convention Center September 19th—22nd. Come visit MCA's booth (#224) for a quick demonstration of Agile tools and principles. We look forward to meeting with you . For more information visit <https://www.ieci.org/ieconvention>

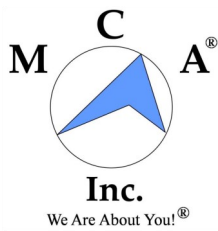
NEW! Agile Tools User's Forum:

MCA is excited to announce that the **NEW Agile Tools User's Forum** is now online and is in use. This forum functions as a portal, designed to help Agile Construction® Practitioners conveniently help one another in open communication. Users are encouraged to discuss issues, and problem solve through open discussion on this forum with their own peers. This is a web based forum which can be accessed on any device with internet access and will be moderated by MCA to help the field and/or expedite any unanswered questions that may occur. This first Agile Tools Forum is currently in the pilot stages with Staff Electric. With its success, MCA has plans to roll-out this forum, or one like it to all clients to help their pursuit in becoming a more agile company. Look for more information in the next SOTI.



NEW! MCA Turns Platinum:

MCA recently upgraded their Bronze Partnership status with IEC to Platinum level in hopes to reach more people in the industry to train and share decades of knowledge in the field of Agile Construction® and Industrialization of Construction®. Visit www.mca.net or call (810) 232-9797 for more information.



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Testimonial & Customer Results:

Culliton *“We are still learning, but I can’t imagine our projects today without Agile component, in the way we look at it. MCA has spent 3 years peeling the onion back and leading us there. We have a quicker turn-around for “learning” on the estimating side. We can’t say enough how much I appreciate what you guys did for us.” ~ Ted Lange, Culliton*

Recent Published Articles by MCA:

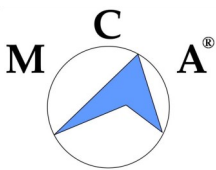


The following articles have recently been published in EC&M & Insights Magazine.

- Winds of Change: Automation of Conduit Bending.....Insights Magazine 2018
- The Paradox of Managing Large Jobs: The Explosive Nature of Large Jobs and Lost Final ProfitsInsights Magazine 2018
- Recruiting for the Future.....Insights Magazine 2018
- Winds of Change: Industrialization of Construction®Insights Magazine 2018
- Safety and Productivity—The Effects of Visibility and Planning on Safety Risk.....Insights Magazine 2018
- Construction Robots: Are they for Real—Evaluating the Impact of Technology on Job PerformanceEC&M Magazine 2018
- Contracting is a Great Small Business.....Insights Magazine 2017
- Work Breakdown Structure From The Field.....Insights Magazine 2017
- Robots: The Next Wave!.....Insights Magazine 2017
- Winds of Change and the Event Horizon.....Insights Magazine 2017
- Green is Good, Green with Prefab is Better.....Insights Magazine 2017
- How to Integrate Apprentices Successfully.....Insights Magazine 2017
- Planning For a Safe Working Environment.....Insights Magazine 2017
- The Power of Peer Groups.....EC&M Magazine 2017

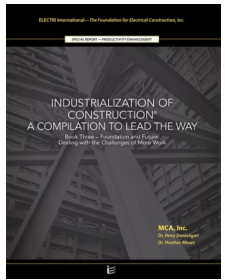
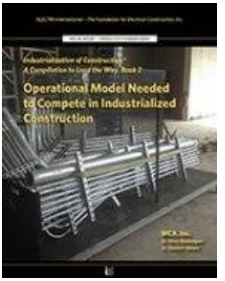
For a complete listing of MCA’s published Articles visit their website at:

<http://mca.net/resources/publications/>



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ELECTRI International has released all four books in a series of four books on Industrialization of Construction.

All four books are written by Dr. Perry Daneshgari and Dr. Heather Moore, of MCA for ELECTRI International

For more info [Click here.](#)

Calendar of Events:

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 EST
Wednesday's- SIS® Mini-Classes @ 9 & 11am EST
Thursday's- JPAC® Mini-Classes @ 3pm EST

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*

Upcoming MCA, Inc. events and engagement can always be found on our website. www.mca.net or www.mca-soft.com

MCA's Agile Construction® Workshops — Across the Country:

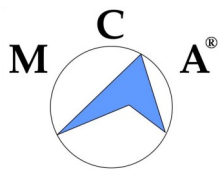
MCA is conducting Agile Construction® classes at various locations across the United States and Canada. This is a great opportunity to see first-hand on what Agile Construction® can do for you and your company. See side panel for dates and locations. For class information or register visit our website at <https://mca-soft.com/>.

Agile Construction® 201 Level Classes:

This workshop is for experienced practitioners, who have taken and successfully completed MCA's Agile 101 classes. In this session participants will expand their understanding of Agile Construction® and develop higher level applications of the successful skills that you should already be applying.

The 201 training will expand on applications and results using your projects, we will dig deeper into proper planning of your work and configuration of the measurements to benefit from each component of Agile Construction® 101.

- [February 11th & 12th, 2019 — Agile Construction® 201 Tulsa, Ok](#)
- [March 14th & 15th, 2019 – Agile Construction® 101 – 201 Portland, OR](#)
- [September 12th & 13th, 2019 – Agile Construction® 101 & 201 Appleton, WI](#)



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MCA Books.:



Industrialization of Construction® Books

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

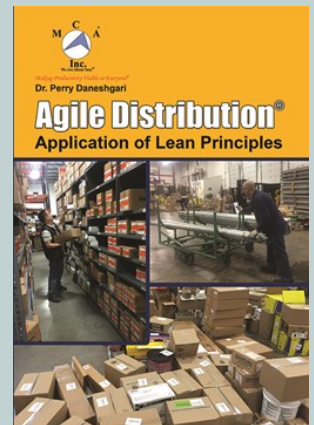
Book #2: Industrialization of Construction: A Compilation to Lead the Way — [Click here](#)

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

Book 4: Efficiency and Continuous Improvement: Survival of the Unfits, published by ELECTRI International — [Click here](#)

Agile Distribution® Application of Lean Principles -

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.](#)



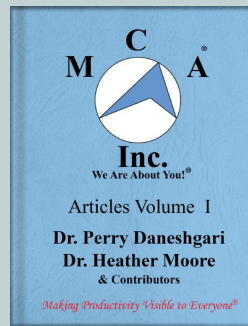
The Chase - The Chase is a business novel, which is based on a real case study. Its intended audience includes the general public, management and administrators, students and teachers in business and engineering schools, and consultant practitioner. This book is unique because it targets the product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



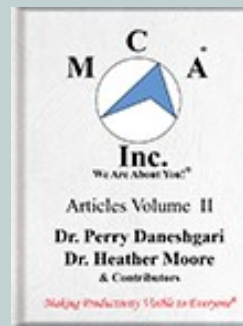


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MCA Books Cont.:

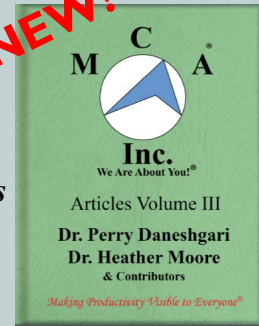


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Articles
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NEW!



Vol
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-

Construction® related articles on Transformation, Productivity, Profitability, Process, Procedures and Tools, and Measurements. [Click here.](#)

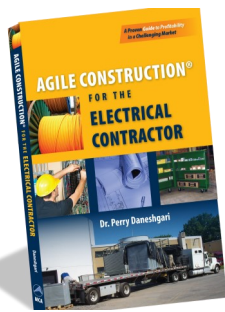
Customers on The Move:

Staff Electric — has hit the ground running this year with the use of the Agile Tools throughout their whole company. They currently have 97 active jobs in JPAC® including a prefab division. SIS® is being implemented not just in the construction projects but also in VDC, Accounting, Prefab and Small Service projects. Staff has committed to full application of Agile Construction®, through cross-functional Design Teams that lead the way for process design and continuous improvement of the organization.

Faith Technologies — MCA, Inc. has completed a design of an industry-first Logistics-Centric Model, integrating Graybar with Faith's Excellerate prefab facilities, leading to faster, lower cost, and better quality logistics. It is being applied on fast-paced, large projects, and will change the landscape of the industry in this country once it is fully executed.

Bowtie Medical— Bowtie Medical formed in 2014 with a progressive operating philosophy of being Value-Based with a Customer Centered Approach to Healthcare. They recently embarked on an assessment of the office and operations to develop scalable processes for building their infrastructure to support their expected growth.

Werner Electric Supply — During this past quarter Werner has continued to expand their prefabrication facility in Appleton and has begun two initiatives to benefit their partner contractors. Working with their partners Werner has identified common assemblies that can be stocked and shipped in the same timeframe as warehoused components, and as production continues to ramp up Werner has begun to develop and implement a comprehensive production quality program in their prefab facility.



Agile Construction® For The Electrical Contractor

by
Dr. Perry
Daneshgari

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Lemberg — Lemberg Electric recently completed an assessment of their baseline operations, setting the stage for them to begin their journey of transformation in becoming an Agile Construction® Contractor. During the recent quarter MCA has completed a thorough assessment of Lemberg Electric to make recommendations that will help them continue their journey to become an Agile Electrical Contractor. Lemberg Electric recognizes the necessity of developing and implementing Agile Construction® principles into their business model and project delivery system to sustain their growth and meet their overall profitability targets.

Graybar — Graybar Electric’s Milwaukee branch continues to expand their role as a partner to key contractors and have expanded VMI services and enhanced their support for critical shop and job site material needs.

Holmes Electric – has continued to use the Agile Tools on various smaller projects as well as one of their largest projects that will be finishing this year. By applying JPAC® and SIS® they were able to manage the integration risk throughout the entire 2 year long project and also provided visibility for tracking the special and common causes of variation on the project’s overall productivity.

Livewire – started with MCA in 2015 and has continued to apply the principals of Agile Construction® within their company with minimal support from MCA. They currently have 8 active projects in JPAC® and multiple projects in SIS® to include service work and they continue to use Design Teams to improve their processes and procedures.

More Agile Practitioners:

The following Agile Practitioners are independently using Agile Principles and Tools (JPAC® & SIS®) to manage their projects and companies.

- **Owen Electric**
- **Bronco Electric**
- **Culliton**
- **Eckardt**
- **Electric Company of Omaha - ECO**
- **Elcon**
- **FB Harding**
- **Hardt Electric**
- **Oregon Electric Group**
- **Crossland Construction**

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<http://mca.net/resources/state-of-industry-report/>