



State of the Industry

Observations, trends and information for the construction industry

December 2016

Volume 4 Issue 3

Welcome to our *Third State of the Industry* report of 2016. Please let us know what you think by sending us a quick email—click [HERE](#).

Update on the Mission: Agile Construction®

Contractors Moving Ahead:



Hardt Electric - held their 3rd Annual Offsite and review of Agile Construction® Implementation, where design teams aligned their strategies and objectives for the upcoming year. Hardt Electric was also recently featured in US Builders Review: [Click here](#) for article.

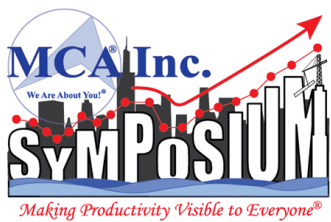
Staff Electric - With close to 100 years in business Staff Electric has joined the MCA's Agile family by establishing Design teams and an aggressive approach to implementing Agile Construction® tools and processes. Staff has already trained a large part of their workforce on using JPAC® and SIS®, and their Procurement Policy Team is actively working on externalizing work® through full vendor partnership.

Graybar - The Chicago District is continuing to put structure behind Agile Construction® Implementation support for customers, as well as its own structure to prepare for future Generations of Distribution.

In the past several months, they have trained people across their [24] branch District on usage of Agile principles, as well as Lean Distribution concepts that will help them reduce their cost, their customer's cost, and overall cost of construction.

Taylor Electric - Recently finished a year-end review of Agile Construction® implementation, which has been led by Project Management/Field and Office Design Teams. The teams have implemented key processes and procedures between the field and the office, which has improved communication and planning.

Taylor is partnering with Hardt Electric on two key projects for both companies, and jointly using JPAC® and SIS® to manage the work together.

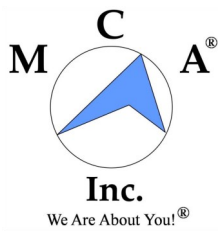


MCA Spring Symposium

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Making Productivity Visible to Everyone®

Register for the Spring 2017 Symposium

Simulation and Modeling (The forth in a series of five Symposiums focusing on training the workforce for Industrialization of Construction™)

This Symposium will consist of train in various stakeholders, including but not limited to: project managers, estimators, pre-fab shop managers, field supervision, field technicians, vendor and supplier points of interface, project support such as drafting/detailing, coordinators, administrators, owners, executives, Vice Presidents, etc.

Dates and Location have yet to be determined, but are tentatively set for May of June, 2017.

Visit our website for future information.

[click here](#)

Contractors Moving Ahead Cont.:

LiveWire Electrical Systems Inc. - design teams have begun examining their existing process in preparation to begin using SBPI®.

Bronco Electric – is moving forward with tracking more of their projects in JPAC®, with excellent examples and results from detailed Work Breakdown Structure, which is used in JPAC® as well as planning their work.

Aldridge – The Aldridge Agile Department is preparing for full rollout of JPAC® & SIS® across projects and divisions of the company, and making it mainstream as part of the Project Management Process in 2017. The Prefabrication Shop is also planning for significant expansion over the next year, after reaching its “200th request”

Culliton - *“I am happy to report that almost all of our current installation projects are meeting the productivity rates and with focus we are meeting and often beating our hours and labour dollar estimates on our installations. The tools of agile, including SIS®, JPAC®, weekly productivity and GOTO meetings, project reviews at 25, 50, 75, 100 percent and a continuous review of projections of labour spend vs budget are helping us feel confident that things are under control on our existing projects.”* ~ Tim Culliton, President & CEO, Culliton

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.

Cupertino Electric - *“This is a great publication that I would like to review with our PM’s and superintendents. It speaks to much of what I have been pushing over the past couple years but in more eloquent detail.”* (Book Two -- Operational Model Needed to Compete in Industrialized Construction, written by Dr. Perry Daneshgari and Dr. Heather Moore of MCA for Electri International)

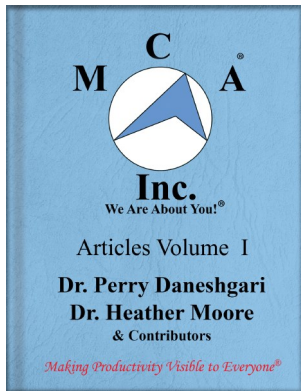
~ Rob Thome, Vice President of Operations, Cupertino Electric, Inc.

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



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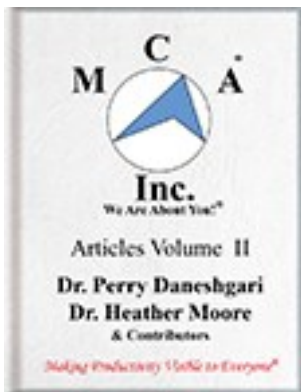


Complimentary EBOOKS!

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

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

[Click here](#)
to download.



Distributors Implementing Agile Support Programs Cont.:

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 – At ConneXion the talk is all about understanding the needs of Agile Construction® and supporting the progressive contractors in their market. Cross functional design teams have been mapping their processes, and seeing true bottom line results through David's and Steve's leadership. The Design teams have now been focused on specific and targeted tasks to help make Agile Construction a reality for many of their customers. The knowledge and learning that they have accomplished, along with significant investment in setting up the proper infrastructure, is already starting to deliver real cost savings to their customers.

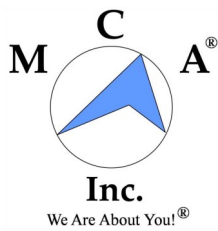


Graybar Partners with Hardt Electric — On December 15th members from MCA Inc, Steve Stone of Graybar and David Hardt, President of NECA, Owner and President of Hardt Electric, along with Project Managers, and Forman got together to break down work and strategically plan what needs to be done and when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

Simulation and Modeling: Application of Modeling to Learn:

Knowledge comes from knowing where to collect the data, what to look for in the data, and what the best sources of available data are. Modeling to Learn focuses on capturing data that will help the empowered builder understand and learn more about a situation faster. This faster learning enables faster creation of a feedback loop, reducing risk, accelerating assembly and shortening installation times. To use Modeling to Learn users will need to consider the following questions:

- What do you want to learn from the model?
- What questions do you want the model to answer?
- What needs to be modeled?
- What type of model should be used?



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

2017 Calendar

- January 26th & 27th – Atlanta, Georgia
- February 16th & 17th – New Jersey
- March 30th & 31st – Akron, Ohio
- April 26th & 27th – Indianapolis, Indiana
- May 18th & 19th – Dubuque, Iowa
- June 15th & 16th – Colorado Springs
- July 20th & 21st – Portland, Oregon
- August 10th & 11th – Santa Barbara, California
- September 13th & 14th – Las Vegas
- October 4th & 5th – Austin, Texas

**For more information
or to register [click here](#)**

Simulation and Modeling Cont:

Once the purpose and approach are clear, a model can be developed and used to learn and to enable better decisions. Despite the relatively simple approach and readily available software programs the industry still has difficulty transferring the necessary information through the system, during the project life cycle.

Communication of the information throughout the system is vital in creating the necessary feedback from the source. Only with this feedback loop can you create the quality assurance and control measures that ensure the predictability and reliability that yield expected profitability. The next generation of modeling will go beyond the building components and focus on process and information. This will provide the builders specifically what they need for the most efficient installations.

To stay competitive and take advantage of the cost savings afforded using this technology, users will need to implement a strategy for both BIM and Product Life Cycle Management (PLM) within a virtual construction environment. These new process models will not only include layout input from engineers and designers, but will require the input of the builder to ensure effective and productive assembly and installation. In addition to using Modeling to Learn for determining an ideal layout, modeling can also provide the details needed to effectively plan prefabrication, as well as provide guidance on the best tools for efficient installation. This “work package” modeling can be designed, selected, and laid out from the builder’s perspective so that once the work is externalized, the processes and information to implement are already available.

2016 MCA Fall Symposium:

On September 20th through the 22nd MCA visited Rockford, Illinois for their 3rd installment in the series of 5 on the **Industrialization of Construction®** with this session’s focus on **Designing Lean Operations based on Agile Construction®**. The 2016 Fall Symposium kicked off Tuesday and Wednesday with MCA’s Agile Construction® classes, where registrants learned the benefits of Work Breakdown Structure, and Externalizing Work® with Prefabrication and Agile Procurement™. They also were able to have hands-on experience with MCA’s ASTM industry standard productivity software, JPAC® (Job Productivity Assurance and Control) and SIS® (Short Interval Scheduling). A dinner, sponsored by Greenlee® followed Wednesday’s classes. Thursday was MCA’s main Symposium session which ended with a tour of Greenlee’s manufacturing facilities located in Rockford.



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2017 MCA Spring Symposium:

In the spring of 2017, the MCA team will join others at the MCA Symposium on “Simulation and Modeling based on Agile Construction®”. Dates and Location are yet to be determined (Tentatively May or June) As always the Symposium will be in conjunction with a training and users forum focusing on the tools of Agile Construction®. This is the fourth in a series of five Symposiums focusing on training the workforce on the five steps of Industrialization:

1. Management of Labor, Fall 2015
2. Management of Work, Spring 2016
3. Lean Operations, Fall 2016
4. Simulation and Modeling, Spring 2017
5. Feedback from the Source.

CEO Forum:

Founded and chaired by Dr. Perry this April in Chicago, IL will be the first conference held by industry leaders representing contractors, distributors, and manufacturers across all trades in the construction industry establishing the framework to predict, prepare, and adopt disruptive business models for the industry.



*Enabling CEO's to Function
and Disrupt the Status Quo*

Agile Construction® For The Electrical Contractor

by
Dr. Perry
Daneshgari

\$55.95

**Get your
copy today!**

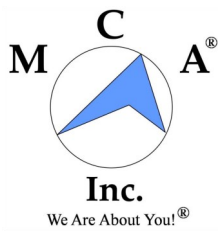
For more
information
[click here.](#)

Technical Forum:

Coming this spring, 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®:

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.



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[click here](#)

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>

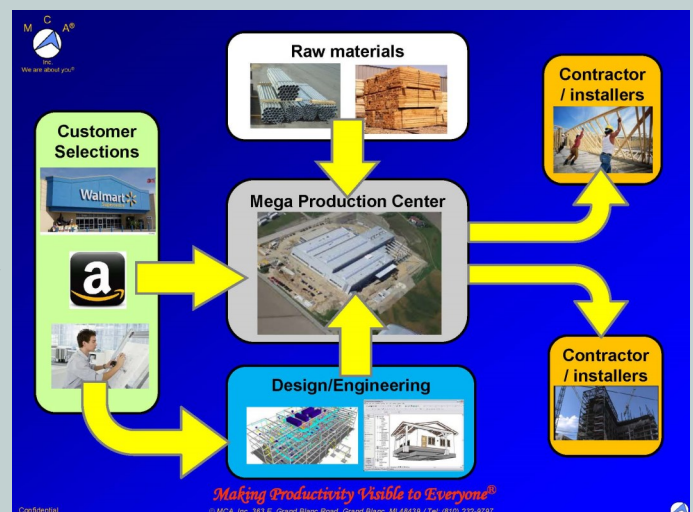
- Web based Agile Classes: *Call MCA for Details*
- Web Based Design Teams: *Call MCA for Details*
- Web Based Project Management courses: *Call MCA for Details*

Disruption:

Disruption happens across all industries, and construction is not alone. Downloadable digital media disrupted sales of the physical CD's and DVD's. Digital photography has all but decimated the traditional chemical photography industry. Portable smartphones and tablets are replacing many of the traditional PC's and laptops. The advent of nail guns for framing and finish carpentry work changed the face of how construction work is done. A cordless drill was a bit of a novelty in the 1980's but has now become a mainstay on any job site or in any service van. In each of these examples the success is due to dramatically increased quality and efficiency of products or projects. Initially a disruption these advances have now created an irreversible shift in the industry.

The Mega Center Concept:

Residential consumers have come to favor the advantages of big box stores over choices of local hardware stores and separate lumber yards. Similarly, as industrialization of the construction industry is upon us, the Mega Center will soon become the model of choice for low minimal risk and lowest cost construction. Five years ago, we showed you how competition from overseas could build a 15-story building in six days, now in many countries, the norm is three stories per day. As





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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 video!

Mobile app video: [here](#)
Web app video: [here](#)

The Mega Center Concept Cont.:

prefabrication becomes more and more centralized, so will the design, engineering, and manufacturing of a project. Very soon much of what we think of today as installation will take place in a centralized facility. These centralized facilities will not only be a controlled environment, producing at optimum efficiency with minimum wasted manpower and materials, but they will also keep the engineers and designers close to the work. The Mega Center model will allow the building owner to custom order exactly what they want, have it delivered when they want it, and assembled on sight, from a single integrated source.

Calendar of Events:

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

January 5 - Avoid Killer Jobs – Improve Estimating Accuracy – King of Prussia, PA

January 10th - Improving Construction through Industrialization – Washington DC

January 19th & 20th – Valley Electrical - Missoula, Montana- Agile Construction®

February 16th & 17th – New Jersey - Agile Construction®

March 1 - 2 – ABC Conference – Fort Lauderdale, FL

- Externalizing Work® using Pre-fabrication
- Industrialization of Construction
- Strategic Planning for Contractors
- How to train the Workforce to use Prefabrication
- Operation Model for Maximizing Profitability

March 9th – Mountainside, New Jersey - Agile Construction®

March 15th – San Leandro, California - How to use Stockman and other Non
Electrical Help

March 30th & 31st – Akron, Ohio - Agile Construction®

April 26th & 27th – Indianapolis, Indiana - Agile Construction®

May 11th – San Leandro, California - How to Build & Productive and Profitable WBS

May 18th & 19th – Dubuque, Iowa - Agile Construction®

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

June 15th & 16th – Colorado Springs - Agile Construction®

July 20th & 21st – Portland, Oregon - Agile Construction®

August 10th & 11th – Santa Barbara, California - Agile Construction®

September 8th – Minneapolis, MN - How to Compete in Large Cities and Win back
Markets



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Calendar of Events Cont.:

September 13th & 14th – Las Vegas, Nevada - Agile Construction®

October 4th & 5th – Austin, Texas - Agile Construction®

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

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



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/>

Recent Publications:

Industrialization of Construction: A Compilation to Lead the Way—Book 2 – Book Two explores ways to maximize the transfer of tacit knowledge to explicit knowledge and develop a full-scale operational model for an electrical contracting firm to compete in the industrialized environment. Industrialized construction is truly a different business model than the traditional electrical contracting business model of “bid the work”, “do the work”, and “collect”, in which the better the workers, the better the job turns out. [Click here.](#)

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.](#)



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Book One - Is available from ELECTRI [click here.](#)



Book Two - A Compilation to Lead the Way is also available from ELECTRI [click here.](#)

ELECTRI International has released the first and second 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.

Recent Publications Cont.:

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.](#)

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.](#)

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.](#)

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.](#)

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