

Making Productivity Visible to E

## State of the Industry

Observations, trends and information for the construction industry

January 2018 Volume 5 Issue 3

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



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**The Process Failure Blues:** 

How many times, have you heard the experienced guys in the company say, "we used to do it this or that way and all was just fine." How many times have you heard the project managers claim to have built a PM process from scratch a few years ago? How many times have you heard the executives of the company complain about lack of accountability or responsibility for following up on processes? How often do you hear the owners say "we have all the processes but no one follows them?" Have you ever asked yourselves why this happens?

The answer is simple and we all have learned it in our physics classes. It is called "Entropy", which in the cases of an organization is all the above complaints about processes and procedures. How would you associate a law of physics to your daily work? It is simple, look at your teenager's room for example, or your hoarded material in your garage, your warehouse, your tools, or the number of socks you have or haven't used since you bought them. That is all "Entropy". It is the nature of matter to take the path of least resistance and lose any order it has to disorder.

Like anything man-made, all the systems and processes as well as products have to have continuous maintenance to survive and for optimal performance. Contrary to nature, no man-made system, process, procedure, product or service can be left alone and then expect it will always "stay the same" or always "get used like it was supposed to". No cars, computers, software, watches, roads, buildings, hospitals, railroad, highways, dams or airplanes will operate indefinitely without continuous care and maintenance. If a new BMW is left alone in the Amazon forests, it won't be long before entropy will take over. After a year or two, the car would be deemed unsalable. In a few decades, it will completely disappear due to nature's toll. If the entropy can work on any man-made product, why do we think that if we have designed and used a process or a procedure based on the feedback from the users, it could serve us forever without



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## Why Don't The Process Failure Blues, Cont.:

maintenance and continuous improvement?

To avoid take over by "Entropy" every infrastructure, process or procedure has to be designed with the maintenance program in mind.

System level learning due to adjustments and corrections has to be designed and integrated into the fabric of any organization that wishes to stay ahead of the game and avoid becoming obsolete. Adjustment and corrections based on the signals from the field and operations have to be made at three levels:

Instant response for correction of error

Project or program level correction for avoidance or prevention

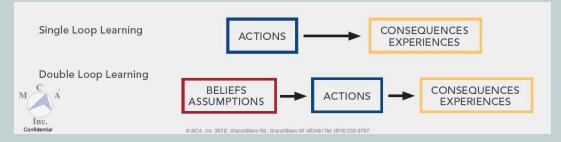


Figure I

System level response by redesign of the supporting process or infrastructure

These three levels of response to errors and issues are the basis of organizational learning.<sup>6</sup> **Figure I** shows this as single-, double-, and tertiary-loops that create the learning. In a simpler way of putting this for a jobsite:

- 1. Fix the issue at hand Use SIS®
- 2. Correct the impact on productivity Use JPAC®
- 3. Use the collected data from SIS® and JPAC® to correct or redesign the supporting processes

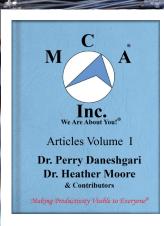
To be able to get to step 3 (System level responses and corrections) the company needs to learn how to listen and how to embed the feedback loop from step 1 and 2 into their company structure. This means the company needs to install check points that will ensure that a continuous update and feedback can happen on existing processes.

In short:

Every process needs to include quality control elements that will help to identify if and how good the process is working; which can happen with SIS® or Issue Resolution Forms

A learning based infrastructure needs to be implemented, in form from Design





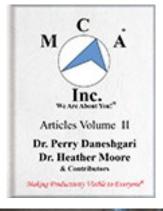
## Complimentary EBOOKS!

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

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

## Click here

to download.



## The Process Failure Blues Cont.:

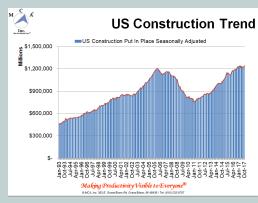
Teams. Which are tasked to work continuously on improving the processes, based on the defined quality control check points. For example tracking how many people are using the actual process or how often which forms actually get filled out a 100%. This can be as simple as reviewing the quality measurements and next steps quarterly, as well as detailed as having the Design Team reviewing the feedback on a more frequent basis and creating a taskforce to fix the processes.

In the following 3 SOTI reports in 2018 it will be explained how to identify when maintenance is required, how to react on both the program and the project level as well as what the best approach is for a system level maintenance implementation.

<sup>6</sup> INDUSTRIALIZATION OF CONSTRUCTION; A COMPILATION TO LEAD THE WAY: BOOK FOUR – Efficiency and Continuous Improvement: Survival of the Unfits

## 2017 Was an Unprecedented Year for Construction? How Did You Do?

2017 is over and the final numbers are only a few weeks away, but already 2017 has been an unprecedented year for construction both with the market growth (see **Figure 2**), and the Winds of Change we have been writing about in this year's SOTI's. That being said, if you haven't been able to fill your war chest for the inevitable downturn, now is the time to re-align yourself in the market to build a sustainable future. How would you like to know where you stand in your market right now, and to be able to project to where you want to be in the upcoming year, or next 5 years? Our market size and share measurement methodology is based on over a decade of research conducted on hundreds of studies across the country. MCA's Inc. methodology uses Construction Put In





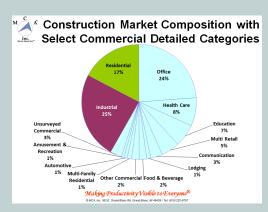


Figure 3



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## 2017 Was an Unprecedented Year for Construction? How Did You Do?, Cont.:

trades as defined by the U.S. Government. We take a scientific approach to surgically segment and analyze your market. You can look at your overall geographic area, or even go down to the county level. Next, we move on to the composition of your market separating it into the industrial, commercial, and residential segments. From here, we have an à la carte cafeteria list of 21 detailed construction categories and 4 sub categories within the general commercial market as defined by the U.S. Government comprising the industrial, commercial, and residential segments for you to choose from. A sample result of the category segmentation is shown in **Figure 3**.

## The market for externalizing work®: what is the potential for prefab and vendor services?

The labor shortage in construction is an ongoing topic of concern, which is projected to only get worse as this construction cycle continues. It often leads to eroding market share without even knowing it, which is a sign of distortion and dislocation....part of the Winds of Change. One option to combat this disruption is to use your current skilled labor to produce more. This requires increasing the amount of work done offsite, either through fabrication or by using your vendors. Our market studies are able to show how much market is available for distributors, fabrication facilities, and contractors, to do offsite.

If you would like to learn more on where your company sits in today's market for externalized work or how a Vendor can help you, contact MCA.

## **Industry Disruption Through CEO Forum:**

Our industry, like all other industries, is being impacted by three "Gales of Change": Market Shift, Industrialization, and Disruption. We believe that the construction industry is in the eye of this storm, and that the next five to ten years will lead to a completely different means of infrastructure development locally, regionally,



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

nationally and globally. To better prepare for this change, we have developed this forum to be used as a portal for an elite group of members so they can lead the way and discuss industry sensitive topics privately, and at their convenience.

The CEO Forum's purpose is to lay out immediate, mid-term, and long-term needs for the industry, considering business, technical, and integration risks. We



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ELECTRI INTERNATIONAL

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.

## **Industry Disruption Through CEO Forum, Cont:**

will start with the electrical construction industry, including electrical contractors, construction contractors and managers, distributors, and manufacturers, focusing on the overall infrastructure of the industry. We will be inviting industry leaders from these industries and outside industries to help us layout the above-listed stages of planning. We will also initiate an application subgroup that will enable companies to apply some of the short term and mid-term forecasts and projections.

The world and our industry in particular, are changing rapidly. We have created this CEO Forum to understand how these changes and the pace of the changes can be managed. We've invited forward-thinking CEO's, whom can connect the dots and address key topics that are and will be dramatically changing our industry as a whole. This group will identify and characterize these trends and topics, then lead or spin off groups of practitioners that will test and optimize practical approaches for managing this futuristic view.

We look forward to sharing great discussions and solutions in future issues of the State of the Industry Report (SOTI).

## <u>David Hardt honors Russell Alessi with the 2017 WENDT AWARD</u> <u>at the 2017 NECA Convention:</u>

David Hardt, President of NECA, presents
Russell J. Alessi the Wendt Award for his
Lifetime Achievements of Excellence and
exemplary leadership over the past 27
years of dedicated service to the
electrical industry. Russell's vision and
perseverance, working extensively with
NECA has brought ELECTRI



David Hardt (Left) Russell Alessi (Right)

International to unmeasurable levels to support industry research and educational programs.

"Russ Alessi has provided an extraordinary example of service and a commitment to the future of the electrical construction industry. He has proven himself worthy of the Wendt Award and of his industry's acknowledgement and gratitude". ~ David Hardt

The Staff of MCA is proud to have worked directly with Russell over the years and congratulates him for his achievements and wishes him well upon retirement.



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## **Customers on The Move:**

**Staff Electric** — Staff celebrates their one year anniversary as an Agile Practitioner and has made leaps and bounds with Agile Construction® and Process Design teams in the last year. They have developed SECU Staff Electric Company University which offers specific courses and training opportunities for everyone in their company.



Jamie Sullivan, President of Staff Electric struck a pose in front of a quote from MCA while visiting Southwire in Carrollton, GA

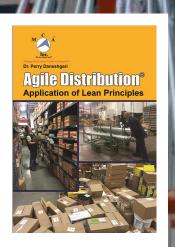
Werner Electric Supply — MCA is now working on a "Fast Track" project to help our Midwest based distribution client to develop a centralized prefabrication shop and business model to serve customers throughout their multi-state footprint from a single Regional Distribution Center. This bold strategic move is certain to position this leading company to lead the move towards Agile Construction® and support their customers with similar enthusiasm.

Mayer Electric — Mayer Electric Supply recently completed a Strategic Market Penetration, Operational Structure and Effectiveness assessment of their Value Added Services at 3 branches within the company. Strategic Planning sessions are to be held after the first of the year to begin their transformation to a Generation 4 Distributor.

**Aldridge** — Aldridge has made it easy for their team members to get ahead. They recently released several SIS® and JPAC® tutorials and has made them available in their operations Manual.



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## Agile Distribution<sup>®</sup> Application of Lean Principles

by Dr. Perry Daneshgari

\$55.95

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For more information click here.

## **Customers on The Move. Cont.:**

**Eckardt Electric** – Eckardt started implementing JPAC® on their projects with minimal training from MCA. They are currently tracking 20 active projects in JPAC® and adding more each month.

Hardt Electric— Hardt Electric is successfully using JPAC® and SIS® on all their jobs for almost 5 years now, which has helped them stabilize their processes and increase their productivity. In 2017 Hardt Electric added a separate service division to their SIS® reporting to engage the benefits of Agile Tools to their smaller jobs as well as service jobs.

**Holmes Electric** — Holmes has continued to expand and apply the applications of JPAC® and SIS® on large projects throughout 2017. Holmes has been applying the Work Environment Management (WEM®) System across the 8<sup>th</sup> & Howell project; a 45 story hotel with a 9 story convention center.

**Culliton** – Culliton started with MCA in 2012 and was fully engaged with them until 2015. They have continued their usage of Agile Tools (JPAC® and SIS®) on their own throughout their company with great success and minimal support from MCA.

**Sprig** — MCA continues to develop and implement "Rock Solid" examples of how to use field data and analysis from JPAC® and SIS® to mitigate liability and to enhance recovery of financial losses on big jobs that turned sour. Often times it's the case that the subcontractors fall prey to better equipped GCs and Owners whose poor management and unrealistic expectations cause significant loss of productivity and subsequent profitability. MCA is working with a well known and long time established West Coast contractor to secure the revenue and profit that they are justly deserved, on a difficult project.

## **Agile Practitioners JPAC® & SIS® Forum:**

We currently are in the process of developing an Agile Tools Forum: a portal designed to help Agile Practitioners conveniently help other Practitioners in open communication amongst each other. This site will be moderated by MCA to help field and expedite questions. Look for this to be launched early 2018.



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## **Executive Spring Symposium:**

We are currently planning the 2018 Executive Level Symposium in the Chicago area mid-year. Look for dates, times and more information in future mailings or look on our websites www.mca.net or www.mca-soft.com

## **Agile Construction® for Apprentices:**

We are being constantly reminded of the importance of training the next generation for the future in science, technology, engineering, and mathematics. This emphasis may be of greater importance in the building



trades and apprenticeships and continuing education systems.

Rapid technology advancements in 3- and 4-D design and modeling, materials, manufacturing, and construction management require that our training take these changes into account.

MCA is partnering with apprenticeships to bring the benefits of two decades of research to craft training. Improved task management and visibility can give each member of the team the tools to boost their own effectiveness in support of the project.

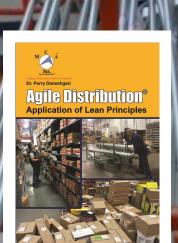
For our Tradespeople, this approach provides the ability to manage their work using Agile Construction® principles including:

- The ability to see the finer details of their task or project.
- The ability to more accurately plan, schedule and assess their scope of work.
- Daily scheduling and reporting of work and obstacles and variances.
- Planning for Prefabrication in support of their project.
- Material handling and management.
- Working with vendors to improve material management.
- Translating Specifications, Codes, Site Conditions, Schedule and Design into the actual work to be performed.

Page 8



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## Agile Distribution® Application of Lean Principles

by Dr. Perry Daneshgari

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## **Testimonials & Customer Results:**

Great Service Forums™ "Let me confess to repeating your ideas three times this week with attribution!—and in the process recalling that fortunately you took an interest in the electrical contracting field a few years ago. It has been so much the better for it. "~ Frederic B. Sargent, President & Former CEO of Sargent Electric.

<u>Cupertino Electric</u> "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. " (in reference to Book Two -- Operational Model Needed to Compete in Industrialized Construction, written by MCA for Electri International)

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

Oregon Columbia - Chapter of NECA "On August 17th, 2017, Dr. Perry Daneshgari of MCA, Inc. traveled to Oregon to hold a Design for Value Engineering to Increase Job Profit Workshop for Oregon Columbia - Chapter of NECA. The primary goal was to provide an overview of ways that you can identify and reduce applicable risk early on in the project start up. The students ranging from Project Managers, to VP's, to CEO's all strongly agreed that the topic presented was spot-on and exceeded all expectations. All the participants left with a new mindset, and were looking forward to additional classes on similar topics."

Minneapolis - Chapter of NECA "After my guys attended Dr. Heather's class 'How to Compete in Large Cities & Win Back Markets' they came back enthusiastic and couldn't stop talking about the class and the information presented."

Steve Grubish - Director Of Support Operations Egan Company

Independent Electrical Contractors, Inc. - National Office "Dr. Daneshgari and Dr. Moore, On behalf of everyone at IEC, we would like to thank you both for your contribution to the educational programming during IEC's annual convention in Baltimore. Your sessions were a great addition to our program and were certainly appreciated by our members. Thank you again for sharing your time & expertise and elevating our educational program standards."

Lysa E. Egly, Director of Education



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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 —

Book #3: Foundation and Future: Dealing with the Challenges of More Work

— Click here

MCA is proud to announce the fourth and final book in the Industrialization of Construction® series.

# SPECIAL REPORT INDUSTRIALIZATION OF CONSTRUCTION OF CONSTRUCTION A COMPILATION TO LEAD THE WAY The Pillinguis Charles of the Uniform Report of the Unifo

## Book 4:

Click here

Efficiency and Continuous Improvement:

Survival of the Unfits, published by ELECTRI

International, explains how to use the first three

MCA-researched books that had examined operational effectiveness, becoming more efficient, and planning to survive both the current environment, and all the upcoming changes in technology, business models and market shifts.

The research determined that to survive coming changes EC contractors must recognize changes, accept them, adjust for them, integrate the changes in a business operation model, and plan for continuous improvement. By focusing on efficiency and continuous improvement, Book 4 serves as a guidepost for finding and using ways to deal with change.

Look for the paperback to be available in January, 2018 — Click here.





## Agile Construction® For The Electrical Contractor

by Dr. Perry Daneshgari

\$55.95

## Get your copy today!

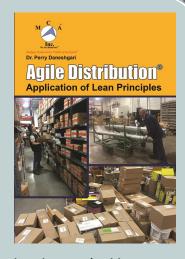
For more information click here.

## **MCA Books Cont.:**

MCA is proud to announce *Agile Distribution*® – *Application of Lean Principles* 

## NEW! 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.

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

## **MCA Training Center:**

We are excited to say that our
Training Center is almost complete.
Look for a grand opening
announcement soon and how you
can take advantage of it in 2018.





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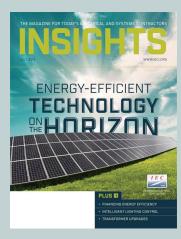
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## **Recent Published Articles by MCA:**





The following articles have recently been published in Insights Magazine.

- Contracting is a Great Small Business......Insight Magazine 2017
- Work Breakdown Structure From The Field....Insight Magazine 2017
- Robots: The Next Wave!.....Insight Magazine 2017
- Winds of Change and the Event Horizon......Insight Magazine 2017
- Green is Good, Green with Prefab is Better....Insight Magazine 2017
- How to Integrate Apprentices Successfully......Insight Magazine 2017
- Planning For a Safe Working Environment.......Insight Magazine 2017
- The Power of Peer Groups......EC&M Magazine 2017
- Recruiting for the Future......Insight Magazine 2018

For a complete listing of MCA's published Articles visit <a href="http://mca.net/resources/">http://mca.net/resources/</a>
<a href="publications/">publications/</a>

## **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... <a href="http://www.mca.net/Complimentary-Mini-Class-Registration-Page">http://www.mca.net/Complimentary-Mini-Class-Registration-Page</a>





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- 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:

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. See side panel for dates and locations. For more information and/or to register click here, or contact Dan Waltz at dwaltz@mca.net



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

https://mca-soft.com/classes/

## Level 200 Classes:

This workshop is for experienced practitioners like you, 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

Contact Dan dwaltz@mca.net or Phil pnimmo@mca.com for more information.

## Level 200 Class Schedule:

April 26<sup>th</sup> & 27<sup>th</sup>, 2018 – 200 Level of Agile Construction® – Northbrook, Illinois