

State of the Industry

Observations, trends and information for the construction industry

December 19, 2014

Volume 2, Issue 4

Making Productivity Visible to Everyone®

Welcome to our fourth *State of the Industry* report of 2014. Please let us know what you think by sending us a quick email—click [HERE](#).

Construction Growth and Worker Shortages

The outlook for the electrical construction industry is improving and looks to keep growing. According to one forecast,

- During 2015-2017, “the electrical industry is expected to be in the upturn phase of its business cycle. On average, we are looking for sales gains in the area of 8½%.”
- “We are now looking at a potential average annual real growth of better than 7% over the 2015-2017 time frame.”

(The DISC Report. Distributor Information Services Corp. October 2014)

In 2012, the U.S. Department of Labor (USDOL) projected the employment of electricians to grow by 20 percent over the next decade, an increase of almost 115,000 jobs. This is higher growth rate than all occupations in general (11%), but less than that for construction trades workers (22%). In addition to needs in traditional areas, USDOL sees alternative power generation, such as solar and wind, as emerging fields that should require more electricians. (Electricians: Job Outlook. Occupational Outlook

Handbook. U.S. Department of Labor. January 8, 2014)

However, labor shortages in construction are a problem. The National Association of Home Builders has reported between 25% and 63% shortages in 12 different trades with electricians coming in with 37%, as shown at right

According to The Associated General Contractors of America (AGC), 83% of construction firms report having trouble finding qualified workers to meet the growing demand as the industry recovers from a prolonged downturn. The AGC

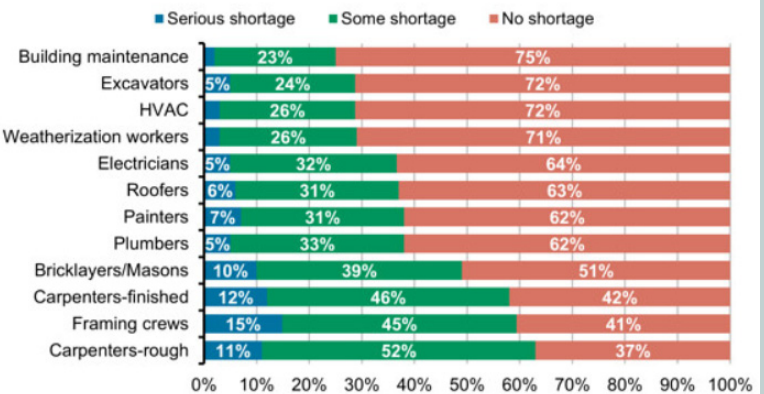
points to a shift in the nation’s educational focus away from teaching students career and technical skills over the last several decades. (Eighty-three Percent of Construction Firms Report Having Trouble Finding Qualified Workers to Meet Growing Demand for Construction Services. The Associated General Contractors of America. October 22, 2014) Findings from the AGC’s supporting 2014 survey of over 1000 member firms include:

- “Worker shortages are getting worse, particularly among craft workers”
- “As a result, many firms are changing the way they operate”
- “Worker shortages are prompting many firms to increase pay, benefits and overtime”
- “Despite offering higher pay and better benefits, many firms are losing workers to construction firms and other industries”
- “Most firms don’t expect the market for qualified workers will get any better”
- “Most contractors have a low opinion of the craft workers training pipeline”
- “Craft worker shortages are slightly less severe in the northeast, compared to the rest of the country, while professional position shortages are relatively consistent across the country”

(Worker Shortage Survey Analysis. The Associated General Contractors of America)

Help Wanted

Share of builders reporting labor shortages, by trade



Source: National Association of Home Builders | WSJ.com

Coming in 2015:

MCA Symposium

See sidebar on Page 2

Industry Executive Forum

Agile Construction® executives get together to address common concerns. See Page 3

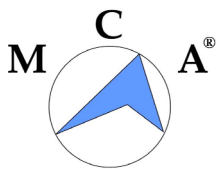
Technical Support Infrastructure Requirement Forum

Quarterly web-based showcase and share what’s new. See Page 3

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Construction Growth and Worker Shortages (cont'd)

The AGC's solution can be found in its accompanying plan "Preparing the Next Generation of Skilled Construction Workers: A Workforce Development Plan for the 21st Century" where it recommends:

- "Reform and Reinvigorate the Perkins Act" [The 1984 Carl D. Perkins Career & Technical Education Act – the primary federal funding vehicle for career and technical education programs]
- "Encourage Private Funding for Craft Training Programs"
- "Improve the Workforce Investment Act" [A 1998 federal act to consolidate, coordinate, and improve employment, training, literacy, and vocational rehabilitation programs in the United States]
- "Make it Easier for Veterans to Get Training and to be Hired"
- "Encourage Partnerships Between Registered Apprenticeship Programs and Community Colleges"
- "Expand Federal Apprenticeship Resources and Collect More Comprehensive Data on All Apprenticeship Programs"
- "Enact Immigration Reform"
- "Offer Community College Career and Technical Programs to High School Students for Free"
- "Make It Easier to Establish Public Schools Focused on Career and Technical Education"

The AGC plan's final conclusion is simple: "The consequences of inaction are simply too severe – for both the construction industry and for the broader economy."

As the market starts picking up, it will be time for the whole construction industry to get reinvigorated by actively elevating its operational model. MCA is doing its part for the industry to help address the labor shortage with such things as:

- Application of the Agile Construction® to reduce the composite rate and increase the usage of lower skilled labor
- Studying the markets and the share of union vs. open shop
- Training the labor in usage of the Agile Construction® tools and Modeling
- Creating a standard for tracking productivity

Register for the Spring 2015 Symposium

The next MCA Symposium, "How to Train the Workforce to Manage Externalized Work® in Prefabrication," will be April 23-24, 2015, in Chicago. Join our local partners Hardt Electric,



Aldridge Electric, and



ConneXion.



To register, [click here](#)

A Taste of a New Continuing Feature

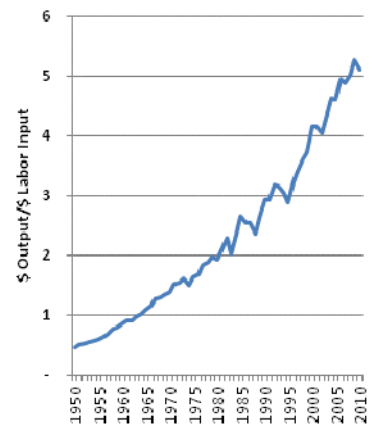
The challenges faced by Construction are not unlike those that have already been handled by Manufacturing. But did you know that Agriculture has experienced the greatest change in the last 200 years?

The chart below shows that agriculture constituted over 80% of the U.S. labor force in the early 1800s. It is now less than 2%. But at the same time, productivity has risen dramatically. The chart to the right shows at 5-fold labor \$ productivity increase in the last 60 years. Doing more with less!

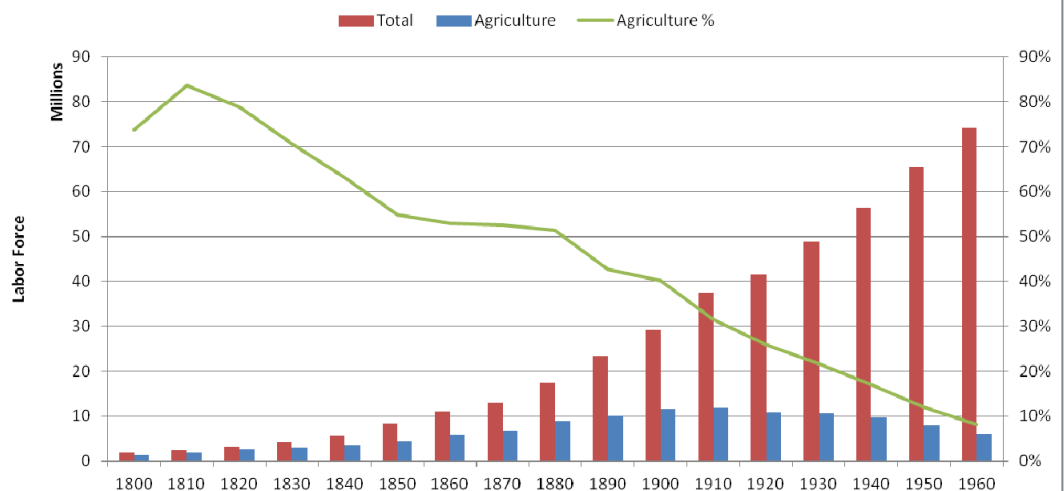
And, did you know that Construction has remained fairly constant at about 5% of the U.S. labor force for over 100 years?

We will explore this topic further in future issues and identify lessons to be learned by Construction.

Agricultural Labor \$ Productivity (1950-2010)



U.S. Agriculture vs. Total Labor Force (1800-1960)





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Document Governance



Dassault Systemes, the largest producer of software for modeling, simulation, and document governance as well as information management is now offering their products in the “Cloud” environment. Holmes Electric of Seattle is one of the leading contractors which has subscribed to Dassault Systemes’ program.



NEW!

Industry Executive Forum Technical Support Infrastructure Requirement Forum

MCA’s Symposium has been helping contractors to stay on top of the leading edge management and technology processes and tools. Over the last decade the practitioners of Agile Construction® have gain significant head start against their local, national and international competitors. During the last few symposiums it has become more evident that the executive and technical requirements of application of Agile Construction® and entrance into the Industrialized Construction era have their own specific requirements. Based on the strong recommendations and feedback from the participants MCA will start two additional series of symposiums to focus on the needs of executives and corporate technical requirements. The objectives and timing will be:

- Industry Executive Forum (Once a year on various locations – Members Only):
 - a. Understand the trends of Industrialization of Construction
 - b. Translate the industrialization requirements to their corporation
 - c. Arrange for workforce development to adopt the Agile Construction® principles and Industrialization
- Technical Support Infrastructure Requirement Forum (Four times a year – Web based and open to registrants)
 - a. Showcase the latest in available technology
 - b. Understand the customers and GC’s technology application
 - c. Share the listens learned among the practitioners

We hear from you ...

“Dr. Daneshgari and Dr. Moore, Thank you both for taking the time to teach my project team. I am always impressed by your depth of knowledge and understanding of productivity. The feedback that I received from individuals in the class got a great deal out of the time with the both of you. Personally, I appreciate the application of scientific management to construction, and seeing the possibilities for the future. ”

Christopher Heger, LSSBB
Project Manager
Turner Construction Company

Calendar of Events

Upcoming MCA, Inc. events and engagements can always be found on our website www.mca.net

January 15– CMCEF. “Procurement Chain Management” - Winnipeg, Manitoba, Canada

February 26– CMCEF. “Short Interval Scheduling SIS®” - Winnipeg, Manitoba, Canada

March 26– CMCEF. “Procurement Chain Management” - Halifax, Nova Scotia, Canada

April 9– Penn-Del-Jersey Chapter. “Design Value Engineering” - King of Prussia, PA

April 22, 2015– Agile Construction® Training and Forum: JPAC® & SIS(R) - Chicago, IL

April 23-24, 2015– MCA Spring Symposium “How to Train the Workforce to Manage Externalized Work™ in Prefabrication” - Chicago, IL