

Talent Wars

When did the competition for skilled labor become a battle consuming our time, energy and resources, like never before?

by Phil Johnson and Michael Lynch

For well over a decade, we have heard time and again that manufacturers in America suffer from some 600,000 open positions. According to the US Department of Labor's April 2017 statistics, Manufacturing posted approximately 300,000 openings. In June 2017, the Labor Department reports that 514,000 unemployed workers were classified as 'discouraged' and added to the non-participation workforce rate of 37%.

In a study published recently by Deloitte and the Manufacturing Institute of the National Association of Manufacturers, they find that over the next decade, domestic manufacturers will need to fill nearly 3.5 million manufacturing jobs, some to fill those created by retiring Boomers and others newly created. Two million of those are expected to go unfilled due to the 'skills gap.'

Study after report after study has reported the challenges manufacturers face in filling open, well paying, skilled positions. The National Association of Manufacturers reports, based in part on member surveys, that 80 percent of manufacturers report a moderate or serious shortage of qualified applicants for skilled and highly-skilled production positions. Nearly every reader of this essay has experience with this phenomena and has provided copies of one or more of these reports or articles or spoken directly to Members of Congress, Governors, state legislators, mayors and their local school district executives.

Talent wanted

The employment market has and continues to be 'disrupted' by economic and societal changes. In addition to the gap created by retiring Boomers, we no longer compete for talent with the nearby machine shop, a competing fastener company down the street or our own customers and suppliers. Instead, we are competing for talent with Starbucks (which sends employees to college for free) and now Uber (where our prospective workers can now work when, where and for how long they want). Further, at least one generation of K-12 school administrators, teachers and parents have drummed into their students that manufacturing is dirty, unsafe and beneath them. The only



path to success, they preach, is via college and then to be what they want [and believe they deserve] to be. Further, we face a different challenge from Millennials whose work ethic/practices and urban living focus have created additional recruitment and retention challenges.

In response to our cries for help, the education establishment has created STEM (Science, Technology, Engineering and Math and I include Mechanical aptitude). However, our needs outpace the number of candidates enrolled in such programs, where they even exist. While community colleges claim a desire to help us fill this need, we are expected, in addition to our tax dollars, to pay all their costs to create manufacturing workforce preparation programs. These issues are not going to go away on their own.

So, what are we to do? I believe, like we did with Energy Independence in the US many years ago, we need to take an "all open options approach" in the prosecution of this war for talent. The days of a big manufacturers (OEMs) training its distributors, for instance, are gone. OEMs expect their distributors to train their own people on their products and be technically proficient.

Here is a list, which is by no means intended to be comprehensive, in which we should all consider investing:

- Work with your local, city and state representatives to make sure they know – and understand -the challenges you face and support training, not just once but semi-annually. Encourage plant visits.
- Voice your support for the current Administration's efforts to establish new apprenticeships across the manufacturing community.
- Establish a training center inside your organization, if you have the scale.
- Utilize established training centers such as Fastener Training Institute or the Industrial Fastener Institute.
- Engage regularly with your local High Schools and Community Colleges on needs and skills. Remember, you can't make a friend only when you need one.
- With your local manufacturing association, visit local teachers' colleges to discuss 21st century manufacturing. Future teachers control the in-class messaging about careers.

- Host your Middle Schools and High Schools for Manufacturing Day and create relationships with principals and select teachers, just as you would with a prospective customer.
- Include on your website, non-proprietary photos of your shop floor and work-in-progress to illustrate your operation is not a remnant of the early 20th century; training and advancement tracks; and testimonials from current employees.
- Consider a commuter or relocation package/contract for program graduates from other parts of your region or state.
- Utilize established Tech Schools like El Camino Community College in Compton, CA or Rock Valley Community College in Rockford, IL.
- Support FEF (Fastener Education Foundation) through donations to enable funding of key initiatives. FEF is a 501(c)3 non-profit and supports the development and advancement of many of these training programs.
- Ally and align with other local manufacturers through your local chamber of commerce or manufacturing association.
- Consider finding sources that can lead you to the availability of veteran availability.

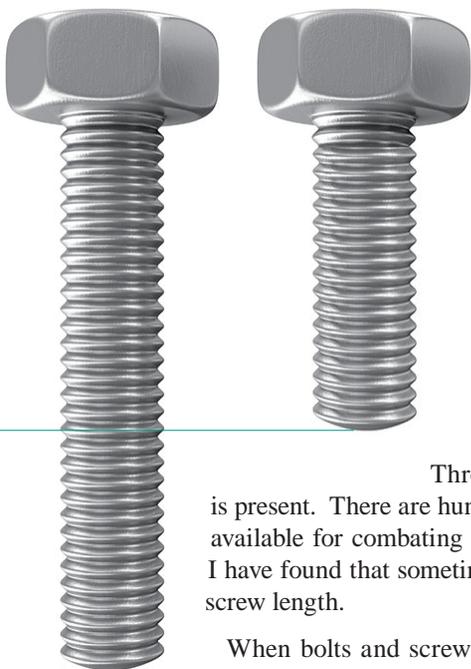
- Consider integrating this effort, as a measurable deliverable, into your HR manager’s annual plan.
- Do not decrease your investment in this process should you be successful in your current recruitment efforts.

Recruiting and retaining talent is a challenge we have and will continue to face. Our success depends, ultimately, on the people we employ in an ever changing shop floor and operational environment. Our traditional 20th century sources of skilled and non-skilled labor have turned against us or simply no longer exist. Fastener manufacturers and distributors today need to apply the same concepts of innovation to recruitment and retention as we do to production if we are to grow, let alone survive. Consider the applicability of the suggestions above in your organization. Even though margins are slim and challenged daily, this talent war requires long-term investment and budgeting as does every other aspect of our operations.

About the authors

Michael J. Lynch served Illinois Tool Works Inc. for nearly 30 years as its senior global public policy advocate including representing the company on K-12 education policy in the United States.

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Long Bolts Resist Loosening Better Than Short Bolts

by Larry Borowski

Threaded fastener loosening is a common problem in applications where vibration is present. There are hundreds of bolt and screw types and additives such as lock washers and adhesives available for combating loosening fasteners. During my years of applications engineering experience I have found that sometimes the only thing that needs to be added to stop vibration loosening is bolt or screw length.

When bolts and screws are properly tightened they actually stretch a little. When a bolt or screw stretches it acts like a very stiff coil spring, which continually pulls the mating surfaces of the application toward one another. When the application is subject to vibration, the bolts will not loosen if the coil-spring like tension is adequate.

A scientist named Dr. Hooke derived what is referred to as Hooke’s Law when he was developing springs to make clocks run for extended periods of time during the 1600s. Hooke’s Law states that the strain (stretch) of a material is directly proportional to the amount of stress (force) exerted on the material until that stress exceeds the elastic limits of the material.