

This white paper outlines the current complications the skills gap has on the manufacturing community. Included solutions that explain the generation gap, gender gap as well as outsourcing services due to shrinking maintenance crews. Future white papers will discuss predictive maintenance and how knowledge and outsourcing can save on the bottom line.

Over the next decade, nearly **3 ½ million** manufacturing jobs will need to be filled.

The skills gap is expected to result in **2 million** of those jobs going unfilled.

## Is the Skills Gap Affecting Your Business?

### Problem

There are two major contributing factors to the widening skills gap – baby boomer retirements and economic expansion. According to a recent Gallup study, the average retirement age of U.S. workforce is 64 years. If an employed person who is 64 years of age is to retire, it is likely that approximately 2.7 million jobs would be created due to the same number of workers who will retire from the manufacturing workforce between 2015 and 2025. In addition to the aging workforce, there will also be a need to fill 700,000 jobs that are likely to be created due to natural business growth.

Over the years, the perception of manufacturing has turned from being a strong career choice to being an unstable, low paying field to enter. There has even been a decline of technical education programs in public high schools, due to the lack of interest in manufacturing.<sup>1</sup> Therefore, STEM (science, technology, engineering and mathematics) skills among workers are at an all-time low.

Manufacturers are continuously innovating ways to meet customer demand and decrease costs. They are unable to increase productivity with the low employment, and unable to implement new technologies due to the skills level of their current employees. This makes it difficult to provide effective customer service, innovate and develop new products, and expand internationally.<sup>1</sup> This has pushed manufacturers to redesign their processes and streamline production lines using tools such as automation and (outsourcing). The American workplace is continuously evolving in which physical strength has become an increasingly irrelevant attribute.<sup>2</sup> While some remaining job roles will require less semi- skilled workers, ironically, these trends and innovation demand more skilled workers.<sup>1</sup>

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## Solutions

- Generation

1. Change the Perception of Manufacturing

The public perception of manufacturing being dark, dirty and dangerous means that manufacturers must raise awareness to upcoming generations to change this perception. By supporting STEM (science, technology, engineering and math) in schools, offering internships/apprenticeships and advocating for the importance of manufacturing using plant tours are just a few ways manufacturers can interact with younger generations.<sup>1</sup> Another way of targeting the younger generation is through social media. Manufacturers should increase their social presence to encourage the workplace and connect with young people to get involved.

2. Recruit Women

- Gender

Women constitute manufacturing's largest pool of untapped talent in the U.S. Although women make up nearly half (47 percent) of the total U.S. labor force only a little over one-fourth (27 percent) are in the manufacturing field.<sup>3</sup> Researchers who study collective intelligence found teams that include women tend to promote responsiveness, collaboration and knowledge-sharing among group members. These high performing teams improve the bottom line.<sup>3</sup>

The best way to recruit women is to have them in highly visible, managerial roles in the organization. Women are motivated by challenging and interesting assignments, attractive pay and work-life balance.<sup>3</sup> Manufacturers need to have "simply irresistible organizations." The dynamic is partly driven through employee and coach relationship which can be enhanced by management working towards a positive work environment characterized as flexible, humanistic recognition focused and an inclusive, diverse work environment. Employees that feel included will be engaged and empowered to curb turnover and increase productivity. Manufacturers should consider shifting from a "presence-driven" culture to a "results-driven" culture. Many leading companies recognize and reward individuals and teams who drive results, regardless of when and where work is being done.

- Outsource

3. Outsource Labor Requirements

Outsourcing labor can give manufacturers a competitive advantage by eliminating the cost of developing in-house competencies that are not needed on a permanent or continuous basis. The outsourced contractor can provide a staff that is well-versed in the usage of the most current technology. By delivering the proper staff that has the required skill set, manufacturers decrease costs and time investment. Manufacturers can also save on by eliminating the need of providing training to the in-house staff in its use, or the costs of acquisition of technology/equipment. Overall, outsourcing allows management to concentrate on their core proficiencies and critical objectives to drive the business.



## About Onex:

Onex, Inc. is a family owned business supplying industrial furnace services. Our mission is to be a strategic consultant for our clients with a goal of understanding their operation and optimize their processes that will give them a superior competitive advantage in the marketplace.

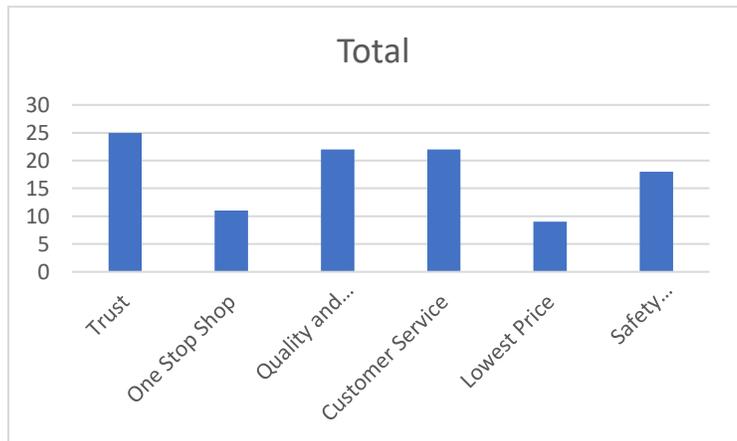
We are staffed with many experienced professionals to provide technical solutions for your refractory and combustion.

## Benefits of working with Onex:

- Our commitment to providing unique and cost-effective solutions to optimize processes and decreased downtime
- Flexible manufacturing solutions using the best material for the job
- Excellent Safety record

## More on Outsourcing

Recently, we performed a research survey and asked manufacturers who use outsourced services what qualities they find are most important in an outsource vendor. Our results show that trust is the number one answer, followed by quality and expertise and customer service.



When inquiring about an outsource contractor a few common questions you should ask before deciding which one to go with.

### Trust

- Am I getting what I need? Am I sure they have the skillset to finish the job? Do they have the best interest of my plant in mind?

### Quality and Expertise

- Do they have the equipment and staff to support my project? Have they performed this service before?

### Customer Service

- What is the best way to communicate with my contractor? What do I need from them in terms of project management and reporting so I have a peace of mind?

## SOURCES:

1. Giffi, Craig. "The Skills Gap in U.S. Manufacturing | Deloitte US | Manufacturing Industrial Products and Services." Deloitte United States. Deloitte, 18 May 2017. Web. 27 July 2017.
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3. "Minding the Gender Gap in Manufacturing | Deloitte US | Inclusion." Deloitte United States. Deloitte, 30 May 2017. Web. 27 July 2017.