

Industrial Projects Report

The Publication Construction Companies & Craft Professionals Trust



Connecting to the

DIGITAL GENERATION

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DIGITAL GENERATION

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While the construction industry continues to expand, skilled craft professionals are becoming scarce. Over the past year, 282,000 construction positions have been added to the job market, including 13,000 added in June. With the last of the baby boomers turning 65 in 2029, the Bureau of Labor Statistics predicts that millennials will make up 75 percent of the global workforce by 2030. The next twelve years are critical not only in hiring new craft professionals but also in being able to increase their knowledge and skill levels to replace the seasoned workers the industry is losing. The time is now to start building the workforce and skills needed to handle upcoming projects, such as rebuilding the infrastructure. Appealing to Generations Y and Z, those born 1980 and after, is crucial and begs the question ... how do we, as an industry, connect with generations who have grown up influenced by technology?

Technology, particularly the internet, has impacted our daily lives and changed the shape of our expectations. It has connected us with distant strangers and family, it has brought us amusement while watching cats sitting in boxes, and it has brought us convenience in having information immediately and products quickly. The internet is utilized by 77 percent of Americans daily and 94 percent of 15- to 24-year olds worldwide, making it necessary to incorporate digital aspects to stay relevant with the next generations of workers. As the 2015 FMI Industry Survey, "Millennials in Construction: Learning to Engage a New Workforce," points out, millennials, or Generation Y, "were born with technology at their fingertips and see it as a critical part of the workplace."

What are millennials looking for in their careers?

Construction has a natural appeal — high salaries, job satisfaction, growth opportunities and more — and is exactly what millennials are looking for, but the responsibility is ours to do better in showing these attributes of the industry. It has been thought of as a fallback or secondary career choice when the reality is many who graduate with a four-year degree are finding it difficult to gain employment while high paying construction

« Competitor at 2018 SkillsUSA National Championships visits NCCER's booth and tries out Miller Electric's AugmentedArc™ welding simulator.

jobs are unfilled. The 2015 FMI Industry Survey indicates that Generation Y wants their work to count for something and just under 70 percent of those surveyed shared that they would be willing to put in extra time to help the business do well. Companies that offer clear advancement opportunities, commitment by senior management to employees' well-being and competitive pay can anticipate higher loyalty from their staff of all ages.

What role does technology play within the construction industry?

Innovative Processes

Although the construction industry may not be known for being a leader in technological advances, it has incorporated innovative processes that stand out, including building information modeling (BIM) that provides a 3D digital representation of a building. Innovative technology, such as training through augmented reality simulators and using exoskeletons, is part of how the construction industry is adapting technology in day-to-day usage. Simulators for crafts such as welding and operating heavy equipment are gaining popularity in training centers within the industry. While embracing and continuing to develop exciting technology like virtual reality within the industry is necessary, companies also need to include digital components within their everyday processes.

Day-to-day Business

Today's youth expect companies to streamline experiences and understand digital is a way of doing things, not a side product. Millennials value collaboration and want to be connected in everyday processes, from training and testing to the office and field. This is being recognized within the construction industry as well, McKinsey & Company reports that some of the most popular technologies being invested in and utilized over the last six years are practical systems such as document-management, performance management and field productivity. A significant impact of these particular technologies is that they are accessible from the field and allow changes and updates to be made promptly. As the next step in their own digital movement, NCCER developed an online testing system that lessens administration time and lets instructors ensure their students have plenty of practical experience. As millennials grow into new roles within the construction industry,

online testing will resonate as they are familiar with digital components in learning. Understanding that the world will only continue to grow in connectivity, NCCER considers the online testing system just a step on the path to going digital followed by a fully online curriculum coming in the near future.

Providing Connections

Beyond advanced innovations and day-to-day processes, we also have the chance to showcase construction careers as meaningful, with high salaries and advancement opportunities, where people spend a significant amount of time — watching videos. Those who interact with teenagers daily will not be surprised to learn that 1 billion hours of video are watched every day on YouTube and 100 million on Facebook. While these numbers are not limited to Generations Y or Z, 85 percent of 13- to 17-year olds use YouTube, and approximately 9 out of 10 teens are online multiple times a day. Build Your Future (BYF), an NCCER recruitment initiative, is shining a light on the everyday life on a craft professional in their Inside the Hard Hat video series. Already impactful with videos about welders, ironworkers, electricians and more, BYF partnered with NACB to up the ante with a brand-new video featuring tower crane operators, which can be viewed in 360 degrees on YouTube or in 3D with virtual reality headsets. Appealing to different interests, from heights to hands-on, these videos provide an inside glimpse of the skill that each craft entails, along with annual salaries and exciting possibilities that are attractive to the next generation of craft professionals.

It has become necessary to incorporate digital aspects in order to make a connection with the next generation of workers.

Connecting Digitally

To draw the attention of the digital generation, a generation that we in the industry urgently need to begin building skills, we must persist in incorporating technology within our work processes. As a tool, the internet is powerful and one that NCCER is embracing throughout their organization, from their BYF initiative to online testing. As we move into an age where augmented reality provides training for crane operators, exoskeletons help ease the physical constraints of construction and virtual reality allows walkthroughs of models, the construction industry is showing that it is about more than digging ditches — it's creative, innovative and builds the world as we know it.

