

### 30 Years Experience—Is there an App for That?

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There are dynamic changes coming in the workforce and many differences between the Boomer and Millennial generations and their expectations. Their views of our industry, its future and how standards and technology can help the Millennials gain the “30 years of experience” they will need to close the so-called skills gap are the subject of this presentation at the MCAA Industry Forum in Atlanta on April 25.

By 2025 according to current trends, almost a quarter of the world’s population will be between the ages of 65 and 90. This puts more pressure on the workforce of today and will be the biggest economic and social shift in history. Some countries will be hard hit:

65+ Age Population by 2025	% of Population
World	16.2%
US	21.6%
China	23.3%
Netherlands	25.6%
Germany	37.5%
Japan	37.8%

Looking at it another way, the proportionate size of populations in Europe will shrink by 5%, in Germany by 14.1% and in Russia by 21% where it will grow in India by 55%, Egypt by 85%, Saudi Arabia by 110% and in Nigeria by 132%,

The number of people engaged in the workforce has been decreasing for the last decade because of the demographics (aging Baby Boomers) and because of the recession. Because of the recession, Baby Boomers are staying in the workforce longer but they are retiring and millennials now make up the largest segment of the workforce. Right now we have multiple generations working together who have very different values, ideas and ways of getting things done, not to mention different ways of communicating.

#### **Baby Boomers**

Command/Control  
Individual Projects  
Managed Workflow  
Job Security  
Work = Income  
Structure  
Influenced by Organization

#### **Millennials**

Active/Involved  
Collaboration  
Unstructured Flow of Work  
Employability  
Work = Personal Enrichment  
Flexibility  
Influenced by networks/communication

Industry members are going to have to realign their cultures to address the driving forces of the Millennials which is different from the Boomer generation that is leaving:

They require active involvement, impactful projects, instant access to information, flexibility in both their work schedule and while they are at work, they won't wait to "pay dues," they like to work in teams and recognition does not always translate into money. Their performance is not always a goal but they can have definable metrics if they understand expectations.

Standards are one way to capture safety operations and procedures—capture the knowledge and incorporate it into automation and work instructions.

It is hard to recruit to our industry because Millennials think it is dirty and they have a low-tech perception of manufacturing. However, we can leverage their social consciousness. It behooves companies to retain their over 50 employees to let them share the knowledge with the Millennials. For Millennials, we need to nurture them, stimulate them and give them required resources. They need flexibility and continued training. They want respect but not authority. We should be striving to mentor and coach them and recognize that we can learn from them since they are entirely digital—something that is not native to the generation that is currently retiring.

Tom Fiske, Ph.D. is part of Yokogawa's Global Strategic Technology Marketing Group. He is part of the team responsible for establishing the vision of Yokogawa's Advanced Decision Support (ADS) solutions that help improve operator's situational awareness and effectiveness, and works with others to address the aging workforce issue and onboarding the next generation. Dr. Fiske has over 30 years of broad experience in industry, government, and academia. He has hands-on research, product development, project management and manufacturing experience in the process industries. Throughout his career, he has actively been involved in optimizing complex manufacturing and production processes. Fiske has consulting with end-users in the process industries to address key issues concerning selection, adoption, implementation, and use of manufacturing, automation and control, and production and engineering technology. He has helped companies develop best practices in the areas of performance management, alarm management and decision support systems to name a few. Prior to Yokogawa, Dr. Fiske spent more than a dozen years with ARC Advisory Group as an internationally recognized analyst in the area of simulation, APC, optimization, advanced analytics, energy management, MES, knowledge management and operator situation awareness. He is a graduate of Stevens Institute of Technology with a Ph.D. in Chemical Engineering. He also holds a Master of Science in the Management of Technology from the Sloan School at Massachusetts Institute of Technology.