

Workforce 2020: The Future of Maintenance and Reliability

Written by Bob Williamson
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The future of many businesses depends on the reliability of their equipment and processes. They depend on equipment running as it should the first time, every time. This reliability will depend largely on the people who operate and maintain the equipment. However, the workforce of today, and well into the 21st century, may not be prepared to meet the challenges unless we take action now.

What does the future hold? Some insights are provided in a study by the Hudson Institute, Indianapolis, IN. The Institute's economists, educators, and policy researchers explored trends that go well beyond their prior landmark study, *Workforce 2000*, published in 1987. The results are collected in their latest publication, *Workforce 2020*.

Among the trends leading up to the year 2020 will be a shrinking labor force caused by slow population growth and the retirement of the baby boomers. However, many of the baby boomers may work well past the traditional ages of retirement for financial reasons or because they enjoy their professions. Employers would do well to find ways to retain their high levels of experience and transfer their knowledge to younger workers.

Economic growth depends on increased levels of productivity. Increased productivity depends on the skills and knowledge levels of the workforce. Education and training focused on improving performance will be required, and the ability to learn quickly will be essential among those in the workplace.

In their book, Hudson Institute researchers offer suggestions for rising to the challenges. Among their suggestions are some key insights. For example, the number of dangerous, monotonous workplaces will shrink. Technology must not be feared: machines will do the worst jobs and people will keep the best ones. Certainly, people will lose their old jobs, but better jobs will be available for those who are prepared.

In general, employers must find ways to promote upward mobility through education and training. However, employers cannot do this without help from educational institutions, government entities, and communities.

What do all these ideas mean for the future of maintenance and reliability? Here are a few thoughts.

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New job roles related to maintenance and reliability have been steadily emerging since the early 1980s. Among them are operator-performed maintenance, team-based maintenance, and total productive maintenance.

In some equipment-intensive industries, the future will lean more toward maintenance-based operation because we can no longer afford a wide gulf between skilled and unskilled plant-floor employees. Imagine, skilled maintenance employees operating the critical equipment and tending to its needs on a regular basis to prevent or eliminate unplanned downtime. Does this scenario mean more preventive maintenance? Absolutely. Does it mean more equipment-specific, process-specific training? Absolutely. The costs of all of these changes will be more than offset by the increased throughput of the plant.

What should we do to prepare for maintenance and reliability Workforce 2020 today? Hire entry-level employees who show a willingness to learn and who have a mechanical/electrical/computer aptitude. Staff at sufficient levels to allow all preventive maintenance and training to be done during the normal work week.

Focus on results in ways that change behaviors along the way. Base all training, rewards, recognition, employee involvement, and other improvement on specific, measurable results--results that people on the plant floor can actually affect. Position equipment reliability and performance, rates of quality, on-time delivery, and improvements at the top of your list.

Develop apprenticeship-type programs to train your own skilled employees. Be creative with inhouse learning, partnerships with vocational and technical schools, and other proven training programs. But avoid the traditional approaches to apprenticeship training in favor of performance-based learning that applies immediately to the workplace, and the business.

And above all, be willing to break with traditional ways of recruiting, hiring, training, and retaining employees. After all, if you always do what you've always done, you'll always get what you've always had. Now is the time to make some serious changes. Your near-term and long-term future depends on it. **MT**

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