

**Work Force Development Policy:
Advancing the Automation Profession to Gain Global Competitive Edge**

Issue: Today, a prime mover in the drive to retain America's global competitive edge is showing signs of faltering for several reasons. The Automation Profession consists of engineers, technologists, technicians, and others with acquired knowledge which spans several engineering disciplines and years of field experience in order to efficiently produce high quality manufactured goods and services. Current estimates show that thousands of new automation professionals are needed annually at a time when the workforce is bracing for the baby-boom bust. Engineers and technicians knowledgeable in automation are critical for keeping U.S. manufacturing competitive in a global market, according to U.S. industry leaders. Some of the main factors contributing to present situation are:

- Many of the automation professionals lost to retirement or made redundant by restructuring in the past decade have now fully retired. At the same time, demand in automation is increasing faster than ever as plants become more efficient, safer, more secure, and increase production to levels never intended within existing infrastructures. Skilled automation workers cannot be easily replaced, just at a time when a large influx is needed to just maintain the workforce size at current levels.
- U.S. schools do not teach automation as an undergraduate engineering discipline, and automation technology is advancing so rapidly that it takes one to three years for graduates of other engineering disciplines to perform at a professional level in the automation field.
- Manufacturers are still doing little to stave off the skills shortage that is created when experienced employees exit the workforce faster than new talent can join. One explanation might be lack of funds and time.
- Lack of preparedness in K-12 - 84% of respondents in a recent survey by National Association of Manufacturers (NAM) believed that K-12 schools were not adequately preparing students for the workplace
- The overall poor reputation of manufacturing in the US is seen as an insecure job, lacking opportunities and losing business to other areas of the world

The Automation Federation Role: The Automation Federation is stepping forward as the “Voice of Automation” and is positioning itself to be the catalyst for the development of the next generation of automation professionals. Our intention is to create a “cradle to grave” approach by preparing current and future workers for automation careers at all skill levels and all career stages. The core components of this approach are:

- K-12 Education
- Diversity Recruitment
- University Relations
- Establishment of Automation Curriculum
- Technical Training & Education
- Certification
- Government Relations
- Industry Relations

Within each component, a plan will be developed to answer the current problems and obstacles through research, marketing, partnerships—both corporate and governmental, and increased public awareness, amongst others.

Next step: We would like you to form a 12-month joint congressional study committee to understand the substance and contribution of the automation profession in industry by visualizing the wide variety of skill sets needed, and evaluate current and future skill gaps. Upon completion of the study, the committee should propose programs creating technical employment opportunities for the development of future automation professionals.

The Automation Federation will be honored work with you and to assist with furthering this issue. Please contact:

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