

Facing the generational skill gap in manufacturing

Can technology bridge the gap?

The cause

Evolution of jobs in manufacturing

Post-war boom

Manual labor

Manual jobs require vocational skills and on-the-job training through apprenticeships.



Information age

Automated processes

Industrial engineers and IT technicians are in high demand as production lines become automated.



New economy

Customer-centric

Jobs require problem-solving, innovative thinking, and STEM skills to meet global pressures.



Defining the gap

Market expectations: A heavy burden to be supported by today's overstretched workforce

Yesterday's golden age
in 1950, **30% of all US jobs** were in manufacturing.¹

Today's skilled worker shortage

- 9%** • US manufacturing employs more than 12 million workers or **9% of the workforce**.²
- 600K** • Shortage of applicants with a background in Science, Technology, Engineering and Math (STEM) is most acute for manufacturing³ leaving **up to 600,000 skilled jobs unfilled each year**⁴
- 52%** • **52% of teenagers** say they have no interest in a manufacturing career.⁵
- 59%** • **59% of industrial manufacturing CEOs** are worried about the availability of key skills.⁶

Tomorrow's collaborative workforce

- Manufacturing rebounds with an agile, innovative workforce comfortable with advanced IT solutions
- Manufacturing Alliance for Productivity and Innovation (MAPI) expects manufacturers to add **356,000 new jobs in 2014** and add **197,000 jobs in 2015**.³

Global Recruiting

By 2020 the global workforce will contain 38-40 million **fewer** skilled workers (with college or postgraduate degrees) than employers will **need**, forcing manufacturers to recruit worldwide.⁷

"To understand the skills gap, we have to understand how the public understands manufacturing.... They see it as a dark, dirty, dangerous industry."⁸

How technology spans the skill gap AND generation gap

Modern ERP solutions reinforce the traditional best practices, plus meet expectations of Millennial generation users

Senior managers	Modern technology	Millennial workers
 Age 40+ <ul style="list-style-type: none">School of hard knocksHighly experienced with knowledge to pass onReluctant to change, less patient with new technology	Allows both generations to meet in the middle and support manufacturing's transition Modern ERP	 Age 20-30 <ul style="list-style-type: none">College educatedLess experienced, impatient with old-school processesComfortable with technology
	Helps Baby Boomers <ul style="list-style-type: none">Share tribal knowledge with new recruits through the use of collaborative toolsLearn to use and adopt new applications by providing intuitive, modern interfaces	Helps Millennials <ul style="list-style-type: none">Get up to speed quickly on best practicesEasily obtain critical historical data for reference and training
		Employees 18-35 years old are twice as likely to leave a company when they are frustrated with the usability of software ⁹

Bright future

Modern technology helps recruit and retain new workers, propelling manufacturing to a new era of innovation

 Technology engagement is increasing 55% of a company's employees use ERP; 63% use ERP when deployed in the cloud. (Unlike in the past when only select super users were granted access.) ⁹	 Workforce is going mobile 54% of plant supervisors receive information in real-time through mobile devices. ¹⁰	 Optimism is growing 71% of manufacturing CEOs say they are optimistic about the future. ¹¹
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Preparing for the future

Federal initiatives plan to prepare **100,000** new STEM teachers to train the next generation of engineers and technicians¹²



Generational Gap research and infographic sponsored by Infor, provider of modern ERP software solutions for the manufacturing industry.

To learn more about the Bridging the Generational Gap in Manufacturing and to download the complete report, visit the Infor blog, [Manufacturing Matters](#).

¹ MIT news
² National Association of Manufacturers
³ Industry week
⁴ Deloitte
⁵ Economic Public Institute
⁶ PwC CEO survey
⁷ McKinsey & Company
⁸ US NEWS
⁹ Mint Jutras: Bridging the Generational Skill gap
¹⁰ LNS Research
¹¹ PwC: Manufacturing Barometer
¹² whitehouse.gov