Manufacturing’s Evolving Workforce

Bob Dean, Executive Director, Business Transformation, Cisco

Pop culture references manufacturing as the factories of the 1800s or modern day overseas sweatshops — full of mind-numbing, remedial tasks in dark and dingy factories. Today’s manufacturing environments tell a much different story: clean and safe environments with employees managing advanced machinery that drives innovation and productivity.

But are these manufacturing stereotypes creating barriers to attract new employees to the industry?

As more companies demand efficiency and collaboration among their workforce, roles are evolving. Manufacturing is driving productivity growth in the United States economy — increasing at two and a half times the rate of the service sector (Manufacturing Institute, Facts About Manufacturing [1], 2012). As manufacturing drives productivity in our economy, manufacturers are also seeking productivity practices to streamline day-to-day tasks.

The United States continues to be the world’s largest manufacturing economy [2], employing nearly 17 million people — about 1 in 6 private sector jobs. However, the modern manufacturing industry is struggling to attract the highly skilled workers it needs for the tech-savvy, evolving role required in today’s manufacturing operations. To be more efficient and collaborative, employees must be connected to share ideas and insights.

If you consolidate the intellectual capital of all the workers into a central repository and give your employees access, then they can start sharing insight on how to do

their jobs better and smarter. Simply put, it's just adding non-networked people to the network. At Cisco, we are working with numerous manufacturing companies across the country to make this key transition needed to support the quality control and productivity improvements plants demand with the collaboration younger workers expect.

Allowing this connectivity is the physical device, which opens the approach to a new or enhanced "Bring Your Own Device" (BYOD) program. Implementing a BYOD program allows employees to work anywhere from their own device, while still securely connected to the network. BYOD has been proven to increase worker productivity, while enhancing overall collaboration among employees and remote plants. If executed properly as part of the overall evolved role of a manufacturing worker, BYOD can serve as a strategic tool to retain and attract new employees.

Last year Cisco published a report [3] that found that two out of five survey respondents would accept a lower-paying job that offered more flexibility — for device choice, social media access and mobility — than a higher-paying job with less flexibility. Next generation employees want to feel empowered when they work. Using collaborative and mobile solutions is the first step. Offering programs where they can share knowledge, collaborate and be a part of a broader team gives them the ability to gain insight and make decisions. And, continuing to educate the next generation of workers about manufacturing's evolving workforce, its innovative technology and collaborative mindset, is key to the future of the modern manufacturing plant.

The ability to deploy advanced mobile technologies on the plant floor, including phones and tablets, add value by connecting front-line workers with R&D, sales and even maintenance teams that are off-site. Employees that were previously "non-networked," such as plant floor workers or site managers, are often the best sources of information in regards to the product. Adding these previously untapped workers to the network brings exciting collaboration potential and this new level of connectedness can also go beyond internal uses to benefit customers and partners who rely on manufacturing efficiency and information sharing.

By integrating communications with business processes, these solutions enable quicker product development, resulting in a faster time to market. With accelerated information delivery, customer needs are quickly recognized; responses to those needs are more effective through improved collaboration with design teams and partners, no matter where they are. Using a variety of communications capabilities allows for easy connecting across distances for meetings and project reviews, securely sharing information in real time and even making simultaneous design

changes with your suppliers and partners.

Bidirectional information-sharing through the global manufacturing value chain — from research and development (R&D) to the customer and back as well as from suppliers to plants to sales-channel partners — and IT systems must adapt to support these strategic shifts. Cisco's own approach to IT has been shaped by the shift in our business over recent years. We are using IT to develop more efficient ways to connect with suppliers, employees and partners globally, and to meet the needs of customers more effectively by delivering greater visibility.

This visibility provides a clear, competitive advantage in the global marketplace and delivers a positive impact on revenue growth. Not only are we recommending this approach for our customers employing our solutions, but we also take advantage of collaborative information sharing across our corporation. Together with our customers we are using IT to improve our ability to manage growth, productivity and research & development globally.

Connectivity that provides complete data visibility from product development through sales and service is crucial to making manufacturing companies more responsive and competitive. This level of connectivity extends access and knowledge across the value chain, making for easier collaboration across globally distributed teams as well as for the secure integration of information and knowledge throughout business workflows.

Robert (Bob) Dean is the Executive Director at Cisco responsible for building and leading the go-to-market strategies for the Manufacturing Industry Vertical in the United States, Canada, and Latin America.

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