



Keep Asking Questions

Matthew Jaster, Director, Editorial Content

BMW recently launched a pilot program in Germany where AI-powered humanoid robots began working the assembly lines. Previously, the company ran a similar 10-month testing program in a U.S. plant in Spartanburg, SC. These steadfast and efficient machines worked for up to 10 hours a day handling rigorous tasks such as placing sheet metal components for welding.

BMW is enamored with the possibilities and reported that the humanoid factory workers contributed to the production of more than 30,000 automobiles. More importantly, they did not replace human workers as much as they reduced the strain of repetitive and challenging shop floor tasks.

I want to be excited about this. I want to live in a world where we eliminate hearing loss, back problems and exposure to harmful chemicals like my grandfather dealt with as an autoworker in Michigan.

I visited his plant once when I was seven years old. I only recall two things about the trip—the factory was enormous and I've never experienced so much noise in my life. My ears were ringing for weeks following my visit.

On paper, giving some of these repetitive and ergonomically challenging tasks to C3PO makes so much sense. We could eliminate carpal tunnel syndrome, cut down on work-related injuries and free up some valuable time to let the humans solve other problems on the shop floor.

But we need to continue asking questions—oh so many questions—on our way towards automation utopia. People are still powering these machines. We have human beings in charge of collecting data, safety compliance and evaluating the potential of humanoid robots in manufacturing. This work is complex and must continue at the highest level.

Conversely, the atmosphere in which our robotic warlords will operate still involves very human environments: slippery floors, poor lighting, constricted space and most importantly, human colleagues. Is it safe to put humans and humanoid robots together in the same manufacturing cells? Can we trust that R2D2 will get better through case studies and testing programs?

Do I want one of these in my house some day—a humanoid robot folding laundry, doing dishes and recording the 17th television spinoff of *Game of Thrones*?

Jeff Burnstein, president of the Association for Advancing Automation (A3) gives us a little sneak peek on robotic innovation on p. 28. This thoughtful piece examines our national robotics strategy, the importance of new industries adopting robotics and he asks plenty of questions about the future of humanoids.

Apart from robotic innovations, our yearly deep dive into automation, smart components and material handling takes us to Pack Expo East in Philadelphia (p. 22) to an industry carefully examining the potential of AI, the need for flexible machines and how digitalization will allow manufacturers to move from reactive to proactive operations.

The manufacturing toolkit continues to grow. No matter the industries you serve, we all have an obligation to see how these innovations can help us build and maintain better gears, bearings, couplings, motors, belts and drive systems in the future.

I urge all our readers to try some new software, see where AI fits into your long-term goals or consider some robotic work cells to increase shop floor productivity.

Just make sure to ask ALL the questions along the way.

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