Master Manually Before Automating

By Mike Huszar

ROBOTS ARE NOT THE ANSWER

For decades now, we have been operating by the principle of mastering a process manually before automating it. We have shared this principle with many clients, and to my amazement, we get more pushback on this one principle than any other.

Just recently, we completed a Value Stream Analysis for a client. After five weeks of work and reams of data, we were able to quantify an annualized savings of $6,000,000. This savings represented the most lucrative productivity improvement of any project the client had ever implemented. After a successful report-out meeting with the business's leadership team, a member of the corporate accounting team came to me and inquired about the use of robots in the facility. My mind quickly raced through all of the processes we had analyzed over the past five weeks, and I could not think of one good candidate for a robotics application. This led to my question, "What problem would we be solving with a robot?"

The answer came back far too quickly. "Definitely direct labor," she replied.

"Direct labor is a problem here?" I asked.

"Well, it could definitely be better."

"I wonder. We are about to embark on an endeavor to realize $6M in annualized savings. Will we then still have this direct labor problem of which you speak?"

"Well, I've studied lean and there are numerous examples of the use of robotics to replace direct labor."

"All of us at LMSPI have at least 20 years of experience with 'lean,' and although we may have heard people say that it was lean, I assure you that nobody with a lean mindset has ever installed a robot to replace direct headcount."

ROBOTS INCREASE INDIRECT LABOR

She walked away quite frustrated. I've experienced this situation far too many times. She might believe us to be anti-technology, or robot-phobic. Really, what we are trying to accomplish is the appropriate application of technology to serve our people and processes, not to replace them. Fixing a direct labor problem with technology often requires the increase of indirect labor. In this case, the capability to maintain, program, troubleshoot, and operate robots did not exist in the business. It would have to be created. This knowledge is not free and neither are robots. In addition, this technology would have been a monument within the process flow and would have not only inhibited flow but would have limited continuous improvement of leadtime as well.

WHAT ABOUT OUR PEOPLE?

There are very good applications of robots in many processes throughout the world. This isn't about the robots, it is about our mindsets. It's about what we think about our people. It's even about how we think about problems.

WHAT ABOUT OUT PEOPLE? CONTINUED…

For example, the problems within the process had cultural, organizational and technical elements. The robot might have solved the technical elements (not in this case, actually) but would not have touched the other elements.

On another occasion, we implemented a pull system in an organization that had numerous part numbers, resulting in literally thousands of kanban cards. The owner of the company asked, "Can't we just replace all these cards with a big TV screen and show it electronically?"

My response was, "Perhaps that would be a good idea in the future, but we need to master this process manually before we automate it."

"Well, if we did it now, we wouldn't have to worry about lost cards," he responded.

"True, but we wouldn't learn nearly as much about this process or information flow. Today, this process is run by the people within the process. If we put it on the computer and post it on a screen, then who would run the process?"

"Well, I guess the supervisor," he said.

"What if the supervisor isn't around?"

"Well, we would have to work on that."

We agreed to work the established process for now. Three months later, I was speaking with the owner again, mostly about the huge turnaround that his entire business had experienced since all of the changes that had taken place, including the pull system. So I asked, "Do you still want to replace it with a computerized system?"

He said, "Oh, no way! That process is great, and we are duplicating it at another facility."

This was years ago. Perhaps there is a computerized system now. But now he would be READY to implement such a system culturally and organizationally; not just technically.

NO AUTOMATION BEFORE IT'S TIME

I can't even enumerate how many IT professionals we've worked with that have been tasked with automating a broken process. This never fixes the problem. In most cases, it exacerbates the problem. As we are improving our processes, when the case for automation arises, we must ask ourselves the question, "What problem are we trying to solve?" If it isn't ergonomic, safety, or quality related, we should question it. The next question is, "Is this process robust enough to benefit from technology?" If we can honestly answer these two questions and still feel comfortable about the change, then we are probably ready to proceed. Let's not automate before it is time.

You can reach me at my direct email mike@LMSPI.com to learn more.