



DAVID A MARSHALL CONSULTING INC.

Improving Adoption of New Technology In Your Company

FROM MY 20+ YEARS AS AN EXECUTIVE IN
MANUFACTURING
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WHAT ARE SOME OF THE CHALLENGES OF ADOPTING MODERN METHODOLOGIES?

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The biggest hurdle manufacturers face in adopting modern methodologies and digital transformation is not the technology, it's developing the cultural acceptance for change and its outcomes.

It generally fails because of a lack of commitment of top leadership. That's because people left to their own devices, without a clear vision of what they want and an absolute buy-in to the outcome, will do what they believe is right, which is not necessarily right for the enterprise.

I can't believe a manufacturer would ever try to adopt modern methodologies without leadership buy-in or involvement. Not that I think a manufacturer would be so foolish as to try it. Rather, I'm stunned that so many manufacturers actually do try it while the executive leadership can't be bothered to get involved or have a stake in its success.

Bigger companies will create fancy, nonsensical titles like Chief Information Officer or Chief Technology Officer to oversee a project. But this doesn't necessarily change the outcome of the adoption. That only depends on the quality and motivation of the leadership at the very top — the CEO, COO, President.

That's because C-level executives are often just a hired gun and not a person with the vision to pull it off. That vision often comes from further down the line. But if those with the vision want to actually see these changes happen, they have to get the top leadership to be the champion of change in order to get everyone else to buy into it and make it happen. Otherwise, it's a lonely thankless task, and those modern methodologies are just a pipe dream.

THAT TIME SOMEONE TOLD ME TO SHUT UP AND FIX A PROBLEM

When I first started at Robroy, Billie Traywick was the Controller for the company. She was spearheading a new enterprise software system that was going to vastly change the way we were doing things. We had been using a different system in the past, and this new system required a whole new way of working and thinking. This new system was causing a lot of unbelievable pain throughout the organization, and I was getting very frustrated with it all.

It got to the point where I said since it was causing so much damn pain, we might as well throw it out and start again.

That's when Billie sat me down and more or less said, "Shut up and listen to me!"

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She explained that the problem wasn't the system, it was that the users were not competent on its proper usage. She said that if we would make them competent on the system, it would work very well and the pain would be gone.

Well, that certainly got my attention, and I knew better than to give her anything less than 100% commitment to its success. So I required everybody in their jobs to create written procedures for their own function within the new system to show that:

-They understood the system.

-They followed the proper procedures so that it would work.

-If they ever left, someone could come into their position and be competent by following the procedures.

As a result, everyone got good at using the system, and it became a smashing success for the company and changed a lot of our internal operations. All because someone made sure I bought into the modern methodologies in the first place.

There will always be problems when you make any major change in your organization, and turning an analog operation into a digital one is one of the biggest you can do. End

FOUR THINGS TO KNOW BEFORE UNDERTAKING DIGITAL TRANSFORMATION

Taking on a digital transformation — not just switching from an analog process to a computerized one — but actually transforming your manufacturing process from a staff-and-labor driven process to one that's managed more by computers is going to be a serious undertaking.

We underwent a digital transformation at a Duoline factory I ran several years ago. We had a factory that employed 140 people, cost as much as \$1 million in environmental remediation and \$2.5 million in waste. We tore the entire thing down and started over with an nearly-fully-automated process that employed 20 people, cut our remediation costs to \$0, and our waste to less than \$10,000 per year. Of course, we learned several important lessons along the way.

1. YOU MAY LOSE STAFF IN A DIGITAL TRANSFORMATION.

Right or wrong, automated equipment and artificial intelligence will reduce the need for low-skill, repetitive jobs. You no longer need people to move raw materials into position, or move partially-completed products to another machine if you've got an automated system that can do it all for you.

This worked to our benefit because we had several employees who were less-than-ideal employees in our old system. We kept and retrained the best employees to work in the new system and they helped the new factory run very well.

2. YOU'LL NEED SPECIALIZED STAFF.

Of course, this also means you'll need people who are capable of running the new machines. For example, if you buy a new CNC router for your production line, or replace a few manufacturing machines with a 3D printer, you're going to need people who know how to operate and maintain those machines.

While you may have been paying someone \$20 per hour to be able to operate the old systems, your new operator may earn as much as \$50 – \$75 per hour. Of course, the new system will be faster than the old one, and you may be able to cut down on overtime or even an entire shift, and end up saving more money by employing one specialist rather than four or five generalists.

Consider retraining your old staff rather than conducting national searches for those highly-skilled specialists. Your old staff will understand how things are supposed to be done, and you'll already be a few steps ahead in staffing up your new operation. You can set up your production line so all the machines move in order of production, and have them automatically moved between machines, rather than relying on your associates to do it.



3. YOU NEED TO MEASURE ALL PROGRESS.

Digital transformation requires that you measure everything. How else are the machines going to be able to perform effectively? And how else will you know whether the digital transformation is actually meeting its project goals?

When we built the new Duoline factory, each work cell could capture 44,000 pieces of data per shift. We had four cells in our factory, which meant we were gathering 176,000 pieces of data per shift. From there, the data was shared through our measurement dashboards. We would watch things like production rates, critical steps in the manufacturing process, and even the status of the equipment itself. And we were able to measure how quickly and easily the new system was paying for itself.

4. YOU NEED BUY-IN FROM THE TOP EXECUTIVES

If you're not one of the top executives leading the digital transformation yourself, you're not going to get very far if you haven't been given carte blanche decision making over the entire operation. That means that not only do you make the decisions and implement the new policies, you have to be given time to iron out all the wrinkles in the inevitable shakedown period.

There will always be problems when you make any major change in your organization, and turning an analog operation into a digital one is one of the biggest you can do. But if we hadn't had my buy-in, I would have turned a difficult solution into a very expensive failure.

Too many executives will fold a change or revamping of processes if they see things aren't going well, rather than requiring everyone in the company to embrace the new change and move on. End

About David A Marshall

David Marshall is a Senior Manufacturing Executive with Corporate Culture Development and Operational Excellence Expertise. David most recently was President and COO of Robroy Industries and Board Member where he oversaw this manufacturing organization with four locations in the USA producing high quality electrical products and oilfield products. During his tenure he worked hard on implementing cutting-edge technology into these facilities during renovations of several of the plants and build out of one ultra-modern 130,000 square foot manufacturing facility in Texas.

With David guidance, these companies saw a remarkable seven record years of profitability; eleven consecutive years with profitability exceeding 20% of revenue; and more than \$300 million added to the equity of the business since going private in 2001. David earned his MBA from the University of Virginia: Darden School of Business.

He currently consults manufacturers looking to achieve operation excellence. His motto is: "If you can't measure it, you can't manage it."

He has been a manufacturing executive, as well as a sales and marketing professional, for a few decades. Now he helps companies turn around their own company by making the right decision. If you would like more information, please visit my website and connect with me on Twitter, Facebook, or LinkedIn.
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