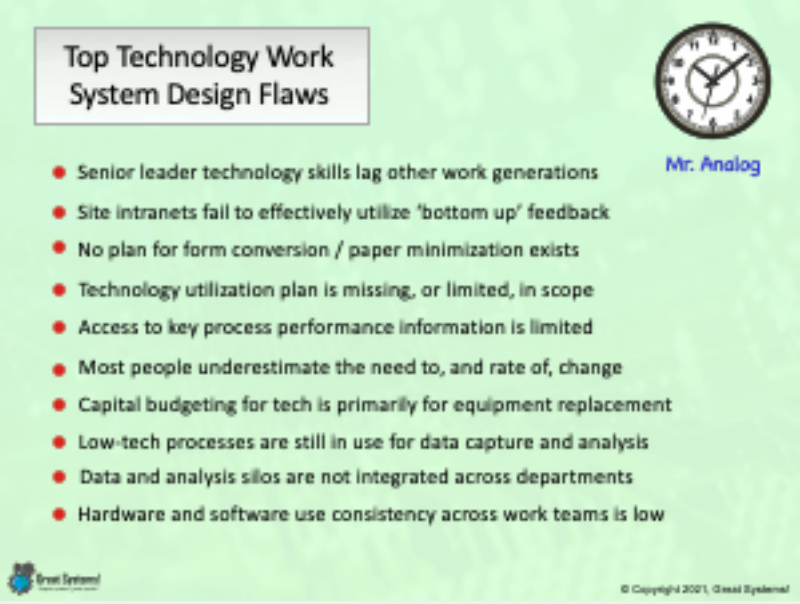
Great Systems Technology Work System Improvement Tips

By Kevin McManus, Chief Excellence Officer and Systems Guy, Great Systems

Do you measure and improve your technology application work system?

I grew up in the analog age. In turn, I had to learn to think digitally (it will always be a work in progress) so I could better utilize emerging technology.



When I was in college, cable had just been introduced. VCRs were the thing to have. CD players had yet to make it onto the dorm room shelves.

I did not use a personal computer to perform my daily work until I had been in the workplace as an Industrial Engineer for four years. Fortunately, I have since learned a lot about how to measure and improve a technology application work system.

In the classic "Back to the Future" movie, Doc chides Marty for not being able to think fourth dimensionally. In today's work world, many of our younger employees wish they could give their managers 'the business' as well when they fail to think digitally. The gap grows daily

between the 'before computers' crowd and the 'after computers' crowd. How effectively do you utilize existing and emerging technology in your organization?

How wide is the technology gap in your organization?

There are two potential dangers associated with such a gap as it widens. First and foremost, if we don't fail to close this gap, the younger crowd can take advantage of, if not control, the older crowd. This can happen even though the wealth of the older crowd often pays for all the neat toys (the technological infrastructure if you want to sound professional).

The second danger presents an even greater downside. When we fail to acquire a digital acumen, we also fail to learn how we can save a lot of time and money. More and more people feel daily stress because of their workloads. Americans, at least, work more hours per week on average than their international counterparts.

Because of poor technology use, we miss out on the potential to reduce our workloads significantly. Our leaders may say it is the capital cost of new technology that keeps us 'as we are', but that is often just an excuse. In reality, we just can't comprehend the potential value of technology itself.

Think about it. We have managers who do quite well with their cell phones, texts, and e-mails. However, these same people may struggle to program the DVR or create a PowerPoint presentation. The cost of slow typing and hand-written forms alone would pay for the typing classes and fillable PDF forms. The cost of continuing to use paper would pay for the well-developed intranets that all too few companies have.

Where are your data mines?

I can remember what it was like to do work without the aid of a computer. Armed with a calculator and white-out tape, I would crank out version after version of cost estimates for the process engineers at the pen plant. In hindsight, having a PC to work with probably would have meant that I had one less IE peer to hang out with. However, it would have made things a lot easier, faster, and less frustrating.

Today, we have the means to both capture, crunch, and display data very easily. That said, we also have too many people who don't know how to use the pivot table feature in Excel. Bill Gates himself said that the pivot table was the most important and powerful feature of the Excel package … thirty years ago. That was well before Power BI came to work.

This indicator, along with others, leads me to believe two things. First, we fail to effectively analyze and utilize the variety of data we capture daily. Second, we don't effectively share the volumes of data we capture across our different work silos.

The database has played a key role in my own process improvement efforts over the years. In addition to capturing waste events as they occur (such as material loss, downtime, or accidents), databases allow us to capture the details, and in particular the causes, of such events.

Before computers, we might have filled out a form each time a waste event or complaint occurred. Unfortunately, few people wanted to sort through all those forms in search of possible problem cause patterns. Opinion ruled in the problem-solving arena to a much greater degree that it should have. Back then, what cost effective options did we have?

Where's the gold in your data mines?

There's a lot of gold in them there data mines. However, our failure to understand queries and the software features that create them keeps us from finding that gold. Additionally, bar coding, RFID, and wearable technology has become so cheap that it is almost archaic to hand-capture or enter most types of data!

Maybe the problem is not a lack of understanding. Instead, could too many leaders still be stuck in a 'before computers' mindset? How often do you get the most out of your data mines? What amount of gold do you leave in the ground each day?

In the digital world, things are actually pretty simple. We enter things into the fields of a database. The data is crunched, and reports display the results. When we fill out a digital form (entry screen), we also complete the fields of a new database record. The same thing occurs when we fill in the blanks on any computer-based form. More gold goes in the mine!

One simple technology application work system example

Unless you want to be fancy, the skills one needs to post pages to a website are not any different than those we use to create a Word document with pictures in it. You basically open a file, make your changes, and drag your pictures into the text. Then, you save the file to the intranet. As a result, you either update or create a new web page.

In the past, it was more of a challenge to both create and post web pages. Also, it was quite costly to set up an intranet. Not anymore. Given the ease of installation and use that now exists, I believe that all managers and supervisors should know how to create, update, and post web pages. I've done it myself, so I know it's not that hard.

Now, assume that all your managers and supervisors have this basic skill. No one has to make and distribute copies of the monthly report anymore. We can sit at our desks or in the airport with a wireless connection and almost instantly look over performance reports, complete with graphs. The time lag to get the information is also reduced. People can also send and receive comments on the work almost instantly.

No-code and low-code apps now exist that allow people to enter data into a form on their mobile device. Digital form completion puts the data into an existing dataset on a computer or

server. In many cases, a user can scan a quick response (QR) code to quickly locate information or verify one's presence with a time / date / location / ID stamp.

It amazes me that more organizations, even the small ones, have not eliminated paper in favor of digital data capture. If we simply require each leader to enter key data into digital boxes each day, we can save a lot of time and money. With the advent of wearable devices, if the information is on a server, it is also accessible to your people.

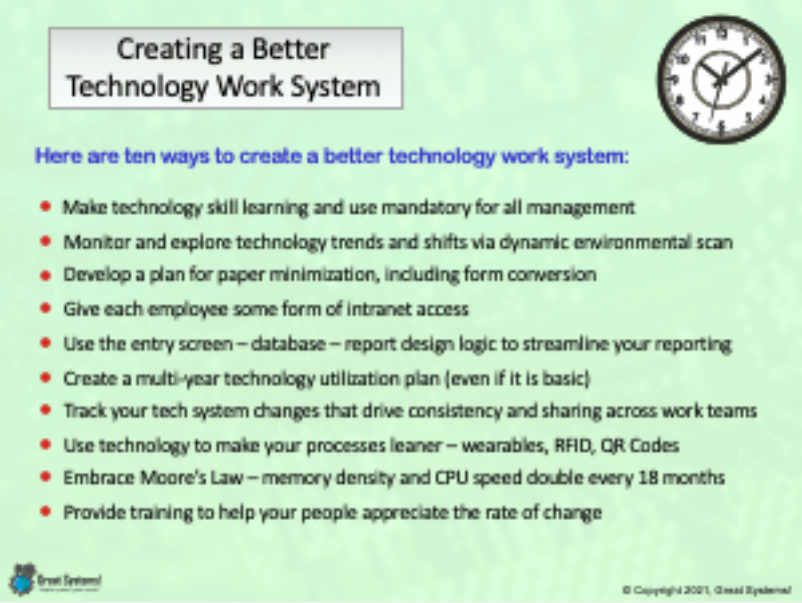
By the way, don't forget that data can be easily accessible to your support personnel as well (such as human resources, information technology, and maintenance). How much waste and clarity do you think you might find if everyone could share more information more easily?

Would you like to improve your technology application work system?

For over forty years, I have helped design and improve technology application work systems in a variety of workplace arenas.

This experience continues to help me discover value added, simple ways to set up digital systems to measure daily performance.

Plus, we can create balanced scorecards that link process performance to company goals. Ultimately, I can help your organization better apply technologies as they emerge and become cost effective.



A failure to think digitally is the primary power restrictor for this power system. If you want to make better use of existing and emerging technology on the job, let's make a digital connection.

Do you have interest in the technology application work system improvement ideas that I offer? If so, send me your thoughts or questions to **kevin@greatsystems.com**.

About the author

As Chief Excellence Officer of Great Systems LLC, Kevin McManus provides virtual coaching and content to help people use proven best practices to enhance and optimize their daily work systems.

Over forty years of work experience in roles such as Industrial Engineer, Training Manager, Production Manager, Plant Manager, and Director of Quality give Kevin a 'real life work' perspective relative to daily work process optimization, work team engagement and empowerment, and sustainable operational excellence.

As a contract trainer for the TapRooT® root cause analysis process, Kevin has taught over 450 courses and further enhanced his ability to help leaders proactively minimize risk, reduce errors, and improve reliability. Kevin holds an undergraduate degree in Industrial Engineering and an MBA. He served as a national Malcolm Baldrige Performance Excellence Award Examiner for twenty years, including a three-year term on the national Judge's Panel.

Kevin has authored the monthly performance improvement column for Industrial and Systems Engineer magazine for over 20 years, is an Institute of Industrial and Systems Engineering Fellow and has been a member of IISE for over forty years. His newest book, "Different Company – How the Best Build Great Organizations", will be published in late 2025."

If you would like more information about the improvement tools and systems I have to offer, please send me an e-mail at **kevin@greatsystems.com.**

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