

LMJ caught up with lean expert Mark Graban for his opinion on the role of technology within lean

INTERVIEWING Mark Graban

Mark Graban is quite the celebrity in the world of lean healthcare and as creator of LeanBlog.org and a regular voice in the realms of social network he was the perfect brain to pick in regards to lean and technology.

It was Bill Gates that said: "Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important."

This is the resounding message from this issue of LMJ, in particular, that practitioners should take an agnostic view of technology, as neither the answer nor the enemy but instead as a useful accoutrement to a lean journey.

Technology is changing the landscape of business. The introduction of ERP, social media and automation, to name a few, are developing the way businesses behave with one another, internally and their interactions with customers.

"Technology is making it far easier for people to access information about lean on the internet," says Mark.

"Unfortunately with many organisations, particularly within hospitals and big manufacturing companies, they are short sighted and block access to YouTube and blogs. They do this because they think people are going to waste time.

"In reality, they are cutting off access to valuable and free educational resources available on the internet. I would include

social media in that category as well, people will block access to twitter because they think people will goof around, they block access to LinkedIn because they think people are trying to find a new job.

"If an organisation is lean, or believes it is lean, lean as a concept compels leadership to question why the workforce would goof around or search for another job? Perhaps because they are failing in some way to engage the workforce, resulting in employees wanting to leave or waste time.

"I think blocking access to tech and the internet doesn't really solve any problems. Instead they block access to articles, case studies, which can be found through links that people share on Twitter and LinkedIn like information posted on discussion groups. Preventing people from using technology to become better educated in lean or anything else."

This suggests that technology can be beneficial to a lean system if used in the right way.

"It's helpful to look at TPS (Toyota Production System), as opposed to my own opinion, Jeff Liker in *The Toyota Way* (2004) identified 14 principles suggesting firms use tested, reliable tech that best serves its people and prophecies, so there is a historical misunderstanding or historical dogma where people will point and say 'lean says tech is bad'. If you look back to the 1970s or 80s the tech people were talking about the battle between MRP scheduling systems and eventually what became embedded in the modern ERP systems.

"MRP systems verses lean methods of heijunka scheduling, visual management of set scheduling instead of having it reside in the computer that only a few people had access to. Simple kanban systems of paper cards used to signal the replenishment of parts instead of relying on computerised schedules.

“People will block access to Twitter because they think people will goof around”

“So looking back over time you could say that the lean visual manual approach is better for scheduling in materials planning but if we look at modern day lean or Toyota, Toyota uses ERP systems and they do long term planning using MRP systems.

“They use lean systems to make short term decisions in response to customer pull signals. Toyota definitely uses technology. I think there’s also the question of embedding newer technologies into proven lean methods. The idea of putting barcodes on kanban cards that support people in processes because Toyota or another lean manufacturer doesn’t have to physically send a kanban card or a kanban container to a supplier, they can send the pull signal by scanning a barcode and sending it in an electronic system.

“Some years ago that would have been done through a fax machine, now that’s being done through the internet. We can incorporate technology, not just for the sake of having the latest, greatest and fanciest, but to use technology that’s proven to work.

“I think there’s a third category of companies using newer technologies to improve the way they collaborate. People in large multi-site, multi-division organisations frequently use video conferencing and electronic communication as the substitute for physical travel, which can reduce costs and some of waste and wear and tear on people.

“You also have technology that companies are using to help people collaborate on their improvement work across and between different sites. There’s a start-up company that I am involved with called KaiNexus, which is helping hospitals, healthcare organisations and manufacturers collaborate in their continuous improvement efforts. There are many lean thinking organisations that realise any technology used doesn’t magically solve a problem, but can certainly be enabling in helping us accomplish our goals and what we are trying to achieve.”

So what is the single most beneficial aspect of technology for deploying in lean?

“I think as opposed to a single piece of technology let’s look back at some of the key principles in a lean culture or the transformation of an organisation that technology can support. How do we build trust in an organisation? How do we increase visibility and transparency with data and information? How do we improve communication?

“Especially across boundaries, technologies that break down silos, help a team or value stream work together more effectively, technologies that build trust and increase ability. I would say those are good and effective technologies.

“A lot of companies use an electronic dashboard system to give visibility to performance measures with charts.

Traditionally this might be done by printing out a poster and putting it on a wall, companies might now instead use an electronic dashboard, which allows executives to see this information on a computer screen.

“In an environment where there’s trust, collaboration, the data collected is used to help diagnose problems and improve the system. However, in a traditional non lean culture that data might be used as a weapon to attack managers, bully people, put pressure on people and that makes people want to fudge the numbers, hide and cover up. So I think that’s where technology is never good nor bad, it is how it fits and is incorporated into a culture.

“There is a discussion surrounding whether technology can drive culture change. If having tools and systems to increase visibility, collaboration and build more team work where it didn’t exist before, I think those are things companies are trying to prove out right now, technology in a lean culture can certainly be helpful. Leaders have to try to create more trust and reduce fear with technology.”

Mark cut his teeth in lean as a college student. As an industrial engineering college graduate he was exposed to TPS. His first job was at General Motors at a time when it wasn’t a lean company, external people came to change the way the factory operated so Mark was fortunate to have some really good people coaching and mentoring him.

“Not just about lean tools but about lean principles and ways of managing and leading people differently. I became passionate to create a better workplace, change culture and management systems so people could be happier and more successful.”

In 2005 he took up a similar lean role in healthcare and started his blog:

“I started blogging in 2005 when I was working at the last manufacturing company that I worked for. I had this habit of emailing articles to other people in the company, friends of mine that were doing lean work and I thought rather than bothering people I can post these things and they can choose to come and look at it. A chance for me to share what I was learning.”

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