Will your company become a digital butterfly?

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5 Reasons your digital transformation project will fail...

(...and what you can do about it)

By Darius Foster

Everyone seems to be jumping on the digital bandwagon these days. You've probably seen countless press releases from competitors, suppliers and even customers banging on about data-driven-this and AI-based-that.

"Oh, and what about the thousands of pounds saved using the latest silicon valley algorithm plugged straight into their equipment?"

Driven by all this coverage, the fear of missing out can be a powerful motivator. It pushes companies to invest in digital technologies and the so-called fourth industrial revolution (or Industry 4.0). The entrypoint is often a pilot project.

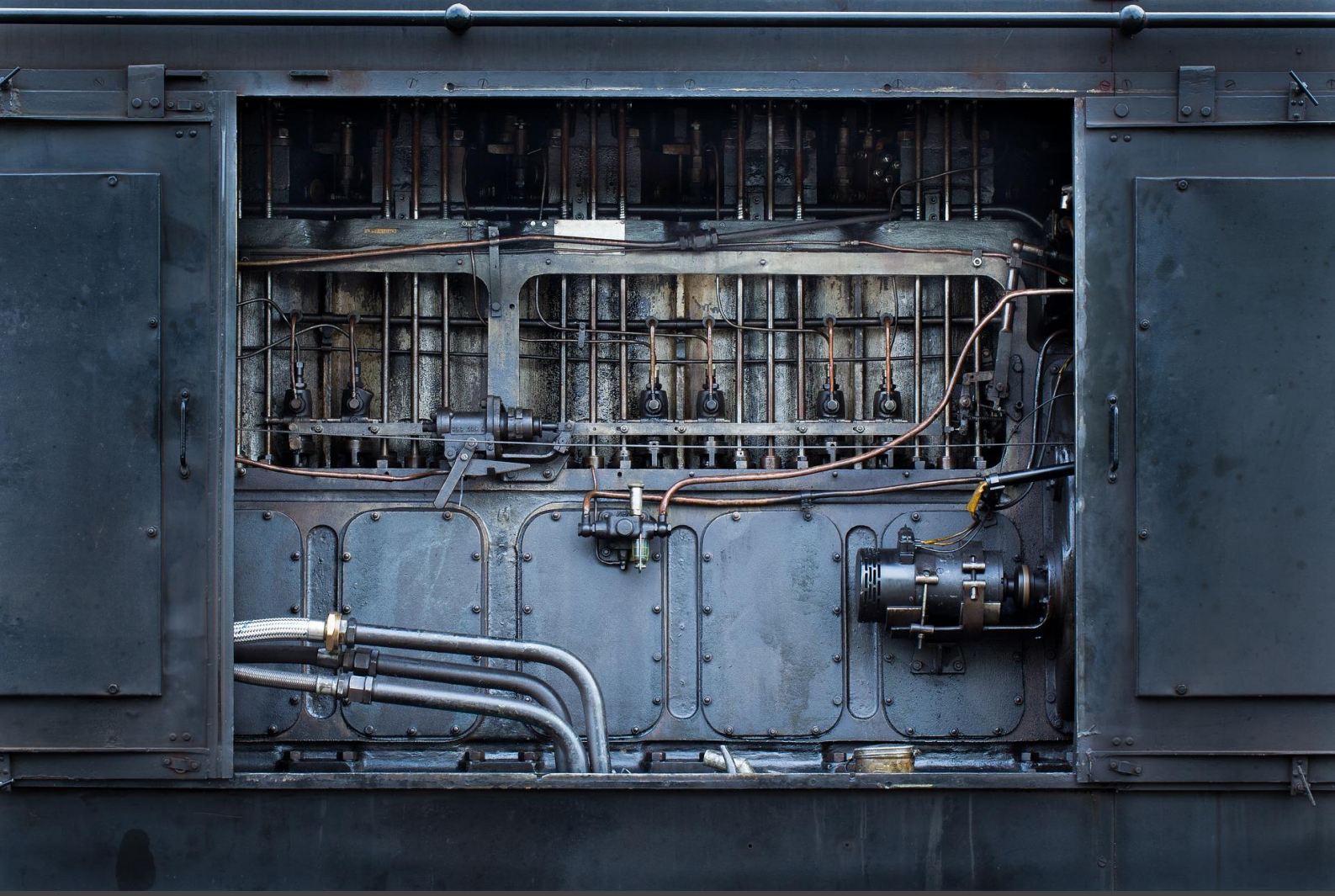
These small-scale exercises usually push some of this shiny new tech into a small part of a company's existing operations. The company then sits back and watches as operating costs tumble.

"But is it as simple as this?"

Are the sunlit uplands of digital nirvana really just a short pilot away? As with anything there's an awful lot of "real world" between here and there. A lot can go wrong.

To help you with your digital journey, we have five reasons why your digital projects will fail, but don't worry, we've also included some tips to try and help you avoid the pitfalls.

How can you ensure success in your digital metamorphosis?



No. 1

Your machines are old

“Ah, they don’t make ‘em like that anymore!”

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“Off grid and proud”

Ah, old machines! Rugged cast iron skin as tough as the hide of a Rhino. Steamy breath billowing out from metallic snouts. Oil circulating through their veins at the perfect pressure and temperature.

OK, maybe that’s a bit overboard, but old machines can have a certain charm that warrants a bit of elaborate imagery. They were also usually built to last.

Indeed, lots of manufacturers still use decades-old assets to this very day. After all, if it’s not broken, why fix it? As reliable (and sometimes beautiful) as they can be, old machines are often a poor fit for the factory of tomorrow. So if you are planning a digital transformation project and you include such assets, you are increasing your odds of failure before you’ve even started.

Old machines can be broadly split into two camps. In the first camp are the truly old. We’re talking about machines that almost wouldn’t look out of place in the workshop of Isambard Kingdom Brunel. Picture them now, humming away in the background as the man himself pours over the designs for the Clifton Suspension Bridge or Box Tunnel.

Proper old machines will be mostly mechanical, with simple push buttons and motorised axes that whirr and shunt. They certainly don’t have networks of state-of-the-art sensors measuring everything from power consumption to how awake the operator is. If you approach this sort with a fancy gateway and try to find out all about them, they will likely disappoint you.

“Looks can be deceiving”

The machines in the second camp are slightly newer. They even have proper sensors, computerised control systems and ports galore. To the casual observer they might seem as capable and ready for the future as the latest I4.0-enabled machine fresh off the production line. But hang on. A big problem lurks just beneath the surface.

With all the right headline attributes you might be forgiven for thinking “let’s plug into those sockets, do a bit of code and hey presto we’re pumping data!” The reality is usually quite different.

The thing is, while all the ingredients seem to be there (sensors, computer controller, plugs and sockets), when you actually try connecting to get your data you will find that the computer controller is unable to keep up with the demands of controlling the machine and serving data to you. When they were built, no one at the factory thought, “let’s add a beefy computer so one day in the future they can attach other computers that will tap the machine’s data and do fancy machine learning”.

The computers were specified for one purpose; to control the actual machine. Anything extra and there simply isn’t the computing resource left over for it to oblige. Trying to tie these poor things into some grand IoT platform would be like trying to drive a herd of goats up the Fulham Road. During rush hour. It’s pretty much impossible and no one will know why you’re doing it.

This might seem obvious but you’d be surprised how many projects neglect to properly check the machines they’ve selected. Things turn bad when they turn out to be incapable of serving any data on top of their original purpose.

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No. 2

Your people are unconvinced

“AI will replace us!”

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“Change can be scary”

With all the headlines about robots taking human jobs and artificial intelligence (AI) becoming more and more capable, it’s perfectly reasonable for people to be concerned.

This concern is likely to be magnified if digitisation efforts are obscured (deliberately or not). If people don’t understand exactly what the aims of the digital transformation are, then can they really be blamed if they jump to the worst case scenario and fear for their jobs?

Failing to address the legitimate questions and concerns of your colleagues can significantly reduce your chances of success. In fact, as these are the people who will end up using your brand spanking new digital solutions, their buy-in should be seen as essential!

“Top Tips No. 2”

Bringing people with you makes everyone’s lives a lot easier. Engage with as many stakeholders as early in your digital transformation journey as possible. Make sure the covers are well and truly off. Make things as visible as possible to the whole workforce.

Show them the value these technologies can bring; like the time they can save freeing them up to concentrate on more important (and more engaging) tasks. The emphasis should be on how digital technologies improve and augment rather than just improve and replace.

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No. 3

Misidentifying where the value is

“Yes, this will definitely be useful for us!”

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“Not as strategic as you first thought”

Imagine you have set off on your digital transformation to level up your company. You’ve set up a pilot project in a strategically important area of your business. The project kicks off, with all the right people in the room and everyone agrees to some definitions and goals. Next step is to scrape together some data. This data is put into the hands of some data science geniuses (either in-house or Smartia).

The data gurus work their magic cleaning the data, interpreting it and pushing it through the latest neural network (it's a safe bet a neural network will be involved at some point). They deliver a pretty good model that does what you expected. Surely this is the dream?

Now that you have this model the value will come rolling in, won’t it?

Everything’s gone to plan and you demonstrate the model in a debriefing session. Someone pipes up. Someone who might even have been in the original kick off meeting and agreed to the original aims. It doesn’t matter, this person now says:

“Hang on, we just get around that problem with a simple visual check after that process completes.”

Silence… This is when you realise that this strategically important problem you set out to solve and that everybody agreed was important, is not actually as big a problem as you thought.

How did this happen?

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“Is it all worth it?”

Well, things can move fast. A smart engineer could have spotted the simple solution between the project’s definition and the solution demonstration. Maybe there were engagement problems at the start and people didn’t fully understand what was being discussed so didn’t raise the potential of there already being a simple solution.

Or maybe the wrong people were in the room in the first place.

Whatever the reason, this is the kind of thing that can derail a digital transformation journey. It can even raise serious questions about the value of having a digital program at all!

Losing touch with where the value is can doom even the most perfect technology.

“Top Tips No. 3”

It’s another surprising one but, again, this happens!

When setting the parameters of your pilots make sure the business case is explicit and well defined with actual real world numbers (cold hard cash usually!) to back it up.

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No. 4

Expecting too much

“Digitising our plant is going to change everything!”

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“Be ambitious! Shoot for the stars!”

It’s what we naturally want to do. Especially in the modern world, we want it all. But, we also tend to want it “now”. Patience can be a scarce resource.

Drive and ambition is great but expecting too much too soon from your digital transformation can set you up for disappointment and ultimately failure. In most companies you are probably looking at changing decades-worth of legacy and “this is the way it was always done”-type thinking.

All those layers of process and machines that have been put in place over that time can’t just be relaid with a thick carpet of edge devices and artificial intelligence in one go (or even two or three goes). That is a recipe for building some colossal white elephants.

“Top Tips No. 4”

The real world won’t just melt away to make room for the new tech. A thoughtful program of transformation (or maybe that should be transition) that works with incumbents rather than trying to sweep them aside is a better approach.

Identify quick wins and low hanging fruit.

Gather together people who can make stuff happen (engineers, project leads etc.) and set about making small but real and measurable changes.

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No. 5

Working with the wrong partner

“You won’t regret this … we promise!”

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“Digital transformation, IIoT, Industry4.0”

These (and more) are the buzzwords of a growing industry. A multitude of companies, new and old, are flooding the market with software platforms and consultancy services to meet the growing needs of industrial companies desperate to not be left behind.

In this kind of environment, it’s very difficult to know who to partner with. After all, they will all promise the earth. They will all sound very convincing. But after the normal courting period the reality of the project can be very different.

Selecting the wrong partner can leave you with very limited results to show for your investment. If digital transformation is going to be more than a buzzword it needs serious partners to understand and help companies reach their potential .

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“Top Tips No. 5”

The best thing you can do is try to find a partner who genuinely wants to get to know you and your company. They will be very much in receive mode rather than transmit. They will talk more about your people, machines and processes than about how great they are.

This is the way for everybody to win. The best partners will try to help you identify the right machine targets for your first forays into digital transformation.

They will work with your people and see them as key stakeholders who can provide important insights for creating the best digital solutions for your company. Your people will be getting something they contributed to and actually want to incorporate into their work.

They will also be straight with you about what you can expect and work with you to understand where the true opportunities and value are.

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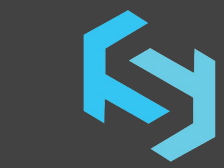
“In a nutshell”

It’s easy to get excited about this fourth industrial revolution. The prospects are genuine. Some of the things being developed in artificial intelligence, machine learning, robotics, augmented/virtual reality and more are truly awe inspiring. But if we are to realise the potential we must always maintain a connection with reality.

Always aim to set these new goodies in harmony with the existing realities of your organisation (machines and people) so that they can grow alongside this brave new digital world rather than fight against them.

Those were our five reasons why digital projects fail. But we’re keen to hear your thoughts and experiences. Let us know in the comments, on Twitter or LinkedIn if you have experienced any other reasons for failure. What happened? Why did things go badly?

On the other side, we’d also love to hear success stories. If you have run a successful digital transformation pilot let us know what you did and why it succeeded.



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