



Time to disrupt

When it comes to bringing new technology into an organisation, should the disruption it offers be seen as positive or negative? Martin Bewick hears from quality professionals, consultants and tech developers to find out how organisations can ensure new tech is implemented successfully

What does disruption mean, in general terms? Interruption, perhaps? A separation or breaking off? Things not working as normal, or as they should?

For tech firms, however, there are few negative aspects to disruption. In fact, it has long been the holy grail. Why develop a new technology, they will argue, if it doesn't change anything?

This tension, between altering things for the better and a simultaneous desire for predictability and business continuity, in some ways encapsulates an essential aspect of the quality professional's role. How can you safeguard what you have, while also making improvements? How can you streamline processes, while implementing new ones?

Nowhere is this more acutely felt than in the drive towards digitisation, automation, artificial intelligence and machine learning – the trend-friendly tech developments that underpin Quality 4.0. Sooner or later, it is likely that everyone working in quality will be confronted by tech disruption. How, then, can it best be managed?

Disruption and change management

In the Deloitte *Tech Trends 2022* report (see bit.ly/3lkfcb), the global auditing, consulting and professional services giant looks closely at how IT, as a whole, is disrupting how organisations work.

"In what we recognise as an emerging trend," the report states, "chief information officers (CIOs) are disrupting their organisations and the army of technologists that currently execute many manual tasks... across systems, architecture, development, and deployment."

Deloitte finds that the trend for tech



Quality and Sustainability Management Consultant and Lead Auditor Patricia Vasques.

"In my experience, all the usual challenges or obstacles are not technical aspects, but human [ones]"

disruption is having a beneficial impact, with gains in efficiency and reductions in labour costs: "In a recent survey of IT and engineering leaders, 74% of respondents said that automation has helped their workforce work more efficiently. Fifty-nine per cent reported cost reductions of up to 30% on teams that have embraced process automation. Add to this noticeable increases in quality and security, and it becomes clear why 95% of respondents are prioritising process automation, with 21% saying it is a high priority."

The section of the report concludes: "The time to (finally) disrupt IT is now."

In practice, however, that imperative does not always translate as a frictionless process. Patricia Vasques is a Quality and Sustainability Management

Consultant and Lead Auditor, who works with oil and gas companies in Rio de Janeiro, Brazil. She knows all too well how disruption can be a bumpy ride.

"I have worked with companies on new technologies' implementation, and it was never an easy process," she says. "All activities need to be very well structured so as not to cause internal chaos. I have seen successes and failures with implementation. Disappointingly, some examples of failures are to do with a team's refusal to use the new technology – they will say, 'the old one was better!' Or there's a lack of confidence in the new system – 'is it going to work?'. Or the new system is not properly adapted to the company's processes. Or there is a lack of internal communication between the team and leadership."

Vasques says that introducing any new technology must be seen as change management. "Senior management need to check all potential impacts before its implementation. There needs to be a well-structured action plan for: human resources (who is going to use it?), infrastructure (how many licences do we need?), and procedures (do we need to update procedures or policies?); as well as a lot of training, with clear communication for all users.

Without a change-management process, the organisation will not succeed in its goals, and the implementation will be a waste of money and time, leaving everyone with a bad feeling of a task not well accomplished."

Quality professionals, Vasques says, have the right tools for change management, and are well placed to check the risks and take the preventative actions to deliver smooth and efficient transformation. The biggest obstacle, she adds, is usually people. "In my experience, all the usual challenges or obstacles are not technical aspects, but human

aspects. It is often to do with people who are not engaged, or a leadership team that does not provide support or motivation for the team. During a new technology implementation, motivation, transparency and patience are vital to strengthen commitment and participation, and reduce resistance."

Most of all, Vasques says, any lingering sense of negativity needs to be overcome. "Quality professionals should check with a team why new technology is being seen as a negative disruption. Maybe, in the past, a new technology has been implemented with errors. If so, what lessons were learned, and does the team now have the correct tools for knowledge management? It is extremely important not to make the same errors again."

As a summary of the quality professional's role in this, Vasques quotes Alfred North Whitehead, a mathematician who studied the philosophy of processes: "The art of progress," he said, "is to preserve order amid change and to preserve change amid order." Again, it describes a tension, or a balancing act, that will be familiar to quality practitioners.

Tools of transformation

Organisational transformation through the implementation of new technology can – and, it could be argued, should – be a rigorous and intensive process. That, however, does not always prove to be the case.

Adeyemi Shodipo, based in the north-west of England, is a Management Systems Consultant, and runs CQI- and IRCA-approved training courses at Charis – The Training Company. He works with product and service providers across the food and allied supply chain to maintain their competitive advantage.

"From my experience in auditing," he says, "I've seen new technologies brought into organisations where a company has completely transformed and automated its processes from one year to the next."

In such instances, the role of quality becomes even more crucial if the right checks and safeguards are to be applied quickly. "The implementation of technology should not happen as an independent or isolated process, away

Lessons must be learned if errors have been made with previous tech implementations.



"Radical testing should sit alongside agile tech development and all of it should be focused on the end game"

from the existing quality infrastructure," says Shodipo. "The quality professional needs to keep a rational head while others might be getting excited by the new tech, and make sure that the levels of excellence that are expected by the customer stand firm during any disruptive change. To do this, you need cross-functional communication to make sure there are no blind spots during the implementation."



Management Systems Consultant Adeyemi Shodipo.

All new technology brings with it a degree of uncertainty, adds Shodipo. The teams that will be using it, for example, may not yet have all the technical know-how to understand fully the new technology's capabilities. The quality function's skill set around risk management and an ability to absorb new information quickly will prove vital during the implementation period.

"Adopting new tech takes significant



Kay Westrap, Test Manager at H30 Digital.



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forward planning," he says. "To help, I find that Clause 8.3: Design and Development of New Products and Services of ISO 9001, is a simple, but very powerful tool when implementing new technology or systems within an organisation. Another useful tool is Failure Mode and Effect Analysis (FMEA), which can help identify potential risks at the design phase.

"Quality professionals should be working closely with the project team, and there needs to be rigorous validation to test the effectiveness of the new technology in the context that it is going to be used. If the technology is to be used in multiple contexts, then validation needs to be very robust in its testing."

Test as part of the design process

The rigorous testing of new technology is central to the work of Kay Westrap. She is Test Manager at H30 Digital, a

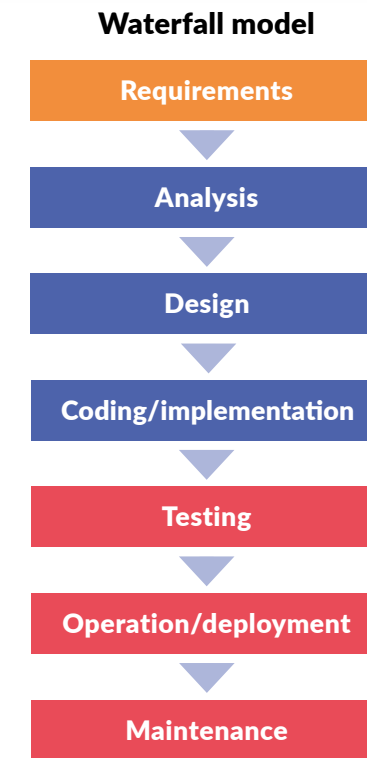


Figure 2.

Agile methodology

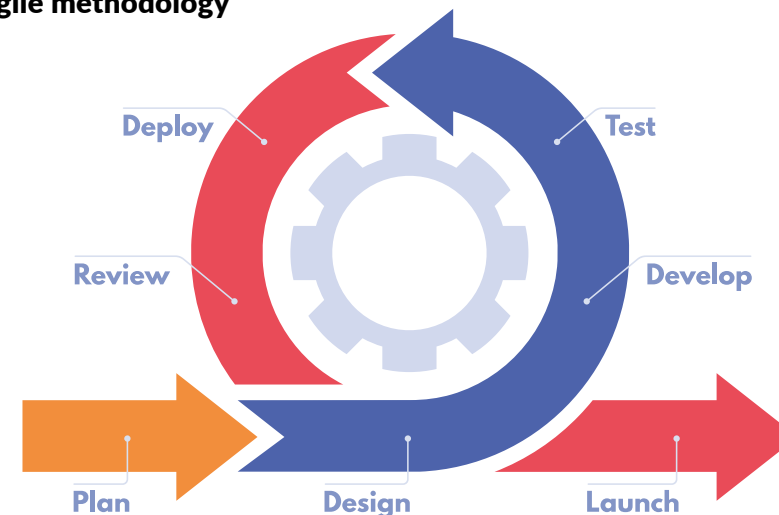


Figure 1.

digital transformation consultancy specialising in Microsoft applications and services. "Whether it is disruptive or not, all digital technology is better written with the end product in mind," she says. "If you work backwards from what success looks like, you have a built-in testing plan." It is a point that quality practitioners should keep in mind during any transformation process.

"When you have a clearly defined set of requirements, you can look at what the testing methods need to be," she says. "A strategy should be put together as to how your testing will be conducted, how it dovetails with the development of the tech, and what methodology and tools you are using. This sets out the intention of the activity. A plan for the work can be constructed, taking into account the knowledge you have built for the strategy, as well as the requirements for the application being tested – known as the application under test (AUT).

"Testing can be seen as a series of processes that, when conducted in a considered way, will give you a good understanding of the robustness of the AUT and any further development or remediation that may need to happen before the launch."

That's the theory, at least. In practice, Westrap says too many organisations see testing as a "nice to have" or an afterthought. "It becomes an expense that gets squeezed and attached as an insurance policy," she says. "Radical testing should sit alongside agile tech development and all of it should be focused on the end game. The whole process, and all the people and roles involved in it, should be thought about when building the project plan and the test strategy.

"The structure of the testing plan can vary depending on whether you are using an 'agile' or 'waterfall' methodology (see Figures 1 and 2), but they will still have the same people involved. For example, there should be an overarching project manager or possibly a product manager, who ensures that all the members of the team are kept informed and that the progress is tracked."

Westrap adds that someone should be responsible for maintaining a list of risks and other potential issues, and

monitor the progress of the project on a daily basis. They should report back to relevant stakeholders on any potential for delay and consider any remediation actions that may be needed to mitigate risks. Stakeholders should be involved from the very start of the project, to ensure the end result is not a surprise and, if any decisions need to be made, that they are already fully engaged.

“The best tech implementation projects have great collaborative teams that look to achieve a common goal,” Westrap says. “They are all aligned and not looking to pass blame, and seek workable solutions to issues. Stakeholders should be present at team meetings and across other crucial communications touchpoints, and there should be transparency as and when any issues arise. If any change in direction is necessary, buy-in from the whole team is required first.

“They set out the common working practices and have agreed ways of working. They are expecting success, but planning for failure. They are self-critical and willing to accept change and have a ‘kaizen’ mindset – one of continuous improvement. At the end of the project, they look back and seek to understand where lessons can be learned, take forward best practices, but also seek to improve constantly.”

Where tech projects fail, she says, it is often when there is an insistence to plough on, even when the project starts to veer off course. “It also happens: when stress is heaped on individuals and blame is sought, breeding a culture of fear and secrecy; where lessons learned are ignored; where leaders do not have an open mindset to change or being challenged; and where the wellbeing of the team is not considered alongside the needs of the project or the client.”

There is, then, plenty of scope for friction and failure, but Westrap says tech development and testing are not rocket science; they are simply processes that will run more smoothly if they are well managed. Perhaps then, it is useful to reframe ‘disruption’ – with its connotations of interruption – and think of it simply as ‘transformation’ instead.

A role for standards

Adrian Overall is the CEO of CloudStratex, a business transformation

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Adrian Overall, CEO of CloudStratex.

consultancy company that advises blue-chip companies on how to leverage technology effectively. Its clients include the London Stock Exchange, Aviva, Credit Suisse, and Deutsche Bank. He sees new tech, such as automation and enterprise service management platforms, as providing a transformative opportunity for quality management.

“A big part of quality management rests on making improvements, whether that be to an organisation’s culture, services or processes,” Overall says. “These platforms and tools we can implement today place a heavy emphasis on improving business processes via improved workflows and the smart use of data. For example, by implementing a configuration management database (CMDB), quality management professionals might be able to improve business processes by enhancing opportunities for automation. After all, their ongoing project of enhancing business processes – or achieving operational efficiency – can only be realised if their organisations are thoroughly aware of what they have to work with.”

While Overall is in the business of advocating these types of tech platforms, he also recognises the risk of

bringing in tech without understanding the specifics of how it might help. Here, industry standards can assist in ensuring success. “Although tools such as CMDB have a lot of potential, we don’t advocate for leaning too heavily on the technology,” he says. “It’s still vital to combine this kind of tooling with the right processes and expertise to make the most of the efficiencies they offer.

“The CMDB and related processes feature as an integral part of ISO 20000. However, the remit to support reliable, accurate and trusted data means that a CMDB is useful for many ISO standards, from 27001 to the 9000s.

“It is also difficult to ignore the increasingly stringent regulatory demands for operational resilience from bodies such as the FCA [Financial Conduct Authority] – or the enormous fines awaiting organisations that fail to comply. As such, the knowledge a CMDB can provide is essential not

merely for securing resilience, but also for understanding whether or not your organisation is resilient.”

A positive outlook

For Overall, technology can help quality professionals take stock of how different components of their businesses are connected – whether that is people, facilities, business applications, or infrastructure. Yet, for many organisations, upgrading to the latest tech still seems daunting and costly. But what if an organisation doesn’t make the shift?

“There is a tangible and calculable impact felt when organisations allow themselves to feel daunted by tech transformations, especially when it comes to the cloud,” Overall says. “For years now, moving from on-premises data centres to the cloud has been lauded as the most efficient, convenient and cost-effective option for enterprise

organisations. Many, though, have since been disappointed by the unexpected and substantial expense of cloud tech.

“In reality, the consequences of many attempted cloud adoptions have left some businesses with one foot in the cloud and the other firmly planted in its surviving legacy infrastructure. We have encountered organisations who pay annual, eight-figure bills from cloud services, while simultaneously facing costs of £100m in legacy infrastructure.

“This is one aspect of adopting newer technologies: their daunting and costly nature can leave organisations unwilling to commit wholeheartedly, leading to substantial inefficiencies. This is not to say that these shifts should not be made – just that they should be made properly, with care and planning. Refusing to make any concessions to the latest technology has its own set of disadvantages, largely in the form of missed opportunities to reach new heights of operational efficiency, and in embracing those all-important resilience regulations.”

From the quality manager to the auditor, and from the consultant to those charged with developing and testing new tech, there appears to be consensus that disruption should be a means of delivering the organisational transformation needed to boost business continuity and competitive advantage, and to meet standards and secure resilience in the years ahead, in line with regulatory requirements.

The implementation of new technology, however, needs to be managed by professionals who can take a holistic view of the process. They must be adept at planning for change, able to communicate openly with all stakeholders, and keep an eye on the end goal. It is also about embracing opportunity.

For a final word, over to Shodipo: “As a quality professional, it is vital that you stay relevant by taking an interest in anything new. As such, we should see disruptive technologies as a positive. They can bring a real competitive advantage and are an opportunity for us to upskill for the future.”

If your new technology is not going to help future-proof your business, the disruption it causes is never likely to be transformative in a positive way. ■

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