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Is agile the answer to digital transformation?

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“We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

That is, while there is value in the items on the right, we value the items on the left more”

[Extract from the Manifesto for Agile Software Development](#)



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Introduction: is there a problem with agile?



Mivy James, Digital Transformation Director, National Security and Defence, BAE Systems Applied Intelligence

Agile is more than just the latest management buzzword. It's a way of working that has penetrated organisations around the world, revolutionising their approach to delivery and transforming productivity and profits in a fast moving and competitive marketplace. At least that's what you would think from the sheer abundance of research material available to practitioners and business academics alike.

But when it comes to effective digital transformation, is 'pure' agile always the answer? If an organisation has set governance models in place, can agile methodologies clash, challenge and struggle to make an impact? And what (if this is the case), can be done about it to ensure that organisations like this can still transform effectively within today's fast-moving technological environment?

Despite its celebrated status, some of the long-term benefits of agile remain unclear. Agile may have been adopted by organisations such as ANZ, Spotify and Amazon but these are all newer organisations and so don't have embedded cultures to change. On the other hand, companies that have a long history of waterfall delivery and especially those bound to long term spending review cycles face a very different set of challenges and hurdles – a simple step-change it is not. That's because agile uproots more traditional ways of working. Gone are governance systems where decisions are made at the top and then filter down the hierarchy; with agile, a network of teams operate as one, using data to accelerate decision making and, in theory, operate faster and more effectively.

What is clear, however, is that an organisation's technology leaders have a pivotal part to play in enabling elements of agile working, where relevant. They are able to blend technological know-how, with the management and communication skills necessary for winning the hearts and minds of stakeholders across their organisation. This, perhaps, is key to making agile a success in the wider context of digital change.

As Sandy Boxall, Defence Digitalisation Director at BAE Systems Applied Intelligence, has said, "There is no clear pathway to an agile operating model. This is particularly acute for a more mature organisation, as the cultural change required to support agile delivery goes far beyond development teams and even the IT department. From failing to communicate the urgency and mission of the transformation, to deploying agile alongside other change programmes to a widening disconnect between management and their teams, it is clear that strategy and governance challenges are pivotal."



Looking at the BAE Systems Applied Intelligence journey so far

Given the recent and catastrophic changes to our working lives, as a result of the impact of the Coronavirus outbreak, it has never been more important for technology leaders to understand the importance of transformation, and how to do it well (agile or otherwise).

It's with the above considerations in mind that we have started to track our own agile journey – what successes can we celebrate? What challenges have we come across? Is 'pure' agile, in fact, a pre-requisite for successful digital transformation or is there a way of striking a balance?

We have opened discussions up to a community of technology leaders from across the government sector. These leaders have shared their experiences with us about their transformational journeys, many of which are included in this eBook.

Our conclusions so far are that agile has great potential – if its core principles are applied across the enterprise and decisions are made with sympathetic cadence. This eBook documents a number (but by no means all) of our discussions and experiences so far, and we will continue to share our learnings with interested parties as they evolve.

At BAE Systems Applied Intelligence we understand that digital transformation within high-trust environments such as government faces unique challenges. We work closely with organisations to build secure digital transformation journeys that support their unique missions – from learning how to benefit from Secure Cloud, to embracing emerging technologies.

We work with our customers to apply agile methodologies, where appropriate, to make their digital transformation journeys possible.

The Royal Navy's Programme NELSON is one example of our agile work.

[Find out more about this project here](#)

Government IT on the move

Chris Hesketh, CTO for Central Government at BAE Systems Applied Intelligence, looks at why Agile by Design is taking root across public sector organisations

[Click here for the full write up](#)

Although governments should be applauded for using digital advances to develop more user-friendly public services – just the other day, for example, I renewed my passport online – it remains the case that increased IT spending offers no guarantee of improved performance.

As a consequence, Agile by Design has long found favour amongst IT professionals – and why not? After all, it sounds great. It's hard to argue against an approach which uses sound architectural design and build principles to enable the rapid delivery of new capabilities and ongoing adaptation of government services. So, why haven't they always been doing it this way?

Beware the barriers

Being an astrophysicist at heart, I'll always try to pivot back to the universal laws of science, in this case computer science combined with the political realities of project and programme delivery in the UK's public sector.

Firstly, when it comes to an IT system the requirements always change. The first day you use a system you want it to be big, shiny and fool-proof but in six months' time, you're likely to prefer it to be quick and streamlined. So change, at least in part, is inevitable.

Secondly, just like the dark matter in the universe, an IT system is mostly made up of logic to prevent the wrong thing from happening. For every functional behaviour you want to see, there are many more exceptional conditions you don't want to see that need to be addressed.

Thirdly, IT systems are inherently non-linear – chaotic, like the weather and the butterfly effect. This is because there is no engineering tolerance in an IT system to absorb mistakes; every bit has to be right – changes in one side of the system can lead to catastrophic failures on the other side.

And finally, an IT system needs a computer. Physical platforms and environments have traditionally been built in a waterfall fashion and involving millions of pounds. This, perhaps unsurprisingly, has limited the options for new ways to achieve successful delivery and transformation.



Taking root, taking off

The first law means change. For decades we have known that the correct response to change has been increased agility. So if Agile by Design is finally trending across government then it must mean we have better solutions to the other laws, the ones which make being agile hard. For me I think the most salient ones are:

- Micro-services are better at encapsulating change – which means that if and when something goes wrong, the impact is minimised.
- Continuous integration and deployment pipelines have shrunk the IT release cycle so that changes can be smaller, safer and more frequent.
- And of course, with infrastructure and network elements now available on demand, the need for a waterfall project plan, once so ubiquitous has been washed aside (forgive the pun).

This means we can finally focus on the hardest and most pertinent challenges: delivering what the user needs now and being able to adapt as that inevitably evolves.

Is this easy? No, of course not, but at least now we have a fighting chance of keeping up.

View from: Major General Tom Copinger-Symes CBE on embracing all things digital



What happened when Mivv James talked engineering empowerment with the Director of Military Digitisation in the UK's

Strategic Command

[Click here for the full write up](#)

Major General Tom Copinger-Symes CBE has been in post since August 2019, the latest stopping-off point in a career which began when he was commissioned into The Royal Green Jackets in 1992, and one that has encompassed a wide variety of staff appointments and operational experience, including commanding an Army Division of 30,000 soldiers, setting up the Intelligence, Surveillance and Reconnaissance Brigade and commanding a battle-group in Afghanistan.

So why swap combat fatigues and the pressure of command in military theatre for a desk job? While it's certainly not your average career path, Copinger-Symes says the opportunity to work alongside Defence CIO Charlie Forte, to actively shape digitalisation and transformation across the armed services was simply too good to turn down.

Advancing through agile

One way that the Major General and his team are seeking to turn digital blueprints into battlefield reality is through the effective deployment of agile methodologies, something that he views as a vital channel through which to effect rapid but sustainable change, particularly when it comes to something as sweeping as digital transformation.

He is at pains to stress that digital-inspired disruption is by no means the only type of disruption Defence is contending with – its horizon also encompasses the risks and opportunities in climate change and Covid-19, to name but two. Digital, though, throws up its own challenges, not least the importance of understanding the difference between 'digitalisation' and 'digitisation'.

"Beneath the bumper sticker of 'digital transformation' I would describe several different steps," he says. "We know what the mission and task is but we can use digital processes and technology to operate and fight better – I think this is what most people call 'digitisation'.

The 'digitalisation' part is about reimagining how we deliver the same outputs, which for us is about reimagining how to operate and fight, once you understand what digital can do".



So, where does agile fit in?

Interestingly, Copinger-Symes – while stressing that he doesn’t “know my Kanban from my Scrum from my Lean Start-Up” – draws some strong and pertinent parallels between agile and the military operations he learned about as a teenager.

“We practice something called ‘Intelligence Preparation of the Battlespace (IPB)’ to start to understand how in any given mission the terrain and enemy are going to need to be engaged with. I would say that this IPB is exactly the same thing as the business analysis that agile folk would start off with, using spreadsheets, existing

“I’m just a knuckle-dragging infantryman, I’m not from a tech background at all, but the section battle drills that I was taught as a cadet aged 14 are inherently agile”

Major General Tom Copinger-Symes CBE, Director of Military Digitisation in the UK’s Strategic Command

data and so on, to understand the rough shape of a problem.

They then go into a Discovery phase but for me this is merely reconnaissance – which is what is drummed into us from day one as a soldier. We are trained from a very early stage that in an uncertain environment such as conflict, you’re never going to know enough and it’s constantly changing. But the first thing you can do is inform yourself about the problem – ‘if in doubt, push a recce out!’ So I see the parallel between Discovery and reconnaissance very acutely – looking at the situation from various angles, and trying to understand problems from the perspective of different users and stakeholders.

And where I really love the comparison is when agile proponents go into Alpha, Beta and then Live, which mirrors the phrases we have in the military - ‘it’s not about the plan, it’s all about the planning’. With the agile stages, you’re deliberately iterating towards solutions, you’re not jumping to a final solution too early. And again, this is just how a battle group sends reconnaissance scouts down different routes, finding where the blockages are and where the going is good, testing their way through to a solution, and always ready to rip up the plan and move to another one.”

Engineering empowerment

These links somewhat beg the question as to why agile hasn’t been adapted more widely in Defence. Copinger-Symes admits that it’s been a slower process than he would like but argues that this is not about the benefits of agile, but rather a reflection of the long-standing challenge about how to ensure that quick decisions made in pressurised circumstances on the battlefield can also take place back in barracks.

"The normal model on operations is as much freedom as possible is delegated - so people can make quick judgements and seize fleeting opportunities, but we have to work out how to operationalise decision-making when we're not on operations," he reflects. "I think it is fair to say that we could do with capturing the vibrancy and risk-taking we get on operations or in a framework like agile, to speed up the way we deliver, even though the irony of agile is that to speed up you go slow to start with. It's all about learning how to take risks, which is the only way you get to seize opportunity."

It's also important to take into account the natural challenges of changing large organisations of any stripe. Defence may possess its own unique characteristics, but its very size and complexity means that its evolution will not be ever be quick or straightforward.

"I'd describe us as a Grade One listed building," says the Major General. "Defence is one of the UK's national treasures - people care deeply about it and that means they can be stuck with a particular vision about how we should fight and operate. This means it takes a long time to shift their thinking, and an even longer time to change their behaviour. It's important to listen to the business about why it's moving slowly as once you understand that you can find ways to speed it up."

That said, he remains confident that the pace of change is accelerating, not least from his own personal experiences. "You cannot move in a senior meeting in Defence now without very senior officers and civil servants talking about data," he points out. "Although some of these discussions may be rudimentary, the very fact our most senior people are talking this language every day gives me immense hope that we're cresting the wave."

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View from: the Department for Education on adaptable IT and adjusting to working from home



What happened when Mivy James talked about delivering education differently with Alok Raj

[Click here for the full write up](#)

We connected with Alok Raj at the beginning of lockdown. He, too, had been working from home for several weeks, but it quickly became clear that physical separation from colleagues is making little difference to how he approaches his dual roles of Chief Architect and interim Chief Technology Officer (CTO) at the Department for Education (DfE).

"This is the first time I've worked in a central government department and I have found it both challenging and exciting," he says. "When you're enabling the delivery of policy and seeing the impact on parents, children, teachers, schools, academy trusts, and so on it is hugely rewarding. But most fundamentally, I have been struck by the people I have found in the department. Their determination to be impartial and make a difference is unlike anything I have come across before."

Alok has been in post at the DfE for a little over two years, taking on the interim role of CTO last December. Recent events, though, had presented an altogether different type of challenge: leading the department's technological response to the Covid19 pandemic.

Life in the shadow of a pandemic

The DfE has had to respond quickly to challenges such as cancelled examinations, supporting pupils eligible for free school meals and much more – all while its workforce has, like organisations up and down the country, been adjusting to working from home.

"Overall from my perspective the department has adapted very well," he observes. "I think we were quite well prepared in terms of the tools the staff already had and the resilience of our infrastructure. So we were able to transition several thousand staff to start working from home the day after the official announcement was made, and they have been using their laptop and home Wi-Fi to seamlessly connect into the department's systems."

He is keen to stress, however, that DfE didn't arrive at this picture overnight – it's been a process that has taken several years. "We've been on a journey where we have started to standardise corporate tools like laptops, tablets and phones and a lot of work has gone on," he says.

Fortunately for DfE staffers, they already were well equipped with vital tools such as laptops, but this hasn't been the case for their counterparts in other government departments, it transpires.

“Unfortunately, we know that laptop supply has completely dried up but even if we had the supply chain, do we have sufficient numbers of technical people to take those laptops and build them out so they are ready for use?” asks Alok. “From my perspective, the crisis has also highlighted that you can talk about having the best new product on the market, but if your core infrastructure lacks the resilience to be able to use these platforms then they all come to nothing.”

For DfE, though, thousands of staffers are now working from home and technical issues have been few and far between – much to Alok’s relief.

“Every department does things in a different way and what I think the crisis shows is the need to think about interoperability and standardisation”

Alok Raj, Chief Architect and interim Chief Technology Officer (CTO) at the Department for Education (DfE)

Time for agile?

Has the pandemic created greater urgency around the benefits of agile working? Alok agrees, – but says that agile is not new and mustn’t come at the expense of planning and scaling up.

“Within the department we are keen to do this while also delivering in small increments and test things out while also scaling them. Sometimes I’ve found that agile – in the digital context – can mean no governance and lack of assurance but in general I do support the fundamental principles of delivering in increments, delivering faster, delivering proof of concepts quickly, while at the same time designing your wider systems so it can be scaled up and scaled out in a resilient way. This is my own interpretation of agile, rather than innovation gone rogue, which is when people can pursue the goal of digital development in different and competing ways.”

Transformations paused





Talking of digital development, it seems pertinent to ask how the DfE's digital projects have been impacted by the crisis – and it turns out they have come to a complete standstill. "This crisis has identified two lifeline activities that this department exists for," Alok points out.

"Our first job is about our finance and payment capability – ensuring that money goes out to the education, skills and children services sector. The second is around communication, collaboration and engagement.

This is not just about technology – it's also about our face to face engagement with our national/regional school commissioners, local authorities, the regulators and many other channels. These activities are what the department is really all about, rather than spending huge amounts of money on things like shiny new websites."

This, he believes, means that the pandemic has reminded everyone that tech is an enabler and something that underpins the business, rather than the other way around.

"The fundamental thing is that you can't do digital transformation without having the technology and data in place."

An outsider's perspective

Looking ahead, managing the impact of the pandemic will clearly take precedence in the weeks and months to come. To do that, he will be bringing his experience from the private sector – something that he has valued from day one of starting his role.

"Having this outside experience to call upon has been immensely helpful and I'm not alone – a lot of people have joined the department over the past few years. I think there is a huge value in bringing people in from outside as it helps the DfE shake things up a bit, think outside of the box, think laterally and focus efforts on the things that matter."

For now that means not the nitty gritty of a digital transformation, but rather ensuring how technology can best be deployed to help schools, universities, colleges and nurseries cope with the drastically changed circumstances prompted by the pandemic.

"The whole department is now thinking about online and remote learning and how we can help. It comes down to helping those in most need and those who are most vulnerable and have been left behind. Doing nothing cannot be an option."

View from: the Royal Navy on flagship digital transformation programme NELSON



Sandy Boxall, Director – Defence Digital Transformation at BAE Systems Applied Intelligence, talks to Commander Jim Briscoe about the Royal Navy's digital future

[Click here for the full write up](#)

Commander Jim Briscoe relishes the opportunity to try something new. The need and desire to do things a little differently, to question long-accustomed rules, runs deep. This is probably why he has proven so suited to his role helping oversee NELSON, an innovation programme rapidly accelerating the exploitation of advanced data analytics and Artificial Intelligence in the Royal Navy.

Sure, his technical background and naval experience – on land and sea – has been vital but so, too, has his mindset; the determination to turn the page; the aversion to the status quo and willingness to challenge legacy processes.

A civilian starting point

So, how did Briscoe end up in the Navy? A military calling may have seemed inevitable given the exploits of his father – a navigator in the Royal Navy – but, at least to start with, he opted against following in his footsteps. After studying engineering at the University of Liverpool, he worked in the private sector for about four years.

His first naval role saw him serving as a Deputy Weapon Engineer Officer on board HMS Iron Duke –and, with a fire burning in him for more adventure, he volunteered for a Joint Forces Unit, where he came through a demanding selection process.

The time with the Joint Unit had a strong influence on him. “The experience definitely shaped me, opening my mind to the power of small, autonomous, teams, and gave me more confidence to take risks and challenge norms,” he recalls. “All of which has definitely helped me at NELSON.”

He goes on to say that this attitude is something he would like to impart on his team at NELSON. “The more traditional command and control leadership styles are not enough on their own when working with digital teams,” he says. An approach adopting a laser focus on unblocking impediments for delivery teams, he adds, would greatly help the organisational agility we need to accelerate delivery of technology to the front line.

“It’s about recognising the need for detailed planning to be informed by doing. Hopefully we can bring others with us. I recognised early on in NELSON that we had to create a sense of urgency in order to help transformation.”



“We need to create more of a mindset around giving things a go, taking sensible risks and collaborating, if we are going to achieve the transformation we all aspire to deliver”

Commander Jim Briscoe, Royal Navy

NELSON-bound

There then followed a variety of roles, before the opportunity to join NELSON arose, although at the time it was known as the somewhat less catchy ‘SO2 Data’.

NELSON is rooted in the Navy’s need to accelerate its adoption of cutting-edge technology. But as different suppliers are involved with different systems, data standards can be plagued by inconsistency and silos, and Royal Navy vessels, too, have struggled to reap the digital dividends now on offer.

NELSON aims to change all that. Its main priority has been to construct a “Navy Mind” – a common big data platform – to be used on warships and at naval headquarters, and in a world first, the BETA data platform is successfully undergoing sea trials on a Type 45 Destroyer. Once fully operational, it will transform the analytical capability of a ship’s systems by making all appropriate data available in one environment – delivering better analytics and reducing the costs of integration as technology continues to move forward.

Up and running

The team operates out of a bespoke digital lab in Portsmouth’s Semaphore Tower. “Whilst we didn’t adopt agile processes to deliver the lab, we did encourage the dockyard and civil servants to have an agile mindset in terms of challenging processes and doing things differently in order to deliver at pace. From finalising the vision to moving in took about 15 months and while this pace almost took our seniors by surprise, it was crucial in showing them something modern and unlike anything else in the military.”

From the moment the digital lab opened to much fanfare, Briscoe and his colleagues were dealing with a bow wave of interest from people wanting to understand what the programme is all about. Within seven months they were engaged in every business area of the Navy but here he injects a note of caution – their “One-NELSON” ethos very much extends beyond the programme’s borders.

Interestingly, he says that scaling up NELSON – the team has risen to about 90 people – has meant that to remain Agile it has needed to emphasise its principles and establish it as a values-led organisation, as opposed to being process-led.

“Establishing some values for us as a team was really important, but more important was establishing values that the whole team understood and bought into”

Commander Jim Briscoe, Royal Navy

Briscoe has forged strong relationships with colleagues across the NELSON project – not least his partnership with its director, David Tagg-Oram. “I feel genuinely lucky to have had the opportunity to work on NELSON and to bring me in contact with the people from different backgrounds in our team,” he says. “Working with young, knowledgeable and motivated people like Hannah Green, and particularly David, is a daily pleasure and has proved pivotal to NELSON’s success so far.”

Wind at their backs

So, what’s next? A long term ambition is, of course, to have the NELSON platform being operational on more major surface combatants – “over the next two and a half years we’re aiming for a larger proportion of the fleet than the carrier strike group” – but he also wants to expand efforts in all services of the Royal Navy, Marines, Fleet Air Arm and the crucial underwater battlespace.

And by no means does he think it will be job done when the NELSON platform is operational on all warships. “Ideally, what I’d like to see is us having uniformed personnel who are part of development teams, learning code and inputting their domain expertise, before they utilise this knowledge while out on deployment and helping to support and iterate applications in near real time. That level of agility in capability upgrades is something we should aspire to. Bringing more people into the development cycle early on powers transformations and this is the model I’d like us to get there eventually – at scale.”

Only time will tell if this vision becomes reality – but such has been the pace of progress so far, few would bet against it.

View from: the MoD on how to transform cyber defence and risk



Mivy James talks to Christine Maxwell – Director, Cyber Defence and Risk at the MoD

[Click here for the full write up](#)

Christine Maxwell hasn't risen to senior positions at KPMG, BP and RBS, as well as her current role as Director, Cyber Defence and Risk at the Ministry of Defence (MoD), without fierce intelligence and curiosity.

Maxwell's approachability belies the gravity of her role, however. She is directing defensive cyber for everything cyber related across the full spectrum of Defence in the UK. So all agencies, all organisations, all units. No wonder she says that she's "never worked as hard in my life".

Hitting the ground running

Prior to Maxwell coming on board, the MoD's cyber activities were handled by different teams and in different ways. "There were lots of people doing bits of it but it was described to me as 'a leg of the stool was missing' because it was always just a bit wobbly as the direction wasn't always clear," she explains. "So it's my job to bring all these elements together and make sure we're going in the same direction and mitigating that risk."

Maxwell, it's important to stress, is no novice. Her time in professional services, as well as oil and gas and banking, has exposed her to broad leadership and security governance, risk and compliance, as well as the challenges of leading large-scale transformation programmes.

And why was cyber defence not being focused on previously? "Because no one was fighting for it across the cyber framework. Lack of leadership was probably a core of it. I'm only one person and I haven't got a big army of people to help me, yet, but it's amazing what you can do when you do think strategically and in the right order."

A question of priorities

Another area of focus has been ensuring that cyber gets an equal amount of attention as more traditional Defence-related activities. It may lack the visibility of a new warship or helicopter fleet, for example, but it is no less important – particularly as the armed forces pivot towards all things artificial intelligence and machine learning.



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“People recognise the challenge and the impact cyber can have on Defence but is it embedded yet? Is it entrenched into the ways of working and compete against other items? Then no, we’re not there yet.”

Christine Maxwell, Director of Cyber Defence and Risk, Ministry of Defence

She is keen to stress, though, that she does not lack for support from her superiors – on the contrary. “Senior leaders have told me that this just needs to be seen as part of the course of normal business now, it’s just like finance, legal and all those bits that we take for granted.”

The transformer

Maxwell’s activities – themselves transformational – are occurring alongside the MoD’s wider digital transformation agenda, which adds another layer of complexity to overcome. But rather than flinch at what lies ahead, she prefers to see it as an opportunity. “Each new technology has their own set of cyber challenges for us to overcome but does this mean we can leapfrog in some areas? There is an opening there for us to make up for lost time.”

She is clear, though, that there is much to do and cites the example of identity management to illustrate her point. “When every equipment programme has to build some capability, it will build their own mechanism for identity management because there is nothing central for them to dock into,” she admits.

“So, we need a central capability and also make it compulsory for teams to use it as that would be the master identity and they shouldn’t build their own. This would save millions. It comes down to doing Secure by Design properly. This is one of my mantras and it’s about ensuring that cyber security is built in right from the outset on anything we’re doing, even from when it’s a twinkle in someone’s eye.”

Also on her radar is working with defence suppliers to inject greater flexibility into the procurement process, particularly when it comes to ensuring that new equipment programmes are as secure as they can be. “This is where I feel we could get better,” she admits.



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Looking forward

Maxwell has clearly come a long way from her accountancy days but she believes that her transition into cyber security merely reflects the need to always be open to new opportunities and interests. With that in mind, her advice to girls pondering a career in this area comes quickly.

“Don’t be frightened,” she says, firmly. “You don’t need to be super technical to do all the jobs in cyber security. It’s a business problem, not a technology problem. You absolutely don’t need a background in computer science.”

This advice reflects her objectives for the years ahead. Sure, the technical side is vitally important, but it is also about the bigger picture. “I want us on a stable footing and to get us working together across the whole of Defence so that we’re actually making a difference,” she says. “There will always be risks but there is so much we can mitigate. Things like why are there no cyber awareness posters on the walls here? We need to get it in people’s faces so that they are more cyber aware – let’s stop mucking about, it’s not difficult. Progress can be made but you have to do these things one by one.”

And for Maxwell, there is no doubt that she thrives under the pressure to get things done. “You really are making a difference here,” she concludes. “It takes me 40 minutes on the train to get to work – should I read something, listen to a podcast or write two or three complex emails? The emails always win out. From a work-life balance I know that that’s wrong, but it all comes down to making an impact.”

It’s quite the responsibility – but it’s clear she wouldn’t have it any other way.

“We need to get it in people’s faces so that they are more cyber aware – let’s stop mucking about, it’s not difficult. Progress can be made but you have to do these things one by one.”

Christine Maxwell, Director of Cyber Defence and Risk, Ministry of Defence

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Thoughts from an agile coach: why transformation means business agility

John Cumming, Agile Coach at BAE Systems Applied Intelligence asks how organisations can adapt to rapidly changing times

[Click here for the full write up](#)

Large change programmes used to be about transition. Digital Transformation, though, is very different. Here, we're talking about a process of continuous change, something that requires Agility because you can't do it once and you're done – you're never done. If transformation is about change and change is constant, transformation should be also be constant, not just a project or single outcome.

There is also a secondary effect of change – uncertainty. If the pace of change in knowledge is high, the volatility of that knowledge is too. Or looked at another way, the uncertainty is increasing. When change is ricocheting all around us, how can we know with any degree of certainty about what the future might look like?

Although we need to be comfortable acting amidst uncertainty, we must also look for a means of increasing clarity and understanding more rapidly through learning.

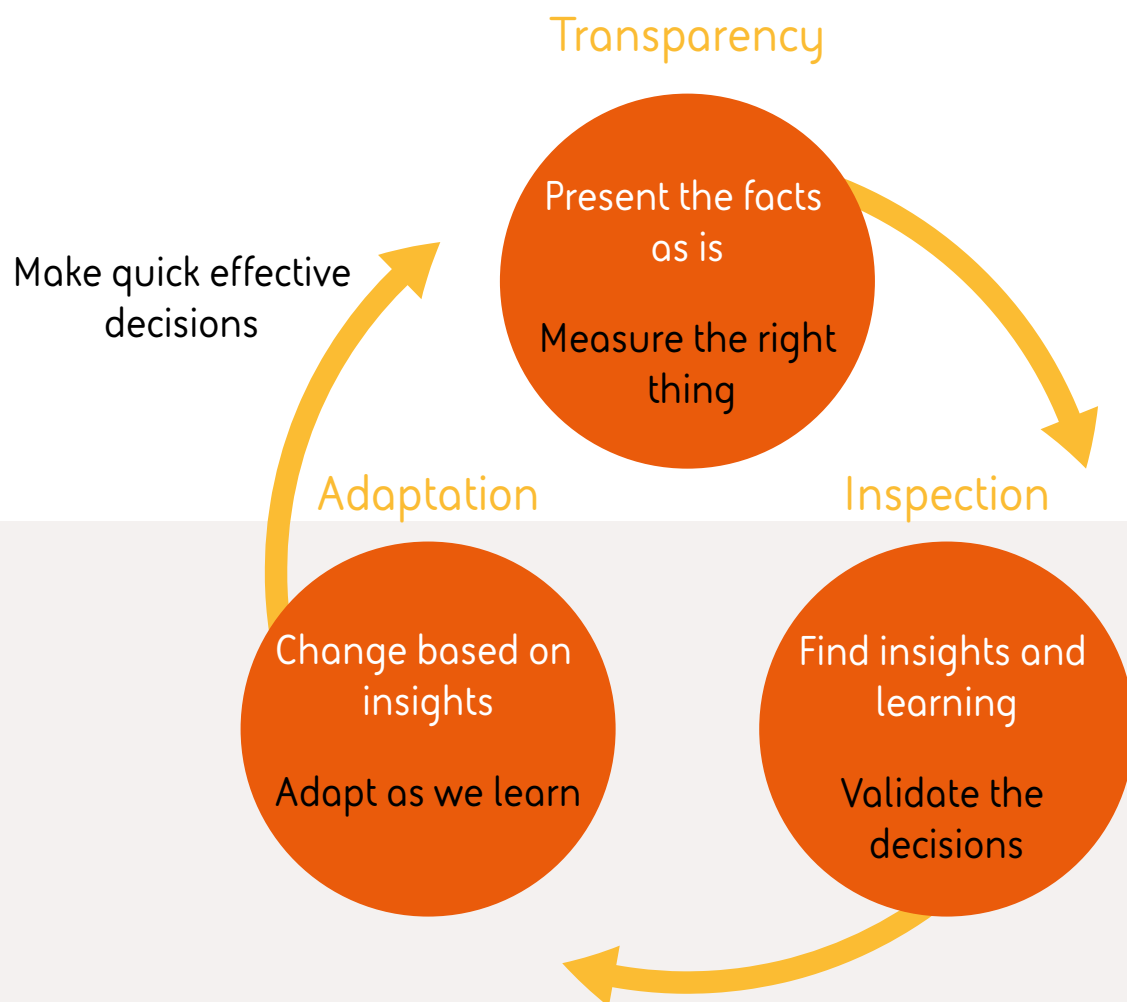
Transformation as capability

Transformation must be viewed not as a project or outcome but as a capability to adapt in response to increased understanding. If we consider transformation as a transition from an as-is to a to-be state, we risk finding ourselves in need of another transformation further down the line. The reason organisations find themselves in this situation is often because they have considered transformation in this way in the past.

People are the heart of transformation

Transformation must be rooted in all our people. We need to ensure that we are focusing on the right things. We need to enable decision making at the right level, enabling those with the information to make the decision, with the safety to be wrong as well as right.





Transformation is business agility

Fundamentally, we need to recognise the value of learning as central to transformation capability. For many this is what agility is all about. Enabling people to deliver value to the business continuously through rapid learning, within an environment that is supportive and safe in which to make decisions and learn through both successes and failures.

Transformation is, I believe, about becoming an agile organisation. It is about core learning capability where change and uncertainty is inevitable in the environment and context we find ourselves.

Our conclusions to date: is it all about agile?

Mivy James, Digital Transformation Director, National Security and Defence, BAE Systems Applied Intelligence

As agile becomes increasingly embraced as a development methodology within government circles, the conversations outlined in this eBook have started to trace just some of the key themes emerging around the topic.

Agile delivery isn't underpinned by daily rituals, it's driven by conscious decision making. Each and every decision is made at the exact right level with the right amount of trust and governance. Now we're in a COVID-19 era where people are trusted to work from home, decisions need to be made by fewer people, by democracy rather than consensus, and focusing on the business drivers. Having a shared understanding of what success looks like in order to achieve the desired goals – is crucial for building a culture suited to change.

It's clear there are many positives to working within an agile framework. After all, as Chris Hesketh has rightly pointed out, "It's hard to argue against an approach which uses sound architectural design and build principles to enable the rapid delivery of new capabilities and ongoing adaptation of government services."


But it's a method that the government sector has taken time to embrace, and for several sound reasons. As Major General Copinger-Symes has pointed out, it's important to take into account the natural challenges of changing large organisations of any stripe, as well as the rules government organisations are bound to for commercial contracts. Defence may possess its own unique characteristics, but its very size and complexity means that its evolution will not be ever be quick or straightforward.

There are several considerations that need to be taken into account before any organisation switches to agile. One is certainly around governance: understanding how change can be governed properly, and asking how rapid transformation can be delivered within an organisation that traditionally works within a different set of processes, is crucial for any agile practitioner looking to make an impact. Another, as Commander Jim Briscoe explained, is around culture – in fact a large part of the agile equation for the Royal Navy has been about creating "More of a mindset around giving things a go, taking sensible risks and collaborating."

So the military may not always embrace the agile lingo of DevOps, sprints, guardrails and so on but that doesn't matter. There's an opportunity to bottle operational excellence and bring it back into change delivery – ideally without someone needing to recreate any sense of physical danger.

It seems that for many of the leaders we have spoken to thus far, the answer to getting agile right lies not in sticking rigidly to a purist's approach, but in first addressing an organisation's unique digital transformation requirements – in terms of goals, culture, existing working practices and wider context – a fact that has led Alok Raj to talk about his "own interpretation of agile," and Christine Maxwell to consider the topic strictly within the MoD's wider transformational agenda.

What's clear is that where agile is most successful in government, it has all the hallmarks of its teams, its leaders and its environment. There is no 'one-size-fits-all' approach.



There are still plenty of questions to be explored on the agile front – not least around the issue of the impact of agile on diversity and inclusion. How can daily stand ups support a truly diverse workforce, for example – one with colleagues that may need flexible working hours or, indeed, be unable to physically stand up at all?

Arguably, as is the case with much of the world in 2020, the COVID-19 pandemic has forced many organisations to face these questions head on. We've simply all had to adapt, flex the rule book, and embrace a new era of digital transformation – at a rate never previously seen before. As Raj Alok explained in his interview, adaptability has been (and remains) crucial.

Agile, then, is a foundation upon which we can build and develop effective and truly exciting transformative programmes. It is a means, but not the end goal itself. And it certainly won't work if one part of an organisation works in one way and another seems set on a different MO – that isn't a way to foster trust and is guaranteed to cause tensions.

Digital transformation, after all, is never complete. As John Cumming has surmised, it is "A process of continuous change, something that requires agility because you can't do it once and you're done – you're never done. If transformation is about change and change is constant, transformation should be also be constant, not just a project or single outcome."

[You can find out more about our problem-solving approach to digital transformation here.](#)

"At BAE Systems Applied Intelligence we understand that digital transformation within high-trust environments such as government faces unique challenges. We work closely with organisations to build secure digital transformation journeys that support their unique missions – from learning how to benefit from Secure Cloud, to embracing emerging technologies."

Sandy Boxall, Defence Digitalisation Director at BAE Systems Applied Intelligence

Continuing the conversation

Just like most other organisations out there, we are continuing on our own transformational journey. This collection of interviews and conversations – among others – has allowed us to be open and honest about our progress so far, and share our views and experiences. But we won't be stopping here.

We are grateful to all individuals and organisations who have taken part in our discussions about digital transformation and the role of agile, and we welcome feedback and input from others too. In fact, we have had too many fascinating discussions to include everything in this eBook, so please explore the growing range of conversations on this topic by browsing the list below.

With special thanks to our customers and industry experts:

- [Major General Thomas Copinger-Symes, Director of Military Digitisation, UK Joint Forces Command](#)
- [Christine Maxwell, Cyber Defence and Risk Director, MoD](#)
- [Alok Raj, Chief Architect and interim Chief Technology Officer, DfE](#)
- [Commander Jim Briscoe, Royal Navy](#)
- [Brigadier Dan Cheeseman, Chief Technology Officer, Royal Navy](#)
- [Dr. Paul Kealey, Division Head for Cyber and Information Systems, Dstl](#)
- [Adrian Bailey, Head of Intelligence Systems, MoD](#)
- [Graham Camm, Head of Technical Architecture for Biometrics](#)
- [Captain Jules Lowe, Head of Navy Innovation, Royal Navy](#)

Take part

To talk to Mivy James about agile and digital transformation, or to take part in this interview series, get in touch today.

mivy.james@baesystems.com

[Visit our digital transformation page](#)



About the author:

Mivy James has been an IT professional for over 25 years. Prior to joining BAE Systems Applied Intelligence in 2005 she worked for several international IT consultancies and corporations.

Mivy started her career as an analyst / programmer after completing a degree in

Computer Science and Maths and soon moved into technical leadership and system design. Mivy has worked for a range of clients across UK government on everything from cutting edge technology research to the strategic design of multi-billion pound programmes.

Mivy is enthusiastic about technology and particularly keen to encourage women to follow careers in the IT profession, she is the founder and chair of Applied Intelligence's gender balance network.

Outside of work Mivy pursues a variety of hobbies including travel and outdoor sports whilst also trying to prevent her young son from wrecking himself and / or his surroundings.

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