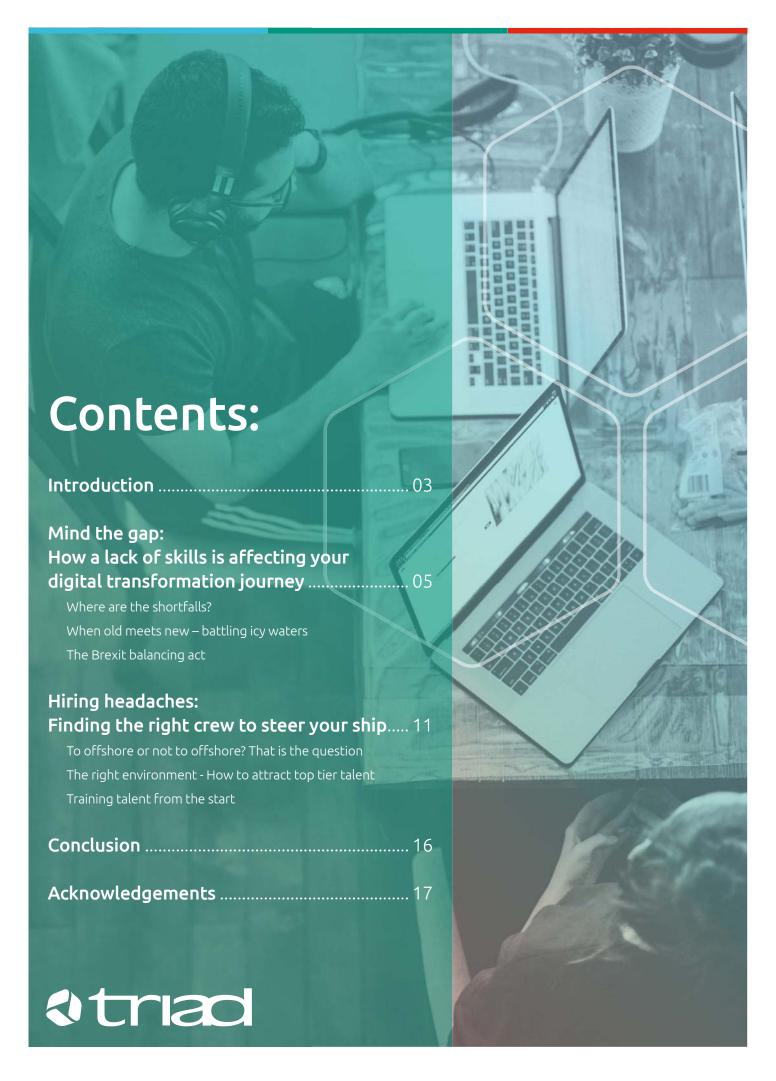




PRODUCED BY

Pach Pros.io





Sir Ernest Henry Shackleton was a British polar explorer¹ famed for his Trans-Antarctica endurance expedition in the early 1900s. The story of his incredible journey is one of leadership when disaster strikes over and over again. Ahead of his voyage, a newspaper advertisement that is widely believed to have been written by Shackleton was published calling for men to accompany him. It read:

"MEN WANTED: FOR HAZARDOUS JOURNEY. SMALL WAGES, BITTER COLD, LONG MONTHS OF COMPLETE DARKNESS, CONSTANT DANGER, SAFE RETURN DOUBTFUL. HONOUR AND RECOGNITION IN CASE OF SUCCESS."

www.coolantarctica.com/Antarctica%20fact%20file/History/Shackleton-Endurance-Trans-Antarctic_expedition.php

The dilemma modern businesses face when trying to find the right skills may sometimes feel a little bit like this. You're all set to head out on your digital transformation journey. You understand that times will be tough and that success is far from guaranteed. And, like Shackleton, you need the right people to help you take on the challenge.

But where do you find them?

Keen to discover how the digital skills shortage is affecting businesses today, we conducted over 100 interviews with digital, technology and recruitment professionals from a wide range of industries. This eBook will showcase their insights, highlighting how a lack of digital skills is affecting their businesses and showcasing what they're doing to attract and retain top talent.

Keep reading to find out what they had to say.



Mind the gap:

How a lack of skills is affecting your digital transformation journey

In 1911, a Norwegian explorer called Roald Amundsen shattered Shackleton's dreams of becoming the first person to set foot on the South Pole. So Shackleton set his sights on another target: crossing Antarctica via the South Pole. But in attempting a feat that no one had ever done before, it was tough to know what awaited them. When Shackleton² set out on his Trans-Antarctic Expedition in 1914, on a boat called the Endurance, he and his hand-picked crew of 28 had no idea what lay ahead. It wouldn't be long before their ship became trapped in ice, leaving the crew stranded for close to 500 days.

"After long months of ceaseless anxiety and strain, after times when hope beat high and times when the outlook was black indeed, we have been compelled to abandon the ship, which is crushed beyond all hope of ever being righted," Shackleton wrote about the experience.

When it comes to the global digital skills shortage, business leaders often feel out at sea because each one is forging their own, new path. There's no prototype or roadmap for

70%



According to Gartner⁴ some 70% of employees have not yet mastered the digital skills they need for their jobs today.

success. This results in a general lack of understanding around what skills are actually required. And if you think the digital skills gap³ doesn't affect you, think again.

Understanding the extent of the issue requires a very simple calculation, explains John-Paul Edwards, CDIO at Foresters Financial. With uptake of new technologies growing at an incredible rate, the global workforce needs to update their skills at a similar pace in order to keep up. What can make this issue more complex is the fact that the skill sets an employee needs to thrive within one organisation may not be the same as those needed to succeed in another.

²www.biography.com/people/ernest-shackleton-9480091

³ https://diginomica.com/mckinsey-the-digital-skills-mismatch-is-going-to-get-worse-as-cognitive-automation-intensifies

⁴www.gartner.com/smarterwithgartner/motivate-employees-to-reskill-for-the-digital-age/

Speed is key in today's busy market, notes Beth Rowland, global head of recruitment transformation at BAE Systems Applied Intelligence. If you're not innovating as fast as your competitors, your customers will notice and it's likely that they'll go elsewhere. Rowland asserts that it is about being able to identify what roles can have the biggest impact on the business. We now have a differentiated approach to hiring, not all roles are created equally, some clearly have more impact on revenue and customer satisfaction than others. Having an understanding of the talent landscape and being able to engage the right talent as quickly as possible, that's what really makes the difference for us as a business, she explains.

75%



Research from Deloitte⁵ reveals that over 75% of business executives are experiencing issues when it comes to digital recruitment.

Often, we get all excited about a particular competency or skill but by the time we actually hire people with these skills, the challenges they address are no longer relevant. So you constantly need to be securing and developing your capabilities to stay ahead of the game, adds Rowland.

Where are the shortfalls?

The conversations we had with IT experts revealed a mixed bag.

We want to build really good, engaging and interactive software

but it's very hard to find the right people to do so, says Tom Collins, head of digital at Good Energy. Predominantly we're after developers and, in particular, mobile developers. We've actually brought our mobile app development work in-house in the last couple of months, he notes. That's going well, but we've had to get several contractors involved because finding the right permanent staff is a massive challenge.

Having done quite a lot of technology reading, Rick Farrow, CTO at Nuclear Decommissioning Authority, believes the main skills that are lacking are around cloud and distributed computing, statistical analysis, data mining, middleware and integration software. These are competencies we've needed in vast amounts over the past 12-18 months, he says. And as is the case with supply and demand, when something is in low supply, prices go up. According to Farrow, the dearth of skills means that they've often had to pay above the market rate to secure the talent they need.

Scott Hanchett, head of digital delivery at Ricardo, agrees. Their troubles stem from the fact that people with sought after skills know that they can earn three or four times their salary as contractors rather than working on a permanent basis. This leads to continuity issues, notes Hanchett. Companies are forced to use contractors more and more because the expertise within the permanent market simply isn't there, he adds.

⁵ www.ignite.digital/uk-digital-skills-gap-infographic/

The security side of any digital business is becoming a lot more important nowadays, says Nico Dontas, technology talent acquisition manager at Funding Circle. As such, the biggest skill shortage right now is anywhere that sits within that security space. Having said this, Dontas doesn't necessarily feel that this holds companies back. It is actually about competition for the same type of people that is holding companies back.

"There is a lot of competition for the same skill set. And if companies aren't willing to be more open about what they're looking for, they are going to struggle to secure the right talent."

The technical skills may be important but it's about how those competencies translate into the customer experience that really makes the difference, the CIO of a British ecommerce business points out. Becoming a specialist in technology is something that can be taught, but we also need to focus on making sure that the technology hits the right notes with our customers. It is the adoption aspect that must really be landed properly so that you don't end up spending a lot of money on developing another piece of technology that misses the mark.

John-Paul Edwards, CDIO at
Foresters Financial shares this
sentiment but he also believes
that it is vital to devote attention
to the other side of the coin – the
employee experience. This goes
beyond just providing skills and
training. It's about digital literacy and
empowering individuals so that they
are familiar with, and comfortable
using, the different digital tools,
web-based apps and systems that
are the cornerstones of your digital
transformation success.

£140 billion



An Accenture⁶ study suggests that a failure to close the digital skills gap could see the UK economy losing over £140 billion of the GDP growth promised by new technologies over the next decade.

When old meets new – battling icy waters

While most businesses understand the importance of having the latest technologies, and the value of evolving their digital strategies in order to stay competitive, old tech can be a hurdle. According to a Vanson Bourne and SnapLogic⁷ survey of 500 IT companies in the UK and US working across

23%



A 2016 UK parliamentary report, 23% of the UK population, roughly 12.6 million people, lacked basic digital skills, at a time when about 90% of new jobs require them.

various industries, 55% of the respondents cited an over-reliance on legacy technology, and a lack of the right tech tools, as one of the biggest challenges to their digital transformation efforts. The same survey revealed that internal politics and cultural resistance only exasperated these problems.

Banks are a great example of a business with lots of legacy systems, says Dontas. He believes this is why they are constantly struggling to compete with the younger generation of businesses, those that kicked off with much newer and more advanced resources. Most banks have to deal with an intricate

web of modern software interwoven with legacy systems, which means that their IT systems are highly unstable. If your legacy systems are nearing end of life, and you're feeling the impact of this, it may already be too late to make a change, Dontas cautions. Businesses must be thinking far in advance and putting transformation plans in place before it gets to this point.



www.snaplogic.com/resources/infographics/busting-through-digital-transformation-roadblocks



For Edwards, this has been an ongoing issue at their organisation; even before people started talking about the digital economy and digital skills shortage. About 15 years ago, there was a huge shortage of mainframe skills, he says. We had a lot of legacy systems and found ourselves struggling because there were suddenly no mainframe skills available.

Hanchett is addressing the issue by adopting what the industry calls the "Strangulation Approach". As the team works on particular part of the system, they will replace it with more up-to-date technology. So, incrementally, you start to strangle the old system out, he explains.

It's not only about how old the technology is, notes Collins. For example, their biggest challenge has been integrating a new mobile application with the business' existing billing system. On the one hand, you could consider this billing system a "legacy" application but actually it's only 18-months old and is constantly being updated. He asserts that legacy stumbling blocks are as much about a mindset as they are about a technology stack.

The effects of an ageing UK population could see almost 3 million jobs left unfilled by 2030, data from Korn Ferry⁸ shows.

THE BREXIT BALANCING ACT

With the United Kingdom's withdrawal from the European Union (EU) on the cards many businesses are concerned about the knock-on effects should Brexit go through. Unsurprisingly, access to skills is one of their worries.

Essentially, Brexit paints a city like London as an unattractive place to be from a hiring point of view, suggests the CIO of a British ecommerce business. This makes it more challenging to attract the right talent with the right experience, which is a major concern.

According to Nico Dontas, from Funding Circle, we're already seeing the effects of this. In the past, we'd speak to people who were jumping at the chance to move to the UK. I think the uncertainty, as a whole, is pushing people away and causing them to consider working at other tech or digital hubs around Europe, he adds.



Hiring headaches:

Finding the right crew to steer your ship

When Shackleton set out on his historic expedition he took a diverse group⁹ of people along with him. From zoologists, engineers, firemen and geologists to pony and dog minders, meteorologist, surgeons and cartographers. He did so because the success of the trip wasn't only about steering a ship. Shackleton needed a team with a diverse mix of skills and a crew made up entirely of sailors or explorers may struggle if they had to handle some sort of animal emergency or if they were tasked with forecasting the weather.

Modern businesses face a similar dilemma. With the tech space changing at such a rapid pace it is becoming ever more difficult to define what skills are most needed.

Currently, we're getting CVs that we have to turn around on the same day or we lose out, explains Scott Hanchett, head of digital delivery at Ricardo. Our HR team will get in touch with the person within 24-48 hours only to find out that they've already accepted another position elsewhere. We're finding this more and more in the senior positions. "If we're not dynamic enough to respond to that, then, we're falling behind."

We have functional roles that support the business and roles that we describe as being more "critical", notes Rowland. These critical jobs are revenue generating or they are very specific roles that are required for a project, without which it wouldn't be possible to move forward. To secure these critical roles we allocate the most resources and the most sophisticated sourcing strategies. We have invested heavily in upskilling our business facing recruiters and adding additional capability to the team so that we can better manage channels, attraction, social media, sourcing and candidate care. I feel the days of a "360 recruiter" are gone, a generic approach is no longer delivering.

It's all well and good if people have got the technical skill but I'm really interested in how they tackled an idea and made sure their work had positive results, explains the CIO of a British ecommerce business. When hiring people, I want to know how they made sure that the tools they developed were adopted and successful. It's that blend of the technical skill and results that really stands out for me.

⁹ www.coolantarctica.com/Antarctica%20fact%20file/History/antarctic_whos_who_endurance.php

To offshore or not to offshore? That is the question

So how did Shackleton and his crew survive their icy situation? They set out in search of help. After their ship sank, Shackleton and his men climbed into three small boats and headed on an escape mission to Elephant Island. Unfortunately, the island sat far outside normal shipping lanes and left little chance of rescue. So Shackleton led another team out on the water again. This time they were heading for South Georgia where Shackleton would ultimately trek to a whaling station to find the assistance he needed to rescue his crew. It was only through Shackleton's strong leadership and incredible resilience that the entire team survived the ordeal.

Finding the right people to alleviate your skills woes, and enable your digital business, can be tricky.

Hanchett only farms out very discrete pieces of work to offshore partners. He does so because he believes that offshore teams must have a strong understanding of the environmental domain across a range of sectors. Having that body of knowledge includes understanding the needs of the business and their clients. "I think that's where a lot of projects have the potential to fall down in our industry. Most of our competitors appear to be partnering with external organisations to supplement their own capacity issues", he notes.

We do this for particular niche projects that don't require much of an understanding of the domain, or the data being handled. Other instances might be where we have a skills gap. However, we have so much repeat business, and deal with very environmental domain specific projects handling scientific data, so it is key for us to build up the knowledge of our own internal teams. This knowledge is imperative for all the work that we do. "Just having somebody come and go is not conducive for the level of continuity and deep understanding we're after."



THE RIGHT ENVIRONMENT - HOW TO ATTRACT TOP TIER TALENT

One consequence of the global skills shortage is that those who have the competencies that most people want will have the pick of the litter when choosing where they want to work. This puts pressure on businesses to offer a better working environment, and often more money, than their competitor down the street.



For many of the people we chatted to, creating the right work environment is crucial.

Tom Collins and the team at Good Energy believe that improving their office space was the ideal starting point. He believes that their location is not about the nicest, most up-to-date office spaces in the world. We're constantly working to make the space a better place to be on a very practical level, but we're also offering employees a higher degree of flexibility. We're currently piloting a highly flexible working arrangement across the IT and digital departments within the business.

We've just opened our flagship office; a space where people will walk in and instantly feel invigorated, creative and innovative, notes a C-level exec at a British ecommerce business. We've reached a point where we are extremely proud of the environment we've created.

For Edwards, retaining talent is all about asking: How do I attract people? How do I hire for digital skills? How do I retain the next generation of talent? How do I improve employee experiences? How do I improve workplace collaboration?

I think both approaches work, but if you do go down the path of outsourcing, you have to be willing to provide significant investment upfront, explains Rowland. Nailing the processes, the engagement model, the governance and being able to flex the solution to meet changes in business demands is key. Ambiguity is the killer of success. Make sure you take the time to find the right people in the marketplace. If they are sitting remotely, they need to be high calibre, they need to stay focused and motivated and they need to be strong communicators. From my experience, the companies that haven't fared so well with offshoring are the ones that have outsourced their problems and in doing so have taken their eye off the ball, which yields mediocre results, she says.

For the CIO of a British ecommerce business, having teams across the world makes it possible to leverage longer working hours. You are able to start work very early in the morning with your development teams in the east and then later into the day you can make progress working with your teams in the west. In this way, you can double the amount of work you do by stretching teams across the globe. While we often fear outsourcing because our teams are so far apart, one mustn't assume that because people are in the same room they will communicate more effectively, this exec points out.



Most of us want to build up capabilities in-house but the reality is that it will take anywhere from 18 - 24 months to truly reap the benefits of these new skills, explains Edwards. "I can't afford to sit around for 18 months and not make any innovative changes while I train people up," he says, noting that this is where outsourcing, tapping into strategic partners and buying in temporary talent offers a viable alternative. These approaches should be used alongside coaching and training existing teams.

While attending a recent CIO conference, Farrow learned that outsourcing is actually set to slow down over the next two years. He believes that this is because most of the tasks that can be outsourced already have been outsourced.

If you look at the businesses that made Fortune's list of top 500 global companies back in 1955, nine of every 10 companies no longer exist¹⁰. The reason being that a number of these organisations failed to transition to the world of Internet-based business in the 1990s. Review Forbes' current list and you'll notice that many of the big players didn't exist 20 years ago and found favour in response to the rise of the Internet and digital disruption. This shift towards digital business models and the adoption of modern digital infrastructures demands that businesses find people with the necessary skills to ensure they aren't one of the businesses that get left behind.

¹⁰ www.forbes.com/sites/steveolenski/2016/06/08/adapt-or-die-the-dangers-of-hanging-onto-legacy-technologies/#5b9125ae51c1



TRAINING TALENT FROM THE START

Many of the interview participants noted that addressing this skills issue has to start at the bottom – with education. If, for example, we worked with tertiary and secondary institutions, investing time and effort into ensuring that young people are getting the right training, we'd end up with the expertise we need, says Good Energy's Tom Collins. An added benefit for those who adopt this approach is that they raise their profile as a business so that students are keen to come and work with them when they leave university.

We do a lot of work with universities, explaining what we do and why it's an exciting place to work, says the CIO of a British ecommerce business. A big issue is a lack of understanding around what different tech roles actually entail. When you speak at secondary or tertiary institutions about a career in tech, people immediately think that they have to become a developer. Whenever we talk to graduates about roles in tech, we always want them to understand that there are so many different aspects of this industry

It is important to encourage the youth to pursue tech/digital jobs from a young age, notes Nico Dontas, from Funding Circle. It's about making young people interested in this field, as well as giving them opportunities once they're at a point where they can start work, be it in the form of internships or apprenticeships.

Conclusion

Final Thoughts from Adrian Leer, Triad MD



Arguably, the skills shortage topic has promoted the highest level of discussion yet. It doesn't matter which side of the technology supply fence you find yourself occupying, a general lack of skills is constraining businesses and impeding digital progress.

Shackleton's efforts would have had far worse results were he not able to pull the right team together. At Triad, we're actively working to recruit a highly skilled "support crew" as we attempt to double the size of our consulting team within the next year. But this doesn't mean that we're relaxing our standards when it comes to digital talent, we're simply changing our tactics. We believe it's important to continuously refine our candidate recruitment techniques, using the power of networking and the lure of local radio as two separate examples of how we are drawing in new talent.

I was struck by some of the challenges digital leaders are facing and my own thoughts on the survey were that industry needs a new breed of technology partners, with a service offering geared to help them respond to client needs. While it is important to provide strategic advice, individual specialists and software delivery teams, it's just as critical to recruit permanent and temporary resources into client organisations. In many of our engagements, we embrace a blend of all these options.

Our most productive relationships with clients tend to be those where the shape and size of our service dovetails perfectly with their demands in a way that maximises efficiency while driving the velocity of digital transformation. For me, this flexible engagement model is the ideal approach to enable today's "Digital Shackletons" to pursue their quest at slightly less risk than their forebears.

Thank You

We'd like to say a big thank you to all those who contributed to this eBook. From making time to participate in the interview process to sharing your valuable insights, your participation played an integral role in putting together this eBook.



Acknowledgements



Beth Rowland Global Head of Recruitment Transformation **BAE Systems Applied Intelligence**

With 20 years in Talent Acquisition and HR Change around the globe, I have worked in transforming Recruitment/HR services with a keen focus on business impact. I have worked in many sectors, including Technology, Banking, Education and more recently Cyber Security and Defence. I have developed innovative solutions to complex talent scarce markets, driving efficiency and cost, without compromising on quality. I am passionate about people and nurturing them to be the best they can be and believe diverse teams deliver the best outcomes.



John-Paul Edwards Chief Digital Information Officer Foresters Financial John-Paul joined Foresters as Chief Digital & Information Officer. He leads the digital, data and technology operation, delivering business solutions to improve customer experience and meet the demands of today's digital business. John-Paul has a strong international background in business operations and transformation having held senior executive roles in leading technology consulting and software firms. John-Paul has significant experience in general management and financial services over a 23-year career.



Nico Dontas

Nico has been working in Talent for over 7 years working for high growth Tech companies who hire the best technical talent worldwide. Nico has a wealth of experience working across the globe with international workforces. Specialising in the IT and Technical sector across all IT domains.



Rick Farrow Head of IT Morgan Sindall

Highly capable results driven C-suite executive, with broad experience and a sustained record of success in B2B Engineering, Energy and Nuclear. Extensive background in leading corporate organisations, managing complex IT transformation programmes to achieve strategic objectives, driving systemic business change. An inspirational leader who creates robust IT strategies, translating business outcomes into value-driven IT frameworks, underpinning business transformation. Strong analytical, technical and commercial acumen coupled with exceptional communication skills.



Scott Hanchett Head of Digital Delivery Ricardo

Scott Hanchett is Head of Digital Delivery at Ricardo Energy & Environment. Scott provides strategic leadership for a team of digital professionals and has a background in innovating, defining and leading on client initiatives that deliver business' digital needs. Scott has over 13 years' experience as an IT management and project management professional, during which time he has delivering complex highly transactional software solutions for clients internationally. Scott has a passion for innovative tech and leading cross-functional teams to deliver such projects profitably



Tom Collins Head of Digital Good Energy

Having helped to grow a number of Fintech startups in the south west of England, Tom moved to Good Energy in 2017 to develop their digital strategy and grow their capability in providing digital experiences to customers. Tom's background brings together digital design and development expertise with marketing and commercial experience to help businesses to compete more effectively in a digital landscape.

Thanks to other participants

Graeme Howard	Group CIO Santa Fe Relocation Services
Abby Ewen	IT Director BLM LLP
Bhanu Chawla	Head of Digital Cornerstone OnDemand
Les Kerjenski	Head of IT Services Ascend Learning
Dave Vincent	Chief Digital Officer Invest Northern Ireland and Tourism Northern Ireland
Andrew Watson	Chief Technology Officer MHR
Jennifer Swain	Head Of Talent Acquisition Clipper Logistics
Jenny Briant	Head of Academy Recruitment Ten10 Solutions
Adam Miller	Group Head of IT Markerstudy Group
Richard Hodkinson	CTO DWF
Els Hol-Ferman	Head of Recruitment Access
Conor G. Smyth	Head of IT Services GSM
Peter Hros	Lead HR Development and Operations Partner Instinctif Partners
Mark Hill	CIO Frank Recruitment Group
Caspar Below	Head of Digital Shelter UK
Mohamed Sakher Sawan .	Head of Technology GBG Plc
	Head of IT & Digital Acorn Recruitment
	Senior Manager NewDay
Martin Hamilton	Futurist Jisc
	Recruitment Manager Immunocore
	Commercial Director Redcentric
Daniel Alheiros	
	Talent Acquistion Manager - Technology Funding Circle
•	Head of IT Services and Operations Ideal Shopping Direct
	Director, Talent Acquisition Sitecore
	Global Chief Architect IFS
	Head of IT Security and Risk N Brown Group
•	Talent Acquistion Manager ao.com
	Group Chief Technology Officer Cambridge Assessment
	Group Operations Director Peninsula
David Morris	Technology Assurance Director RSM UK

Pawan Nandrajog	Director of Digital Transformation Infosys Consulting
Symon Hughes	Interim Head of Resourcing Kambi
Darrin Shaw	Global Head of ICT Mayborn Group
Michael Bisaro	Head of Distribution Transformation & Specialist Units Swinton Group
Matthew Bellringer	Head of Platform Development University of Sussex
Lorna Willis	Executive Director, Digital & Insight Archant
Jim Lee	Digital Director Time Inc
Dave Cook	Chief Digital Officer Croda International
Michael Litterick	Head of Architecture Aimia
Jo Hamilton	Head of Digital Home Group Ltd
Mark Clare	IT Strategy and Transformation Lead NEX
Bal Bharma	CIO Noble Foods
Marco Pinheiro	Master Data Management Programme Director Brammar Group
Michael McConaghy	Commercial Director Gig Qwik
Antony McCandless	Chief Digital Operating Officer Thames Water
Mark Bramwell	CIO Said Business School - University of Oxford
Paul Amor	Head of Transformation and Operational Change TLT
Krish Pilicudale	Head of IT University of Huddersfield
Sian Brown	Head of People FitFlop
Lawrence Lilley	Associate Director - Digital Design University of Salford
Martyn Wells	IT Director Wright Hassal LLP
Alan Crawford	CDIO Shaw Trust
Stephen Faulkner	Principal Solutions Architect NTT Security
Fraser Brown	Director of Global IT & Security Wood MacKenzie
Torquill Pagdin	Director, Technology (Data Engineering) Hotels.com
Joe Hughes	Head of Digital Solutions & Marketing Newsquest
Mike Fraser	Chief Technology Officer Wilmington plc
Hasani Jess	Chief Technology Officer Simply Business
Carl Stokes	Head of IT and Business Programme Management NHBC
	Director of Technology and CIO Met Office
	IT Director Warwickshire College
Greg Crease	
James Endersby	_
_	Director of Information Communications Technology Wellcome Sanger Institute
	Head of IT Projects & Business Systems Kew
	Head of Business Operations Strategy Three UK
	IT Technical Director Media 10
_	Head of DesignOps Practice Sopra Banking Software
	Head of Client Services & Operations ION Trading
Ed Hornby	3 3
	Head of Digital Systems Hodder Education
	Head of Product Currencies Direct
	Chief Information Officer The Hut Group
	Consultant - Programme Management Deloitte
	Head of Technology Operations Royal Opera House
	Chief Information Officer HS2
Cnervonne Claassen	IT Quality Assurance Director SHL

Like to know more about Triad's services and the kind of benefits they deliver? Visit www.triad.co.uk

