Unify

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DIGITAL TRANSFORMATION

Lift off to effective competition in a digital economy

Building a NETWORK FOR THE FUTURE

Keeping ahead of the recruitment game

Rise of the ASSET-LIGHT TELCO

FIXED AND MOBILE

A marriage of convenience?

Tough wide-ranging EU REGULATIONS

on the way - are you prepared?

Gamma

Foreword

Gamma
Clear. Creative. Communications.

It was the 1910s when the last of the large manufacturing organisations moved from using their own power stations to consuming electricity 'as a service' from an electricity provider.

It was 2005 when the latest Apple iPad model provided more processing power than most mainframes still in use by our leading financial institutions and added to the 'cloud first' revolution that has transformed application delivery throughout the world.

So why is it that in a recent survey Gartner found that 92% of organisations still purchase and consume ICT and voice services using a model that is 50 years out of date?

Despite all the talk of unification, users are still buying voice and unified communications hardware and putting it into data centres and onto physical desktops.

It is clear that unified communications has failed. In truth we have unified nothing. In most deployments it's voice over IP - and that's it. The only unified element is the cabling. This is ironic when we consider that voice was the original 'cloud first' service; delivered from a central location (the exchange), delivered as a service (the rental) and paid for when used (the bill).

At Gamma we see positive signs that user organisations are recognising the gap between theory and practice, and are moving quickly to close it. Unified Communications 2.0 is emerging.

In this edition of Unify you will find examples of organisations embracing the new paradigm, including Reed, the specialist recruiter which describes the journey and its rewards. And to help you make a truly informed strategic decision we explain why fixed/mobile convergence will be the enabler that allows Unified Communications 2.0 to become a reality.

David Macfarlane
Managing Director of Solutions

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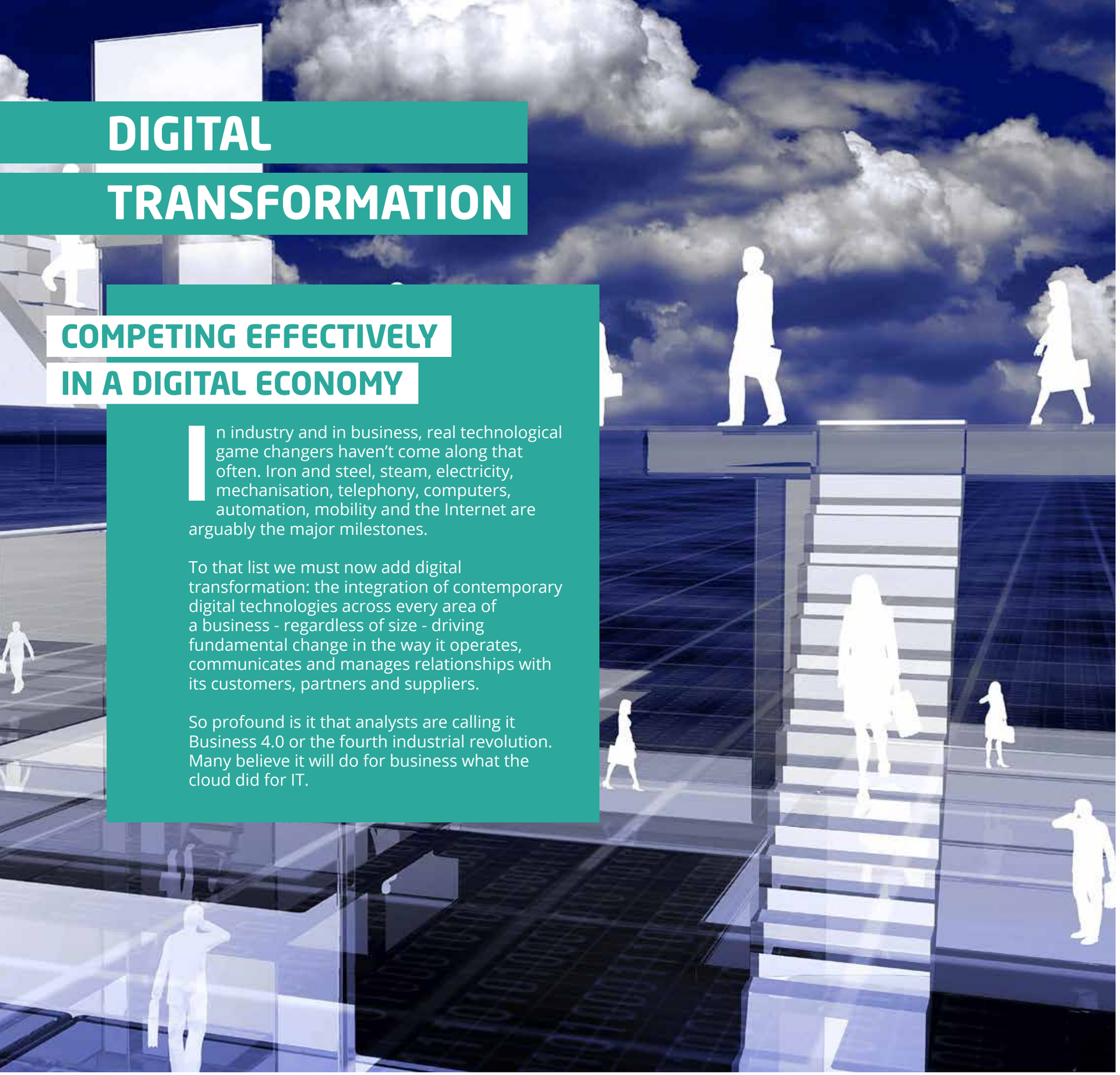


COMPETING EFFECTIVELY IN A DIGITAL ECONOMY

In industry and in business, real technological game changers haven't come along that often. Iron and steel, steam, electricity, mechanisation, telephony, computers, automation, mobility and the Internet are arguably the major milestones.

To that list we must now add digital transformation: the integration of contemporary digital technologies across every area of a business - regardless of size - driving fundamental change in the way it operates, communicates and manages relationships with its customers, partners and suppliers.

So profound is it that analysts are calling it Business 4.0 or the fourth industrial revolution. Many believe it will do for business what the cloud did for IT.

> **87%** of the 400+ companies surveyed are already somewhere on the road to **digitisation**

Gamma Digital Transformation Survey 2017

But rather than a purely technological transformation, it is a business transformation too. A change in thinking and culture at the very heart of the organisation. Requiring companies to question how they currently operate and to test and deliver new ways of working, new businesses processes, adopt new mindsets. Moving from a product-centric to a customer-centric philosophy.

It portends a time when as much as one third of a business' value will be digitally derived. And already company boards are taking notice with CIOs looking to define and implement digital transformation agendas before the competition beats them to the punch.

At root digital transformation is about creating smart, customer-focused companies through a combination of flexible and open IT systems, APIs and intelligent devices brought together by high capacity communications services.

Gamma is already working with many large enterprises on their digital transformation strategies, supporting their virtualisation, cloud computing and telephony initiatives, and giving them a communications infrastructure on which to explore and develop further innovation and even greater levels of flexibility.

Why transform?

Most organisations now recognise that digital transformation is crucial to competing in the digital age. As a recent poll by Gamma shows, 87% of the more than 400 companies taking part have already begun transformation projects, with more than three quarters of those wishing they'd started sooner.

The reported benefits of digital transformation are a powerful incentive. Gamma's research points to increased efficiency of business processes, improved customer satisfaction, better revenue growth and significantly lower IT costs.

But increasingly it is customer expectation that is leading companies into digital transformation. The Gamma study reveals that the changing demands of customers have led 60% of organisations to up their digital game, while 57% saw it as a way of increasing business performance. >

Putting communications first

Truly seamless interaction with customers, partners and suppliers is paramount in digital transformation, with all channels of communication playing a part. While email, messaging and social media all have a part to play, Gamma's research shows that for most organisations – and certainly for their customers – voice still remains pre-eminent.

Yet nearly three quarters of those contributing to the research felt their companies were not making best use of voice and, worse still, the larger business community was gradually losing the art of conversation.

Equally surprising, in a world of digital, cloud and converged communications many firms still rely on traditional hardware PBX-centric voice infrastructures. A switch to an alternative technology - say cloud voice - would be a relatively painless, yet valuable first step towards larger overall digital transformation.

The Internet of Things (IoT)

IoT is much talked about in the context of digital transformation. The term describes connected intelligent devices, anything from cars and industrial ovens to plant waterers and office security sensors, all communicating with each other, with us via apps and with automated back end systems over the internet. Many such devices already exist and it is estimated that more than 26 billion will be live and connected by the year 2020. That is to say four connected things for every man, woman and child on the planet.

> **60%** of organisations have had to up their digital game to meet customer expectations
>
> Gamma Digital Transformation Survey 2017

Examples of IoT are not hard to find. Gamma is already involved in a project to roll out smart energy meters across the UK. These devices monitor energy consumption. The data they produce can help generators, wind farms and hydro schemes measure and meet demand in a way that was never possible before, leading to reduced bills for consumers.

Gamma is also involved with a scheme that uses connected occupancy sensors to enhance the security and energy efficiency of buildings, and to alert contractors when public spaces require cleaning.

And the concept of IoT is not just restricted to buildings. Already smart cities are being discussed. Imagine interconnected traffic lights that automatically regulate and ease traffic flow during rush hour. Sensors that detect when potholes appear and need repairing. Smart waste bins that can monitor remaining capacity and create adaptive refuse collection days.

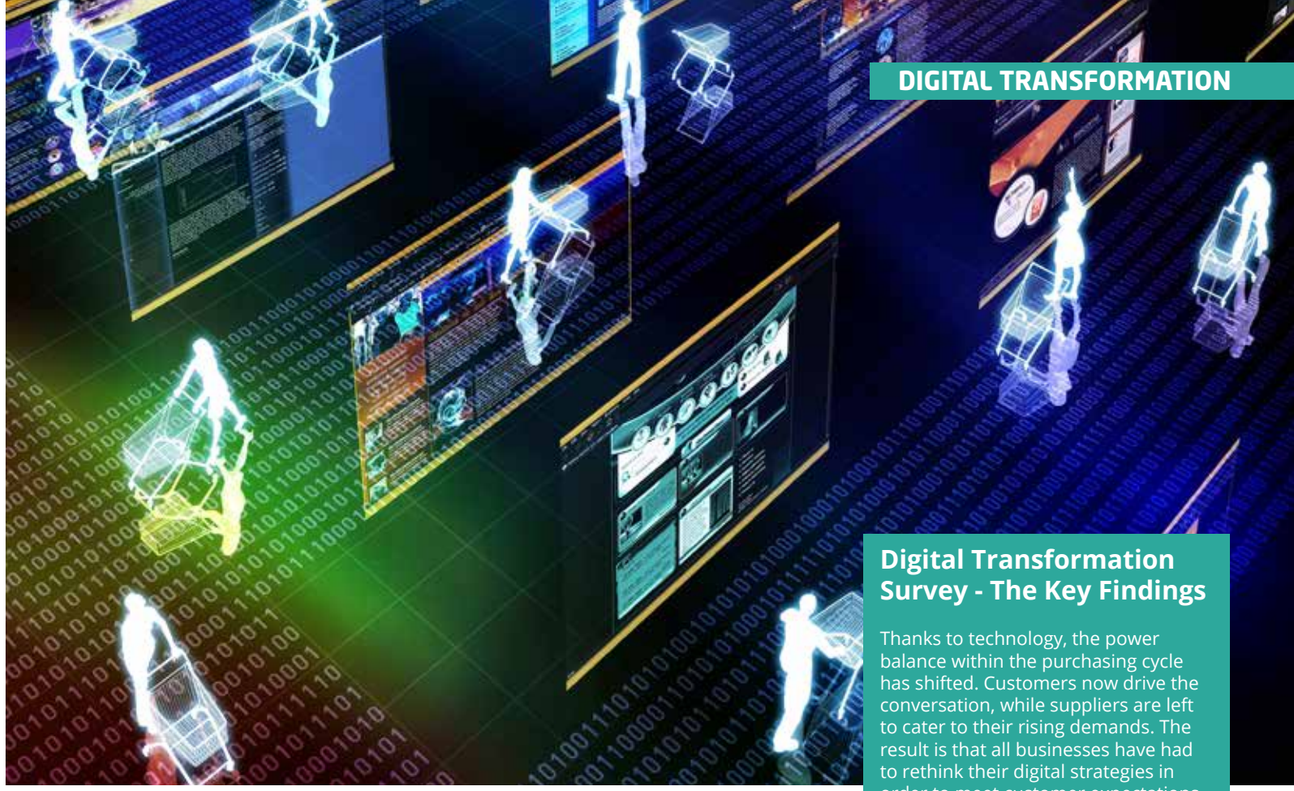
Transforming industries

If digital transformation is not just about technology, then it is also not just about technology businesses or the overhyped technology start-up scene. Airbnb and Uber are often cited as examples of technology-enabled disruptors.

But similar digital transformation is happening in all industries, and in the public sector too. It is independent of business areas, markets and sectors.

Also emerging are transformational partnerships where established businesses are partnering with disruptive newcomers to make the job of transformation easier and less costly for both.

The traditional company gets instant, valuable insight into transforming itself. The new company gets the credibility, wisdom and experience of a long-standing player.



Transforming experiences

Customer experience is often the key driver for digital transformation. Marketing, customer service and other customer-facing functions are usually among the priorities during digital transformation projects.

The end-to-end digital customer journey begins with data and intelligent marketing, social networking, CRM and the call centre and it goes all the way through the organisation to service, fulfilment and support, all informed by a common data set and a single view of the customer experience.

The retail business is one of the most rapidly changing industries in the world and is particularly good at exploiting technology to keep up with ever-changing customer needs.

Retailers are coming up with more and more innovative ways of connecting customers' in-store experience with their online digital experience, improving supply chains, and overhauling fulfilment and back-office processes. And these same changes are taking place across the entire business community, not just in retail.

With the help of enabling infrastructure providers like Gamma, a new breed of digital business, powered by successful and sustained digital transformation, is challenging what is possible, seizing market share and disrupting the status quo. The question is no longer if to digitally transform, but when.

Digital Transformation Survey - The Key Findings

Thanks to technology, the power balance within the purchasing cycle has shifted. Customers now drive the conversation, while suppliers are left to cater to their rising demands. The result is that all businesses have had to rethink their digital strategies in order to meet customer expectations. The game has changed, and business communications must change with it.

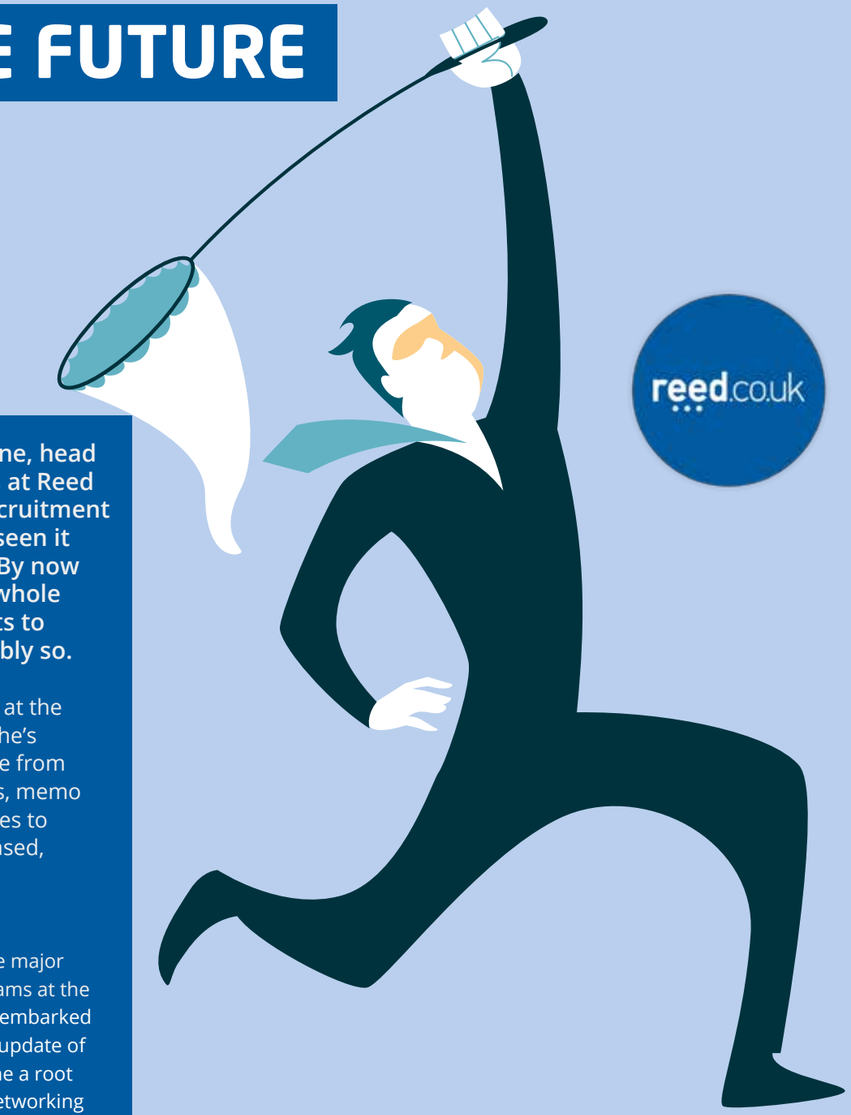
To find out how organisations are coping with these pressures, Gamma surveyed 407 IT decision makers about their experiences on the field of digital change. As it turns out, they're experiencing real, tangible benefits. While the main driver for digital transformation has been meeting consumer expectation, the results have instead been a boost in operational efficiency as well as sales. It's little wonder then that an overwhelming 78% of respondents would prefer if the pace of digital transformation in their organisation was faster.

But before technology can transform, management must transform first. IT leaders and the wider C-suite must be on the same page if they are to embark on the same journey.

You can download a copy of Gamma's Digital Transformation Report from: www.gamma.co.uk/transformation-game

RECRUITMENT CASE STUDY

BUILDING A NETWORK FOR THE FUTURE



Sean Whetstone, head of IT services at Reed Specialist Recruitment has not just seen it and done it. By now he's probably got a whole drawer full of T-shirts to prove it. And justifiably so.

For, after 30 years in IT at the recruitment company, he's seen the business move from mainframes, Rolodexes, memo pads and dial telephones to the sophisticated, IP-based, virtualised, thin client environment of today.

Now, having overseen five major technology change programs at the company already, he has embarked on yet another extensive update of the company's IT. This time a root and branch upgrade of networking and connectivity, moving Reed from a legacy WAN infrastructure to one based on fibre and Ethernet connectivity.

The objective: meet the company's growing appetite for flexibility and bandwidth as it embraces increasingly sophisticated applications and solutions. The end goal: better equip Reed for the future and help it stay ahead in professional recruitment.

The vendor partner chosen for this latest journey in Reed's digital transformation agenda is Gamma. The move will see every one of Reed's 122 offices in the UK and Ireland linked by Ethernet to Gamma's high capacity fibre network.

It will provide bandwidth, resilience and reliability on an unprecedented scale, and give Reed the capacity for future generation rich media interactive applications as well as supporting Gamma's market-leading SIP telephony.

Intelligent solution

Gamma won the deal based on its commercial terms, the intelligent technical solution it proposed and the rigorous due diligence Whetstone and his team performed on the company. And when Whetstone says rigorous, he means rigorous with a capital R.

"I'm not impressed by salesmen's talk or slick PowerPoint presentations. Promises on paper are all well and good but the real measure of a supplier is in doing the proper due diligence. Lifting manhole covers, looking at cables, peering under rocks.

"The network underpins our whole digital strategy. It's our enabler to evolve in today's digital arena. Without it we can't do business. It's all about making sure the reliability and scalability is there. Making sure the supplier is ready to deliver on their promises."

Confidence

Whetstone acknowledges that deploying all-new fibre networking across the organisation and migrating from the previous solution was always going to be a big challenge. That made the choice of supplier all the more critical. But having seen Gamma's work for other enterprise customers he was confident the company would deliver.

"I really see it as a stand out benefit that in Gamma we're working with a passionate, committed team of people we can trust. That's often the difference between the success or failure of a project like this. We'd never see the same degree of attention to detail from everyone else.

"For us Gamma is just the right kind of organisation to be dealing with. When we talk they listen and we have the ear of the board if we want it. That's something we could never get from another supplier. We don't want to be perceived as a small player."

All modesty aside, it's unlikely anyone would call Reed small. As a group, it is the biggest family-owned recruitment business in the world and has the UK's largest current database of job candidates. It employs approaching 3,000 people of its own across 460 business units in 130 locations worldwide. That said, the bulk of its operations call the UK home.

Critical fibre deployment

To support the virtualised digital side of its business, Reed has chosen a fully-managed network service from Gamma. This supports staff equipped with thin clients at its 122 offices, all of them using Citrix VDI and NetApp services hosted on HP blade servers at the company's own data centres.

Crucial to this deployment is the roll-out of high speed fibre to every Reed office, with a second fibre circuit or alternative technology providing backup. This kind of belt and braces thinking is typical of Whetstone's pragmatic approach to resilience and his wish to have infrastructure 'that's ready for anything' the business might demand in the future.

"I'm very aware that with fibre Ethernet to every office we're building for the future as much as the present. We don't ever want bandwidth to be a bottleneck for future applications, whatever they are," he says.

Gamma has kept its promises and has delivered on time. Naturally there have been a few anticipated 'ups and downs' as Whetstone calls them but all have been resolved quickly and effectively. "I'm realistic. I know the world isn't perfect. But thanks to transparent and open conversation with Gamma we've always got there," acknowledges Whetstone. >

Voice still key

Reed's business is all about matching people with employers and with jobs. And here human factors enter the equation. Despite the cool factor of instant messaging, social media, email and video, when it comes to finding a job people still like to talk on the phone.

To this end Reed has switched to Gamma's SIP telephony on its existing Mitel PBX platforms. The results have been impressive, bringing a rationalisation of Reed's entire voice infrastructure and a dramatic reduction in telephony costs of some £450,000 a year.

As well as savings on telephony there are benefits for data. Bandwidth is increasing 10-fold with no upfront costs and no increase in recurring costs. At the same time service levels are increasing significantly.

Future

Having worked at the coal face of IT for 30 plus years Whetstone has some trenchant views on the future, beginning with networking. "First of all, I think fibre will get faster and faster. There'll be new ways of lighting dark fibre. In five years' time I can see one Terabyte connections becoming a reality. We'll get to the point where we simply don't think about bandwidth any more. It won't be an issue. I think we'll also have fibre to every building as the default. No more civils, no more waiting for installations. It'll be there when you move in.

"Twenty years ago 64k was the norm. Gigabit fibre direct to the premises was unheard of and I would never have dreamt of the launch of broadband over copper."

But what about the broader picture of IT as it applies to the recruitment industry. Does Whetstone ever envisage a time when methods of communication other than voice will take over as the primary channel for recruiters and candidates?

"I certainly believe there will be a place for video and social media. There is already some use of Skype, Facetime and WhatsApp but I think many are still wary of it. It's still difficult to replace a good quality phone conversation as the primary means of holding a proper business conversation."

And where does the cloud fit in? Surely with business IT that is already fully virtualised, the cloud cannot be far behind? "We do already use some cloud services, Salesforce for example, and we are maintaining a watching brief on solutions like Azure and Amazon Web Services. But I'm a firm believer in cloud only where it's the best option, not cloud first."

In many ways Reed is a perfect example of how contemporary technology and services are enabling ground-breaking advances. It also underlines the value of high performance, high availability fibre networking as a foundation for business. Moreover, by dealing with Gamma it has a network infrastructure, free of legacy constraints, that can change and grow as the business evolves.

IT'S COMMUNICATIONS JIM, BUT NOT AS WE KNOW IT

THE RISE OF THE ASSET-LIGHT TELCO

Just as email and messaging apps have all but killed off postal services as a way of sending and receiving business correspondence, so cloud services and software are changing the look of telecommunications providers.

For both types of legacy organisation, the problem is costly infrastructure. Postal services need letter drops, vehicles, buildings, workforces. Traditional telcos need cables, fibre, switches, routers, control centres and last-mile connections to customer premises.

It all comes at a heavy price. But now a new kind of asset-light telco is emerging, one that focuses on core network and services provision and leaves the burden of last mile access to third party providers. For this new breed of telco it means a substantial reduction in costs and a reduced operational and maintenance overhead.

"Captain, I seem to have beamed myself into the cloud."

Unburdened in this way, the new asset-light telcos are free to concentrate on service levels and customer satisfaction. More fleet of foot than their traditional competitors, they also have more resources to develop and roll out the new products and services – for example cloud voice and incoming call management – that their customers are asking for. And they can focus investment where it matters, on the core network.

For the customer it means freedom from investment in expensive edge network hardware like PBXs and their long-term maintenance contracts.

It also means they can benefit from better, SLA-based services that are driven by demand, rather than legacy investments in technology. Customers also get the freedom to choose the best access providers the market has to offer.But there are further advantages, especially from the customer's view.

Conventionally, for a user company to add customised features or applications to its telephony service meant paying the telco to develop and deploy the new feature on its behalf. The new asset-light telco can make APIs freely available to customer organisations. In-house or third-party app developers can then have access to core network functionality which lets them develop, using standard software tools, their own advanced services.

New applications and features developed in this way no longer need to be physically distributed and deployed. They can be released once in the cloud, and become instantly available to all intended users.

And in addition to this, any updates made to the network itself are similarly deployed and therefore become instantly available to all customers.

The winner from this tussle between the old and new telco models is business and commerce, increasingly able to access more powerful, more flexible and more robust telecommunications services at a cost that less than a decade ago would have been unthinkably low.

You might be tempted to say that communications are boldly going where no communications have gone before.

THE CONSUMER FIGHTS BACK

New data protection laws and what they mean for the call centre

So far only the financial industry has faced heavyweight regulation on record keeping. Now punitive new EU law is set to clamp down on every business trading by phone.

The thicket of regulations and directives that already surrounds call centre activities is soon to become denser still with the coming into force in 2018 of the General Data Protection Regulation (GDPR) and MiFID II directive.

GDPR has implications for all organisations that collect information about customers resident in the EU, while MiFID II (Markets in Financial Instruments Directive II) applies only to financial services operations involved in the trading of investment market products such as derivatives, commodities, bonds and complex products like credit default swaps and collateralised debt options.

Both rulings are creatures of the EU; both can be expected to have force in the UK following Brexit, whatever leaving the EU eventually looks like. Both make new demands that will compel organisations to review and heavily revise the ways in which they gather and preserve for later examination evidence of the way they go about their activities.

MiFID II might be characterised as a bolting of the stable door after the financial crash of 2008, aimed as it is at regulating the sale of the kind of complex financial products that led to the meltdown.

GDPR is something rather different - a legal framework that aims to restore to citizens some of the control they once had over the propagation and use of their personal data. It is a reset of the relationship between corporations and their citizen customers. Before GDPR, customer information was increasingly 'owned' by the acquiring corporations. They could do what they wished with it. When GDPR takes effect, the power will shift back to the individual. Companies will no longer be able to behave as if they own the data; they will have it on explicitly consented loan, and will need to prove they are worthy of trust in order to retain it. If they lose personal data, or allow unlawful or accidental access to it, then they must report the incident to their in-country information commissioner within 72 hours.

Global reach

GDPR will have global effect, radical though this sounds. It will protect the data of EU citizens, wherever in the world they reside, or wherever their data is kept or used. Moreover, it will extend beyond the primary organisation to all partners in the value chain. Each of them will be obligated under GDPR to check that they themselves are compliant with the directive and, further, to ensure that the entities they interact with are compliant too.

The penalties available under GDPR are also of a different order of magnitude, at up to four percent of global turnover. If the UK's information commissioner had been working under GDPR in 2015 then the £400,000 fine levied on TalkTalk for its customer data breach could have been as high as £72 million. The obligation to report data breaches within 72 hours leaves organisations with no real hiding place.

Previously, some organisations might have thought that toughing it out and saying nothing was the pragmatic response to a data breach. If the news eventually leaked out, then the resulting fine was not going to have a major impact on the bottom line. Now however, trying to cover up a breach will likely result in an even stiffer eventual penalty. Moreover, the possibility of private claims is higher because class action and no-win-no-fee law suits will find it easier to convince courts of non-compliance with GDPR's specific elements.

That was then, this is now

Wind back in history 200 years, and business was transacted by spoken word and by written correspondence. Today, business communication channels are rather more complicated. Face to face contact and letter writing persist, but have taken a back seat to telephony, email and video links such as Skype. This, then, is the multi-channel environment that GDPR seeks to regulate.

As with previous and existing regulations and directives, neither GDPR or MiFID II are prescriptive about the technology that enterprises must deploy in order to prove compliancy. The what of compliancy is set out, but the how is left to the organisation to determine.

Gary Dudbridge, a telecoms consultant, previously head of telecommunications architecture for a tier 1 international bank, says this lack of prescription is typical and deliberate; not intended to give organisations rope on which they can hang themselves, but crafted so that they are not forced to deploy technology that might be quite inappropriate for their business model or the size of their operation. >

"Regulations and directives tend to be tested through fines, test cases and ultimately litigation. They are deliberately open to interpretation. They might say you have to keep a record of something, but not tell you how. As a sole trader gathering customer data you might be able to argue successfully that keeping a paper record of transactions is adequate, but a call centre of a major bank, for example, will be expected to be able to provide a complete electronic after-the-fact reconstruction of every multi-channel interaction. That means recording and being able to quickly retrieve email, web chat and collaboration Blackberry messages, SMS, land line and mobile - perhaps dual SIM - voice calls, and even Skype or FaceTime too. Anything that is evidential will be regarded as material."

New citizen powers

Significantly, GDPR doesn't just give regulators a new bite, but also empowers citizens to view the information corporations hold about them, to request that incorrect information is changed, and to give their permission for, or to opt out of, ways in which their personal information might be used.

To prove compliance, organisations will have to demonstrate that they have in place effective programmes for the promotion of appropriate soft skills, such as induction, on-going training and monitoring of staff.

But, inevitably, the primary burden of compliancy will have to be carried by automation. This is not just because of the complex multi-channel nature of the required audit trail, but because the enhanced empowerment of citizens provided by GDPR means companies must ensure they are able to respond in a timely and accurate way to requests from members of the public. Putting in place technology that allows this to be handled in an interactive self-service way will, for most organisations, be the only affordable and practical route to compliance with this particular element of GDPR.

The silver lining

It would be quite wrong to characterise GDPR as all pain and no gain. It is a certain bet that all call centres, even the smallest, are already using voice recording systems to ensure compliance with current regulations. An equally certain bet is that most if not all are taking advantage of the embedded technology to enhance staff training, and using it as an aid in dispute resolution. For some, voice recording is a useful component in a fraud prevention strategy.

With GDPR comes the requirement to gather and preserve for rapid analysis records of all interactions with customers, adding to telephony the further channels of email, text, and video. For anything larger than a one or two-person inbound or outbound call centre, this brings a significant technical challenge, but organisations that meet it successfully will build greater trust with their customers and be in a position to turn those better quality relationships into new revenues. Compliance with GDPR will of course mean that customer permission must be sought for information to be used for marketing, but the capturing of multi-channel exchanges will create a rich stream of data that smarter and better equipped organisations will mine for marketing, sales intelligence and fraud prevention purposes.

As we have noted, GDPR and MiFID II compliance is not optional. Therefore the essential choice now facing organisations that deal with customer information is how they achieve it. For most companies new technology will be required, and from that flows the question of which deployment model is to be adopted - that of on-premises equipment or third-party services delivered from the cloud.

Many organisations will conclude that given the multi-channel complexity of the task, the on-premises model has had its day. Steep up-front capital expenditure, combined with the operational costs of office real-estate and specialist in-house staff will drive a lot of organisations to look seriously at the cloud alternative.

> **Managing the technology required to achieve compliance is going to be a major test. It's clear that the hosted model has a lot going for it. In an ecosystem as rich as the call centre the cost of owning, operating and maintaining on premises equipment is formidable.**

The Gamma solution

Gamma has created a hosted solution with a leading specialist in the field. The solution comprises a comprehensive suite of call recording and PCI compliance services integrated with SIP trunking and Horizon for fixed line calls and mobiles.

The solution provides the toolset needed for organisations to achieve compliance with the voice elements of GDPR, MiFID II and other related legal and regulatory requirements. As well as shifting all recording costs from capex to opex, and providing a single portal for all call recordings, the solution stops all payment card data from entering the user-organisation's IT environment, removing a major source of potential risk. Recordings are stored in the only VISA Europe approved solution currently available.

Comments Dudbridge: "How organisations manage the technology required to achieve compliance is going to be a major test and it's clear that the hosted model has a lot going for it. In an ecosystem as rich as the call centre the costs of owning, operating and maintaining on premises equipment are formidable. There's also the task of integrating with other systems such as customer relationship management desktops.

"Every time a new software version is released, the organisation has to create a project to upgrade and prove compatibility with the entire ecosystem. Move it into the cloud, and someone else takes the pain and has to get out of bed in the dead of night when something breaks. Add to that the ability to scale up and scale down at will in response to market changes and you have a compelling proposition."

TEXTILES SERVICE GIANT TURNS TO GAMMA FOR NETWORK UPGRADE

When the UK arm of Berendsen, Europe's leading textile services business, met with the network services vendor Gamma, it was to discuss telephony only. But things, as they say, quickly moved on to bigger things – Berendsen's requirement for a nationwide managed network service.

Gamma was soon invited back, this time to take part in a four-way competitive pitch for the project. And, following a searching and rigorous evaluation of the bids, Gamma emerged the winner.

"We really liked Gamma's honesty, openness and candour during our meetings with them. It was refreshing. They were also more cost effective, came up with a better design and proposed better hardware," says Berendsen's head of service delivery Antony Pugh. "The others didn't seem to grasp the concept of what a core network was, or our requirement for real resilience. Without a working network, we don't run as a company. It's that simple.

"Yes, it was a big deal for us but we were confident that Gamma could deliver, and a year down the line they have lived up to their promises."

Critical network

Berendsen is a £1Bn+ international group that manages the textile, hygiene and safety needs of 150,000 customers in 16 countries across Europe. It services businesses in the areas of workwear, facilities, hospitality and healthcare with end users in places as diverse as hospitals and care homes through to high tech cleanrooms and up-market hotels.

In the UK, its data and voice network is critical with the three Rs - reliability, resilience and redundancy - of utmost importance.

"We have 100 sites in this country and 95% of our computing is with thin clients connecting back to virtualised services at our head office in Basingstoke.

"The network is everything and our dependency on resiliency and reliability is huge," adds Pugh. "Gamma understands how important it is to have the right technology at the heart of the network and it appreciates the difference between simple dual circuits and true triangulation.

BERENDSEN

"We took a decision to deploy fibre wherever possible and this will give us more reliability and the capacity to add new services, beef up data transfers and give us the very best voice quality." It is perhaps also significant that the role of IT within Berendsen is changing subtly as the company moves forward with a customer-focused strategy for excellence and growth. IT is working more closely than ever before with the rest of the business and is being increasingly viewed as an enabler for improvement, not just a means to get the job done.

One example would be the way the department, working with Gamma, has markedly reduced latency and the number of network hops that virtualised computing traffic has to negotiate. The result is faster response times which have a knock-on positive effect on customer service and perception.

Berendsen's customers also can't have failed to notice the increased uptime made possible by the Gamma solution. Several of them interact directly with Berendsen systems to query stockholdings, order extra linen or update collections. They too will have witnessed the improvements.

Added value

Pugh and his team also likes the fact that Gamma, as an independent, is strongly motivated to manage effectively third-party last mile circuit providers. This is most visible when it comes to connecting new or moved offices, or upgrading existing lines.

"Previously we'd waited more than a year to have a particular new circuit installed. Once Gamma was on the case they'd worked out with the installation engineer how to find a new route that avoided wayleave issues and the line was in within eight weeks," acknowledges Pugh.

He also finds Gamma's responses to queries and support requests better. "With some providers, we'd just get a standard cut-and-paste response. With Gamma there's always a deeper explanation with some added value on top. It helps us better understand what's going on." A lot of this, says Pugh, is down to Gamma's use of customer advocates as members of its front-line team providing a single point of contact for sales, support and management. Pugh, quite clearly not one to be taken in by vendor jargon, is supportive. "It would be wrong to think of Gamma customer advocates as glorified account managers. We don't just get a once a month sales call or meeting. We have a continuous two-way dialogue and our advocate is much more proactive. There's a higher degree of professionalism, no tiptoeing around issues. An openness between vendor and customer that's often lacking in this business."

With Gamma there's always a deeper explanation, with some added value on top. It helps us better understand.

Connectivity choice

While the initial meeting with Gamma was to discuss voice, both voice and data elements of the project have progressed hand in hand. From a network based largely on DSL, Berendsen has now moved up to fibre and EFM in the main. Gamma very carefully crafted a matrix of all the available connectivity options at each site, allowing Berendsen to choose based on bandwidth, resilience and dependability. "The migration to Gamma has been faultless. I can honestly say that I've not had a smoother migration," says Pugh. "It has all been set up and configured brilliantly and we're getting much better reliability." Most of Berendsen's key sites are now also using Gamma SIP telephony. As well as delivering much improved flexibility, freedom of configuration and uptime, the voice platform has also brought significant cost savings. Pugh will not be drawn on actual numbers but talks of tens of thousands of pounds a year.

Network monitoring

Another key aspect of the Gamma network is the company's use of its strategic partner Highlight's hosted network monitoring and management service. Gamma chose the Highlight solution as the best option for both its customers and its own network operations. It is integrated into Gamma's automated ticketing system, allowing customers and Gamma support staff to work more closely. "It's a great addition and it gives us a massive amount of visibility." says Pugh. "It has all been perfectly set up and we can truly see how much use we're making of all our lines, what might need upgrading, where misuse is happening and where there are issues that need to be fixed.

"Things are faster, more stable and we can see which lines are approaching 90% or 100% usage. It's great to able to see detail like that." >

Optimising network usage

But Pugh is keen to emphasise the more consultative role the tool plays in pointing up where improvements might need to be made to working practices or processes in order to optimise network usage. For example, it was quick to identify how laptops performing timed backups or heavy internet use were causing spikes that impacted other users. It is also helping guide changes to quality of service configurations to limit some non-priority traffic while optimising more critical traffic.

Pugh also plans to implement application monitoring, drilling down into how particular applications need and use IT resources. "We aim to eliminate the theorising about how apps are behaving and get access to actual data instead. In turn that will let us meet the expectations and improve the perceptions of the business and that's good for everybody," he says.

Another area where the tool is proving itself is in guiding Berendsen's future thinking on its IT and networking. "We are constantly thinking three and six months ahead as things in the business are moving at a faster pace," says Pugh. "We want to be ready for the future."

First impressions

In signing with Gamma, Berendsen has underscored the value of first impressions. The company's openness and honesty during that first meeting got it the chance to bid for, and ultimately win Berendsen's networking business.

"Gamma has always been very frank and open in all its dealings with us, right from the start. In the IT industry that seems to be an increasingly rare quality these days," observes Pugh.

"Communications with Gamma are always good, their project managers are some of the best I've worked with, and any issues are always resolved correctly and very quickly. It's all made our whole experience with them a positive one."

DIGITAL TRANSFORMATION FOR BUSINESS IMPROVEMENT

The Berendsen story is another example where digital technology - in this case the adoption of fibre-based high speed network services and SIP telephony - is helping to drive business and process improvement.

The company is part way through a five-year strategic growth plan that has at its heart customer focus, operational excellence, people effectiveness and efficient use of capital. Digital technology, overseen and managed by the company's IT department, is the common thread that brings all these initiatives together and that will help the business deliver against its objectives.

Berendsen is one of several large companies with which Gamma is working to help them achieve similar goals. You can read about some of the others in the pages of Unify and on our web site - gamma.co.uk

HIGHLIGHT SHINES AS PERFORMANCE MANAGEMENT TOOL

highlight
see clearly

Berendsen (see previous article) is just one of the growing number of Gamma enterprise customers that have deployed the hosted applications and network monitoring solution, Highlight.

Gamma's own network operations team uses Highlight to monitor the company's network and the services and applications that run over it. The Highlight company is a Gamma partner organisation, and the Highlight application gives Gamma customers the same visibility of their network and applications performance critical to their businesses.

By deploying Highlight, Gamma customers can have a single pane of glass where they can see, in real-time, the performance of their Gamma services and their own IT infrastructure - a local area network or data centre for example - together with their business applications.

Such is the versatility of Highlight, it is described as a 'silver bullet' by Gamma Network Solutions managing director, David Macfarlane, who welcomed its dual-purpose role with the company.

"We wanted a monitoring system that could give us both application visibility and network availability for monitoring our own customers' environments. But we also wanted to give our customers a tool for looking at their application levels, their layering and how their own systems are performing. Highlight has given us one platform that answers all questions.

"Having application and network visibility for our internal teams and our customers in real-time, on one platform, has enabled us to move up the value chain with management information."

Highlight is unique in the clarity and depth of the information it provides, and the easily-assimilated way it is presented. Day-to-day a single screen of 'heat tiles' offers IT management an immediate, at-a-glance way of assessing the performance of complex systems, broken down into the three key areas of stability, load and health.

Further levels of data and analysis are available upon drilling down, for example strip charts that graphically show performance over time and alerts that flag problems or where capacity limits are being approached.

Further information comes from Highlight's extensive reporting capabilities that provide accurate data for service level compliance, management reports and for planning changes and extensions to IT infrastructure.

But perhaps Highlight's strongest feature is its ability to aid overall business performance. By enabling the proactive management of network and applications issues, and guiding their speedy resolution, it pushes up customer experience and satisfaction scores. Highlight's performance management enables both technical and non-technical staff to have greater visibility of both network and applications. This helps bring vendors' services and customers' expectations into alignment, strengthening business relationships and turning customers into advocates.

Concludes Macfarlane: "In Gamma we think of Highlight as a customer experience tool. It's allowing us to ensure we deliver the level of service our customers expect."

highlight.net

FIXED AND MOBILE
A MARRIAGE OF CONVENIENCE

CONNECT bridges the fixed/mobile phone divide

For the longest time it was a case of never the twain shall meet. Businesses looking to combine the benefits and collaborative working features of an advanced, hard-wired office phone system with the flexibility and convenience of mobile phones had nowhere to turn.

At the same time they were acutely conscious of the cost and maintenance burdens of traditional fixed telephony infrastructure, yet were reluctant to compromise what remained a key channel of communication for staff, customers and partners.

Gamma has bridged the fixed/mobile divide with a new converged solution that aims to do for business telephony what the Swiss army did for the pocket knife. Among the first of its kind on the UK market, Gamma Connect lets businesses powerfully augment their fixed telephony estates, and creates a platform for future migration to an all-mobile environment.

The best of both worlds

According to Gamma's Alan Mackie the service delivers the best of fixed and mobile worlds while eliminating the disadvantages. "Companies like their fixed office systems because they're easy to manage and control, help meet regulatory and compliance legislation and offer essential features like hunt groups, call recording, IVR, a common inbound and outbound number, and a central phone directory. Mobiles on the other hand have existed largely outside the corporate sphere of influence: hard to regulate, difficult to control and each with its own number."

With Connect, employees' mobiles and fixed extensions share a single DDI number particular to that individual, or calls may be routed from the business' published main number. Any outgoing calls will present the same published number regardless of from which device they are made. And critically, mobiles are brought under the corporate umbrella of security, conformance, reporting and scrutiny that is so important in a tightening regulatory climate.

Compelling service

Mackie believes many will find the service compelling. "Take the public sector – healthcare, social and council staff often use their mobiles for work but may not want to reveal their number. Equally the people they are contacting may not trust a mobile number or associate it with the person or organisation with whom they are dealing. Now field workers can be reached more easily and can present the head office number when calling a client, so there's always someone to answer a return call later.

"For the private sector the ability to access hunt groups and teams, have a common voicemail platform, maintain audit trails and voice recordings and analyse how business is being done are important. Previously it was impossible to aggregate that kind of data across fixed and mobile domains."

The wider benefits

Other important drivers for business are improved customer service and reduced costs. Contact with customers becomes easier, more consistent and less fragmented by the transition between fixed and mobile. Meanwhile telecoms costs are set to come down significantly as companies reduce their dependency on PBXs, ISDN lines and desk phones, and as mobile call costs continue to fall.

Mackie predicts a time soon when even in large businesses, mobiles will be the only phones workers need. "Fewer and fewer people will have a phone on their desk. The whole model has changed. The technology is improving and new functions like presence reporting and auto call routing mean it's perfectly possible to replace fixed with mobile today."

Gamma's new service removes certain technical challenges that have so far dogged converged deployments and restricted business take-up: a lack of consistent data coverage and a lack of integration between apps on a phone and its native mobile functionality.

Gamma has worked closely with phone and mobile O/S providers to put everything on the single green call/answer button, while its MultiNet mobile bolt-on service ensures improved coverage for voice and data. And because much of the intelligence behind the system resides within the network any handset may be used, not just smartphones.

NEW START MEANS BETTER SERVICE

openreach

Separation from BT following pressure from the industry and from regulator Ofcom is seeing Openreach emerge as a newly refocused and re-energised infrastructure company committed to doing better and reaching further with connections that run faster. It's great news for customers who should see installs happening sooner, connection speeds getting faster and problems dealt with more promptly.

These messages were underscored by new Openreach MD of business and corporate delivery Kevin Murphy during a recent presentation where he described a more transparent, autonomous and accountable Openreach set on better meeting the connectivity needs of business.

Murphy cited a 20% annual increase in data traffic in the UK with the increasing use of cloud services, video streaming and virtualisation alongside growth in video conferencing, collaboration tools and big data. Also, lower prices were bringing greater demand for Ethernet connectivity from a wider market together with rising calls for dark fibre for large UK projects like 5G and the emergency services network. He said Openreach would meet these challenges in a number of ways including organisational changes, increased staff numbers, improved planning and surveying, a strengthened legal team to resolve wayleave and access issues and more use of overhead networks.

Already the changes are delivering results says Murphy: "We've reduced the backlog of work by around 26%, reduced the average completion time from 85 days down to 55 days and we're continuing to drive those numbers down. More significantly we've cut the number of jobs that were held up by civil, access and traffic management issues by as much as 82% thanks to different working practices and closer co-operation with local authorities."

Future improvements will include better information flow with civil engineering contractors, a stronger culture of ownership and pride in a job well done, better network health monitoring and record keeping and improved workflows. Technical enhancements will play a role too with more dark fibre and advanced techniques like G.fast to better exploit copper circuits. "We're now into the second year of a three-year programme of improvement. Year one was about reducing backlogs and times to deliver. Year two is about ramping up speed, certainty and quality," added Murphy.

"We have an excellent field engineering team some 25,000 strong and I've always believed that good quality engineering leads to great customer service. We will be pushing ahead with some very exacting service level targets and I believe our customers will see a real difference."

THE SOFTWARE DEFINED WAN

BEHIND THE SMOKE AND MIRRORS

Information Technology, a sector that already has more than a fair share of acronyms, seems to have an unquenchable thirst for creating new ones. Among those recently coined and now increasingly being used in boardrooms is SD-WAN, the Software Defined Wide Area Network.

SD-WAN is being touted as the silver bullet for networking. According to the technology companies that have crowded into the technology space, it will enable enterprises right across the spectrum from government departments to commercial organisations in nearly every vertical market to do things more quickly and more efficiently.

However, the reality is much more nuanced; clouded by the smoke being blown and mirrors being angled by 40-plus vendors, all with their own particular commercial positions to defend, and so far without the emergence of any obvious leader.

Away from the hubbub, Gamma has been taking a cold hard look at SD-WAN. It has upgraded and re-engineered its network with the latest core switches in readiness. The service will enable customers to tap into the benefits of SD-WAN without exposing themselves to the risks that can attend very early adopters of leading-edge technology.

Gamma sales director Alex Ayers predicts that SD-WAN will prove to be a valuable addition to the networking toolbox for many organisations, but that scale of real-world deployments will be driven by use-cases, not by hype.

"The pragmatic way of thinking about SD-WAN is as an alternative way of better connecting to some applications. As more and more applications get delivered from the public cloud so will the use of SD-WAN increase, but it is by no means the universal silver bullet that some would have us believe. For every one or two organisations where it does have a strong use-case there will be others where it doesn't.

"For example, in the UK the main difference between private and public networks is an IP address as it's largely the same underlying network. In that context, SD-WAN is less about managing infrastructure and more about managing the delivery of applications.

"As more of them get served up via the public cloud rather than from private data centres, SD-WAN will allow us to dynamically change how we route traffic. For some businesses it will be an unnecessary complication, but for those where it does make sense we see it as a useful enrichment of the service we can offer our customers."

New architecture - new way of networking

Software as a service and cloud-based storage have already virtualised two of the three key IT elements making them ultra-fast and cheap to deliver and configure, but the third element, networking, is still based around intelligent hardware platforms.

> **We can ensure that the network responds much more effectively…in a way that actively supports business needs.**

Many of these are proprietary to some significant degree, and require specialist attendance for configuration and maintenance with all that implies for steeper capital and operational expenditure, and sheer inflexibility.

SD-WAN proposes a centralised software intelligence entity that commands simple distributed policy engines and acts as single logical switch for applications that want to use the network – an architecture that has been named NFV or Network Function Virtualisation. SD-WAN exploits NFV to deliver networking as-a-service, promising to enable the dynamic networking needs of enterprises to be met much more quickly.

Ayers says it is important to correct the misapprehension that SD-WAN is somehow able to conjour up temporary bandwidth out of thin air. "You will still have to have the underlying bandwidth. What SD-WAN will do is enable you to use that existing resource more effectively and attune this to your application strategy."

How might this work in practice? Gamma's product director David Doherty: "Say you have a retail business and you are planning a major refresh of your web site, or a short-term promotional campaign that you think will generate a real spike in data traffic.

How do you cope with it? SD-WAN will enable routing changes to be made at the click of a button so that, for example, traffic for a CRM application might for a short while go down route one rather than its usual connection of route two.

"By moving traffic flows around dynamically we can ensure that the network responds more effectively to changing needs in a way that actively *supports* business needs, rather than holds them back."

WINNING FORMULA FOR WEST COUNTRY LEGAL FIRM

PORTER DODSON
SOLICITORS & ADVISORS

Porter Dodson, one of the UK's top 200 law firms, selected Gamma for SIP Trunks over a dedicated Ethernet circuit. The move to SIP was seamless during an office relocation and now provides clarity and depth of billing data, as well as improved resilience and customer service. Call costs are down by as much as 87%.

While looking for a SIP provider it soon became clear that Gamma was widely recognised as the market leader. We spoke to other vendors but some knew less about SIP than we did, while others just felt like analogue players out of their depth.

Since moving across we've had some spectacular results. We've now got a first class solution with reduced fixed costs and call costs down by as much as 87%. Customer service is much better too. A lot of providers are very responsive until you sign the order. Gamma is the only company I've dealt with that offered and continues to offer a consistent, solid service.

Jay Ralph
IT operations manager

CHANGING THE ACADEMIC LANDSCAPE

Northumbria University

Two of Britain's most go-ahead academic institutions, City of Glasgow College and Northumbria University are quite separately and in different ways reaping the rewards of signing up Gamma to meet their communications needs.

In Glasgow, the nautical faculty at the city's college has partnered with Gamma to slash line rental and calls costs by 40% despite a two-fold increase in call volumes. In Newcastle, Northumbria University makes year-round savings by combining Gamma SIP trunks with an on-site PBX, backed-up by temporary roll-out and roll-back of Gamma's Horizon cloud hosted telephony platform to cope with seasonal peaks and disaster recovery needs.

Convergence

Both stories illustrate just how much converged communications have changed the landscape for academia, bringing cost savings, new levels of robustness and unprecedented flexibility to a sector that, like so many others in Britain, was held back by the suffocating embrace of legacy telcos with their costly, sometimes fragile and always inflexible take-it-or-leave-it offers.

The City of Glasgow College has 1,200 staff and offers more than 2,600 different courses to more than 32,500 full time, part time and distance learning students of some 135 nationalities.

Glasgow's long heritage in shipping and shipbuilding is celebrated in a newly opened £66M campus on the River Clyde, which is training the next generation of marine engineers and ships' crew. Continuing Scotland's proud maritime history, the Riverside Campus aims to teach 10,000 students a year.

Although the site boasted state-of-the-art modern facilities, its communications relied on a legacy phone system based on ISDN and an ageing PBX that badly needed updating. At the same time ISDN's rigid numbering scheme, which binds numbers to physical locations, did not suit the college's need for flexibility.

SIP trunking over JANET

Value for money was a priority too, with ISDN line rentals and call charges not offering the best return. The college also wanted to make more use of its high bandwidth Joint Academic NETwork (JANET) connection. Additionally it wanted to move to a converged network infrastructure with a view to improving connectivity and providing more resilience for vital services, together with laying a foundation for a telephony system that will eventually extend to some 3,000 extensions city-wide.

Having decided on SIP technology as the best way forward, the college was surprised by the lack of relevant knowledge and the uncompetitive pricing shown by some vendors it approached – until it spoke with Gamma and was offered SIP trunks at compelling prices along with use of Gamma's pre-existing JANET interconnects. Gamma provisioned SIP trunking over JANET to the college's Cisco PBX, and ported over a block of some 40 numbers seamlessly and without fuss or disruption.

A separate, diversely routed fibre connection will, when added, provide robust connectivity back up. Resilience is further enhanced by the flexibility and instant controllability of SIP, allowing important phone numbers to be routed to alternative sites in the event of outages.

City of Glasgow University

Savings on calls and rental

Meanwhile, in Newcastle, the Northumbrian educational establishment saw its relationship with Gamma deliver savings on calls and line rentals. But the wins in the tie-up were so much more profound. The university had a particular challenge with the annual recruitment round – most contacts to apply for places were by phone, and this huge spike in traffic asked serious questions of the legacy phone system.

Northumbria University has some 30,000 students and 3,000 staff teaching in 30 subjects, from arts, design and social sciences; engineering and environment; business and law; to the health and life sciences. Among the alumni are the athletes Steve Cram and Victoria Pendleton, the Apple® iPod® and iMac® designer Jonathan Ive, and the musician Sting. But the university is probably best known for its heritage in practical and vocational training, which helped create a generation of industrialists and business leaders, and which is now helping the region move into the knowledge and high technology industries. It also has a thriving international student body and can boast that no fewer than 90% of its graduates are either in work or further study within six months of graduation.

Clearing

The university seasonal peak - the short time period when would-be students apply, mostly by telephone for places on courses, pitches universities in competition with each other, not only to offer the most compelling mixture of academic quality but of social life too. It's called clearing, and it lasts just three days, and it shows that A1 courses and a killer social scene mean nothing unless applicants can get through at the crucial time.

Without reliable comms during the three-day clearing window, student recruiting is severely restricted.

Gamma's solution at Northumbria University was to combine access to JANET, bringing important resilience gains, with the provision of two 100 channel SIP trunks to deliver day-to-day service into an Alcatel-Lucent PBX.

The Gamma SIP-based core telephony system had already proven itself more than up to the clearing challenge several times. But what if something went wrong, a building flooded or without power for example? The university could not afford to lose valuable additional students during the clearing window.

Backing up the SIP-based system is Gamma's Horizon cloud hosted telephony platform. Needing no on-site hardware beyond phone handsets or PC soft clients, Horizon is quick to provision, easy to make changes in the way calls are handled and routed, and is highly flexible in the way it operates. As a subscription-based service it is also an ideal contingency and business continuity solution.

At Northumbria, Horizon forms the heart of a temporary 100-seat co-located call centre, set up expressly to provide disaster recovery. A second, remote fallback facility is also available, offering a true belt and braces approach. Each has Horizon available for the crucial clearing period, the service then being scaled back until clearing comes around again.

At both Glasgow College and Northumbria University, Gamma's role is a text-book example of how the robustness, flexibility and affordability of its services are helping academia not just survive, but to excel.

GAMMA TOASTS AWARD-WINNING VIRGIN WINES

Robust telephony and networking provided by Gamma are helping to put the fizz into 2017 Online Drinks Retailer of The Year Virgin Wines. Gamma services have helped deliver a crate of wins for the wine merchant, including vastly improved resilience, greater flexibility to meet fluctuating seasonal demand, better reach and more bandwidth for data.

The drinks retailer's relationship with Gamma began when a Virgin Wines management buy-out meant a new supplier of voice and data infrastructure had to be found. Network and telephony links were needed for the head office and an inbound/outbound call centre in Norwich, a warehousing and distribution centre in Preston and a third-party hosting and web platform provider in Woking.

Gamma was chosen for both the networking and telephony elements of the new system, providing high speed managed data services between Norwich, Preston and Woking while at the same time delivering SIP telephony and PSTN connectivity to complement Virgin Wines' ISDN links.

When the time came to improve both resilience and capacity, Gamma upgraded the system to add more bandwidth together with diversely routed backup circuits while at the same time removing single points of potential failure in the network. The work has also helped meet seasonal peaks in sales, particularly the pre-Christmas rush.

Strength to strength

Virgin Wines is well known for its unique offer of wines from boutique producers, compelling loyalty schemes, top notch customer service and free delivery. Although most sales are self-service online, Virgin Wines also has a loyal following of customers who prefer to discuss their choices with expert staff over the phone. These separate sales channels mean reliable networking and telecommunications are crucial.

"Gamma understands exactly where its services can meet our needs." said Karl Warham, Virgin Wines' CIO. "Gamma has done, and continues to do a good job. The risks of moving to another provider were simply not justified. Now we have a faster network that's as robust as it can be, and because Gamma has been able to achieve savings on voice provision we've now got a much more resilient service at the same cost as before."

"Gamma understands exactly where its services can meet our needs."

For its initial requirement Gamma provisioned managed data links for Virgin Wines' three sites providing Ethernet, SIP and internet connectivity. As the business grew additional capacity and resilience was achieved by adding further links using diverse routing. Bandwidth currently stands at 100Mbit/s into Norwich, 50Mbit/s into Preston and 20Mbit/s into the hosting provider in Woking.

With substantially reduced call costs and other savings achieved by working closely with the customer Gamma has delivered a scaled up, more resilient infrastructure with no increase in overall cost.

CONNECT YOUR BUSINESS TELEPHONY WITH YOUR MOBILES

Gamma's hosted telephony service, Horizon, gives you full cloud-based flexible and scalable control over your company communications without the limitations of site-based hardware.

Put simply, you can make instant changes to your business comms from just about anywhere.

Even with a multi-site deployment you only have one system to manage, and you get all the call features you'd expect to meet compliance standards, together with wall-board integration and management reporting statistics.

CONNECT

Connect takes your Horizon system to the next level, providing business-critical features from your Horizon service seamlessly on your company mobiles.

With native integration and no additional apps, you can present one number to your customers, have a single voicemail across all your devices, dial colleague extensions direct from your mobile and even pick up hunt groups.

So more calls are answered and your business looks more professional.

Connect with Gamma.

Gamma

Clear. Creative. Communications.

gamma.co.uk