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25 Years: The Future of Business

An MYOB Future of Business series special report, October 2016

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In 25 years from now, the business environment will be fundamentally different – just as it was 25 years ago.

In the last three decades, technology has developed in leaps and bounds, completely changing the way we work, how we live, and generally how society operates.

It's hard to predict exactly how the next three decades will change the way we do business, but by looking to our past experiences for clues and identifying the trends that are evolving now, we can see a future that is more connected and enabled by technology, that offers more opportunity for rewarding work and entertaining lifestyle, and brings people together from around the world.

And, contrary to popular belief, people will remain at the core of success for businesses of the future.

Looking back to see forward

by Simon Raik-Allen

By the time we enter the 2040s, we will have experienced a dynamic shift in the way we conduct business. At every level, from the digitisation of every transaction to the management of each organisation, every business will undergo major change. Although those changes will be profound, what may be more remarkable is what has remained the same.

The human future of technology

People need to be together to truly be creative. Technology is going to see people working together seamlessly, regardless of how far apart they might be.

While there might not be an office we work from – we will have moved past the central workspace to the remote office or localised centres or "hubs" – people will still gather to work. Your workforce may be a globally connected group, using holographic projection to communicate in real time – but there will be people at the centre of the operation, finding new and unique ways to collaborate on tasks and innovations.

Rather than technology isolating or excluding people, it will bring them together across the globe. No longer will you have to live in Sydney to work there, or reside in Auckland just to run an Auckland-based company – businesses will have the ability to work on global scale, and – through technology – bring the world closer together.

Humans are wildly creative, thoughtful, curious beings and the increased importance placed on technology is not going to hinder that – in fact, it's going to enhance it.

New rules for a new world

In the last 25 years, technology has broken many barriers. We've gone from using computers and phones only at work or at home to being individually online and accessible 24/7. We've become more comfortable about sharing our individual experiences with the world. We've adopted devices that track our movements and share our details, in order to enjoy greater convenience and better experiences.

Along the way we've had to create new rules about what is socially acceptable. We've evolved our understanding of privacy. And we've had to become used to a world where anyone, anywhere can comment on something we've shared.

We are now creating a new world, one where innovation – from automation and robotics to social media and the emerging Internet of Things (IOT) – is creating a seamless connection between humans, technology and our environment.

User experience is key

Throughout the last two decades there have been some stunning successes and some resounding failures in products, apps and designs. For many of them, that success or failure has hinged less on how well they were built or the idea on which they were created, and more on how they were received by people: did they solve a problem, have a place in society, and capture the imagination in a way their competitors didn't?

Twenty-five years ago, that didn't matter. In the early days of the technological revolution, whatever you built as a technologist was successful – it was either the first of its kind or miles ahead of its predecessor.

We understand now, perhaps better than ever before, the importance of user experience. Twenty, or even 10 years ago, the concept of user experience or "UX" was just not a consideration. Now, it's a job within itself and has been made even more important not only by companies, corporates and businesses, but by the user's own requirements and demands. If someone gets a console, or opens an app, and it is not immediately obvious what to do or how to navigate it, then it's abandoned.

What's to come

As we look forward, to a future populated with virtual work portals, remote jobs, AI assisted management and robotic workforces, we have to understand the important role people play in the future of business.

No matter how good an idea, there are some things people just aren't ready for – and that will change how, when and even if a technology ever reaches the mainstream.

But, how fast those changes are coming, and how quickly people – with their amazing adaptability – are ready to adopt new technology is also increasing. In the next 25 years, the pace of that change will be almost unrecognisable from where we stand today.

We've entered a period in which technology development is no longer craft and creation, but aggressive evolution. And just like in evolution, which is driven not just by steady growth but by pressure points – natural disasters, changes in climates, explosions in resources, or the introduction of novel species – we are seeing a period of hyper development. As in the natural system, in business this will reward the agile, the nimble and the adaptable, and weed out the slow and the resistant to change.

The one constant

There's only one thing you can bet on in the business of the future – change. And over the next five years, let alone the next 25, that is something people need to get used to. People and businesses need to understand that whatever you develop, invest in, re-train in, or pursue as a product line, a productivity enhancer, or a career, it will likely change.

As a business owner you need to make sure that you can rapidly change to align with the way in which not just technology but society is moving. In predicting the future of business technology over the next 25 years, people will be your best barometer. Understanding what they want, what problems they need solving, how they'd like their experience to be delivered, and whether they are ready yet for the next step will determine success as much in 25 years as it does today.

Simon Raik-Allen is MYOB's Chief Technical Advisor. His role involves looking at the current and future trends in technology and how they can be developed to benefit Australasia's SMEs. According to Simon, while technology will play a key role in the work of every New Zealand business operator by 2040, so too will the businessmen and women who are innovating today and those that are the innovators of tomorrow.

We are living in an unprecedented technological age, with many fields of science and industry constantly on the cusp of new discovery.

How many of these developments will unfold, and their influence on business and society, is unpredictable. But, by looking at the last 25 years, we can see patterns of development, which allow us to discern how current technology may evolve.

In particular, in every development and at every stage, we see how important the influence of society and the individual has been over every new technology. Regardless of the developments in areas like AI, robotics and the Internet of Things, we are building a future people will inhabit – and developers ignore at their peril the very human side of business and technology.

Where we've come from

In order to predict what the future might look like, it's important to understand where we came from.

The last 25 years have been a period of extraordinary development. We've made considerable advances in the fields of science, medicine and automation. But the innovation that has perhaps driven the world the furthest and transformed both our work and social worlds has to be the invention of the World Wide Web.

Officially made available to the public on August 23, 1991 (aptly nicknamed, Internaut Day), the web would go on to change the very core of how people live their lives.

The very first web page was created in December of 1990 by Tim Berners-Lee, before being made available to the physics community in January of the following year. However, according to Berners-Lee, the birth of the web technically should be attributed to March 12, 1989 – when he first proposed the idea of a "distributed information system".

According to the United Nations agency that oversees international communication, around 40 per cent of people – or more than three billion – now have access to the internet. In 1995 it was less than one per cent. There are over one billion websites on the World Wide Web today, and search giant Google processes around two trillion searches a year or 63,000 per[1] second, with more than half coming from mobile devices.

[1] Google only give approximate search numbers, so this is number is only an estimate.

A computer-driven revolution

The technology that has been steadily changing society throughout the post-war period, has come of age in the last 25 years. Indeed, many of the advances that support today's computer technology were just entering the market 25 years ago. At that time, the notebook was first introduced by PC vendors and Apple launched the PowerBook; video games on platforms like Sega were entering the mainstream and Norton Anti-Virus was released.

Perhaps the most technologically advanced invention – aside from the web – the Linux operating system was first released in 1991. The brainchild of 22-year-old student Linus Torvalds, the Linux OS was established as a new and free operating system for Intel x86 based PCs. Just a "hobby", the open-source system he went on to build is now the platform that runs a huge proportion of the modern internet, most of the world's fastest supercomputers, game consoles, televisions, and most smartphones (ie., Google Android). Linux is also the OS that underpins most of the systems at Amazon, Facebook, Google and Twitter – just to name a few.

An evolving human technology

In many ways, the evolution of computer technology has been driven by the growing recognition of the needs of the person using it.

While it seems completely natural today, some of the most significant changes Apple co-founder Steve Wozniak introduced were based on configuring the hardware for the user. The company – which remains today at the forefront of technological development, driven by a fundamental focus on user-experience – was the first to put a screen on a computer, establishing the model for the modern PC.

The move from massive computers housed in a separate room, with data entered first by punch-card then tape, to computers with screens and keyboards, to touchscreens has highlighted the drive to reflect the user in the development of the technology.

Based on this, it is clear that the next phase of technological development, which will help transform the way we work, connect and socialise, will be driven by an increasing demand to create a more 'human' interface.

The concept of the internet, predominantly a tool for information and sharing, is expanding to reach every part of our lives. Potentially millions of devices will soon be online in the Internet of Things (IOT), providing unprecedented convenience, information and access.

Voice-controlled personal assistants like Siri and Cortana, in their infancy today, are constantly being made smarter and more adept at responding to our needs. The idea of a virtual assistant – accessed through a device or even a direct neural connection – which is capable of helping us navigate the rapidly changing world of work is just a few short years away.

The way we input data is also evolving rapidly. Moving beyond touch-screen technology to provide gesture support, allowing users to swipe, pinch, highlight and even type without any contact with their device, is just another small step in development from current technology.

That technology will be complemented – and may even be surpassed – by the rise in virtual reality (VR) and holograms, both of which are finally finding more widespread use and acceptance after years in development. In a virtual work-space, users will be able to manipulate data in three dimensions, interact directly with an interface or walk within a virtual landscape to customise how it acts.

The winners and losers

As with any evolutionary model – particularly one that is so closely tied to human needs and desires – there are winners and losers, dead-ends and rapid bursts of innovation. With technology there are, of course, successes and failures. And survival isn't always about which development is the fittest – or even fit for purpose.

So, what makes a winner? Let's look at Facebook. Its creator had a similar idea to the Winklevoss twins, and Myspace was already out in the public domain. Somehow though, Facebook managed to blow its competitors out of the water. Said to have been created in Mark Zuckerberg's dorm room, there was no business plan, no advisors, no "market research" for the development of Facebook – it was just a cool product that was built and launched quickly. Dynamic and flexible since its inception, Facebook offered up something the others didn't – it was simple and easy to use, easily accessible and appealed to the masses.

And perhaps most importantly, Facebook is blue. Apparently used because Zuckerberg is red-green colour blind, blue has been dubbed the web's most popular colour. Blue is the colour of Facebook, Reddit, Twitter, Tumblr, LinkedIn, Microsoft, WordPress and Pandora, just to name a few.

Now, although it wasn't first to market or even the best in its class, the platform that has in many ways defined social media has become a truly global phenomenon. Worldwide there are over 1.71 billion monthly active Facebook users and 4.5 billion 'likes' generated every day with five new profiles created every second.

Dvorak vs

Dvorak and Qwerty represented two very different approaches to the layout of a keyboard. Qwerty, was designed to ensure a typewriter's internal mechanics didn't jam. Dvorak on the other hand, was mathematically and statistically created to be the most efficient keyboard layout given the juxtaposition of letters in the English language. Brilliant in the technical sense of the word, it never took off and even today, Qwerty – with no risk of jammed typewriter arms – reigns supreme.

The future workspace

For business, particularly, the future looks bright.

The World Economic Forum's report on the future of jobs highlights that we are at the dawning of a fourth industrial revolution. The pace of technological advancement is building, laying the foundation for smarter systems that will enable us to tackle problems from supply chain management to global warming and climate change.

Rather than removing jobs, like our previous experience of industrial revolutions, technology will provide more opportunities for rewarding work. Many of these roles will be in areas that are still in development or will depend on the next stage of technology – it is estimated that 65 per cent of children entering primary school now will work in a job that doesn't exist today.

While some roles will see a dramatic change in regards to technology – office roles and administrative functions, manufacturing and production will likely be tasked to robots or be automated in some way, shape or form – the face-to-face value of human interaction will be more highly valued than ever. This will give rise to a whole new section of business designed to fulfill the need for human interaction and experience, provide tailored, personal advice and guidance, or create experiences designed specifically for the customer.

Artificial intelligence, virtual reality, 3D printing and bio-technology will play a huge role in business – and life in general. Working remotely will become part of the societal norm. Advances in mobile and cloud technology will mean remote – and instant – access will become one of the most important technological drivers of change.

Our future work place might not be an open-plan office, but the concept of interconnectedness will not disappear. We will not be tied to one workplace, but many. Virtual conferencing will enable businesses to be run from anywhere in the world, without the glitches and delays we experience today.

The working day too, might look different. If we are cutting down on journey times with the likes of VR or driverless cars, and spending less time dealing with data storage and technical logistics, it's likely our workday may become shorter, or more readily able to be built around other aspects of our lives.

Ultimately, based on our experience of the last 25 years, we know technology will sit at the heart of our changing world. It will not only drive business but increasingly shape every aspect of our lives. In doing so, it will provide more opportunity to connect, share, and experience more of the world. It will create more jobs and generate more opportunity for business innovation.

Technology fails... and resurrections

Google Glass

When your product requires an etiquette guide that instructs users not be "creepy or rude (AKA, a Glasshole)" you know your technology is going to struggle to take off.

While the technology also failed to deliver on its promise, VR overlay technology is an idea that is unlikely to go away. Already widely used in the military, in September of 2016 it was reported that the augmented reality headset that failed as a consumer product was getting a new lease on life – as a tool that paramedics and EMTs can use. And, a new player which has built a niche by understanding its, initially Millennial, users is having another tilt at the market, with the launch of Snapchat Spectacles.

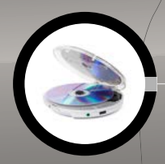
The Segway

Billed as the future of personal transport, before even a single item of inventory was released, cities across the world were already banning the Segway. But the idea – a two-wheeled human transporter – is out of this world. Launched in 2001 amidst a blizzard of publicity, the company that released it, Segway Inc., had tremendous funding and resources. Unfortunately, the product just couldn't live up to the hype, and the Segway became seen as a symbol of the worst kind of technological indulgence.

Like Google Glass, the underlying concept, however, has promise and designers and developers continue to experiment with the idea of revolutionising personal transport. A 2015 reboot of the technology – the hoverboard – fast went the way of its predecessor, helped along by unflattering comparisons to the technology promised in Back to the Future and more damaging problems with its battery system.

Betamax

One of the great technology face-offs of the 80s, Betamax rivaled VHS as the video system of choice. Fans who purchased the system said they provided far superior quality. However, the tapes were only an hour long (VHS were three) and Sony declined to let any other manufacturers make their players.



The mini-disk

Killed by the portable mP3 and then, the iPod and now, the smartphone, the mini-disk was an idea that arrived just in time to be completely outmoded.

Apple Newton

The precursor to the iPad, Apple Newton was a PDA (Personal Digital Assistant) that could send a fax and function with a stylus. However, its software malfunctioned constantly and battery life was an issue. It wasn't a complete failure though, as it did inspire a new category in Apple's iPad tablets and future iOS.

HD DVD

Beaten out by Blu-ray, HD DVD never really stood a chance. Warner Brothers effectively brought down the hammer on this technology when they decided to universally distribute all of their films and TV programmes on Blu-ray alone.

3D TV

3D TV never quite took off the way people thought it would. There were limited channels that broadcast 3D worldwide and originally, the prices of the televisions sets were high, ranging from $1500 to $40,000. Most sets also required users to wear specific glasses to watch 3D programming – something that might be fun in the cinema but can seem a little weird in the lounge at home.

Sega

Unable to compete with PlayStation, Sega Dreamcast was released in Europe in the late 1990s, ahead of the PlayStation 2 and Xbox consoles. However, the might of Sony's marketing machine meant it never made a lot of headway and even price cuts couldn't help. Eventually it was cancelled and Sega – once the giant of the gaming industry – never made another console.

Apple Maps

Many iPhone users will remember the first Apple Maps, but probably not so fondly. Plagued with problems, Apple Maps provided useless and unreliable directions and was so bad that Apple CEO Tim Cook even suggested customers use another product while it was improved. However, it did recover and the newly updated iOS10 offers a much more reliable application.

Where did we think we would be now?

And where are we, really?

From the 1950s through the 1980s, the promise of technology that would change the world and transform our work and lives was limitless. By the turn of the century we were confidently expecting to be using jetpacks, flying cars, holographic transportation, flights to the moon, hoverboards, robotic appendages, and transformers.

And while technology hasn't quite delivered on all of these promises, the science fiction of the last century has inspired many of the technologies in widespread use today.

Imagine telling someone in the 1950s that one day their children and grandchildren would be walking around with hand-held devices that could instantly connect them to any person in the entire world, and could answer any question at the touch of a button?

What seemed far-fetched then is now a reality. And in many ways, we have already seen the fulfillment of science fiction's promise.

We have jet packs that are being developed in New Zealand for emergency services around the world. The Terrafuga converts from a car into a small aircraft. We have seen enormous developments in the use of bionic limbs, even with a brain interface. The deceased rapper Tupac appeared on stage as a hologram at Coachella in 2012, and Elon Musk has just announced ambitious plans to set up colonies on other planets using reusable rocket technology.

So, what does the future of technology look like? Human!

While in many areas technological developments have met or surpassed our most ambitious imaginings, there's one very important factor on which success or failure still turns. That factor? Humans.

Not only do people develop and enhance the technology, they're its primary user.

If one thing rings true, it's that without humans, there is no technology. So, while many are worried that with the developments in robotics and artificial intelligence they will be relegated to the background when it comes to the future of business, that just simply is not the case.

As for the technology that we humans might be utilising? We can already see from the trends developing today that the options are endless.

How technology is already shaping us

With our ever-increasing dependence on personal devices, including smart phones and wearable devices, people are beginning to become more comfortable with the idea of merging the physical and the technological.

Embeddables, now more commonly referred to as "insertables", are already gaining traction in the tech sector. Tiny RFID implants that can be activated and scanned by RFID readers – smart phones or scanners installed in office buildings are the first wave of this technology. While there is no comprehensive data on how many people have RFID implants, retailers estimate the total number is already between 30,000 to 50,000 worldwide.

The acceptance of the technology is being driven by convenience. People no longer have to worry about forgetting their keys, their access card or their gym tag – simply unlocking doors and passing through scanners with the wave of a hand.

Implanted tags have endless business potential, beyond gaining access to office buildings, or operating the photocopier. Instead of passing out a business card, we will merely pass our wrist over a potential client's inbuilt scanner. Or to take a payment we will ask for someone to swipe their hand, rather than their phone or credit card.

The fitness industry, currently being revolutionised by personal data, will be truly transformed by providing a user with a constant source of embedded biometric data. Travel too, will be increasingly streamlined. With all your personal data stored in an implant, business trips will be made much easier by simply scanning your chip and connected luggage tag at a single airport terminal, instead of wasting time in lines to show paper passports and visas.

Tags also offer considerable medical benefits, with people already able to list emergency contacts and life threatening allergies on their "tag". Within hospitals, patients with tags implanted could provide their carers with instant access to personal medical records, real-time biometric data, treatment plans and drug regimes – potentially saving thousands of lives each year.

Five ways
technology will be more personal in 25 years

"Super-powered Siri"

People will have access to a "super-powered Siri". The digital assistant, embedded under the ear will be available 24/7 and able to help with everything from restaurant suggestions to booking client meetings and gauging traffic flow.

Technologically-tailored clothing

Clothing will have the ability to give people superhuman skills. From exoskeleton suits that make lifting heavy packages or building new offices a breeze, to leggings that make it easier to walk, or even run, to Spiderman-like clothing with gels to improve strength or make ascending mountain peaks much less treacherous.

20/20 vision

Poor vision? While Lasik surgery will still be popular (and come with a lifetime guarantee) some people will choose to opt for super-charged contact lenses. With the ability to be worn consistently for up to a year at a time, the lenses will have the added benefit of overlayed VR. Need to access spreadsheets or presentations in a video conference? It can be done at the blink of eye. Think Google Glass but cool (and no one will know you're wearing them).

Chatting to a… building?

Control the home you live in, or the office you work in – from wherever you are. Artificial Intelligence will be ingrained into buildings, meaning people can "talk" to the building – be it in person or through the use of super-powered Siri – and ask for adjustments in temperature and lighting or even cleaning. Like a built-in home or office-based servant within the walls.

Customisable prosthetics

Prosthetics won't just just restore movement; they will give people new skills. Right now a biological scientist is making use of a prosthetic arm with a built in drone and flashlight and a French artist has a prosthetic that doubles as a tattoo gun. By the decade 2040 prosthetics will be more customised and accessible than we could ever have imagined, with the ability to aid us in our personal and work lives.

Five jobs
that will prove the usefulness of humans

Travel curator

Be it virtual or in real life, a travel curator (formerly known as a travel agent) will be an integral part of travel planning. Able to holographically bring your destination to you and relate their own personal experiences, these curators will be easily accessible and available 24/7.

Craft brewers

Hipsters rejoice; craft brewing will not be a thing of the past. More high tech than ever before, with the ability to grow your own grain and hops at rapid rates, craft brewing will be an experience everyone can enjoy. It won't be all modern though, delivered on a GoPro Karma drone (circa 2016), the brewing experience will still have that vintage feel.

Lawyers and accountants

Not everyone will have picked up a law or accounting degree by 2040 so access to these professionals will remain crucial. The only difference will be their availability and access, instant communication will be commonplace and there will be no "paperwork" with all digitised documents stored in your own personal cloud.

Unreal estate agent

Want to purchase property in the south of France but don't have the spare time to jet over the pond? Never fear, a real estate agent will be there in a jiffy. Not only will you be able to tap into their knowledge of the market, they will also be able to virtually "walk" you around potential abodes so you can "see" yourself living there.

Artists

Artists of varying shapes and forms from water-colourists to poets, authors and actors, musicians and designers, will be as prevalent as they are today. Creativity isn't going to disappear anytime soon and only so much can be done through the addition of apps. People will still want to tap into skills that they themselves don't possess (organically, anyway).