amaze

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Unlocking the true value of IoT

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eCcommerce

The connected devices explosion

From cars to kitchen appliances, warehouse management and agriculture to smarter cities, the pervasive opportunities presented by connected devices and the Internet of Things (IoT) to every imaginable industry are infinite.

Even though we are still early in the adoption stages of IoT, there is widespread belief that we are teetering on the edge of an explosion that will make previous technology revolutions – such as the rise of social media – seem like small fry. If you think of the web browser as the first dimension of the Internet and mobile the second, then IoT is the third.

The figures speak for themselves – ABI Research found that there were 16 billion active connected devices last year. IDC predicts that by 2018 the number of devices on IoT will more than double to 22 billion and drive the development of 200,000 new apps and solutions to take advantage of them. Gartner has a slightly more conservative estimate of 20.8 billion connected things in use worldwide by 2020 but thinks that IoT will support total services spending of $235 billion in 2016. Whichever way you look at it, the hype around IoT is compelling. Indeed, it has the potential to transform business models to create better experiences for customers, competitive advantage and operational efficiencies.

Imagine if your running shoes could track when they need to be replaced. Using data that is collected each time you run and taking into account the distance you travel and the terrain you run in, and using this data to alert the shoe manufacturer's commerce system to automatically order you a new pair of trainers, according to your personal specifications, just when you need them? In essence turning your running shoes into a subscription service.

In the same way, your car could automatically let both you and your dealership or garage know when it needs essential maintenance or software upgrades. Your online grocery shopping could become a thing of the past as your fridge could automatically order products for you as you run out of them. This could even be extended to things such as shampoo bottles, which could sense when they are nearly empty and then be automatically added to your grocery list.

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As is often the case, there is a 'but' looming on the horizon. While the applications and opportunities presented by IoT may be infinite, so too are the associated disruptions and challenges.

The all-encompassing vision of IoT is still a distant dream for the majority, with the reality a series of isolated projects. The true value of IoT will come in combining connected intelligence to deliver an overarching view, which will allow organisations to optimise operations, differentiate their services and enable new business models.

It is all too easy to get caught up in the excitement of IoT without stopping to consider how to really unlock its true potential. Those who approach it as a gimmick or with a short-term mentality without creating a strategy around how it can really add value will ultimately fail. Just getting products to turn off remotely for example will not cut it – there needs to be real innovation and use.

If approached correctly, IoT is a chance to reinvent business processes and transform market offerings. Yet recent Forrester research found that only 34% of organisations agree that IoT enables new types of business models, focusing instead on how it can drive operational efficiency[1]. Unless those who take such a narrow view of IoT dramatically expand their perspective, they will miss out on the new revenue sources and improved business models IoT can enable.

Taking a new approach

A large part of the problem is in how organisations are approaching IoT implementation. Instead of approaching IoT with the same gold rush mentality that many took to introducing, for example, mobile and ecommerce systems, organisations should step back, reassess the market and rethink their approach. Otherwise they risk adding yet another siloed offering to their digital estate.
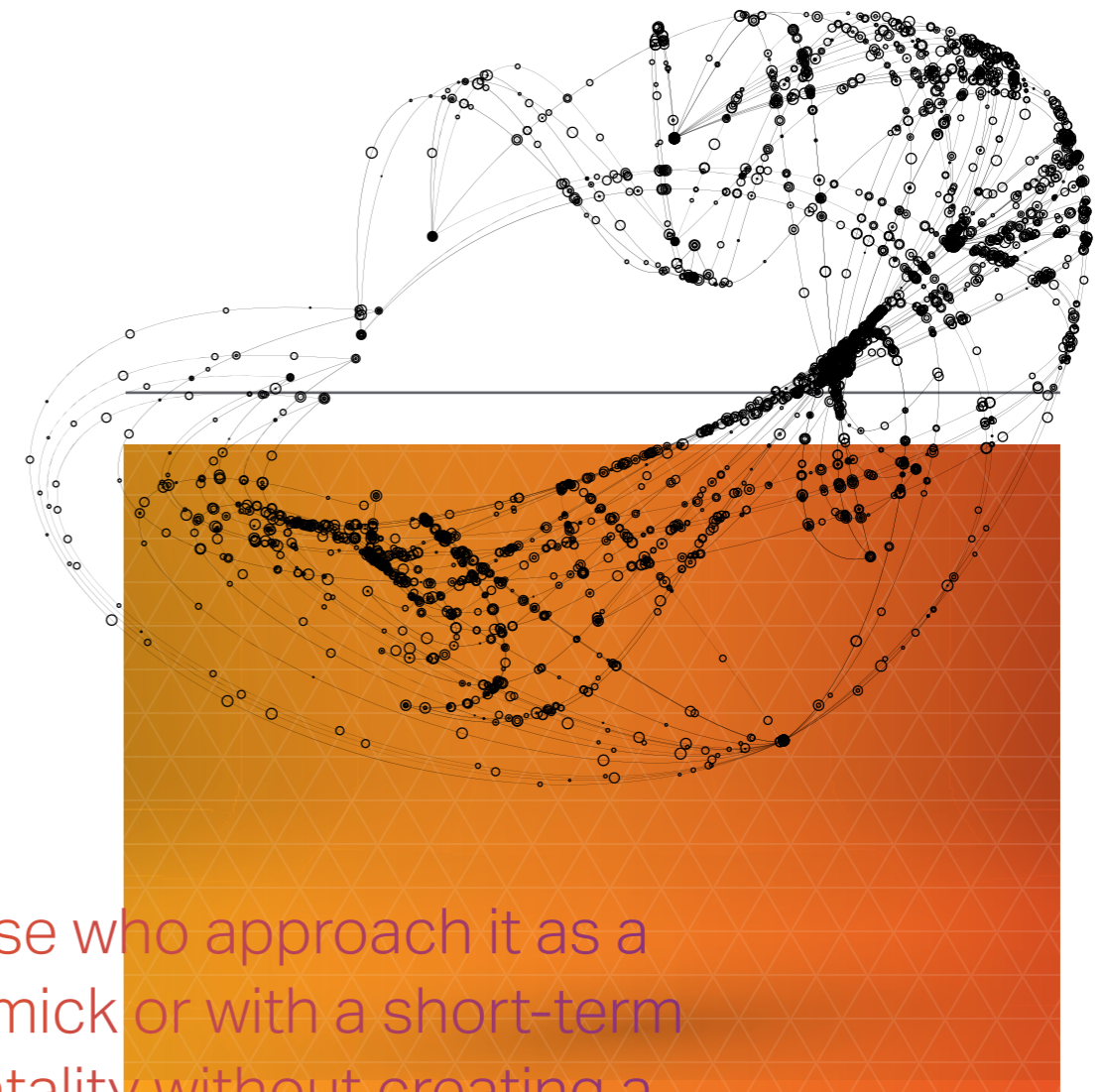
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In addition, digital disruptors such as Uber, Netflix, Tesla and Airbnb are challenging existing business models and engaging customers in new ways, leading to empowered, savvy consumers who are changing the market fundamentals across industry. They expect to be at the centre of an ever-evolving eco-system and organisations need to be able to deliver on this expectation.

As such, continuing with digital silos risks hampering the opportunities presented by IoT. Historically, the majority of organisations do not have a good track record of responding well to silos of information. However, to really reap the benefits of IoT, businesses need to join the dots across their digital estate, connecting all data and intelligence, in order to have a seamless view of their customers

1. The Internet of Things has the potential to connect and transform businesses: Forrester August 2015

The three waves of IoT

In our conversations with organisations, we are seeing three main phases or 'waves' emerging in their approach to IoT.

Wave one: The Home

The initial wave of IoT has focused predominantly on the home, with products such as Nest's smart thermostats and smoke alarms acting as good examples of how products connected to IoT can make life easier for people by allowing them to, for instance, control the temperature of their homes remotely.

Wave two: Consolidation

The second wave of IoT concentrates on consolidating existing platforms to encourage interoperability between products. For example, as you near home at the end of the day, your connected car could signal the cloud, which would then communicate with items in your home, for instance getting your oven to pre-heat, and your porch lights to turn on.

Wave three: Innovation

This third wave of IoT is perhaps the most challenging and, without doubt, necessitates the most innovation. It requires organisations to really think about their products and how they work within a connected environment, as well as with companion apps and utility services. IoT shouldn't be about connecting your products to the Internet, but bringing the Internet to your products. There is a huge wealth of capability in terms of ideas and content that is accessible via the Internet and the challenge is how organisations can enrich their products with this capability.

While some forward looking organisations already have their sights firmly on the third wave, the majority are focusing on phase one, partly because it is the most obvious and partly because larger, well-established organisations need to prove the business case first and so start slowly. However, agile start-ups can and are moving very quickly to phase three and consumer demand is increasing. Traditional organisations need to look further ahead or risk getting left behind..
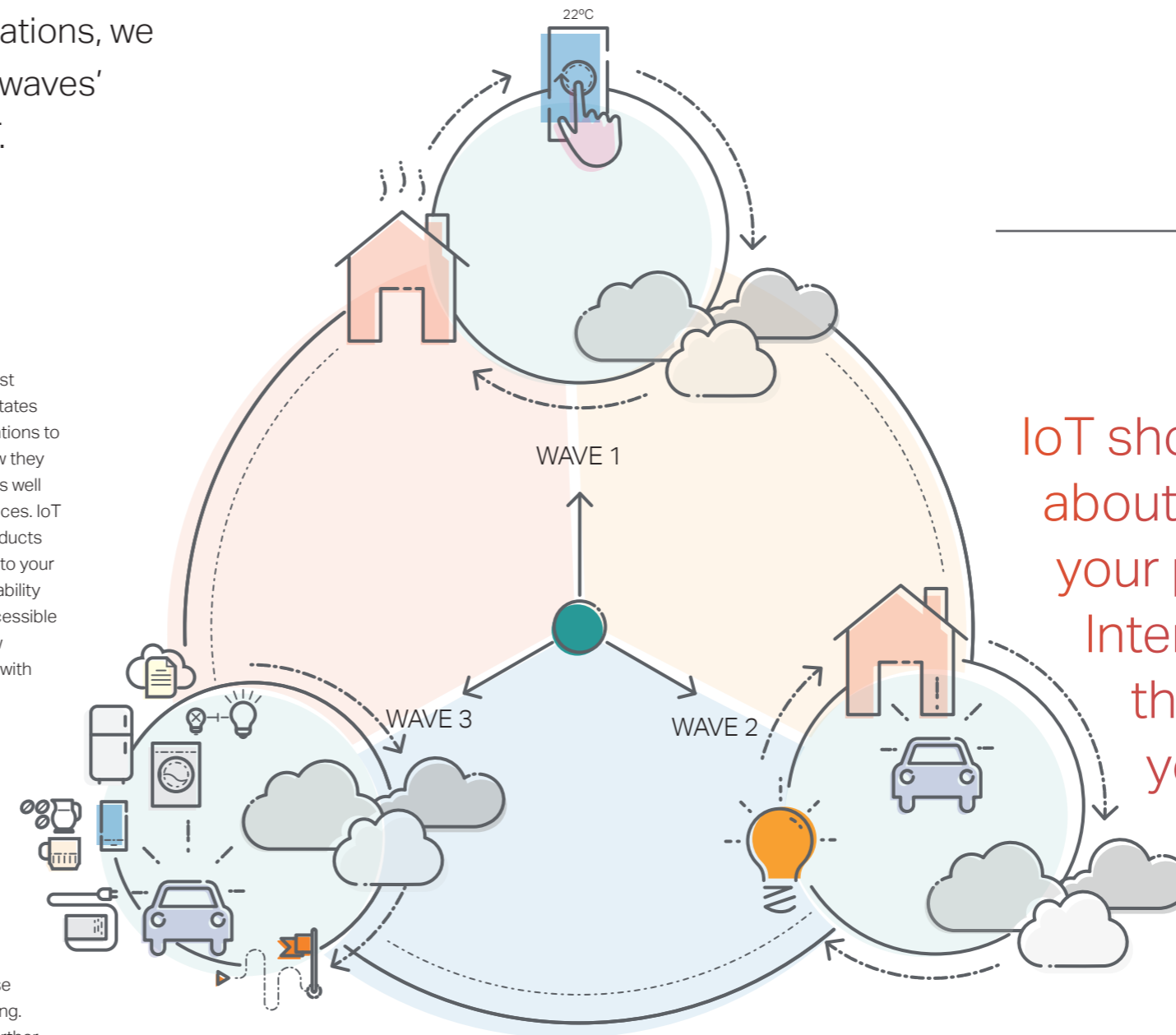
WAVE 1

WAVE 3

WAVE 2

22°C

IoT shouldn't be about connecting your products to the Internet, but bringing the Internet to your products

Key considerations for IoT success

So, what do organisations embarking on an IoT strategy need to consider? The key considerations are outlined below, and – as is so often the case – are all inextricably interlinked.

01 Take ownership

Driving IoT implementation will bring up new challenges, not least in connecting business systems across business boundaries. This needs strong companywide collaboration, championed by leadership. No one person or department can plan and implement an IoT strategy alone – nor should they, as for IoT to live up to its potential organisations need to join the dots between existing silos of information.

However, research has shown that 75% of organisations are currently taking a fragmented approach to ownership of the IoT lifecycle – splitting ownership into strategy, budget, technology selection, implementation and ongoing operations across three or more executive sponsors[2].

This can not only hinder productivity, but also further encourage silos. It is no surprise then that the same research showed that the organisations with more executives owning various stages of the IoT lifecycle were more likely to cite IoT challenges including silos, and lack of executive support.

As such, whoever 'owns' IoT within an organisation also needs to help drive a cultural shift to encourage departments - from marketing and ecommerce to IT and HR - to innovate and work collaboratively towards realising a holistic customer view.

02 Innovate, innovate, innovate

The average lifespan of a company is now just 15 years according to the S&P index. The main reason for this? Failure to embrace innovation. Kodak is a classic example here. Although it is the company responsible for inventing the digital camera, ironically its failure to embrace it led to the company's downfall.

All too often boardrooms focus on figures and not the future – but there needs to be a shift in mentality to invest in innovation. You only have to look at Blockbuster's fate at the hands of Netflix or RadioShack's demise with the emergence of Amazon to see that those who innovate and embrace change flourish.

Of course, there needs to be a balance between long term investment and short term financial challenges, but it is possible to satisfy both. For example, DuPont's strategy from 2010 has been that 30% of all revenue must come from innovations, rather than anything that's more than four years old. Google spends 50% of its profit on innovation and Amazon invests all its profit in innovating.

Or take Tesla – it has had a blank canvas to build a business upon and has used this opportunity to really think about potential future innovations in terms of how people will buy, drive and interact with cars in the future. It has designed its operations to reflect this; with great success.

This demonstrates why it is so hugely important for organisations to carve out time to be innovative and really think through exactly what they want to achieve with IoT, where they want to go with it and how they're going to get there.

Think of the cloud as the brains and control system for the new IoT ecosystem

Everything will potentially be a service and therefore offer new revenue streams

03 Embrace changes in product and service design

Part of the reason that taking time to innovate is so important is that the advent of IoT is having an enormous impact on both product and service design – and it is these changes that will drive the commercial success of IoT.

As the connected devices that make up IoT become more prevalent, the lines between software and hardware will continue to blur. Devices that are connected to the internet do not just offer the opportunity to collect data, they can receive it too. For example, a manufacturer could push out an update to make an older model washing machine run as efficiently as the latest model. In effect, products could improve over time rather than vice versa.

This turns current models on its head, with products being more a way to deliver services than about the actual product itself.

Everything will potentially be a service and therefore offer new revenue streams. The challenge will be to produce products that can adapt and learn from the user to continuously offer relevant and meaningful services. It is therefore no wonder that IDC predicts that by 2018 enterprises will more than double the size of their developer resources.

04 Intelligent use of data to gain a single customer view

As business models shift to subscription based approaches, accessing and exploiting customer data will be absolutely key. To encourage customers to sign up to and continue using subscription based services, organisations will need to know them extremely well, in order to repeatedly anticipate their needs and maximise their experience. For this, organisations will need to understand how their customers consume their services, by tracking their behaviours across channels over time.

Customers already increasingly expect a personalised, seamless experience across all digital touch points and the increase of connected devices on IoT will only compound this expectation. Fortunately, IoT will also provide a goldmine of customer data – for those organisations that can successfully collect and analyse it at least.

Early IoT adopters are already waking up to these facts, with 83% saying that improving customer experience is their top business priority and 75% citing improving the use of data and analytics as a top IT priority. Those who can successfully convert analytics into a holistic view that can deliver real customer value will triumph. Those who can't will continue to wade through a sea of data.

05 Build on your current investment

The technology to enable connected devices and IoT for organisations is, generally, all in place. The majority of organisations have a digital 'hub' encompassing mobile, commerce, CMS, web, analytics, bespoke apps etc. This is good news for many organisations, as it means they do not necessarily need to re-invent their digital estate. Indeed, an organisation's CMS system is often the only single source of truth amongst all digital assets and content within a business.

It is a vital component within a digital ecosystem that can handle scale and load and is the only platform that is capable of managing a business' brand experience. In addition, it's agile and is already gathering intelligence – why on earth would you start again? Instead, build on this investment.

06 It's all about the cloud

The cloud is absolutely key in terms of enabling IoT, as it can facilitate not only the integration of the aforementioned technologies, but also the exchange of data that is so central to IoT. It is not only a very efficient hosting environment, it is also possibly the only affordable way to realise IoT.

Perhaps unsurprisingly, IDC predicts that enterprise spending on cloud services, the hardware and software to support them , and the services for implementing and managing them will exceed $500 billion by 2020 – more than three times what it is today.

When building on their current assets, organisations need to ensure they invest in cloud-based infrastructure in order to reap the rewards IoT can enable. Think of the cloud as the brains and control system for the new IoT ecosystem – without it, there is no glue to bind all the devices and platforms together.

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3. The Internet of Things has the potential to connect and transform business: Forrester, August 2015.

Final thoughts

The IoT is set to be more disruptive and far reaching than many realise. If approached correctly, it can transform entire business models and lead to unprecedented competitive advantage. It can revolutionise customer experience, streamline operations, completely alter product and service design and deliver new business models and revenue streams.

All the building blocks are in place for organisations to capitalise on IoT – technology is not the issue; strategy and culture are. That is why it is vital that organisations claim ownership of the IoT agenda and drive the change needed to join the dots between their digital functions, not just look at IoT as a way to streamline processes or cost savings.

Put bluntly, those that do not, will fail to reap the rewards offered by IoT. Businesses are at a clear junction – they can either make changes to improve their market share going forward, or stick to existing models and risk failure.

However, organisations do need to appreciate that success in IoT will take time, and that they may not see rewards straight away. That doesn't mean that they won't eventually. IoT is a brave new world for all involved, but there is no doubt its age is dawning. IoT offers opportunities that haven't even been imagined yet, but to be able to deliver on its promise, businesses need to be brave and take that step out into the unknown.

Matt Clarke

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Matt is responsible for Amaze's technical strategy and innovation.

He brings a huge amount of experience in guiding client thinking at a global level and as well as overseeing the successful delivery of all projects, he plays a key role on briefs that require especially large, complex solutions.

Much of Matt's time is currently spent advising clients on how to use new and emerging technologies to get the maximum return on investment, especially with the current global trend of bringing together Commerce, IoT, Omni-Channel Retail, CRM, Big Data, Product Content Management and ERP into one space.

About Amaze

Amaze is a leading, full service digital marketing, technology and commerce consultancy.

We like to look past boundaries – between countries, media channels and especially services - to deliver integrated solutions right across the digital spectrum from strategy to commerce and global implementation and ongoing optimisation.

To find out more about how Amaze can help you develop an innovative connected product strategy for your business, contact us on:

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