



Bringing it all together

WorkShift: The future of the office

Written and compiled by Dr Nicola J Millard with Steve Gillies



PART **1**
of the WorkShift Series

Beyond...The office: The face of work to come?

Back in 1981, Dolly Parton sang about 'working nine to five'. Now, we are in an era where a workforce can collaborate across time zones and territories with people they may never meet in person. We can be talking to Sydney at 10pm and Mumbai at 6am. So nine to five simply doesn't feature; 5am to 9pm might be more appropriate!

With seismic shifts in global working practices, do we need to rethink the fabric of the jobs that we do, the offices that we work in and the tools that we use?

As both consumers and employees, we often move faster than the organisations that serve and employ us. Consumer thinking may be with us in the home but it doesn't suddenly leave us as we walk through the doors of the office. The fact that the office may also be the home, blurs the boundaries even more. With the WiFi wings to fly employees into the cloud, they can potentially work anywhere, with any device – work becomes a state of mind rather than a place. Which leads us to ask some basic questions: What are offices for? Is it time to look beyond the office?

The future of work is one where employees become as demanding and innovative as they are as customers. If the technology they have at work is slower, heavier and so locked down that they are unable to access the tools and apps they find useful, the likelihood is that employees will start to use their own better technologies to get the job done. Immense creativity can be unleashed if the employer understands the forces driving these new ways of working and encourages employees to adopt them. One size increasingly doesn't fit all in terms of tools and technologies for work. That can challenge the IT department to ensure that their business is secure. Is it time to look beyond the desktop?

Technology has freed us from some of the more mundane tasks but it has also served to accelerate work – as we become a slave to the little flashing light on our BlackBerries. However, are these very tools that were designed to increase our productivity, actually serving to slow us down as we struggle to juggle multiple tasks and, worse still, continuously task switch and end up achieving nothing? Is email our lifeblood or a black hole for collaboration? Is social media a new way of collaborating or a distraction? Are there other ways of working across boundaries using a combination of new and old tools? Is it time to look beyond collaboration?

Jobs are also undergoing a radical rethink. Thomas Frey suggests that **“In the future, people will worry far less about how safe their current job is and far more about where their next job will be coming from”**. We are entering an era where work is the focus, rather than fixed jobs. Hours are irrelevant, as long as you get the task done. Microworkers can be paid for as little as 15-minute shifts for multiple employers. Expertise is valued, as customer demands get more complex – and experts can network together in ‘swarms’ with passion and commitment. How do organisations harness the power of networked expertise to solve problems in customer time, rather than corporate time? Is it time to look beyond the job?

New attitudes and technologies are changing business paradigms. In fact, the only certainty in work now is change. Using 20th century models to run 21st century businesses may not work anymore. Let’s look beyond all that.

This is the first of three papers looking at various aspects of the future of work. This paper investigates the ways in which employees are leading the change in the way that they are working as a consequence of becoming untethered from their desks. It looks at the changing nature of the fixed office environment, how employees are using third places to work away from both office and home and the influx of their own devices into the work environment. It also looks at the changing patterns of knowledge working which may, ultimately, lead to the death of the job.

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The agile organisation

1. The age of true ‘martini working’: anytime, anyplace, anywhere through any device.

Back in the 1970s a Martini advert extolling the virtues of the red vermouth at anytime, anyplace and anywhere was so successful it reportedly increased sales by 300%. The advert was so popular that the catchy/ irritating jingle can still be easily remembered.

Then, any connection to work would have been difficult to make. Cellular networks were just starting out. Work was a place you went to and, whilst offices were often open plan, you could see the management hierarchy reflected in them. The notion of working anytime, anyplace, anywhere was in its infancy.

It wasn't just the lack of mobile technology that held Martini working back. Managers were there to supervise work effort, flow, balance and quality. If they couldn't see their employees, how could they know that they were working? Employees rapidly learned that ‘face time’ in front of the boss was a way to progress up the career ladder. Offices followed a daily ebb and flow of people patterned around the boss's regular routine.

Today we can't get away from mobile technologies (even if we want to); the internet is now the communication and collaboration tool of choice; work is conducted across continents and management attitudes have changed in response to social pressures demanding improved work/life balance. Add to this a tough economy, the ever-increasing cost of fuel, plus adverse weather conditions and major disruptive events (especially sporting events like the Olympics and the World Cup) and it is easy to see why employees may think twice about getting in a car.

Employers who are under increasing pressures to do more for less have slashed travel budgets and dramatically replaced face-to-face meetings with audio and web conferencing alternatives. For example, BT reduced face-to-face meetings by more than 40% in some functions through technologies such as video and audio conferencing. With the cost of transport soaring, hotel bills to pay and the drop in productivity that travel inevitably brings, BT avoided travel and subsistence expenses worth £111 million. In addition, time worth at least £71 million was freed up for more productive use.

Today, people can work anytime, anyplace and anywhere, if they are provided with the tools, policies and infrastructure that support more flexible, more dynamic work styles. There is nothing new about agile working. It has been around in various guises (e.g. teleworking, telecommuting and smart working) for some time. However, only now have the possibilities become so significant that organisations are proactively deploying large-scale change programmes across their workforce.

Work has become a thing you do, not a place you go.

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2. Reasons to be agile...1,2,3...

2.1. Using space better.

For most organisations people and property are their two highest annual costs. Making people more effective and productive and reducing the amount of space they can be effective and productive in are becoming high priorities. Experience with large-scale agile working transformation programmes has demonstrated that efficiency savings on both of these are typically more than 10% and can exceed 20%, in some cases.

Walk into any open plan office today and the chances are that you will be greeted by a sea of empty desks. In a BT study of desk utilisation, we found that desks are used, on average, for 50-60% of the available working day. However, there are always spikes in demand, depending on the time of day, the day of the week and monthly/quarterly work cycles (e.g. end of quarter sales cycles). A one desk for every employee policy doesn't necessarily make sense for everyone and sometimes the desk is the last place that some people should be working (see section 4.2.2).

By introducing agility into the equation, you can potentially reduce desk allocation to 80% or even 60%. Of course, alternative work spaces need to be provided – including hotdesking, hoteling (reservation-based hotdesking), drop in areas, team zones, informal working spaces and home working. Curiously, when desks are removed, the average utilisation often remains low (around the 60% level) seemingly indicating that employees change their working habits to accommodate the new arrangements.

Special consideration has to be given to some job roles where information security is an issue. For example, team zones can be used by any employee as long as they are a member of a specified job role or department. In this way you at least know the stranger you are sitting next to is as qualified to view the same material as you are.

The challenge is where paper is still predominant – as the paperless office is still far from a reality in many professions (especially in research, law, banking and government). Paper rarely crashes and, despite digital signatures being available, ink and pen ones are still sometimes required. Storage spaces and lockers are often a necessity still as people need to lock away confidential paperwork or even just lock up their laptop for the night.

2.2. Reducing down time.

Being in a situation where you are disconnected from the office is becoming a thing of the past – conducting business from the beach or a hotel room is reality for most people now. This is, of course, a double-edged sword as work-life balance is being even more seriously challenged than it has been in the past (a subject for a future WorkShift paper). However, if your work PC

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has blown a gasket, your car has broken down or you are buried under 30 feet of snow, the ability to log-on to the corporate network from wherever you are means that productivity can be maintained even under the most challenging of conditions. Of course, many people email or make telephone calls 'on the run' but without access to some of the critical corporate resources they need, these calls are often limited to an "I'll call you when I get back in the office" type response.

Synchronisation and push technologies combine to make information available anywhere, anytime so that employees can make informed decisions whether they are in the office or in between, regardless of device and as long as they have network connectivity of some form or another.

For example, in BT, push technology is used to keep field-based workers up-to-date when a knowledge repository is updated. They specify the kind of things that they are interested in and are alerted when any changes are made. Although these technologies don't replace face-to-face, they open up new possibilities for networking people together who aren't physically co-located.

Today Cloud-based services on the internet can provide shared spaces and device independent synchronisation. As consumers, we are using services like Dropbox to do this. However, using publicly available Cloud services can cause the IT department to have some sleepless nights around information security. With the explosive growth of consumer devices such as iPads or Android smartphones, organisations need to look at either replicating the convenience and functionality of the public Cloud in a more private and secure environment or develop information security policies that provide employees with guidelines as to the appropriate use of public Cloud services (especially if they are using their own devices to do so – see section 5.1).

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2.3. Conducting better meetings.

Conducting meetings from any location using an audio or web conferencing tool has always been one of the most significant benefits of agile working. Face-to-face meetings can be more than 10 times the cost of an equivalent audio conference. If you consider that at least 20% of all face-to-face meetings can be substituted with online alternatives, the financial benefit to the organisation is considerable.

As more and more people use audio and web conferencing facilities one of the common questions asked is, which meetings are better off online and which ones are better face-to-face?. In addition to cost considerations there are other important factors to consider:

- Is the agenda linear or non-linear? Regular, set agendas that review and discuss the same issues using the same content simply updated from the last time are good online candidates. The discussions tend to take the form of one person updating several with questions and clarifications requested at the end of the update. Ad hoc, issue-based, one-time or emergency meetings tend to have bespoke agendas and require specialist input making them less suitable for online interaction.

- Is the content structured or unstructured? For many meetings the content to be discussed already exists in a structured form and can often be provided in advance. If content is highly dynamic or debated or being generated on the fly in the meeting then it usually requires engaged debate, the use of analytical tools and maybe some brainstorming techniques. Structured content is good for online; unstructured usually requires face-to-face.
- How much social capital exists between the meeting participants? From general life experience we know that it's much easier to deal with people we trust, share values with and who talk the same language. We feel we know them and don't necessarily need to meet up to get things done. One of the funny things about social capital is that it decays very slowly. I have several business 'friends' that I worked with over 10 years ago that I would happily work with again because the shared experience we had and the successes we achieved together created a super-tight social bond. Strong social bonds make online meetings easier so, if the participants need to get to know each other, face-to-face is best (see section 4.2.5).

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3. The beginnings of an employee led revolution.

3.1. Anchors to the old ways.

Agile working is neither new nor ground breaking but, in reality, many organisations are still clinging on to work patterns that are highly traditional. The change that is going on now is subtly different from previous changes because it is employees that are now seizing the initiative and enterprises are running to keep up. Fixed work styles have been with us for a long time and have left their fingerprints in systems, organisational structures, policies and even in the technology we use. In fact the fixed workplace model is so strong and so pervasive that we often don't realise the impact it has when we design new ways of working or new technology solutions. Like an anchor dragged along the sea bottom, fixed work style thinking is severely hampering the rate of organisational change.

Lynda Gratton, Professor of Management Practice at London Business School and author of *The Shift*^[1], suggests that there are many reasons why the promise of organisational flexibility has rarely been delivered in practice: the continuing focus on being present rather than on results; few if any senior role models prepared to work flexibly; and under designed and over complicated jobs.

Cloud based technologies, the influx of those younger Generation Ys into the workforce and social media are all changing attitudes to work and opening up new possibilities for very different work paradigms. For a start, the old pattern of working from 16 to 65 is changing. In the future people are likely to retire only when they can afford to do so, and that will probably mean a workforce who may well be working until they are well into their 70s. Proportionately, the number of workers in the 35-65 bracket is likely to drop. In addition, approximately a third of the workforce are likely to be 'free agents', either working on a part-time basis or possibly microworking (see 5.2.2).

As Benjamin Franklin put it, “An investment in knowledge pays the best interest”.

3.2. Tools for a knowledge economy.

The way we work now is very much rooted in our industrial history and yet we are still often using 19th century techniques in a 21st century organisation. For example, Taylorism, or the concept of ‘scientific management’, has been around since the 1880s and is still being used (or abused) today.

Taylor, who came from a well-to-do Philadelphia family, was a foreman in a Pittsburgh steel mill. He had a largely uneducated, untrusted workforce and devised a means of detailing a division of labour in time-and-motion studies and a wage system based on performance. He introduced the ideas of de-construction, standardisation, organisation, incentives and repetition to work. Subsequently, it would increase profits for business owners. It would appear to be the ‘only way to go’ in managing and motivating people. However, Taylor’s concept of motivation started and finished with monetary incentives and he believed that the workforce in his mills were inherently lazy. Taylor’s attitudes towards workers were laden with negative bias and he believed that **“In the majority of cases, man deliberately plans to do as little as he safely can”**.

Arguably we have been taking a Taylorist approach to business ever since but with the added twist of automation replacing people. Jobs that were the mainstay of organisations 15 years ago – like secretaries and receptionists – have been replaced by new knowledge jobs such as social media marketers and search engine optimisation analysts.

Extrapolating from the past it is easy to assume that the future of work continues to gain productivity from deconstruction, automation and standardisation until we eventually design ourselves out of a job and replace ourselves with a machine (this report was in fact written by my robot vacuum cleaner).

However, this is largely wrong because there is a limit to the amount of complexity that deconstruction can cope with and machines have key weaknesses when it comes to innovation, complex reasoning and emotional intelligence. Plus, a lot has changed in the past 100 years (even in the past five years!). We have moved from a labour based economy to a knowledge economy where the de-construction/standardisation/repetition of work doesn’t always lead to efficiency gains and where knowledge creation/sharing combined with mass collaboration can deliver higher gains.

As customers, we have a lot more choice than we’ve ever had before and the internet has given us Google knowledge and more opinions than we can cope with. When we walk through the doors of the office, we are bringing those experiences as customers to bear in the way that we do business. We want choice about work-life balance; we want to work away from the office sometimes; we want to work when it suits us; we want to focus on the job and be uninterrupted by office politics; and we want more empowerment and the right tools to get the job done.

Knowledge is now the primary source of competitive advantage and it is the knowledge in the combined heads of knowledge workers that drive business success. As Benjamin Franklin put it, **“An investment in knowledge pays the best interest”**. An organisation’s internal knowledge economy must be based on well-established social capital, including trust, reciprocity, common business goals and language. Without these conditions, knowledge is like sludge. If you want knowledge to flow, you need to focus on promoting social capital.

Social capital represents the ties between workers and the organisation. The ability to exploit it fast is becoming a more valuable asset than simply what you have on your balance sheets. Yet most companies are not managing knowledge workers very well. They don't provide the workplaces, measures of success or technological support that meets their needs. The old industrial model of predictable, repeatable tasks and top-down management control is being superseded by more flexible, leadership models.

In addition, tough economic conditions have meant that we're doing the same amount of work but with less people – which means that it's vital to ensure those human assets are utilised well. Successful organisations need to look at minimising the overheads of supporting the workforce (including technology, travel, management overheads and facilities management) whilst ensuring that their experts have access to the knowledge and networking capabilities that enable them to work effectively, wherever they happen to be.

This is about as far away from the Tayloristic model as you can get. In other words, the old ways of doing business as usual need a bit of a purge.

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The future of the office

4. In the future, why will we need offices?

“Our mission is to understand the future of work as a sequence of events: what type of people we will need in the future; what sort of work they will do, and how the space they will work in can best suit this”, Anne Muirhead, Head of Future Working Environment, PriceWaterhouseCoopers.

Work is very much rooted in the society of the time. The meaning, content and focus of work has changed fundamentally since the Second World War as has the number of hours that we all put in on an average week. Even Dolly Parton’s classic 80’s track “9 to 5” is now a relic of an age gone by – the 2011 remake would probably have to be called “5 to 9” – as we increasingly work in a 16 hour window that encompasses San Francisco to Sydney and Shanghai to Stockholm.

This often also means that business is becoming more virtualised – unless we all want to turn up to the office in our pyjamas at 2am for that important call with the East Coast. The Cloud is enabling us to access all of our tools for working through a virtualised desktop – all we need are the WiFi wings to fly up and get them. Many of us are already choosing to work anytime, anyplace and anywhere, through devices that may well be ours rather than the company’s. According to a 2011 study of office workers by Virgin Media Business, 60% of UK employees believe companies will no longer need offices by 2021^[2].

The role of the traditional office is changing. There is a growing body of research emerging showing us that the WAY that we work now is actually inhibiting our productivity. Ask yourself “where am I most productive?” and I doubt that your answer is “the office”! And yet, many of us still choose to drag ourselves into those big grey, soulless open plan places with their Dilbert-style cubicles and harsh fluorescent lighting every day.

Why do we go to the office now? The answer is to see other people, have meetings and socialise about work. And yet, in an open plan office, all of these activities are often greeted by disgruntled shushes and tuts from people who are still clinging on to the deluded notion that offices are good places to concentrate.

Open plan office design is often blamed for this. However, the open plan movement, which evolved in the 1970s, did so for very valid business reasons. In a time before email, audio conferences, the internet, wikis, instant messaging and social networking, few people were venturing out of their offices to talk about work. Knowledge sharing and awareness of what was going on in the office environment was limited. By literally pulling down the barriers, these buildings were designed to promote economies of scale through co-location whilst fostering a sense of community and collaboration through communal spaces. Efficiencies were to be achieved through better collaboration, peer learning and enhanced creativity through the free exchange of ideas.

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Manufacturing thinking has designed the modern office space. Cost per seat has driven organisations to load more and more people into tighter and tighter spaces. This ‘one very small size fits all’ environment fails to account for inevitable decrease in productivity of the people crammed into these spaces. Noise, lack of natural light and air plus constant interruptions all tend to destroy the ability to concentrate on any task.

Despite focusing on efficiency and productivity in systems and processes, we are not necessarily acknowledging that the offices that we work in don’t necessarily work for us anymore because we are working in a model that is 40 years out of date.

4.1. Phone home: the office in your house.

Of course, the traditional alternative to the office is working from home. Homeworking has achieved critical mass in many organisations (as of the end of 2010, 73% of BT’s workforce were equipped to work flexibly from any location, including the home, and 10% were registered as permanent home workers). The ever-increasing speed, capacity and reliability of home broadband connections is likely to open up even more possibilities for delivering ever more sophisticated forms of communication to the home environment. For example, the delivery of high quality video conferencing via the laptop or even via your super high definition, surround sound television is becoming a reality. In this way the world can literally be brought into your living room as remote collaboration through telepresence becomes accessible in environments other than the office.

Working from home can reap the benefits, with 20-30% increases in productivity compared to office-based employees typically reported by organisations who have adopted it. These benefits are largely delivered through employee retention, reduction in absenteeism (typically 10-20% lower than the average rate due to the fact that the morning commute tends to be limited to putting on a pair of slippers), sickness rates (with some organisations reporting 60% lower than average since many people even work from their sickbed) and more flexible hours.

Even jobs that were regarded as the realm of a fixed office, like call centre jobs, are starting to become ideal jobs for ‘homeshoring’^[3]. Again, this is not a new idea. BT originally tried the concept of advisors working from home in 1992. However, the pipe needed for voice and data in those days required a JCB to dig up the front garden and, as a result, it cost around £11,000 a seat to set up. This was regarded as being a bit too expensive to implement across the business.

Almost 20 years later, the costs have gone down significantly as home broadband capacity has gone up and contact centres have migrated into the Cloud. Solutions like BT Cloud Contact effectively provide you with the ability to become a contact centre advisor wherever you are,

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as long as you have access to a web browser. This means that you can be listened to and reported on through the contact centre management information system in the same way as anyone in the physical contact centre (which actually makes it an ideal job to put at home because the output is so visible and shift times are set).

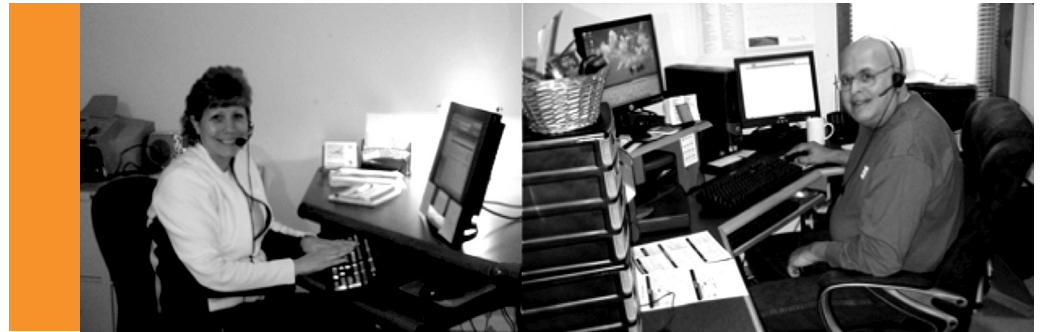


Figure 1: Homeshored customer service advisors.

With the complexity of calls going up, as self-service takes away the simple stuff, getting the right people to answer them can be challenging^[4]. Homeshorers, which include BT, the AA and US-based JetBlue, have found that they can recruit from a wider, more diverse and multi-skilled talent pool – including returning mums, the semi-retired and people with disabilities who have the skills but not the means to commute to a centralised office. The big benefit comes with the ability to schedule home-based people more flexibly, with split shifts, microshifts and anti-social hours being more easily delivered. Experience has shown that this can give a 20%+ hike in productivity compared with fixed contact centre agents. This is partially due to the fact that job satisfaction tends to go up and results in a significant reduction in churn from the current average of 20-30% in UK centres – and 40-70% offshore – to as little as 10%, and lowering sick leave by as much as 60%.

However, permanent homeworking is not a solution for everyone. Some people don't have a suitable work space at home (or even a home), some want to have the boundary of a commute that allows them to keep the office and the home separate, some aren't self disciplined enough to stop themselves being distracted by the sudden compulsion to grout the bathroom or shampoo the dog and some (particularly younger employees) actually like the buzz of the office.

There is still a premium value put on face-to-face communication (across all ages and demographics) according to research from Cambridge University^[5]. Working in isolation for any length of time can be demotivating and lonely – and travel bans, which are often part and parcel of cost cutting exercises, can impact home-based employees hard.

This is why it is important to ensure that home-based workers are integrated into team communication patterns as well as able to occasionally see people face-to-face. Teams with tighter social support mechanisms are better equipped to cope with stress^[6]. Individual innovation, motivation, creativity and productivity are all fuelled by office social support networks. If the future of work brings us a virtualised organisation of constantly moving free spirits who work on tasks before moving on, the soul of working life may be ripped from the heart of an organisation.

The problem that a lot of home workers encounter is about switching off at the end of the day. The permeability of the work environment into the home (rather than the other way around)

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can cause significant boundary problems for home workers. Recent research by Cambridge University ^[5] has shown that these boundaries can easily be crossed. This is summed up well by one father who was interviewed: **“I think it’s more the separation between work and home that’s the hard part. Being in the sort of work I’m in it tends to bleed over. You know, communications technology blurs the boundaries between the end of the working day and home life. So it’s entirely possible to get phone calls and emails and various other things that carry on to the evening that are work related that ordinarily one wouldn’t have to pay attention to until the next day.”**

Some curious practices are followed by some people who feel the need to clearly separate ‘working’ at home from just being at home. These include wearing a business suit, walking out of the front door and around the block to simulate a commute and even decorating the home office in corporate colours. All of these are symbolic but work for many people.

Just because we can make ourselves available for 24 hours a day, wherever we are, does not mean that we should be pressured not to switch off. However, the shift in social and cultural expectations about return times, speed of response and availability can cause new workplace pressures. It appears the lack of actual ‘face time’ has been replaced by a need for ‘virtual face time’ instead. The ability to literally switch off the BlackBerry, the email and the PC is vital to both productivity and wellbeing (and will be the topic of another WorkShift paper on Productivity and Wellbeing).

4.2. The hive: the new role of the office.

4.2.1. Beware the M&Ms.

So the office is no longer necessarily a place where we go to do work. It is actually a place where we go to socialise about work – have meetings, serendipitous encounters at the coffee point and see and be seen. If we actually want to do productive individual work tasks, offices are often the last places we should go.

Classic interruptions include what Jason Fried ^[7] calls the ‘M&Ms’ (Meetings and Managers) or what MIT’s Sherry Turkle ^[8] calls ‘digital saturation’, otherwise known as the tsunami of email, voicemail, phone messages and other general beeps and tweets that we have to cope with on a daily basis. This causes us to task switch – i.e. start one task then switch to another and another and another without ever finishing any of them – which tends to completely destroy our productivity (not to be confused with multitasking – which is cognitively a very different thing).

We are increasingly being more productive away from the office – on trains, in coffee houses and at home. One size definitely doesn’t fit all here – we sometimes need to be quiet, sometimes noisy and sometimes we just need an environment which stimulates us into action. We also often need to have a place where we, and likeminded others, ‘belong’. Maybe the traditional notion of the office as we know it needs to be completely reinvented.

In an interview with HR Magazine ^[9], Zoe Humphries, head of workspace futures at Steelcase says, **“Office design has moved on from being about playrooms and cushions. Organisations need to think about the people side of space, its impact on efficiency and effectiveness, and its relationship to engagement. Human Resource Directors need to look at space as a strategic asset. The way work happens is changing, so space needs to reflect this. It is not about squeezing people into offices any more. Work is more collaborative, but the traditional use of space hasn’t moved on with this.”**

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...each person is free to do whatever they want, whenever they want, as long as the work gets done – and companies that have implemented this model have reported up to a 50% increase in productivity!

Ten years ago, according to Steelcase^[9], work was 20% a collaborative affair and 80% individual – which explains why the Dilbert cubicle came to be. However, Steelcase predicts that this ratio will be reversed in 10 years' time, which is why things need to change: “**In collaborative companies, space utilisation surveys show workers are not actually seated at their desks for 20%–40% of their time. We still see staff who primarily use laptops tethered to workstations, because the office is not WiFi enabled. We see managers being given BlackBerries – but they never leave the office. Meanwhile, salespeople, who are mobile, are not given them.**”

4.2.2. Supporting daily work modes.

So if we are escaping from the tethers of our desks, where are we working and how do office spaces need to evolve? Research for the British Institute of Facilities Management (BIFM) suggests that the current workforce is dissatisfied with the types of spaces that are available to them for working away from the traditional cubicle based desk layouts. As Tim Oldman from the BIFM says, “**As the tethers that tied us to a desk are being cut by increasingly mobile technologies, people want to be able to seek out space that best fits the activity that they are undertaking at that point. The challenge for the employer and the workplace designer is to decide what these spaces are.**”

We tend to have a number of modes of working during the day, some of which are eminently suited to the traditional office, some which are not. Some jobs require more time in one mode than another (which is one reason why the ‘one size fits all office’ tends not to fit anyone any more). The emphasis in this model is what is termed a ‘ROWE’ (Results-Only Work Environment). In a ROWE, each person is free to do whatever they want, whenever they want, as long as the work gets done – and companies that have implemented this model have reported up to a 50% increase in productivity! So the main question in a ROWE is not ‘where is everybody?’ but ‘is the work getting done?’

In doing our work, most knowledge workers move through a number of work ‘modes’:

→ **Collaborative mode** – this is where we are meeting with other members of our team or customers with whom we are actively collaborating. These spaces need to be dynamic with plenty of room to move around, shared spaces on which to work and acoustic shielding so that people can be as noisy as they like without disturbing others. Large, airy meeting spaces are often needed here.

Virtual collaboration becomes inevitable in global businesses and environments that support dynamic audio and video along with shared collaboration tools can create dynamic environments that exist in both physical and virtual space (see 4.2.4).

→ **Focused task time mode** – this is where distractions become counterproductive as focussed tasks tend to require long periods of concentration. In this study people reported that they were most productive either at home, away from the office or in the office either early in the morning or late at night. This is often because the average open plan office is extremely noisy as we overhear people screaming down the phone about project overruns or gossiping with each other about office politics.

According to 2011 research by Acoustics at Work^[10], 80% of office workers believed their productivity would increase if their working environment were more acoustically private, and a review of peer research also found office workers’ ability to focus on tasks improved by 48% when noise was reduced.

- **Administrative task time mode** – this is doing all the routine tasks that inevitably form some portion of our weekly workload. This includes reporting, appraisals, email, maintenance and form filling. Since these are often relatively mundane tasks, breaks for social interaction can be a welcome spur. These kinds of tasks tend to suit the conventional tethered open plan office well.
- **Contemplative time mode** – time to think is often regarded as a luxury. However, contemplative time is vital for good business decisions to occur. This doesn't necessarily require a space where there is silence; indeed personal interaction can significantly enhance contemplation, but it does require an open space where people can think. Some companies have taken these spaces further by providing fake grass and hammocks – but a lot of these spaces often languish unused even in the most creative companies because lying in a hammock may be misconstrued as looking into thin air rather than working. As Kursty Groves^[11] says: **“Innovation rooms on their own fail miserably. They only work when there's a synergy between work, the space, the culture and environment of a company. Plonking in a 'pod', but then having protocols about who can or can't use them, defeats the object.”** Some people use physical activity as a focus for contemplative time – taking a walk in the fresh air can do the trick. Again, personal preference is all in this mode.

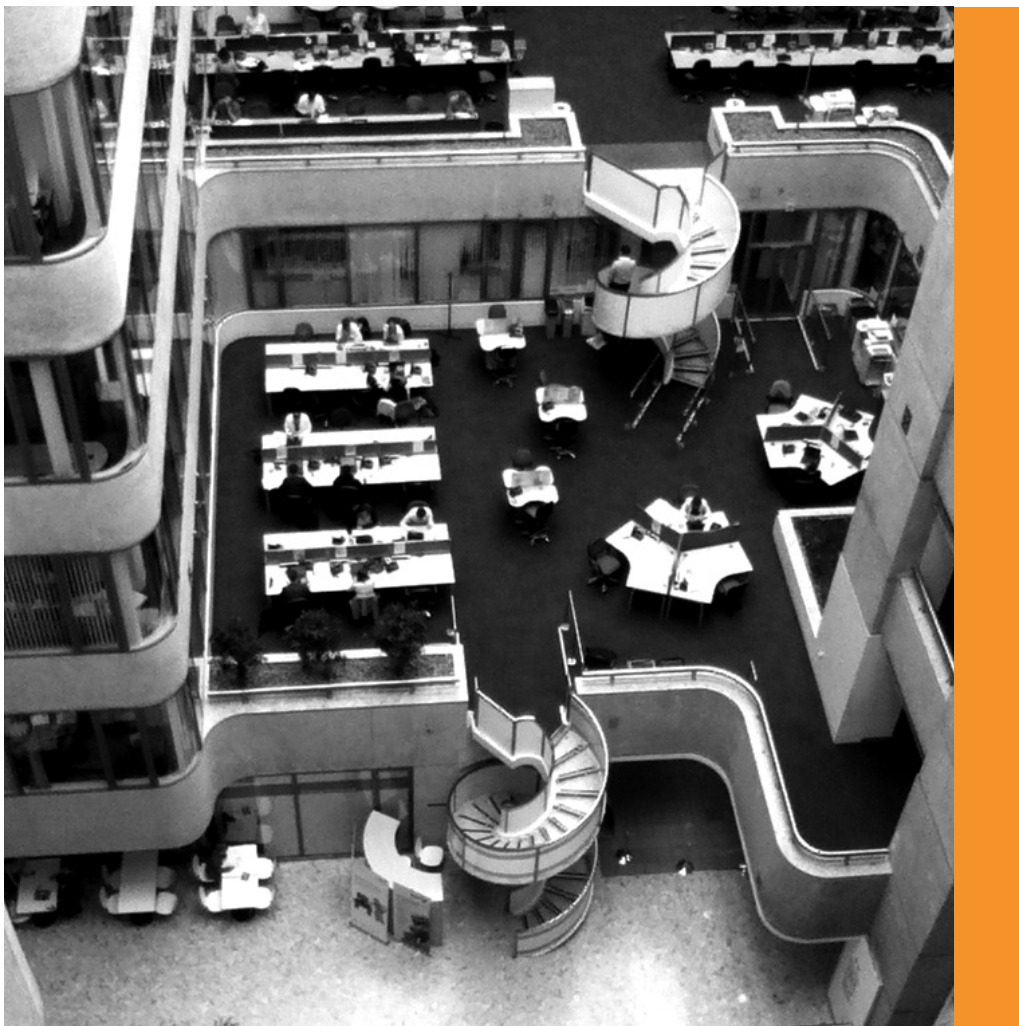


Figure 2: Touchdown areas at BT Centre.

→ **Recovery time** – this kind of time forms the ‘social glue’ that contributes to team cohesion, morale and serendipity. The biggest predictor of a team’s achievement is how team members feel about each other^[12]. Taking lunch with colleagues, going for a walk and having a coffee are all vital to recovery time. Many organisations can act as if this is wasted time and an excuse not to do ‘real work’. However, wise companies take recovery time very seriously. For example, Google reportedly extend their cafe opening hours to beyond the 9 to 5 to encourage employees to sit and eat together.

So the strength of the conventional office space is really around socialising – about work – in either a formal meeting setting or an informal ‘social glue’ way. Offices are places where we can meet, where we get those serendipitous encounters that take us to another level and a place where we can say we belong, with a locked door to keep things private.

Many head offices – BT Centre in London included – have become a little bit more like a bee-hive. The queen (or king) bees are notionally based there but the worker bees flit in and out when they need to collaborate with others or simply reconnect with the hive. Especially with head offices, there is also an element of show – a place where companies can set the tone and the image of the company and show off its capabilities.

This has a significant knock-on effect to the office space itself. Out go fixed and allocated desks. The emphasis is more on formal and informal meeting spaces and touchdown areas where people can get their fix of email or finish the last few slides in their PowerPoint presentation.

Cisco has offices where mobile workers have access to eight different kinds of unassigned work spaces: workstations, touchdown spaces, privacy rooms, focus booths, open project spaces, team rooms, lounges and dens. These spaces can support a multitude of different kinds of virtual collaboration using IP technology and audio and video conferencing. Companies such as Intel, the BBC, PwC and Deloitte are using similar strategies to make the office space they have more flexible and have reported anything up to a 50% increase in productivity^[9].

Austrian furniture company Bene has constructed a zoned environment that deliberately encourages people to move away from their desks and pods (small, circular seating areas specifically for brainstorming, short meetings or discussions (virtual or real) that require intense concentration for short periods. Bene have identified four types of worker: the anchor (likes to stay put); the gatherer; the navigator; and the connector. They also have small ‘business boxes’, tiny rooms for guests who may drop in and work there for a few hours at a time.

After a study on efficiency, Dutch insurance company Interpolis has redesigned their workspace to reflect the fact that work and home life is blurring. They realised that flexible working is not just a matter of moving some furniture around and letting people work from home, so they changed the culture of how they work, think and act by designing spaces that support the productivity of employees when they are in the office.

Companies such as Intel, the BBC, PwC and Deloitte are using similar strategies to make the office space they have more flexible and have reported anything up to a 50% increase in productivity.

Interpolis has zoned each area into what they call 'clubhouses' (there's a Garden House, Light House, Weave House and Railway House). Each clubhouse has places with screens for conferencing, and places for working, meetings, and eating. WiFi is everywhere and they have open working spaces where people can work individually, a lounge area for meetings with colleagues, a more formal 'dining table' for a group and concentration areas called 'cockpits'.

Where people choose to work is a function of what they are doing and how they prefer to work. Some people always go to the same place, because they like the food there, or they like the atmosphere or they see the same people. Surprisingly, for an insurance company, use of paper has been reduced by 70–80% as mail is scanned in, all documentation is stored in the Cloud and any documents that do exist are stored either centrally or in employee lockers. One of the key aspects contributing to employee satisfaction with their environment is control (one psychological study revealed that even giving employees the ability to choose pot plants for the office can increase satisfaction). In Interpolis, lighting and heating levels are controlled by individuals.

There may be some cynicism about this approach, particularly in challenging economic times when some will say that this is simply too expensive to contemplate. However, the results that Interpolis has reported justify their investment. They have increased productivity by 20%, sick leave has dropped from 9% to 2.5%, 51% of their working areas have been freed up, construction and equipment costs have been cut by 33% and their office usage expenses have reduced by 21%. Last but not least, their revolutionary office design brings in 90,000 visitors a year.

4.2.3. The rise of the 'coffice'.

Another big trend is for workers to abandon their offices entirely and set up their working day from a third space that is neither the office, nor the home – a place that has been nicknamed the 'coffice'. Rather than having a fixed location to work from many people are gravitating towards an area which is bright, friendly, has fast WiFi connectivity at nominal (or no) cost and has great coffee. People can meet and talk or simply work quietly on their own.

It is no wonder that some coffee chains are starting to cater for coffice workers now by ensuring that there are desk spaces and power sources to help the coffice worker be productive. Highly connected countries like Sweden have started to get drop-in offices in key public areas such as hotels, airports and stations – where people not only have access to caffeine but also printing and photocopying facilities. London and New York are following the Scandinavians by establishing 'networking centres' near to main shopping and commercial areas.

They have increased productivity by 20%, sick leave has dropped from 9% to 2.5%, 51% of their working areas have been freed up, construction and equipment costs have been cut by 33% and their office usage expenses have reduced by 21%.



Figure 3: 'Coffices' in London and Scandinavia.

Hotels, museums, libraries and even art galleries are getting in on the act with rates going from the price of a cup of tea to more formal hourly, daily, weekly and even monthly rental. If you want to sit down in an airy space full of experimental art or shelves of books, the choice is yours – whatever inspires you.

Companies such as BT and Panasonic have also created 'touch down' or 'spot' offices in key locations, where employees can drop into a secure environment if they need to discuss confidential matters. The ability to meet others in an unstructured and ad-hoc way is often the route to serendipity and great new ideas. However, this type of environment can also allow for quiet contemplation, which is often a requirement for effective business decision making.

4.2.4. The collaborative office: physical.

Collaboration is one of the things that offices should be ideally suited to facilitate. However, co-locating a geographically distributed team in one single place can be problematic, especially when resources are literally scattered across the globe.

When deadlines are tight and resources are under pressure, travelling between sites constantly is not an option. Work needs to be highly co-ordinated and collaborative and sometimes bringing these resources together, albeit virtually, needs to be considered.

IT development is a function where close collaboration is essential. In 2008, BT moved to an agile IT development process, which necessitates global technology teams to work together for short, concentrated periods of time in a very tightly coupled way. It was decided that the best way to do this was to co-locate and network cross-BT teams in a cluster of Global Development Centres (GDCs) around the world – including the UK, India, The Netherlands, Belgium, Spain, Germany, Italy, USA and China.



Figure 4: BT's Global Development Centre in Ipswich.

Teams are co-located by country and then networked to other GDCs by networked collaboration environments, so that unnecessary travel is minimised and better team working across geographic boundaries is enabled. This minimises travel costs and gives the team members a better work/life balance

whilst reducing the amount of to-ing and fro-ing that is often involved in global development projects – so turnaround time and development costs are both significantly reduced. In fact development time has decreased by over 200%, compared to the traditional lifecycle model of development, with productivity increases of 200–400%. One recent new deployment was delivered a full two months ahead of schedule.

For the individuals working in these environments, the world consists of touchpoints, hot houses, collaboration stations, large open spaces, very few desks (and none fixed) and personal lockers. The environment is dynamic and ‘buzzing’ with constant activity. The environment is infinitely configurable so that spaces can be arranged to suit the needs of the project and the individuals working on it.

To facilitate collaboration across time zones and locations, a series of 95 ‘collaboration cells’ have been constructed from off-the-shelf components. These consist of two video cameras, one to show what’s on the touch-sensitive whiteboard and one to show who



Figure 5: GDC Collaboration Cell at Adastral Park in Ipswich.

is in the room. The central table has directional microphones to ensure that everyone can be heard and also jacks for plugging in laptops and other devices. The whole thing runs over standard phone lines to ensure that the cost of each cell is kept low. Remote teams are brought in through basic videoconferencing, shared whiteboards and team collaboration and common wiki-style environments.

One of the GDC team members articulated the advantages of being brought together in this way: **“The ability to sit in a collaboration station and grab the people needed around a whiteboard, and work out solutions is much more productive than conference calls. Also as the team has been expanding and recruiting new people, we’ve found that being co-located has helped people get up to speed more quickly. So we achieve more.”**

His anxiety about moving from a fixed office space to a more dynamic environment was about the amount of ‘stuff’ he had. However, he said he had to **“Be ruthless about chucking out old rubbish”** and **“Concentrate on the benefit of sitting beside and working more closely with your team rather than the emotional attachment you may have to a location or old paperwork”**. He also uses the slightly longer commute time from Essex to Suffolk as a way of creating space between his home life and his work life.

However, these collaborative workspaces are not suited to all work modes – one size does not fit all. Try and do individual, focused or contemplative tasks in an environment as buzzy and dynamic as the GDC and you are probably on a route to low productivity.

...development time has decreased by over 200%, compared to the traditional lifecycle model of development, with productivity increases of 200–400%.

211 million air miles were avoided and 90% cost savings have been achieved since launch.

4.2.5. The collaborative office: virtual.

Virtual collaboration is going on everywhere in our leisure time at the moment – from the large scale networked gaming in World of Warcraft, Happy Farm and EveOnline to smaller scale social connectivity facilitated by networks like Facebook, which has just integrated Skype into its pages.

The leakage between the tools that we use as consumers and the tools that we use for business is very evident in the way that employees are starting to use collaboration tools on their desktop. Unified Communications (UC), again, not an especially revolutionary concept, is finally coming of age and is being driven by employees. This is hardly surprising since the core purpose of UC is to enhance overall productivity based in large part on the specific needs of individuals and the applications they use day-to-day. One of the historical issues with deploying UC has been an adequate understanding of the ways in which users want to use it. However, with an increasingly virtualised workforce and trends such as Bring Your Own Device to Work (see 5.1) employees are demanding ways to maximise collaboration, innovate and communicate that mirror the ways they are doing it outside work.

Rather than cobble together various distributed solutions, enterprises are starting to see the value of having a collaborative desktop that doesn't fall over constantly and that integrates with the whole suite of corporate communications and collaboration applications. These services need to bring together telephony and email with instant messaging, presence information, video conferencing and shared knowledge spaces so that applications can talk to each other and collaboration can be easily facilitated.

Companies such as Cisco have leveraged processes, culture and their own technologies, such as Quad (their own enterprise social collaboration tool) plus video conferencing, to create what Cisco term a virtualised 'Dynamic Network Organisation' across all their employees and contractors.

From their laptops they have access to video conferencing, remote access in the form of virtual private network (VPN) and unified communications (through phone/voicemail and webex conferencing) plus they use high definition telepresence suites extensively across the world to allow multiple participants to meet, regardless of where they are.

Cisco lists a number of benefits from this major transformation programme:

1. **Travel reduction** – 211 million air miles were avoided and 90% cost savings have been achieved since launch.
2. **Increased employee productivity** – including enhanced access to networked expertise and a resulting acceleration in the ability to make better decisions through better communication and collaboration. Even job interviews are conducted remotely, which speeds up the process of recruitment, whilst dramatically reducing costs.
3. **Improvements in the value chain** – including accelerated sales, reduced sales cycles and faster product development.

However, collaboration with people who have never met often requires workers to change the way that they relate to their fellow virtual team members. There are numerous pieces of research that show that the keys to successful teamworking are relationship building, cohesion and mutual trust. Virtualised teams face a few challenges in achieving these things.

The shift in technology is starting to change the ways in which virtual teams adapt to these challenges. Virtual teams tend to have more of a task-focus and less of a social-focus than traditional teams. When compared to traditional team members, virtual team members generally report weaker relational links to their teammates^[13, 14]. However, these relational links can be significantly strengthened if the team is brought together on a face-to-face basis early on in the project and can foster later success by improving performance and enhancing learning^[15].

Trust development in virtual teams also presents significant challenges because it is difficult with someone you have never met^[16]. Virtual teams can also have a very limited lifespan, so trust needs to quickly develop^[17]. However, work on virtual team development has shown that they are able to develop 'swift trust' – where team members assume that other members are trustworthy until proven otherwise^[17].

However, other studies have shown that virtual teams who indulge in more social communication tend to achieve higher trust, social cohesion and better social and emotional relationships^[18]. Finally, effective leaders have also been found to be able to stimulate relationship building by scheduling regular audio or video chat sessions with all team members.

Technology can be very effectively deployed to facilitate virtual team working. However, the core to effectiveness of the team is down to the old disciplines of good leadership, supportive culture and effective communication.

...studies have shown that virtual teams who indulge in more social communication tend to achieve higher trust, social cohesion and better social and emotional relationships.

Into the Cloud

5. Everything in the Cloud: The agile and assetless organisation.

Today anyone can be in business. Tools that used to cost thousands are now easily accessible on a pay as you go basis. The ability for 'garage' startups to compete with big, established organisations with little more than rich human capital and a pay as you go infrastructure is becoming a reality – they can achieve scale without mass (thus violating the laws of physics as well as old commercial ideals). They own very little but can muster IT, people and resources from the Cloud. Without being tied into long term contracts, legacy systems, thick processes, inventory, IT, politics and roadmaps, they can move very fast and can start to outpace big organisations who have more mass to mobilise.

The idea of having less mass to move forward faster is one of the most challenging ones for business as usual for most big organisations which already have accumulated a number of assets – whether they are buildings, people or technologies. We've already questioned the role of the office in the future organisation – but there are two other trends in the future of work which questions the ownership of both the IT and people. The whole organisation could be effectively 'in the Cloud'.

5.1. Leaving employees to their own devices: bring your own device to work.

“Consumerisation is not a strategy or something to be ‘adopted’ or not. It can be embraced. Consumerisation cannot be stopped. It can be dealt with” – Gartner.

One of the most interesting challenges for technology in business at the moment is the fact that corporate IT lags consumer IT – in other words we have far cooler gadgets at home at the moment than we do at work. Most companies tend to restrict the selection of laptops and smartphones that can be used on the corporate network – and most tend to veer towards heavy, grey bricks. This is causing the consumerisation of the corporate IT space as more and more of us bring our own devices to work (a trend often abbreviated to BYOD).

A recent survey conducted by IDC on behalf of Unisys suggests that 95% of the workers who responded have used technology they purchased themselves for work (e.g. smartphones, tablet computers, webcams, sat navs etc) – and they generally don't bother telling either the IT or procurement departments that they are doing it. This means that many organisations remain blissfully (but dangerously) ignorant of whether this trend is hitting their company or not.

A 2011 Virgin Media Business study^[2] of UK employees suggests that 63% of people wanted to have just one device for both work and play. A June 2010 Frost & Sullivan survey showed 49% of respondents expect tablets and smartphones to become the end-user computing platform of choice within a few years. According to IDC^[20]: **“Employee-owned smartphones will represent more than half (56%) of the business smartphones shipped in 2013, for a total of 56.7 million devices going into the hands of individual workers in the next three years.”**

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This is not a trend being driven from a process or IT perspective, it is being driven by highly networked employees who have found tools that are useful to their job and want to use them. They are not being deliberately malicious or flouting security rules, they just want to use the best tools to help them succeed. The basic fact is that a standard build 'one size fits all' laptop or phone doesn't necessarily work for everyone now in a complex work environment. We all have tools that work for the job we do. It may be that, just like a plumber will take his or her tools of the trade from job to job, we may have to demonstrate that we have the right tools for our trade whenever we take on a new assignment.

It's not just younger employees that are the challenge in this area. This change is being forced often by the CEO who wants to use his or her new iPad on the network. Personal preference, individual choice and the desire not to be laden with multiple devices for home and work are all driving this trend.

Whether organisations like it or not, this 'consumerisation' of the corporate IT space is happening. A combination of powerful new devices and more pervasive connectivity means that employees can be released from the tethers that held them prisoner at their desks. Gartner, who found that 24% of employees use their own devices on corporate networks already, suggests that trying to fight this trend is probably like trying to hold back a tidal wave ^[19].

The reflex action of the IT department is to block this (if we can't control it; we won't support it) or grudgingly allow limited access on 'red side'. The issue is that the tighter the controls over IT use in the business, the more people fall through the cracks (to misquote Star Wars). Block people using USB ports on their corporate laptop and they end up emailing documents to their personal email account to read later. Block access to websites that are useful for work but fall into a security risk category and people just log on using their own device instead.

It is the IT department itself that is being challenged to change here. Some have said that the IT department needs to become the department of "yes", rather than the department of "no". Much of this is legacy behaviour formed when IT had to protect the integrity of the mainframe system or the client server. However, in an era of Cloud, it seems that the logical strategic move is to manage the access to the Cloud rather than the device. The role of IT is then to:

- Facilitate access to essential corporate applications
- Protect employees from security threats, including loss of devices
- Enforce a minimum set of rules and controls for security and regulation purposes
- Provide general helpdesk technical advice and guidance but prioritise advice on enforcement and governance
- Evolve architectures that facilitate 'Cloud as a service' offerings to employees.

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... with over 50% of employees accessing company information from their personal device, lack of security could quickly spiral into a major security issue.

However, 58% of IT security and audit experts view employee-owned devices as a security risk to the enterprise, according to a survey by the Information Systems Audit and Control Association (ISACA) of 2,765 IT leaders in May, 2011^[21]. 33% say work-supplied devices are a security threat. However, 27% argue that the benefits of BYOD outweigh the threats.

Mobile access to company data from personal devices isn't necessarily a bad thing, but it can become a dangerous one if it's not done in a proper, secure way. And with over 50% of employees accessing company information from their personal device, lack of security could quickly spiral into a major security issue.

The dilemma for organisations is the need to retain some semblance of control to ensure the security of its assets, protect its liabilities and manage costs. Obviously, one of the big attractions is that BYOD avoids the capital expenditure burden of giving the latest devices to employees. If the employee owns their laptop, tablet or smart phone, they feel more responsible for it and are more likely to treat it better (especially in the light of reports of employees deliberately running over work devices in order to get more up to date ones). They are also responsible for maintaining the device, whilst the organisation maintains the data in the Cloud. All this can reduce training costs, increase productivity and, potentially, decrease support costs.

Some companies have been quick to embrace this model of working. In 2010, food and drinks giant Kraft announced it would provide a subsidy to staff in the US to allow them to choose their own computers. Microsoft, Unisys and Intel all run BYOD schemes where the hardware is subsidised – as does Citrix. Mick Hollison, vice-president of marketing at Citrix, says **“Not only has it cut costs, but staff like the control”**.

Most of these deployments use a virtual desktop in the Cloud, so that the Cloud is secured rather than the device. Desktop virtualisation allows IT to manage desktops centrally and deliver applications as an on-demand service. By doing this, different security profiles and requirements can be implemented, including policies that potentially stop people saving certain sensitive data on local devices. The user is then able to use any device (within reason) to access the same desktop. Access is generally via a secure VPN software client, like BT MobileXpress.

Other deployments allow limited access, without a VPN, to certain common functions in the Cloud – such as corporate intranet and webmail. These 'red side' deployments can be a little more restrictive in the functionality that they give employees – which comes with a downside as they still need to access corporately controlled devices in order to perform certain functions. This inevitably restricts flexibility but is a good solution for a workforce who are only using their own devices for a certain percentage of their time. However, the economic benefits of this solution are less persuasive as the employee may still have a corporate device as well as a personal one. This is also a less secure solution, as no control over what is stored on the personal device is monitored.

Another consideration is about mobile access tariffs, as most corporates will negotiate special business rates that may not apply in a BYOD world, where employees may well be using different tariffs according to which phone they have chosen. Unless there is some form of centralised spending control, this can result in some eye-watering bills. It isn't uncommon for the globally connected executive traveler to run up bills of over £5,000 a month because they are permanently attached to their mobile phone and laptop.

Innovative services like BT's award-winning One Voice solution can start to reduce the cost of a connected and virtualised workforce, especially if they are using their own devices. For example, One Voice Anywhere (OVA) gives mobile employees access to the VPN anywhere in the world. This means that someone using their iPhone over WiFi from a hotel room in Singapore can save over £60 per hour over standard GSM roaming fees. OVA can also bridge calls between two end points and initiate both legs so that callers never make an outgoing call. You could even have calls delivered to a pay phone, and make international calls at local rates all billed back to the VPN tariff. This can reduce mobile bills by as much as 70%. This change in the way that their online communication life is managed means that costs can be controlled regardless of where they are or what device they are using. Users can also receive all their calls at home, the office, a hotel room, the coffee or a mobile device using just one number (rather than having a multiplicity of phones and numbers to cope with).

Over and above the technical and financial capabilities, the next biggest consideration is policy. What policies and processes do you need to have in place that, as well as protecting employees' privacy, keep your organisation's data secure and devices visible and in your control? If an iPad is stolen on a train, has the staff member signed an agreement that lets you remotely wipe any sensitive data that might have been stored on that device? Training and awareness packages are also vital to ensure that employees understand what steps they need to take to ensure that they meet regulatory compliance and understand how they should be using technology in a work context. The risk is then very much down to the individual to understand and manage.

Of course, not everyone will want to bring their own device to work, so the most successful schemes are run in a manner not dissimilar to a company car scheme – in that it is 'opt out'.

At the heart of this debate is the notion of the 'trust line' between those who protect the enterprise from data theft, viruses and cyber-attacks and between the users of IT services, equipment and applications.

In the traditional model, employees have very little ability to change anything. Any change must be authorised by custodians of the network and strategies are deployed that make it difficult or impossible for employees to tailor their working environment. This is like the early days of proprietary telephone and data networks where control was strictly central and change was consequently slow.

At the other end of the spectrum the working world is more like the internet, where universal access is valued more than performance or security. In this world, technology is more under individual control and employees are trusted to act responsibly.

The internet model is often described as libertarian, providing equal access to all irrespective of the purpose. Establishing a 'trust line' within the corporate network is critical if organisations want to fully exploit the future highly agile working world. It all depends on the nature of the organisation. Organisations that follow prescribed unchanging processes with resources coordinated in harmony are like orchestras. Other organisations need to be more like jazz bands where syncopation and improvisation are highly valued. Each needs a different trust line – one that establishes the boundary between central authority and individual empowerment.

...someone using their iPhone over WiFi from a hotel room in Singapore can save over £60 per hour over standard GSM roaming fees.

5.2. Harnessing networked expertise in the ‘Human Cloud’.

“Forget about being a generalist, if you know a little bit about a lot then you are just competing with Wikipedia. You need to learn mastery” – Professor Lynda Gratton.

5.2.1. Connecting expertise.

Organisational advantages are gained and lost by the value of the human capital that they can leverage. With most organisations using similar management approaches, technologies and delivering commoditised products and services, it is the value that people provide that gives genuine business differentiation. However, with expertise distributed across organisations, how do companies maximise the knowledge capabilities that they might not even know they have?

Research from the Hotspots Movement in the Future of Work Consortium suggests that the age of the ‘shallow generalist’ in an organisation is gone, to be replaced by a ‘serial master’. These people often have deep expertise forged by vast experience and have built tacit knowledge of ‘how to do stuff’ without necessarily being able to write it all down. However, finding these people can be problematic. For a start, experts in an organisation may no longer be obvious by their reporting line, so organisations need to start to provide a more searchable repository of skill sets across the whole of the enterprise.

Of course, once you’ve found the right expert, the next challenge is to contact them. In a virtualised enterprise, people can no longer be tracked down at a fixed desk in a fixed office. This tends to result in a nightmare of unanswered emails and voicemail hell. In fact, Forrester (2010) estimates that we spend about 40% of our time not being able to contact the expert we need to talk to. They suggest that 25% of work projects grind to a halt and 63% of projects are delayed because access to this key expertise is not available. Meanwhile 75% of companies take one day or longer to schedule and confirm meeting attendees – especially if experts are in demand!

This is a problem that is likely to get worse rather than better, especially if the organisation has cut back levels of support to employees in response to economic hardship. Faster, more effective ways of finding and co-ordinating expertise is a must for distributed organisations who want to move in an agile way. In order for experts to be successful, their knowledge needs to be used well to innovate and collaborate, so the incentive to advertise and make that expertise available is to their advantage as well as the organisations.

Using technology to bring people back together is important. Searchable intelligent directories that help us to connect with the right experts, social networks that connect knowledge to people, presence information that finds out whether these people are available and tools for contact that combine the traditional phone and email with newer tools such as video and webchat are all vital components to navigate a complex web of networked expertise.

Ironically, it can sometimes be easier to engage experts in a distributed workforce with presence management tools than it is in a face-to-face organisation. One of the best uses of presence indication is that it allows employees to quickly set up ad hoc meetings. Experts are able to indicate their micro-availability online through the use of red/green indicators that can be accessed and changed from any connected device. In one NHS Trust this is used to good effect when District Nurses contact GPs using instant messenger to gain agreement on a care plan. The time saving is remarkable, as in the past it often took several days to get a GP appointment and the benefit to the patient is a prompter, more efficient service.

...we spend about 40% of our time not being able to contact the expert we need to talk to. They suggest that 25% of work projects grind to a halt and 63% of projects are delayed because access to this key expertise is not available. Meanwhile 75% of companies take one day or longer to schedule and confirm meeting attendees – especially if experts are in demand!

5.2.2. Microworking in the Cloud: employ me for 15 minutes?

“In the future, people will worry far less about how safe their current job is and far more about where their next job will be coming from” – Thomas Frey.

However, human expertise is also available in the Cloud and this is potentially challenging the future of the job, in its traditional sense. Globalisation will mount pressure on jobs. Workforces are increasingly virtualising in both time and place. Geography doesn't matter anymore. Organisations can hire the best talent, regardless of where it is. There will always be someone in the world who is cheaper, smarter and better educated who can pick up work that was previously the domain of jobs within a national boundary. In the world of freelance writing this has decreased the amount paid for low quality copy to a few cents per word as smart, intelligent and talented writers from emerging economies compete for work.

It is worth noting that some jobs that can be done remotely are not because it is socially unacceptable to do so. For example, it is technically possible to fly a commercial aeroplane using a laptop computer from anywhere. It is arguably safer as the pilot is presumably less stressed and not subject to jet lag. However, most of us want to know that a human is available when we need one and the idea of travelling on a pilotless plane would probably scare the pants off most of us.

So, some jobs are resistant to this trend – remote surgery, house building or hairdressing is unlikely to be with us for a while – but a lot of knowledge work can be located anywhere in the world.

The age of hard-wired, permanent jobs with organisations may be disappearing to be replaced by a more flexible, on-demand model. According to Aronowitz and DiFazio, authors of 'The Jobless Future' ^[22], “jobs are an endangered species”. For any contractor, actor, freelance journalist or specialist builder this way of working is entirely familiar. However, it may come as a shock to people who are used to having a steady job rather than more transient work. In many professions, jobs will be increasingly characterised by a series of projects where their expertise is tapped. The duration of these projects may be measured in days or hours rather than months or years.

Employing workers on a temporary, on demand basis is by no means a new concept – temp agencies, seasonal workers and portfolio careers have all been around for a long time. However, the digital marketplace is increasing the number of people selling their time and expertise online in discrete blocks (so-called 'Microworking'). They are competing with others on a global basis, and not just to do mundane tasks, like data cleansing, submitting product reviews or formatting a PowerPoint deck, but also to tackle bigger tasks, like producing videos for online advertisements. There are many online marketplaces appearing that facilitate microworking, like Amazon's Mechanical Turk (named after Baron von Kempelen's chess playing machine, which was actually powered by a concealed human). These sites are putting people with skills who are available for micro-shifts – anything from 15 minutes to a couple of hours – in touch with organisations seeking people to complete 'Human Intelligence Tasks' (as Amazon terms them).

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According to BusinessWeek^[23], companies like Tongal pay microworkers thousands of dollars to create commercials. Tongal's customers include Mattel, the world's largest toy company, and Allstate, one of the largest insurance firms in the US. While a lot of micro-work is the equivalent of digital serfdom (clicking on banner ads for pennies), online markets for high-level, expert work are fast gaining critical mass.

In the contact centre space, especially, microworking is becoming popular as call volumes spike at certain times of the day and the complexity of enquiries coming in require organisations to access specific networked expertise to solve problems.

The rise of the virtualised contact centre, again driven by Cloud, has enabled a number of companies to tap into a very flexible and knowledgeable set of experts both within the organisation (see 4.1) and beyond it. If you have a browser, you can become part of a virtual contact centre environment. Access to extreme expertise is also possible in this virtualised contact model. For example, if you are a pharmaceutical company, you could bring a doctor physically in to take calls to an allergy advice line but he or she might end up having nothing to do that day. The alternative is to employ a pool of doctors to take calls at their surgeries on an 'as required' basis. If they're free when a call comes in, they get to do the work and get paid for it.

LiveOps in the US were one of the early pioneers of microworking in the contact centre space. According to LiveOps CEO Maynard Webb^[24], this model can deliver significant advantages to a contact centre operation: **"The quality of agent you get is far higher in general because we are sourcing from the entire country versus a constrained region. We have more college educated folks than call centres anywhere else, but they also work different hours than they would be able to work at a regular call centre. They work around their kids' schedules or whatever their unique situation may be. People are looking for that flexibility in their lives. Technology has evolved enough that people are comfortable using it."**

However, flexible resource pools are not just the domain of freelancers. Some corporates are also using similar concepts to ensure the talents of their resource pool are fully utilised, especially in a time of austerity and downsizing where it is all too easy to lose valuable expertise. BT has been using a model of agile resourcing across the development and consulting parts of its business since 2008. People are assigned to specific project work for a fixed period of time. When this work comes to an end, employees are transferred to a flexible resource pool called the BT Transition Centre (BTTC). In the BTTC, they are given support to apply for new longer term assignments or roles within the organisation (or with partner organisations), do short 'microworking' assignments or develop their careers by gaining new skills that the organisation needs (particularly if this work is being contracted outside the business at some expense rather than being sourced internally).

To facilitate this process, flexible resources are responsible for maintaining their CVs online (so they are searchable) and submit a core competence assessment against their current role, which is evaluated by the leads of each professional community that the individual belongs to. To progress to higher roles or close competence gaps, both eLearning and demonstrable experience by taking on additional responsibilities can be used.

The 'Radiohead model' (i.e. work now, get paid later, according to how much the customer thinks it is worth) is also becoming an alternative way of getting work done. One business I talked to had held a 'beauty contest' with a number of designers for the design of their new

logo. Only the winner got paid and the submitted designs were reportedly of a consistently high quality. Inviting specialists to compete for work is one example of 'crowd sourcing' and can lead to extremely innovative solutions. This has been used to effect in the design of public buildings by architects who submit conceptual ideas and drawings to meet a requirement.

In parallel, a concept called time-banking is gaining ground in the UK, especially in the voluntary and public sectors. With time banking, instead of exchanging micro-services for cash, people exchange their time for other people's time in their locality. Participants 'deposit' their time in the bank by giving practical help and support to others – like childcare, caring for the elderly, cleaning community areas – and are able to 'withdraw' their time when they need something done themselves. For example, Housing Association residents can be rewarded with Time Credits as a 'thank you' for their involvement in helping to improve community life for all residents. The time credits can then be used to access training, cultural or social events and 'reward activities' such as outings.

Of course, this shift from jobs to work is also a tough one to solve psychologically. Jobs can give us a sense of personal identity and belonging that a fleeting set of work projects cannot. To address this, the Future of Work Consortium suggests that the concept of the 'Guild' is coming back into fashion as people with similar interests and skills are establishing virtual communities to share opportunities, ideas, contacts and build up professional reputations through recommendations. Of course this was very well established in medieval times when guilds of associated skilled craftsmen were all powerful – and there are some unions that act in this role already (notably the actor's union, Equity).

The Future of Work Consortium suggests that **“Virtual guilds will be important reputation platforms for people attempting to move from long-term employment to ongoing skill development, which is closer to the craft mentality of developing mastery”**. This 21st century spin on the same idea is powered by virtual communities and social networks. LinkedIn, Google+ and Facebook all enable virtual communities to be forged but more specialised networks are evolving, such as Sermo, a medical community where doctors can discuss expert issues and rank the quality of contributions to the discussion, and Lawlink, which effectively acts as a virtual job broking service for lawyers. These communities also allow businesses to search talent pools and connect with potential candidates informally.

5.2.3. Management challenges in an agile organisation.

Conventional management styles are one of the things being challenged by the virtualised way of working and the ROWE. In a simpler, more centralised and compartmentalised time, managers could easily apply boundaries and boxes to things. They clocked us in and out to count the number of hours we worked. They could stick their heads out of their offices occasionally to ensure they could see us working. They targeted us on a minimum number of units of work to be processed. In other words, they became obsessed with counting things.

Given that much of the work in 21st Century organisations is knowledge work rather than production line (and that includes so-called “transaction processing” activities such as the contact centre), the Taylorist approach to measurement and management becomes increasingly difficult to define in tangible unitary terms.

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Leaders feel uncomfortable about challenging the status quo and interrupting the deep-seated rhythms of office life. Especially in a time of economic instability, getting people to act outside their comfort zone is often difficult.

Now managers struggle to define knowledge work in quantifiable terms. Hours become difficult to count as the work day blurs. They can no longer see their people, because they are distributed all over the globe. Work no longer falls into a neat, number of units processed model. Even in contact centres, the holy grail of 'average call handle time' is failing as self service causes 'average calls' to disappear from the queue to be replaced by far more complex and emotive contacts.

And yet, managers still try to count, as if they still worked in a 19th century factory. It's just that the measures have become increasingly more creative and increasingly less relevant to individual motivation (in fact, it can act against it). In an increasingly sophisticated and connected knowledge-based workforce, the problem is not one of trying to keep workers working. It is often trying to stop them.

Virtualisation of the office space, however, can make some managers uncomfortable. The most common question asked is: "If I can't see people working, how do I know they are?". One major reason is that managers are still struggling with the 'presenteeism' mindset. Distributed work, remote offices and virtual employees fly in the face of traditional wisdom, which believes that if you're visible, you're accountable. Managers will have to come up with other quantifiable metrics based on ROWE rather than physical presence to measure progress.

One of the future dangers of agile working is the advent of very low cost digital camera technology. Managers may find it hard to resist their use as work monitoring tools. It's easy to imagine the appeal of sitting at an array of video windows watching workers work at home or from any location. We hope this form of management is resisted strongly. A high performing workforce requires trust, leadership, the right tools and the right working atmosphere and environment. This engenders goodwill, cooperation and high productivity. If mobile technologies are used as a substitute for good management we will lose all of the corporate agility and gains we strived for in the first place.

It is this challenge to convention that often causes agile working initiatives to fail. Leaders feel uncomfortable about challenging the status quo and interrupting the deep-seated rhythms of office life. Especially in a time of economic instability, getting people to act outside their comfort zone is often difficult. However, employees are starting to seize the initiative here and challenge management from the bottom-up (particularly if they are fuelled by social media – see the next WorkShift paper on 'The Networked Watercooler'). Employers need to reconsider how to harness this bottom-up enthusiasm in order to achieve the gains in productivity across the board that a centralised initiative can deliver. There is a school of thought that agile working is quietly happening in the background, almost imperceptibly, and that it doesn't require leadership or pro-active management. This is plain wrong – unless you are happy to wait 20 years, sub-optimize corporate benefit and risk losing your best and most progressive people.

A centrally driven, cross-enterprise multi-disciplined team is required to successfully implement agile working. Financial modelling, programme management, human resources management, communications, technology delivery and property management resources all need to work together to a single agile working business plan. The team has to be 'board empowered' to take policy and operational decisions – the team must be targeted with achieving the business plan and goals set in the business case.

However, there are a number of things that leaders need to look at when making the shift. The first is to understand what works well in the traditional model of working and ensure that any changes considered don't disrupt these things.

The next thing is to realise that working practices are going to be shaped by ever more sophisticated communication technologies. Already the social enterprise is becoming a reality as user generated "social networking" style content becomes the new way of connecting knowledge and people together. If you then ally that content with presence and location information enabled by enterprise-grade unified communications plus ever faster broadband speeds then the limits are largely constrained only by imagination.

Like any other initiative, the business case for change needs to be in place detailing cashable and strategic benefits to the organisation and the investment in people, processes and technologies to make it happen. Whilst the benefits associated with agile working are very significant, sometimes extraordinary, there are also significant costs associated with the delivery of infrastructure (e.g. networks, mobile computers, enhanced security); people change management (e.g. education, training, coaching); and new services (e.g. remote employee support, extended helpdesk facilities). These costs need to be well understood to ensure that value is delivered at each stage of adoption.

Finally, we are heading towards new ways of working and new employment models (like microworking). Outcome agreements will dramatically change how employees are measured, recognised and rewarded. Legislation will make it easier for employees to work part time or from home. The move to outcome-based contribution will change the way employees promote and market themselves both inside the organisations and externally.

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Be agile or be gone

Capitalism has a history during which there have been times of relative stability and times of great upheaval. The previous period of fundamental change in commercial models was the end of the 19th/beginning of the 20th century as the industrial revolution kicked in and mass consumerism became a reality. This current period of business turmoil looks to be a precursor to another seismic change in business practices to create new economies.

Agility in the face of unpredictable circumstance is a key aspect of survival in turbulent markets. The likes of Seeley-Brown and Hagel^[25] note that previous business models ('Push' models) were built on the ability to forecast and plan precisely (as in the factory production line model). This relies on stability in markets, minimising variation and accurate prediction based upon past performance – none of which is particularly possible as the stock market does the hokey cokey and austerity measures force swingeing cuts at the moment!

We are often missing a trick by using 21st century technologies to drive 20th century conventions. We've used them to automate processes, for labour substitution, to drive down transactional costs and increase profits and, as a result, we've turned more and more things into commodities. Now is the time to rethink some of the old models of working.

New models ('pull' models) respond flexibly to uncertain and complex economic demands. Variability becomes the norm and prediction becomes increasingly unreliable. That may mean that you need to flex people, offices and IT up and down, according to demand. In the face of this, many of the old ways of measuring and managing, command and control don't work. Pull models work around understanding and responding effectively to customer and employee demand.

Competitive advantage is often about how fast you move, how knowledge flows (rather than what IPR/knowledge you own), networks of relationships and human capital rather than physical assets like IT or buildings. As Hagel^[25] observes: **"How do we get better, faster and by pulling together?"** The 'bang for your buck' of these things is notoriously hard to quantify using traditional transactional economic models. Key to this is leveraging the combined brain power and passion of the employees within an organisation and their customers outside it. Employees are often taking the initiative now – organisations need to work out how to keep up and harness their creativity rather than block it.

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People have changed far more than the organisations upon which they must depend for both consumption and employment. Control and motivation are, of course, inherently linked. Classic psychology (e.g. Karasek^[26]) states that a job with high demand and low control generally results in stress. By giving employees more voice and control in how, why and when they work, higher engagement, productivity and satisfaction can occur and that translates to the bottom line.

Of course, there are many things in this snapshot of the future of work that challenge convention. How do you virtualise yet connect? How do you control without being controlling? How do you measure outcome when knowledge work is largely intangible? However, by breaking away from the anchors of legacy thinking, huge gains in productivity can result. Success often depends on how well loose networks of people come together to work and collaborate. This is facilitated by a change in the way that technology is harnessed to meet these new market demands. Collaboration, co-ordination and networking technologies are all at the core of this revolution – but people ultimately make it work.

Success often depends on how well loose networks of people come together to work and collaborate.

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