WORK SMART.
WORK MOBILE.

A WHITE PAPER REVIEWING MOBILE WORKING AND THE TOOLS REQUIRED TO SUPPORT THE MOBILE WORKER OF TODAY – AND THE FUTURE.
Two years ago, office products company Esselte published a white paper on the ‘Future of Work’. Today, its Leitz brand is launching the first of a series of papers and discussions to address a specific aspect that we have seen become increasingly relevant over the last two years – the rapid growth in mobile working.

Leitz has commissioned one of the original authors of ‘Future of Work’, Andrew Crosthwaite, to review the opportunities and challenges posed by mobile working.

He is a former Head of Planning at Euro RSCG London and in recent years has focused on scenario planning, in partnership with the author Richard Watson, through their company Futures House.
Unlike the previous paper, this is accompanied by proprietary research from a panel of over 800 management level workers across four countries in Europe: the UK, Germany, France and Italy. As well as representing the four largest economies, they also represent different attitudes to work.

Northern and southern Europe are often associated with stereotypical attitudes and behaviours. We often think (erroneously) that southern Europe has a more laissez-faire attitude to work – but recently it was the French who enacted legislation forbidding the compulsory answering of work e-mail after hours.

The series of papers will focus on the mobile worker and, over three documents, address three core areas:  

**Part one**
We talk about the smart worker, differentiating between the business traveller of the past, and the mobile worker of today, and discussing the massive increase in mobile devices and the challenges they provide.

**Part two**
To be published in the Spring, it will focus on the environment we provide for these workers and how the growing focus on knowledge work and the different ways in which fixed location and mobile workers will interact.

**Part three**
This part will look at how companies are adapting – from the challenges facing established multi-nationals to entrepreneurial start-ups, exploiting the breaking down of geographical boundaries.
The workforce of 2015 and beyond will be increasingly specialised and virtual. They will be more likely to be working flexible hours, or part-time, and to be based outside ‘head office’ for most or all of their time – in other people’s offices, on the move, at home and often on short-term contracts for project-based work.

A PWC survey of HR professionals shows nearly half expect at least 20% of their workforce to be contractors or temporary workers by 2022. Short-term contract work is popular with employers as they only pay for hours worked, are able to reduce their fixed costs and can call on pools of specialised talent.

The Freelancers Union, a national organization in the USA, released a survey in September 2014 showing that 34% of the country’s workforce are freelancers – higher among millennials at 38%. The organisation describes this as “the new normal”.

New types of worker do new types of work. And they do it in new ways.

In the past, being a mobile worker didn’t always connote high status or influence. In fact, it was often the direct opposite. The classic image of the travelling representative, immortalised in Arthur Miller’s play, ‘Death of a Salesman’, was often a negative one: on the road, isolated, rarely going home, out of touch with head office – both physically and culturally.

This is changing radically. More of us are probably far more mobile than we realise – even those who self-classify themselves as ‘office workers’. For instance, $\frac{2}{3}$ of all office workers carry out some work-based activity remotely in the course of any month.
To be more precise, our proprietary research shows that a third of our sample do 30% or more of their work outside the office. Less than one quarter only work at their main fixed base. Conversely 1 in 5 are doing at least 50% of their work elsewhere.

8 out of 10 of those surveyed are taking their work home to do in the course of the average month. (so it’s hardly surprising that nearly 60% of our sample say “My home life suffers a lot because of the pressure of work.)

Forrester’s 2013 survey, “Mobile Workforce Adoption Trends”, classified 29% of the global workforce as ‘anytime, anywhere information workers’.

Their criteria for this is using three or more devices and working from multiple locations. This rose six percentage points from the previous year – and so we could easily envisage this descriptor applying to half of everyone reading this, by 2020.

And clearly, in different countries, at different stages of development, the concentration of mobile workers will be greater.
Increasingly, specific industries have a large proportion of their workforce away from ‘head office’ at any one time. Utilities, telecoms, transport and consulting, are all areas where taking work to where the customer is has always been embedded in the job function. As working becomes more cross functional, more collaborative, with companies teaming up on project work, this is increasing in all industries.

Innovations in personal data management will transform the life of workers on the move. Purchases will be digital, via smartphone rather than credit card or cash. Your device will log and manage what you buy and where and when you bought it. Portable tachographs will monitor your mileage for you and send it to head office. Sifting through expenses receipts will be a thing of the past.
THE NOMADIC WORKER

Just as mobility was not a prized attribute in the past, nor was contract working. A demand for flexible hours could be seen as a lack of commitment to the job. Contract working carried overtones of casual labour and uncertainty of tenure. Being a temporary worker meant that, in the past, you never really became involved in the company. A nomad with limited commitment. This perception is changing rapidly.

The International Flexible Working Survey carried out among HR professional by Bakker Elkhuizen in 2013 showed that 64% of UK organisations had implemented flexible working, with Germany close behind with 57%. Research by Orgatec shows that project work now accounts for 35% of all the working hours spent in offices. Half of all companies now continuously put together new teams consisting of employees from different functions, consultants, and external service partners.

Rather than working in ‘departments’, smart working involves cross-functionality, and also people are more exposed to new ideas, new ways of thinking and, are more task and project focused.

As our workplaces become more ‘multi-generational’, different attitudes to work and working will emerge. Different people will adapt to this in different ways. Age and lifestage throw up diverse points of view.

The 2015 Millennial Majority Workforce Study, published in 2014 by Elance-oDesk, and focusing on Gen Y, found that 58% of millennials expect to stay in their jobs fewer than three years. The study contrasts this with previous generations, with Gen X leaving a company in five years on average and Baby Boomers leaving in seven years on average.
The hiring managers in this sample saw radical differences in personalities, skills and expectations, as the chart above graphically illustrates.

Management surveys across the globe have identified Gen X and Y characteristics that will impact on the future of work. More technologically attuned, they are far more inclined to multi-task, having grown up used to switching between devices.

The smarter you are, the more in demand you are, the more power you wield, the higher your status. This is nothing to do with traditional measures based on hierarchy or time served. This is simple supply and demand of the best. The greater their desirability to employers, the more they will be able to adjust their working conditions to their own needs.

And if their working conditions don’t fit their needs and aspirations, they will move and find ones that do.
The advent of portable devices – initially the laptop, but then the tablet, the smartphone and potential new hybrids, such as the ‘phablet’ and Apple’s recently launched iPhone 6 Plus, initiating yet another size configuration – are transforming the way we are doing, and more crucially will be doing, business.

The speed of adoption of mobile devices has been extreme. The take up of smartphones and tablets occurred 10 times faster than the acquisition of PCs 20 years earlier.

Given this rate of technical advancement, allied to our evolving ability to adapt, especially in younger workforces, the tools we use in the future will increasingly have shortened lifespans. In our personal and business lives, we will be in a constant state of accelerated ‘upgrade’ (there are already more mobile phones than people in the world as old models are discarded).

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But envisaging mobile purely in terms of phones and web-related devices potentially blinkers our thinking. Mobile working is more than just another way of accessing the web – although as business people also wear a consumer hat, that is how we all tend to think of it.

Instead, it offers a set of new tools, and new means of connectivity. It’s a huge step forward from where we were just a couple of years ago, and as revolutionary as the web was to fixed internal network computing.
Wearables have gained a lot of attention in the past few years but, in the business world, uptake has been slower than anticipated – this is despite 19% of the sample in Forrester’s 2014 Business Technographics Telecom & Mobility Workforce Survey, saying they’d be interested in using smart glasses for personal use in future and a further 28% saying they’d be interested in them for personal and work use. (A shy 3% would wear them at work, but not otherwise.)

Intel is one of many companies taking a bullish view of the future potential of wearable technology. In a connected world, characterised by the ubiquitous Internet of Things (IoT), Intel expects there will be 50 billion IoT devices in use by 2020, and 400 million of those will be wearables.
But wearables as a term is very broad. There is a world of difference between, say, a smart wristband, discreet and unobtrusive, and a helmet-style headset like Oculus Rift, aimed at the gaming market by Facebook.

The challenge is to create adoption and retention through price, utility and actual wearability. Currently led by fashion, rather than functionality, the market is likely to be catalysed by a number of factors:

1. The likelihood of large companies teaming up together to bring their combined skills and brand equities together (Google & Samsung, IBM & Apple, for example).

2. The growth of telemetry. With wider publicity and access around doing things remotely from a wearable (turning on the lights at home, changing TV channels, locating the cat), the home market will expand and the business market will surely follow if there is evidence of a positive smart benefit, and wearables are seen as more than just the latest toy for senior management.

3. An iconic ‘must have’ device, which will accelerate adoption, in the same way that the iPhone gave impetus to smartphones – blending science and technology.
As this paper was being written, Apple and Samsung were both planning to introduce a hands-free payment facility into their watches. Tesco is using wearable devices in their warehouses to help employees pick up orders in the most efficient sequence. Kapture, an audio-recording wristband, has the potential for workers to take notes on a site without paper and pen, or replay pre-recorded instructions.

In the travel market, Japan Airlines announced in 2014 its intention to test the impact of new technology on customer experience and staff efficiencies, using location finding with smartwatches.

In addition, there are many skilled and unskilled work applications for people who are doing complex manual tasks – from surgeons to gas fitters or with wearable camera technology for police, army and security personnel.
Many people reading this will remember a time when being away from the office meant you were not contactable — for good and bad. In future, the ‘always on’ needs of the smart worker (and the smart customer) will have to be accommodated, wherever they are.

In 2014, there were 48 million Wi-Fi hotspots globally, double the 2013 figure, according to a survey by iPass, who predict that by 2018 there will be nearly 350 million — or approximately one for every 20 people in the world.

Inevitably, these will not be equally distributed – one for every four people in the USA, for every seven in Europe, but still only one for every 40 people in Asia.

These will not just be fixed locations – the expectation will be for 15,000 Wi-Fi enabled planes by 2020. In December 2014, Air France and Orange announced they will offer Wi-Fi access on-board two Airbus A320s on short and medium-haul networks during a three-month trial phase, from summer 2015.

This has profound implications for telecommunications. The relatively slow shift from 3G to 4G will be suddenly overtaken by Wi-Fi on demand.
Smartphone providers will offer Wi-Fi audio and visual calling as a matter of course – with improved connectivity and reduced prices. And naturally, ubiquitous Wi-Fi will mean that the smart worker will have instant access to essential work information and equipment, on demand, wherever they are.

As remote online security becomes an issue, there will be increased importance of brand name recognition and trust. Sending information via cellphone networks will generate a greater feeling (although not a 100% delivery) of safety, rather than through Giovanni’s coffee shop Wi-Fi.

The broader issue of device security will be explored later in this paper as we examine the implications of Bring Your Own Device (BYOD).
There’s no point in having the capability to be connected, if we are always running out of power away from the office. Poor battery life is the perennial complaint of smartphone users – regardless of the device they own.

While the computing capability of mobile devices has increased exponentially, battery power has lagged. The battery power of the iPhone 5 was only about 15% more than the original model – and Apple is not the worst offender, simply the most high profile one.

Research commissioned by Leitz shows that 60% of business people totally run out of battery power at least once a month, and also 60% have to restrict their phone usage at some stage each month to conserve power.

From July 2014, all passengers flying into or out of the UK were advised to ensure electronic and electrical devices in hand luggage were sufficiently charged to be switched on, as part of increased security measures. Having to leave your phone or laptop behind is not something most of us would ever contemplate.

Battery technology is already at its limits, and so as a 2014 article in Wired magazine put it, “Future progress depends not on sharp increases in battery capacity, but on a diversity of techniques to extend battery life”.

HOW OFTEN DOES YOUR PHONE RUN OUT OF BATTERY WHILE WORKING OUT OF OFFICE.

MORE THAN 10 TIMES A MONTH

1 - 3 TIMES A MONTH

4 - 6 TIMES A MONTH

1 - 10 TIMES A MONTH
Just as in the automotive industry, the race is for fuel efficiency, and so mobile device companies will increasingly focus on low power or power-efficient computing.

Portable devices will make more use of ‘typical use energy efficiency’, with better management of idle states, giving peak performance for shorter periods and very low power idle states (thinking again of cars, mirroring engines that cut out when the car isn’t moving).

It will be easy and intuitive for the device to switch into low power configuration, depending on intensity of use, with devices learning and anticipating their users’ likely behaviours.

Methods other than electrical charging do exist, but are currently sub-optimumal for a number of reasons.

Some phones have wireless charging as a feature, but the power output is limited and currently the device needs to be within a couple of centimetres of the emitter. You might as well use a wall plug!

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Solar energy charging from leaving the device in the sun or near a light source is another technology already in use. However, current products on the market will often not deliver a full charge, or take several days to do so – not ideal if you need a quick burst of power.
Other future possibilities could include kinetic energy (just as we power the batteries in our watches as we move our wrists). The bad news is that we are probably 10 years from this being a commercial possibility and looking even further into the future, energy derived from sound – voices, traffic and music.

Leitz’s own research shows that nearly three quarters of our sample carry a charger with them. And in the course of any month, nearly half are forced to borrow someone else’s charger.

Devices in the future will also be able to ‘piggy back’ energy from others – like the ‘buddy’ system of shared air when diving. As with diving, however, it depends on someone else being willing and able to sacrifice their own precious resource.

For the foreseeable future, the majority of our re-powering on the move will still come from the electrical mains – and so pocket-sized chargers or enabling desk-top accessories with charging capabilities will remain crucial tools. Speed of electrical charging will improve dramatically. Laptop chargers have traditionally been the size and weight of house bricks. In future, products like Dart from Finsix, which claims to be four times smaller and six times lighter than conventional chargers will become the norm.

One of the biggest challenges facing the international mobile user is the sheer variety of plugs – meaning you always need an adapter. Barring a radical overhaul of global standards, this is unlikely to change. The frantic appearance at hotel reception, pleading for an adaptor, will still be a familiar experience.
In the past, companies often operated as stand-alone units. They had relatively stable workforces. They knew that their employees were ‘theirs’ and not also working for other people – perhaps their competitors – on a contract or freelance basis.

Information was kept on site – because that’s where the majority of workers were based. Access was tightly controlled, whether through lockable filing cabinets or protected layering of security systems. It was often duplicated and finding the most up to date versions of reports and paperwork could often be a challenge.

Information now is a different commodity – nearly always digital (even if paper still has a strong grip on the way we work); constantly updated; more freely available to people on demand. This is true regardless of hour and location – whether you are a multi-national with a workforce at different time zones around the globe, or a loose alliance of independents in a start-up sitting in a serviced office or a motorway.

Managing increasingly mobile, transient, self-sufficient workforces will bring new challenges for organisations – and the equipment that people use to do their work will increasingly facilitate this.

BYOD is increasingly the rule rather than the exception.

Forrester’s report on Mobile Workforce Adoption Trends shows that over half of knowledge workers are using laptops, tablets and smartphones specified by themselves – and of these, the majority are also paid for themselves.
Gen Y and Z in particular don’t want to work with mobile equipment that is less advanced than they use in their personal lives – especially as they are likely to be using the same devices for both. Some commentators have said it is like asking senior people to wear clothes that the company has chosen for them.

If people are specifying their own devices, they will be doing the research and possibly the transaction as well, with implications for acquisition and retailing. For personal electronic devices, the old model of central procurement from larger retail suppliers is likely to decline.

Instead, personal office equipment is turning into an impulse purchase, with outlets like airports, large stations and motorway service stations becoming increasingly important.

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With Amazon introducing same-day delivery on millions of products online, plus the ability to pick up anywhere through Pickup and Locker, likely to be emulated by other online retailers, the average smart worker is very unlikely to take the time to go to an out of town retailer to buy new equipment.

BYOD can be another accelerator. Rather than using a centralised IT hub, people will be in a state of continuous upgrade, rather than taking big technological steps, separated by long timeframes.

While centralised procurement may decline, there will be an additional burden on management and IT to ensure devices work (even if self-selected), are run cost-efficiently and do not compromise company security.
With BYOD, the issue of security becomes problematic. As the devices are the employees’ property, what control can companies exercise over them?

While 50% of IT professionals believe employees obey policies on personal use of work-provided mobile devices, in contrast 70% of employees say they don’t. This disparity isn’t surprising when 50% of large companies don’t even know how many devices they have and three quarters can’t track costs in real time.

It is estimated that 10 million devices go missing each year with commercially sensitive data on them. The mobile phone overtook the umbrella as the most lost item on the London Underground some years ago. We generally hear about this when a government employee leaves the tax records of 20 million people in a coffee shop. Companies feel they have a responsibility to protect sensitive data, therefore.

Security isn’t just an issue in the digital space. The prevalence of remote working means that, increasingly, people are looking at sensitive materials on their screens in public places.
Remote wiping of lost devices is one option, but this can have unexpected consequences. According to a 2013 survey by data protection firm Acronis, 20% of US companies perform a remote wipe of a worker’s device when they leave the firm, which obviously is erased on the cloud as well and will include more than just work-related data. It’s all very well having your emails wiped, but what about your child’s birthday photographs?

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While serviced offices frequently offer ‘pods’ for the individual workers, many people find themselves working in open plan in a library type of environment.

And with the pressure to be productive on the move (a by-product of the connected world, where instead of, for example, filling in sales reports at the end of the day, people are now expected to deliver them in near real time), how often do we glance up from our work and find the person next to us on a train, plane or in a coffee shop rapidly looking away and wonder how much they’ve seen?

Leitz’s research shows that over half of our business sample have noticed someone looking over their shoulder to read their confidential information on tablet or laptop. And a quarter say this happens frequently or all the time. (We tactfully refrained from asking them how often they do this themselves …)
CONCLUSIONS

The smarter worker isn’t coming. They are here right now and if they aren’t quite senior enough to be making major buying decisions yet, they are already at the very least influencing them.

We know these workers will carry multiple devices, some of which they own themselves and some their employers own.

We know they will be mobile – not necessarily formal business travellers, travelling business class and staying in hotels, but in different ways, such as mobile working in coffee shops, railway stations and on trains, at home or even in a bar on a Tuesday night.

We know they will expect to use all their devices simultaneously wherever they work. They will need, and expect, their employer to provide if not the tools themselves certainly the facilities and infrastructure to support their work.

We know that this flexible style of ‘always on’ working will require different levels of support and most importantly will require much higher levels of security.

We know that the world is changing fast and we all need to keep up.
Leitz provides top quality products to help professionals organise their work in any environment.

Renowned industry-wide as an innovative brand with German heritage and quality standards, Leitz is leading the transition to the future of work and the mobile working generation.

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