



A report from the Economist Intelligence Unit

The personalisation challenge

Business culture and mobile security

The personalised workplace of the future



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Personal technologies in the workplace are clearly entrenched. But where will this rapidly moving trend take employees and companies in the next five years?

The personalisation of workplace technology seems destined to expand well beyond smartphones, tablets and cloud services like social networking. Many other technologies born in the consumer market will transform companies, including wearable computers, advanced mobile apps, sensorenabled health and fitness trackers, mining of personal data and ubiquitous wireless connectivity.

"One of our assumptions is that if something is useful in the consumer area, it will also be useful in the business area," says David Moschella, director of research for the Leading Edge Forum, a research organisation inside CSC, a US systems integrator.

As these technologies storm corporate firewalls, organisations and employees will reap substantial rewards at relatively low cost, experts say. But stresses on workers may grow and even impede business success if companies fail to manage the workplace changes new technologies have unleashed. And organisations will be forced to continue to adjust how they manage networks and sensitive data.

Immersive work environments

The most dramatic breakthrough may come from Google Glass, a wearable computer that clips onto eyeglasses and tethers wirelessly to your smartphone. This sort of hands-free computing will soon transform the way we work, says Vivek Wadhwa, vice president of innovation and research at Singularity University, a technology-focused US

learning institution.

"Devices like Google Glass will bring the [computer] display to the body, to the self," he says. "You won't need to sit at a desk anymore."

Mr Wadhwa spins a future in which such devices, teamed with new gesture-based user controllers and voice commands, create a work environment that is immersive—think holographic conference calls—and effortlessly portable.

Meanwhile, mobile apps will become even more personalised—and more dominant. And they will change the very definition of productivity by shifting it to stand-alone mobile apps for communication, travel and geolocation and away from traditional software suites like Microsoft Office, argues Alexander Erofeev, chief marketing officer at Kaspersky Labs, a Russian security software maker.

Consumer apps will continue to gain use in the workplace (Skype, for example) because workers already know how to use them and they are inexpensive, he says. At the same time, business apps will grow in number and sophistication. "There are ship-tracking apps for the iPhone that can, for instance, show all the ships currently in the New York City harbour," Mr Erofeev says. "That's a toy for people like you and me, but it's a big business for people who work in marine travel."

More intrusive employers?

A downside of personalisation for many employees is the potential for their boss to become Big Brother. In a global survey of 316 senior executives by the Economist Intelligence Unit, sponsored by HP, a surprising 59% of respondents said they were

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David Moschella, Director of research, Leading Edge Forum worried about their employer having access to personal information stored on their mobile device.

That concern could grow with the arrival of new apps and sensor-based mobile devices that gather and transmit personal data. Consider, for instance, wearable biometric-monitoring devices like the Nike FuelBand and Fitbit Flex. These fitness devices, marketed as health-improvement tools, gather data about movement as well as heart rate, weight, sleep and other health-related matters.

Some companies will be eager to take advantage of this blast of personal information to reduce sick days and medical costs, says Mr Wadhwa. "You will find that companies will become intrusive about your health," he says. "Before they give you sick leave, companies will expect you to do something to improve your health."

Sound farfetched? Mr Wadhwa says several Silicon Valley firms recently conducted health contests in which employees wore fitness monitors and voluntarily handed over their personal data to employers. "Initially, these types of programs will be reward-oriented, but later they may penalize you for not exercising or being overweight," he says. Already, some companies reward employees who regularly visit health clubs—and penalize those who smoke.

If employees experience such changes as an invasion of privacy or abusive, that could breed worker backlash. So could an expanded use of personalised technologies that leads to further encroachment on personal time. "You will be always on, always working, always reacting," Mr Wadhwa predicts.

The result could be a rise in employee-manager conflicts, worker burnout and even wage-hour lawsuits, says Nancy Flynn, executive director of the ePolicy Institute, a US consulting firm that advises companies on workplace technology policies.

Organisational efficiency and effectiveness will also suffer, says Leslie Perlow, a professor of leadership at the Harvard Business School and author of *Sleeping with Your Smartphone*. When employees get caught up in reacting immediately

to calls and e-mails, planning, prioritisation and, ultimately, efficiency and effectiveness suffer.

Meanwhile, the isolation that can come from oftenimpersonal digital communications can undermine communication, innovation, creativity and problem-solving, she says. "I think that the costs are actually quite large to organisations."

Hotter demand for tech savvy workers

Personalisation will create a workplace that is more decentralized, with more autonomous employees. Forty percent of executives polled by the EIU say they expect their firms' structure to be somewhat or very flat five years from now, while only 22% described their firms' structure as flat today and 16% described it as flat five years ago.

Technology will become pervasive throughout the organisation, and jobs will go to people who have technology expertise, Mr Moschella of Leading Edge Forum says. "We use the phrase 'double deep' to talk about people who know how to do their job and can use the relevant technologies," he says. "This is really important, and it will determine the people who are in demand and those who are not."

In this world, corporate IT networks will become less central to operations because scattered employees will use Wi-Fi and cellular systems to attach to company data and applications. It is happening already, as highly mobile workers use public networking infrastructure as much as or more than the corporate network.

Other technology shifts are also eroding the power of corporate IT and challenging it to redefine its mission. Many companies are outsourcing datacentres and services like e-mail. Business-unit leaders bypass IT to set up their own cloud services. And employees buy and support their own hardware and software. Even information security, a complex endeavour that now requires technologies configured by IT experts, may go the way of easy-to-use consumer tools like Facebook log-in authentication, says Mr Moschella.

Yet others argue that the influx of personal data and an agnostic device policy will make

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of executives polled by the EIU say they expect their firms' structure to be somewhat or very flat five years from now, up from 22% who say their firms are flat today.

comprehensive enterprise security more important than ever. Requirements for data storage, security and privacy may become more pressing, particularly among regulated industries and those with valuable intellectual property, says Ed Stroz, co-president of Stroz Friedberg, a US investigations firm.

"I think big enterprises will more carefully configure and segment their networks to limit access, and content will have to be identified as sensitive or nonsensitive," so sensitive data can be defended, Mr Stroz says.

But the general consensus is that

personalisation is an unstoppable force. Today's "bring your own device" phenomenon, in which employees use their own smartphones and tablets at work, will become one of "bring your own technology". In this model, companies provide a stipend to employees, who purchase all the technology they need.

"The role of centralised IT, which has traditionally made all the technology decisions, will be appropriated by informed individual users," says Mr Moschella. "A lot of consumerisation is about demystifying IT."

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