

Wearables in the workplace

Wearable technology survey

27 January 2016

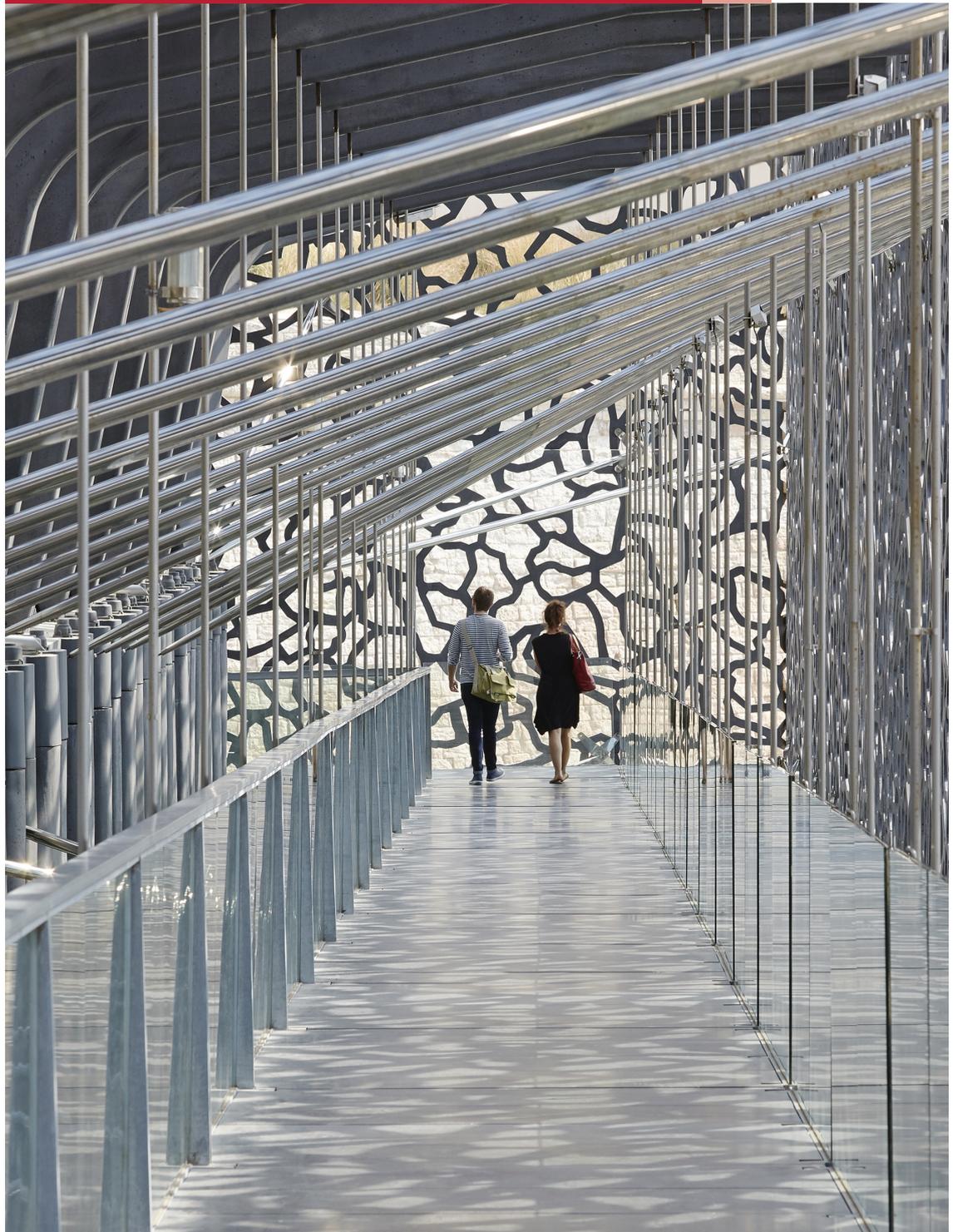


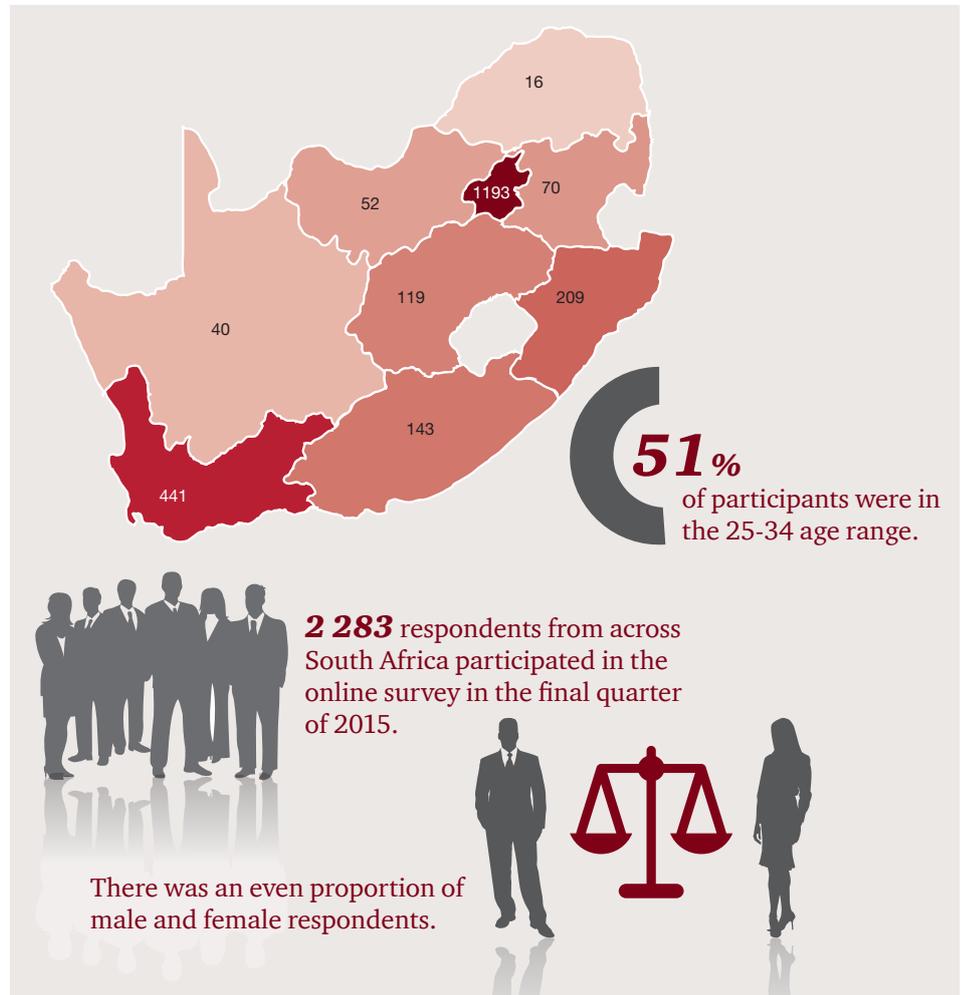
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About the survey

This wearable technology survey was carried out to explore how employees feel about wearables and whether it might be viable for employers to consider providing wearable devices to employees in order to collect health and work-related information.



About wearable technology

The term wearable technology refers to clothing and accessories incorporating computer and advanced electronic technologies.

You may have come across wearable technology in the form of fitness and health monitoring devices. You may also have read about or seen smart glasses, which can take videos or photos and project information from the internet. Other examples of wearable technology include smartwatches, wearable cameras, people-tracking devices and smart clothing.

Glimpses into the wearable future of a new health economy are emerging. For example, people who are members of Discovery Vitality can earn Vitality points by linking a fitness device or smartphone app to their Vitality profile. These devices include Garmin Connect, Polar device, Jawbone, Fitbit, Fitbug, and other apps.

Apple recently unveiled a smartwatch that monitors heart rate and activity, one more step towards creating a one-stop-shop for health information for consumers and their healthcare providers. The Sony SmartWatch can be used to track activities and movements and can be synced with a fitness app like Lifelog. The Samsung Gear 2 is a personalised fitness motivator and monitor, which tracks fitness via a built-in heart rate sensor and pedometer.





Overview

The digital world is creating a future of wearable devices that promises to entertain consumers, save them money and help them live healthier lives. Technology companies' interests in health and wellness have sparked the creation of a myriad of wearable devices, from fitness bands that monitor activity and sleep patterns to flexible patches that can detect body temperature, heart rate, hydration level and more.

By wearable technology, we refer to clothing and accessories incorporating computer and advanced electronic technologies. The devices are embedded with electronics, software, sensors and connectivity that enables the device to collect data and sync with smartphones and PCs.

These devices produce data that, often enabled with analytics, can be used by consumers to manage their health and by healthcare organisations to improve care and potentially reduce costs via systems enabled to provide remote patient monitoring.

Data generated by personal devices can be used by insurers and employers to better manage health, wellness and healthcare costs, and by pharmaceutical and life sciences companies to run more robust clinical trials and capture data to support outcomes-based reimbursement.

Already, employers are discovering valuable applications for wearable technology. From new hire onboarding, to improved employee communication to real-time instruction and feedback, major players like Discovery Vitality, Momentum Multiply, Virgin Atlantic, Progressive Insurance and the Container Store are catching on to the impact of wearables on their bottom line.

In addition to monitoring how employees spend their time and derive insights on how to streamline processes and maximise efficiencies, the wearables industry offers a myriad of opportunities for hands-free tutorials and easy access to information in industries ranging from manufacturing to medicine.

Data generated by wearable devices could also be used by employers to monitor their employees in order to improve their stress levels, efficiency and work conditions. This could allow employers to offer benefits such as flexible working hours, fitness incentives, free health screenings and lower health insurance premiums.

This study was carried out to explore employees' views about wearables and whether it might be viable for employers to consider providing wearable devices to their employees in order to collect health and work-related data.

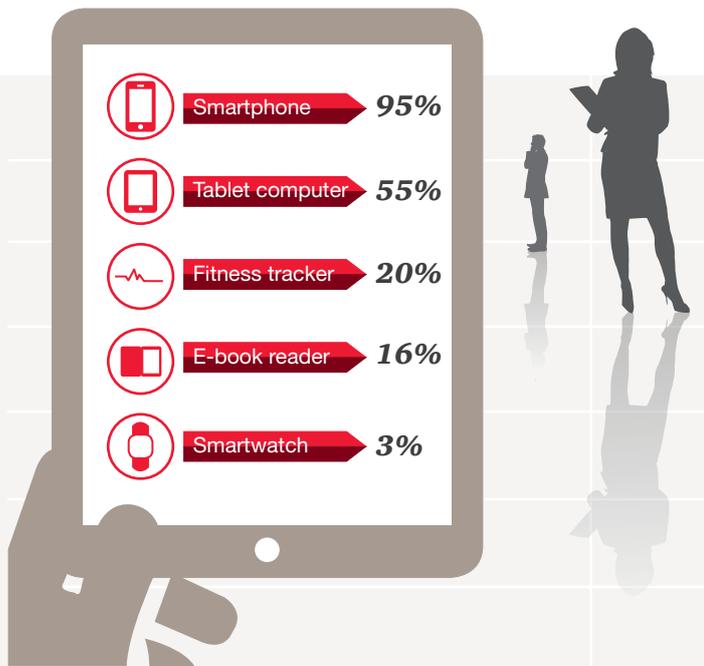
“It’s a very creative way to encourage employees to be healthier and more productive. A healthy body is a healthy mind. The employer can also understand the time it takes for employees to travel to and from work and the need to work flexible hours or from home some days.”

A Snapshot of Wearables in the workplace

Wearable technology is becoming increasingly popular. It has the potential to benefit both organisations and employees in big ways.

Technology has taken off

Figure 1 SA working adults own:



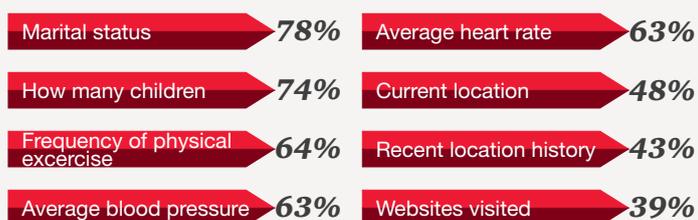
Source: PwC analysis

Data is personal

We're generating and collecting more data than ever before, but people are not necessarily comfortable in sharing it. We are much more likely to share unchanging background information with employers than personal information such as our internet browsing history.



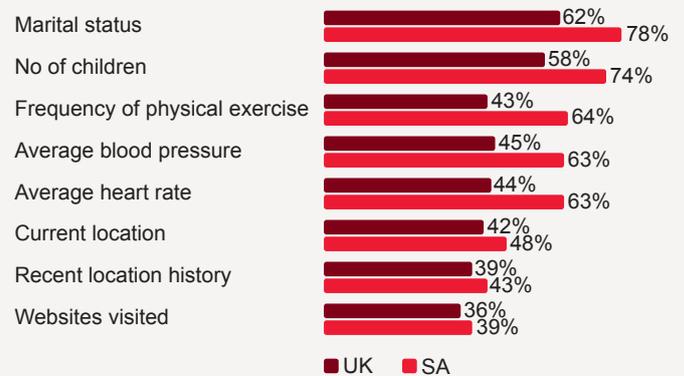
Figure 2 Employees are most likely to share information on:



Source: PwC analysis

Compared to participants in a similar survey carried out in the UK, South African respondents are much more willing to share information.

Figure 3 Respondents willing to share their information



Source: PwC, Wearables in the workplace, www.pwc.co.uk/data-analytics

What's in it for me?

72%

of employees would be happy to use a piece of wearable technology provided by their employer and allow the employer to collect data from it.



If there are benefits for the individual, the proportion of employees who are prepared to share rises to

87%

Figure 4 The most enticing benefits of wearing and sharing



Source: PwC analysis

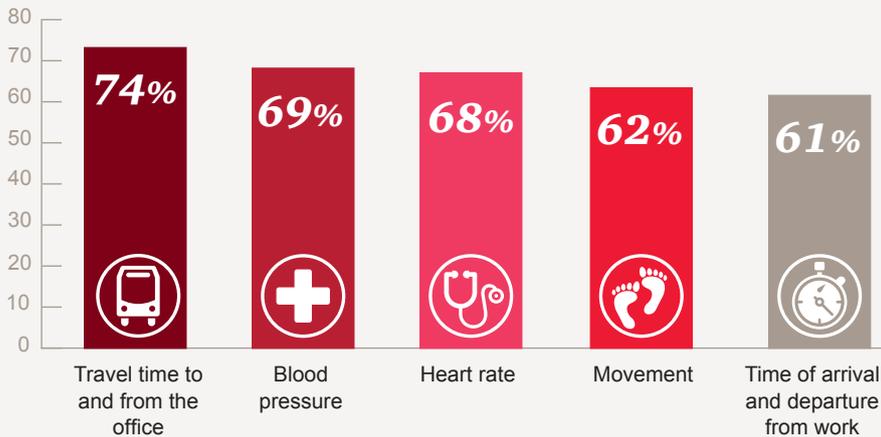
72%

of working adults would be happy to have data collected about them via a wearable device in order to improve pay, benefits, working conditions and opportunities.

Sharing data requires trust

In exchange for the right benefits, respondents would be happy for their employer to collect and analyse data on certain aspects of their health and lifestyle.

Figure 5 Health and lifestyle information respondents are happy to share with employers



Source: PwC analysis

But even with benefits on offer, some people are just not comfortable sharing their data with their employer.



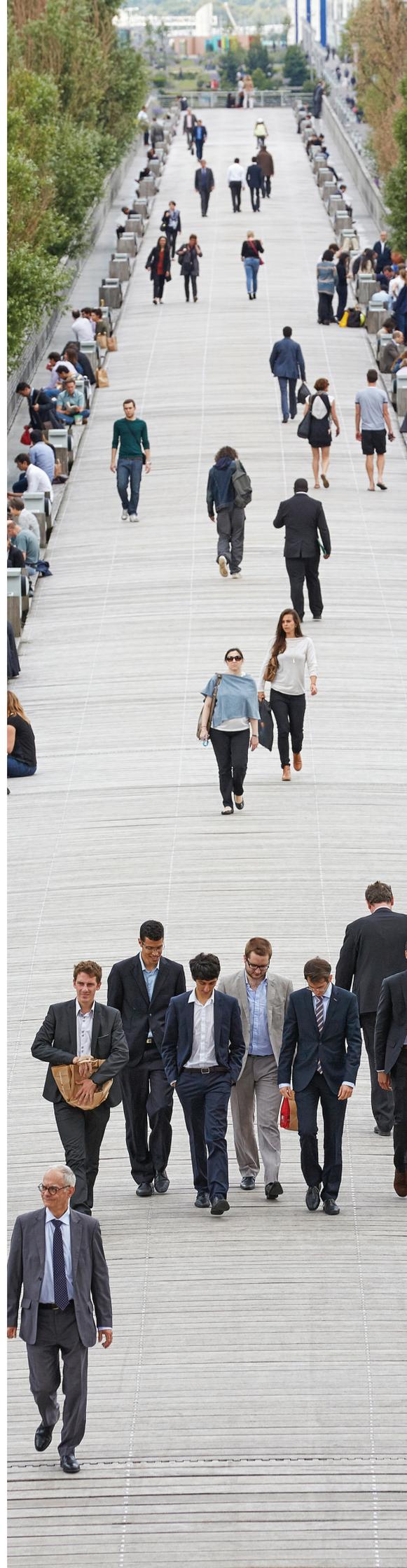
say they don't trust their employer to use the data for their benefit.

say they don't trust their employer to not use this data against them.

Win-win

Providing employees with wearable devices could be a novel and powerful way for organisations to gain better understanding of their workforce and tailor working patterns and office life to their individual needs; ultimately leading to more engaged and happy employees.

The key to success for both organisations and their employees will be overcoming the trust barriers by having clear processes for acquiring, using and sharing the data securely and responsibly.



Two worlds of wearables

The wearable utopia

Farrah Wilson opened her eyes on the first day of grade 8 feeling nervous and excited. She had just finished another night of perfect slumber – one hour of light sleep, six hours of REM – regulated by a smart eye mask, which uses sono technology to lull her into an easy dream state. She used to wake up groggy and grumpy, but now, with proper rest, everyone in the Wilson household is happier.

Downstairs, a nutrient rich protein shake was waiting for her. Farrah's mom, Lara, had already gotten a report that she was a little low on iron and calcium that morning.

En route to school, traffic was light, thanks to a recent reconfiguration of roads based on data the city had gathered from wearable devices – more pedestrian lanes were added in places with heavier foot traffic, bike lanes were rerouted according to use and stoplights were re-timed.

As Farrah moved through her day, school assignments loaded automatically onto the personal organiser hub of her network, viewed with a quick swipe of her glasses. No more carrying heavy backpacks and books – it was all done in the cloud, preserving precious human energy and natural resources.

At lunch, Farrah pulled up her Family Ties app, which showed her brother, Jax, studying by himself at the high school. Farrah beamed into his glasses to say hi.

During their conversation about Farrah's upcoming maths class, Jax noticed her mood detector shirt was signalling anxiety, so he sent a clip of a belly-flop contest to play on her smartwatch. As he knew it would, the video made Farrah smile and relax.

That night the Wilsons sat down to dinner, each eating a meal optimised by health reports from their wearable devices, and shared snapshots they'd taken throughout the day. Music controlled by Jax's smartwatch played softly in the background. The air was clean, the temperature was perfect and they were, best of all, together.

vs. The wearable dystopia

Farrah Wilson was with her friends in a self-driving car, pinging messages back and forth across the seat when a flashing note popped up on all their smart glasses: JHNYRocks@ClubLima. GET HERE.

As Farrah nervously approached the nightclub's entrance, the scanner flashed red, setting off a series of alarms. MINOR. MINOR. MINOR. Farrah and her friends were horrified – they'd forgotten about the identity chip they'd had tattooed onto their ankles last month.

When she returned home, her mom, Lara, didn't bother to remove her laser beam youth mask as she handed down the punishment: a week without digital access to her friends.

Farrah sullenly marched off to her room, where an attempt to retreat from the world was thwarted by the constant alerts from her smartwatch: Begin Algebra Homework Now. Daily Iron Intake Low. Steps Taken 3 208; Steps Needed 6 792. No matter how much she did, it was never enough. And though she was lonely, she couldn't seem to find the solace of being fully alone.

Slipping on her smart glasses, she swiped over to the news, where she caught a headline about the city's overflowing digital landfill, which was leaking an undetermined substance into the ground.

Farrah looked out her window at the empty streets. She remembered when people at least rode their scooters around and talked to each other. Actually talked, face-to-face, with no distractions.

She quickly snapped out of her reverie. As her beeping smartwatch reminded her, there was much to do. Algebra. Iron. 6 792 more steps.

(PwC - The Wearable Future (Consumer Intelligence Series) – pwc.com/cis)

Key findings

Device ownership

Almost all (95%) of working adults say they own or use a smartphone followed by:

- Tablet computer – e.g. iPad (55%)
- Fitness tracker – e.g. Nike+ fuelband, GPS running/cycling watch (20%)
- E-book reader – e.g. Amazon Kindle (16%)
- Smartwatch – i.e. a watch that can connect to the internet/smartphone and use apps (3%)

Data ownership

- Three fifths (61%) of working adults think they have legal ownership of the data produced by their smartphone and other devices themselves, while 17% say the service providers they use online do (e.g. Google, Facebook).
- Nine percent say they simply don't know who has legal ownership of the data. This increases to 12% for those over the age of 50.

Protection and ownership of personal information

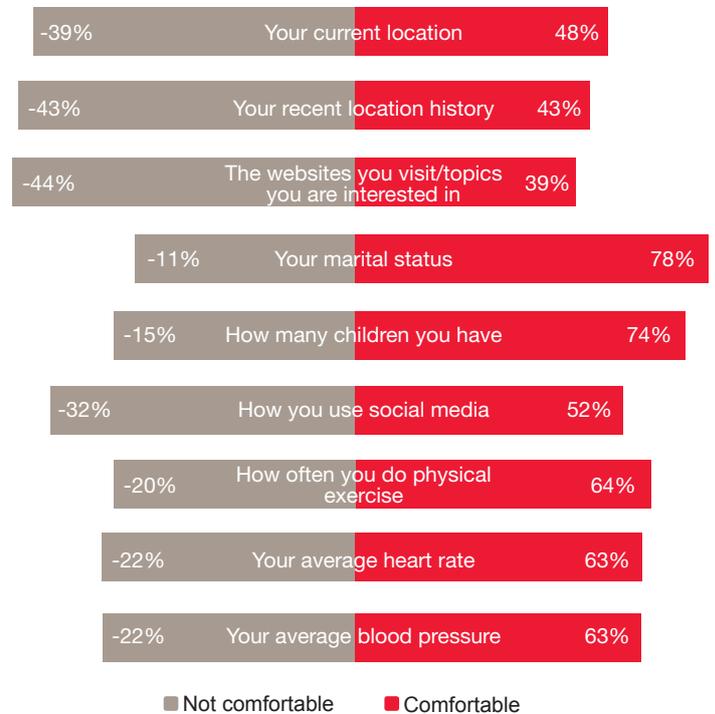
The Protection of Personal Information Act (POPI) was signed into law in South Africa in November 2013 with the actual commencement date of the Act still having to be determined by the President. The Act aims to ensure that when collecting, analysing, processing and sharing personal information, companies are held accountable for any abuse of information and/or if personal information is compromised.

The Act considers an individual to be the owner of their personal information and aims to provide rights in order to protect this information such as that an individual's information can only be shared with their consent and collected for valid reasons and with transparency about how their data will be used.

Sharing personal information with employer

Smartphones and other devices record information about their users such as their location history (where they have been and when). The table below shows how comfortable or uncomfortable respondents would be with sharing various types of information with their employers.

Figure 6 Level of comfort with sharing information with employers



Source: PwC analysis

The type of data respondents were most comfortable sharing tended to be the sort of unchanging 'background information' that employers are likely to know anyway such as marital status and how many children they have.

In contrast, the strongest objections were to what would normally be considered personal behaviour such as internet browsing history, recent location history, current location and social media usage.

"I believe your health information is a personal and private matter. This is sensitive information that should not be used in any way against the employee."

The Smartwatch information exchange

Respondents were presented the following scenario:

Imagine that your employer was offering you a piece of wearable technology like a smartwatch. You would be able to keep the device for the duration of your time with the company and be free to use it how you choose. In return, the company would collect some of the data recorded by the device such as health-related information (e.g. exercise, blood pressure) and work-related information like commuting time/distance, average hours worked etc. Would you take this offer?

Nearly three-quarters (72%) of respondents say they would take the offer, but only 31% would definitely take the offer. The high level of respondents that would take the offer is consistent across all age groups and is only slightly higher among younger respondents.

Respondents were then asked to imagine that this information was collected to help employers improve things such as reducing stress levels for employees, changing the hours that they work to better suit them, choosing where they can work from most conveniently and whether this would make them more likely to take this offer.

Respondents' likelihood to take the offer rose to 87% when these potential benefits were offered. This increase is observed across all age groups.

Benefits and concerns of exchanging data

When working adults were asked what benefits they would be happy to have their information collected and given to their employer in exchange for, three quarters (77%) say flexible working hours. This was followed by:

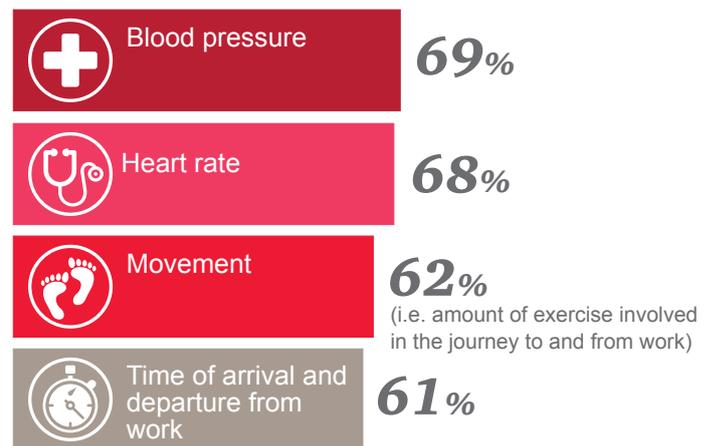
- Fitness incentives (e.g. subsidised gym membership / free classes) (72%);
- Lower health insurance premiums (70%); and
- Free health screening/annual health check (59%).

Of the 26% who say they would not want any of the benefits listed in exchange for having their information collected, the top reason given is that they don't want to share their information generally (32%);

- 20% say they don't trust their employer to not use this data against them in some way; and
- 20% say they don't trust their employer to use the data for their benefit.

Willingness to share work-related data

Those who selected at least one benefit in exchange for collection of their personal information were asked what data they would be happy to share with their employer. Almost three quarters (74%) say travel time to/from office, followed by:



Overall, almost three-quarters

(72%) of working adults say they would be happy to have data collected about them via a wearable device in order to improve their pay, benefits, working conditions and opportunities.

Some respondents recognise that sharing their data would help both employees and employers.

A few respondents were enthusiastic about the concept of sharing their data, but not the smartwatch itself, as they don't wear watches or would prefer the watch to have specific functionality.

For many, their willingness to take part would depend on exactly what information was being collected.

While many respondents were opposed to the idea of their employer monitoring their every move, most could see benefits, with their ultimate consent or refusal likely to be based on the specific details of any programme offered.



Recommendations

In an era in which workplace loyalties are fragile, wearable technology has the potential to increase morale if it makes it easier for workers to produce more efficiently and provide better service, making them stronger employees overall.

Likewise, use of wearable technology in employer-sponsored health and wellness programmes offers to create a healthier and more productive workforce, which could have clear implications for a company's bottom line – opening the door for organisations to subsidise the use of wearable devices among both employees and consumers.

- In South Africa employees are quite receptive to the idea of sharing information with their employers via wearable devices. This level of receptiveness is greater than that displayed by respondents in the UK. (PwC Data and Analytics, Wearables in the workplace, www.pwc.co.uk/data-analytics).
- Companies exploring health and wellness programmes involving wearables can expect buy-in if incentives are offered and proper policies are in place ensuring the privacy of employees' information.
- Three-quarters of employees would provide information through wearable devices to their employers provided the right incentives are provided such as flexible working hours, fitness incentives and lower health insurance premiums.

However, employees are concerned about the privacy of their data and that the data collected may be used against them.

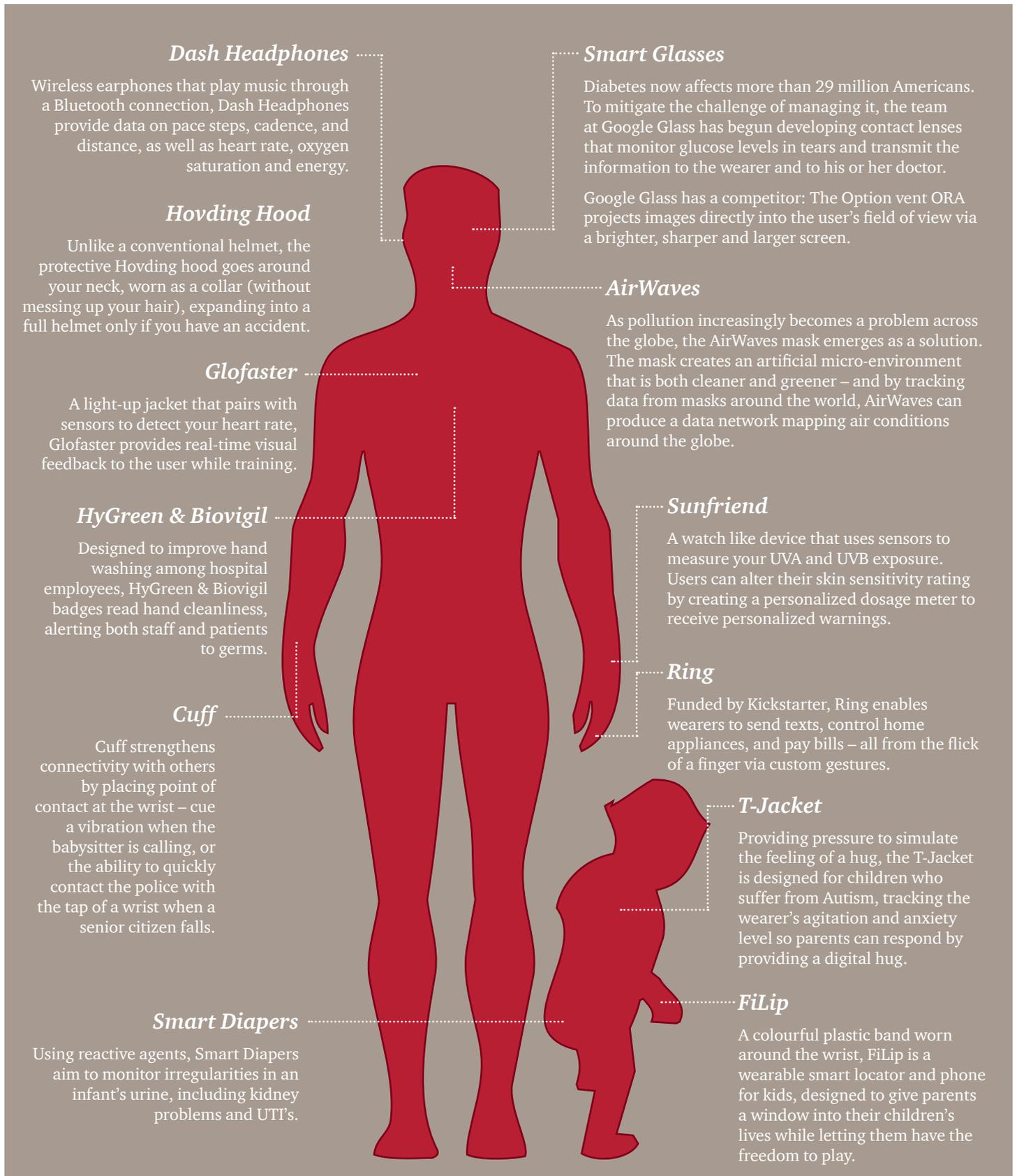
- Companies should ensure that privacy policies are crystal clear and that these are understood by employees.
- Policies should be set to clearly identify what data will be shared with employers and what this data will be used for.
- Employers would need to understand the willingness of their employees to provide information via wearable devices
- Employers should also be careful about what categories of data they collect as this will also impact employees' buy-in.

Providing employees with wearable devices could be a powerful way for organisations to get a better understanding of their workforce while also benefiting their employees.

“I think it's great, but a clear distinction must be made around what is done at work/outside of work. Work time and tracking of websites/movements/heart rates can only be beneficial. Tracking things outside of work should be off limits for an employer. I would not want my employer monitoring my data usage/website usage/location in evenings and on weekends, and nor should it be used by an employer.”

Where on the body is a wearable? Just about everywhere.

Although glasses, smart bands and smartwatches are the most common wearable devices, developers are looking at the whole human body as an opportunity for connectedness. Here are a handful of potentially innovative products in the works.



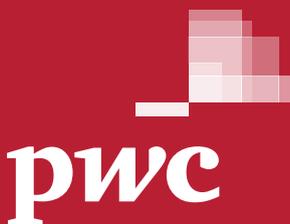
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