Although a wide range of exciting future technologies are being watched closely, there is clear evidence from this research that businesses are adopting and looking to capitalise on the benefits of Big Data, the Internet of Things and Sensor technology for their mobile workforces.

As these technologies are deployed, we move ever closer to the age of Edge Computing, where processing power is required at the edge of the network, much closer to where data is collected. This means the role of the mobile workforce computing device becomes even more critical in the gathering, analysis and communication of data, and the provision of services and in improving productivity.

Panasonic is already focused on evolving its rugged mobile computing notebooks, tablets and handheld devices to allow businesses to benefit from these technological leaps. We have, in some devices, for example, already integrated sensor technology, such as heat sensors, to enable data to be collected from the field and seamlessly transferred into backend systems or the cloud. Our devices, with their extensive range of ports and sensors, can be used as IoT devices or to connect, monitor and maintain IoT equipment. In the Big Data area, we continuously upgrade the communication and processing capabilities of our rugged mobile devices to ensure they have the capability to meet these needs.

**IMPORTANCE OF SECURITY**

Buyers highlighted device and data security as the key improvement area in mobile computing devices over the next five years. As the importance of Android grows in this market, Panasonic is responding to this need with improved management functionality and increased device and operating system security with the availability of COMPASS 2.0.

Alongside the adoption of these future technologies, buyers also predicted the increasing need for rugged devices for their mobile workforces. And, of course, the ever constant need for ergonomic design and long-term compatibility of peripherals will be required to allow workforces to easily take advantage of these future technologies and for mobile hardware to be adaptable and to provide return on investment.

As a result of these findings, I am confident that Panasonic’s philosophy to continue to develop a range of rugged mobile computing devices that are increasingly more powerful, more connected and with a widening range of integrated applications, such as sensors, and increasing management and security functionality is the correct path to take.

I hope you find our latest research valuable and that it helps you to better anticipate your future mobile workforce needs.

Jan Kaempfer
General Manager for Marketing at Panasonic Computer Product Solutions
EXECUTIVE SUMMARY
Big Data, the Internet of Things (IoT) and Sensors will be the technology trends most impacting mobile workforces over the next 12 months, say mobile technology buyers in the latest research. The independent research, carried out by Opinion Matters and commissioned by Panasonic TOUGHBOOK, questioned 250 mobile technology buyers for businesses in the UK.

When thinking about the immediate future (i.e. the next 12 months), how would you rate the importance of the following technology trends for your organisation in terms of their use by your mobile workforce?

When asked to rate the importance of technology trends for use by their mobile workforce, buyers rated Big Data the most important, closely followed by IoT and Sensor technologies, including atmosphere, temperature and biological sensors.

The main drivers for the technologies were improved business efficiency and productivity.
What do you think would be the main reasons for the mobile workforce in your organisation to have this kind of technology in the immediate future (i.e. next 12 months)?

- **INTERNET OF THINGS**
  - To improve business: Efficiency 31%, Productivity 30%, Process 28%

- **BIG DATA**
  - To improve business: Productivity 34%, Profitability / cut costs 31%, Process 30%

- **VIRTUAL REALITY**
  - To improve: The employee experience 28%, The customer experience 27%, Business efficiency 25%

- **AUGMENTED REALITY**
  - To improve: Business process 31%, Business efficiency 29%, The customer experience 27%

- **WEARABLE TECH**
  - To improve: Business efficiency 38%, Business process 27%, The employee experience 27%

- **BLOCKCHAIN**
  - To improve business: Process 33%, Efficiency 32%, Profitability / cut costs 28%

- **SENSOR TECHNOLOGY**
  - To improve business: Productivity 33%, Efficiency 27%, Process 26%

- **USE OF DRONES**
  - To improve: The employee experience 26%, Profitability / cut costs 26%, Business process 24%

- **ARTIFICIAL INTELLIGENCE / MACHINE LEARNING**
  - To improve: Business productivity 31%, Business process 30%, The customer experience 27%
Who benefits?
Unsurprisingly, the mobile device buyers thought that the IT Department would benefit most within the organisation from every technology trend. However, looking at the second department to benefit most threw up some interesting insights.

Which teams in your organisation do you think will benefit most from the following technology trends over the next 12 months?
### Business Benefits

Looking further into the future, over the next three years, buyers could clearly see the impact on their mobile workforces of Big Data to improve service offerings, improve processes and reduce costs. With IoT, they saw the mobile workforce benefits as improving processes, improving service offering and helping to improve the functionality of mobile devices.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Impact in Next 3 Years</th>
<th>Improvement</th>
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</thead>
<tbody>
<tr>
<td><strong>Internet of Things</strong></td>
<td></td>
<td>Improve processes</td>
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<td></td>
<td>Improve service or product offering</td>
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<td></td>
<td></td>
<td>Improve functionality of device</td>
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<tr>
<td><strong>Big Data</strong></td>
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<td>Improve service or product offering</td>
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<td>Improve processes</td>
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<td></td>
<td></td>
<td>Reduce costs</td>
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<tr>
<td><strong>Virtual Reality</strong></td>
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<td>No Impact in next 3 years</td>
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<td>Improve service or product offering</td>
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<td>Improve functionality of device</td>
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<tr>
<td><strong>Augmented Reality</strong></td>
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<td>No Impact in next 3 years</td>
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<td>Improve service or product offering</td>
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<td></td>
<td></td>
<td>Improve functionality of device</td>
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<tr>
<td><strong>Wearable Tech</strong></td>
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<td>Improve mobile workforce experience</td>
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<td></td>
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<td>Improve service or product offering</td>
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<td></td>
<td></td>
<td>No Impact in next 3 years</td>
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<tr>
<td><strong>Use of Drones</strong></td>
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<td>No Impact in next 3 years</td>
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<tr>
<td></td>
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<td>Improve service or product offering</td>
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<td>Improve functionality of device</td>
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<tr>
<td><strong>Sensor Tech</strong></td>
<td></td>
<td>No Impact in next 3 years</td>
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<td>Improve service or product offering</td>
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<td>Improve functionality of device</td>
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<tr>
<td><strong>Blockchain</strong></td>
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<td>No Impact in next 3 years</td>
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<td></td>
<td></td>
<td>Improve mobile workforce experience</td>
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<td>Improve processes</td>
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<td><strong>AI/Machine Learning</strong></td>
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<td>Improve service or product offering</td>
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<td>Improve functionality of device</td>
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<td></td>
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<td>Improve processes</td>
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**MOBILE PRIORITIES**

Considering how mobile devices will need to change over the next five years to take advantage of these new technologies, buyers prioritised improvements in device and data security, processing power and communications for faster data transfer.

In which of the following areas do you predict your company’s mobile devices will need to change most over the next 5 years to take advantage of technologies such as Internet of Things, Big Data, Virtual Reality, Augmented Reality, Wearable technology, Drones and Sensors?

- **Device and Data Security**: 43%
- **Communications for Faster Data Transfer**: 35%
- **Battery Power Requirements**: 31%
- **Storage Memory**: 31%
- **Connectivity of Ports and Peripherals**: 26%
- **Device Portability**: 26%
- **Screen Size**: 19%
- **Processing Power**: 19%
- **Power and Storage**: 19%

Mobile device buyers also predicted the increasing importance of foldable tablets over the next five years and the continued rise of rugged devices as critical tools for mobile workforces.

Which type of devices do you see being most suitable for your mobile workforce in the next 5 years?

- **Standard notebooks/laptops/Tablets**: 34%
- **Voice assistant computing**: 29%
- **Rugged wearables i.e computer devices that are worn**: 29%
- **Foldable tablets**: 26%
- **Rugged notebooks/laptops/Tablets**: 26%
- **Standard wearables i.e computer devices that are worn**: 22%
- **Smart glasses**: 22%
- **Voice assistant computing**: 20%
- **Any other type of standard handheld devices (but not phones)**: 19%
- **N/A, I don’t see one particular device being most suitable for our mobile workforce in the next 5 years**
- **Any other type of rugged handheld devices (but not phones)**: 14%
The adoption of smart technologies for mobile workforces already looks well underway. Many buyers said that the implementation of smart watches, wrist bands and drone use had already been completed or was imminently planned for mobile workforces.

Do you think the mobile workforce in your organisation will be using any of the following devices in the future?
BARRIERS TO ADOPTION

Cost and reliability were the biggest issues preventing organisations from adopting new technologies faster.

What do you think would be the main thing preventing your organisation from adapting to technologies such as Internet of Things, Big Data, Virtual Reality, Augmented Reality, Wearable technology, Use of drones, Sensor technology?

Panasonic Computer Product Solutions help mobile workers improve productivity with its range of TOUGHBOOK rugged notebooks, business tablets, handhelds and electronic point of sales (EPOS) systems.

As European market leaders, Panasonic had a 57% revenue share of sales of rugged and durable notebooks and tablets in 2017*. 

*VDC Research, March 2018

27% COST

19% RELIABILITY OF NEW PRODUCTS

15% THE TIME AND COST OF TRAINING TO USE NEW TECHNOLOGY

14% NOTHING WOULD PREVENT OUR COMPANY FROM ADAPTING TO TECHNOLOGIES

12% COMPATIBILITY WITH EXISTING HARDWARE / SOFTWARE / SYSTEMS

9% THE APPETITE TO EMBRACE CHANGE

4% N/A, I DON’T THINK THERE IS ONE MAIN THING THAT WOULD PREVENT OUR ORGANISATION FROM ADAPTING TO THESE TECHNOLOGIES