

Sensing the future of the Internet of Things

The Internet of Things (IoT) is transforming the everyday physical objects that surround us into an ecosystem of information that will enrich our lives. From refrigerators to parking spaces to houses, the IoT is bringing more and more things into the digital fold every day, which will likely make the IoT a multi-trillion dollar industry in the near future.

While the IoT represents the convergence of advances in miniaturization, wireless connectivity, increased data storage capacity and batteries, the IoT wouldn't be possible without sensors. Sensors detect and measure changes in position, temperature, light, etc. and they are necessary to turn billions of objects into data-generating "things" that can report on their status, and in some cases, interact with their environment.

Because sensor endpoints fundamentally enable the IoT, sensor investments are an early indicator of the IoT's progress. And, according to PwC's 6th Annual Digital IQ survey of nearly 1,500 business and technology executives, the IoT movement is underway.

Why the Internet of Things matters to consumers and businesses

The IoT can help consumers achieve goals by greatly improving their decision-making capacity via the augmented intelligence of the IoT. For businesses, the Internet of Business Things (IoBT) helps companies achieve enhanced process optimization and efficiencies by collecting and reporting on data collected from the business environment. More and more businesses are adding sensors to people, places, processes and products to gather and analyze information to make better decisions and increase transparency.

Global sensor adoption: Asia leads; North America lags

Our respondents from Asia were more likely to say their companies are investing in sensors, followed closely by Latin America. On the flipside, North American respondents were least likely to say their companies are investing in sensors and they have no plans to close the global gap. Asia (26%) and Africa (18%) expect to invest more in sensors this year. Only 8% of respondents from European companies and 7% of respondents from North American businesses said they plan to boost their investments.

*Top Performers are survey respondents whose companies are in the top quartile for revenue growth, profitability, and innovation.

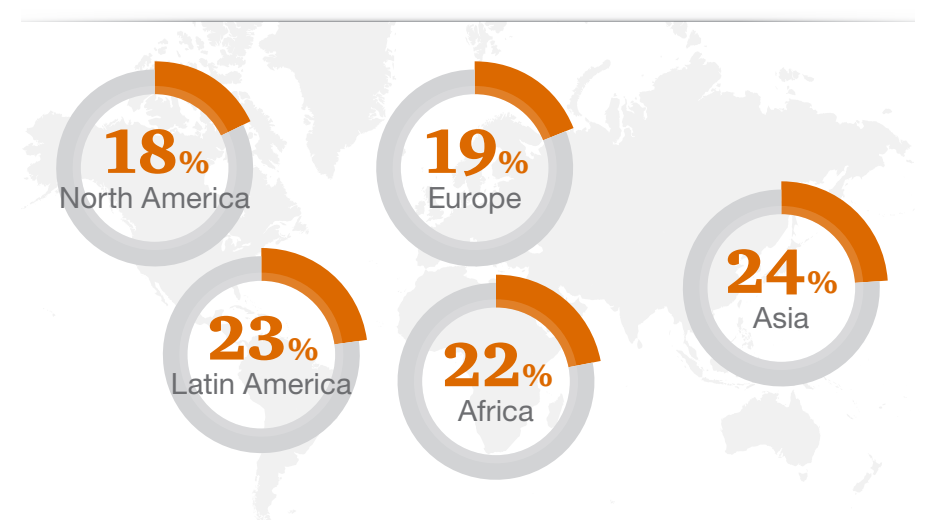
20% of companies are investing in sensors, compared to **17%** last year.

25% of Top Performers* are investing in sensors, up from **18%** last year.

54% of Top Performers said they will invest more in sensors this year.

14% of respondents said sensors would be of the highest strategic importance to their organizations in the next 3–5 years, as compared to other emerging technologies.

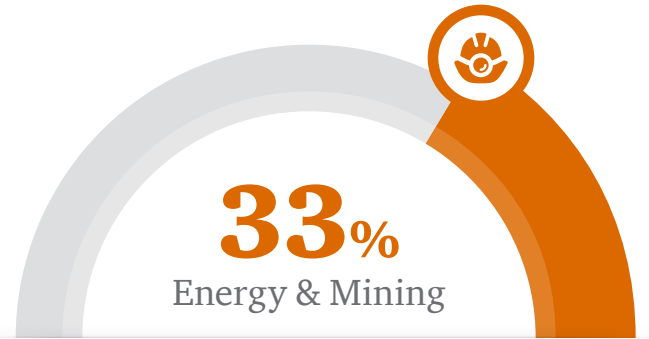
Source: PwC 6th Annual Digital IQ, 2014



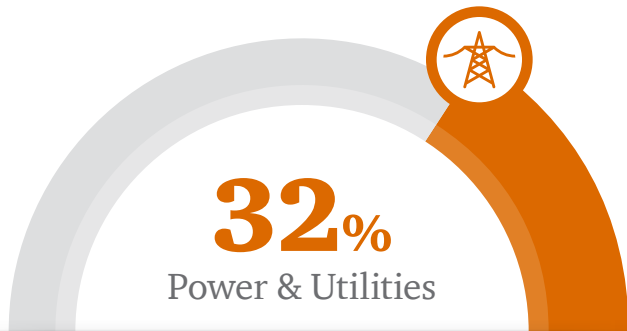
Source: PwC 6th Annual Digital IQ, 2014

Top 10 industries investing in sensors

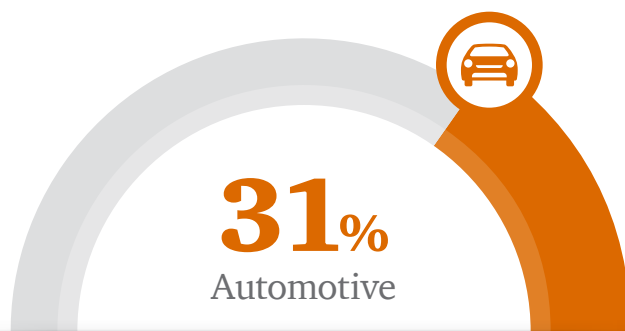
Undoubtedly, the Internet of Things is poised to disrupt industries. If it is THE next big thing—then getting in soon will be critical to success.



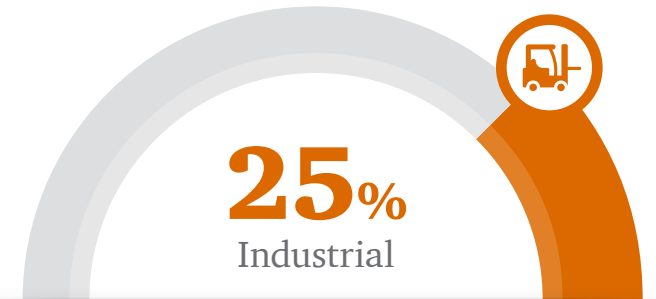
Sensors continuously monitor and detect dangerous carbon monoxide levels in mines to improve workplace safety.



In the past the power usage was measured on a yearly basis: one-way communication. Now, Internet-connected smart meters measure power usage every 15 minutes and provide feedback to the power consumer, sometimes automatically adjusting the system's parameters.



Sensors and beacons embedded in the road working together with car-based sensors are used for hands-free driving, traffic pattern optimization and accident avoidance.



A manufacturing plant distributes plant monitoring and optimization tasks across several remote, interconnected control points. Specialists once needed to maintain, service and optimize distributed plant operations are no longer required to be physically present at the plant location, providing economies of scale.



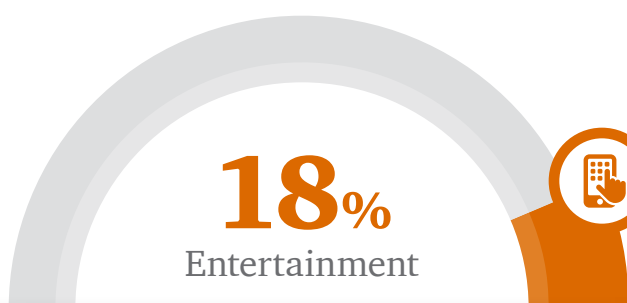
Electronic doorbells silently scan hotel rooms with infrared sensors to detect body heat, so the staff can clean when guests have left the room.



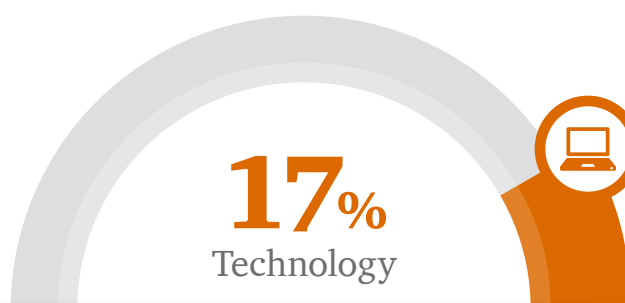
EKG sensors work together with patients' smartphones to monitor and transmit patient physical environment and vital signs to a central cloud-based system.



Product and shelf sensors collect data throughout the entire supply chain—from dock to shelf. Predictive analytics applications process this data and optimize the supply chain.



In the gaming world, companies use tracking sensors to transfer the movements of users onto the screen and into the action.



Hardware manufacturers continue to innovate by embedding sensors to measure performance and predict maintenance needs before they happen.



Telematics allows devices installed in the car to transmit data to drivers and insurers. Applications like stolen vehicle recovery, automatic crash notification, and vehicle data recording can minimize both direct and indirect costs while providing effective risk management.

Source: PwC 6th Annual Digital IQ, 2014

To have a deeper conversation about how this subject may affect your business, please contact:

Scott Bauer
Principal, Retail & Consumer Products
828 545 1306
scott.d.bauer@us.pwc.com

Frank Burkitt
Senior Executive Advisor, Strategy &
307 699 1321
frank.burkitt@strategyand.pwc.com

Chris Curran
Principal and Chief Technologist
214 754 5055
christopher.b.curran@us.pwc.com

Larry Gioia
Director, Health Industries
412 916 9960
larry.gioia@us.pwc.com

www.pwc.com/us/digitaliq

© 2014 PricewaterhouseCoopers LLP, a Delaware limited liability partnership. All rights reserved. PwC refers to the US member firm, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details. This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors.