Digital IQ *2014 10 Technology Trends for Business*

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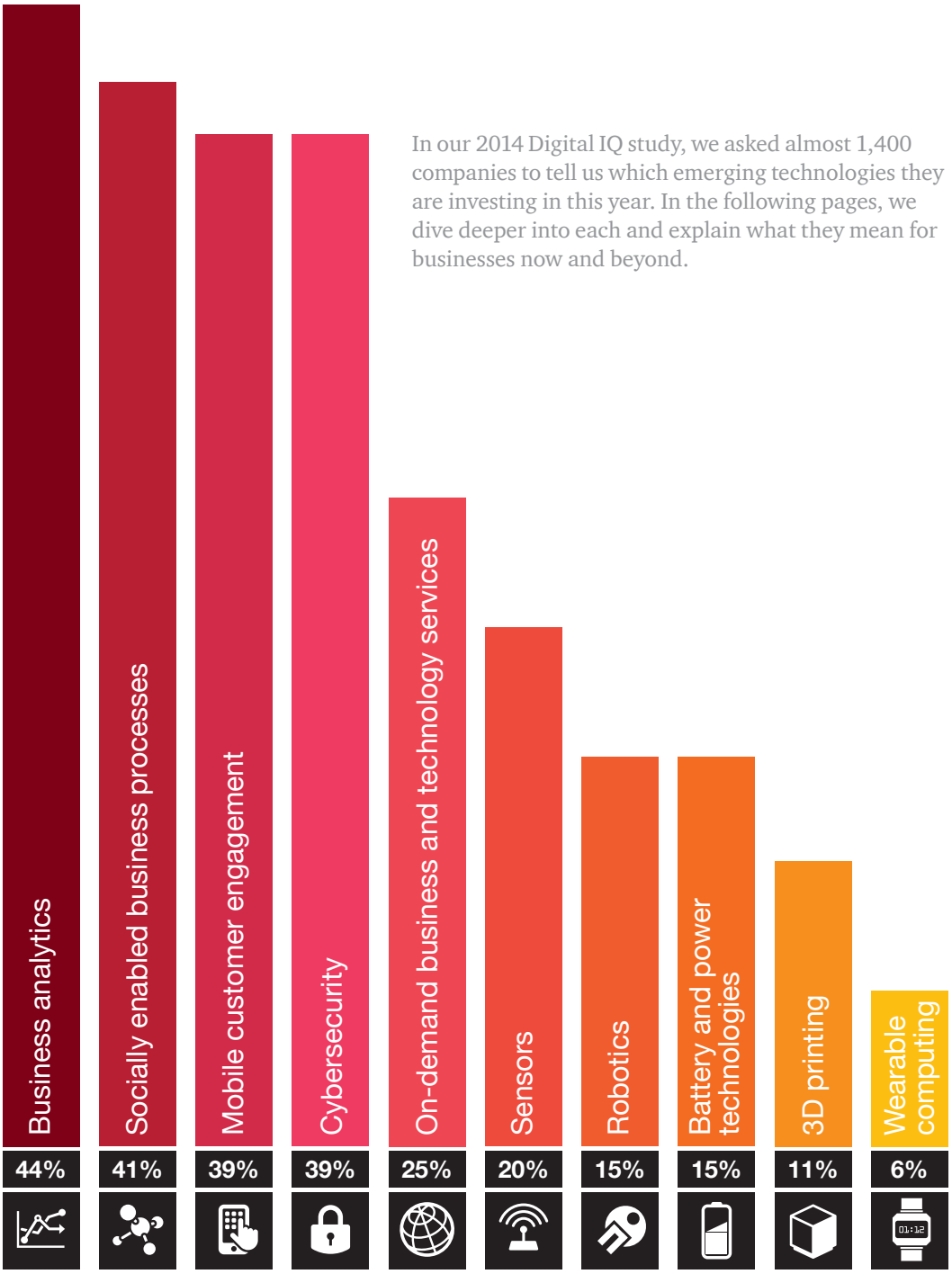

In our 2014 Digital IQ study, we asked almost 1,400 companies to tell us which emerging technologies they are investing in this year. In the following pages, we dive deeper into each and explain what they mean for businesses now and beyond.

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Source: PwC's 6th Annual Digital IQ Survey, January 2014.
Q: Which of the following technologies are you currently investing in? Please select all that apply. Sample=1,393.

Business analytics

Advances in sensors, display technologies, and devices are enabling companies to monitor people, entities, behaviors, events, and objects. Companies will use data originating from these and other technologies to apply new analytic, statistical and computational modeling techniques. New display technologies and visualization software and techniques vastly improve the ability to visualize and process information.

With business analytics, companies are realizing business advantages of increased innovation, improved productivity, enhanced customer experience and loyalty and lower costs.

As analytic technologies mature, they will work in concert with humans; leveraging what computers do best, while freeing decision makers from often mundane and complex data analysis to deliver "intelligence at the moment." This "information advantage" will speed the transition of data to insight and drive better business decisions and actions that generate superior business results.

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Socially enabled business processes

Social collaboration tools are making their debut in the HR and sourcing functions, far outside their original home in marketing, sales and service. Why? Forward-thinking organizations are designing and managing business processes to create engaged and empowered organizations—teams that seamlessly work across traditional organizational lines with an eye towards unleashing more talent, innovation and efficiency across the enterprise. Some are integrating social and community features, such as collaboration, game mechanics, discussion boards, social analytics and ideation tools directly into their business processes.

Business processes across the enterprise will deeply entangle social and community capabilities to enable a new generation of connected employees.

Enterprises that can harness and prioritize multiple collaboration platforms to increase productivity, enhance collaboration and connect with external stakeholders will reap valuable benefits from their relatively modest investments.

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Mobile customer engagement

Mobile is the center of the consumer's universe. To meet consumers in their mobile worlds, companies are providing compelling, customer-centered products and services. They are elevating and expanding their mobile strategies with investments in disruptive technologies such as sensors, biometrics, Bluetooth, analytics and social media.

In 2014, consumers will use their digital devices to monitor their health, check their bank accounts and pay their bills.

They will interact with the physical objects that surround them for information and inspiration. They will plan their next vacation down to the smallest personal detail, while they comment in social media about the latest TV show. Next year consumers will begin to use mobile to stage-manage virtually every aspect of their lives and increasingly empower their digital devices to act on their behalf.

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Cybersecurity

Companies increasingly see cybersecurity as a strategic corporate risk issue rather than a technology challenge. As such, companies are pinpointing their sensitive data or "crown jewels" and prioritizing their security investments accordingly. Companies are conducting threat assessments to understand who wants to steal or damage their sensitive data assets and why and how they plan on mounting their attacks.

Companies are finally facing the reality that they can't always block a determined hacker from infiltrating their systems.

Rather than focus solely on prevention, enterprises are using monitoring strategies and tools to rapidly identify and respond to security breaches. Companies are also gathering intelligence on their corporate ecosystems – employees, contractors, suppliers, distributors, joint venture partners and even customers.

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On-demand business and technology services

Business departments want the technologies they want when they want them.

Technology-as-a service is becoming the norm and it's easy for anyone at the company to purchase the latest technology.

CIOs are under tremendous pressure to speed the pace of technology deployments in the areas of cloud, social, mobile, Big Data and analytics. A new year will bring a new IT department that can meet the dynamic needs of the digital marketplace. CIOs will further transition away from the role of procurer and into the role of strategic counselor to the enterprise. They will develop and deploy a more flexible IT framework that customers, employees and partners can plug into to. They will shift focus from central control to a business empowering governance model. In 2014, we will also see more industry-specific business services for businesses like hospitals, retail locations, insurance companies, banks, and media companies. These services will drive the next wave of growth in cloud-based business services.

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Sensors

No longer the domain of the digerati, the Internet of Things will take off for consumers and industry in 2014. Beacons and sensors will begin to collect data and feed it to the cloud, where it will be turned into context-aware information that can be used to enhance a user's experience.

Users will experience the benefits of a true digital assistant as their mobile devices begin to proactively interact with this data and provide predictive solutions for the user.

In retail, low-cost sensors will track shopping traffic patterns in stores and motion and weight sensors will alert drivers of open parking spaces. Manufacturing companies will track everything in their supply chain to enhance and improve operations. City governments will use gunfire locators to sense when a gun is fired and notify the authorities. Today, it's just getting started, but by 2020, just about everything will be communicating with the network.

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Robotics

Recent high-profile robotic company acquisitions by internet companies will likely take several years to fully play out. In 2014, we can expect to see other companies explore how robotics can disrupt business models and shift labor/capital mix while managing societal perceptions.

Robot platforms built on open source RobotOS/ Android will emerge allowing innovators to focus on new applications rather than foundational technologies.

Outside of factory automation, expect growth in logistics, i.e. pick, pack, and ship; healthcare, i.e. remote medicine, eldercare; and services, i.e. cleaning, surveillance. In these areas, mobility, autonomy, manipulation, payload capacity, and human-robot interaction will need to be balanced based on industry application. Companies that innovate through robot platforms and have a business case that works have the opportunity to disrupt their competitive landscape and capture new markets.

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Battery and power technologies

Power surges in the battery industry are sparking from various competing—and sometimes conflicting—areas of business.

Batteries are starting to influence infrastructure and product design.

Battery technology and form factor will become a key design constraint/enabler for the "receiving" product now and in the future. Due to past battery constraints, other technologies have had to progress as a result of deficiencies in battery technology growth (i.e. the power consumption of chips and screens on mobile devices has had to advance quickly because it was easier to reduce consumption than to improve battery capacity/performance). As batteries are increasingly key cost and performance components of products, there's now a renewed effort to achieve step-function battery cost and performance improvement. As a result, the battery industry is driving aggressive operational improvements, pursuing new technology solutions and spawning new business models.

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3D printing

3D printing is on the brink of revolutionizing manufacturing. Also known as additive manufacturing, 3D printing uses digital models and special material deposition devices to build physical objects one layer at a time. Although they are nowhere near having the capabilities of a science fiction replicator, today's 3D printing machines have progressed leaps and bounds in a short time and are capable of fabricating complex components out of a variety of materials, including steel, aluminum, titanium, and different types of plastics.

Companies can tap the power of 3D printing to customize products at rapid rates, produce breakthrough products at hyper-speed, and mastermind new business models.

3D printing is quietly crossing the chasm from interesting concept to legitimate production technology.

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Wearable computing

Embedded and wearable sensors are gaining the most ground in areas such as wellness, fitness and beauty that require little or no regulatory approvals and no clinical validation. Great examples are the many consumer-oriented devices that monitor physical activity.

Now that these devices are popular among consumers, we see clinicians and payers embracing them.

An academic medical center recently used a wearable to demonstrate that activity after orthopedic surgery improves recovery. An innovative new medical practice now uses several wearables as part of the cardiovascular disease prevention programs. Insurance companies are integrating them into their wellness platforms to improve consumer health and reduce costs, and employers are now tying employee health insurance premiums to measured activity gathered from wearables. Imagine if wearable device manufacturers waited for the healthcare industry's stamp of approval before selling to consumers. They'd still be waiting to enter the market.

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About PwC's 2014 10 Technology Trends for Business

PwC's 2014 10 Technology Trends for Business were selected because they were the highest ranked topics according to our recently fielded 6th Annual Digital IQ Survey, and identified as the top areas where business leaders will invest in 2014. We anticipate these trends will be in the forefront of business and IT leaders' minds as we move through the year.

For a full report on our 6th Annual Digital IQ Survey findings and technology trends, visit www.pwc.com/us/digitaliq.

To have a deeper conversation about how these trends may affect your business, please contact any of the PwC leaders listed or contact:

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