

TOP 10 TECHNOLOGY TRENDS
From gamification to computer security, businesses are spoiled by choice of innovations **B10****TECHNOLOGY**

Top 10 trends in 2013

From clouds and gamification to computer security, businesses today are spoiled by choice on how to harness the latest innovations to improve their bottom line. By **Vilaiporn Taweelappontong**



Technology has always shaped society and commerce in unpredictable ways, changing customer behaviour, spawning new enterprises and wiping out existing businesses that are unable to keep pace. Technology has the power to change our lives. It can increase the quality of

human experience, create new environments to realise our dreams and help us to get beyond problems that trouble our world.

Many people are now convinced that we will all benefit from the development of information technologies. It is hard to underestimate the added value of

these technologies. Companies across the world are increasingly adopting — and creating greater business value — by harnessing science and technology to foster business growth, drive innovation and create real competitive advantage . . . and why won't you?

Organisations that do not make these

shifts will be left behind as they struggle to effectively exploit technology and manage an inefficient IT function and an underperforming corporate centre. It is vital that you understand and use advanced technologies to help increase business efficiency in some way or another. Therefore, CIOs and other corporate leaders need to embrace the emerging and disruptive technologies to stay ahead of the game and determine the solutions that best fit the organisation's needs.

The 2013 PwC report *Top 10 Technology Trends for Business* highlights the 10 most significant technologies that have the potential to be key drivers in an organisation's business agenda and will affect companies for 2013. They make up a diverse and complex set of technologies that are reshaping strategies, business models and enterprise investments this year:

1. Pervasive Computing: The ability to digitally engage and interact (via your mobile devices) with enabled objects around you. It's much more than the "Internet of Things". Pervasive computing will require that we change how we find the needle in the haystack. Instead of users being forced to ferret out relevant mobile apps from the hundreds of thousands available, mobile apps will automatically surface based on situations. In other words, the app finds the user rather than the user finding the app.

2. Cyber Security: Security continues to be a pressing issue, as technology enabled processes increasingly underpin and fuel the global economy. Our nations, economies, corporations and citizens around the world are connected, and consequently, are easily exploited by cyber capability. We expect to see the following: more large scale attacks, increased focus on cyber security at the highest levels of organisations.

3. Big Data Mining and Analysis: Big Data is more than managing dizzying amounts of data faster and cheaper. Big Data is about making better business decisions. Maximising Big Data's full potential requires using advanced analytics to cull and leverage data from inside and outside the organisation. Big Data will grow more pervasive as pilot projects prove Big Data's value as a tool for transformation. Companies will foster data-driven decision-making cultures, including seeking more data scientists, to harvest and harness Big Data.



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4. The Private Cloud: Due to security and regulatory concerns, larger enterprises have been primarily operating in a trial mode of private/hybrid clouds. That will change in 2013. Consumers of IT are demanding greater value from IT services. Furthermore, enterprises are requiring their IT organisations to deliver high quality services that enable their business to grow on demand, to decrease their time-to-market and to utilise the most cost-effective technologies.

Moreover, private cloud technologies are readily available that address the security and regulatory concerns as well as licensing, management and orchestration. Organisations that do not pursue private/hybrid cloud in the near-term will run the risk of ballooning infrastructure costs and missed business expectations.

5. Enterprise Social Networking: Becoming a core tool for the new social workforce. The key insight for organisations succeeding in building value from this technology is social business processes redesign. When organisations rethink processes, enormous co-creative value is unlocked. In 2013, we will reach a tipping point in the global workforce where the majority of workers are familiar and comfortable with social networking, and for most businesses, there is a growing expectation that these

tools will be used in a business context.

Furthermore, there are now proven models for driving adoption and achieving value through the deployment of enterprise social networks. Companies that succeed in becoming social organisations will achieve tremendous advantages over their competitors.

6. Digital Delivery of Products and Services: Customers are driving companies of all shapes and sizes to develop new, technology-based ways of delivering value. Digital delivery of products and services can open tremendous new pathways for growth, but companies must shift their underlying business operations to support this new business model. In 2013, smart executives will evaluate digital transformation's impact on business strategy, customer engagement channels, operating models, organisation transformation, systems, and tax and accounting.

7. Public Cloud Infrastructure: Cloud adoption will continue to mature with hybrid cloud architecture becoming the mainstay as companies of all sizes leverage public cloud services. The desire to reduce the management complexity of hybrid cloud architectures will lead to demand for service intelligence capabilities in the short-term, cloud platforms in the mid-term and cloud interoperability standards in the long-term.

In addition, some highly visible public cloud service lapses in 2012 will likely lead to cloud adopters beefing up risk mitigation processes and selecting vendors with more enterprise-grade security, service levels and indemnification clauses.

8. Data Visualisation: Leading-edge companies will explore dynamic virtualisation techniques (eg, virtual reality, augmented reality) and advanced display devices (eg, arrayed 4K screens or "walls", 3D goggles, haptics and gesture-based interfaces) to navigate through multiple dimensions of data. Advanced visualisation will provide companies with a huge "dashboard" to layer and manipulate multiple sources of information on gigantic floor-to-ceiling HD monitors to analyse past events and explore future scenarios (eg, economic, competitive, technology or customer adoption scenarios).

9. Simulation and Scenario Modelling: Organisations are increasingly focusing on simulation models that enable executives to envision the potential impact of their choices before making investments. Through simulations, organisations can move from "dashboards" that capture insights from historical data to "cockpits" that empower organisations to anticipate the future under various scenarios including economic, competitive or customer adoption.

Recent research indicates that simulation modelling was rated as the second most important analytical technique (behind data visualisation) that organisations are implementing. The concept of simulation is being used by management teams to evaluate scenarios

as a group and make better collective decisions faster.

10. Gamification: With its combination of game mechanics, social networking, interactive media and behavioural analytics, gamification can transform a business. Smart companies will use gamification to deepen connections with customers and enhance employee experiences. Gaming mechanics will become so broadly adopted and integrated that we'll stop calling it gamification.

The measurement capabilities of gamification platforms will mature and provide real-time metrics and behavioural data that will enable companies to respond more nimbly in virtually every aspect of their businesses. Finally, leading edge companies will extend the gaming experience offline and onto mobile devices, in multiple locales and at every touchpoint.

Companies that can effectively adopt and leverage emerging technologies can create innovative new products services and even brands and become more efficient in managing costs and processes. These companies realise tangible value that increases competitive advantage and secures position as leaders in the markets. However, companies should be aware of the risks and mistakes encountered when evaluating and adopting a new technology.

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