UNITED NATIONS
UNIVERSITY
CRIS

Institute on Comparative Regional Integration Studies

GR:EEN

Global Re-ordering:
Evolution through European Networks

Future Trends Series - GR:EEN Project

Title of the report

Global Technology Outlook 2013

Area

Science and Technology

Reporter

IBM

Type of the Reporter

Private Organisation

Periodically updated?

Yes

First issued year

1982

Latest update

2013

Official website

http://www.research.ibm.com/

Language available

English

Short summary

The Global Technology Outlook (GTO) report is a comprehensive analysis that identifies and evaluates significant, disruptive technology trends that will lead to industry-changing products and services over a three- to ten-year period. IBM Research considers the societal and business applications in which these technologies could be used – and the impact that they will have on IBM and the world.

This wave is characterized by the confluence of social, mobile and cloud technologies, the rise of Big Data and the new kinds of analytics needed to create value in this environment. The GTO 2013 report focuses on this confluence, which is transforming the way companies deliver millions of systems, software, and services to billions of users.

Key trends

While each technology driver is important when considered individually, this confluence is fueling four "mega-trends" with significant implications for enterprises:

• **Growing scale / Lower barrier of entry**: A massive expansion in the number of smart devices, sensors, transactions and users of digital technologies is creating huge amounts of structured and unstructured data — while the rise of easy-to-use and affordable programming interfaces is simultaneously lowering the barrier of entry for companies to create applications and services that derive value from this data.

• **Increasing complexity / Yet more consumable**: While the volume, variety, velocity, and veracity of data is contributing to the increasing complexity of data management and workloads — creating a greater need for advanced analytics to discover insights — mobile devices have made technology more consumable, creating user demand for interactive tools for visual analytics.

• **Fast pace**: Change is coming faster than ever — disruptive models for the development and consumption of technology are emerging to penetrate global enterprise ecosystems, resulting in rapid innovation and decreased time-to-value. Open online courses are experiencing exponential growth making education and training more accessible.

• **Contextual overload**: The proliferation of sensors and devices and the explosive growth in structured and unstructured data are causing information and contextual overload. With the increasing affordability and sophistication of smart devices, new opportunities exist to provide contextually aware and personalized services based on user views, desires, preferences and location, delivered just-in-time.

In addition to these 'mega-trends', the report identifies several other:

• **Mobile first**: mobile devices are emerging as the new primary design point for end-user access to information technology. The accelerating integration of cloud, social media and analytics is requiring companies to re-think how value is created within a larger ecosystem which emphasizes speed.

• **Multimedia and visual analytics**: Improvements in multimedia analytics are allowing computers to make sense of images and videos, and in turn, being able to extract information and insights from those sources. Improvements in visual analytics are allowing humans to use visual interfaces to consume and make sense of complex data and analytics better and faster.

• **Contextual enterprise**: The smart devices we carry today are at the center of the social, mobile and cloud confluence. They carry our personal context in form of our interests, calendars, contacts, history, preferences and location. As natural aggregators of this data, such devices could well be used to deliver information to create context applied to broader applications. Achieving the full promise of the contextual enterprise will require innovation to integrate gathering, connecting, reasoning and adapting.

• **Personalized education**: The education industry is at the brink of an IT-enabled transformation. This transformation is driven by a demand for quality education that outstrips supply especially in the growth markets, misalignment between education and employment needs, and impatience with inefficiencies of education systems. In order to achieve their often-shared goals, particularly to improve graduation and employment rates, the various stakeholders need to come together to create an open platform for sharing this data and insights from the analytics.

Suggestions

/

Methodology

Research from secondary sources and modelling

Reference to other trends reports? If yes, which reports?

/