Untangling the Web of the Future

Natarajan Chandrasekaran, CEO and Managing Director at Tata Consultancy Services (TCS), considers the challenges inhibiting the internet, from cyber crime to the surge of data traffic

This year, a major threshold will be surpassed with over 50 per cent of the world's population expected to connect through the internet.

It has been almost 50 years since the internet was conceived and 30 years since the world wide web came into existence. The internet has evolved over the last three decades, leading us to a world where virtually everything is connected.

The advancement of the internet has become the cornerstone for the evolution and growth of the global economy. If we isolate the internet economy, it represents an economic value of $4 (£2.7) trillion, making it one of top five global economies along with the US, China, Japan and India.

The internet has already become a public utility like electricity, gas or water and is considered a vital service on which entire societies, industries and economies are based. One-fifth of the world's GDP growth can be solely attributed to it, and that figure is rising.

Speeding Up

Over the past decade, internet-driven innovation has been about people, spurred on by advancements in social media, big data and mobile devices. This is changing the way industries and businesses operate, particularly within the B2C context.

In the next decade, three principal elements will drive the continuing evolution of the internet: The Internet of Things (IoT), evolution

in Artificial Intelligence (AI) and the deployment of next generation of telecom infrastructure (5G).

The IoT revolution in particular is expected to have a significant impact on manufacturing, energy, transport, agriculture and other core industry sectors. Connecting products, devices and processes through networked sensors will present an enormous opportunity to innovate.

There are now almost five billion connected devices in the world, an increase of 30 per cent from 2015, and this figure has the potential to cross 25 billion by 2020. It promises to fundamentally transform and disrupt a wide range of traditional industries. TCS' recent trends survey of more than 800 global senior executives, ▶

indicated that 80 per cent of companies across all major industries have started planning or executing IoT initiatives and are making large investments.

This will drive a faster and more pronounced evolution of the internet than ever before. I recently hosted one Swedish politician, Carl Bildt, at the TCS Summit in Venice with 300 of Europe's top business leaders to discuss how digital was becoming the new default. He made a powerful statement which sums it up well: "Very soon the Internet of Things will become the infrastructure on which all other infrastructures are based."

Barriers Abound

While the internet is poised towards becoming a universal public good, we cannot take it for granted. There are several challenges that may yet inhibit its further development.

Unlike various other public goods, what makes the internet distinct is that while being extremely global in nature, it is regulated and protected at a fragmented national level. There is a need to evolve internet governance standards, rights and dispute resolution institutions at a multilateral level – akin to a United Nations or a World Trade Organisation.

Cyber security remains a potent risk that is chipping away at the trust of networks and the global economy. Over $400 (£276) billion of economic value is lost annually to cyber crime and such breeches must be prevented through stronger systems and safeguards.

Like physical roadways, the internet is being choked by an increasing surge of data traffic. We are at such a steep point

> ❝ *There are five billion connected devices in the world* ❞

of the exponential curve that 90 per cent of the world's data across history has been generated in just the last few months. Much of this is flowing through antiquated networks and there is a need to step up next generation infrastructure, including 5G telecom networks and a more assertive move to IPv6.

With the proliferation of data, there is growing concern for data protection and privacy, which needs a balanced approach. Under, and over, regulation – both of which stifle innovation – should be equally unwelcome.

The Need for Public-Private Dialogue

The internet is a utility for all – for people, for businesses and for government. Hence it needs to be managed and evolved through a sustained public-private dialogue.

I have the privilege to serve as the 2015-16 Chair person for the IT Industry Governor's steering committee at the World Economic Forum (WEF). The group of CEOs from the IT industries who constitute this body have had multiple initial private-public dialogues involving the European Commission, the US government and public leaders across the developed and emerging world. This has set the agenda.

The focus in 2016 should be to take this forward by evolving regional and national digital strategies that move towards a more homogenous global governance of the internet. There also needs to be a renewed focus on attracting business investment for building supporting digital infrastructure, lifting barriers for cross-border business and partnerships to bridge the growing digital skills gap. The private sector is a much needed partner on these fronts.

For example, TCS recently forged an agreement with the British Council to have 1,000 university graduates from the UK spend one-year internships in India from 2016 to 2020 – strengthening their digital skills and bringing that much needed experience back to the UK's labour force. ∎

This article originally featured in New Europe. Find out more here

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