

The Internet Economy

In a hyperconnected world, no sector of the economy will be untouched by technology and only those who adapt quickly to technological change will be successful.



Overview

The Internet economy will evolve substantially over the next ten years, fueled by innovations in technology and business models. Advances such as the Internet of Things (IoT), Artificial Intelligence (AI), and blockchain could bring about an industrial and technological “renaissance”. Our community believes that the Internet will promote drastic shifts across all sectors of the future Internet economy. In a hyperconnected economy, no sector of the economy will be untouched by technology — hospitals, transportation companies, manufacturing firms — and only those who adapt quickly to technological change will be successful.

This rapid change will disrupt businesses and increase pressure on societies, particularly on jobs and economic opportunity. Business models and the nature of work will be profoundly changed. It is far from clear whether this technology-driven disruption will favour existing Internet platforms or bring greater competition and entrepreneurship. Either way, governments and society at large will need to quickly adapt to the new economy and its policy challenges.

We are on the verge of a technological paradigm shift as the digital and physical worlds converge. This technology “renaissance” will disrupt existing economic structures and business models in ways that society is only beginning to understand.

All parts of society — from local communities to education systems, healthcare and public services — will have to adapt to the pace of change.

Governments, and particularly policy-makers, will be ill equipped to respond to the economic and social pressures of IoT and AI.

Market consolidation by Internet service and access providers could spur the growth of so-called “walled gardens” — closed platforms with proprietary ecosystems — leading to a loss of choice, constraints on innovation and Internet fragmentation.

Those economies and new market leaders who successfully anticipate this paradigm shift will drive innovation and entrepreneurship.



The Impact of New Technologies on Industry and the Economy

The Internet economy will increase efficiencies, productivity and create new opportunities not yet imagined. The pace of technological change will dramatically accelerate as IoT, AI, and blockchain technologies are fully deployed. They will reshape economies in ways stakeholders, and particularly governments, may be ill-equipped to keep up with. And as technology drives automation, traditional jobs and the local economies that rely on them will be at risk. The future Internet economy will depend on new approaches to skills and education.

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I think the government knows how important IoT is for the entire economy in the coming years. Therefore, their response will be based on investing and deploying IoT and artificial intelligence, especially in building smart cities and industry.

Internet Society Member, Middle East

New technologies and services, including currencies and payment models, will continue to challenge existing institutions and industries: many companies will be pushed into adopting new technologies just to stay competitive with new entrants. We will also see more mergers and acquisitions as bricks and mortar companies seek to integrate technology companies, and vice versa. These forces could radically reshape industries and business practices, impacting every economic sector. Governments may need to increase spending on training programs to help workers impacted by technological displacement.¹

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Many Internet trends are expanding into the social environment, for example Airbnb but also smaller firms that, for example, cook food at home for customers or that invite customers home. Such trends will clash with established business models, but are needed to give people more flexibility and to allow new models to evolve.

Private Sector, Europe

¹ <https://www.technologyreview.com/s/603465/the-relentless-pace-of-automation/>



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Every industry leader in every economic sector is at risk of being disrupted. The economy changes far faster than the rules governing it. The system we have in place to regulate business is stuck on twentieth-century notions of how the economy works — some of which no longer make sense.

Private Sector, Europe

Traditional manufacturing sectors that were once relatively insulated must evolve to succeed in an increasingly connected Internet economy. As devices and appliances are built to be network ready, the line between manufacturer and tech company will blur. Companies will need to adopt a technology mindset as they move from replacing parts to updating software. The growth of IoT will effectively make *all* companies technology companies. This shift to greater dependency on technology will be accompanied by new security concerns. As one survey respondent in North America noted, “losing control of your data is catastrophic today. Tomorrow, it could mean the death of your business”.

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Business is trying to protect against disruptions to their business models – for example, in the tussle between Google’s automated cars and the automobile industry. For one, it’s just another application of sensor technology, for the other, it’s a change in mindset.

Academia, Asia-Pacific

Digital currencies could also transform the global financial system. For example, digital currencies can support financial inclusion because they allow people to transfer funds without an intermediary; they also provide alternatives for those in countries experiencing currency volatility. The future of digital currencies will be determined by the next generation’s willingness to embrace the technology, something our community remains uncertain of.

Whole societies are ill-prepared for the rapid pace of technological change. This risk may be more acutely felt where technology drastically outpaces the ability of some countries to keep up. In terms of digital readiness, the current gap between the top seven countries and those that follow is already wide. Understanding and managing the implications of new technologies, and the economic and societal forces that they will unleash, will be critical to economic development and competitiveness.

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Governments may face a dilemma due to the fact that AI and IoT will reduce employment opportunities in certain industries. On the other hand, they will have no choice but to move with the world trends... I can imagine having robots deployed underground to mine our copper and manage underground infrastructure.

Internet Society member, Africa

Related to: [Artificial Intelligence; The Internet & the Physical World](#)



Market Consolidation, Walled Gardens and Policy Responses

In this future technological “renaissance”, will today’s most widely-used online services and platforms deepen their market position, or face competition and possible displacement by new players? Could these Internet companies face new competition from traditional industries as they go online in a world of IoT? Our community, particularly among those from the private sector, is generally optimistic about a more competitive environment. However, if the Internet platforms of today consolidate their power — becoming dominant across infrastructure, services and applications — user choice and control over their online experience, as well as the availability and diversity of information and content, could be constrained.

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Scalability is such an important factor in the Internet economy. When search companies reach such a level of scalability, it is difficult for others to compete with them. This issue will be a global issue.

Government, Asia-Pacific

Without thriving competition, closed platforms and proprietary ecosystems, or “walled gardens”, may proliferate. Customers may find it difficult to move from one provider or platform to another. This will result in the loss of choice and constraints on innovation and lead to Internet fragmentation.

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There is a trend towards an ecosystem of users and developers, in which you can have the big winners or something similar to walled gardens. But there will always be some disruption that fragments this garden and creates a new paradigm.

Private Sector, Latin America & Caribbean

“Walled gardens” could also arise as a reaction to political concerns such as economic isolationism and national security, hindering the development of the global economy. Among our community respondents from Africa and Asia reported a significant trend toward greater use of the global, public internet whereas respondents from Europe and North America reported significant trend toward greater use of closed, access-limited, or private IP networks.

How governments should respond, and whether their existing policy tools are adequate, will also be called into question. One survey respondent from the Middle East suggested that, “...as governments begin to identify the potential of the Internet, there will be increased regulation for social and economic reasons”. This said, the economy will change far faster than the rules governing it. As one private sector representative from Europe noted, “*The system we have in place to regulate business is stuck in the 20th century notion of how the economy works*”. Legacy policy approaches will become increasingly counterproductive in the hyperconnected world of tomorrow. As technologies such as [AI](#), [IoT](#) and blockchain roll out, there will be considerable growing pains as policy frameworks struggle to keep up.

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Other trends concern the nature of governments to regulate that which they cannot understand. There is increasing pressure for governments who see free speech and permissionless innovation as a threat to crack down on political and economic dissidents alike.

Private Sector, North America

Related to: [The Role of Government: The Internet & the Physical World](#); [Networks, Standards & Interoperability](#)



The Future of Innovation and Entrepreneurship

A small number of major companies may further concentrate their power by absorbing potential threats or new opportunities. The reach and resources of Internet platforms mean that startups will be acquired in their infancy, before they can disrupt the bigger players. Will the idea of permissionless innovation and the notion that anyone can start the new “Google” still be realistic?

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The question is if smaller entrepreneurs are going to be able to “compete” or get caught up in an uncertain environment of investment and competition from big conglomerates.

Roundtable with Chapter Members in Africa

This said, innovation and new services on the Internet often develop and move faster than anyone can predict. Many big players and favourites of the past are now mere footnotes in the history of the Internet. Economic growth and business opportunity will increasingly depend on a dynamic and innovative Internet, which, in turn, will depend on open interoperable standards and permissionless innovation. This demand for continuous innovation by industry, users and even government may mean that even today’s large Internet platforms will face fierce competition from emerging players, including those outside the traditional ICT sector.





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We can no longer credibly argue that someone can create something new, start a new service in a lab and individually change the future. This isn't necessarily bad, but it does have implications for policy, technology, industry. This really just reflects a maturation of an industry. We are moving/have moved from individual entrepreneurs to partnerships and alliances that drive innovation.

Government, North America

A new generation of entrepreneurs coming online from emerging countries has the opportunity to use technology to solve local problems, reach global markets and drive innovation. As more people benefit from coming online in the next five to ten years, the opportunities and funding for entrepreneurs and startups will grow locally

and globally. Startups will be able to scale more quickly, accelerating past the traditional path of company growth. And as Internet growth shifts from the historically strong digital economies in North America and Europe to emerging markets in Asia, Latin America and Africa, new innovation leaders and technology hubs will emerge. These new entrepreneurs should play a pivotal role in shaping the future of the Internet economy.

European respondents believe the greatest sources of Internet innovation and new Internet companies in the future will be today's highly-developed economic regions. This is in contrast to respondents in Africa and Asia who believe that future innovation would come more from emerging or developing economic regions.²

Related to: [Digital Divides; Networks, Standards & Interoperability](#)

² Future of the Internet Survey 2 - Question 4: "Which areas of the world are the greatest sources of Internet innovation and new Internet companies?"