

Navigating The Fourth Industrial Revolution: Is All Change Good?

A REPORT BY THE ECONOMIST INTELLIGENCE UNIT,
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Written by

The
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Forward

In almost every aspect of society, the Fourth Industrial Revolution is changing how we live, work, and communicate. It's reshaping government, education, healthcare, and commerce.

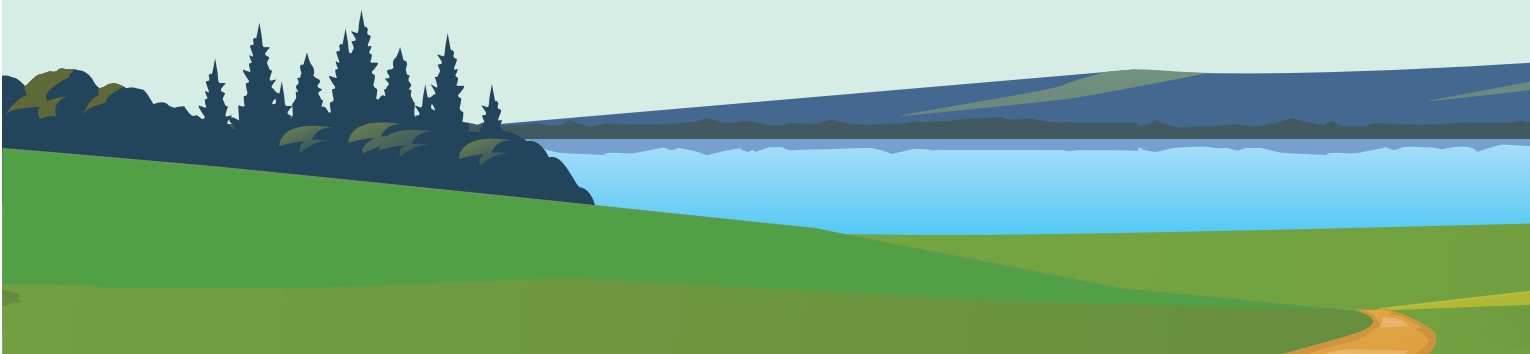
In the future, it can also change the things we value and the way we value them. It can change our relationships, our opportunities, and our identities as it changes the physical and virtual worlds we inhabit.

New technologies can be powerful agents for good. However, while the Fourth Industrial Revolution has the power to change the world positively, we have to be aware that the technologies can have negative results if we don't think about how they can change us.

Education and access to information can improve the lives of billions of people around the world – no matter the social or economic status – through increasing access to powerful computing devices and networks, digital services, and mobile devices. Innovations can create a true global village, bringing billions more people into the global economy. They can bring access to products and services to entirely new markets. They can give people opportunities to learn and earn in new ways, and they can give people new identities as they see potential for themselves that wasn't previously available.

In turn, these technologies can create incentives that make it harder to change that underlying value. Artificial intelligence, robotics, bioengineering, programming tools, and other technologies can all be used to create and deploy weapons. Social media can erase borders and bring people together, but it also can intensify the social divide – giving a voice to cyber-bullying, hate speech, and spreading false stories.

This report digs into the one of the greatest challenges of our time: *When it comes to technology in the Fourth Industrial Revolution, is all change good?*



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At Salesforce, we understand that we're in the midst of the Fourth Industrial Revolution – bringing an incredible wave of innovation and technology that is radically transforming our economies, our societies and our daily lives. Behind all the amazing technologies are connected customers, who are demanding smarter, faster, always-on experiences. It will be the Trailblazers – customers, innovators, technology disruptors, and global shapers – who bridge the divide between these connected customers and the businesses they love to drive customer success.

This report gathers the opinions of Trailblazers across Australia to highlight innovations, disruptions, and to discuss the future of society in the Fourth Industrial Revolution.



The digital transformation

“For the first time in my life, progress is not restricted by the ability of technology, but by the extent to which we harness available capabilities,” says Andy McFarlane, marketing director of Telstra Enterprise, citing the proliferation of data collecting devices and massive scalability of computing systems and software.

The fourth industrial revolution refers to improved automation, artificial intelligence (AI) and continued technological improvements, among other areas, and it will have an immediate impact on workers, businesses and society, according to the Australian government.¹

Countries, industries and cities naturally differ in their digital transformation journey, as illustrated by The Economist Intelligence Unit’s series on a connected future, commissioned by Telstra.²

The mining industry, for example, is particularly relevant in an Australian context as the country’s external trade balance is closely tied to commodity prices.³ Iron ore, coal and LNG combined accounted for more than half of total exports in 2017. “Digitisation can reduce the time to get the asset out of the ground with the lowest possible risk for humans and create greater value,” explains Mr McFarlane, to illustrate the opportunities.



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- Andy McFarlane, marketing director of Telstra Enterprise



Beyond mining

“As a leader, you need to be aware of what is coming in terms of technology,” says Trent Innes, managing director of Xero Australia, a ten-year old cloud-based accounting company that already has 583,000 customers in Australia alone and 1.4m across 180 countries. Four years ago, he had 40 staff in Australia. Now it has grown to over 360. “The industry is going through rapid change,” says Mr Innes, citing AI, machine learning and big data, which are all relevant to the accounting industry today. Such digital transformation of the industry is enabled by rising adoption rates.

The EIU forecasts that Australia will have an Internet penetration rate of 94 (per 100 people) in 2018, and 34 broadband subscriptions (per 100 people).⁴



“The inequality associated with [the fourth industrial revolution] is the greatest societal challenge moving forward.”

– Klaus Schwab, founder and executive chairman of the World Economic Forum



“As a leader you never want to have a ‘Kodak moment,’” says Mr Innes, referring to the infamous instance in which the dominant camera-maker didn’t adapt to trends in digital technology adoption. “But it can happen so much quicker these days”. As a leader you have to make sure that you innovate before you get disrupted and take advantage of the latest technology trends, he advises. “Accounting is not new but it is different today because cloud computing changed how we deliver services to small businesses at scale,” says Mr Innes.

Jack Ma, the executive chairman of Alibaba, the Chinese e-commerce giant, has labelled data as the new “natural resource.”⁵ Mr McFarlane says that it is not only about the proliferation of data but rather what you do with it. “It enables better decisions to be made more quickly,” he says. “Business and society will be different because of the proliferation and analytics of data, which will enable a different kind of engagement for our customers. This really excites us.”



A future ready workforce?

There are also concerns about the transition to the fourth industrial revolution. Klaus Schwab, founder and executive chairman of the World Economic Forum, has said that the inequality associated with this concept is the greatest societal challenge moving forward.⁶ The rise of advanced industrial robots and their role in the development of smart factories has brought into question their impact on employment. For example, Siemens, a German engineering firm, has created a smart factory in which 1,000 manufacturing units can communicate with each other through a network to complete order placements by themselves.⁷

However, views are split on this point, as some argue that it will lead to job losses while others contend that robots are either supplementary or that workers will gain the necessary skills to move into value-added positions. “Job losses will happen in some part due to automation,” says Mr McFarlane. “But there will be many new opportunities out there,” he says, citing a need for different skills, such as a greater knowledge of software, data, databases and applications. IBM, for example, predicts that the demand for data scientists will increase by 28% by 2020.⁸



“ As a leader there is a big responsibility to take people on this journey and provide them with the right skills and life-long learning, fundamentally, the ability to change will be the biggest challenge, as most people don't like change. ”

- Trent Innes, managing director of Xero Australia



Fast forward

New innovations come around all the time. But the fourth industrial revolution offers an opportunity to do it at scale and add real customer value, says Mr McFarlane. Telstra aims to help their clients thrive in a connected world. That might mean using technology to improve health and safety in industries such as mining or more effectively tracking the shipping of goods to new markets using technologies such as RFID tracking. “Our opportunity is to partner with companies and governments to see how we can curate a mix of technologies, deliver expertise and ultimately inspire powerful solutions using new technologies,” says Mr McFarlane.

The emergence of technologies and how to leverage them to collect, analyse, and use data is quickly becoming crucial for companies to seize on the benefits of the fourth industrial revolution. “If you look at the waves of technologies that are coming quicker and faster than ever, the fourth industrial revolution is what brings them all together,” says Mr Innes. “You’ve got to have a mindset that you will disrupt yourself.”

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– Trent Innes, managing director of Xero Australia

1 <https://industry.gov.au/industry/Industry-4-0/Pages/default.aspx>

2 <http://connectedfuture.economist.com/>

3 EIU Australia Country Report March 2018

4 EIU Industry Report: Telecommunications 1st Quarter 2018


5 <http://fortune.com/2016/10/13/alibaba-jack-ma-company-future-retail-transform/>

6 <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>

7 <https://www.wsj.com/articles/germany-bets-on-smart-factories-to-keep-its-manufacturing-edge-1414355745>

8 <https://www.forbes.com/sites/louiscolombus/2017/05/13/ibm-predicts-demand-for-data-scientists-will-soar-28-by-2020/>

Key takeaways



The environment for digital transformation varies greatly between industries.

Innovative enterprises increasingly apply emerging technologies to collect, analyse, and use data to create new services.

Organisational leadership in the fourth industrial revolution rises in importance as awareness of technologies and encouragement of skills development will be central to avoid potential disruption.



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