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The end of work is closer than we think.

Subsequent industrial revolutions have resulted in radical social and economic changes. Today the term "disruption" is ubiquitous, and the consequences of the changes continue under the "digital revolution" banner.

We are now on the cusp of another workplace revolution - one that will inevitably lead to seismic changes in humanity's social compacts and economic flows. These changes are likely to be profound, impacting how leaders lead and we work.

Rory Gregg leads the Leadership, Talent & Culture practice for Grant Thornton Australia

The fourth industrial revolution is here

Each successive industrial revolution has forced changes to the way we lead, and how people work. Rapid shifts in technology suddenly complicate a once binary and linear world. Leaders who adapt and apply new ideas to old problems thrive, while those who are complacent face decline.

In 2016, the situation in which Australians are living bears the hallmarks of three earlier phases of the industrial revolution: rapid technological change, dramatic shifts in wealth, and disruptions to the way we work and lead. The first - or Agrarian Revolution (1760-1850) saw steam power replacing muscle power. This period saw significant growth in wealth across the industrialised economies, a trend that continued through the Second Industrial Revolution (1850-1910). This second phase exploited technologies such as electricity and the internal combustion engine. Without question, the first two industrial revolutions gave rise to inequities in wealth distribution across the globe, and the huge wealth gap between the "developed" world and "developing" countries.

Similarly, the rapid digitisation and computerisation of the third phase, or "digital revolution", has also resulted in drastic shifts in wealth. Information and communications are key

factors of production in the third industrial revolution. It is characterised by the dissemination of information through the use of digital technology, personal computing and the internet. As a consequence, revenue generated per employee is now higher than it was a quarter of a century ago. Silicon Valley in the US is the epicentre for investment in firms based on the "digital revolution" concepts, while Detroit in the US epitomises the sophisticated industrial complexes developed in the second industrial revolution.

In 2014, Silicon Valley firms generated roughly similar revenues to the high-point achieved by the largest Detroit firms at their zenith the 1990s, with ten times fewer employees.

This huge leap in productivity and revenue generated per employee is possible because of a fundamental change. Economic output for some businesses has been able to decouple from most physical inputs, driving rapid growth in services within economies, with global standardisation and automation of the delivery of those services.

This has led to wealth being concentrated dramatically into the hands a tiny number of dominant global businesses and individuals. The competitive gaps that now exist between these globalised automated services and "normal" businesses are starting to lead to high impact social problems in "developed" countries across the globe.

Anti-globalisation and anti-business political movements and politicians such as Donald Trump in the US, Brexit and UKIP in the UK, and One Nation in Australia are at least partly fuelled by anger caused by widespread economic pain being generated by the current phase of industrial change. Despite these growing problems, the changes that we are currently living through present enormous opportunities to rethink the way we work and lead.

At the last World Economic Forum (Davos 2015), economist Klaus Schwab highlighted the competing tensions the current changing environment presents to leaders. Schwab outlined a vision of the future in which technology will play a pivotal role in reshaping and recasting the role of leaders and the way work is done within an increasingly connected and globalised world. Schwab concluded by suggesting that emerging digital capabilities such as big data and "the internet of things" are transforming the way leaders need to lead in ways that could not have been imagined just a decade ago (World Economic Forum, 2015).

In the past ten years, we have seen a transformation in the way people connect with others, information and the world around them through a combination of technologies. Wearable and implantable technologies are likely to enhance people's "digital presence", allowing them to interact with objects and one another in new ways.

The continued rapid decline in the size and cost of computing and connectivity technologies is driving an exponential growth in the potential to access and leverage the internet. This has led to ubiquitous computing power being available,

where everyone has access to a powerful computer in their pocket.

Accessibility to the "internet of things" is opening up new ways for organisations to track and monitor the effectiveness and applicability of their product and services in ways never thought possible. Whether we like it or not, Artificial Intelligence (AI) and big data encourage the digitisation of everything and everyone. As a consequence, the sophistication of the problems software can address, and the ability for software to learn and evolve itself is advancing rapidly.

The sharing economy and distributed trust are driving a shift towards networks and platform-based social and economic models. Assets can be shared, creating not just new efficiencies but also whole new business models and opportunities for social self-organisation. The blockchain, emerging technology, replaces the need for third-party institutions to provide trust for financial, contract and voting activities.

The digitisation of matter is resulting in "printing" goods from raw materials, known as 3D printing; a process that transforms industrial manufacturing allows for printing products at home and creates a whole set of human health opportunities.

Megatrends and the impact for leaders

The cornerstones of society are experiencing disruption: how we connect, how we trade and how we make things. These disrupters are called mega trends. The World Economic Forum has identified twenty-one new technologies that are likely to emerge over the next ten years. They include:

1	The "mainstreaming" of big data, mass storage and the internet of things.
2	Wearable Internet and 3D manufacturing
3	Digital presence and the supercomputer in your pocket
4	The sharing economy becoming mainstream underpinned by block chain commerce
5	AI permeating white collar job & driverless cars

It's anticipated that these mega trends will become widely implemented, and provide disruptions to how we work by 2025.

As connecting to the internet becomes more pervasive, and people use it to stay informed and to communicate, the nature of work and how leaders lead will shift. This shift is especially significant for large companies and Governments with very hierarchical and traditional ways of working.

Whether people are functioning as employees, customers or citizens, their behaviour is altered as

they take advantage of connectivity and connected communications with each other. At a macro level, the shift can be characterised as a movement from top-down structures to those that are bottom-up.

Technology, communications and information are empowering ordinary people. This shift is also often characterised as a "flattening" or "levelling" of organisations and their approaches to making decisions.

Systems of authority, accepted for generations or even centuries, are being challenged and remade. Nearly all organisations will see their functions altered as these behaviours continue to shift, and as the tools continue to evolve. In general, the world is becoming more empowering for individuals than it is for institutions.

The central reason for this development is that ordinary people have access to communications tools of ever increasing power. These tools range from email or texting to complex commercial services such as Facebook, Twitter, WeChat, Instagram, Snapchat, YouTube, Skype and many others. These services provide citizens with unprecedented opportunities to communicate instantly with others anywhere in the world. Even more importantly, the services allow broadcast capabilities – the kind of power that, until recently, was concentrated in the hands of very few people – Government entities and business elites who controlled exclusive access to expensive broadcast and publishing infrastructure.

A related liberating set of changes is happening with information. Anyone can access facts and opinions via websites, with information search services like Google playing a key role in helping disseminate information.

In the past, subject matter experts and specialised publishers could easily control access to information. But as people can now easily access useful information, they can inform themselves and generate valuable ideas, improving innovation. This means that consumers can research the price and features of products and services, and learn what other consumers have experienced. It means citizens can mobilise their peers using social media or other services and have a political impact, with or without the assistance of organised political parties. Combined with the extraordinary and growing access to information, technology enables people to get a better deal as customers, and a better government as citizens.

Fear is driving a surge in complacency

Last year's meeting at Davos provided a platform for technology pioneers, business leaders and politicians to reflect on some of the implications of what will be a very different sort of future economy in ten years' time.

Just to take one example, smart machines may soon be able to replace entire industry segments of workers, such as accountants, lawyers, delivery drivers, estate agents, and people handling routine customer service transactions. One estimate states 47% of US jobs are at risk of automation, and ultimately, redundancy (World Economic Forum, 2015). These technological changes require flexibility in the face of change, though history suggests our adjustment will be painful and slow. Complacency in the face of massive upheaval has already given rise to a number of common myths.

Myth One; this too shall pass

The suggestion is the current and anticipated changes won't have a significant or lasting impact, that the potential for social impact is being over-hyped. While it is true that it has always historically taken significant time to feel the full

effects of disruption or change, it is also true that the pace of change and scope to make change is now enormous. The biggest possible mistake a business leader could make in 2016 is to assume simply that a disruption to their normal revenue streams is too far over the horizon to consider.

Myth Two; markets will fix everything

This is effectively "she will be alright mate" dressed up in economic theory. The efficient market theory is clearly not relevant to all scales of analysis and planning and is certainly not suitable for business planning. Even at an economy-wide scale, the change process will not be trouble-free if everything is left to the market. It is a naive to believe that wealth created by competition will cascade down to a local business level, rather than accumulating with shareholders of the companies that achieve global scale.

The displaced people within the economy are unlikely to simply walk into another job with similar stability and remuneration, which is amply demonstrated by the rapid decline in well-paid full-time work positions across developed economies over the last ten years. Ultimately, market forces operating by themselves will not ensure local economic growth, or avoid disastrous economic dislocation and social problems.

Myth Three; Technological advances benefit everyone in the long-run

You could sum this up as "a little pain is worth the gain". Unfortunately, the people who are benefiting from change are often arguing that others should endure the pain of losing their jobs and social stability.

While it is hard to argue that inventions such as electricity and industrialisation have failed to benefit people broadly, there are many technologies which have been developed which have ultimately been rejected for social reasons. Nuclear technologies have been almost completely rejected within most societies around the world. Genetic modification and coal based energy have faced similar social opposition, which is not based on purely technical or economic considerations.

The current pace of information technology change will see artificial intelligence soon become another controversial technology, one that will undoubtedly generate social fear. In the long term, AI poses fundamental questions about the role humans will play in the economy and society. What purpose will people play in a society when computerised machines with AI handle almost every task?

It is quite clear that every country is currently based on societies that reward people for their work, and that work is the mechanism by which people earn the resources they need to provide for their families. AI combined with robotics could fundamentally disrupt this social system.

In view of these myths it's a concern that leaders are too often caught in traditional, linear (and non-disruptive) thinking or are too absorbed by immediate concerns to think strategically about the forces of disruption and innovation shaping our future. Leaders and decision makers are faced with the challenge of disruptive new technology: the current political, economic and organisational frameworks are no longer fit for purpose. These shortcomings are becoming apparent as leaders continue to hold onto outdated leadership practices and management principles (Elliott, 2016).

Reframing how we work and lead

In a recent survey[1] conducted by Grant Thornton with over 100 Australian CEOs and leaders with growth of more than 5% per annum, we noticed that their businesses had similar attributes and

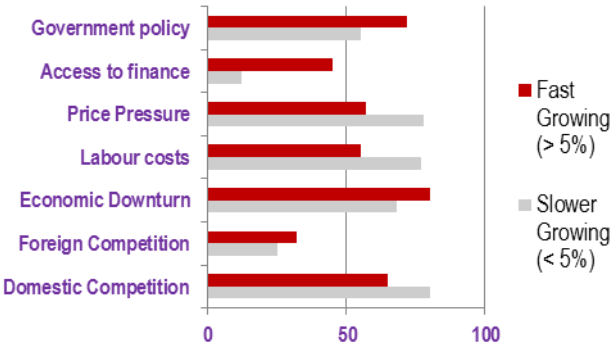
[1] What fast growing mid-sized businesses do differently (2015)

outlook on how they lead. These attributes included:

- Setting ambitious growth targets
- Establishing and maintaining a culture of innovation and entrepreneurship
- Establishing dynamic, flexible and agile business models & work practices
- Focusing on exports and global markets

Leaders of fast growing companies appear to focus on the external or market facing perspectives. This invariably presents some differences on how leaders lead within this changing economy.

Fig 1.0 - What leaders of fast growing companies are focused on?



The world has become more complex and leadership need to reflect the changes in the environment. The competencies that will be most valuable to the future leader are likely to be centred around adaptability, self-awareness, boundary spanning, collaboration and networked thinking (Petrie, 2011).

Invariably tomorrow's leaders need to rethink their approach to leading within a volatile, uncertain, complex and ambiguous world. No longer will the traditional "set and forget" or top-down leadership constructs be relevant. In a world of the continuous disruption, flexibility and agility will become the hallmarks of an effective leader. Furthermore, demand for greater levels of transparency and a consultative leadership style is likely to result in a greater focus on collective rather than individual leadership - ideally using open source/crowdsourcing for decision making.

Leaders will also need to embrace concepts such as the "social self-organisation" and self-management as a way of getting work done. Leadership qualities are likely to be characterised by attributes such as adaptability, self-awareness, boundary spanning, collaboration and network thinking. These characteristics are what will be needed to support the levels of innovation. These changes are also likely to see a profound shift in the way leaders are developed with a greater focus on vertical development, expanding a leader's capacity to learn and transferring greater development ownership to the individual.

Technology is the dominant player reshaping the way people connect and it's these changes that are fuelling the popularity and relevance of the sharing economy (network and platform based social and economic models). People and employees expect greater levels of transparency from leadership which is supported by the democratisation and distribution of communication that delivers greater opportunity for employee/customer to drive organisational outcomes.

Employees are also increasingly being recognised as being able to innovate and generate value, regardless of location in hierarchy. These changes are having an unprecedented impact on the way work is being delivered across informal and networked organisations rather than the traditional hierarchical structure.

Teams are becoming far more diverse and eclectic. Enterprising leaders are exploiting crowdsourcing, start-up incubators and shared workforce to get things done quicker and in many cases cheaper. These changes are likely to also see a widening of the skills gap as roles become more specialised and transactional or low-value aspects of our work are stripped away. This trend is likely to continue as knowledge based vocations underpinned by deep technical expertise become the key drivers rather than formal qualifications & education.

As the full impact of the fourth industrial revolution begins to take effect, undoubtedly, organisations will need to establish flatter, more egalitarian structures and ways of working to support enhanced decision-making, create value for money and exceptional customer experiences. No doubt, time will tell.

The leader of the future

Research conducted by Grant Thornton Australia into high growth companies highlights similar trends emerging. Leaders and CEO's of fast growing businesses appear to be focused on.

- Working with their customers to actively invest and manage their product development strategy, pipeline and process.
- They are investing in new technology in a timely way and staying abreast of technology as a competitive edge.
- They are thinking differently about new markets. In an increasingly digital world, companies can make a leap from local to global much earlier and easier.
- They are leveraging the benefits of acquisitions such as new resources, business synergies, risk diversification, economies of scale and talent acquisition.

Along with all this comes a new mandate for leaders. Decision-making will become more transparent, as affected communities expect to understand how decisions are arrived at. A more consultative mindset will become the new normal. Products and services will increasingly be developed in consultation with customers or citizens in the case of Governments. Leaders will more rapidly rise up from communities in response to crises. Leaders with global appeal will find their influence heightened and the speed of their impact accelerated.

The power of these changes, and their potential to have political impact in organisations and especially countries, are already leading many leaders to react against the tools of software and connectivity. Governments around the world are instituting restrictions of various sorts to prevent citizens from gaining access to information that might challenge the status quo, and to prevent them from using broadcast internet tools to communicate with other citizens. How successful these efforts to restrict the free flow of digital information will not be as certain. In general, the recent history of the digital age suggests it is hard to restrict information flows effectively.

Many of the megatrends characterising the impact of software and services on society in the coming years also contribute to changes in the impact of individuals. Increasingly, everyone has a digital presence, and tools to connect to the internet are becoming cheaper, more available and more

diverse. Ordinary citizens have genuine power with "a supercomputer in their pocket". The tools of big data and AI will initially be most easily accessible to large, rich and powerful organisations. However, if the past is any guide, such tools will increasingly become commoditised and accessible to anyone. Google itself, for that matter, is a universally accessible and intelligent way to search a massive quantity of data, offered as a free service. As the world shifts towards networks and platform-based social and economic models, the beneficiaries of these more equitable, transparent and widely shared systems of value creation will be people who, in many cases, had previously little or no access to the systems of power.

Today, this hierarchical and process-driven leadership constructs are clearly visible in large bureaucratic enterprises, many Government agencies, and most education and military institutions. In these types of enterprises, thinking and execution is strictly separate. People at the bottom are instructed through command and control.

In today's fast-changing, knowledge-based economy, this static, top-down concept of management has proven to be inefficient; it wastes the talent, creativity, and energy of most people in these organisations (Laloux, 2015).

Arguably, the skills and competencies required to lead in this future world will be significantly different to the ones we currently lead with.

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