Tomorrow’s Digitally Enabled Workforce
Highlights and Key Themes in Our Research Over Recent Years

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Our methods (strategic foresight)

1. Current Situation Analysis
2. Horizon Scanning (Trends Identification)
3. Trends Validation, Screening and Prioritisation
4. Synthesis of Trends to form Megatrends and Scenarios
5. Craft the Narrative (Communication Strategy)
Our results ...

MEGATRENDS

- The Second Half of the Chessboard
- Porous Boundaries
- Tangible Intangibles
- The Era of the Entrepreneur
- Divergent Demographics

SCENARIOS

- 1. Lakes
- 2. Harbours
- 3. Rivers
- 4. Oceans
Are We (All) Jumping at Shadows? Why So Much Interest?


Australia’s Future Workforce

The future of work centenary initiative

The future of work: jobs and skills in 2030
Was the Industrial Revolution a Warm Up Act?

Index of Real Wages (1778/82 = 100)

Wages in England & Wales During the Industrial Revolution

Real Wages Stagnation, 60 years

Real Wages Growth, 60+ years

Data source: Professor Charles Feinstein, The Journal of Economic History [56]

The Misunderstood Luddites, Wikipedia
Robots are Improve Quickly
The Journey of IBM’s Watson

47% of Jobs in America at High Risk of Automation
Michael Osbourne
Oxford University

Learn to race with the Machine, not against it
Erik Brynjolfsson and Andrew McAffee
Massachusetts Institute of Technology (MIT)
What Jobs do People Get?

After seven years of effort by scientists from UC Berkeley a robot can fold a towel in ...

20 mins.

The Berkeley Robot for the Elimination of Tedious Task (Brett) by Prof Abbeel at UC Berkley. Image source: Youtube
Photographers Versus Lab Staff

Australian Photographic Industry

Employment ('000s)

Photographers
Developers/printers

Printery Workers Versus Graphic Designers

Total employment (000s)

- Printers/graphic press workers
- Graphic designers

Accountants Versus Keyboard Operators

Total employment ('000s)

- Accountants
- Keyboard Operators

Individuals who work 55 h or more per week have a 1.3 times higher risk of incident stroke than those working standard 35-40 hour week.

Working Smarter (Not Just Harder)

A high tech digitally enabled economy rewards intelligence more than brute force

Experiments in Sweden, reducing the work week from 8 to 6 hours tested by:

- Svartedalens elderly care home
- Internet startup, Brath
- Filimundus App Developer
- Stockholm city council
- Toyota service centre in Gothenburg

Source: OECD Statistics
Not Everyone is Making the Transition

Working Age Males in Australia, Labour Force Participation Rate

Rethinking the Theory of the Firm?

1. Information asymmetry

is where one party has more or better information than the other. But ...

... can customer generated content create symmetric information?

2. Transaction Costs

Are incurred in making an economic exchange (i.e. the cost of participating in a market). But ...

consider two ways of buying an e-Scooter from China.

1. Learn Cantonese
2. Travel to China
3. Search for sellers
4. Evaluate quality
5. Deal with Bureaucracy

Buy a Scooter
Scenario Planning of the P2P Economy: A Case Study of Uber

New Data in a study by Uber Technologies and Princeton University, published 2016

Scenario B3: Vehicle fleet automation

Scenario A1: Customer trust & quality perceptions won

Scenario B2: Natural S-shaped levelling off

Scenario B4: Regulations bite, trust & confidence breaches

Scenario A2: Nothing much happens

Proxy measure for Market Share

Number of New U.S. Driver-Partners

Democratisation of Innovation

Solar Flare Jan 2015, NASA

Bruce Cragin

Predicted 8 hours in advance with 85 percent accuracy and 24 hours with 75 percent accuracy

Lars Bo Jeppesen1 & Karim R. Lakhani – 166 competitions and 12,000 scientists.

Having expertise unrelated to the problem improves chances of success.
The Rising Bar

Data source: Department of Employment [31], ABS, Labour Force [32]
Pressures on Recent Graduates

Percent of Australian bachelor degree holders working fulltime shortly after graduation

Source: Graduate Careers Australia
Neglecting STEM at Our Own Cost

STEM skills are need for 75% of the fastest growing occupations and wage premiums. But Australian youth aren’t all that interested.

Today 11% less year 12 students study math since 1992. There has been a 35% drop in enrolment in information technology subjects at universities since 2001.

In my company we hire software developers by the tonne, but we are lucky to get two job applications a day.

We put up an ad for an office manager and we got 350 applications in two days.

Matt Barrie in the Sydney Morning Herald, 14 April 2014, Speaking at ATP Sydney.
Small businesses account for the largest proportion of employment in Australia - 43% in 2012-13.

Data source: ABS, Venture capital and later stage private equity
The number of co-working spaces operating worldwide has nearly doubled each year since 2006

DeskMag Survey
By the year 2020 over 40% of the world’s university degree-holders will be living in China and India.
We combine research excellence with business relevance. We analyse trends, risks and scenarios with a focus on the digital economy. We do decision analysis. We help organisations make wise strategic choices and achieve their objectives. We live in Brisbane but we travel the world ...

... (and we try to get home in time for dinner).
Thank you

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