

WillisTowers Watson IIIIIII

Today's Speaker

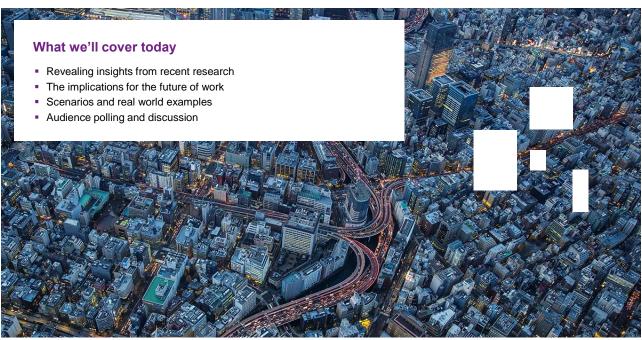


Ravin Jesuthasan Ravin Jesuthasan, CFA Managing Director

Managing Director Willis Towers Watson

ravin.jesuthasan@willistowerswatson.com @ravinjesuthasan

Follow Willis Towers Watson on social media



D 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Willis Towers Watson 1.1"1.1

.

We are at the beginning of a Fourth Industrial Revolution...



Today's realities

- Digital revolution
- Fusion of technologies is blurring lines between the physical, digital, and biological spheres
- Technological breakthroughs, such as artificial intelligence, robotics, the 'Internet of Things' (IoT)



Compared to previous industrial revolutions

- Disrupting almost every industry in every country
- Significant impact on work and jobs
 - Significant job creation to job displacement
 - Heightened labor productivity to widening skills gaps



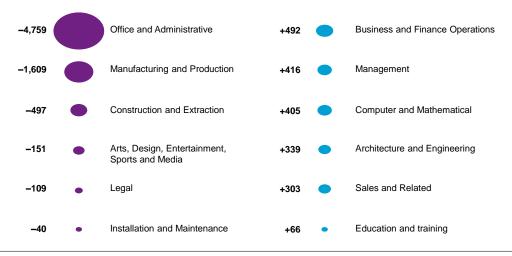
In many industries and countries

- The most in-demand occupations or specialties did not exist 10 or even 5 years ago
- 65% of children entering primary school today will ultimately end up working in completely new job types that don't yet exist

The Fourth Industrial Revolution is revealing specific employment trends

Net employment by job, family 2015-2020

Employees (thousands, all focus countries)



D 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

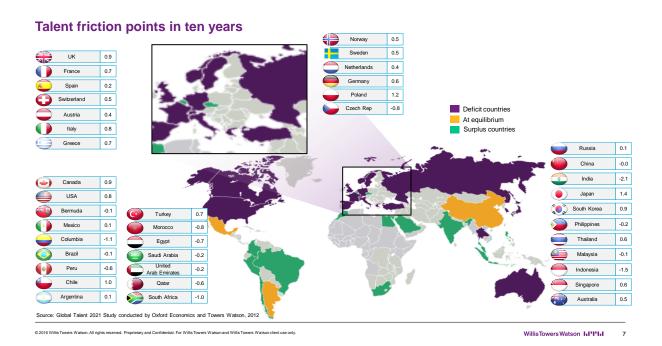
Willis Towers Watson I.I'I'I.I

There are Five Forces of Change in play which can be captured in two core themes Democratization of Work and Technological Empowerment

Five Forces of Change Democratization of Work Social and organizational A more highly democratized future is reconfiguration characterized by new "employment" relationships shorter in duration and more All inclusive, global talent market company / individual balanced. A shift A truly connected world toward a more agile and responsive view of Exponential pattern of technology work will deliver results by activating change purpose-built networks. Human and machine collaboration **Technological Empowerment** Technology is transforming the way we live and work. Machine learning, 3D printing, mobile, wearables, and algorithmic analytics are some of the many technologies that promise to improve individual empowerment.

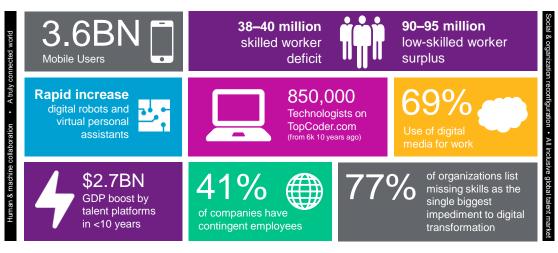
© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Willis Towers Watson I.I'I'I.I



The emerging "Robo-gig" economy

Technology, digital media and robotics are transforming work and jobs



Sources: Digital Media & Society, World Economic Forum in collaboration with Towers Watson; Towers Watson Research; also reference McKinsey & Co

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson Client use only

WillisTowers Watson I.I'I'I.I

The transformative impact of talent platforms

By 2025, online talent platforms could boost global GDP by \$2.7 trillion

Share of GDP increase by source, \$ trillion	\$2.7 trillion ¹	
Improved productivity	0.34	Better matches
	0.29	Reduced informality
Greater employment, 25 million additional FTEs ²	0.70	Faster matches
		New matches
Higher labor-force participation, 47 million additional FTEs ²	1.27	Work currently inactive people and increased hours for current part-timers

Source: McKinsey & Company

I. Figures do not sum to total, because of rounding

D 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

WillisTowers Watson I.I'I'I.I

۵

POLLING QUESTION

Which of these statements are true for your organization?

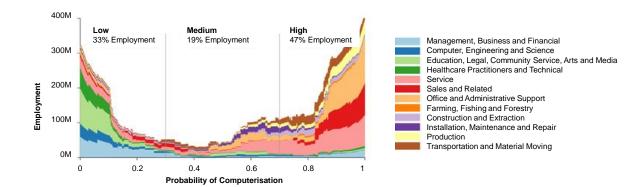


- A. Our organization is a place containing employees doing work
- B. Our organization organizes work and talent regardless of where that talent comes from or where the work is done

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson Client use only.

Willis Towers Watson I.I'I'I.I

Technology is transforming work and jobs



Source: Frey, C.B. and M.A. Osborne, "The Future of Employment: How Susceptible Are Jobs to Computerisation?", 17 September 2013

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Willis Towers Watson In 1911

11

Robotics combined with other tech bring a disruptive fusion

A combination of technologies will impact the workplace in unpredictable ways

- AI, actuators, sensors (Visual Simultaneous Localization and Mapping) and mobile fuse to make robots ubiquitous
- Robots come in many shapes: they walk, fly, swim, crawl, and roll on wheels
- Smartphones are becoming the "supercomputers" for programming household robots
- Shared learning in the cloud accelerates robot effectiveness and adaptability
- Collaborative robots working alongside humans
- Physically assistive robots for the elderly
- Neurally-controlled prostheses may become a new way for seamlessly interfacing with robots
- From doing dangerous and dirty work robots evolve towards doing accurate and patient work



Main source: Rodney Brooks, Panasonic Professor of Robotics at MI

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

WillisTowers Watson I.I'I'I.I

POLLING QUESTION

Which of these skills is most important to your company?









- A. Digital skills
- B. Agile thinking skills
- C. Interpersonal and communication skills
- D. Global operating skills
- E. All of the above

2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Willis Towers Watson IIIIIII

. .

Are we approaching "peak human"?

Machine Learning and AI have come of age, and scale, thanks to the cloud



More affordable and better care - but fewer doctors?

IBM Watson successful diagnosis rate for lung cancer is 90% compared to 50% for human doctors



Robo-advisers replace humans in banking

RBS announces the shedding of 550 jobs, to be replaced by roboadvisers in order to cut costs



AlphaGo beats world champion at Go

Self-learning algorithms can improve their performance over time, and be applied to any complex cognitive problem (e.g. language translation)

The impact of automation and digitization on Financial Services

Automation Advances



- · Electronic stock tickers and trading tickets
- Increased automation of core processes
- ATMs

- · Rapidly declining prices of automation software
- Rise of pattern recognition by software (i.e., machine learning) for investment analysis
- Rise of robots for lending and advice
- Artificial intelligence scalability (i.e., computers that are able to anticipate needs and complete tasks independently)
- Information processing digitization

Past

1980 - 2000

Present

Future 2020 and Beyond



Eliminations

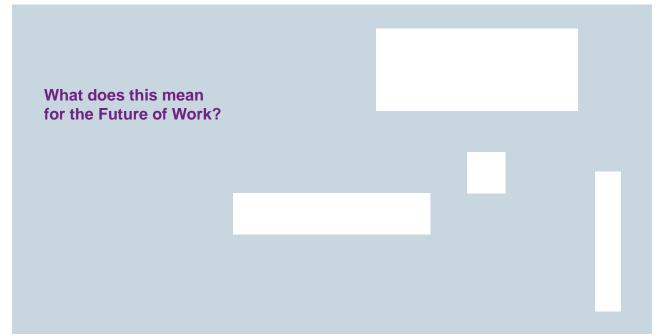
- Administrative clerks Branch staff
- Phone-based stock traders and stockbrokers
- Financial analysts
- Researchers
- Loan processing
- Financial advisors/brokers
- Institutional traders
- Client-facing positions (e.g., salespeople)
- Information processing-focused positions
- Financial advisors

Over the next 20 years, jobs in the financial services industry are considered at "high risk" of automation more than any other skilled industry – about 54% of all jobs may be eliminated

Source: "The Robots are Coming for Wall Street", The New York Times Magazine, Nathaniel Popper

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Willis Towers Watson 1.1"1.1



© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

WillisTowers Watson In 1911

A challenge to our core beliefs about the organization

"Outside the firm, price movements direct production, which is co-ordinated through a series of exchange transactions in the market," Coase writes. "Within a firm, these market transactions are eliminated and, in place of the complicated market structure with exchange transactions, is substituted the entrepreneur co-ordinator, who directs production."

- Ronald Coase, The Nature of The Firm, 1937

WillisTowers Watson 1-1-1-1

Industrial revolutions and work

Second Industrial Revolution

Fourth Industrial Revolution

Second Machine Age

First Machine Age

1960s - 1990s

Features:

"The assembly line"

Underpinning for Coase's theory

Late 19th - early 20th century

- Companies as social institutions
- Organization of work into jobs
- Jobs as careers

"Nikefication" and core competencies

Features:

- Technology enablement and the web
- Companies as the nexus of contracts
- Steamlining of jobs to enable outsourcing

2000s "Uberization"

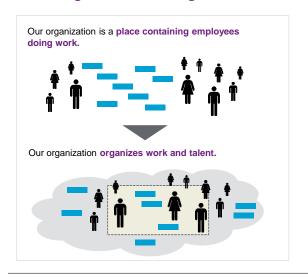
- Features: Mobile, sensors, Al and machine learning
- Companies as platforms
- Disaggregation of work into activities
- Talent on demand

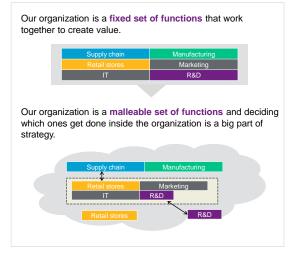
Source: John Boudreau, Ravin Jesuthasan and David Creelman

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Willis Towers Watson In 1911

This will require a fundamental paradigm shift in how work and our organizations are organized





D 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Willis Towers Watson III'I'II

19

POLLING QUESTION

What are the most significant impediments to your use of non-employee talent?









- A. Lack of consistent governance over all types of labor
- B. Concerns over regulation / liability
- C. Lack of leader awareness / capability
- D. Lack of infrastructure to consistently attract and manage such talent
- E. We don't need non-employee talent

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson Client use only.

Willis Towers Watson III'III

New work: Horrible or wonderful?

Horrible

- Risk shifted to workers
- Employers stop training
- Death of the Career
- Commoditization
- Rush to lowest cost
- Worker exploitation

Wonderful

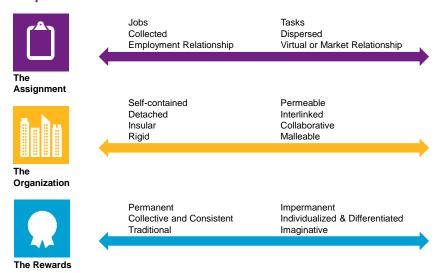
- Transportability
- On-demand training
- Boundaryless careers
- Precise work-worker matching
- Rewards segmented to match needs
- Worker Empowerment

2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

WillisTowers Watson I-I'I'I-I

21

Lead the Work Map



Source: John Boudreau, Ravin Jesuthasan and David Creelman

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson Client use only.

Willis Towers Watson III'III

REAL WORLD EXAMPLES

Insurance industry

The organization

Background:

Insurers are faced with tough new business, investment and regulatory environments that are emerging from the financial crisis.

Broader challenges including demographic shifts, the rise in power of the emerging markets, and changing customer behavior are causing the transformation from a product-centric to a customer-centric market.

Business Case:

- Acting on customer insights and harnessing the power of big data and social media will
 create competitive advantages. However, this transition will require employees with
 completely new skill sets.
- How can this sector compete with other industries for highly prized digital talent?

The Solution:

By first segmenting the workforce and then viewing the organization's boundaries as permeable, the sector will be able to collaborate with others to meet the demands of its evolving marketplace.

Accomplishments

- Organizations that segment their population and take on creative approaches to resourcing work will be far more capable of meeting their talent needs
- By focusing on their core strengths and leveraging "non-competitive relationships" the sector can collaborate with others for mutual benefit
- ✓ Talent from outside the organization brings more than just technical skills, they inject diversity of thought

© 2016 Willis Towers Watson. All rights reserved. Proprietary and Confidential. For Willis Towers Watson and Willis Towers Watson client use only

Willis Towers Watson In 1911

23

REAL WORLD EXAMPLES

Your organization's work done by another employer's talent

- Siemens creates a hearing aid for kids
- Where is the best talent that understands how to engage children with a product....Disney
- Siemens uses Disney employees to create a hearing-aid comic book





REAL WORLD EXAMPLES

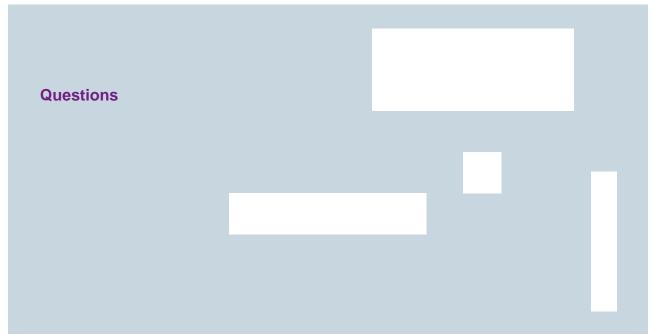
The Siemens "Disney Kit"

The Disney Kit

The Disney Kit for younger children includes a cuddly Mickey Mouse® and storybook. Reading and playing with Mickey helps younger kids gain confidence in their hearing aids. And to keep their hearing aids in peak condition, the kit also provides all the maintenance essentials parents need, like a battery tester, drying set, listening stethoset and a cleaning tool.



Willis Towers Watson I-I'I'I-I 25



Willis Towers Watson In 1911

Recertification Credit Information

This webcast may be claimed for SHRM Certification recertification credit. Use the number below to indicate when in 2016 you viewed this program.



This program counts as 1 hour of PDC toward SHRM-CP and SHRM-SCP recertification. The program number is 16-U4S5Y.

You may claim the credit for both certifications. Please see the SHRM Certification website for details on claiming webcast credits.

