

# **The Renaissance of Professional Firms in 2020 and Beyond**

KEYNOTE SPEAKER PRESENTATION

**Vivian Jiang**

Executive Management Committee Member

*Deloitte China*



# The renaissance of professional service industry: 2020 and beyond

**Vivian Jiang**

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Tax and Business Advisory Services, Great China Region

Disrupted to disrupter:

The game changer of  
tomorrow's professional  
industry

# A whole new world



**Tablet**



**Apple**



**Twitter**



**Glasses**

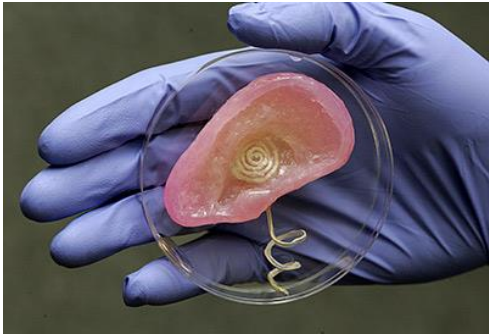


# Items undergoing disruption...





# 3D printing of organs



Princeton University researchers created a functional ear with a coil antenna, demonstrating an efficient method of merging electronics with tissue.











Surgeons at the Kobe University School of Medicine are using CT and MRI imaging to create life-size surgical models of patients' organs.

































The Wake Forest Institute of Regenerative Medicine developed a 3D printer to deposit skin cells directly on a wound to speed healing.

# Outlook of 3D printing in medical devices

Driver	Trends	Impact	3D Printing Outlook
<b>INCREASED DEMAND</b> 	Medical device manufacturers seek greater precision and higher consistency to deliver high-quality products in response to customer demand		3D printing will be utilized to enable a <b>faster response</b> to shifts in customer demand
<b>INCREASED COGS</b> 	Increasing costs of labor in Asia, rising material and distribution costs make custom medical devices expensive.		3D printing is used for <b>specialty manufacturing</b> of customized medical devices
<b>CONSOLIDATION</b> 	Mounting consolidation of manufacturers to grow market share and achieve economies of scale that preserves margins		Medical device manufacturers and distributors adopt 3D printing and <b>absorb niche players</b> to diversify market offerings
<b>SUPPLY CHAIN REDESIGN</b> 	As medical devices adopt 3D printing for prototypes and final products, offshore manufacturing is reduced and inventory is minimized		3D printing service providers stay closer to manufacturers, creating a <b>leaner and more cost effective supply chain</b>

Source: "3D Printing/Additive Manufacturing is Changing the Mfg Industry", 3D Innovations.com, March 1, 2012; Todd Grimm, "Is 3D Printing Ripe for Consolidation?", Engineering.com, March 1, 2012; "Medical Device Prototyping", Strataysys; "Global 3D Printing Market to Reach US\$2.99B by 2018", Global Industry Analysts, Inc., Jul 20, 2012

# Technologies, costs involved, key players and end markets

Technologies	Cost <sup>1</sup>	Key Providers	Select End Markets
Digital Light Processing	\$9,000 to \$14,000+	Objet/ Stratasys (U.S.), EnvisionTEC (Germany), DWS Systems (Italy), Lithoz GmbH (Germany)	  
Stereolithography	\$100,000 to \$500,000+	3D Systems (U.S.), Stratasys Inc. (U.S.) and CMET (Japan).	   
Fused Deposition Modeling	\$9,500 to \$500,000	Stratasys (U.S.), 3D Systems (U.S.), and EOS (Germany)	   
Direct Metal Laser Sintering	\$500,000 to \$700,000	EOS (Germany), 3D Systems (U.S.), Arcam AB (Sweden), Cubic (U.S.), Stratasys (U.S.)	  
Electron Beam Melting	\$800,000 to \$1.3 M	Arcam AB (Sweden), Stratasys (U.S.)	   
Selective Laser Sintering	\$20,000 to \$1 M	3D Systems (U.S.), EOS GmbH (Germany).	  
Plaster-based 3D Printing	\$15,000 to \$70,000	3D Systems (U.S.), Z Corporation (U.S.) <sup>2</sup>	  
Powder Bed and Inkjet Head 3D Printing	\$15,000 to \$60,000	Z Corp. (U.S.), ExOne (U.S.)	  
Selective Heat Sintering	\$13,000	Blueprinter (Denmark)	Limited information available
Laminated Object Manufacturing	\$95,000 to \$180,000	Helisys (now Cubic Technologies)	  

<sup>1</sup> Cost shown above is that of the price of printers offered by leading players in that technology.

<sup>2</sup> Even though Z Corp. was acquired by 3D Systems in early 2012, for the purpose of this deck, it has been considered as a separate entity, since the company has a huge base of installed printers and strong brand name.





# 2014 tech trends that inspire disruption

## Disruptors

**CIO as venture capitalist**

**Cognitive analytics**

**Industrialized crowdsourcing**

**Digital engagement**

**Wearables**

## Enablers

**Technical debt reversal**

**Social activation**

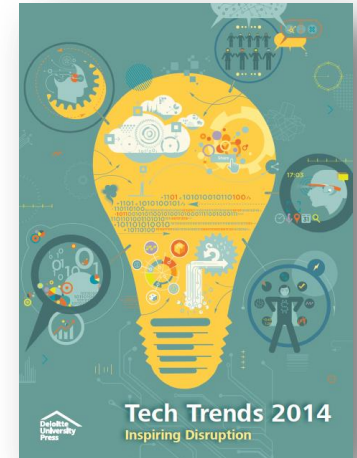
**Cloud orchestration**

**In-memory revolution**

**Real-time DevOps**


## Exponentials

Artificial intelligence, robotics, cyber security, additive manufacturing, advanced computing

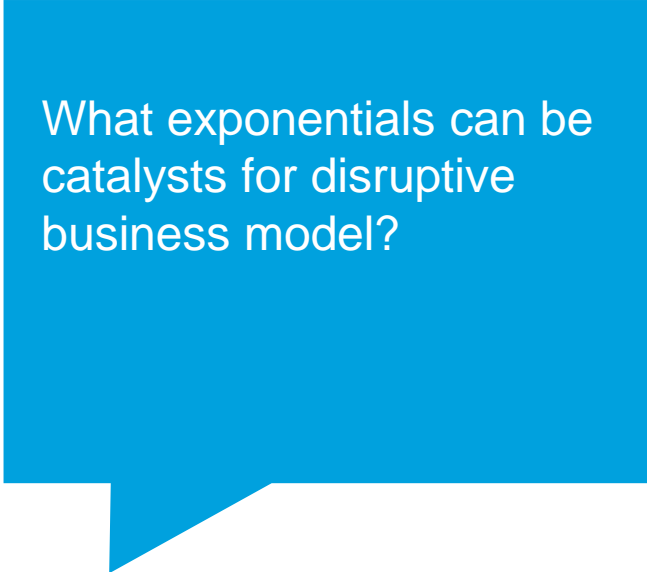


Source: Deloitte University Press, *Tech Trends 2014: Inspiring Disruption*, 2014

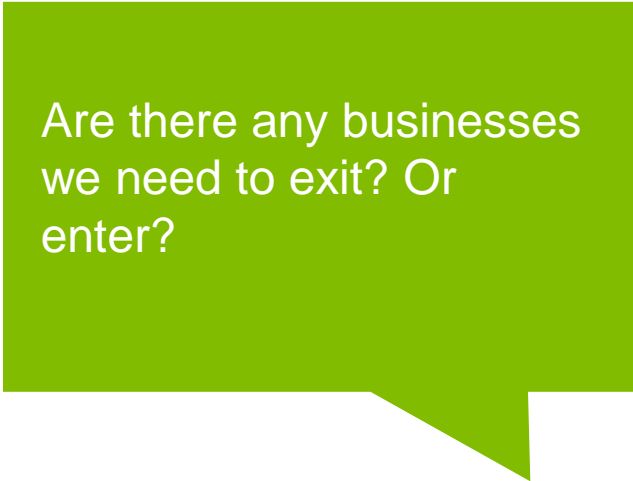
# Disruptive questions for the professional services industry



What are the disruptive threats to our business?



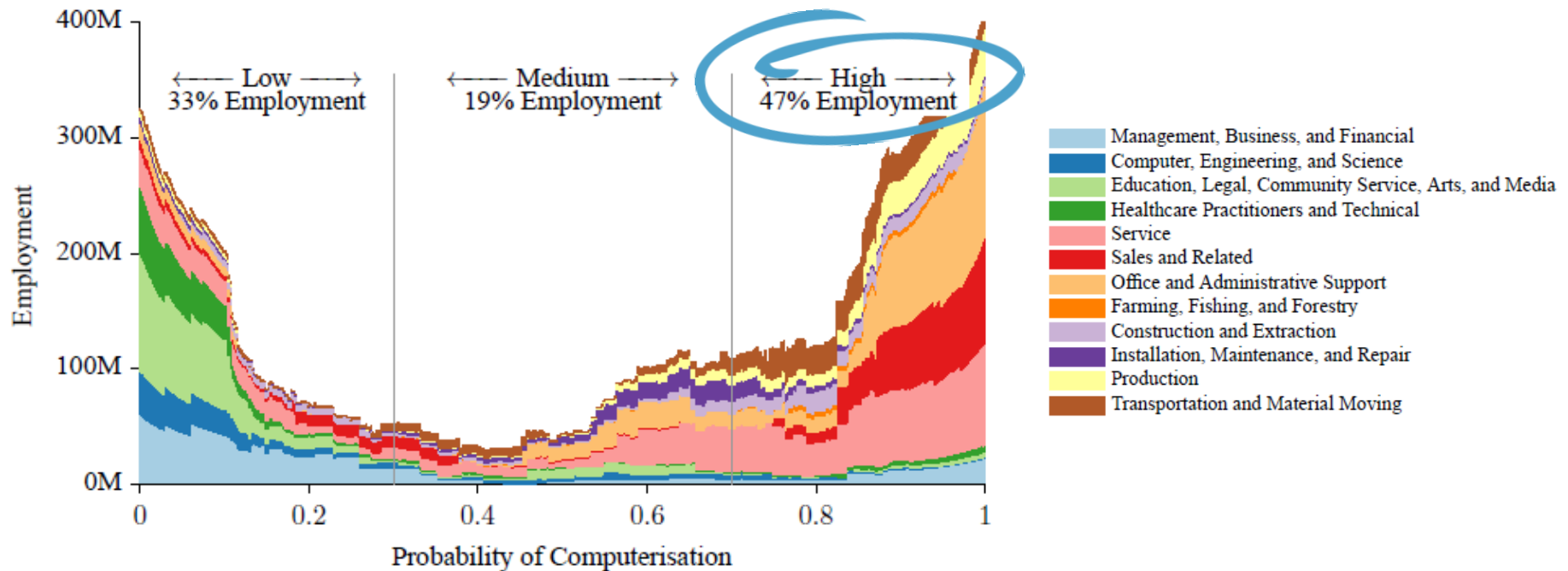
What exponentials can be catalysts for disruptive business model?



Are there any businesses we need to exit? Or enter?

# Employment in the 21<sup>st</sup> century

The distribution of BLS 2010 occupational employment over the probability of computerisation, along with the share in low, medium and high probability categories

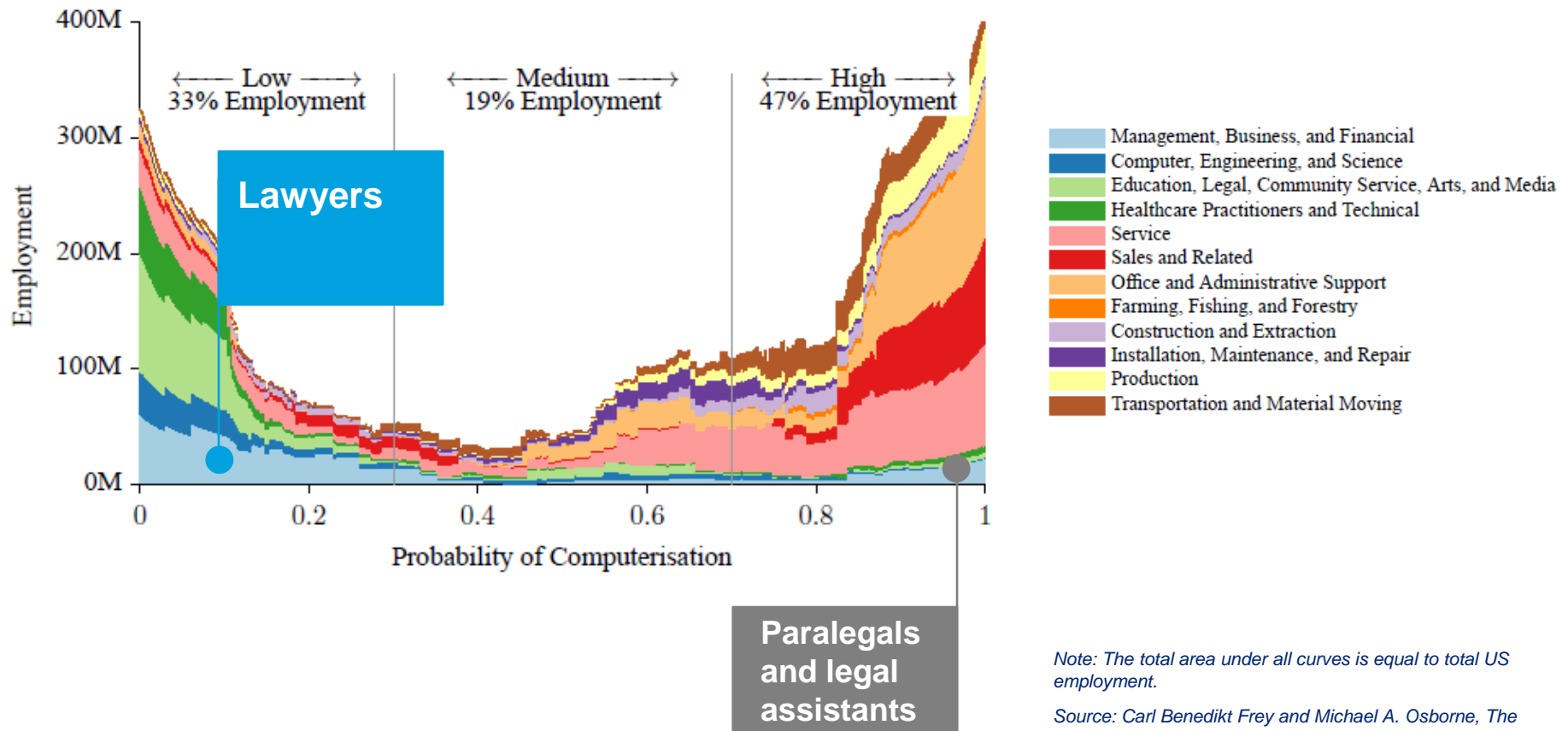


*Note: The total area under all curves is equal to total US employment.*

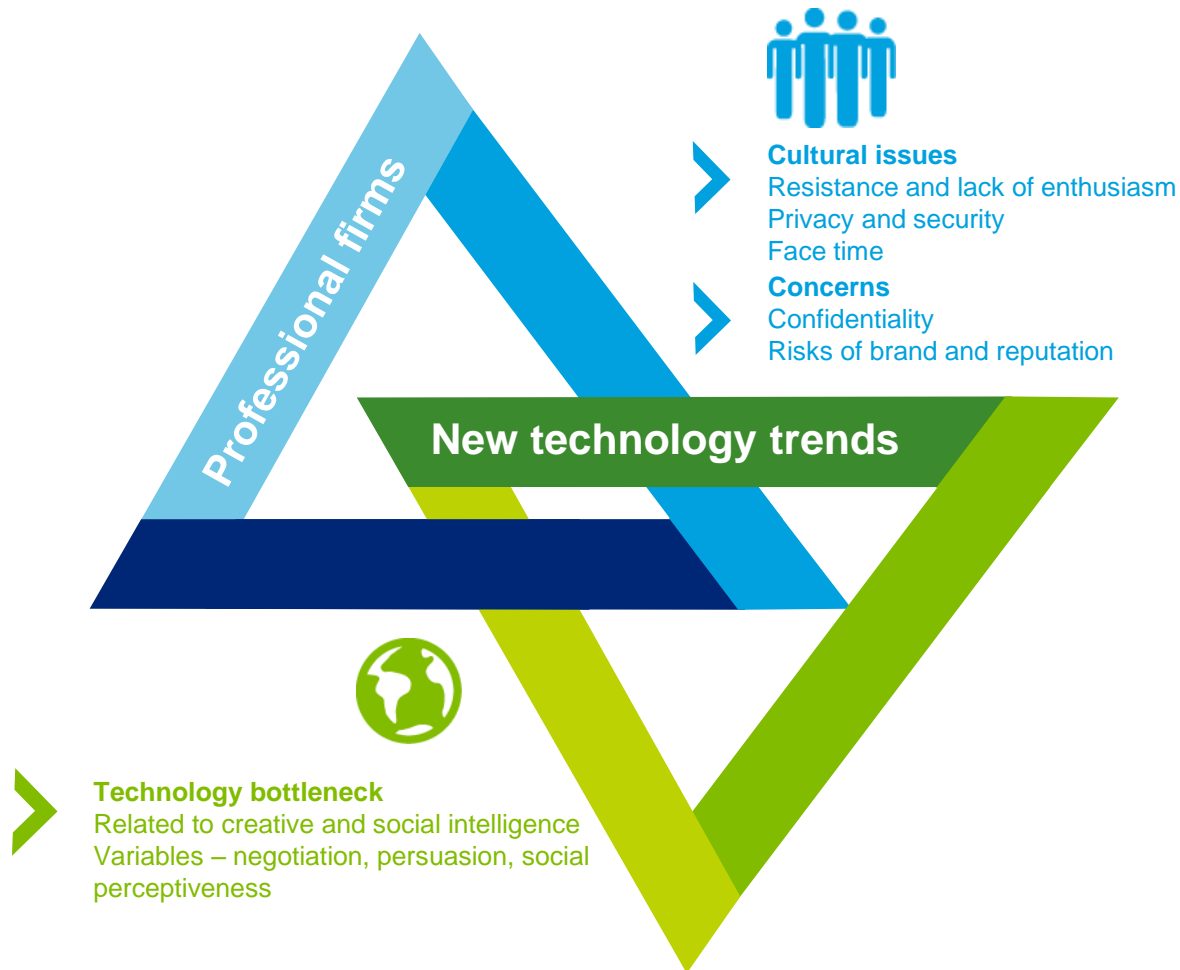
*Source: Carl Benedikt Frey and Michael A. Osborne, The future of employment: How susceptible are jobs to computerisation? September 2013.*

# Employment in the 21<sup>st</sup> century (cont'd)

The distribution of BLS 2010 occupational employment over the probability of computerization, along with the share in low, medium and high probability categories



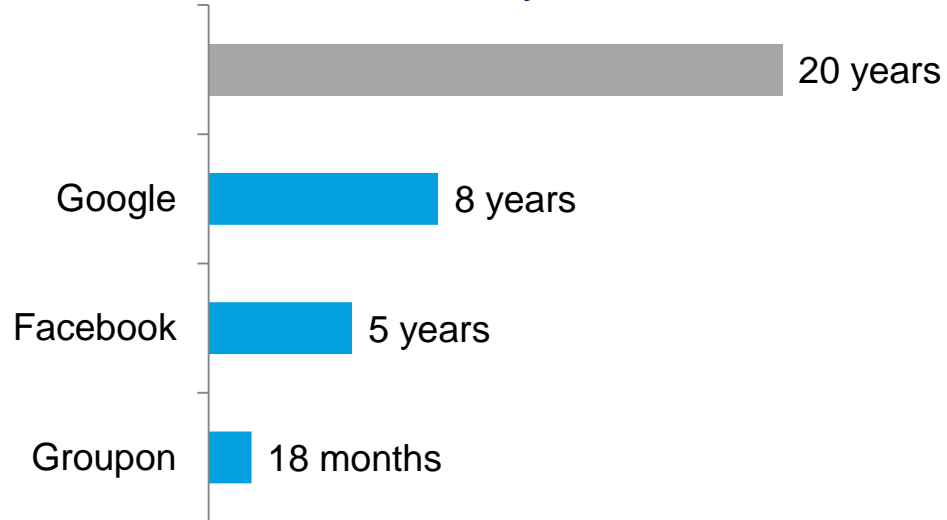
# Why adoption in professional services is slow



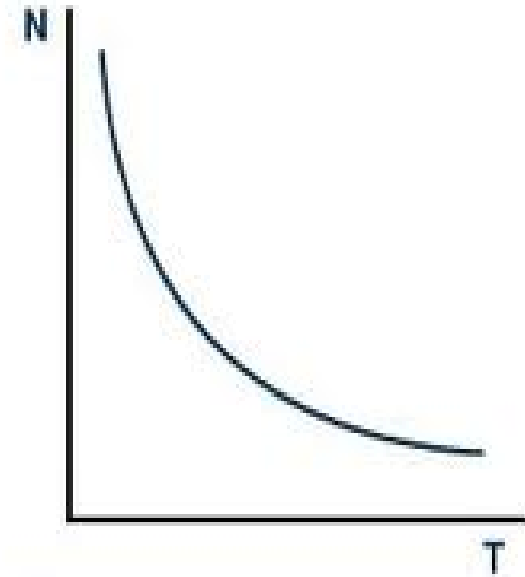


# Billion dollar companies

A billion dollar opportunity  
Used to take 20 years to create



Barriers to entry  
dropping



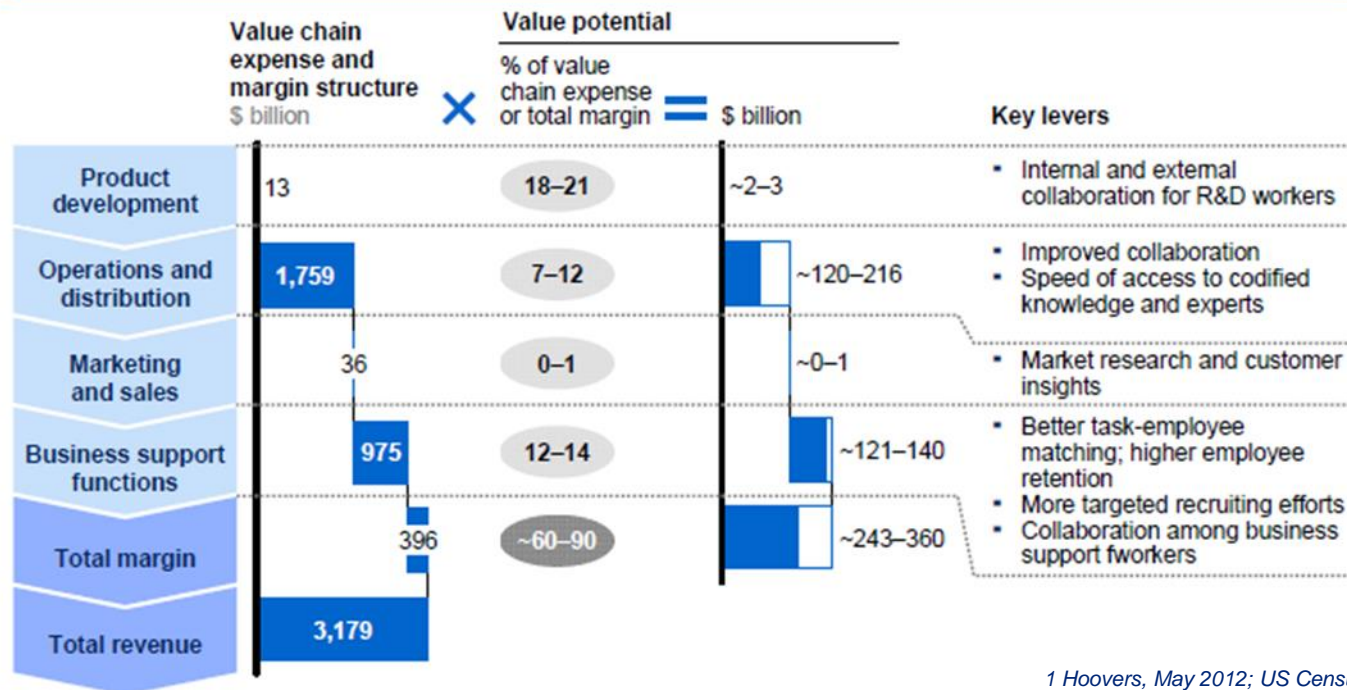
Metabolism of the economy  
increasing

# Social technologies - value added potential for professional services

## Global 2011

### Sector snapshot

Global sector revenue	\$3.2 trillion per year <sup>1</sup>
Social technology value potential	\$256 billion–360 billion annually
Top value levers	Value potential up to 14 percent from improved collaborations



<sup>1</sup> Hoovers, May 2012; US Census Bureau, *Statistical Abstract of the United States: 2012, 131<sup>st</sup> Edition*.

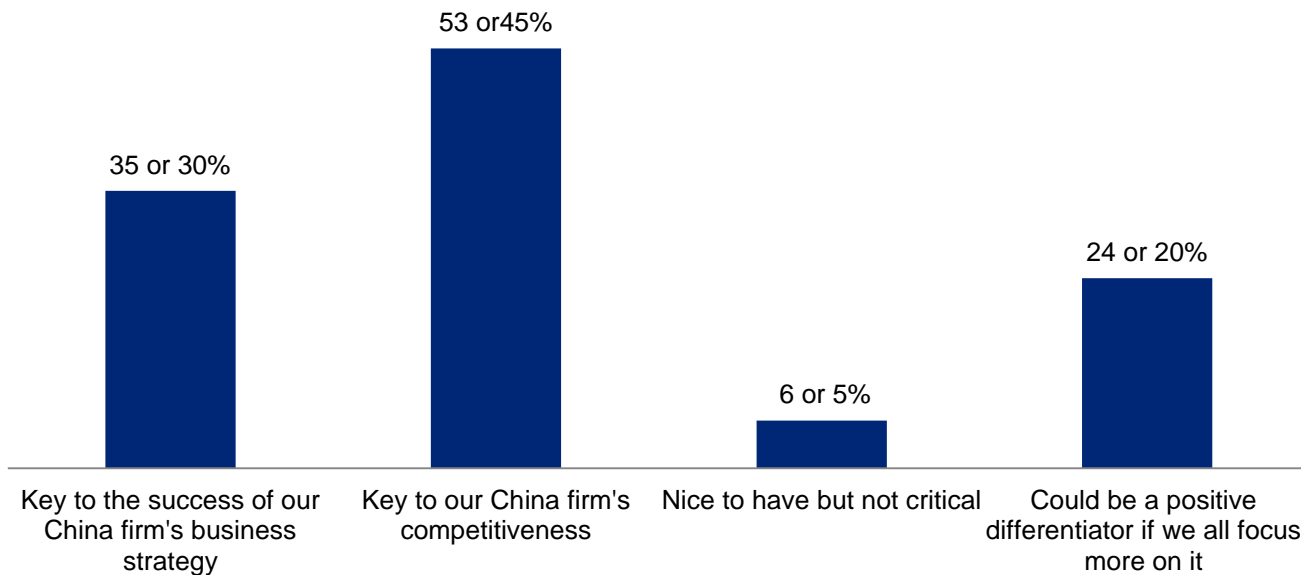
Note: Numbers may not sum due to rounding. Not to scale.

Source: Hoovers; US Census Bureau, *Statistical Abstract of the United States: 2012, 131<sup>st</sup> Edition*, Washington, DC, 2012; McKinsey Global Institute analysis

# Deloitte China: partners and directors' view on innovation

Polling –

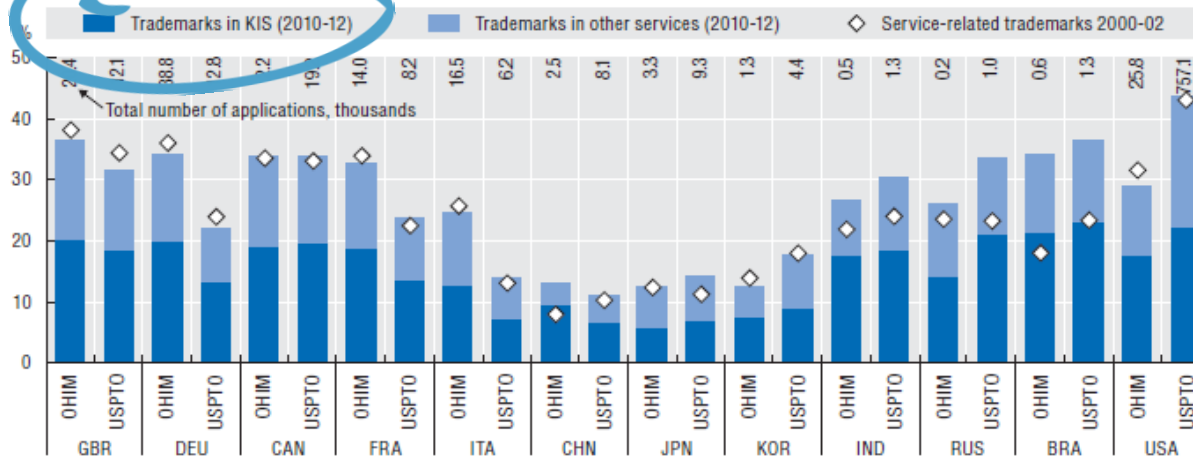
Which one of the following represents your current view on innovation?



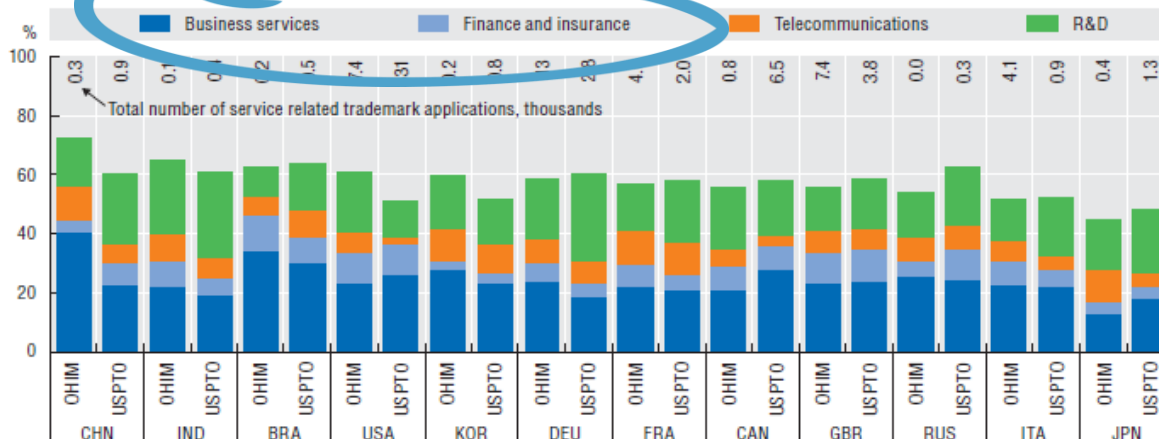
Among 118 respondents to our on-line polling, **75%** agreed innovation is key to our success and key to our competitiveness.

# Innovation snapshot via the lens of trademark registration

Service-related trademark applications at USPTO and OHIM by selected OECD and non-OECD economies, 2000-02 and 2010-12 (as a percentage of total trademark applications)



Trademarks in knowledge-intensive services, selected OECD and non-OECD economies, 2010-12 (as a percentage of total service-related trademark applications)



# Deloitte indirect tax: 12 months of change

Faster than ever

## THE MARKETPLACE



Indirect tax rates going ever higher



Greater tax authority scrutiny

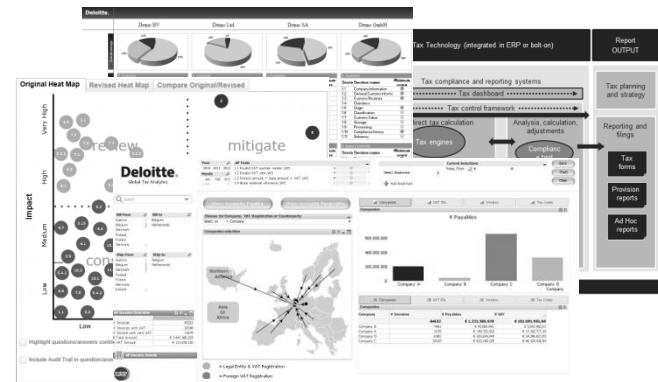


Desire to realize indirect tax savings

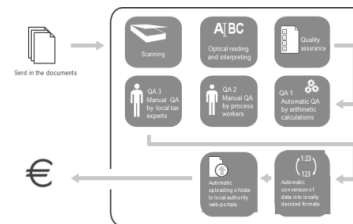


Appointment of global heads of indirect tax

## OUR ACHIEVEMENTS



Deployment of five global technology-enabled service offerings



Aggressive technology-driven entrance into VAT refund market



Integration of VAT and CGT and teaming with Consulting and TMC



# Deloitte indirect tax: 12 months of change

Faster than ever

## THE MARKETPLACE



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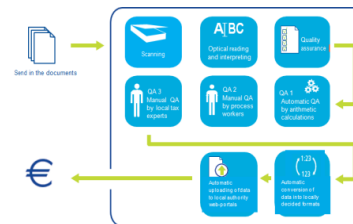


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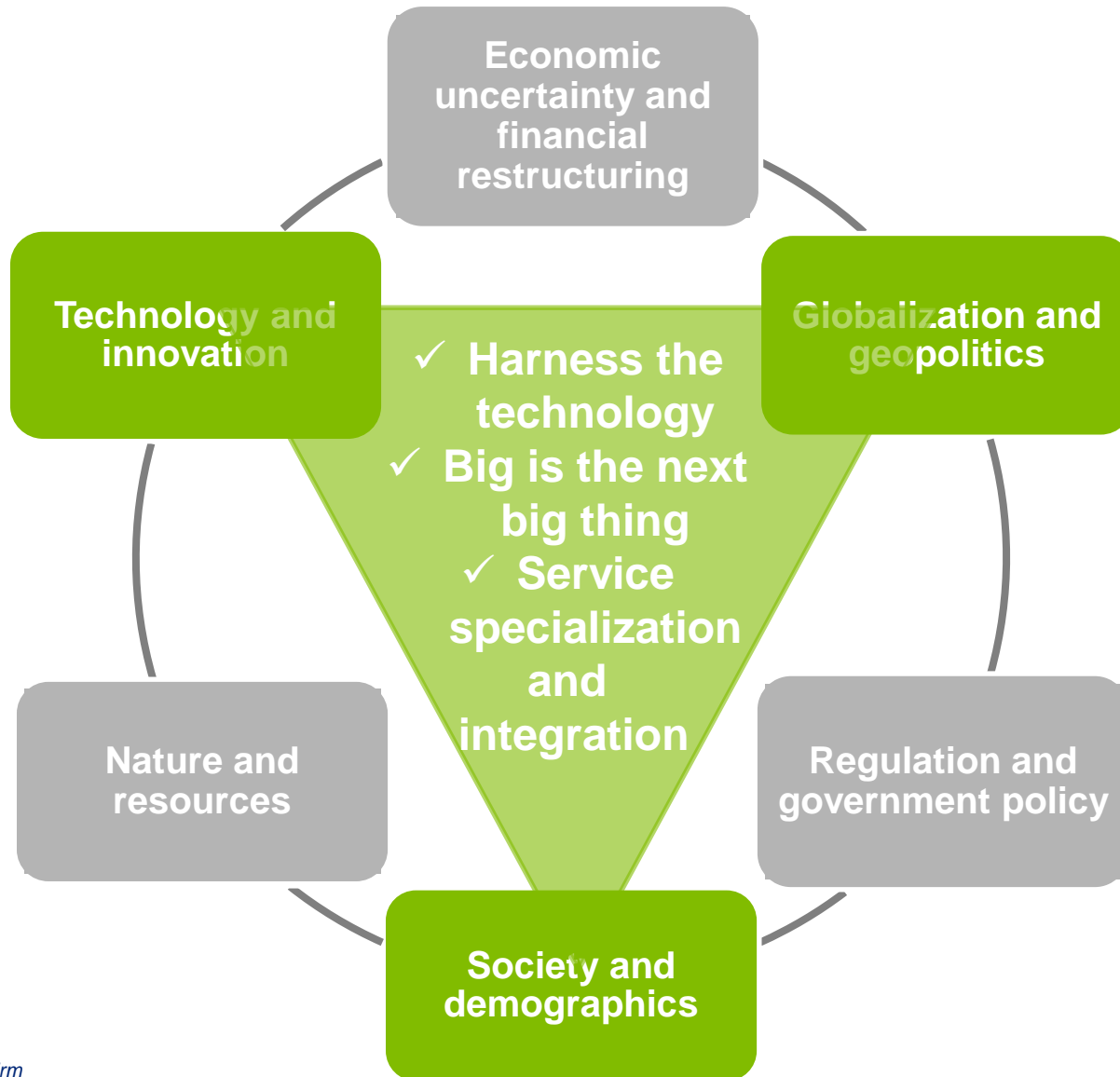


Aggressive technology-driven entrance into VAT refund market



Integration of VAT and CGT and teaming with Consulting and TMC

# Future of professional services



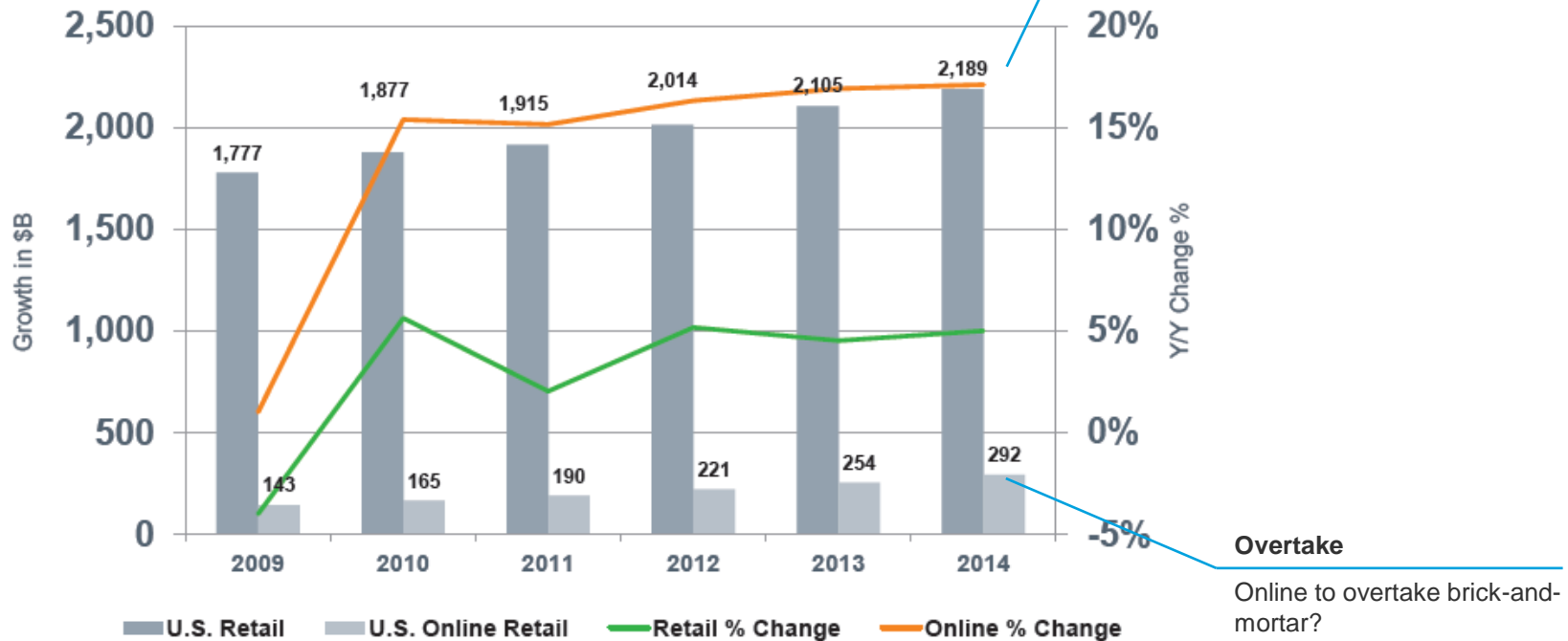
*Adapted: US firm and China firm*

Beyond the traditional  
profession:

The value of crossover

# Who moved the cheese?

## Online vs. Traditional

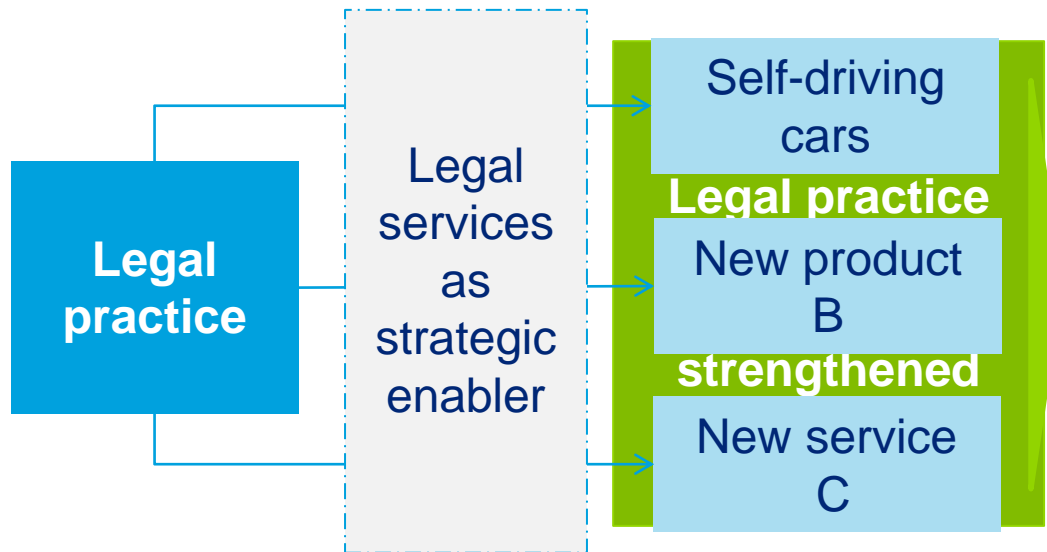


Excludes motor vehicles, gas stations, food and beverage stores, health & personal care, food services & drink places.  
Source: Citi Research; Department of Commerce

# Turn technology into business

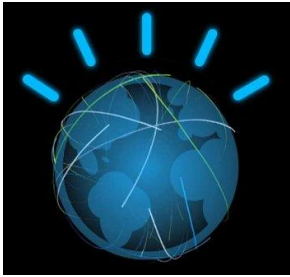


- Impact only on automobile industry?
- What's in it for legal?
- What can we learn from this?





# Crossover collaboration



2011/

First introduced as a question answering computer system

2013/

First commercial application of utilization management decisions in lung cancer treatment

2014/

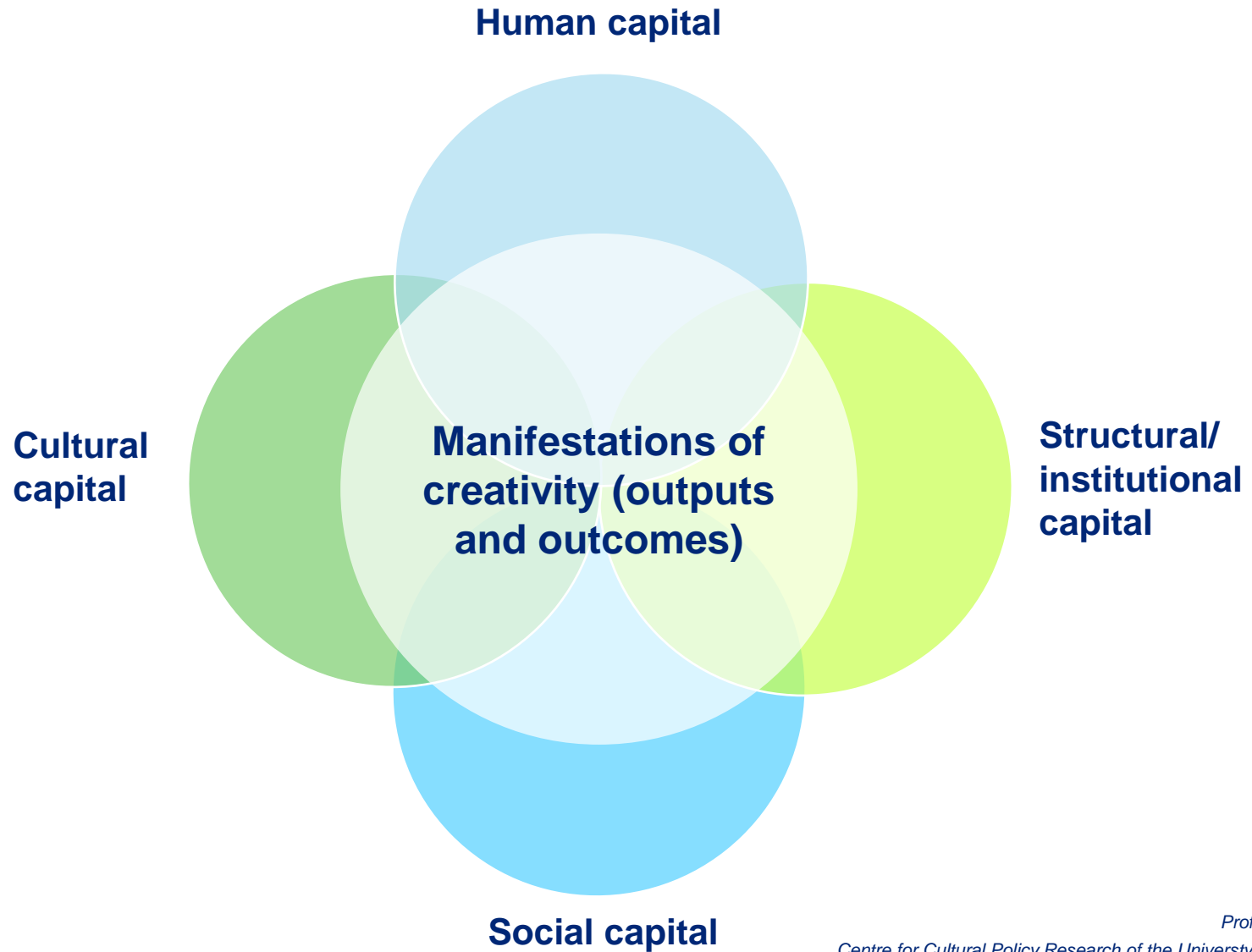
Fueling New Era of Cognitive Apps Built in the Cloud by Developers

- Often based on exponential innovations
- Crossover by blurring and dissolving the boundaries
- Helps connect institutions and individuals
- Inspires new products, services, businesses, technologies
- Spurs further innovation and amplify

# Looking forward:

## Enablers of successful transformation

# Creativity Index – the 5Cs model



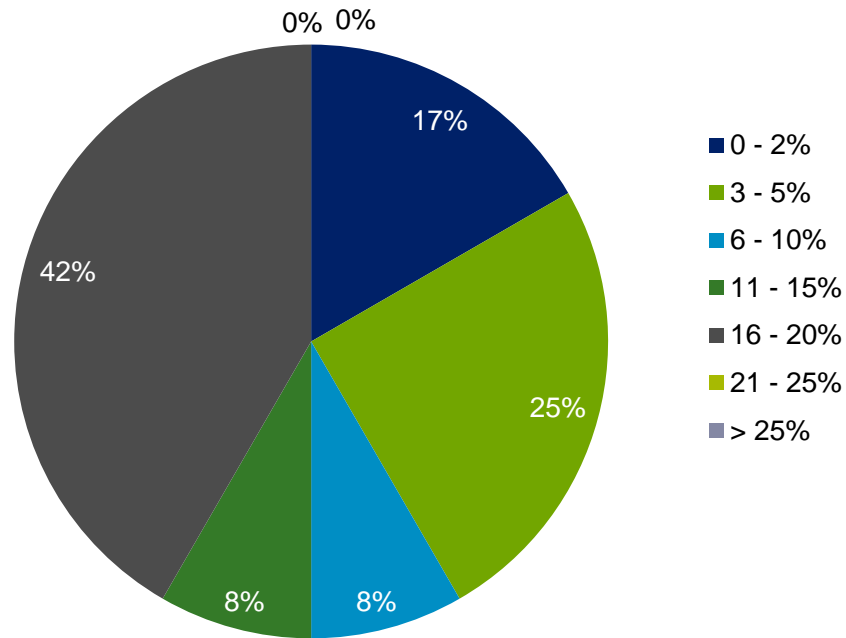
*Prof Desmond Hui*  
*Centre for Cultural Policy Research of the University of Hong Kong*



**社会创新是什么？**  
**What is social innovation?**

# Innovation is also driving our growth!

Among the Deloitte member firms which have established innovation programs, **42%** earned **16-20%** of their revenues from services and businesses created over the last five years.



Source: Deloitte survey, October 2009

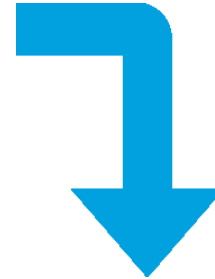
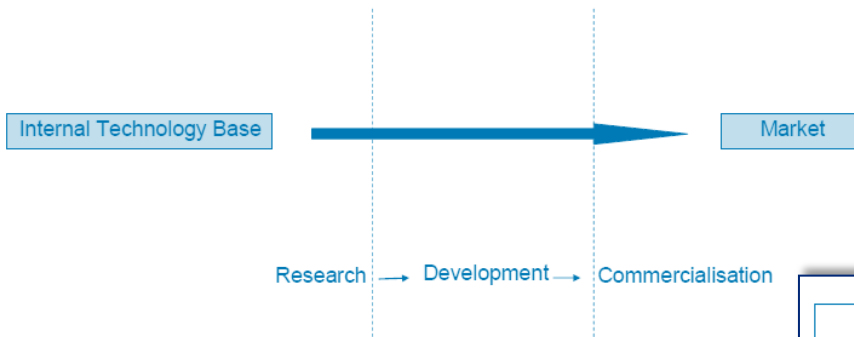


# Institutional and individual innovation

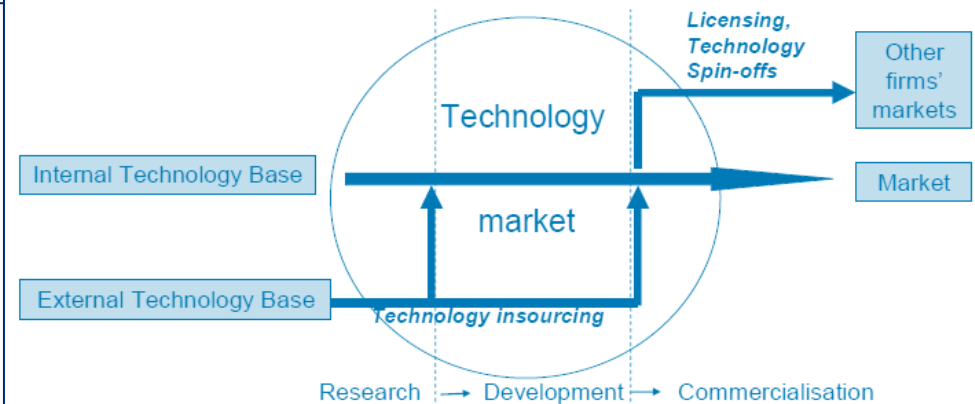


# A new innovation paradigm

## CLOSED AND UNILINEAR INNOVATION MODEL

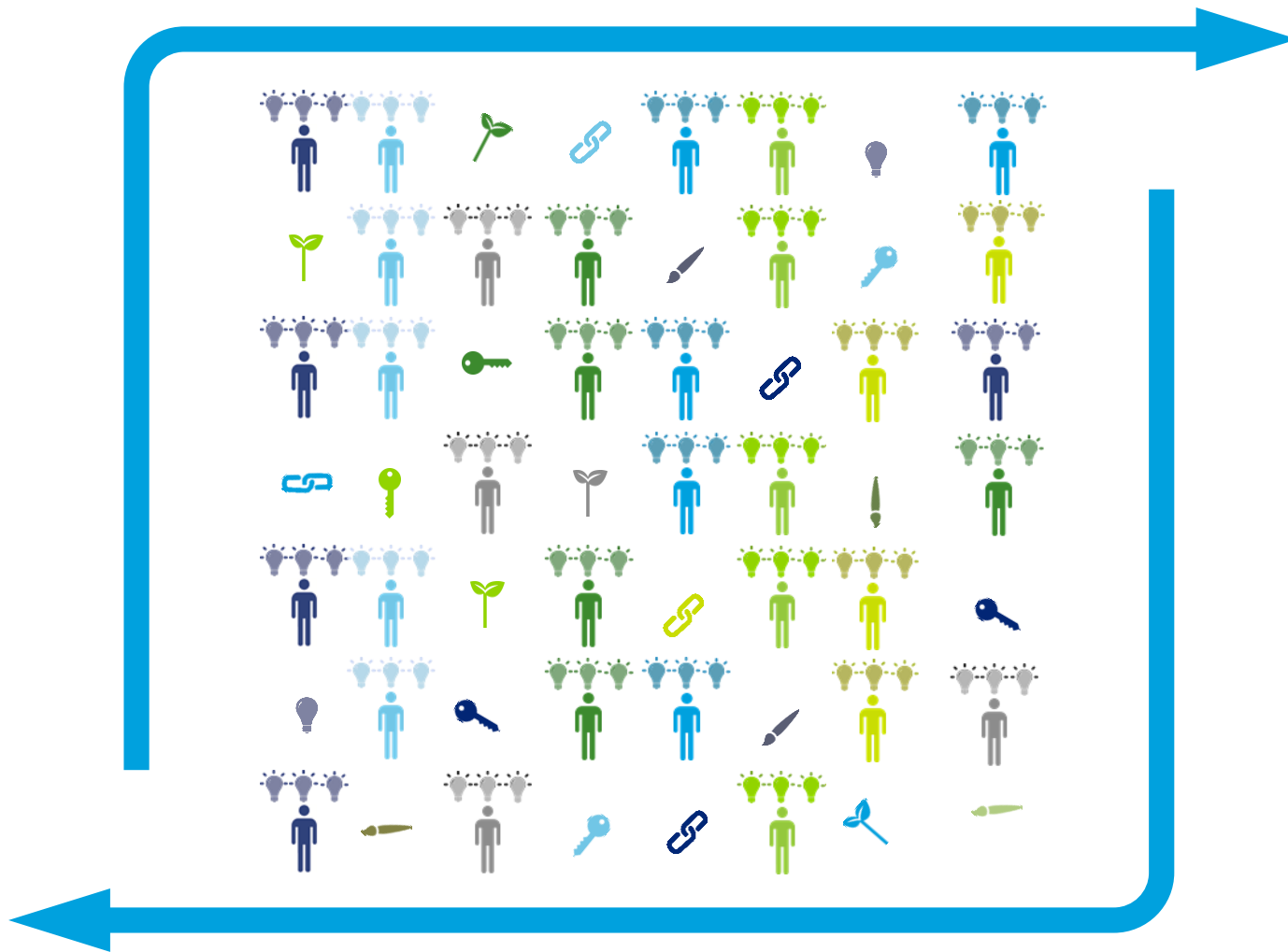


## EMERGING OPEN INNOVATION PARADIGM (with various input and output channels)



Source: OECD, Summary Report of the Study on Globalization and Innovation in the Business Service Sector, 2007

# Open and exponential innovation



# The open talent economy

## Traditional employment model

Full-time employees  
Within corporate boundaries



Balance sheet



Partnership



Borrowed



Freelance



Open source

← **Open talent economy continuum** →

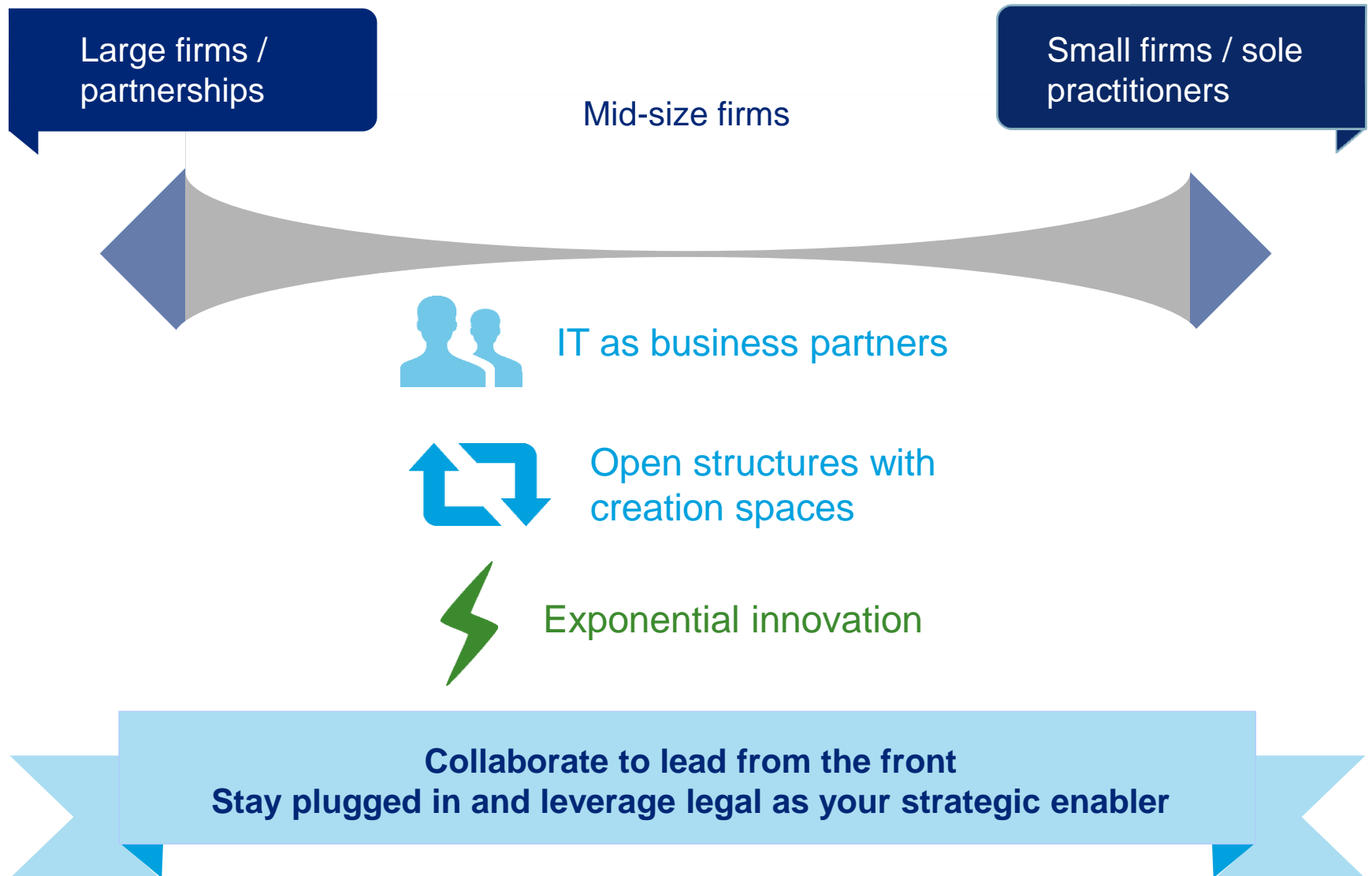
Source: Deloitte University Press | DUPress.com, 2013

# From employee life cycle to talent ecosystem



*Adapted: The Open Talent Economy, Deloitte University Press*

# Disruptive business models



“

The definition of insanity is doing the same thing over and over again and expecting a different result each time.

Albert Einstein

”



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SHANGHAI, CHINA

4 April 2014

