

# *Industry 4.0*

# *Vietnam Survey 2018*

## Executive Summary

Globally, behind the scenes of the world's leading industrial and manufacturing companies, a profound digital transformation is now underway. In this report, we try to understand if this is happening locally in Vietnam at this moment, and what are the impacts? What does the local workforce make of or expect from these changes? Let us explore the data further.



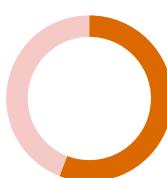
## About the survey



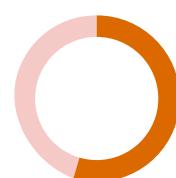
**188**  
Respondents



**15%**  
Large companies – headcount exceeding 3,000



**56%**  
with revenues of \$100 billion VND or greater



**54%**  
Classified as Management; Middle Management & Senior Management

Preliminary survey, conducted between 8 and 27 November 2017 in collaboration with the Vietnam Chamber of Commerce and Industry (VCCI) and the Vietnam Business Council for Sustainable Development (VBCSD), as an initial step towards understanding how the local Vietnam-based workforce views the impacts of Industry 4.0.

## Vietnam anticipates nearly immediate impact and significant benefits

### THE TAKEAWAYS

Vietnam's workforce expects significant benefits such as improvement in operational efficiency as well as improved access to customers, largely from the digitisation and integration of value chains as well as digitisation of business models. These impacts are already affecting some local organisations and others anticipate their impact in the near future.

### THE DATA

Improved speed of product delivery, quality and completion as well as access to customers

- 35% expect faster product delivery and completion and 23% expect improved product quality
- 28% expect improved access to customers

Benefits & impact from digitising business models and digitising/integrating value chains

- 41% anticipate the largest impact from digitisation of horizontal and vertical business value chains
- 34% indicate largest impacts from changing nature of digital business models and customer access

Impact felt now and in the near future – the time to act is now

- 67% of respondents foresee significant impacts of Industry 4.0 on their organisation's operations within the next 3 years
- 24% reported to have already been affected by the industrial revolution wave

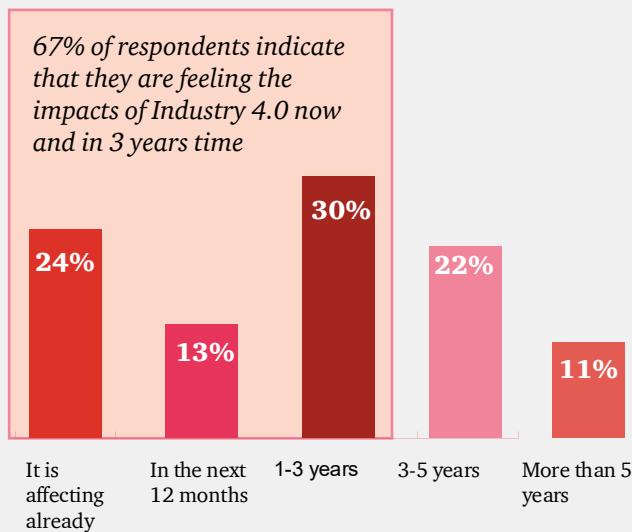
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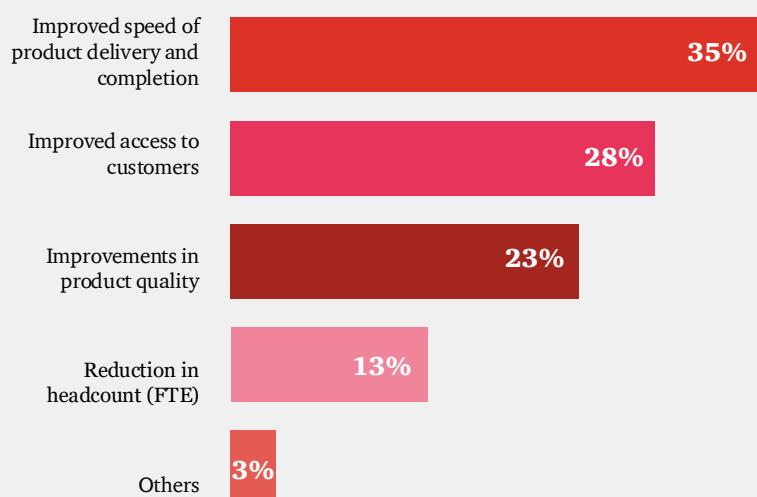


## Industry 4.0 impacts are felt now

*Q: When do you foresee Industry 4.0 having a significant impact on your Vietnam operations?*



*Q: Where do you expect to see the largest benefits from digitisation and automation?*



## People remain positive despite uncertainty and perceived impact

### THE TAKEAWAYS

While respondents know of Industry 4.0, not many fully understand its concept and impacts. They estimate that Industry 4.0 will require significant upskilling, which may impact their organisation and ways of working. However, despite these uncertainties, Vietnamese respondents are positively embracing Industry 4.0 and expect to personally benefit from it.

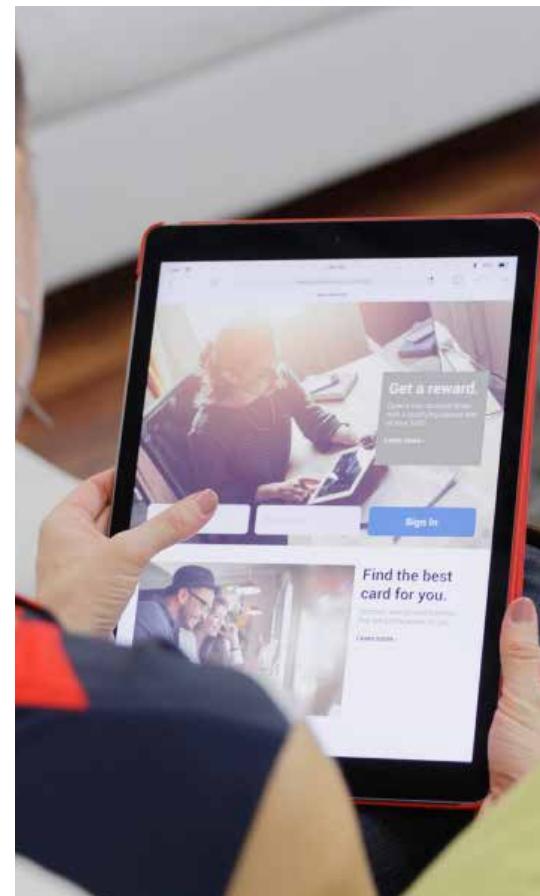
### THE DATA

Most respondents have limited knowledge or are unclear of the exact impacts

- 27% of respondents fully understand Industry 4.0 concept and impacts
- 73% having limited or no knowledge, or are unclear of the impacts of Industry 4.0

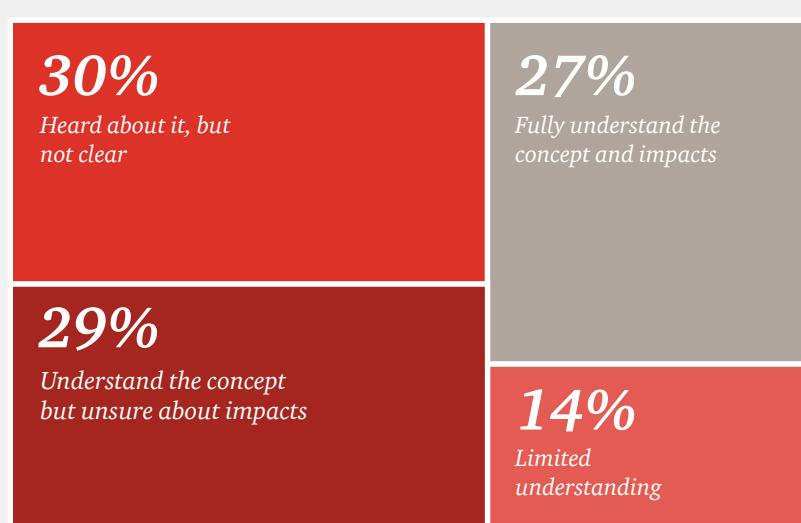
Despite anticipating significant impact, people remain positive

- Only 14% of management believe their employees have the required preparation for digital transformation
- 50% of staff would require reskilling or be made redundant
- 65% expect many benefits and opportunities to their organisation, career and future

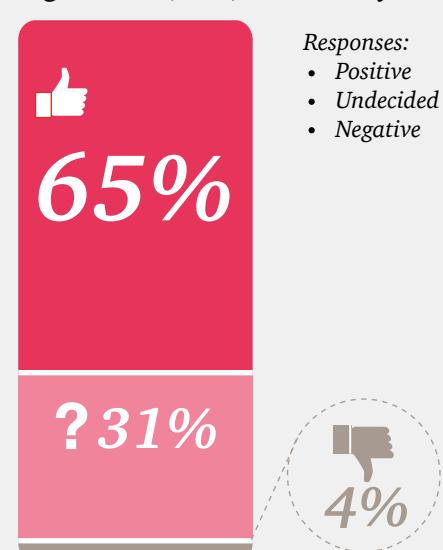


## Lack of knowledge on Industry 4.0 and what it means

*Q: How much do you understand of Industry 4.0?*



*Q: What is your perception on the impacts of Industry 4.0 for your organisation, role, career and future?*



## Different challenges for Vietnam due to environment maturity

### THE TAKEAWAYS

Compared against global respondents, Vietnamese respondents indicated different challenges in embracing Industry 4.0. Globally, respondents were more concerned about getting senior management buy-in into digital investments as well as providing clear view of return of investments, whereas Vietnamese respondents highlighted environment maturity factors such as the lack of digital standards, insufficient skills in the local labour market and concerns around data security & privacy.

### THE DATA

#### Different challenges faced by local respondents

- Global respondents indicated top 3 challenges: lack of clear digital operations vision and support from top management (40%), unclear economic benefits from digital investments (38%) and high financial investment requirements (36%)
- Local respondents indicated top 3 challenges; lack of digital standards, norms and certification (18%), insufficient skills and talent of local labour market (16%) and unresolved questions around data security and privacy (15%)

#### Exploring 3 local areas of concern

- Lack of digital standards, norms and certification – lack of clarity on regulations raises investment risks
- Insufficient skills and talent – mismatch between demand for digital skills and availability in local labour market
- Unresolved questions around data security and privacy – developing digital trust requires strengthened cyber security

#### Cyber security, threats and risks matter as we digitise

- 69% of respondents believe addressing network cyber security risks is of critical importance
- 27% indicate addressing cyber security is critical to mitigate damage to reputation, loss of trust and data loss

#### Top 3 Global Challenges

**40%**

Lack of clear digital operations vision and support from top management

**38%**

Unclear economic benefits from digital investments

**36%**

High financial investment requirements

#### Top 3 Vietnam Challenges

**18%**

Lack of digital standards, norms and certification

**16%**

Insufficient skills and talent (local labour market)

**15%**

Unresolved questions around data security and privacy

*Q: How important do you think it is to address network cyber security when planning for Industry 4.0?*



**69%** of critical importance



## Companies are investing heavily and expecting strategic benefits

### THE TAKEAWAYS

To address impacts and position themselves strategically, Vietnamese corporations estimate to be spending massively on digitisation and automation now and within the next 5 years. On average, Vietnamese respondents estimate potential investments may be significantly larger than global estimates, estimated approximately 2-3 times larger\*.

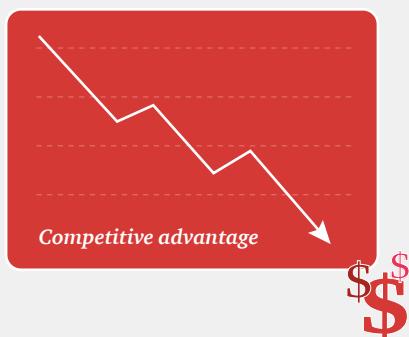
### THE DATA

#### Significant investment now and expected to grow further

- Overall, respondents estimate investments in digitisation to be around 9% of annual revenue
- Respondents expect investments to reach around 22% of annual revenue within the next 5 years
- PwC's 2016 Global Industry 4.0 Survey respondents from 26 countries; USA, Canada, Brazil, UK, European countries, South Africa, Middle East, China, India and Australia, put global investment estimates at 5% of annual revenue

\*The above is an estimate, given the lack of clear comparison between both studies.

*“Companies that do not strategically invest will lose competitive advantage in the long-term”*



Q: Average percentage of annual revenue invested for digitisation:  
Current vs Next five years

Current average



9% of revenue

Next 5 years average

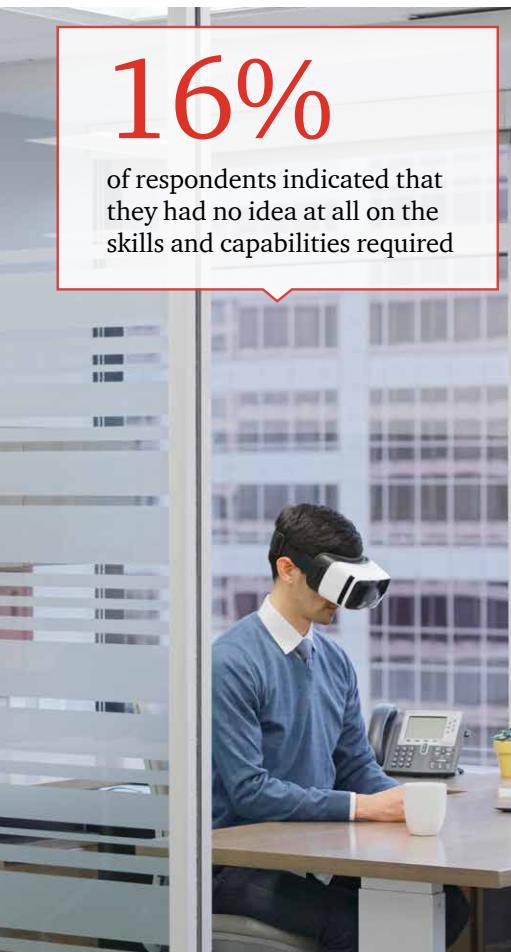


22% of revenue

Global respondents indicate a median investment of 5%

**16%**

of respondents indicated that they had no idea at all on the skills and capabilities required



## Lack of clarity on needed skills to accompany technology advancement

### THE TAKEAWAYS

Despite recognising that the right skills and capabilities need to be developed to accompany advances in technology, many respondents lack clarity on the specific skills, knowledge and capabilities required to make the digital integration with Industry 4.0 a reality in Vietnam. Core basic capabilities required for the industrial revolution, such as data analytics, are also lacking.

### THE DATA

#### Lack of clarity in the workforce of the specifically required skills to succeed

- Only 14% believed that they and their employees have a clear view of the skills required for digital transformation
- 16% of respondents indicated that they had no idea at all on the skills and capabilities required
- The large majority of 70% of respondents fell in between the extremes, in their understanding of required skills

#### Data analytics, a core capability, is not consistently embedded across local organisations

- Only 13% of organisations have advanced data analytics capabilities within the organisation
- The majority (57%) only use data analytics in critical functions or on an ad-hoc basis

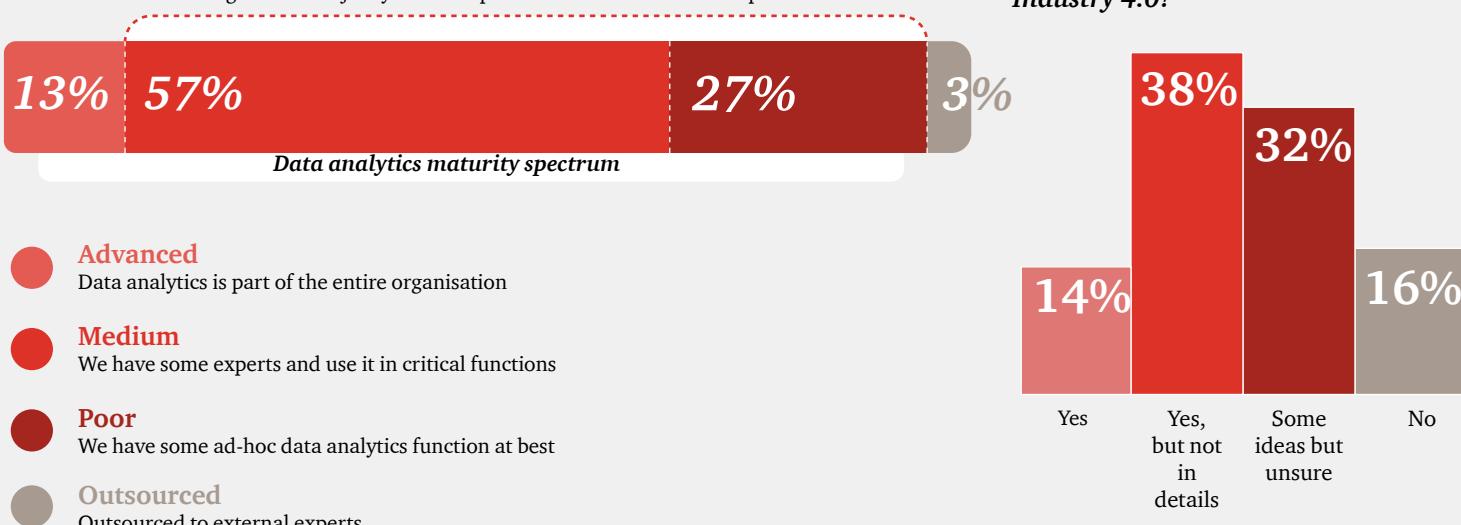
#### A skills framework to guide capability development is needed

- 84% of respondents indicated a need for a skills framework to guide Industry 4.0 capability development

**Q: Average percentage of annual revenue invested for digitisation:**

**Current vs Next five years**

Range where majority of VN respondents indicated their companies are at.



## Business to take the lead with government support

### THE TAKEAWAYS

Most participants agree that business needs to take the lead, with a large portion of participants asking for government involvement in this process. Effective partnership and collaboration between government bodies, industry bodies and private organisations is required to embed automation and digitisation in Vietnamese organisations successfully.

### THE DATA

#### Business to take the lead, with involvement from government

- 64% indicated that business needs to take the lead in Vietnam's digitisation efforts
- While not the majority, 32% would like to see government take an active role in this process

#### Public Private Partnerships is the way forward

- 74% value a public private partnership (PPP) framework between the Government, Education and Industry to help equip people with the required skills of the future

*Q: Is there a need for an industry-wide skills framework to facilitate the development of critical capabilities to prepare for Industry 4.0?*



*Q: Who needs to take the lead in ensuring Vietnam's readiness for Industry 4.0?*



**64%**  
indicated that business needs to take the lead in Vietnam's digitisation efforts



## Key contacts

### **Grant Dennis**

General Director

PricewaterhouseCoopers Consulting (Vietnam) Ltd.

+84 28 3824 0127

dennis.a.grant@pwc.com

### **Christopher Lee (Aik Sern)**

Senior Manager, Management Consulting

PricewaterhouseCoopers Consulting (Vietnam) Ltd.

+84 28 3823 0796 Ext. 1636

lee.aik.sern@pwc.com

## Our offices

### **Ho Chi Minh City**

Floor 8, Saigon Tower

29 Le Duan Street, District 1

Ho Chi Minh City

Tel: +84 28 3823 0796

### **Hanoi**

Floor 16, Keangnam Hanoi Landmark 72

Pham Hung Road, Nam Tu Liem District

Hanoi

Tel: +84 24 3946 2246

[www.pwc.com/vn](http://www.pwc.com/vn)

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