



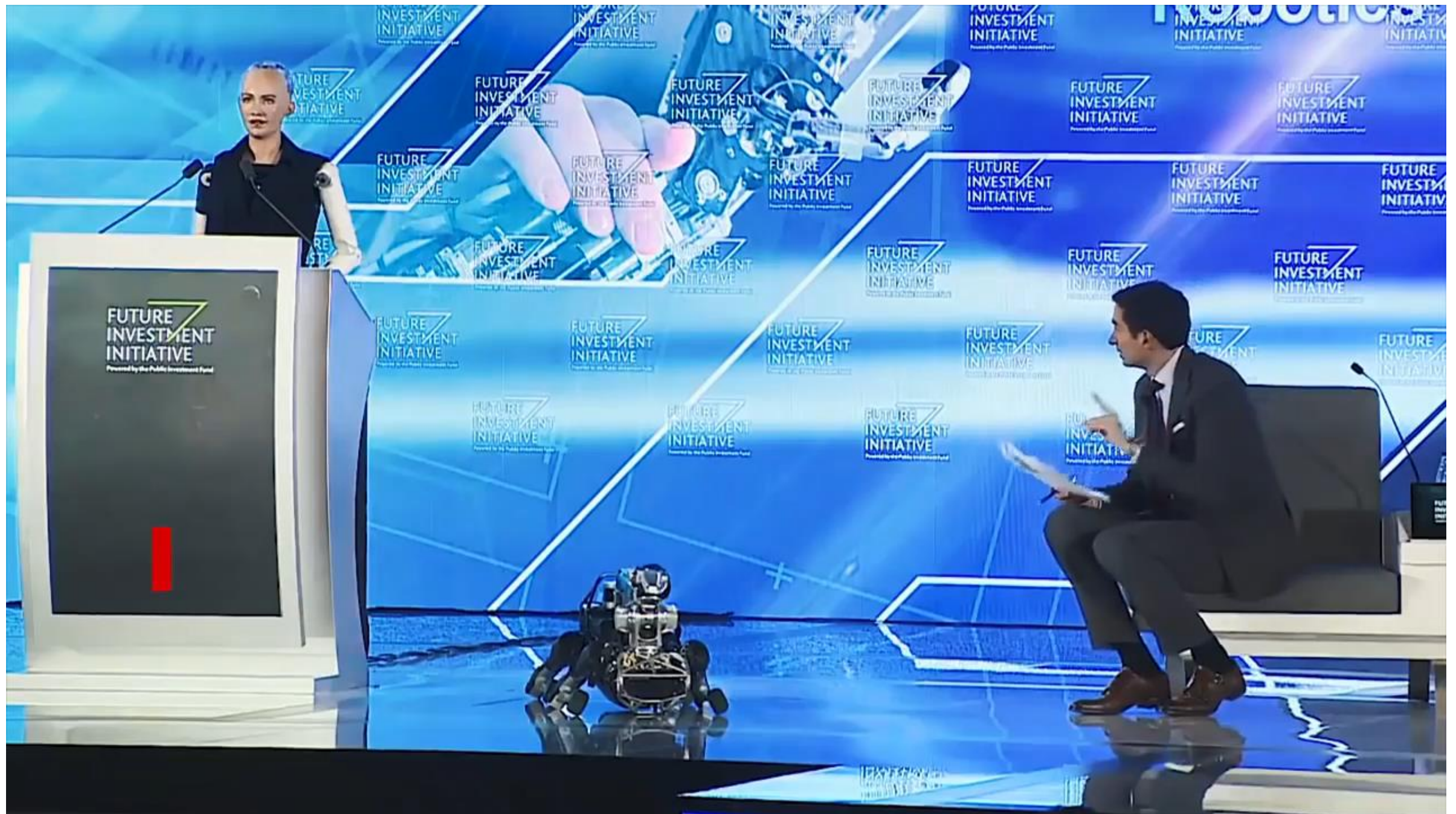
# TECHNOLOGY DEVELOPMENTS IMPACTING CA PROFESSION

CA SAURABH GOENKA






*The World is Changing. Intelligence is Leading that change.*



Video Credits : Jakarta Post



Did you ever anticipate that a robot could one day be granted the citizenship of an advanced economy?

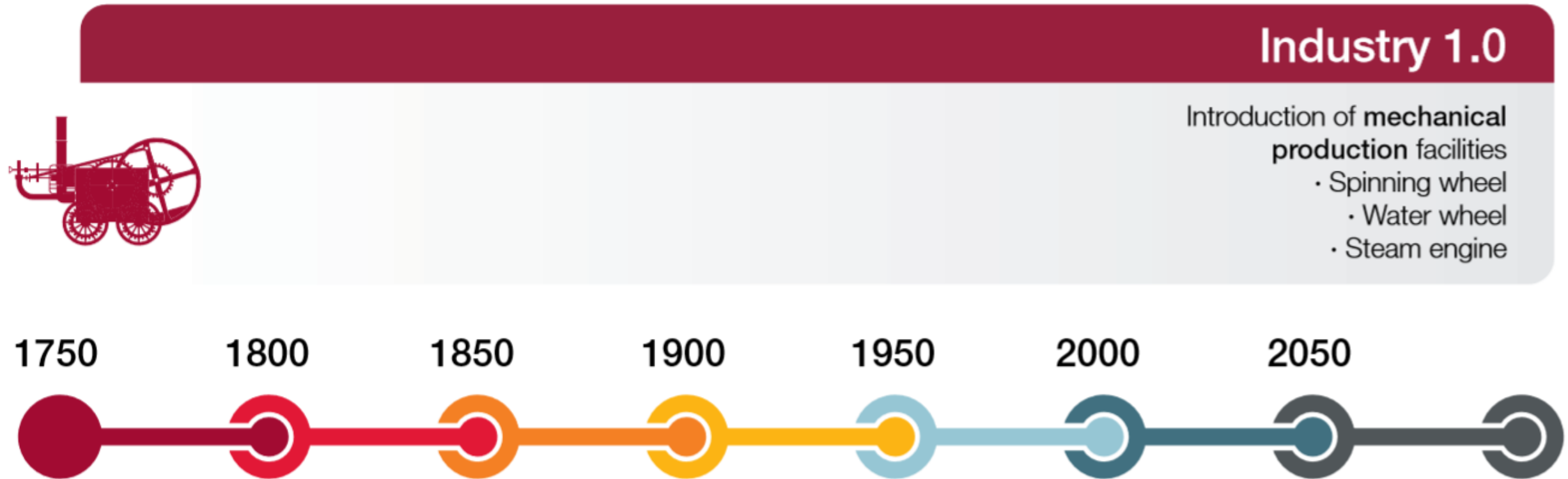
**Question**



Why am I here today?

**Question**

- 1 Understanding Industry 4.0 and the Digital Transformation wave
- 2 A sneak peek into the key Digital Technologies enabling Digital Transformation
- 3 What does Industry 4.0 mean for the CA Profession – What is Profession 2.0
- 4 What do you do to embrace Profession 2.0
- 5 Questions and Answers





## Industry 2.0

Manufacturing with the **help of electricity (mass production)**

- Electricity
- Conveyor belts
- Assembly lines



## Industry 1.0

Introduction of **mechanical production facilities**

- Spinning wheel
- Water wheel
- Steam engine

1750

1800

1850

1900

1950

2000

2050





## Industry 3.0

Manufacturing with IT to  
**automate production**

- Electronics
- IT



### Industry 1.0

Introduction of **mechanical production facilities**

- Spinning wheel
- Water wheel
- Steam engine



### Industry 2.0

Manufacturing with the help of **electricity (mass production)**

- Electricity
- Conveyor belts
- Assembly lines



1750

1800

1850

1900

1950

2000

2050



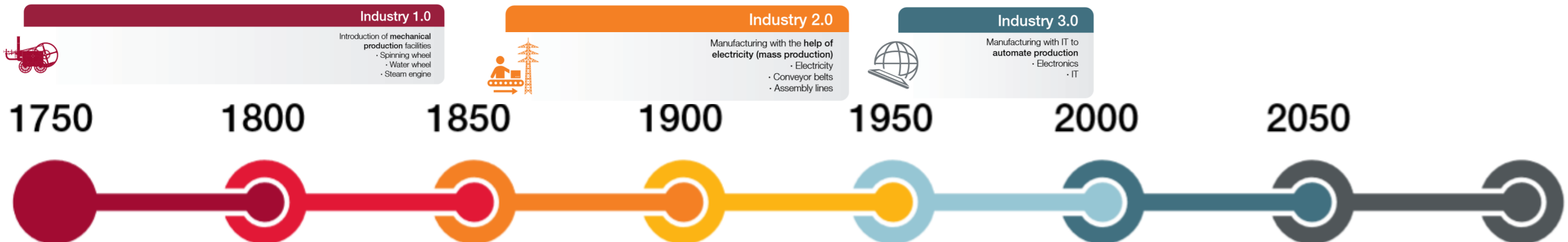
# Understanding Industry 4.0 and the Digital Transformation wave

## Industry 4.0



Integration of **digital and physical systems**

- Internet of Things
- Big data analytics
- Robotics and 3D printing





## Industry 4.0



Integration of **digital and physical systems**

- Internet of Things
- Big data analytics
- Robotics and 3D printing

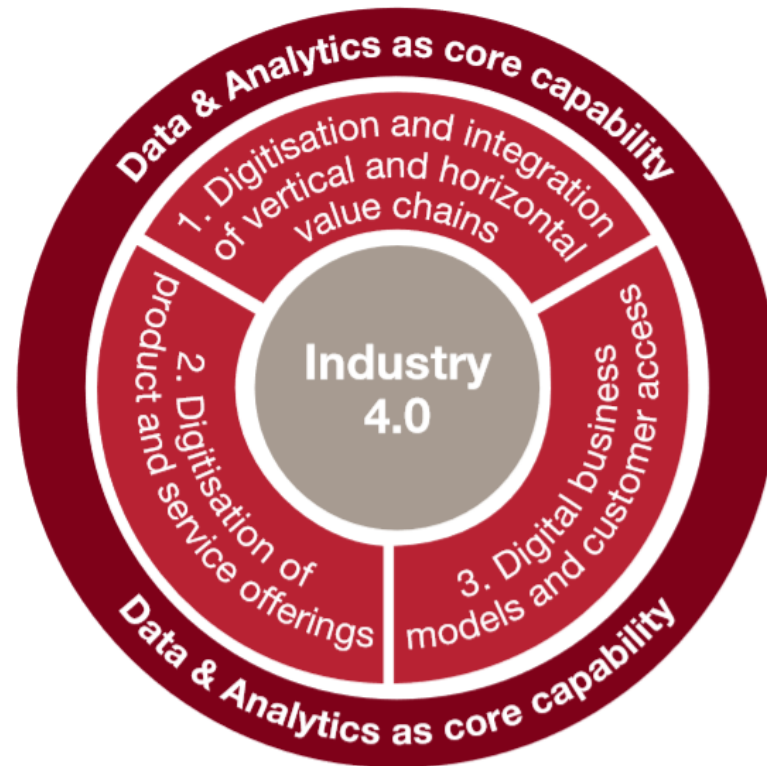


## Industry 4.0



Integration of **digital and physical systems**

- Internet of Things
- Big data analytics
- Robotics and 3D printing



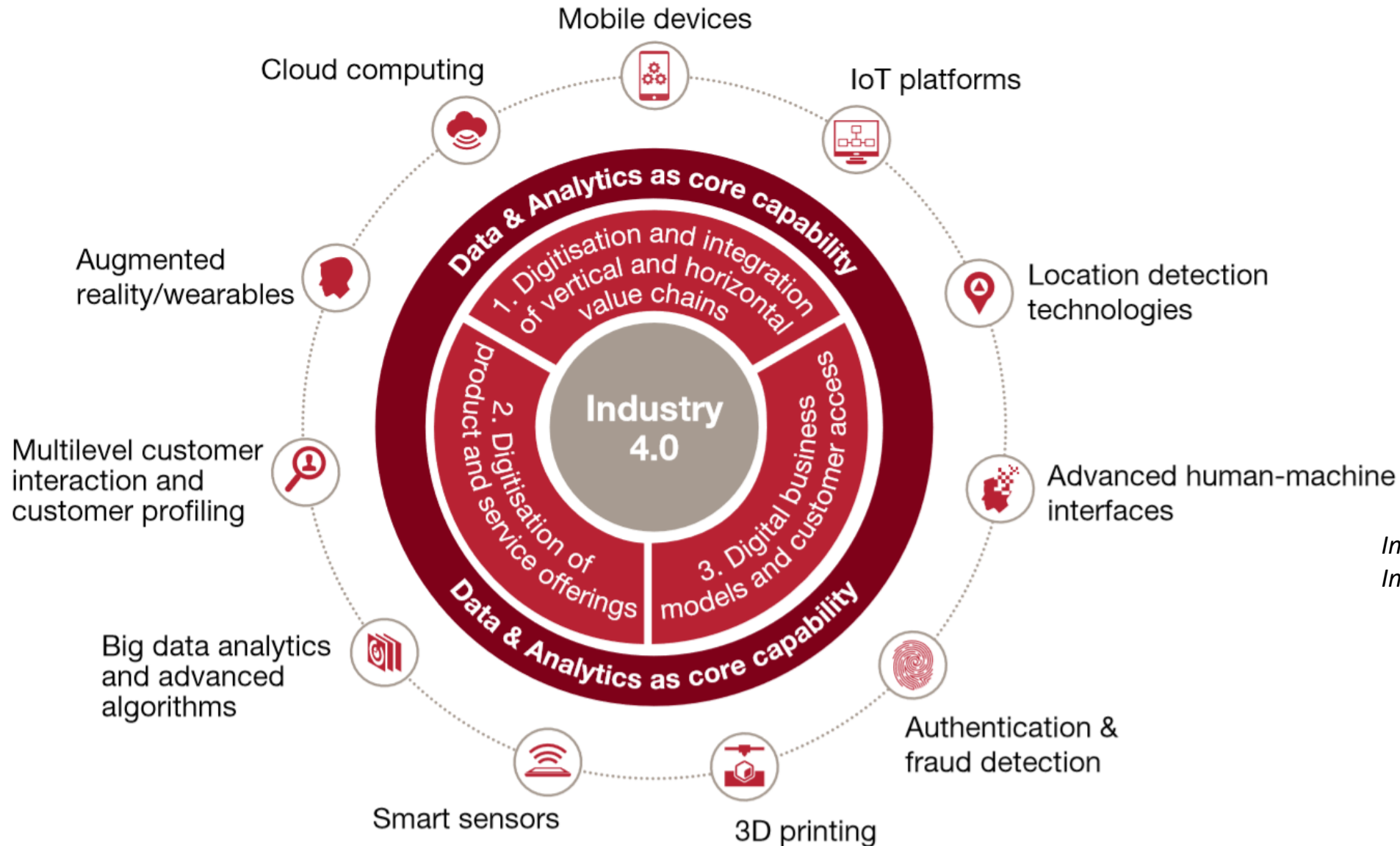
## Industry 4.0



Integration of **digital and physical systems**

- Internet of Things
- Big data analytics
- Robotics and 3D printing

# Understanding Industry 4.0 and the Digital Transformation wave



Industry 1.0 – 4.0 journey credits : CGI

Industry 4.0 Framework credits : PwC

## Industry 4.0



Integration of **digital and physical systems**

- Internet of Things
- Big data analytics
- Robotics and 3D printing



*Video Credits : Alphabet Inc. / Google*

- 1 Understanding Industry 4.0 and the Digital Transformation wave
- 2 A sneak peek into the key Digital Technologies enabling Digital Transformation
- 3 What does Industry 4.0 mean for the CA Profession – What is Profession 2.0
- 4 What do you do to embrace Profession 2.0
- 5 Questions and Answers



1

2

# A sneak peek into the key Digital Technologies enabling Digital Transformation

3

4

5



ADVANCED ANALYTICS

What is the most valuable asset in the world today?

**Question**

# A sneak peek into the key Digital Technologies enabling Digital Transformation



David Parkins

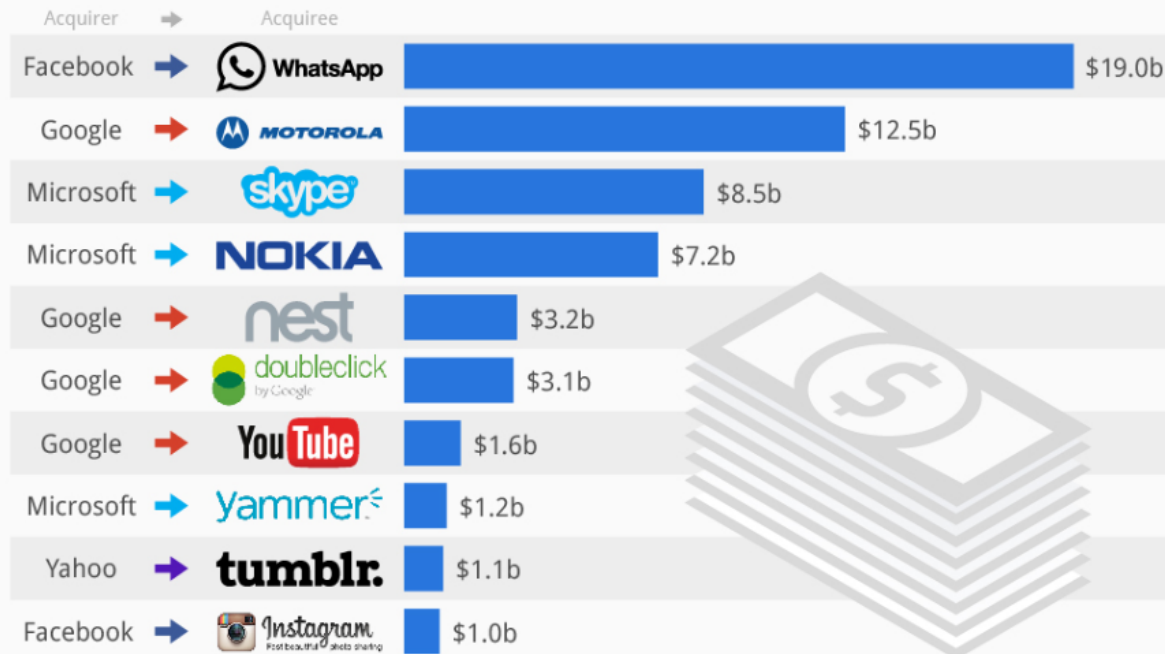
## 2019 *This Is What Happens In An Internet Minute*



# A sneak peek into the key Digital Technologies enabling Digital Transformation

## WhatsApp Deal Dwarfs Other High-Profile Tech Acquisitions

Value of selected tech company acquisitions



@StatistaCharts

Source: Media reports

statista



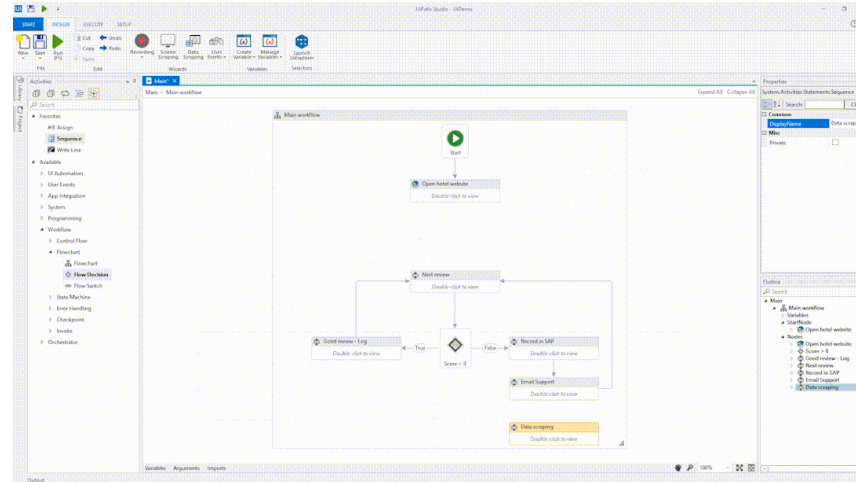
# Cambridge Analytica



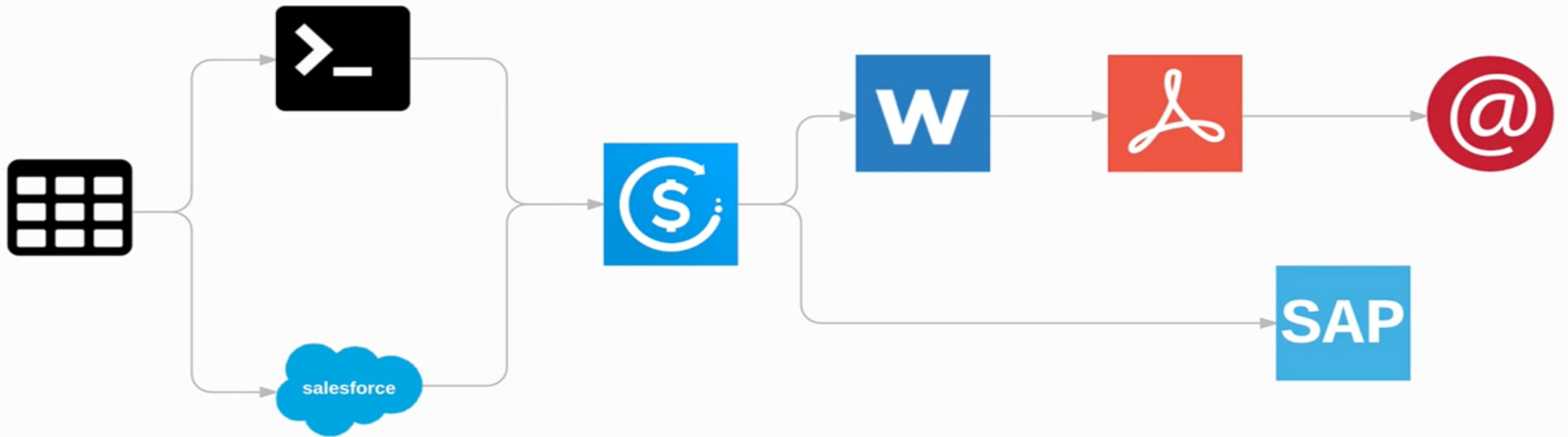
# A sneak peek into the key Digital Technologies enabling Digital Transformation



ADVANCED ANALYTICS



ROBOTICS PROCESS AUTOMATION (RPA)





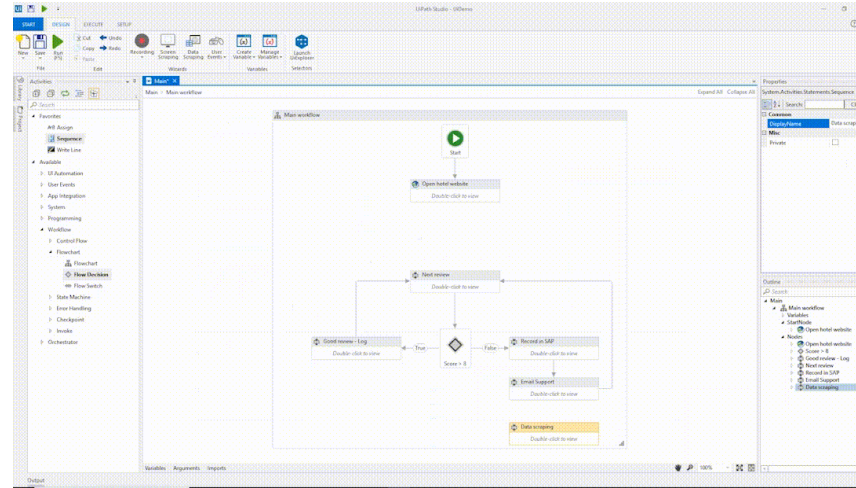
Welcome to the Deloitte TaxLab 2017, the 4th edition already!



# A sneak peek into the key Digital Technologies enabling Digital Transformation



ADVANCED ANALYTICS



ROBOTICS PROCESS AUTOMATION (RPA)



CLOUD AND MOBILITY

ARTIFICIAL NEURAL NETWORKS



AI AND MACHINE LEARNING

1

2

# A sneak peek into the key Digital Technologies enabling Digital Transformation

3

4

5

## Programming

**Data**

```
01100110101000  
01010000101000
```

**Program**

```
01100110101000  
01010000101000
```

**Computer****Output**

## Machine Learning

**Data**

```
01100110101000  
01010000101000
```

**Output**

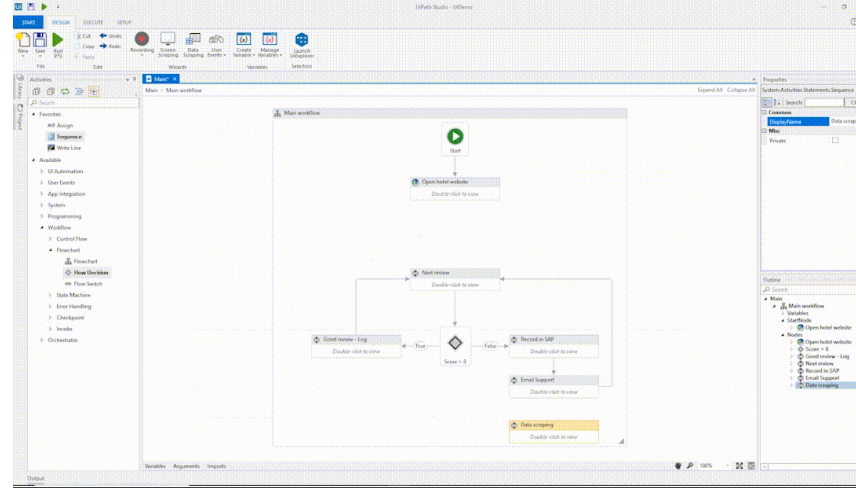
```
01100110101000  
01010000101000
```

**Computer****Program**

# A sneak peek into the key Digital Technologies enabling Digital Transformation



ADVANCED ANALYTICS



ROBOTICS PROCESS AUTOMATION (RPA)



CLOUD AND MOBILITY

ARTIFICIAL NEURAL NETWORKS

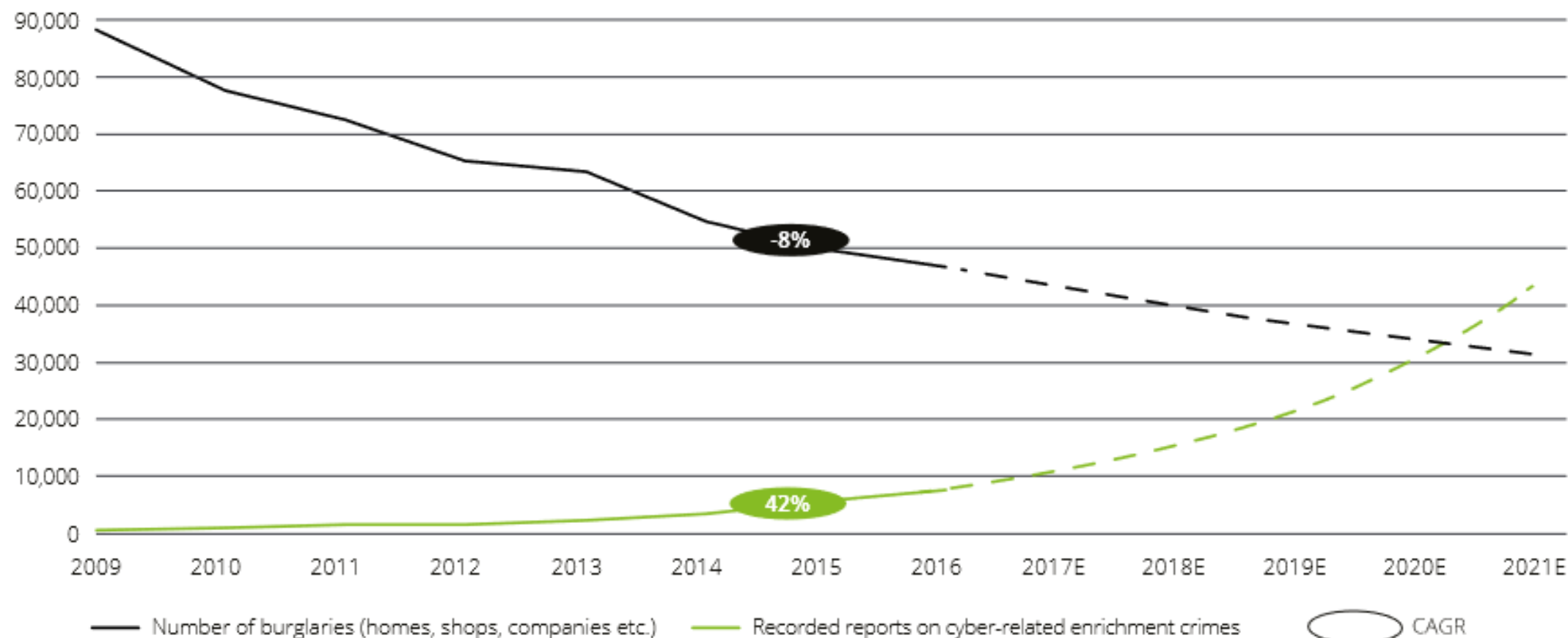


AI AND MACHINE LEARNING



CYBERSECURITY

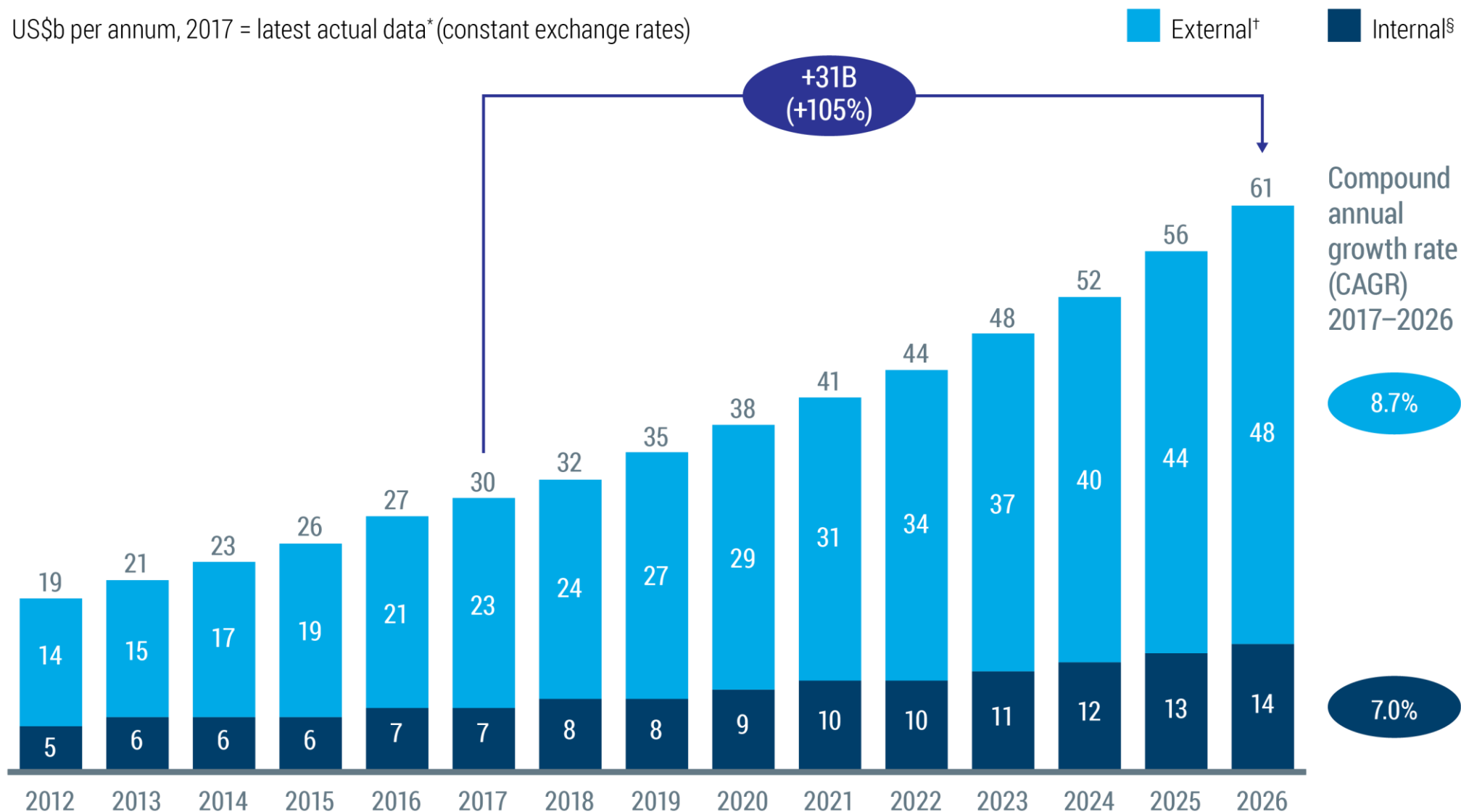
# A sneak peek into the key Digital Technologies enabling Digital Transformation



Sources: Danish Police, Danmarks Statistik

# A sneak peek into the key Digital Technologies enabling Digital Transformation

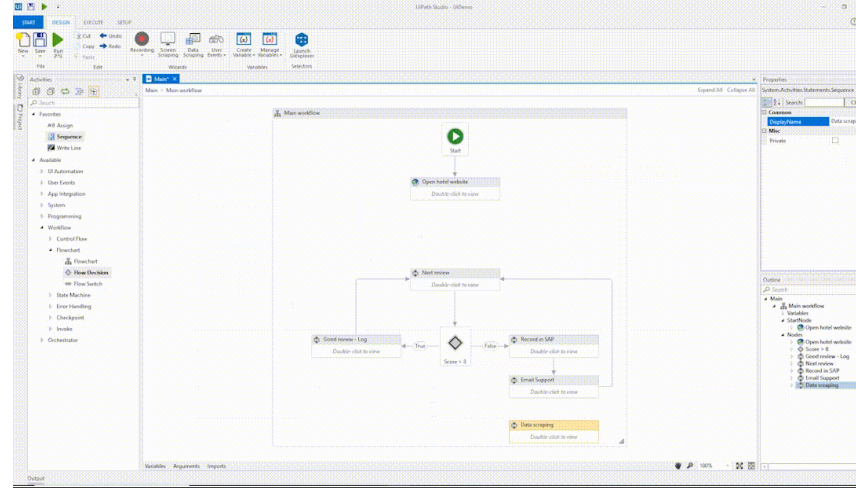
US\$b per annum, 2017 = latest actual data\* (constant exchange rates)



# A sneak peek into the key Digital Technologies enabling Digital Transformation



ADVANCED ANALYTICS



ROBOTICS PROCESS AUTOMATION (RPA)



CLOUD AND MOBILITY

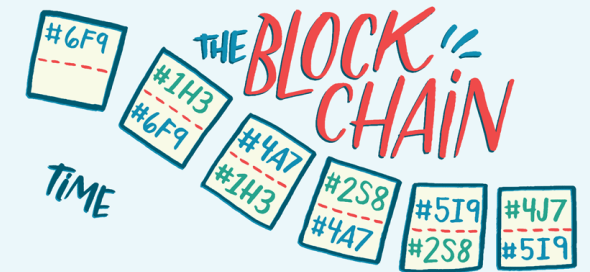
ARTIFICIAL NEURAL NETWORKS



AI AND MACHINE LEARNING



CYBERSECURITY



BLOCKCHAIN

1 Understanding Industry 4.0 and the Digital Transformation wave

2 A sneak peek into the key Digital Technologies enabling Digital Transformation

3 What does Industry 4.0 mean for the CA Profession – What is Profession 2.0

4 What do you do to embrace Profession 2.0

5 Questions and Answers

Exponential Technologies	Visualization	In-Memory Computing	Blockchain	Robotics Process Automation	Internet of Things	Cognitive Computing	Advanced Analytics	Mobility
Finance areas								
Fixed Assets					X		X	
FP&A	X	X	X	X		X	X	X
Order-to-cash			X	X			X	X
Procure-to-pay			X	X	X		X	
Record-to-report				X			X	
Tax				X			X	
Treasury			X	X				
Investor Relations	X		X			X	X	X

**X** Areas of Finance Disruption







What changes do you see in Profession 2.0 vs Profession 1.0?

**Question**

	PROFESSION 1.0	PROFESSION 2.0
CA FIRMS AND CAs IN PRACTICE	<ul style="list-style-type: none"> <li>• Tax Filing Services</li> <li>• Traditional Audit and Assurance</li> <li>• MIS and reporting</li> <li>• Traditional transaction advisory</li> <li>• Engagement on demand</li> <li>• Local presence</li> </ul>	<ul style="list-style-type: none"> <li>• Tax Filing Automation</li> <li>• AI and Analytics enabled audit</li> <li>• Advanced Analytics and visualization</li> <li>• Decision impact forecasting</li> <li>• Analytics driven demand generation</li> <li>• Digital presence</li> </ul>
CORPORATE FINANCE	<ul style="list-style-type: none"> <li>• Finance as a support function</li> <li>• Responds to business needs</li> <li>• Manual push based reporting</li> <li>• Manual controllership function</li> <li>• Traditional internal audit</li> <li>• Descriptive reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Finance integrated with business</li> <li>• Forecasts business outcomes</li> <li>• Cloud based automated reporting</li> <li>• RPA driven controllership</li> <li>• AI and RPA driven internal audit</li> <li>• Predictive Analytics</li> </ul>

1 Understanding Industry 4.0 and the Digital Transformation wave

2 A sneak peek into the key Digital Technologies enabling Digital Transformation

3 What does Industry 4.0 mean for the CA Profession – What is Profession 2.0

4 What do you do to embrace Profession 2.0

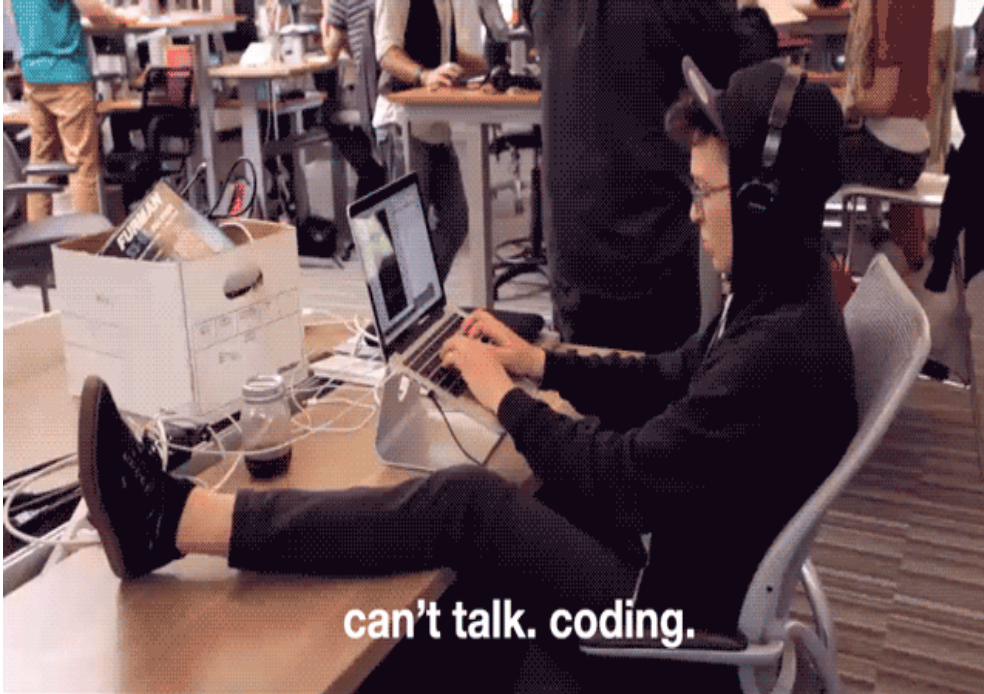
5 Questions and Answers



TRAIN YOURSELF AND BUILD CAPABILITY



STRATEGIZE YOUR FIRST DIGITAL PROJECT

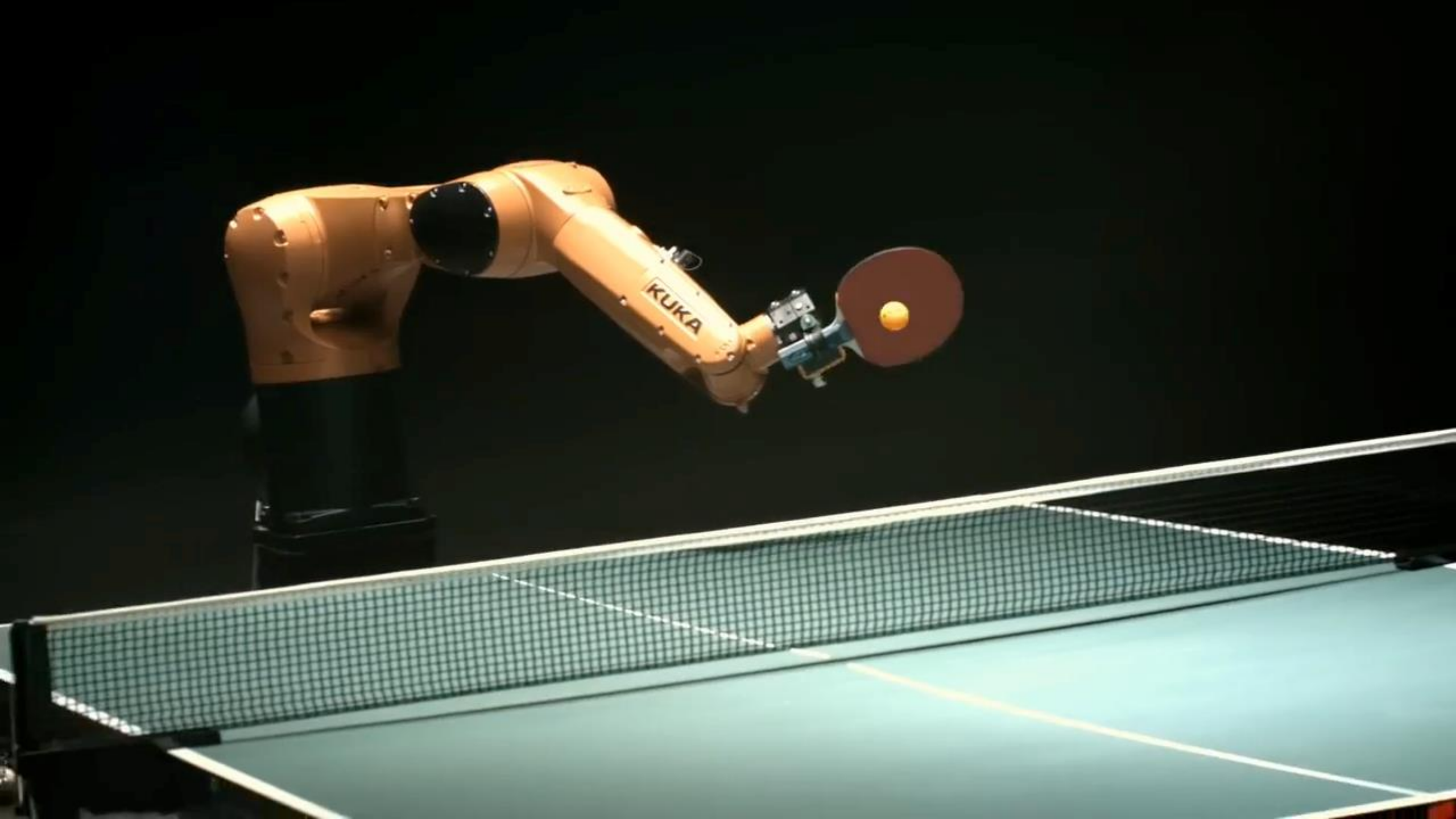


EMBRACE TECHNOLOGY



CASH IN ON INDUSTRY 4.0





1. *Sophia video by Hanson Robotics and The Jakarta Post*
2. *Industry 1.0 – 4.0 journey credits : CGI*
3. *Industry 4.0 Framework credits : PwC*
4. *Google Assistant video by Alphabet Inc. / Google*
5. *2018 CFO survey report by Grant Thornton*
6. *RPA use case video and F&A Heatmap by UiPath*
7. *Top 10 RPA Tools by HFS Research*
8. *Tax automation video by Deloitte Netherlands*
9. *Saurabh Goenka and MindMap Consulting for Analytics pyramid and F&A Transformation Use cases*
10. *YouTube and the producers of the movie The Accountant*
11. *Danish Police research*
12. *Gartner research for research on cybersecurity spend*
13. *US State of Cybersecurity Crime*
14. *Report titled Crunch Time – Future of Finance in a Digital World, Deloitte*
15. *Survey report by IT Governance UK*
16. *NTT Group global threat intelligence report*
17. *Verizon, 2016 data breach investigation report*
18. *Cisco, The Shadow IT Dilemma*
19. *Kuka Robotics and YouTube for Kuka Video*



## CA SAURABH GOENKA

[saurabh@mindmapconsulting.com](mailto:saurabh@mindmapconsulting.com)

[www.linkedin.com/in/saurabhgoenka](http://www.linkedin.com/in/saurabhgoenka)

