



# Strategic and Vision in Industry 4.0

CIMA-IAI, Jakarta, March 28, 2019

# Reality Check!



UNITED STATES  
DEPARTMENT OF LABOR

*65% of today's grade  
school kids will end up  
at jobs that haven't  
been invented yet*

United States Department of Labor:  
Futurework - Trends and Challenges for Work in the 21<sup>st</sup> Century

[Agenda](#)[Initiatives](#)[Reports](#)[Events](#)[About](#)[Global Agenda](#)[Davos 2016](#)[Workforce and Employment](#)

## 5 million jobs to be lost by 2020

**“Where will you  
end up?”**

# Agenda

- **Changes in the Business World**
  - **Challenges and Role of CFOs**
  - **Skill and Competencies**
  - **Re-inventing Finance in Digital Worlds**
  - **Discussions, Q&A**
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Facilitator:

**Arif Suseno, CA**

SVP – Business  
Finance RBWM

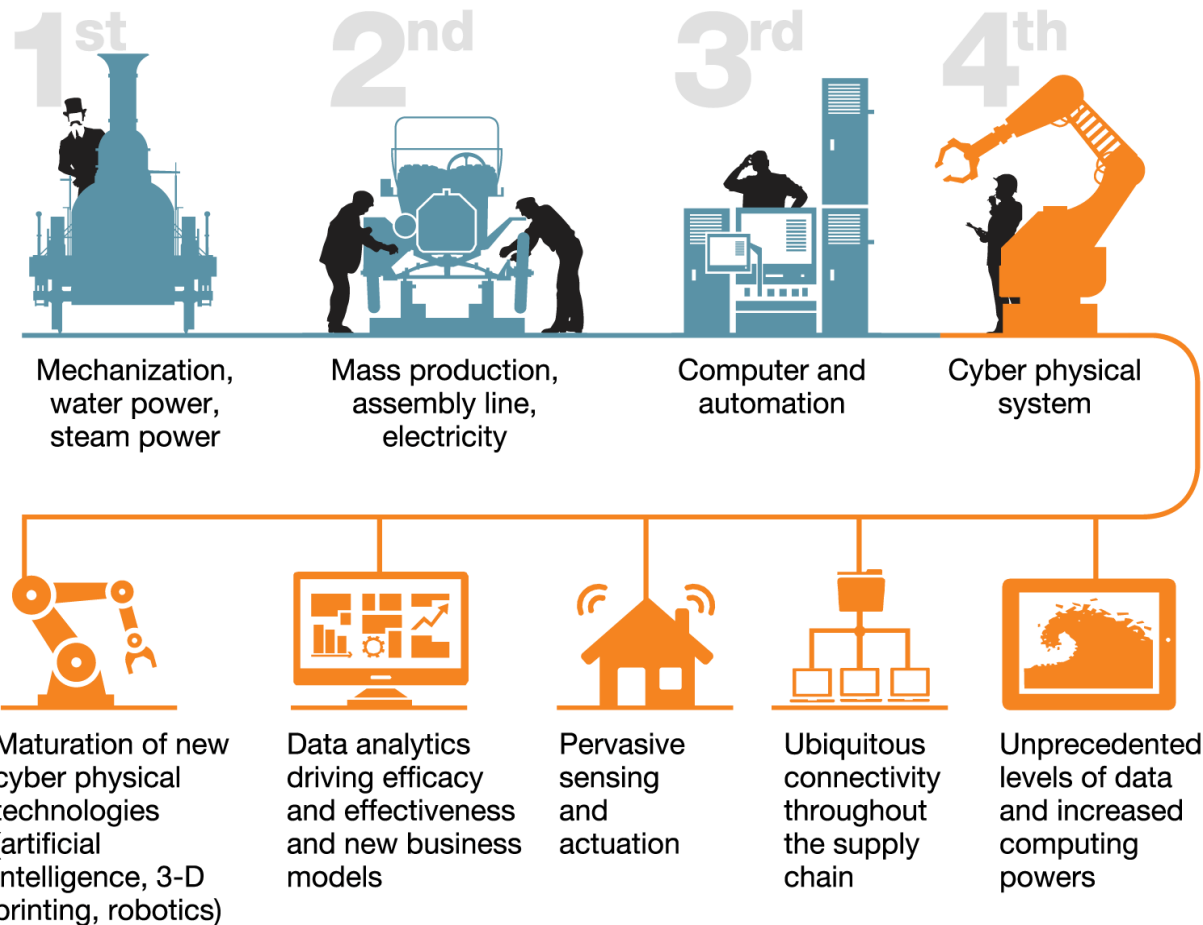
PT Bank HSBC  
Indonesia



# Changes in the Business World

# Industrial Revolutions

In the fourth industrial revolution, digital analytics enables a new level of operational productivity.



## Key Indications:

- Geographic
- Time
- Quality
- Disruptions to business model

# Industry 4.0

“Are we there yet?”



“Where are we now?”

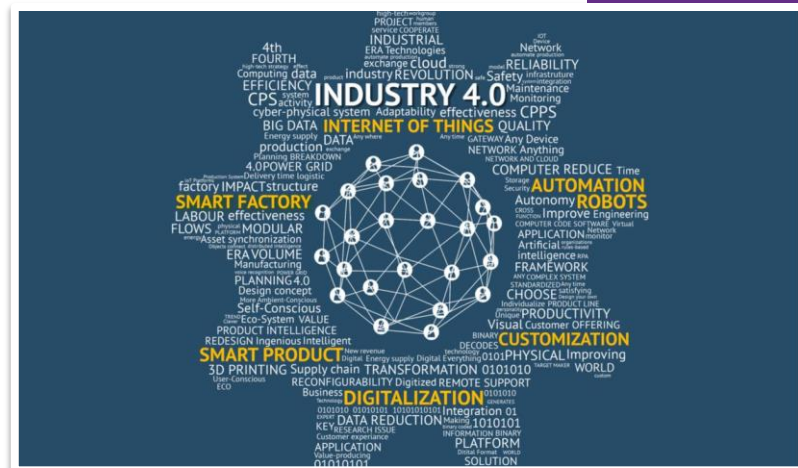
# Industry Revolution

## We are at the center of it!

- **Geographic** – Broadband Internet and Networking media, worldwide connectivity
  - **Time** – Computing powers, Straight through processes
  - **Quality** – Data Security and encryptions, Efficiency, Improved Analytics
  - **Disruptions** – Companies emerging and sunsets; Jobs creation and ceasing
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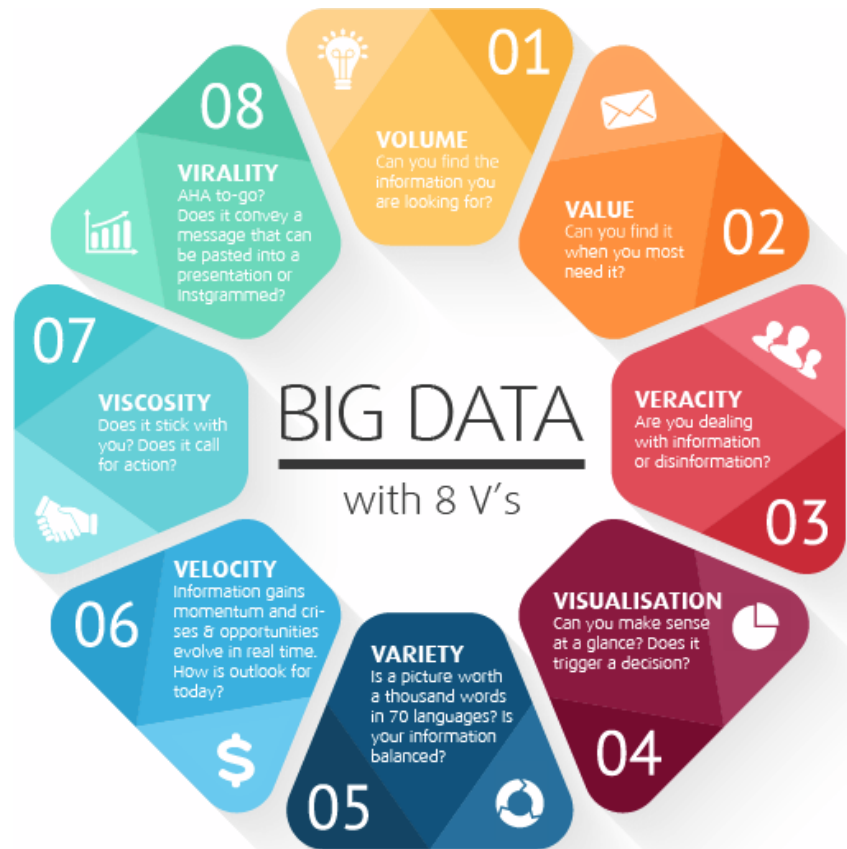
# Industry 4.0

- **Autonomous Sensory through IOT (Internet Of Things)**
- **Big Data**
- **Artificial Intelligence, Machine Learning, Deep Learning**
- **Blockchains**
- **Robotic Automation**
- **Cyber Security**
- **Cloud Computing**





# Internet of Things and Big Data



# Machine Learning and AI

## Traditional Programming



## Machine Learning



## Common use-cases of Machine Learning by functional area



### FINANCE AND BANKING

- Credit scoring
- Fraud detection
- Risk analysis
- Client analysis
- Optimised debit order strikes



### RETAIL AND E-COMMERCE

- Demand forecasting
- Price optimization
- Recommendations
- Fraud detection
- Customer segmentation



### MARKETING AND SALES

- Marketing and customer segmentation
- Price optimization
- Churn rate analysis
- Customer lifetime value prediction
- Upsell opportunity analysis
- Sentiment analysis in social networks



### TRAVEL AND BOOKING

- Demand forecasting
- Price optimization
- Price forecasting (for dynamically changing prices)



### HEALTH CARE AND LIFE SCIENCE

- Increase in diagnostic accuracy
- Identifying at-risk patients
- Insurance product cost optimization

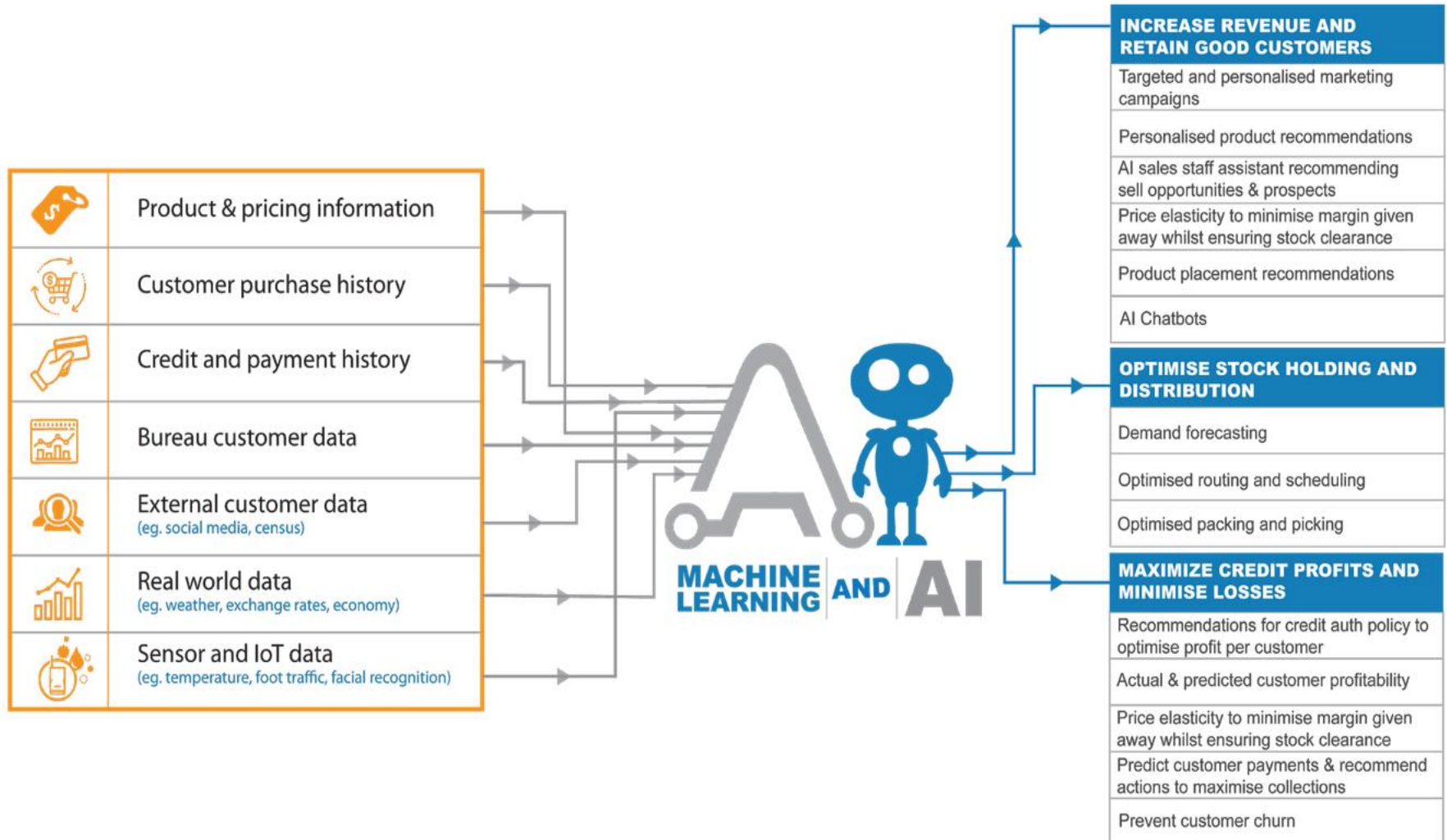


### OTHER

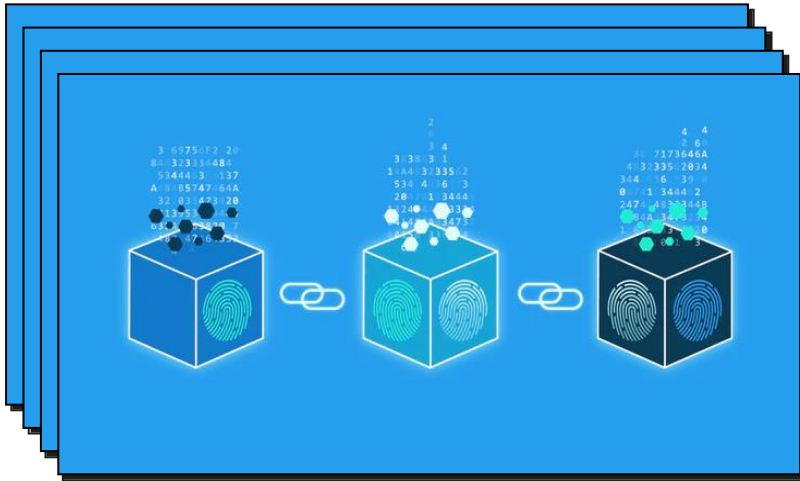
- Object recognition (photo and video)
- Content recommendations (movies, music, articles and news)
- Chabot's and virtual assistants
- And more

# Machine Learning and AI

Any organisation which possesses large amounts of data can monetize this data to gain a competitive edge at scale.



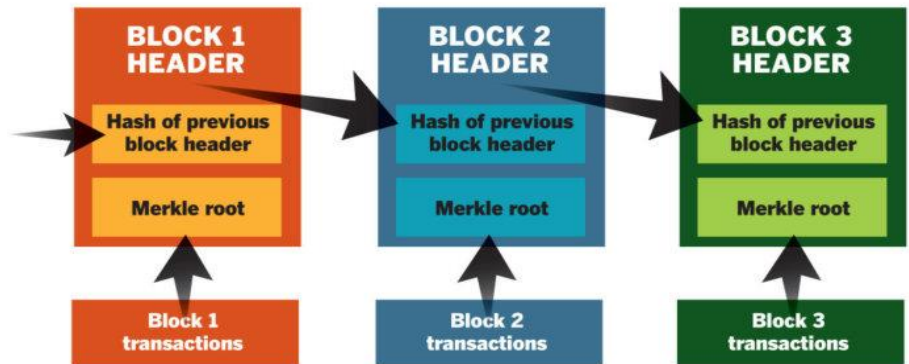
# Blockchain



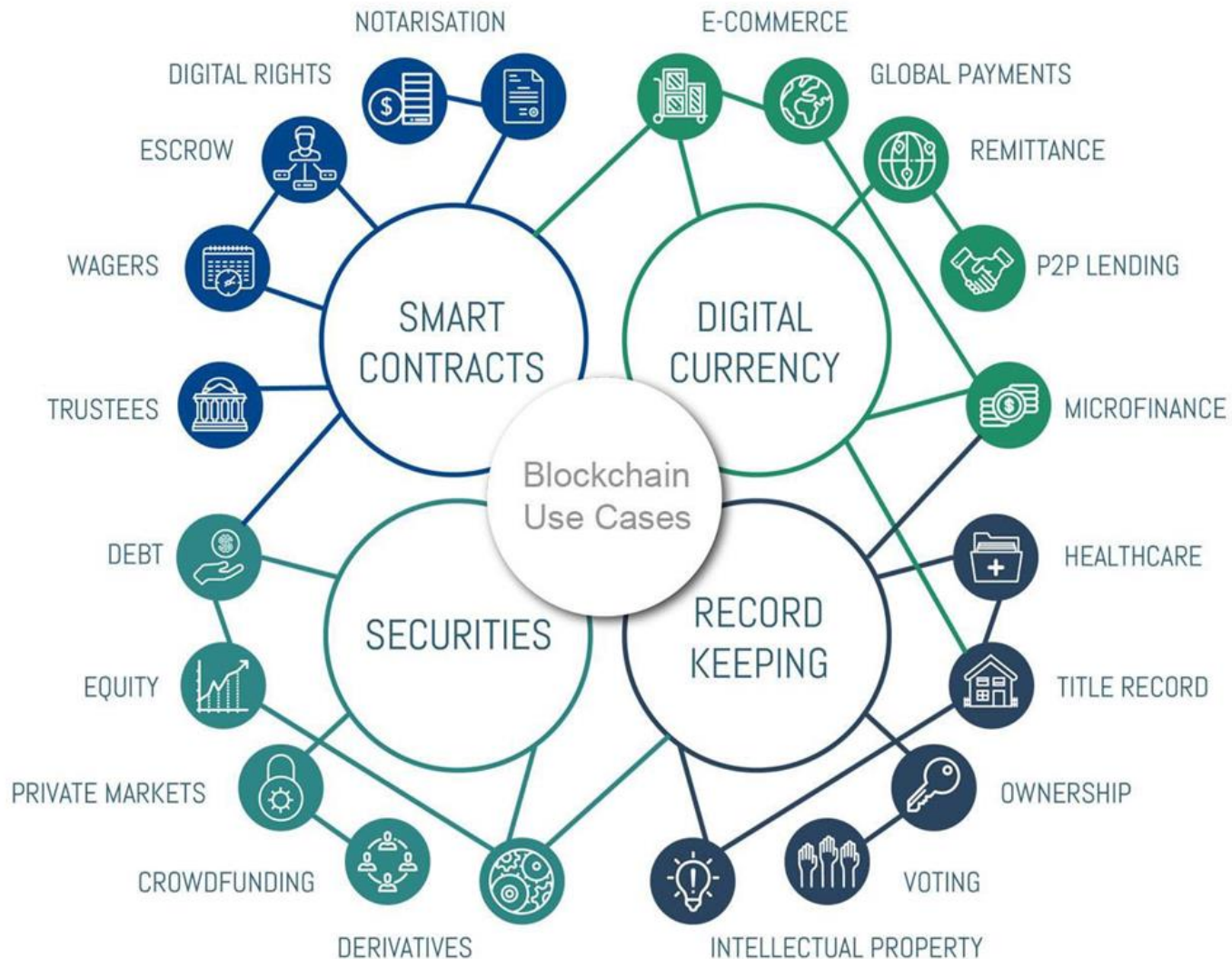
- Involving: Data blocks, Hashes, Chains, Decentralized (P2P networks)
- Improved data security and trust
- Remove intermediaries (i.e. validators, etc)



**With blockchain technology**, each page in a ledger of transactions forms a block. That block has an impact on the next block or page through cryptographic hashing. In other words, when a block is completed, it creates a unique secure code, which ties into the next page or block, creating a chain of blocks, or blockchain.



# Blockchain Application Potential (not only crypto-currencies...)





# Robotics Process Automation (RPA)

## RPA is..



Enterprise software...



...that replaces repetitive or rules-based tasks...



...across multiple systems / applications



## RPA is not..



Walking, talking robots



Virtual personal assistant



Artificial intelligence or voice recognition and reply software

## How RPA works:



Emulates human execution of repetitive processes via existing user interfaces



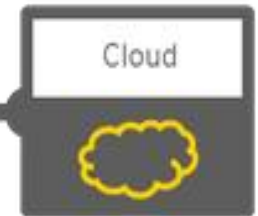
Robots are a virtual workforce controlled by the business operations teams



Sit alongside existing infrastructure, governed and controlled by IT



- ▶ Mainframe
- ▶ Custom applications
- ▶ Non-supported applications



- ▶ Third-party capabilities
- ▶ Industry utilities
- ▶ Internet capabilities

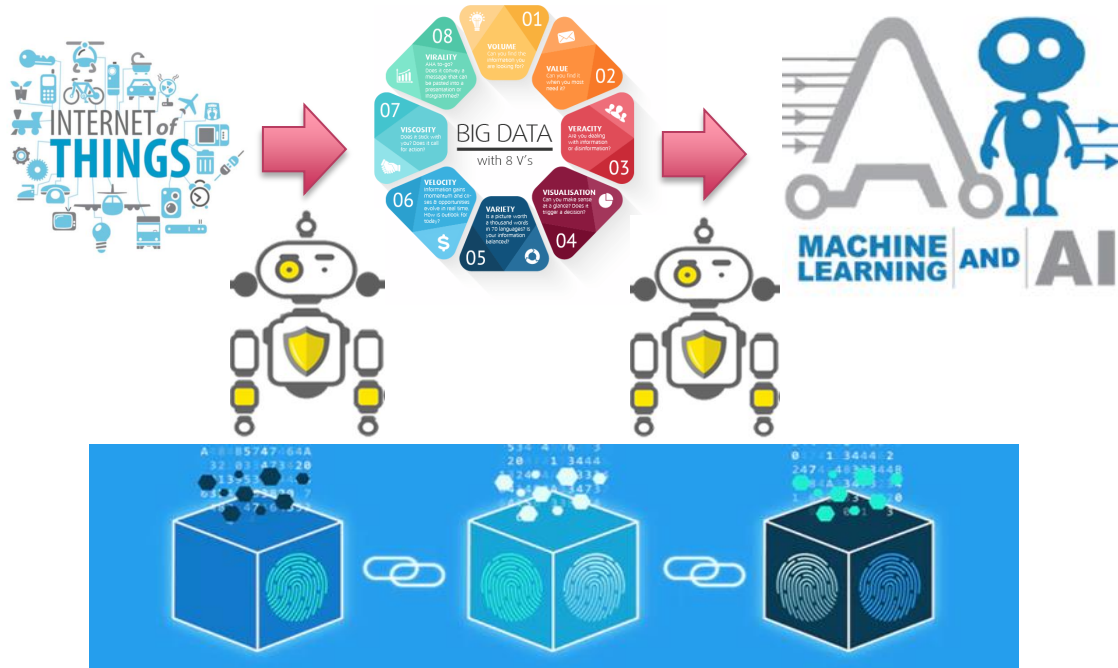


- ▶ Workflow and rules
- ▶ Imaging
- ▶ Digital channels



- ▶ Spreadsheets
- ▶ Data & analytical tools
- ▶ PDFs and emails

# Industry 4.0 Changes in the Business World (Summary)



**Revenue Streams**

**Cash Receipt and Disbursements**

**Supply Chains**

**Receivables & Payables**

**And many more....**

**Data is Key!**

**CyberSecurity**

**Digital Literacy!**

**Strategy**

**Competitive  
advantage**

# Industry 4.0 Changes in the Business World (sample)

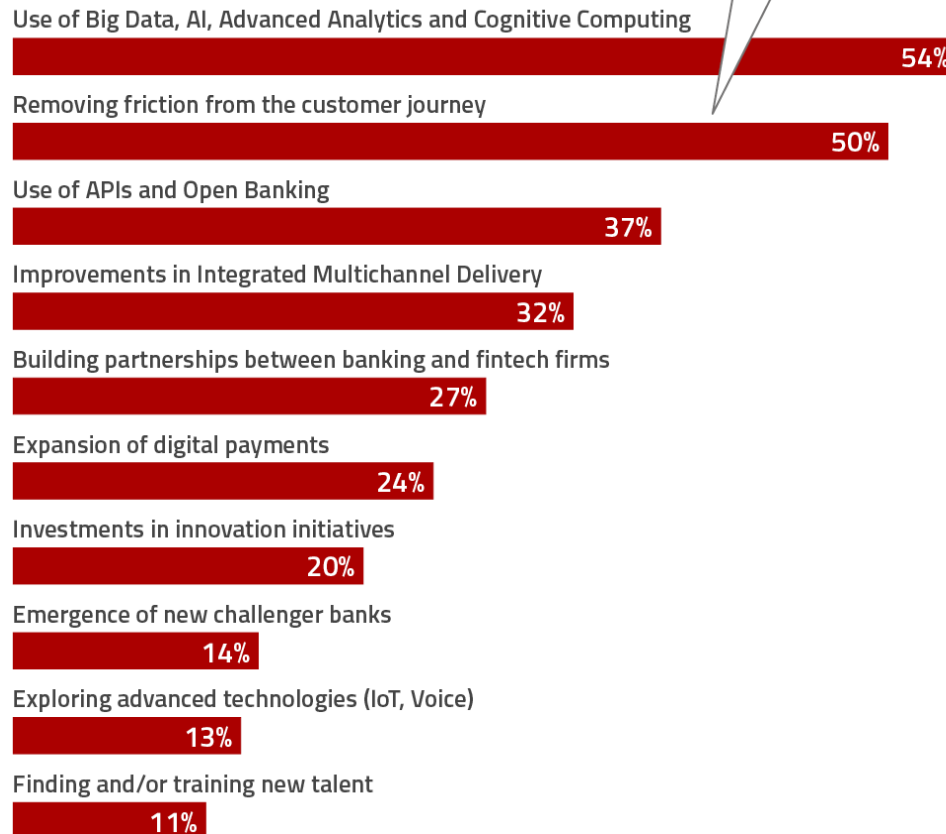




# Industry 4.0 Changes in the Business World (sample)

## Top ten trends for the retail banking industry in 2019

Q: What do you think will be the (3) three most important trends for the retail banking industry in the upcoming year?



SOURCE: Digital Banking Report Research © December 2018 The Financial Brand

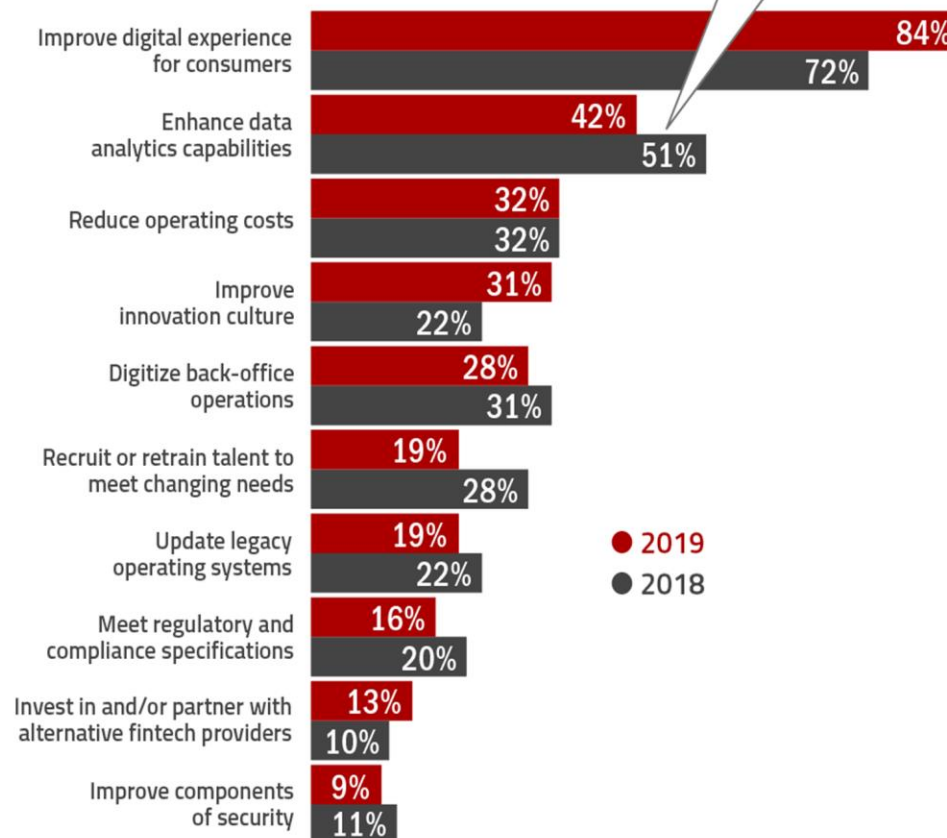
What are the challenges?

What should we do?

# Industry 4.0 Changes in the Business World (sample)

Top strategic priorities for financial institutions comparing 2019 & 2018

Q: What are your top 3 strategic priorities for your organization?



SOURCE: Digital Banking Report Research © December 2018 The Financial Brand

What are the challenges?

What should we do?



# Challenges in Industry 4.0

# Challenges in Industry 4.0

- New business models—the definition of a new strategy
- Rethinking your organization and processes to maximize new outcomes
- Understanding your business case
- Conducting successful pilots
- Helping your organization to understand where action is needed
- Change management, something that is too often overlooked
- Examination of company culture
- The genuine interconnection of all departments
- Recruiting and developing new talent

# Finance Professional Challenges

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CFOs and their C-level peers agree that finance leaders should spend more time leading. But the results suggest a gap between finance chiefs' current leadership on the executive team and what others expect.

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**"See what happens with Uber and the way it has disrupted [the taxi/transport] sector. What if someone does this [type of disruption] to the finance industry?"**

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Although some transformations include radical changes, most create significant improvements on the margin of existing operations.

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**"It is no longer about the financial statements but the value. A CFO has to make decisions to help other areas of the business to create value. Certain people need support and business partnering on how to create value out of the numbers that they see."**

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**"We are being challenged to stay relevant."**

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Working together, CFOs and CSOs have the stature to challenge biases and influence how the top team makes decisions to improve a company's performance.

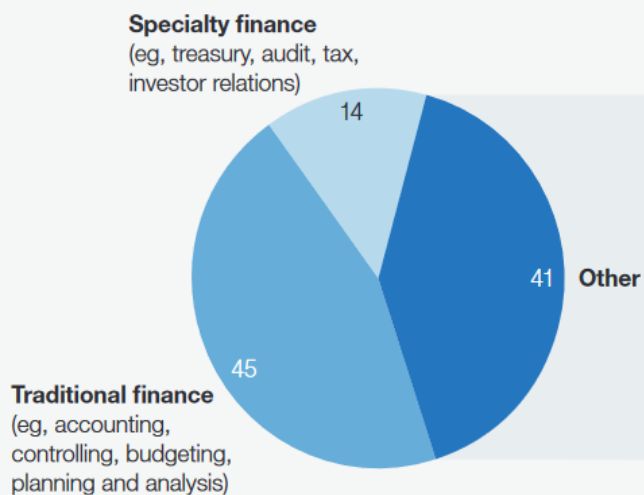
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# Role of CFO

Last year, four in ten CFOs spent most of their time on strategy, transformations, or another nonfinance area.

% of CFOs<sup>1</sup>

Roles where CFOs spent the most time, past 12 months



Areas where CFOs focused on nonfinance roles spent the most time, past 12 months



<sup>1</sup> In the first question, n = 193, and in the second question, n = 77. The second question was asked only of CFOs who say they spent the most time on other (nonfinance) roles in the past 12 months.

**COLLABORATION**  
with non Finance  
professionals is key  
for CFOs and  
Finance  
professionals

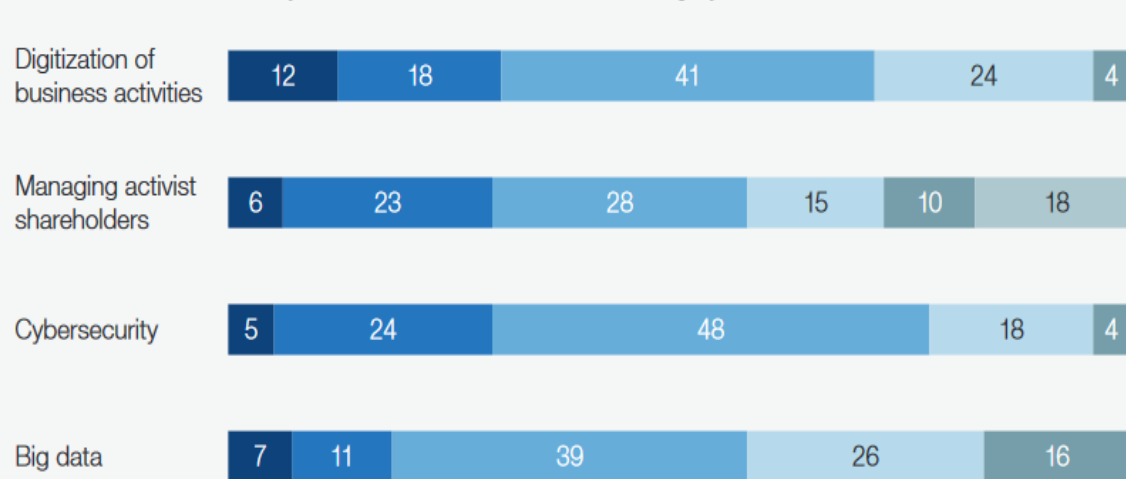
# Role of CFO

**For newer activities and trends, such as digitization, few CFOs say their companies are prepared to be competitive.**

% of CFOs, n = 193

How well companies' current capabilities meet what they will need to be competitive over next 5 years

Very well Well Somewhat Slightly Not at all Don't know



How do we  
prepare better?

# 7 Key Questions a Strategic Thinking CFO Should Consider

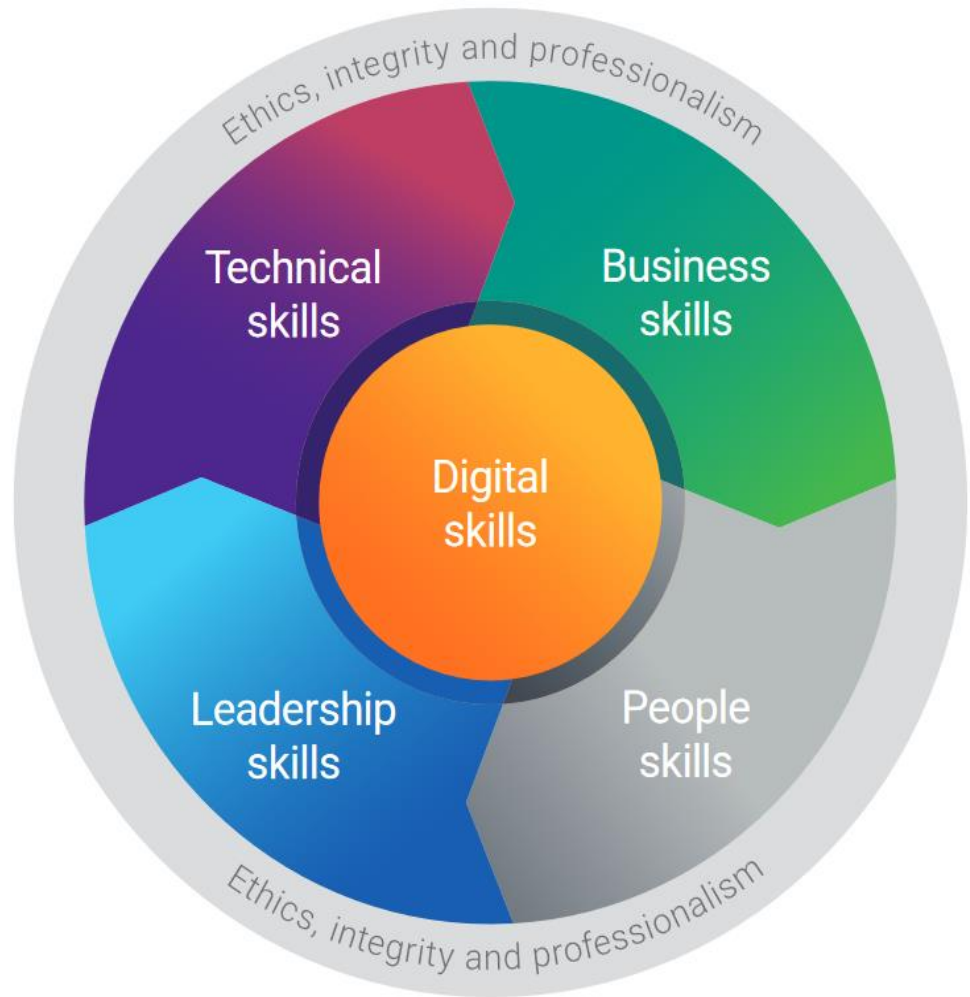
1. What's the company's plan for growth?
2. What are the challenges to your company's growth plan and how might you overcome them?
3. What uncertainty is your company facing and how can you help negotiate it?
4. Where does your company spend the most without proven ROI?
5. Are your company's growth goals big enough?
6. What could halt your company's goals and what could help nullify it?
7. What should your company consider stopping



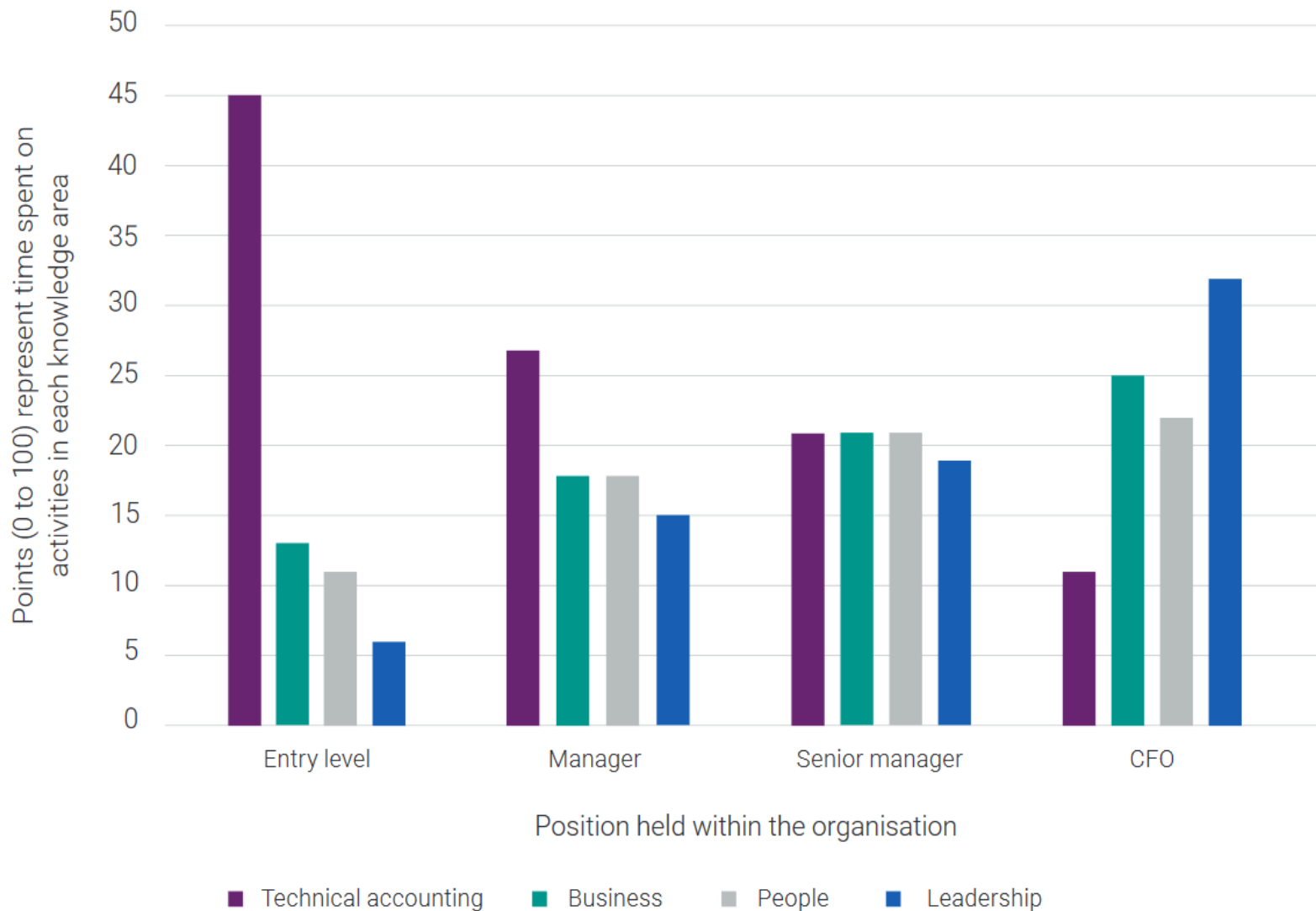


# Competency and Skills

# CIMA Competency Framework



# CIMA Competency Framework



# CIMA Competency Framework

Financial accounting and reporting

Cost accounting and management

Business planning

Management reporting and analysis

Corporate finance and treasury management

Risk management and internal control

Accounting information systems

Tax strategy, planning and compliance

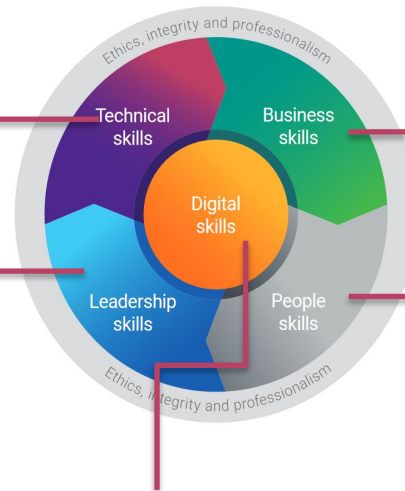
Team building

Coaching and mentoring

Driving performance

Motivating and inspiring

Change management



Information and digital literacy

Digital content creation

Problem-solving

Data strategy and planning

Data analytics

Data visualisation

Strategy

Business models

Market and regulatory environment

Process management

Business relations

Business ecosystems management

Project management

Macroeconomic analysis

Influence

Negotiation and decision-making

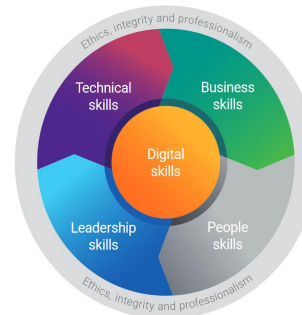
Communication

Collaboration and partnering

# The Three Important Business Pillars

The three pillars represent specific areas of knowledge. The three pillars are interlinked to provide a coherent body of knowledge that will equip you with the competencies a financial leader require.

- **The enterprise pillar** deals with the formulation of strategy and its effective implementation.
- **The performance pillar** uses the tools and techniques of management accounting and risk management to ensure that strategy is realistic and to monitor its implementation.
- **The financial pillar** focuses on the financial accounting and reporting obligations of the organisation.





CGMA®

Future of Finance

# Re-inventing Finance for a Digital World

# Finance Activities

Figure 4. Basic finance activities – from information to impact

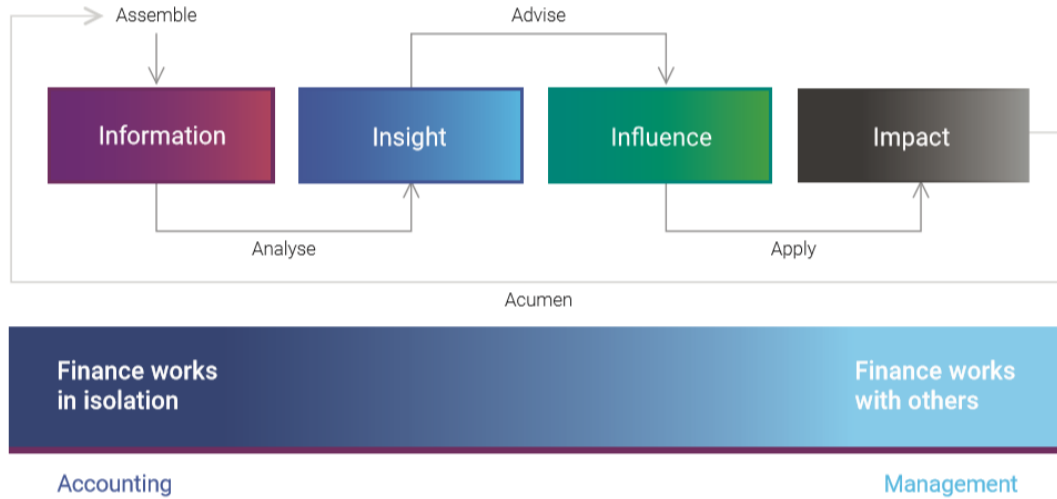
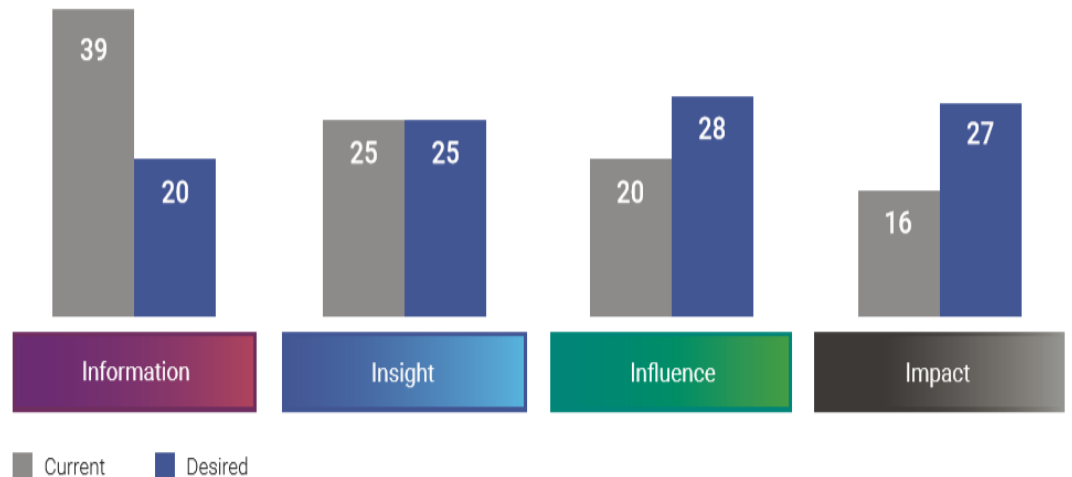


Figure 5. Basic finance activities – percentage of time currently spent on activities vs desired



# Finance Activities and Modernization

Figure 6. Basic finance activities – time currently spent on activities vs desired, by finance function role

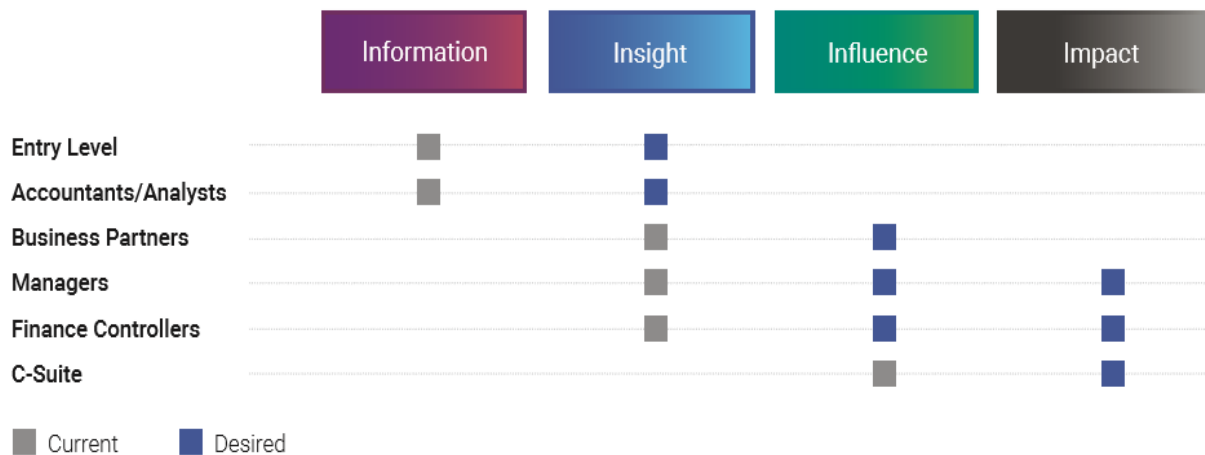
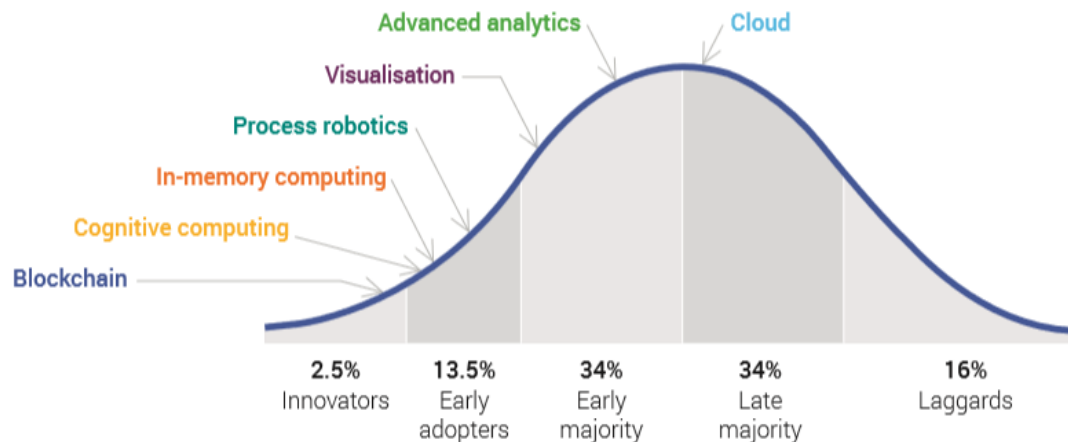


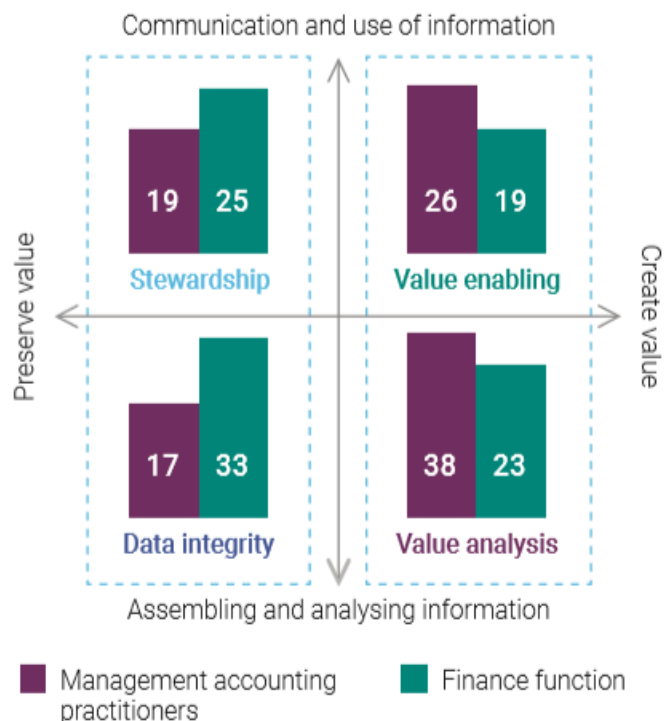
Figure 9. Finance function adoption curve of core modernisation and exponential tools





# Finance Value Matrix

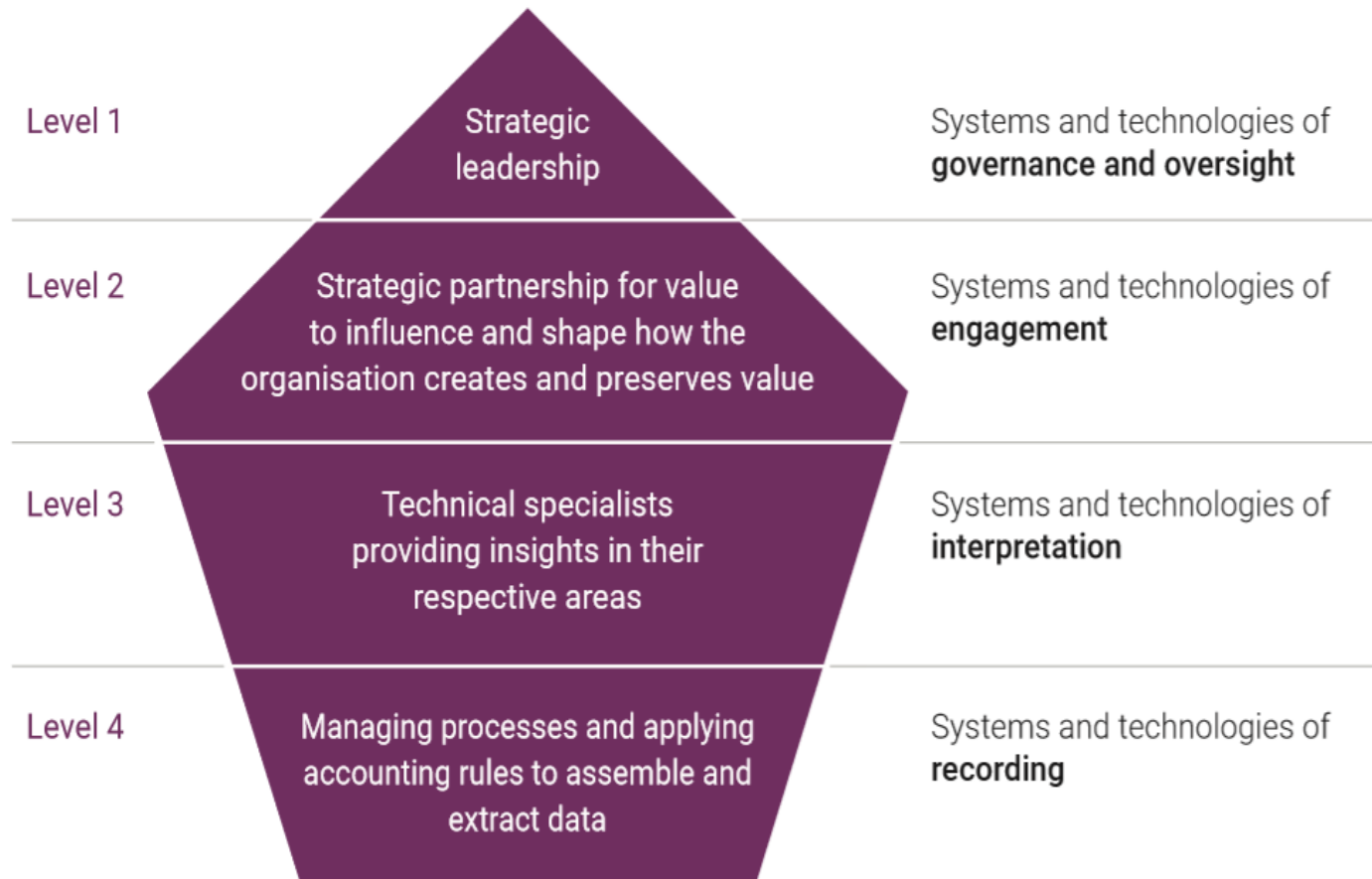
Figure 8. The finance function value matrix – by management accounting practitioner and finance team focus (percentage)



- ▶ as a trusted source of the management information, provides **data integrity**
- ▶ as a commercial **analyst**, providing insights into the drivers of organisational value
- ▶ as the subject matter expert and **steward**, contributes to strategic decision-making, including defining objectives with regard to developing the business model
- ▶ through partnering, uses insights to address performance issues and **enables** solutions to create **value**.

# Re-inventing Finance for a Digital World

The shape of the finance function in the digital world



# Re-inventing Finance for a Digital World

Attribute	Data extraction (Level 4)	Insight generation (Level 3)	Value partnering (Level 2)	Finance leadership (Level 1)
Type of system	Recording	Interpretation (or sense-making)	Engagement (or interaction)	Governance and oversight
Outcome	Hindsight	Insight	Foresight	Oversight
Gartner model	Descriptive	Diagnostic	Diagnostic; predictive; prescriptive	Predictive; prescriptive and cognitive
Technology	OCR; RPA; early stages of BI system	AI; NLP; middle stages of BI system	AI; visualisation; final stages of BI system	AI; prediction tools; all stages of BI system
Role of accounting	Gathering information for narrating; and narrating how organisation creates and preserves value	Narrating in greater detail; beginning to shape how organisations create and preserve value	Shaping how value is created (through interaction); enabling how value is created	Enabling value creation by ensuring oversight, governance, and by allocation and provision of resources
Focus	Quality and integrity of data; training machines to do a better job; efficiency	Compliance (interpreting rules); quality of analysis; telling machines what to do; effectiveness	Quality of decision-making; judgement; trade-offs and learning	Quality of strategic decision-making; risk management; capital and resource optimisation
Main competencies	Technical accounting	Technical accounting; business skills	Business skills; people skills	Business skills; people skills and leadership skills
CIMA Professional Qualification/CGMA	Operational level	Management level	Strategic Level CPD/CPE	CPD/CPE

OCR – Optical Character Recognition, RPA – Robotic Process Automation, NLP – Natural Language Processing, BI – Business Intelligence, AI – Artificial Intelligence, CPD – Continuing Professional Development, CPE – Continuing Professional Education

Source : Re-inventing finance for a digital world, CGMA - AICPA

**Do you know  
where you are?**

**Where do you  
want to be?**

# Discussions, Q & A

Thank you