

Leading the Digital Enterprise

- **How Artificial Intelligence will redefine management**

Vegard Kolbjørnsrud, Assistant Professor, BI Norwegian Business School Senior Research Fellow, Accenture

- **Break**

- **Building a culture for trial and error at FINN.no**

Anders Skoe, CEO Finn.no

- **Strategy as disciplined experimentation**

Vegard Kolbjørnsrud

- **Discussion**

Entering the age of intelligent machines

- The rise of Artificial Intelligence (AI) and robotics is predicted to drive the biggest technology disruption in the workplace since the Industrial Revolution
 - 33-50+ % of jobs estimated to be computerized
- Prior waves of new technology in the workplace have mainly impacted workers, rather than managers
- This is different. Artificial intelligence will radically change knowledge work incl. core management tasks



Intelligent Machines: The jobs robots will steal first

By Jane Wakefield
Technology reporter

© 14 September 2015 Technology



Artificial intelligence combines multiple technologies into applications that can sense, comprehend, act, and learn

Artificial Intelligence defined

	Description	Technologies	
 Sense	<ul style="list-style-type: none">▪ Applications that can observe and register their environment, people, and data	<ul style="list-style-type: none">▪ Computer vision▪ Audio processing▪ Sensor processing	Underlying technology architectures  <ul style="list-style-type: none">▪ Neural networking▪ Security▪ Cloud computing▪ Connectivity
 Comprehend	<ul style="list-style-type: none">▪ Applications that can discern context, detect patterns, and make inferences	<ul style="list-style-type: none">▪ NLP: Natural Language Processing▪ Knowledge representation▪ Affective computing	
 Act	<ul style="list-style-type: none">▪ Applications that can signal decision situations, make recommendations, express themselves, and potentially act autonomously	<ul style="list-style-type: none">▪ Inference engines▪ Expert systems▪ NLG: Natural Language Generation▪ Predictive analytics	
 Learn	<ul style="list-style-type: none">▪ Applications that can adapt based on accumulated knowledge and experience	<ul style="list-style-type: none">▪ Machine learning/pattern recognition	

Are you ready for a machine on your leadership team?



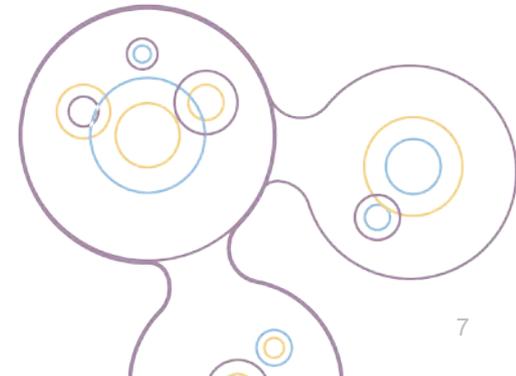
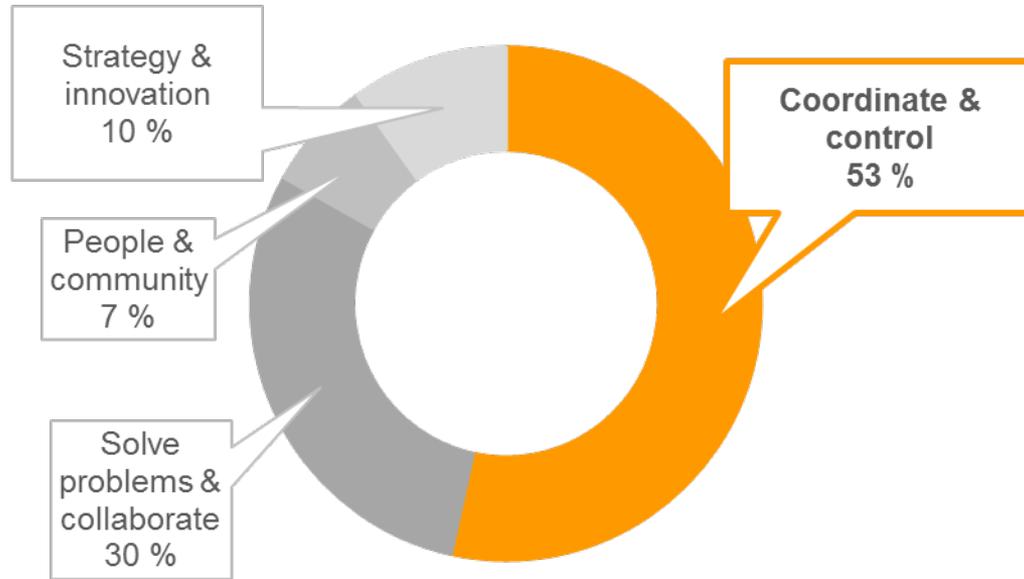
- In 2014 the Hong Kong VC firm appointed the intelligent algorithm VITAL* to its board and gave it voting rights in investment decisions
- Has voted on a number of investments



- How will artificial intelligence impact managers' work?
- What are the actions managers and employers must take to fully integrate the power of artificial intelligence into their organizations?

Managers spend most of their time on tasks that intelligent machines will do in the future

Time spent on categories of management tasks



What's special about this financial news article?

BUSINESS
INSIDER



Strong ad sales boost Google parent Alphabet's 1Q earnings

AP Associated Press
10h 1



FACEBOOK



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MOUNTAIN VIEW, Calif. (AP) — Google parent Alphabet on Monday reported a jump in first-quarter net income on the back of strong digital ad sales and an accounting adjustment.

The Mountain View, California-based company's net income surged 73 percent to \$9.4 billion, or \$13.33 per share. Earnings, adjusted for non-recurring gains including those from the accounting change, were \$9.93 per share.

The results beat Wall Street expectations. The average estimate of 13 analysts surveyed by Zacks Investment Research was for earnings of \$9.21 per share.

The internet search leader posted revenue of \$31.15 billion in the period. After subtracting Alphabet's advertising commissions, revenue was \$24.86 billion, also beating Street forecasts. Eleven analysts surveyed by Zacks expected \$24.2 billion.

Still, Google's sunny quarter comes amid the backdrop of looming privacy regulations in the U.S. and Europe.

[Article is edited shorter]

Elements of this story were generated by Automated Insights (<http://automatedinsights.com/ap>) using data from Zacks Investment Research. Access a Zacks stock report on GOOGL at <https://www.zacks.com/ap/GOOGL>

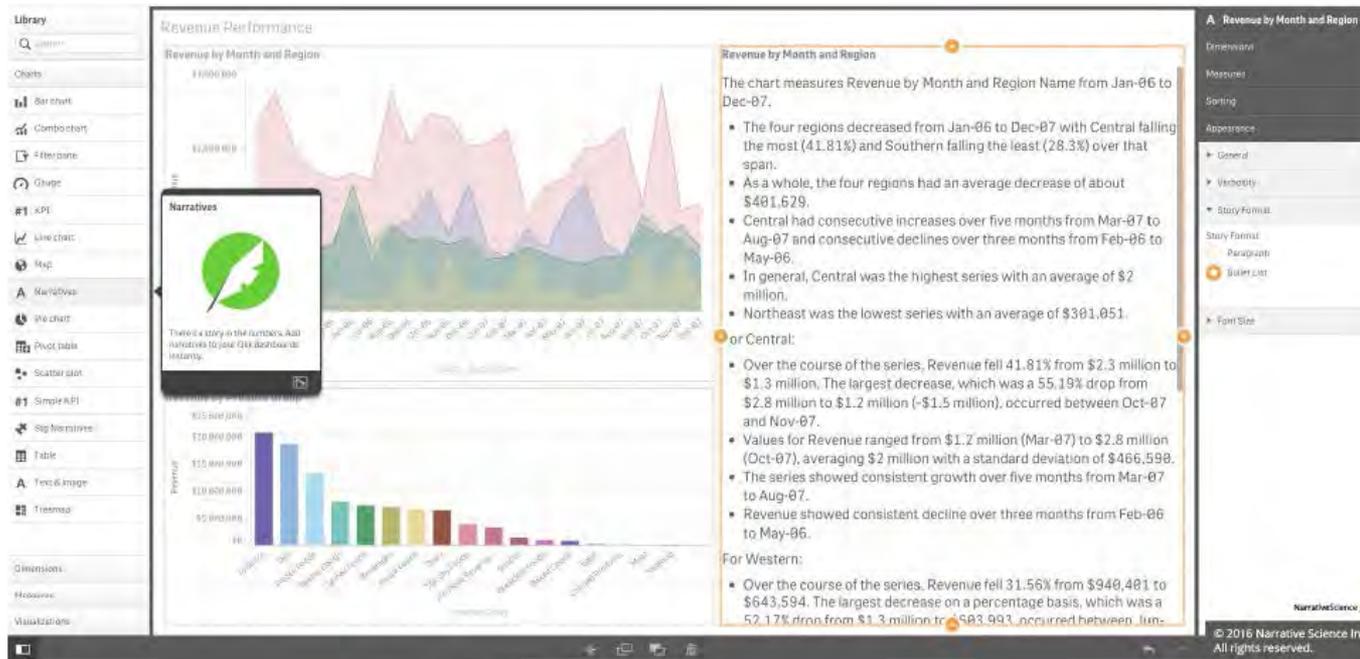
It is written
by an
intelligent
reporting
engine



...would you like it
to draft your next
management
report?

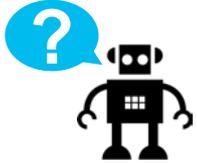
AI helping you write your management report is closer than you think...

Example: Tableau and Narrative Science partnering to provide narratives for data charts



The greater the presence of machines, the greater the need for human judgement

People power

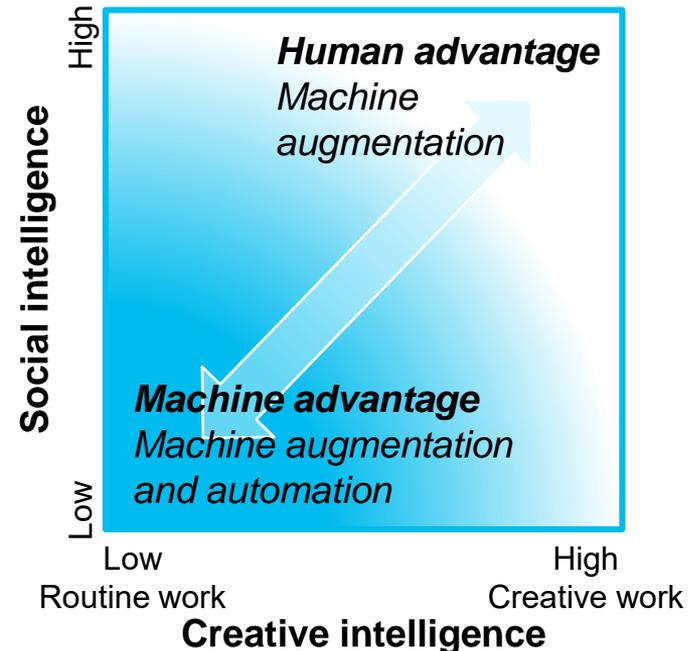


- Some decisions and practices require insight beyond what a information can tell



- This is the sweet spot for human judgment

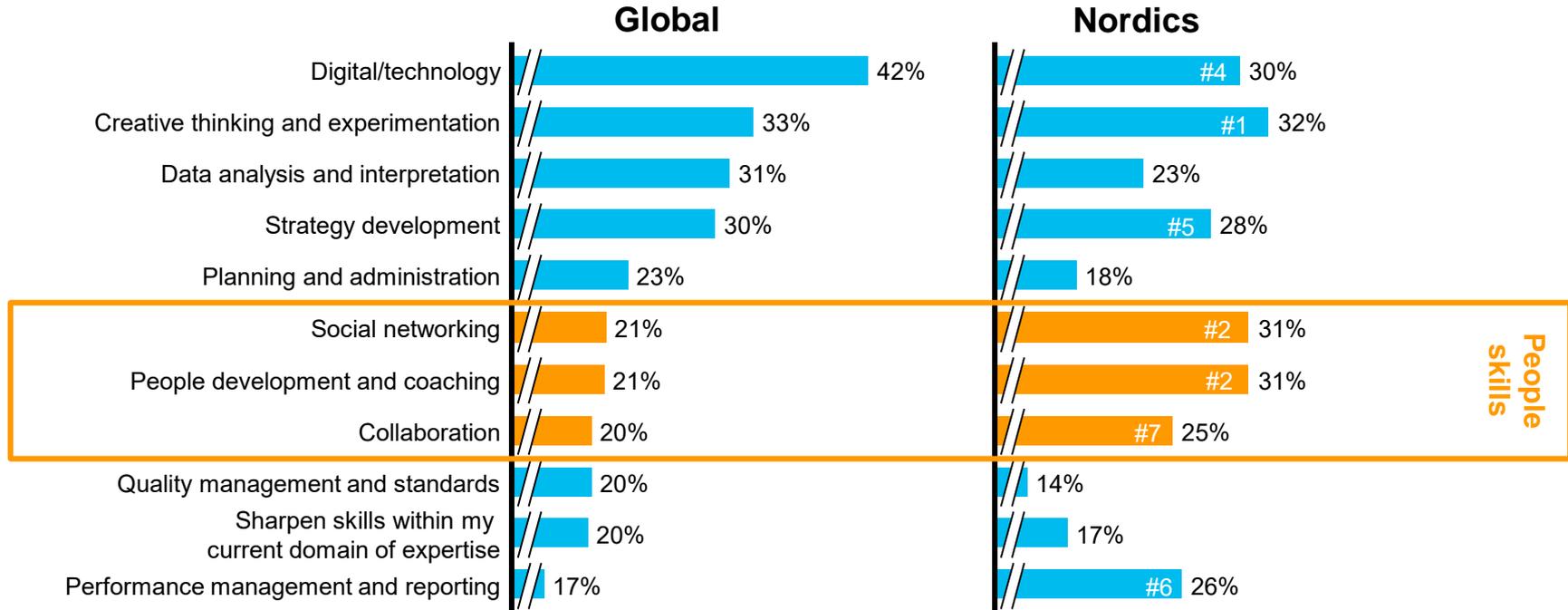
Human and machine advantage



Source: Kolbjørnsrud, Amico, Thomas (2016) "The promise of artificial intelligence: Redefining management in the workforce of the future," Accenture Institute for High Performance; Shanks, Sinha, Thomas (2016) "Judgment calls: Preparing managers to thrive in the age of intelligent machines," Accenture Strategy

Managers recognize need for digital, creative, and analytical skills – ignoring people skills?

New skills needed to succeed*



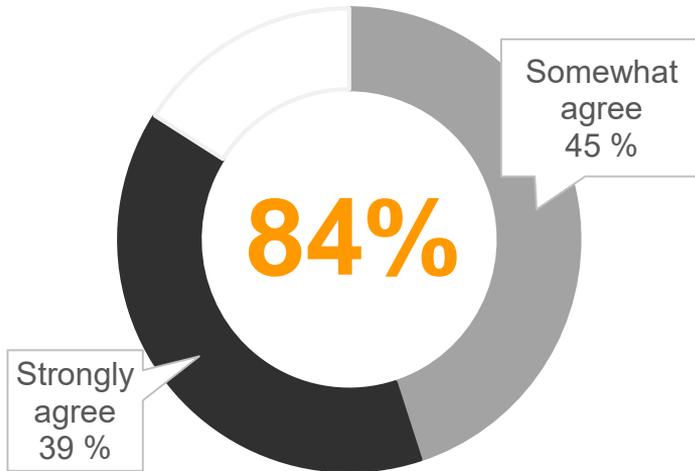
Source: Kolbjørnsrud, Amico, Thomas (2017) "Partnering with AI: how organizations can win over skeptical managers," Strategy & Leadership, 45(1)

* Which new skills will someone need to learn in order to succeed in your role in five years' time? Please select up to 3 skill areas.

AI stirs both excitement and fear

Opportunity

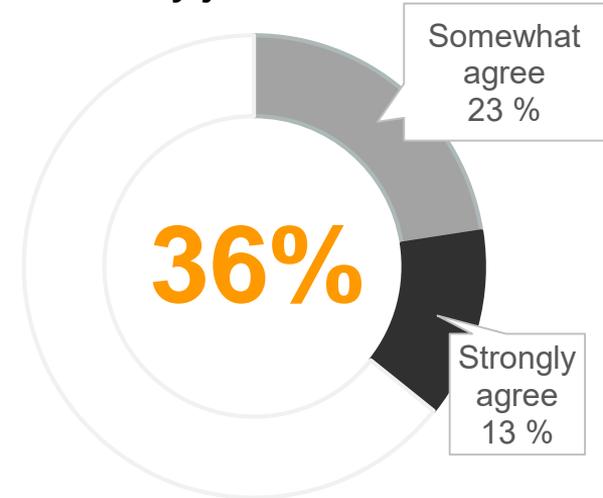
"Will make my work more effective and interesting"*



&

Threat

"I fear that intelligent systems will threaten my job."**



Source: Kolbjørnsrud, Amico, Thomas (2017) "Partnering with AI: how organizations can win over skeptical managers," Strategy & Leadership, 45(1)

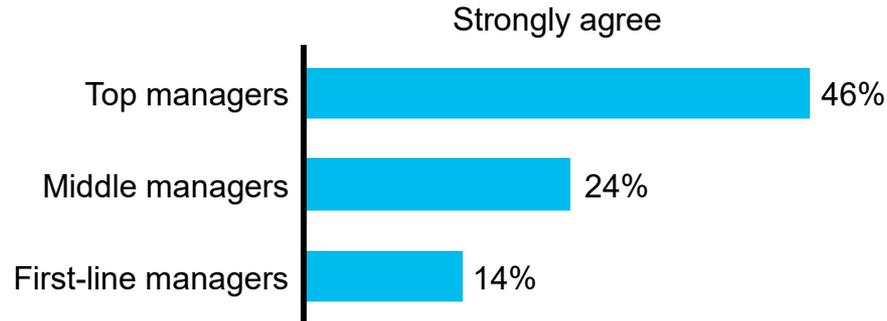
* Intelligent systems will help me to become more effective in my work and focus more on interesting and impactful tasks.

** I fear that intelligent systems will threaten my job.

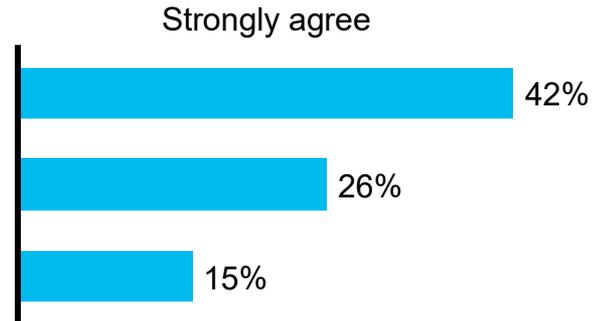
Lower level managers are much more skeptical about taking advice from machines than their bosses

Trust in and comfort with...

"Trust system advice in business decisions"*



"Comfortable with intelligent system monitoring and evaluating my work"**



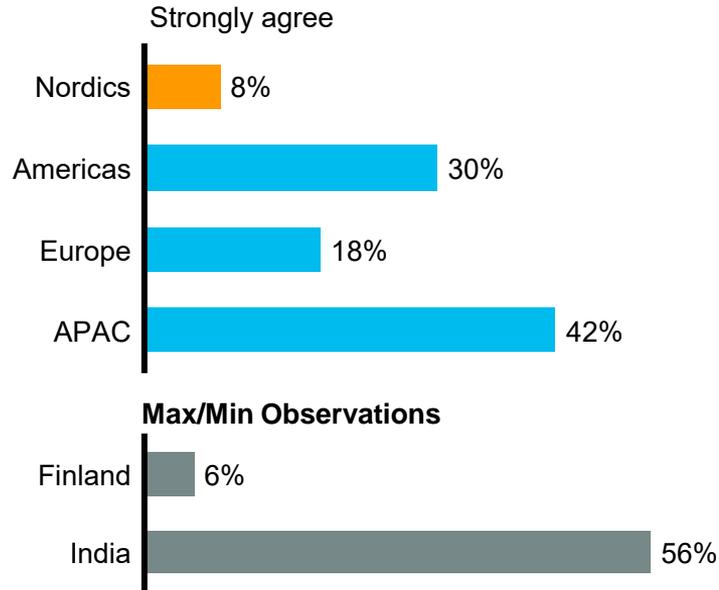
Source: Kolbjørnsrud, Amico, Thomas (2017) "Partnering with AI: how organizations can win over skeptical managers," Strategy & Leadership, 45(1)

* I would trust the advice of intelligent systems in making business decisions in the future (e.g. an investment decision or deciding whom to hire or promote).

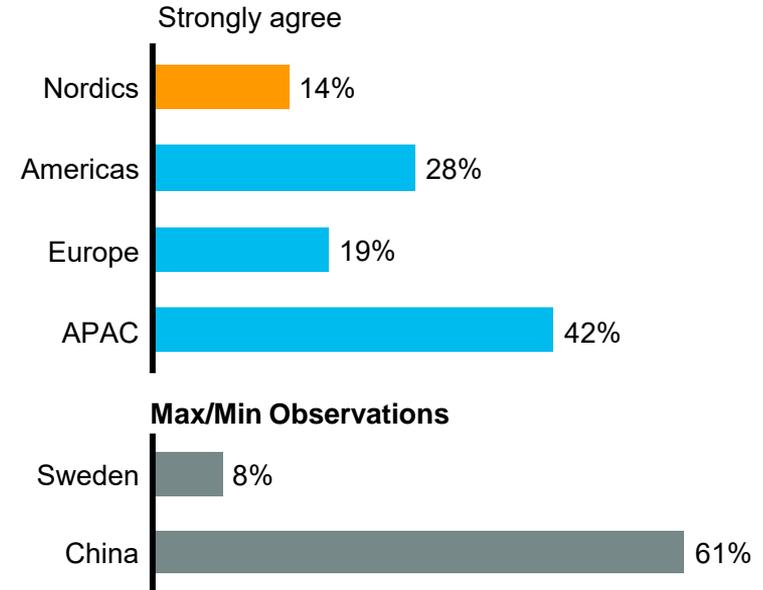
** I am comfortable with an intelligent system monitoring and evaluating my work.

Are managers in developed countries so skeptical that they will be leapfrogged by emerging economies?

Trust in Advice from AI*



Comfortable with System Monitoring and Evaluating My Work**



Source: Kolbjørnsrud, Amico, Thomas (2017) "Partnering with AI: how organizations can win over skeptical managers," Strategy & Leadership, 45(1)

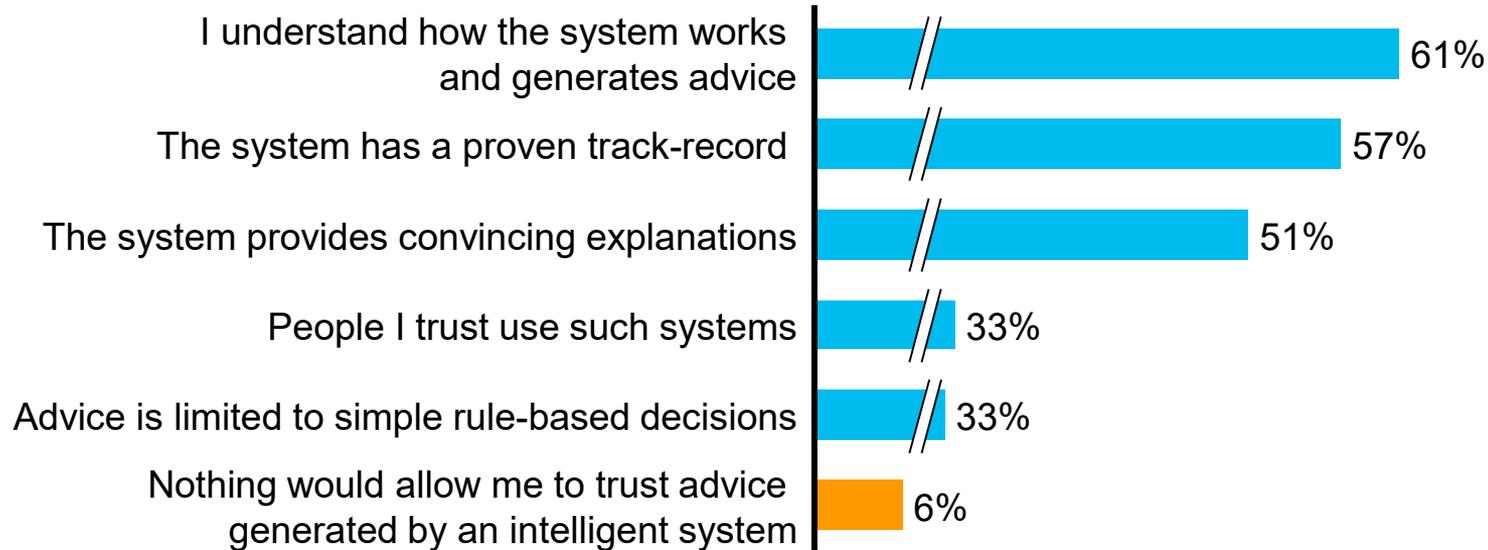
* I would trust the advice of intelligent systems in making business decisions in the future (e.g. an investment decision or deciding whom to hire or promote).

** I am comfortable with an intelligent system monitoring and evaluating my work.

Managers want machines to explain their logic before they will accept it

What it takes to trust artificial intelligence

What would allow you to trust system advice?*



Developing the capabilities of the intelligent organization

The SCALE framework



Steps to success

Leaders must be prepared for technology to take on more routine tasks



Explore early, **experiment and engage** with new technology and pilots – together



Automate administration and focus on **judgment work**



Develop **training and recruitment strategies** for creativity, collaboration, empathy and judgment skills



Start building **the intelligent enterprise**—combine AI and collective human intelligence for optimal outcomes