How Artificial Intelligence Is Reshaping the Accounting Industry

Jim Collins
Business Analytics Strategy Executive
IBM Business Analytics

Hello!

How is everyone?

Are you ready to get started?

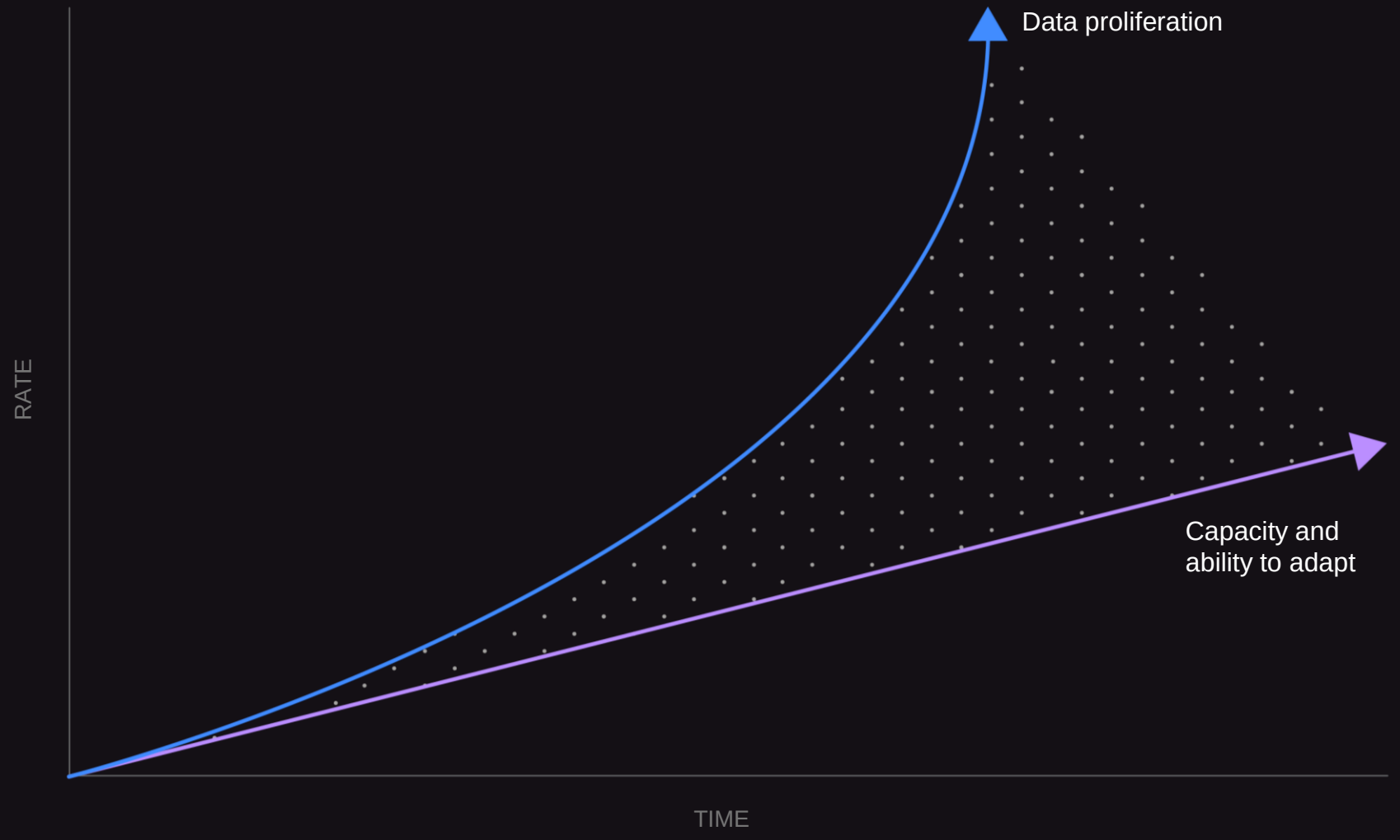
What did we just do?

How did it make you feel?

Do you typically get that feeling when interacting with your digital devices?

AI is the next disruptor

As the volume of data, digital transformation, and the pace of technological change accelerate, the ability of organizations and professionals to keep up and capitalize on the opportunity is becoming more challenging.



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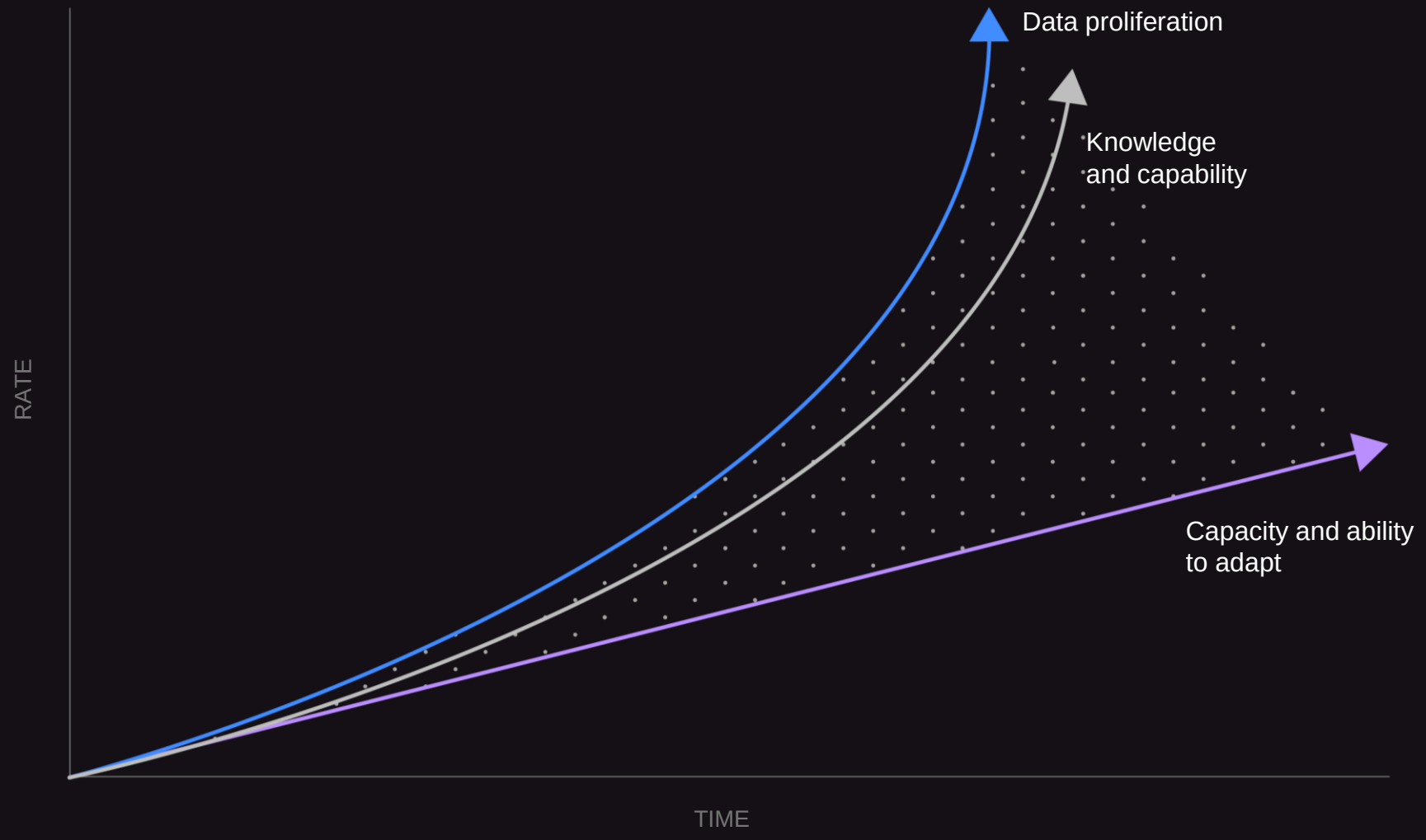
AI provides an opportunity to help professionals close the gap and harness the full potential of data by creating new tools to improve their work and outcomes.



Cognitive systems are fundamentally different from what you have today

UNDERSTAND

Adapt and make sense of data; **read** text, **see** images with context **like humans do.**

REASON

Interpret information, organize it, and offer explanations as to what it means, with **rationale for the conclusions.**

LEARN

With each data point, interaction and outcome, they develop and sharpen their expertise, so **they never stop learning.**

INTERACT

With abilities to see, talk and hear, Cognitive systems **interact with humans in a natural way.**

Cognitive businesses will redefine how decisions are made

AI is the system of the future.
People will define what is to be learned.
System will learn how to learn it.

- Interactive decision making, learning and evidence-based explanations
- A range of techniques including natural language processing, knowledge and planning
- Statistical prediction analysis and pattern recognition to make highly data-driven decisions

Artificial Intelligence and the Future of Accounting

AI is the system of the future.

- Major accounting software vendors offering capabilities to automate data entry, reconciliations and more
- Expected that by 2020 accounting tasks, tax, payroll, audits, banking, etc. will be fully automated using AI technology
- Not an effort to eliminate accountants but a means to provide time to focus on decision making, problem solving, strategy development, etc.

Humans
+
Machines

>

Humans
or
Machines

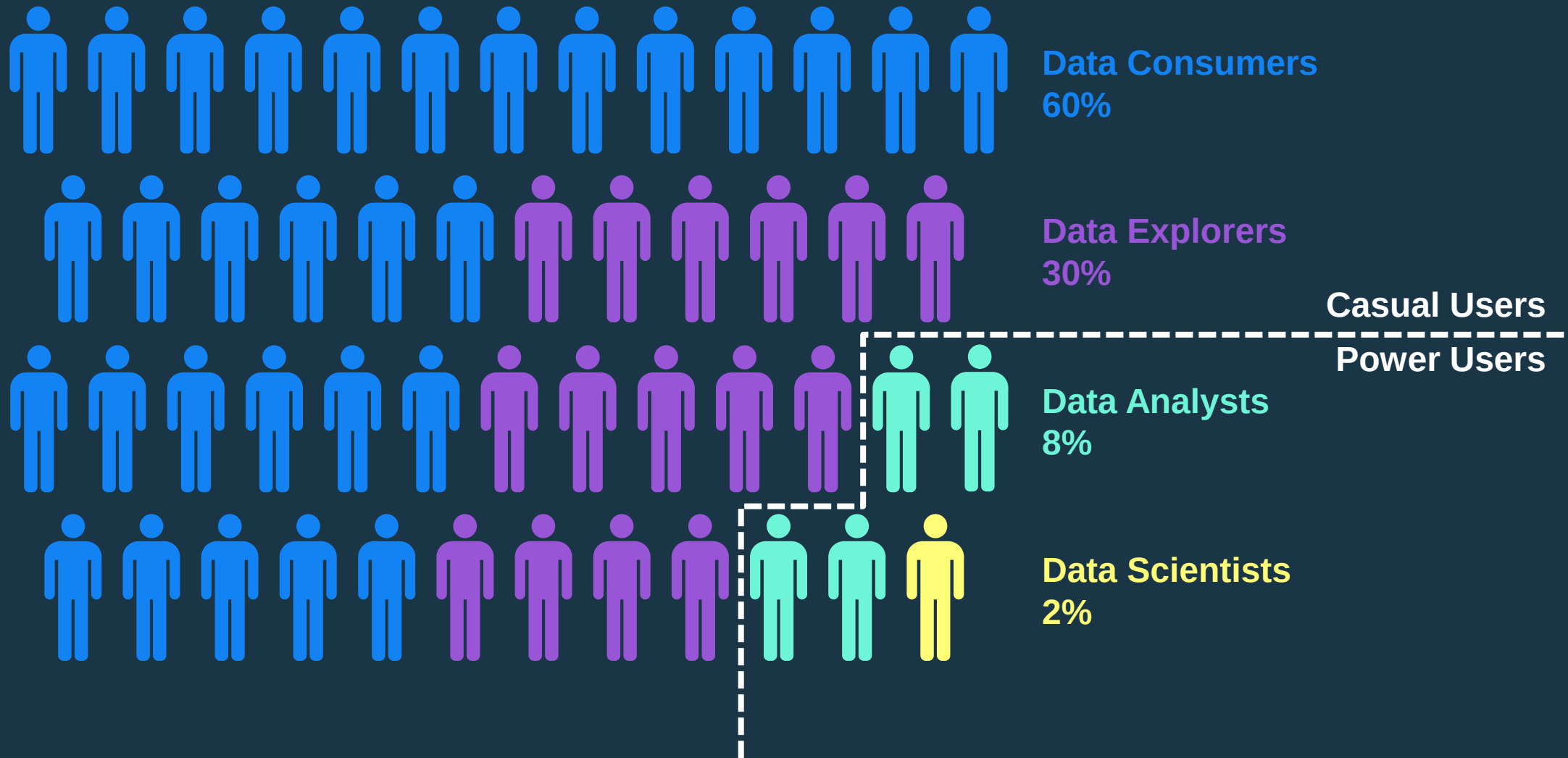

“Coping With Humans”

99% say their firms are trying to become insights-driven, but only **one-third** report succeeding

NewVantage Partners,
“Big Data Executive Survey 2018 Executive Summary of Findings”

Your data has **outgrown** the analytics **capacity** of your average business user.

There is a growing population of Professionals hungry to put data to work



Business users with only **basic** analytics skills could conduct analysis yielding **misleading** or **incorrect** insight

Bringing together **man and machine** to help us make better, smarter decisions.

Humans excel at

Common Sense

Dilemmas

Morals

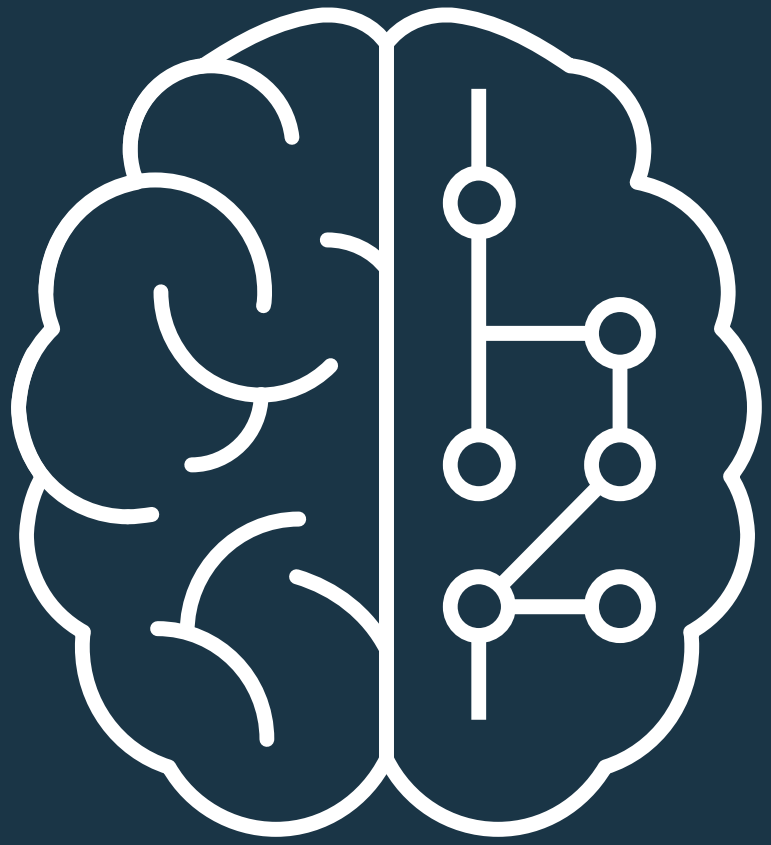
Compassion

Imagination

Dreaming

Abstraction

Generalization



AI Systems excel at:

Pattern Identification

Locating Knowledge

Machine Learning

Eliminate Bias

Endless Capacity

Natural Language Understanding

Data Science and Business Analytics makes data simple, accessible and actionable

Descriptive, Diagnostic, Predictive, Prescriptive to plan a course, monitor the business, predict the future, and change the outcome

Grow Revenue

Grow, Retain, and Satisfy Customers

Better understand customer behavior

Reduce Cost

Increase Operational Efficiency

Streamline operations

Mitigate Risk

Mitigate and Manage Risks

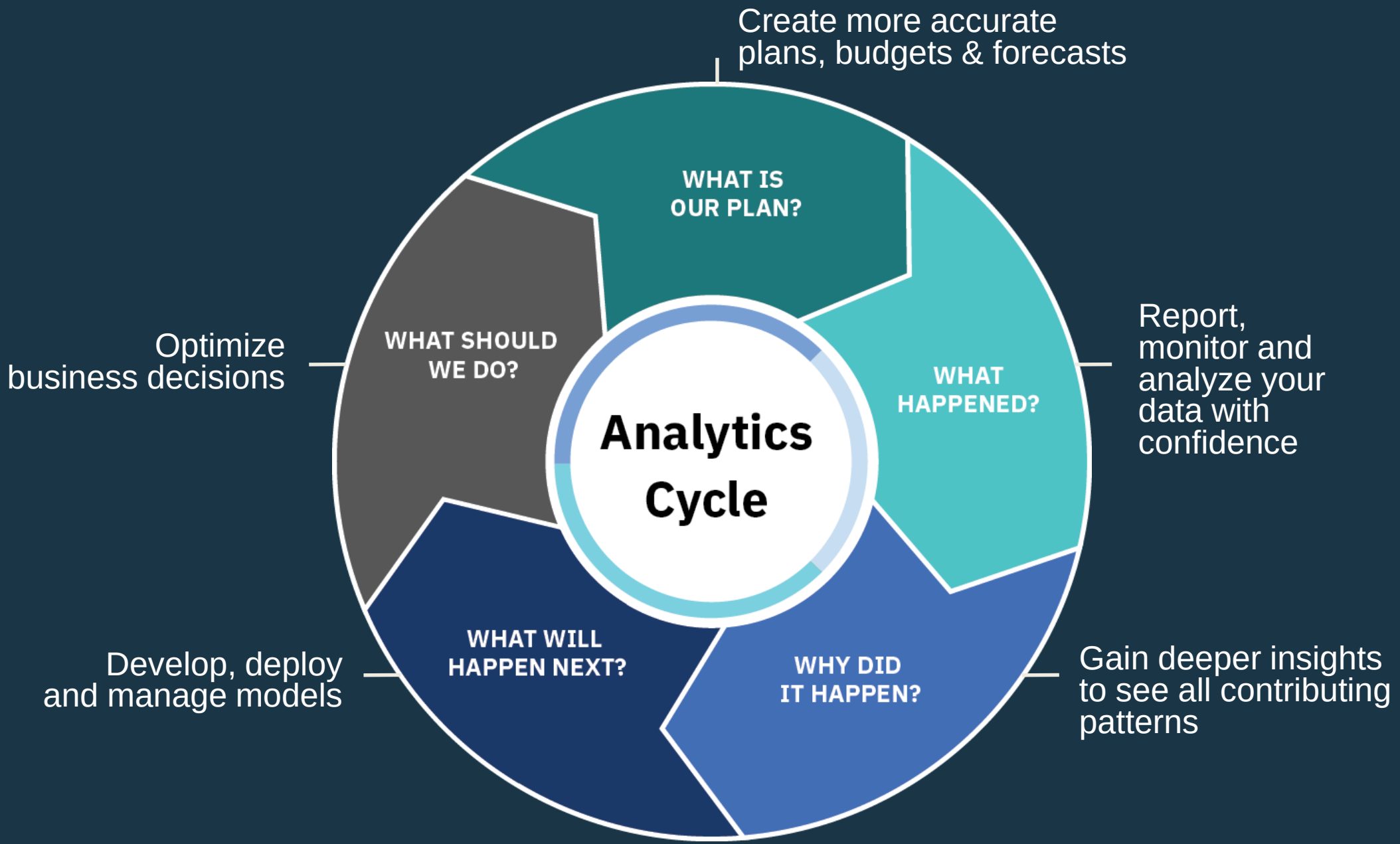
Identify high risk signals

Drive Innovation

Drive Innovation with Analytics

Validate business decisions with data

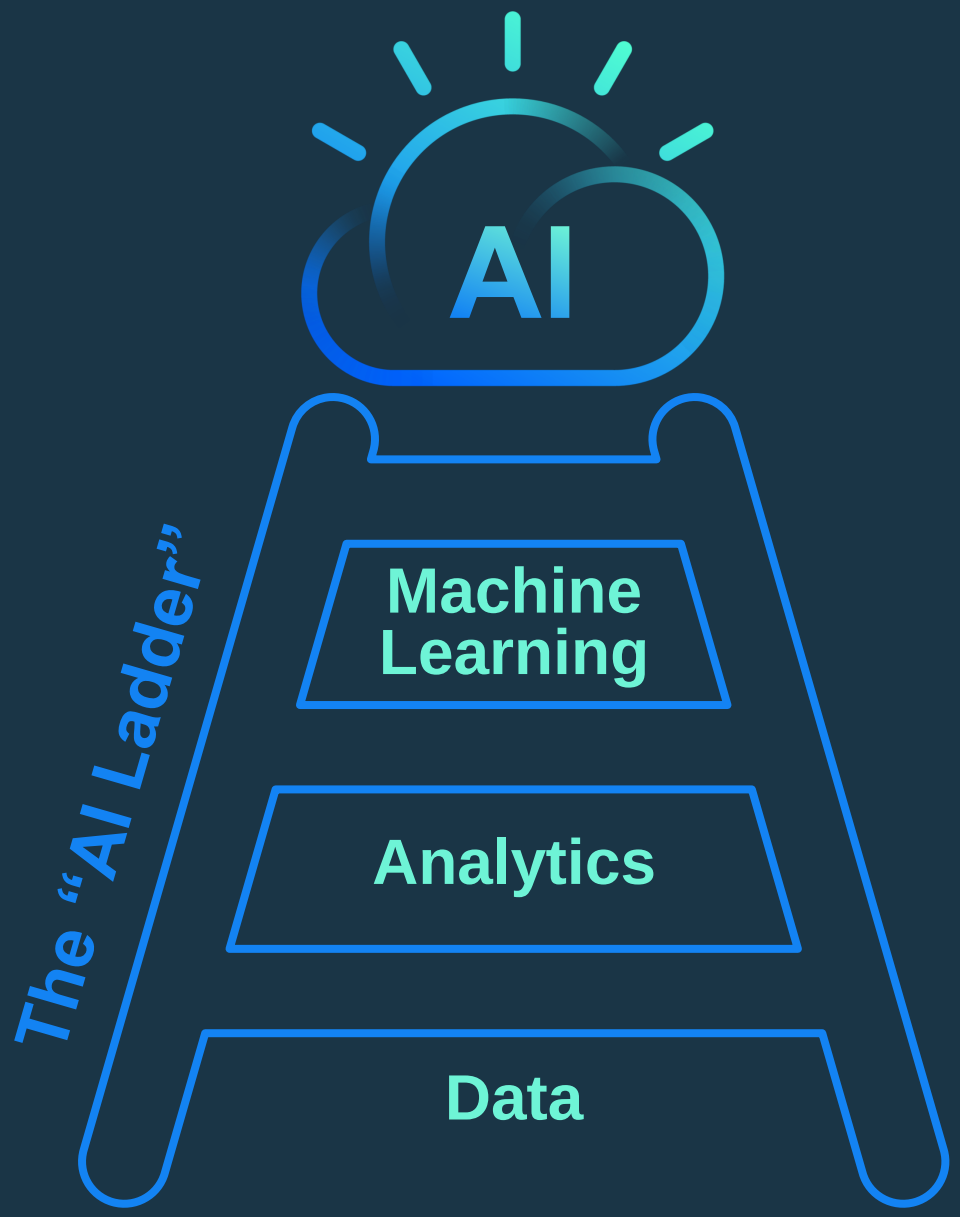
Analytics Lifecycle

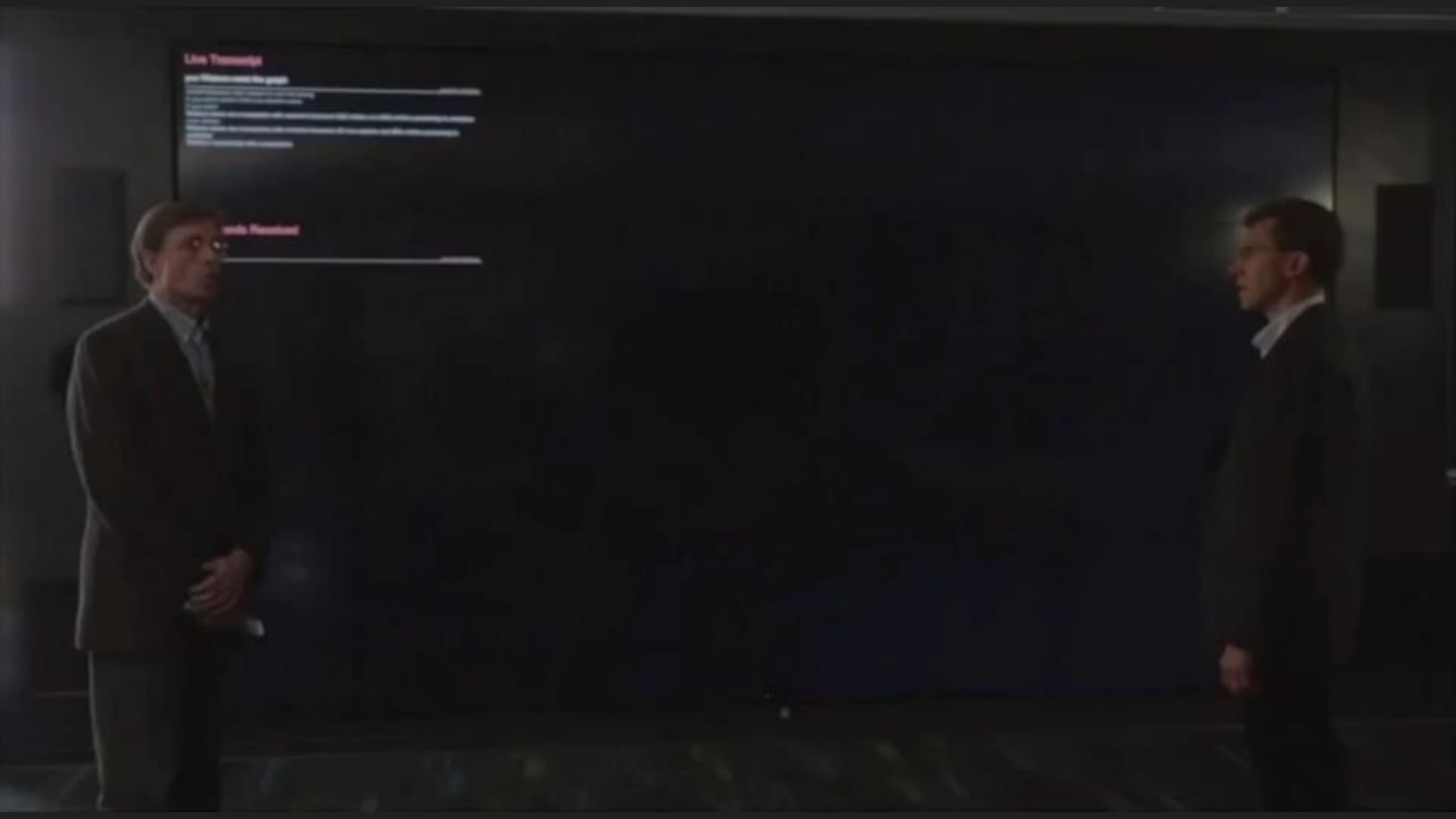


We make data simple and accessible

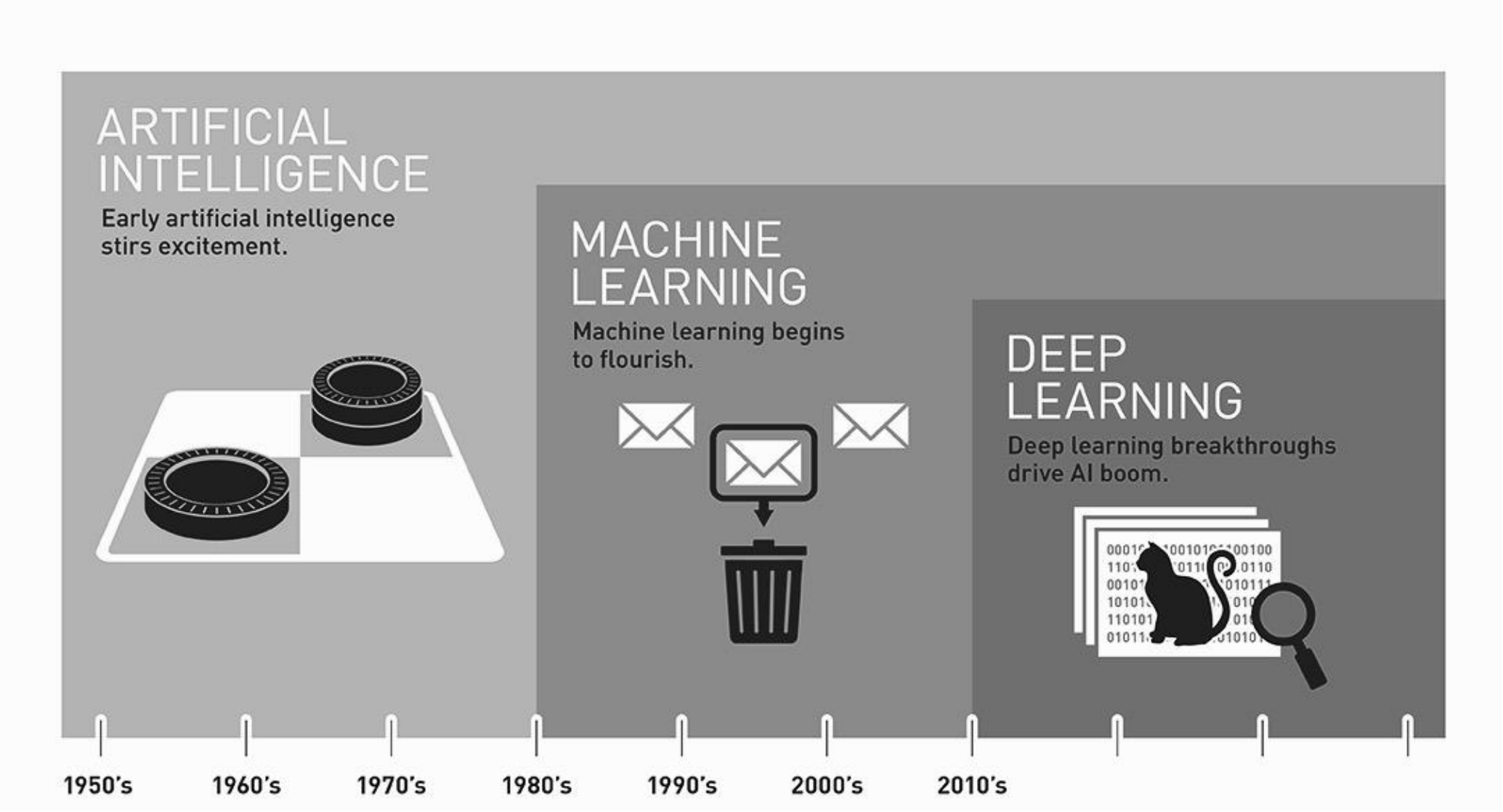
We deliver data insights for better business decisions

We help our clients climb the AI Ladder





One perspective to view AI, ML, and DL



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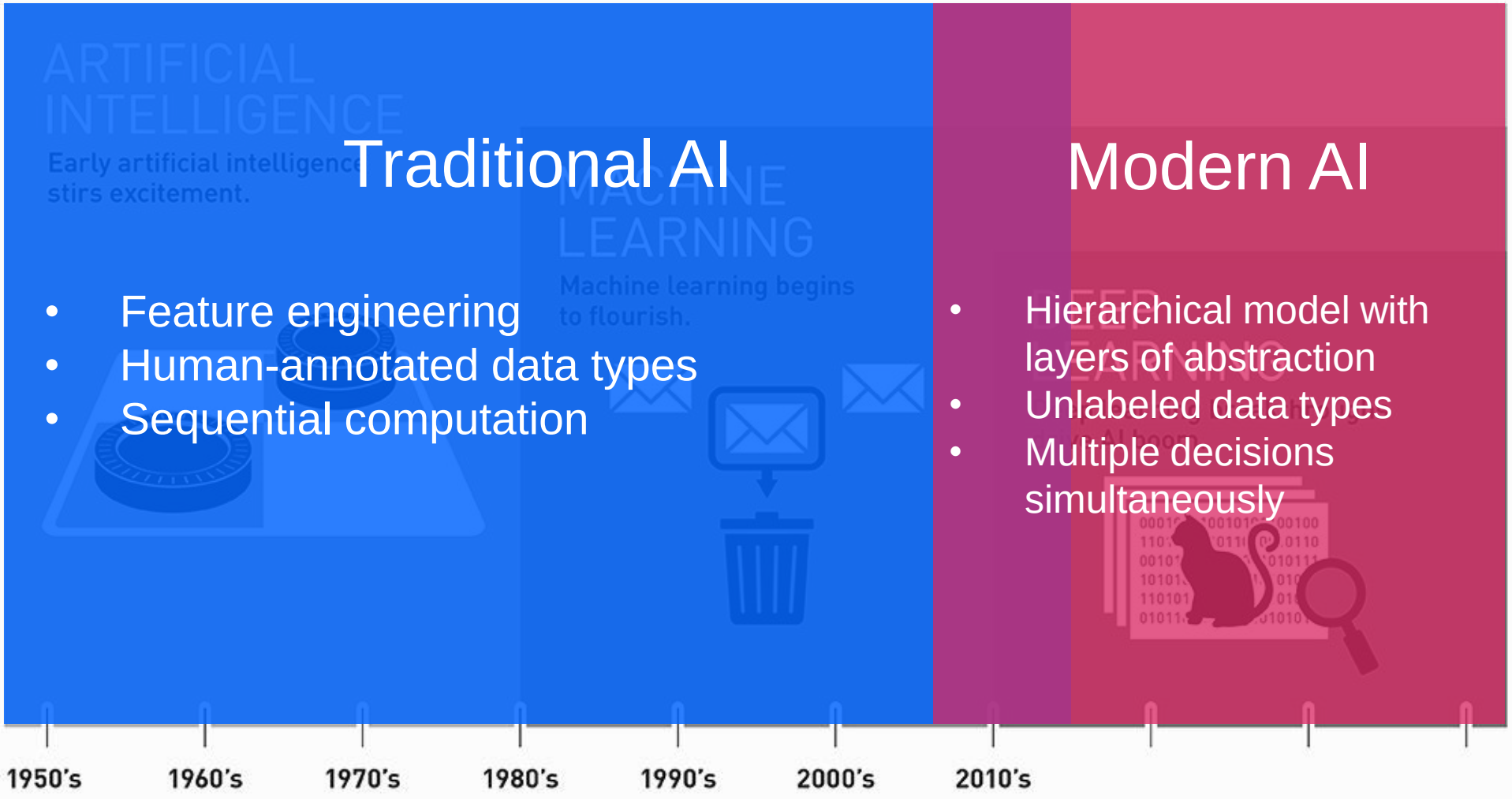
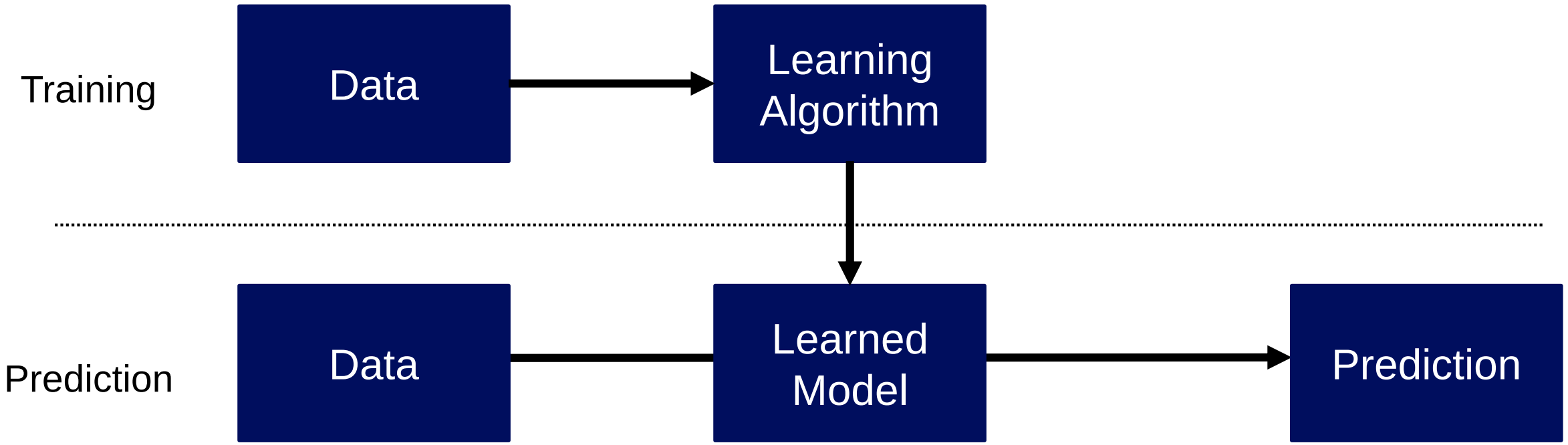


What is Machine Learning?

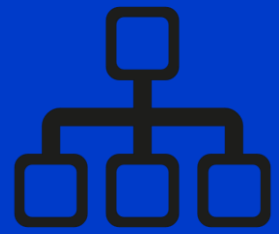
Machine Learning is a type of AI that provides computers with the ability to learn **without being explicitly programmed**



What is Deep Learning?

Part of machine learning field of learning representations of data

Exceptional effective at learning patterns



Utilizes learning algorithms that derive meaning out of data by using hierarchy of multiple layers that mimic the neural networks of our brain

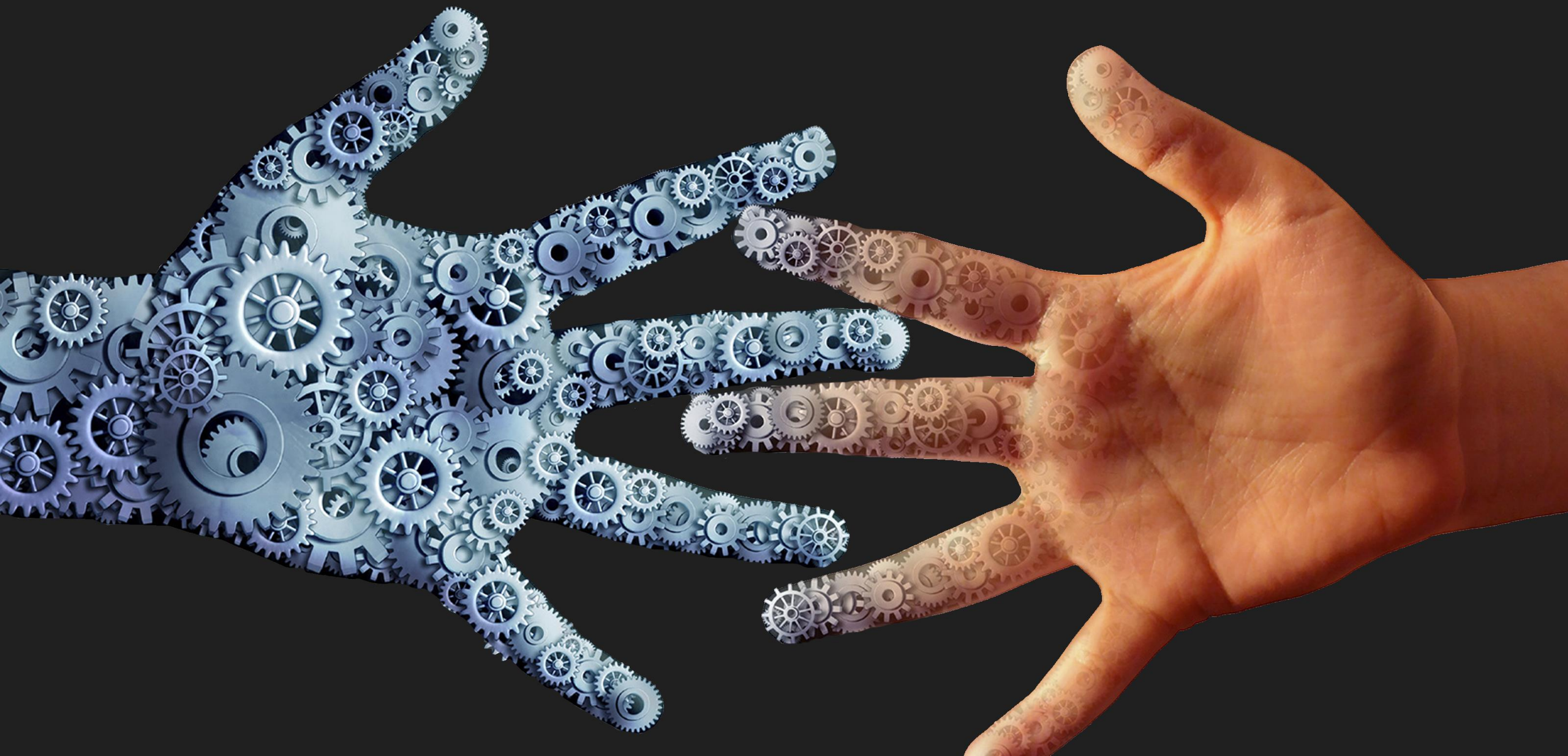
If you provide the system tons of information, it begins to understand it and respond in useful ways

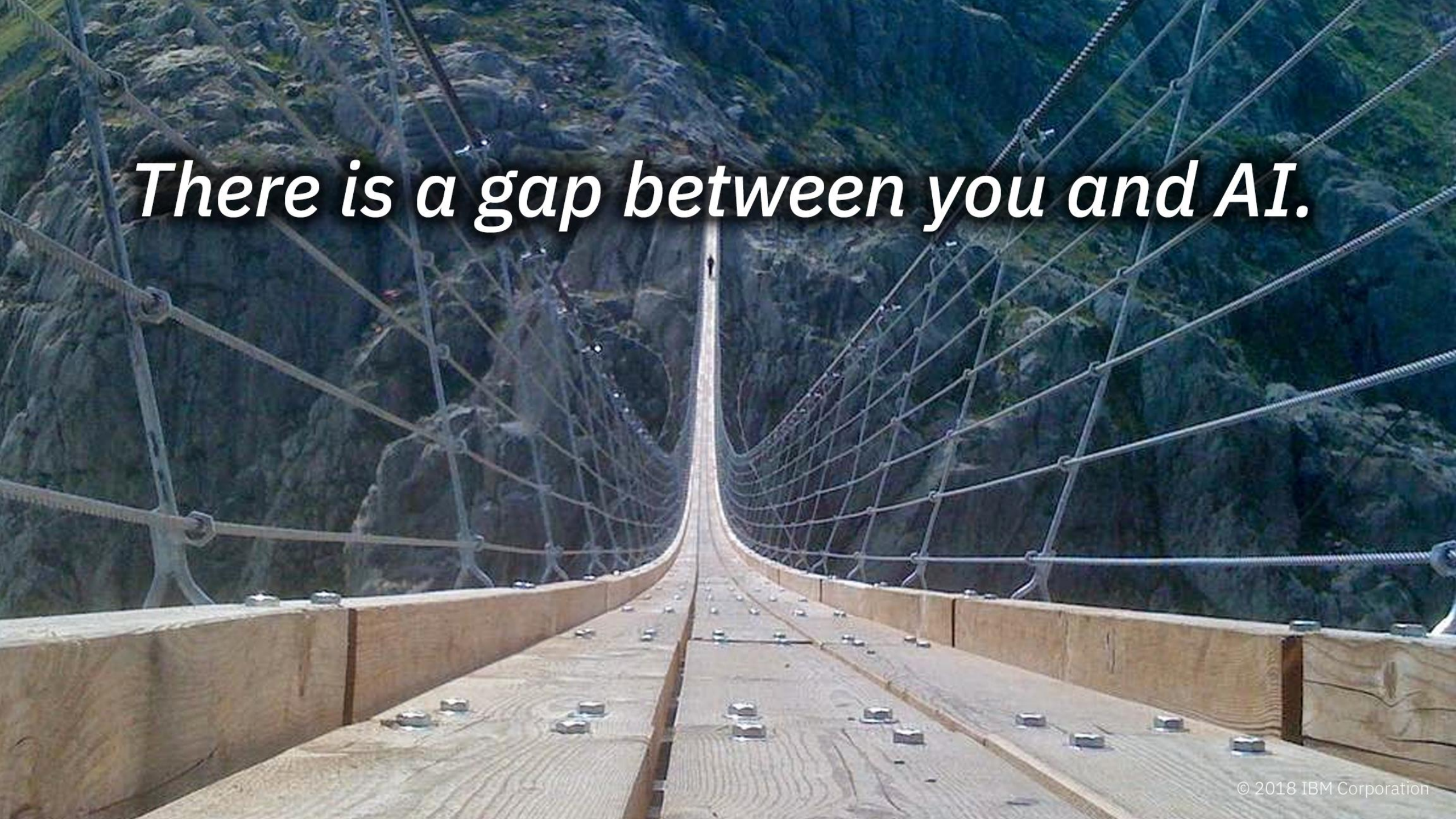
No feature engineering required!

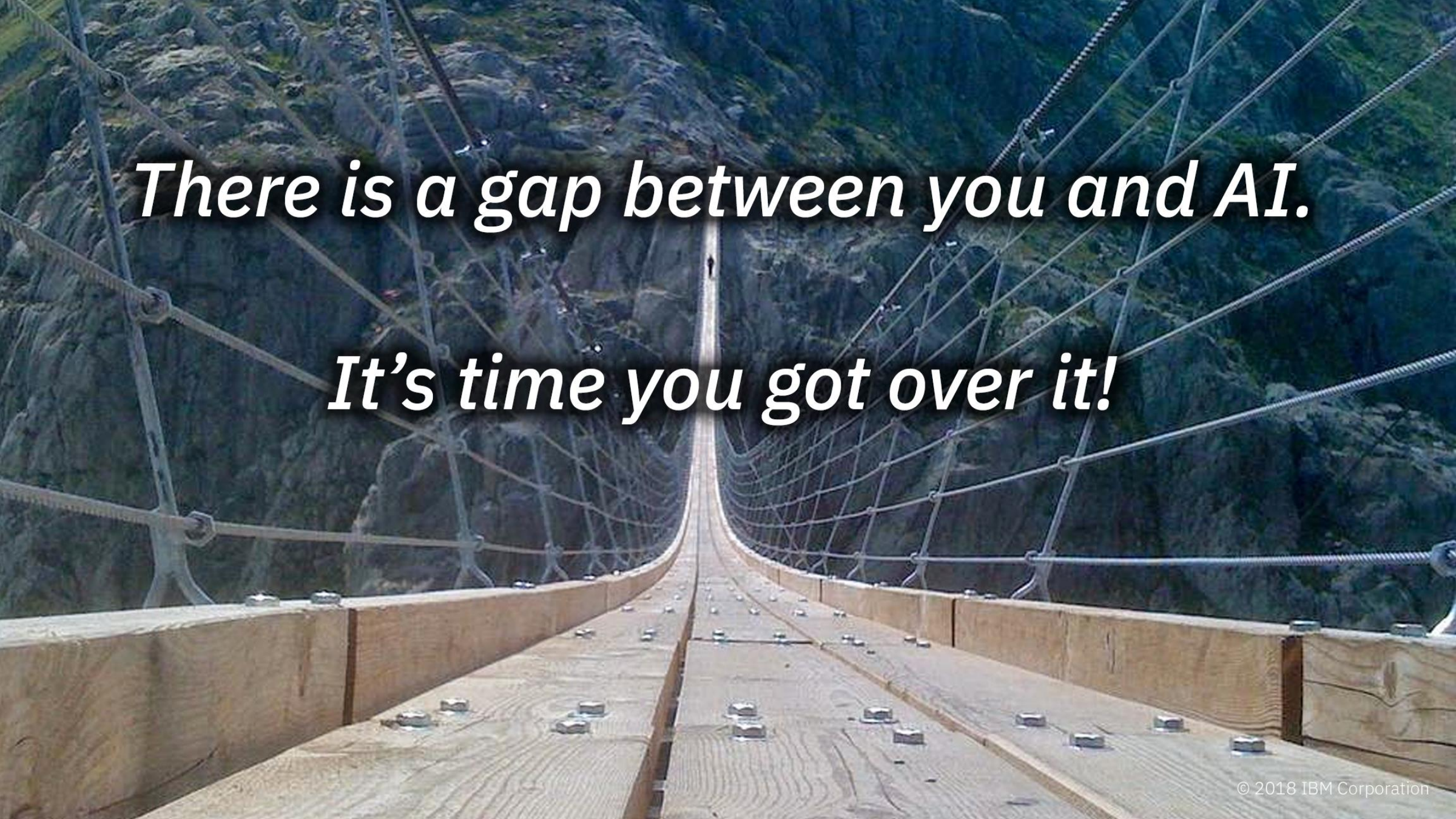

THIS ISN'T ABOUT
SEARCHING FOR
BETTER
ANSWERS


IT'S ALL ABOUT
SEARCHING FOR
BETTER
QUESTIONS

AI: Augmented Intelligence







Four misconceptions

AI is for them...not me.

AI helps free us from the mundane so we can do the things that matter!

AI is hard to understand.

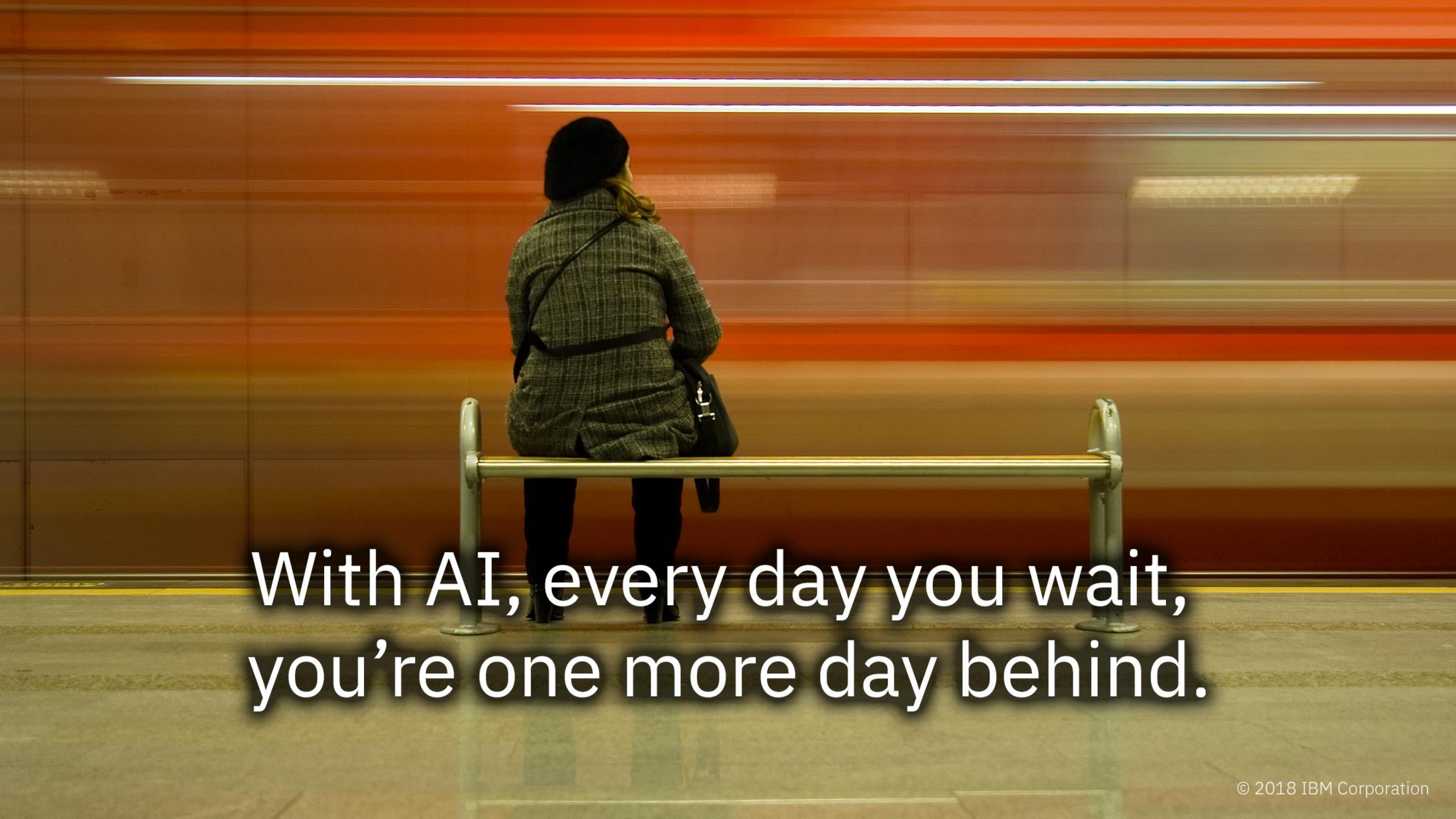
Effective cognitive systems think a lot like you do.

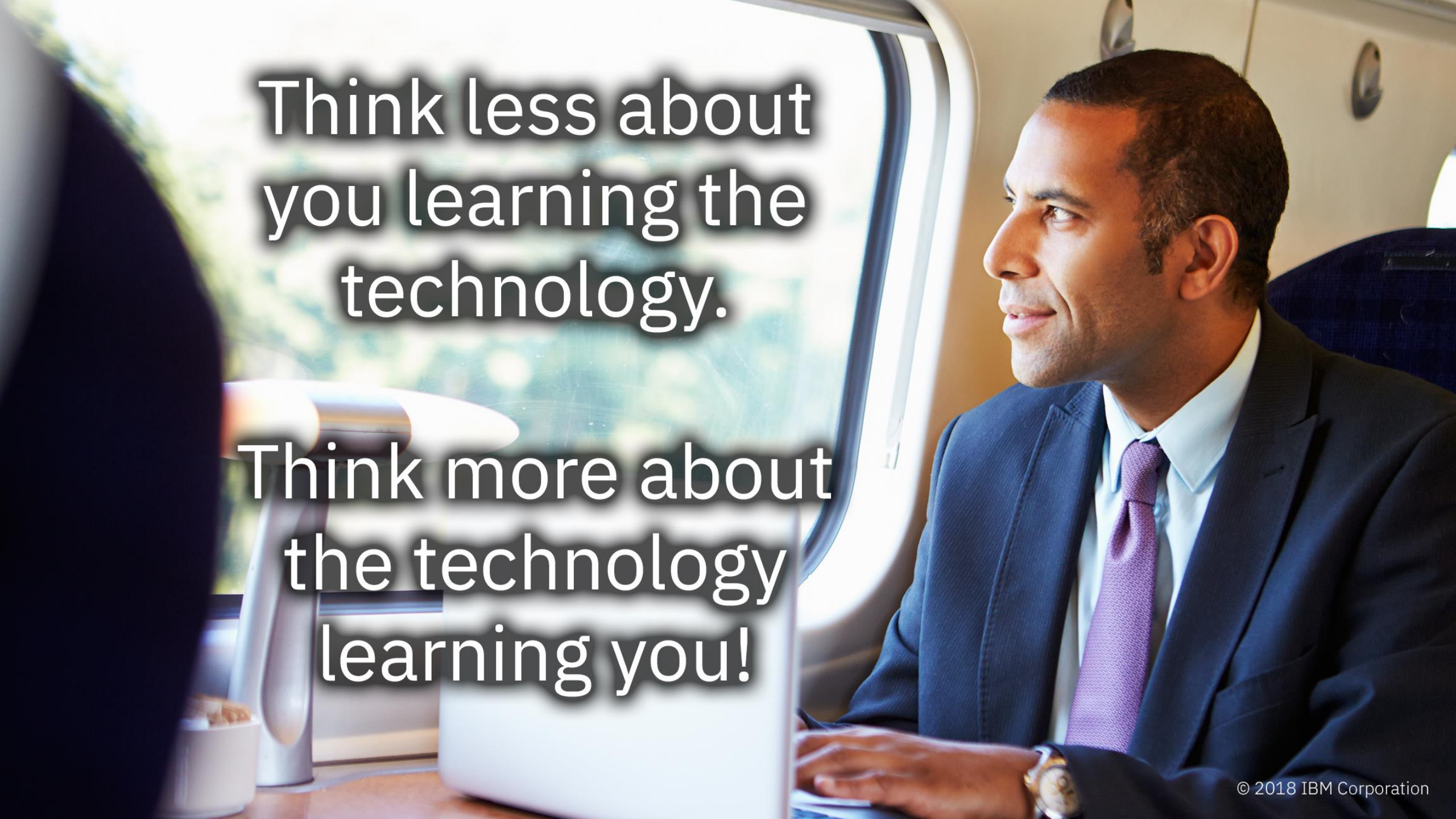
AI is not business ready.

AI was made for today's business environments.

I should wait to see what happens.

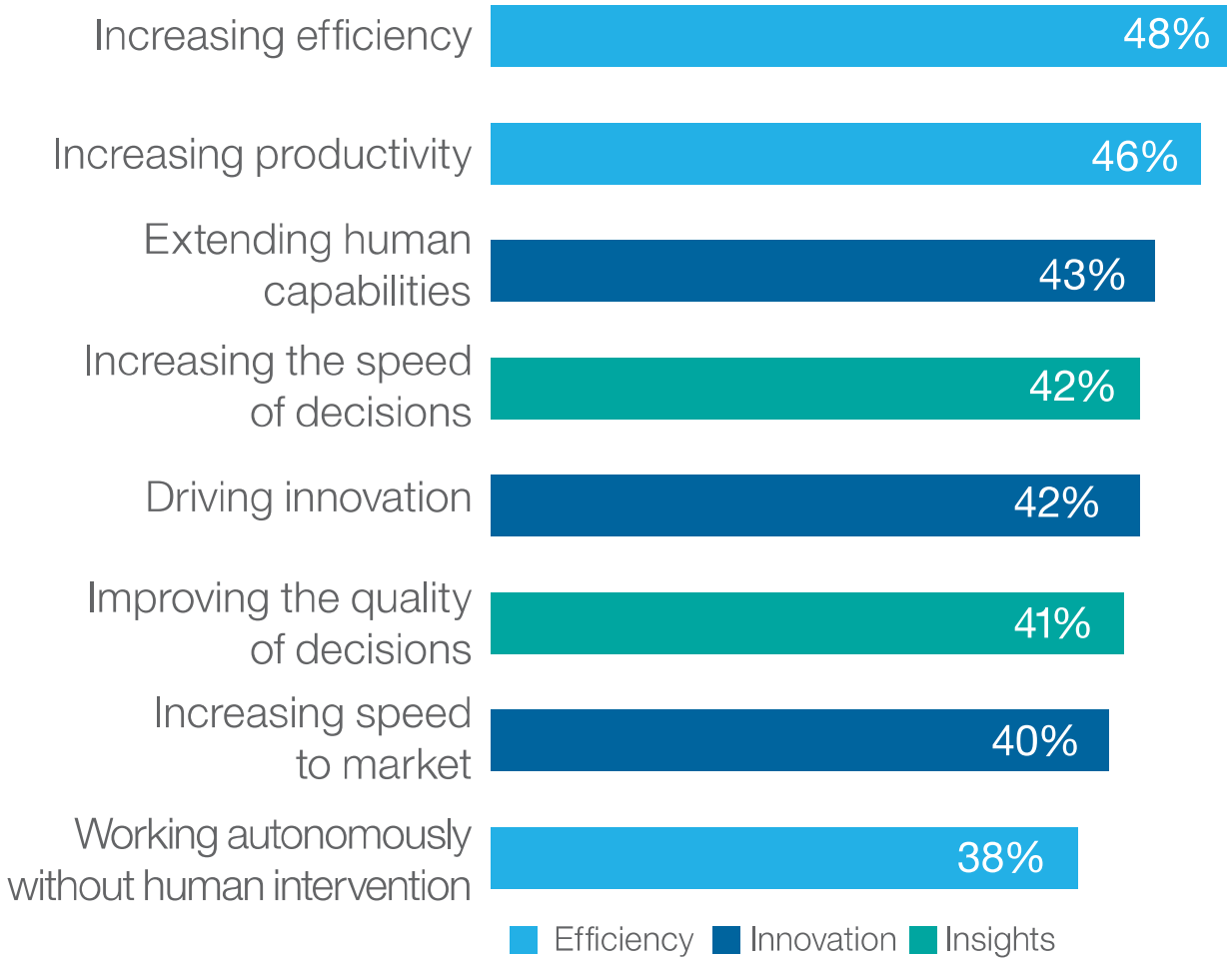
If you're not moving forward
you're backing up.





Early benefits of intelligent machines include efficiency, innovation and insights

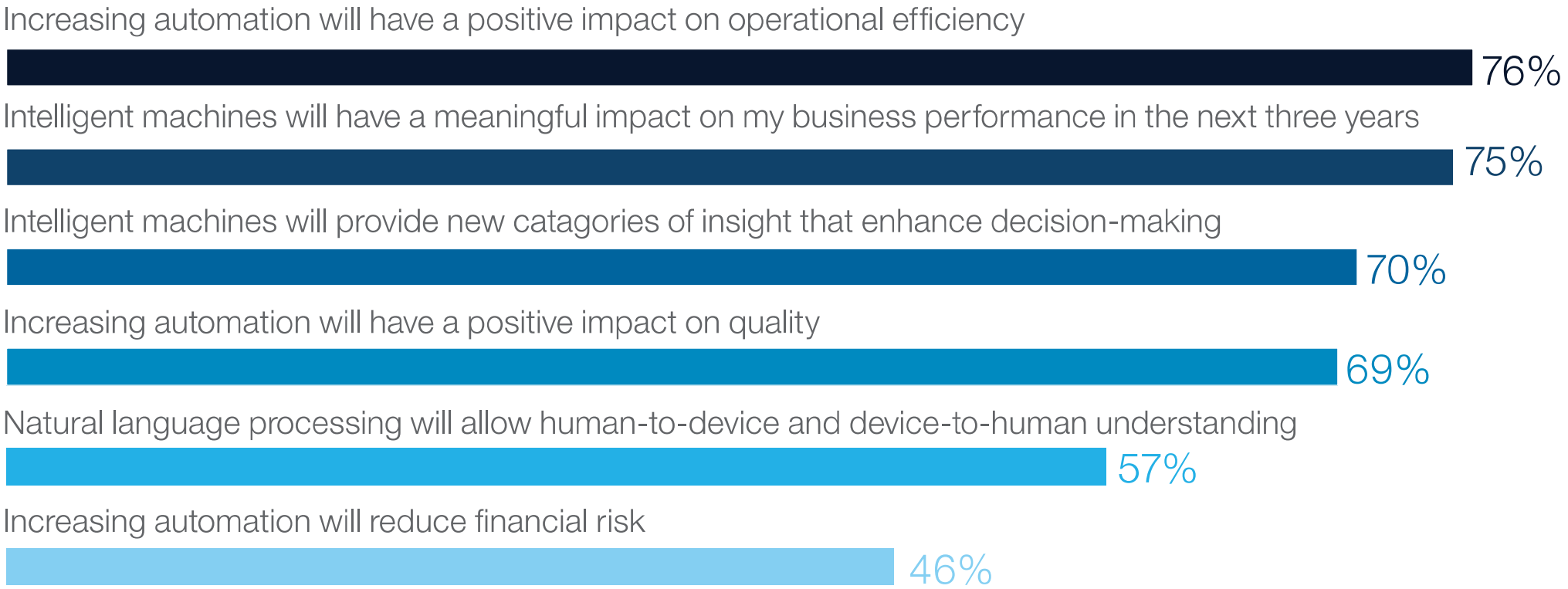
- Automotive firms are realizing substantially more value than others across industries in nearly every area; Industrial, Electronics, and Banking firms also report more value in a range of areas.
- The largest companies in our survey (more than $10 billion in revenue) are more likely to report value from robots and intelligent machines in a range of areas, including increasing efficiency (76%), increasing productivity (67%), and extending human capabilities (67%).
- Organizations that are using machine learning in some or all parts of the business are more likely to have realized value in a range of areas, including increasing the quality and speed of decisions.



Source: Intelligent Automation Study. Question: To what extent has your organization realized value from robots and other intelligent machines? "Some positive impact" and "substantial positive impact" responses.

Source: Intelligent Automation Study

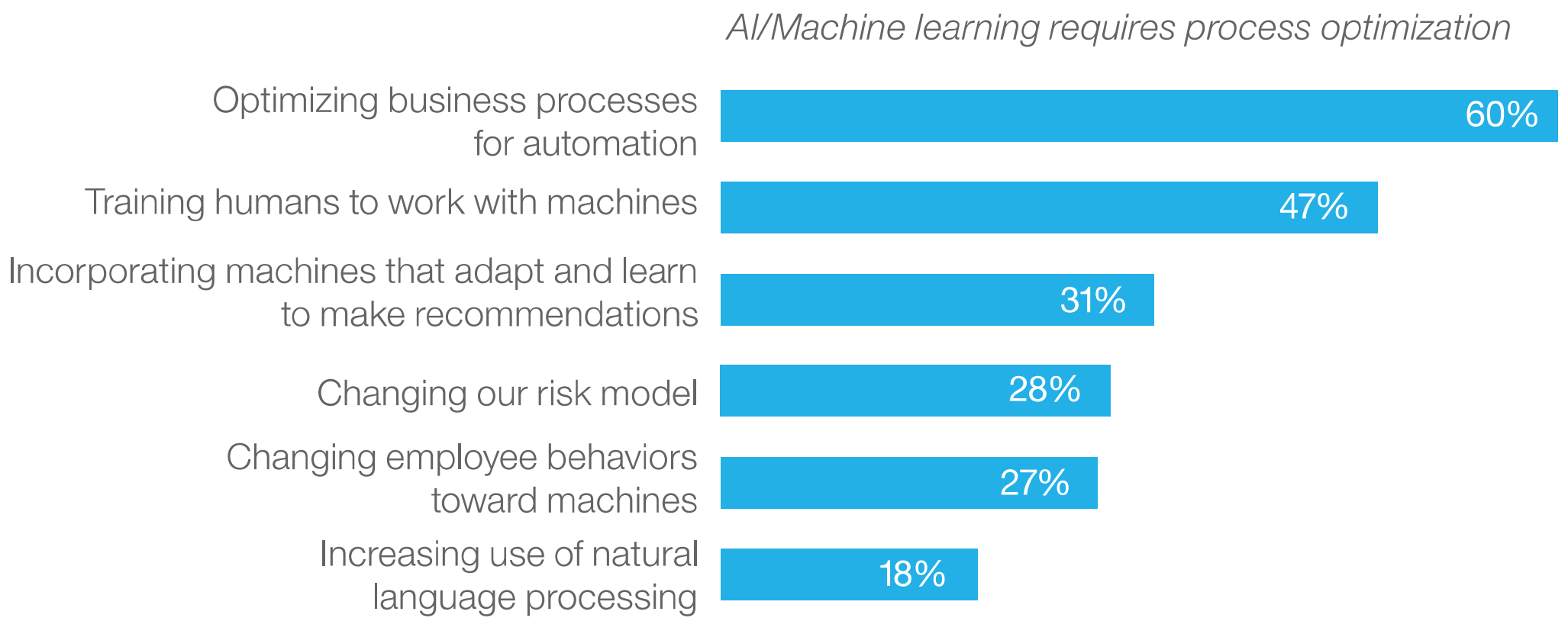
Executives are seeing the positive impact intelligent machines can have on their businesses



Source: Intelligent Automation Study. Question: To what extent do you agree with the following statements about human-machine interactions? "agree" and "strongly agree" responses.

Source: Intelligent Automation Study

Process optimization precedes cutting-edge technology

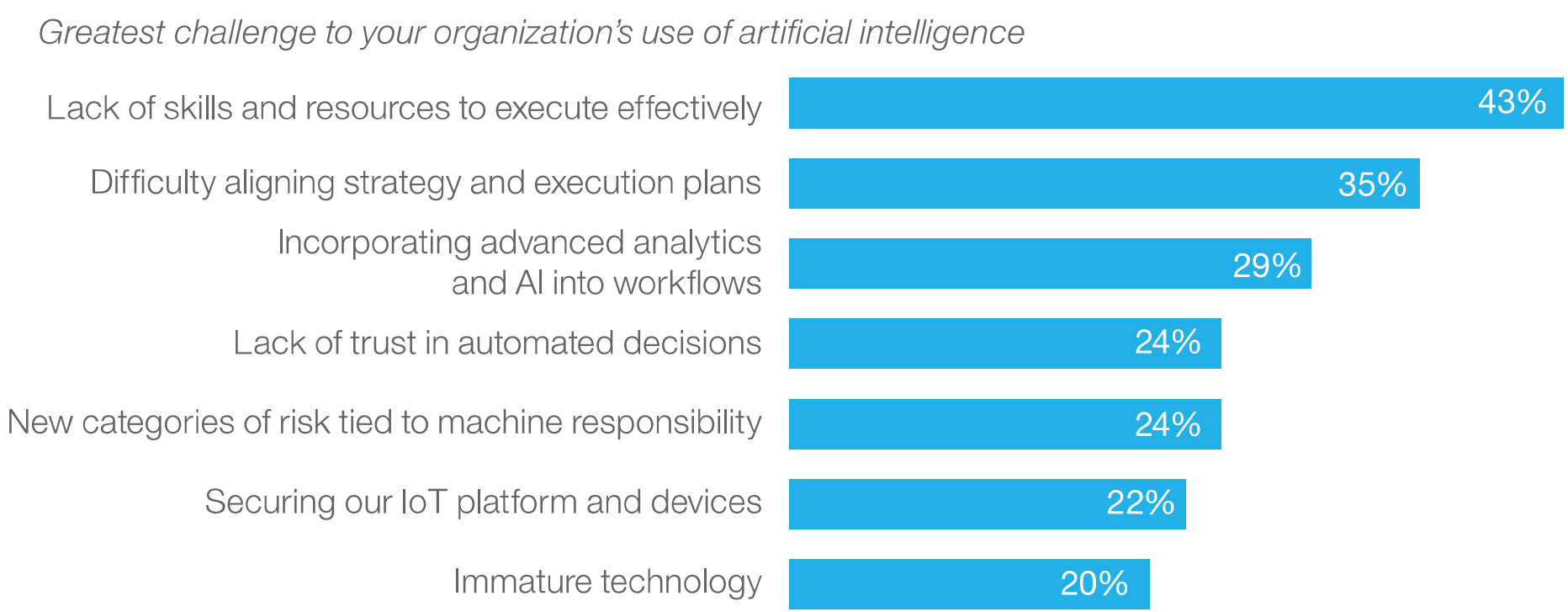


Source: Intelligent Automation Study. Question: How has your organization changed processes and workflows, if at all, to reflect the involvement of artificial intelligence/machine learning/adaptive robotics? Select all that apply.

Source: Intelligent Automation Study

But, most have not taken steps to make this happen - people are the biggest hurdle to cognitive adoption

People skills and resources are the biggest hurdles to cognitive adoption

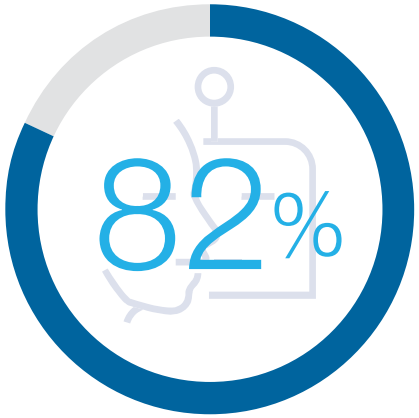


Source: Intelligent Automation Study. Question: Which of the following present the greatest challenges to your organization's use of artificial intelligence/machine learning/adaptive robotics and automation? Select up to three.

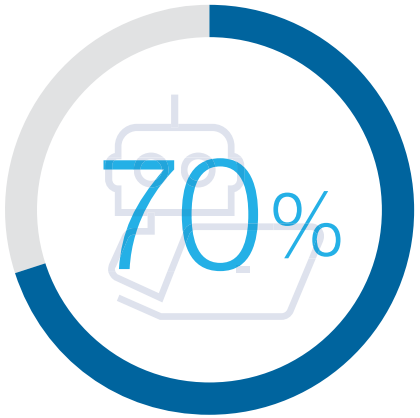
Source: Intelligent Automation Study

Teaching humans to work with machines begins with “feeling” comfortable

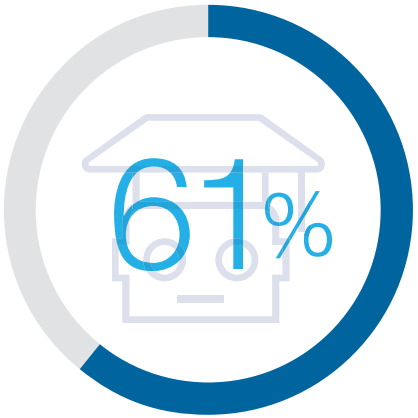
Teaching humans to work with machines begins with “feeling” comfortable



Employees need training and encouragement to feel comfortable working with intelligent machines



Intelligent machines will lead to higher-value work for our employees



Intelligent machines will have a meaningful impact on job descriptions and activities in the next three years

Source: Intelligent Automation Study. Question: To what extent do you agree with the following statements about human-machine interactions? “Agree” and “Strongly agree” responses.

Source: Intelligent Automation Study

Staying competitive in the cognitive era will demand an effective use of Intelligent Automation

Invest with intention

- Prioritize the landscape of emerging technologies
- Always align technology with business strategies and goals
- Investing intentionally requires detailed execution plans
  - ✓ Impact analysis
  - ✓ Communication plans
  - ✓ Change management

Rebuild the business for automation

- Layering new technologies on top of old business processes is not productive
- Rethink processes for the cognitive age – optimize workflows for automation
- Envision the end; enable through prototyping; repair and scale

Educate to automate

- Build agile, innovative workforces
- Encourage employees to think “big”, focus on higher-level tasks
- Participate in broader ecosystems to expand new ways of thinking and working

Source: Intelligent Automation Study

The Future of Finance and Accounting and the Changing Role of the CFO Includes Transformation through Cognitive Technologies and Artificial Intelligence