

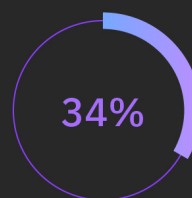
# From Roadblock to Scale: The Global Sprint Towards AI

**A paradox exists in the world of artificial intelligence (AI):** while AI represents the largest economic opportunity of our lifetime (estimated to contribute roughly \$16 trillion to GDP by 2030, PwC), the business adoption of AI has remained low. The slow business adoption of AI globally can be explained in many ways, including lack of skills, lack of tools, vendor lock-in, and a lack of trust and confidence in the AI. But, until recently, one of the biggest roadblocks has been cultural.

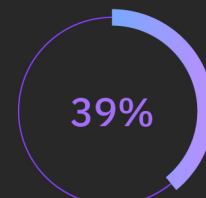
But exciting new data from the IBM report, From Roadblock to Scale: The Global Sprint Towards AI, show that while there is still work to be done, recent advances in a range of technologies from data prep, to bias detection, as well as skills training and re-training efforts is causing the rate of AI exploration and adoption to take off faster than some have predicted. Based on these insights and hundreds of client interactions, Rob Thomas, General Manager, IBM Data and AI, anticipates adoption of AI in the corporate world will climb dramatically over the next 18 to 24 months, exploding to 80% or even 90%.

The data sheds new light on the deployment of AI across 4,514 businesses in three regions: the U.S. (1,003), the E.U. (2,509), and China (1,002). The polling was conducted online through Morning Consult's proprietary network of online providers between October 10-22, 2019. See full details on the methodology at the end of the summary.

**3 in 4 businesses are exploring or implementing AI.**



have deployed AI



are ramping up exploratory phases with AI

Source: IBM's From Roadblock to Scale: The Global Sprint Towards AI Study 2020



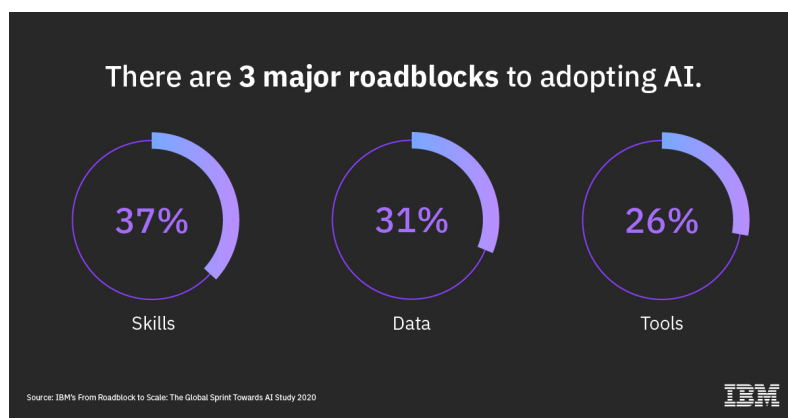
The survey's results provide critical insight beyond merely overall AI adoption—giving an insider's look at how adoption rates break down by industry and geography, how the technology is being deployed—and by whom—and defining precisely what the roadblocks are that stand in the way of seeing this transformational technology deployed at scale.

## Key Findings

### 1. Barriers to Adoption

Global business leaders worry most about lack of AI skills and expertise when they think about barriers to adoption. Executives cite the skills gap as a significant roadblock to broad business deployment of AI, and data silos remain a stubborn drag as well.

- 37% of respondents cite limited AI expertise or knowledge as a hinderance from successful AI adoption at their business, with increasing data complexities and silos (31%) and lack of tools for developing AI models (26%) falling closely behind.
- Limited AI experience is a significant barrier to AI adoption for companies that are still exploring AI, while increasing data complexity and vendor lock- in are larger issues for companies currently deploying AI.
- Companies currently deploying AI are more likely than those exploring to be required to use AI from their cloud provider by a margin of 33 points.



### 2. Current and Planned Investment in AI

Businesses in all industries and all regions surveyed are accelerating their exploratory use of AI.

- Across industries and in all three regions, most global businesses have either deployed AI in their business (34%) or are ramping up exploratory phases with AI (39%), meaning almost 3 in 4 businesses surveyed are in the AI game.
- Large companies are leading AI adoption, with 45% of firms over 1,000 citing adoption of AI compared to 29% of companies under 1,000 employees

## Key Findings (continued)

- Globally, 22% of the survey’s respondents reported they are not currently using or exploring the use of AI.
- Professionals whose companies are currently deploying AI are much more likely to report investment across the board.

Global companies are planning to heavily invest in all areas of AI over the next 12 months:

- o Proprietary AI solutions: 35%
- o Off the shelf applications: 34%
- o Off the shelf tools to build their own AI models: 33%
- o Reskilling and workforce development: 33%
- o Embedding AI into current applications and processes: 28%
- o R&D: 26%

### 3. Types of AI Deployment

As the use of technology drives down the cost of performing repetitive tasks, the value of the doing the remaining mission-critical functions sharply increases, especially for tasks that require foundations in intellectual skill and insight—and functions where physical flexibility, common sense, judgment, intuition, creativity and the ability to process natural language. AI today is being deployed horizontally across businesses.

- Firms that are still exploring AI, regardless of the country, are evenly split on whether they plan to use AI for specific project-based work (48%) or to deploy AI across the business (46%).
- Of those companies currently deploying AI, 40% are developing proof of concepts for specific AI-based or AI- assisted projects and 40% are using pre-built AI applications, i.e. chatbots).
- Professionals at companies currently deploying AI report the top 5 most important ways their organization are using AI as:
  - o Data security (36%)
  - o Automation of Processes (31%)
  - o Virtual assistants/chatbots (26%)
  - o Business Process Optimization (24)
  - o Sensor Data Analysis (Internet of Things) (24%)
- Large companies are more likely to be investing in embedding AI into current applications and processes (35% for over 1,000, 22% for under 1,000 employees) and proprietary AI solutions (42% for over 1,000, 32% for under 1,000 employees).
- Data and information architecture is more likely to contribute to AI culture at large companies than small companies (55% for over 1,000, 41% for under 1,000 employees).

## Key Findings (continued)

### 4. AI Culture and Trust

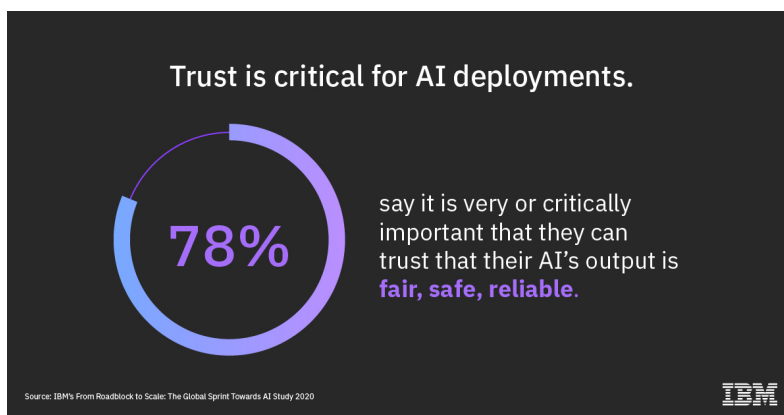
Here are a few examples across wage ranges and occupations:

- While business needs and competitive pressure are driving AI adoption across the companies surveyed, respondents that have deployed AI are more likely than those that are currently exploring AI solutions to cite directives from leadership (41% v 28%) and company culture (39% v 29%) as driving AI adoption.
- Of the companies currently exploring AI, 41% report that non-technical staff are working with AI, suggesting these companies are moving beyond small experimentation and toward full integration of the technology. Of the companies that have deployed AI, over two-thirds report non-technical staff are directly working with AI.

Trust is the Bedrock of AI's Impact.

For businesses facing roadblocks—and businesses working to deploy AI at scale—one factor remains universal: the necessity of trusting the technology, being able to say with certainty how AI reaches decisions, and building a culture of trust inside organizations for the technology and how it is brought into the workplace.

- Trust in AI technology is the leading factor contributing to the AI culture of companies across all respondents surveyed (61%).
- Globally, 78% of respondents across all countries surveyed say it is very or critically important that they can trust that their AI's output is fair, safe, and reliable.
- Being able to explain how AI arrived at a decision is universally important (83% global respondents), but it is particularly important to those currently deploying AI (92%) over those currently exploring (75%).



## 5. AI and the Cloud

Businesses' AI and Cloud journeys are linked. There is no single approach to the link between AI and cloud, with a wide range of companies moving forward with private cloud, others adopting a hybrid cloud.

- Vendor lock-in is an issue for companies around the world, impacting 53% of respondents.
- Companies currently exploring AI are much more likely to use a private cloud (44% exploring, 27% adopted), while companies currently deploying are more likely to use a hybrid cloud (38% adopted, 26% exploring) or hybrid multicloud (17% adopted, 8% exploring).

## Methodology

This survey was conducted from October 10 to October 22, 2019,

across an international sample of 4,514 senior business decision-makers with some knowledge/influence over their company's IT decisions, including 1,003 in the U.S., 1,002 in China, and 2,509 in the European Union, including roughly 500 respondents each from the U.K, France, Germany, Spain, and Italy. The interviews were conducted online and the margin of error for the full sample in the E.U. is +/- 2 percentage points, the margin of error for China and the U.S. is +/- 3 percentage points, and the margin of error for each individual E.U. country is +/- 4 percentage points with a 95% confidence level.

Respondents represented a mix of small and large firms:

- 31% of respondents came from firms with more than 1,000 employees
- 34% of respondents came from firms with between 251 and 1,000 employees
- 16% came from firms with 51-250 employees
- 19% came from smaller businesses (50 employees or less)
- Sole proprietorships were not sampled

Respondents represented a mix of seniority:

- All respondents were required to have significant insight or input into their firm's IT decision-making
- One-third of the sample was at a VP level or above (including CIOs, etc.)
- The remainder of the sample represented a mix of directors and senior manager-level employees with close knowledge or authority in their firm's IT/AI practices