



FORRESTER®

# Accelerate Your Data-Driven Transformation

How Innovators Use Advanced Analytics, Artificial Intelligence,  
And Machine Learning To Increase ROI And Competitiveness

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FORRESTER OPPORTUNITY SNAPSHOT: A CUSTOM STUDY COMMISSIONED BY RAPIDMINER | MAY 2021

## Overview

Digital transformation driven by data science (the practical application of advanced analytics, machine learning, and artificial intelligence) is critical for enterprises, driving competitive advantage and business impact today and into the future. As enterprises navigate these strategies, however, they face significant people, process, and technology challenges, including democratization of skills, choosing and implementing the right tools, and creating efficient processes. Failing to solve for these will result in significant negative impacts.

However, a comprehensive data science platform that lets anyone prep data, develop models, and manage models in production can address these challenges and accelerate digital transformation strategies. Early-adopter companies (11 or more models already in production) see greater benefits from their initiatives than later adopters (10 or fewer models in production), underscoring the need to get started now.

## Key Findings



Data science is among the most important factors for competitiveness and the highest investment areas for many. Users see 4.4x ROI on data science and expect an increase in next two to three years.



Early adopters with 11+ models in production see higher ROI and increased benefits as opposed to later adopters with 10 or fewer models in production, underscoring the need to get started now.



A comprehensive data science platform impacts companies both internally (increases efficiencies and improves ability to innovate) and externally (improves customer experience).

## Data Science Is The Key, Growing Driver Of Competitiveness and Investment

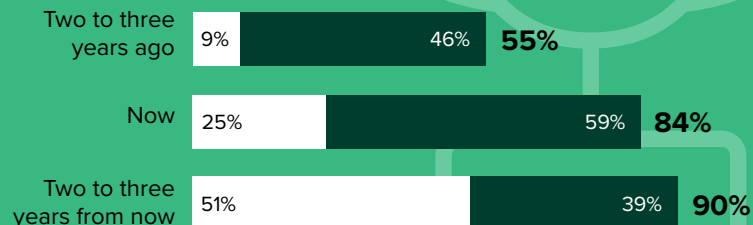
Decision-makers are more hyperfocused on data science initiatives than ever and only expect their importance to grow. Over eight in 10 say data science is the single-most (or one of the most) important factor for competitiveness and, thus, the single-most (or one of the most) important investment area. Early adopters with 11+ models in production are ahead of this curve and made their investments in this area two to three years ago, while later adopters are behind the curve and just getting started.

Companies are applying data science to a wide range of problems and tasks — as a solution for everything from reducing risk (85%) to increasing operational efficiencies (82%). Early adopters are expanding on their successes with known benefits like increased data-driven decision-making, improved customer acquisition, and improved products and services.

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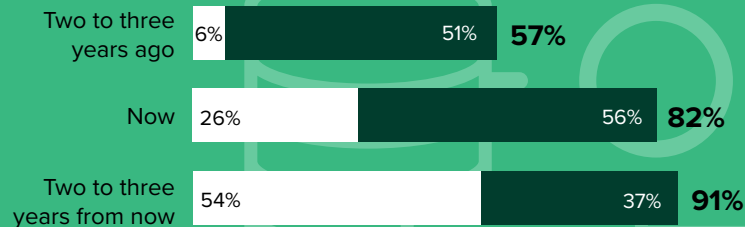
### Importance Of Data Science For Competitiveness

- The single-most important factor
- One of the most important factors



### Investments In Data Science

- The single-most important investment area
- One of the most important investment areas



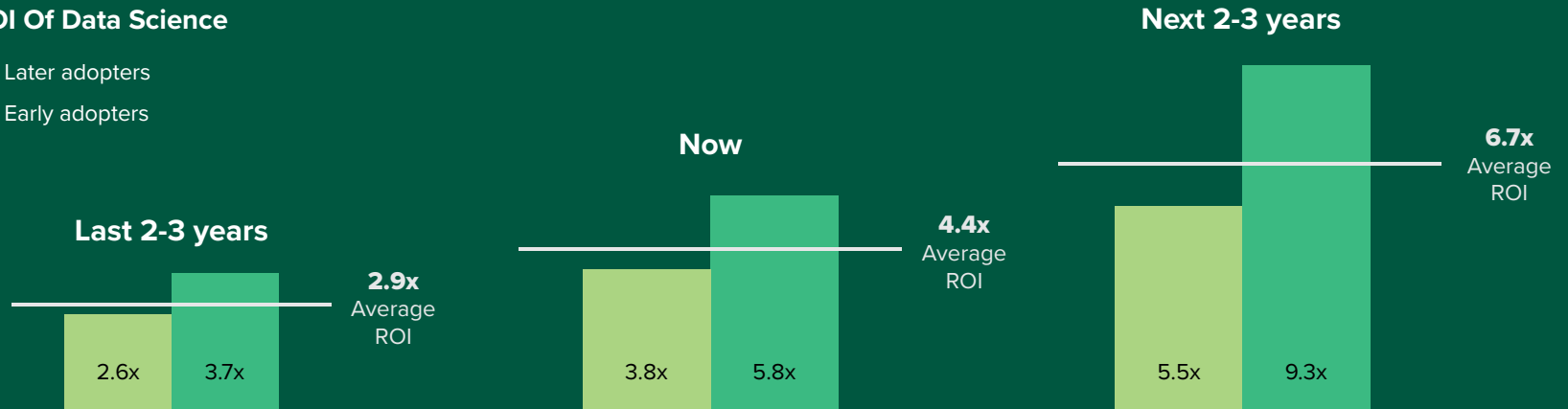
Base: 208 global director+ decision-makers responsible for implementing their organizations' data science and/or machine learning strategies  
Source: A commissioned study conducted by Forrester Consulting on behalf of RapidMiner, March 2021

## Companies That Quickly Operationalize Data Science Reap Higher ROI

Users of data science currently see a 4.4x ROI and expect that figure to increase to 6.7x in next two to three years. However, there is a stark contrast in ROI between early and later adopters. Later adopters currently see a 3.8x ROI while early adopters see 5.8x. While any increase in ROI is beneficial, this discrepancy makes a clear case for getting models into production as soon as possible; with delayed production rollout, ROI suffers. To aid in achieving their data science goals, companies find it very important or critical to invest in solutions for operationalizing AI/machine learning (ML) models (80%) and tools that promote collaboration (79%). Decision-makers also find it important to set up/expand a data science/AI center of excellence (79%). It's clear that earlier investments pay higher dividends over time.

### ROI Of Data Science

- Later adopters
- Early adopters

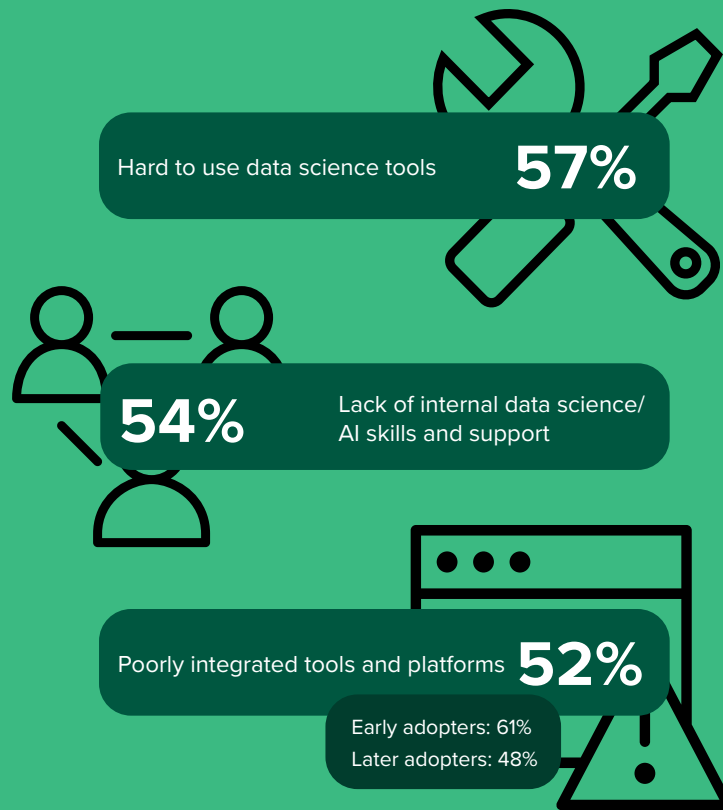


## Challenges Indicate Need For Single, Well-Integrated Data Science Platform

Data science challenges span people, processes, and technology. In more than half of organizations, obtaining the right internal skills and support is a critical hurdle. Technology and people challenges are highly correlated, as technology that is more difficult to use strains employees, especially those without advanced skills.

As companies mature in their data science model deployments, the process issues take center stage. For early-adopter companies with more models in production, the processes become more challenging because they have already solved for many of the technology issues and have more people working on more projects who need to integrate with current tools and processes. The need for a single, well-integrated platform is clear — one that is easy to use and alleviates skill-gap pressures by upskilling and training employees to enable collaboration.

## Challenges of Current Data Science Programs



## Consequences Of Challenges Include Slower ROI

The two most commonly reported negative impacts of the challenges mentioned are an increased amount of time to both model deployment and delivery of desired ROI. Clearly, any delay in deployment will delay ROI, so these problems are not unrelated and point to the importance of getting models into production quickly.

Additionally, the integration of different platforms into current workflows and the onboarding of new employees are commonly reported challenges. Firms can address both of these consequences by implementing a comprehensive data science solution that reduces the number of different tools that must work together while also providing visual interfaces that current employees can use to develop models.

### Consequences Of Challenges With Existing Data Science Programs

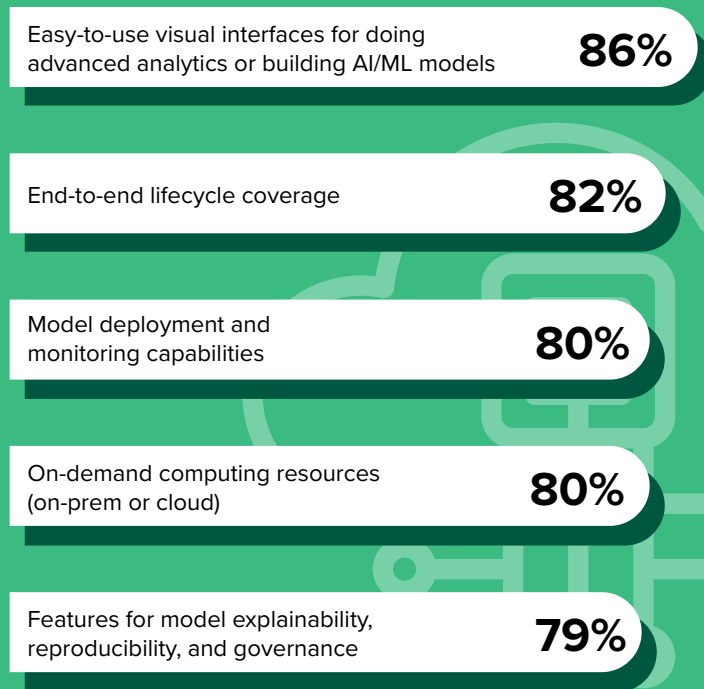


## Comprehensive Data Science Platforms Address Critical Challenges

As companies expand their data science programs, they need a platform that addresses their critical people, process, and technology challenges. To do this, the platform must not have any gaps in terms of who can use it and what stages of the data science lifecycle it can be used for. It also must help users overcome IT and governance challenges that might otherwise prevent a model from being deployed and ultimately delivering ROI. When selecting a data science platform, companies find most value in easier interfaces (upskilling business domain experts and empowering them to build and manage models), full lifecycle coverage (creating more seamless processes), scalable compute power, and streamlined governance (enhanced capabilities that build trust and promote business buy-in).

## Value Of Data Science Platform Capabilities

Showing “Extremely” and “Very valuable”



## Comprehensive Platforms Improve Innovation And Efficiencies

A comprehensive data science platform can solve critical business challenges and enable companies to progress in their digital transformation, no matter where they are today. Decision-makers agree that a comprehensive platform would have a big impact on their organizations both internally (operations/innovation) and externally (customers) by improving their ability to innovate new products, increasing their data-driven decision-making, improving customer experience, and increasing operational efficiencies. End-to-end data science platforms become all the more important as companies progress on their AI journeys. Early adopters also find that a comprehensive platform has a greater impact on their ability to innovate new products and services (88%) as opposed to later adopters (74%).

### Impact Of A Comprehensive Data Science Platform

Showing “Significant” and “Moderate impact”



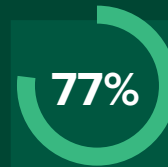
Innovate new products or services



Increase data-driven decision-making in more parts of the business



Improve the customer experience



Increase operational efficiency



Improve the acquisition of new customers (e.g., sales and/or marketing)



## Conclusion

Data science is rapidly becoming the most important factor for competitiveness. As investments and returns grow dramatically, the gap between early and later adopters is widening. Organizations can expand the impact and accelerate the time-to-value of data science initiatives by investing in platforms that:

- Democratize data science across the organization. Unlock the untapped opportunities for driving growth and efficiency by upskilling employees with easy-to-use, guided tools that teach anyone to apply data science and ML to real-world business problems.
- Operationalize data science at scale. Drive impact with platforms that accelerate the entire data science lifecycle. Leverage capabilities that help rapidly prototype, deploy, monitor, and manage multiple data science projects to drive the ever-increasing ROI.

### Project Director:

Emily Drinkwater,  
Market Impact Consultant

### Contributing Research:

Forrester's Application,  
Development, and Delivery  
research group

## Methodology

This Opportunity Snapshot was commissioned by RapidMiner. To create this profile, Forrester Consulting supplemented this research with custom survey questions asked of 208 global director+ decision-makers responsible for implementing their organizations' data science and/or machine learning strategies. The custom survey began and was completed in March 2021.

### ABOUT FORRESTER CONSULTING

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## Demographics

### COUNTRY

France 9%
Germany 10%
The Netherlands 7%
United Kingdom 24%
United States 51%

### RESPONDENT LEVEL

C-level executives 37%
Vice president 35%
Director 28%

### COMPANY SIZE (USD REVENUE)

\$500M TO \$999M 23%
\$1B to \$5B 52%
>\$5B 25%

### INDUSTRY (TOP 5)

Manufacturing/materials 26%
Financial services/insurance 17%
Retail 16%
Telecom 14%
Healthcare 10%

A person is sitting at a desk, writing in a notebook with a pencil. A laptop is open in the background. The scene is dimly lit, and the overall tone is professional and focused. The Forrester logo is overlaid in the center.

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