



FORRESTER®

Automate And Optimize Data Engineering To Accelerate Time To Value With External Data Sets

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FORRESTER OPPORTUNITY SNAPSHOT: A CUSTOM STUDY COMMISSIONED BY CRUX, DECEMBER 2022

Overview

The business world runs on data, yet organizations spend most of their time cleaning and preparing data rather than using it to make decisions. External data can inform everything from go-to-market strategies to technology investment strategies, and decision-makers are always looking for more. However, it proves difficult for many in-house data teams to keep up with demand because every external data set is shaped differently and requires significant effort to re-index and integrate with other data sources.

Significant work goes into ingesting, integrating, and preparing new external data sets for analysis and insights extraction. The reality is organizations spend significantly more time preparing data than analyzing and applying it. Organizations that want to enable faster time to value with external data sets need to understand the challenges and opportunities facing their data teams. This enables them to make the changes needed to better integrate and prepare new external data sets at scale going forward.

Key Findings

1. Nearly 80% of surveyed data leaders want a faster, more efficient way to onboard new external data sources.
2. Forty-six percent of leaders agree their teams don't have the right tools and automation to handle a large influx of new data sources.
3. On average, surveyed leaders said their teams spend 70% of their time with a new data set prepping it for analysis vs. just 30% of their time on actual data analysis.
4. Over 80% of those surveyed affirmed that they want more options to outsource parts of their external data management processes as needed.

Data Teams Need A More Efficient Way To Onboard New External Data Sources

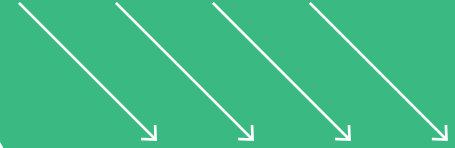
Organizations are constantly looking to bring in new data sets from external sources to provide insights in areas where internal gaps exist. On average, surveyed data decision-makers estimate that their companies ingest between 16 to 20 new external data sources each month.

Anytime a new data request is made, there is a time gap between when that request is made and when the data is available for use and analysis. This gap is significantly longer than the speed of business, which is why 79% of surveyed data leaders are looking for faster, more efficient ways to onboard new external data sets to keep up with business demands.

Business Leaders Want A Faster Path To Action With External Data Sets

59% AGREE

We experience slow time to value when onboarding new external/third-party data sets.



79% AGREE

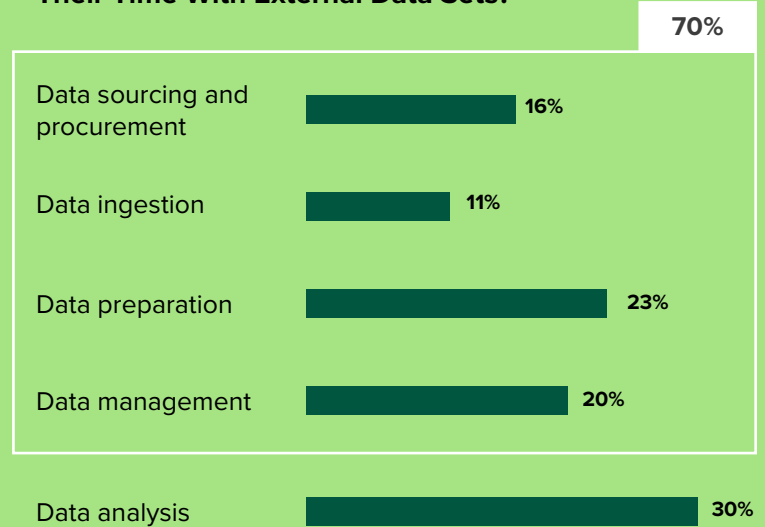
We need a faster, more efficient way to onboard new external data sources to keep up with the demands of the business.

Data Preparation And Management Dominate The External Data Lifecycle

Our survey revealed two primary issues contributing to slow time to value with new external data sets. First, 46% of leaders agree their teams don't have the right tools and automation to handle a large influx of new data sources. Second, 41% agree they don't have enough resources to handle the current volume of data requests. As well, 74% of respondents said their data teams must deliver data to at least two different locations (e.g., cloud and on-premises), further stretching timelines.

The combination of these challenges has resulted in the surveyed leaders reporting their team spends 70% (on average) of its total time working on getting the data for ready analysis versus just 30% of their time on actual data analysis. Data leaders acknowledge this is problematic and 71% would like their organizations to spend more time analyzing data and less time ingesting and preparing data.

Where Are Organizations Spending Their Time With External Data Sets?



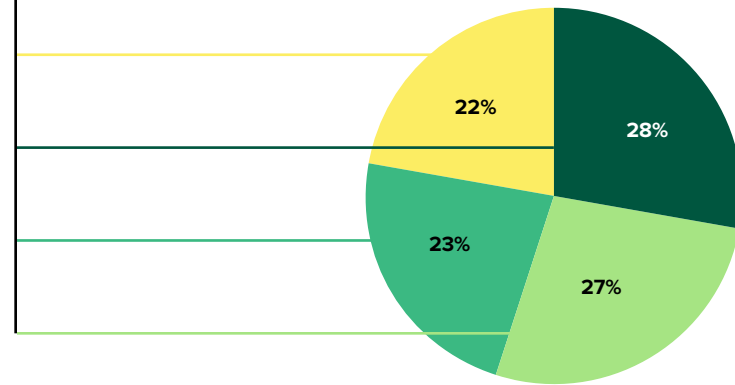
Skills Deficiencies Slow Data Preparation And Management

Forty-six percent of our survey respondents indicated data management was the most challenging part of the process once the external data has been procured. Only 22% considered data ingestion to be the most difficult task, suggesting that getting the data into the organization isn't the main problem.

We asked data leaders where they see the greatest challenge in their companies' external data operations, and the top response was in skills (28%). The skills challenges leaders face manifest in two ways. First, basic data engineering skill sets are missing entirely from organizations (e.g., data modeling, entity matching, pipelines). Second, organizations simply have too few employees with the right skills to manage growing data volumes. Either way, data teams are grasping for solutions for meeting the growing demand for external data onboarding.

Greatest Challenges Organizations Face With External Data Operations

- **Skills challenges** — not having employees with the right data engineering or DevOps skill sets
- **Technology challenges** — lack of the right data engineering tools and systems (e.g., lack of automation tools)
- **Staffing challenges** — not having enough employees to handle external data needs
- **Process challenges** — not having a clear, repeatable process for integrating new external data sets



Technology And Organizational Gaps Also Hinder Data Preparation Processes

While skills challenges were the top overall challenge, technology- and process-related challenges were the most significant challenge for approximately one-quarter of those surveyed.

For example, 39% of respondents said their organizations struggle to combine external data with internal data, and 37% lack the proper data governance to ensure data quality, appropriate access, and consistency. Organizational silos can also limit who accesses and uses certain external data sets, which impacts how much value an organization can get out of these data sets. Without an established home base for managing data and data access across teams, data leaders will continue to struggle with organizing, sharing, and using data effectively.

TOP TECHNOLOGY CHALLENGES

Difficulty combing external data with internal data **(39%)**

Lack of proper tools to ingest and transform data **(24%)**

TOP PROCESS CHALLENGES

Organizational silos limit who can access and use certain external data sets **(39%)**

Lack the proper data governance to ensure data quality, appropriate access, and consistency **(37%)**

TOP SKILLS CHALLENGES

Missing business analyst skill sets to help interpret new external data sets **(47%)**

Missing the skills to do entity matching across data sets **(33%)**

TOP STAFFING CHALLENGES

Not enough headcount to ingest, transform, and process external data **(36%)**

Not enough headcount to monitor and remediate onboarded external data sets **(32%)**

Leaders Are Investing In Data And Automation Tools And Partnerships To Bolster Data Operations

Data leaders are eager to improve their operations and are making investments and improvements to drive change. The most commonly planned changes revealed in our survey include a focus on improving technology to enable greater automation (i.e., AI and machine learning [ML]) and engaging external partners to optimize data engineering tools and processes.

With missing skills as the most prevalent challenge, organizations are looking toward tooling and partnerships to provide a quick path to addressing gaps. Over 80% of those surveyed affirmed that they want more options to outsource parts of their external data management processes as needed. These partnerships can provide the needed expertise and headcount that organizations are struggling to find.

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Planned Changes Or Investments For External Data Source Onboarding And Management Improvements



Base: 206 global decision-makers or influencers of third-party data sources

Note: Showing top 5 responses

Source: A commissioned study conducted by Forrester Consulting on behalf of Crux, September 2022

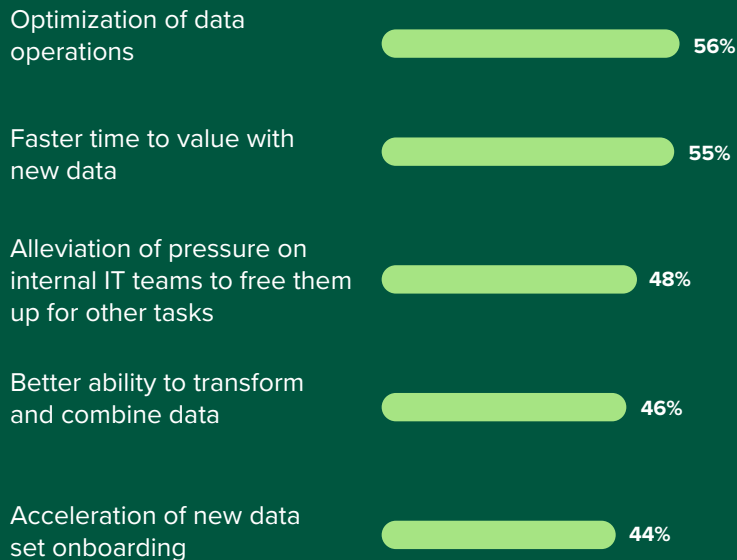
Improving Data Operations Drives Faster Time To Value For External Data

As data leaders make improvements to the way their organizations ingest and prepare external data, their efforts are focused on how to speed up the process and get to the analysis and insights phase faster. When asked about the one thing leaders would like to fix with their data operations, common responses included “reduce the time it takes,” “make operations faster,” and “automate wherever possible.”

As organizations make these changes and engage with partners to address key gaps in data preparation, data leaders expect to see more optimized data operations (56%) and faster time to value with new data (55%), which in turn will help alleviate pressure on internal data teams to allow them to focus on other tasks (48%).

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Expected Outcomes From More Effective External Data Onboarding And Management



Base: 206 global decision-makers or influencers of third-party data sources

Note: Showing top 5 responses

Source: A commissioned study conducted by Forrester Consulting on behalf of Crux, September 2022

Conclusion

The proliferation of new data sources available to businesses is not slowing down anytime soon, and neither is the business leaders' appetite to have access to that data for business insights. The result is that data requirements are multiplying, but internal data resources remain constrained in trying to keep up. As business and data decision-makers prioritize time to insight, they want to focus their valuable data resources on conducting analysis and making decisions with data versus simply getting the data prepared and organized. To help do this, they are seeking out tools, partners, and automation techniques that can help them quickly fill gaps with data preparation and reduce the time spent on data management.

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Forrester's Business Insights
EA CI ADD research group

Methodology

This Opportunity Snapshot was commissioned by Crux. To create this profile, Forrester Consulting supplemented this research with custom survey questions asked of 206 data science, analytics, and IT professional responsible for sourcing external, third-party data. The custom survey began and was completed in September 2022.

ABOUT FORRESTER CONSULTING

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Demographics

COUNTRY	
United States	29%
United Kingdom	30%
Canada	21%
Nordic countries	20%

INDUSTRIES	
Technology/technology services	21%
Insurance	20%
Retail	20%
FinTech	19%
Financial services: Non-retail banking	19%

Note: Percentages may not total 100 because of rounding.

ANNUAL REVENUE	
\$500M to \$749M	36%
\$750M to \$999M	26%
\$1B to \$5B	23%
>\$5B	15%

TITLE	
VP	17%
Director	31%
Manager	52%

ROLES	
Data science/analytics	51%
IT	49%

A hand is shown on the left side of the frame, reaching towards the center. The background is a dark green, futuristic digital interface. It features a large circular graphic on the right side, composed of concentric rings and gear-like patterns. The overall aesthetic is high-tech and data-driven.

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