

The Business Value of dbt



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Business value highlights

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Key results

559% three-year ROI [↗](#)

5-month payback on investment [↗](#)

Tooling and maintenance

\$182,200 average annual data solution and infra cost savings per organization [↗](#)

\$210,800 average annual data platform management efficiencies per organization [↗](#)

Operational efficiency

40% more efficient data governance teams [↗](#)

33% fewer data quality issues [↗](#)

44% higher productivity for data and analytics teams [↗](#)

28% higher business analyst team productivity [↗](#)

Business impact

34% faster to market [↗](#)

\$91,900 higher revenue per year per data dev team member using dbt [↗](#)

Executive summary

Data teams use dbt, a modern data development platform, to help build, test, document, and deploy transformations efficiently. The platform includes collaborative workflows for analysts and engineers working in structured query language (SQL) and modular code, with built-in capabilities for version control, automated testing, lineage browsing, and metrics definition and query. The dbt platform improves developer speed and accuracy, reduces errors, enforces consistency, and reduces unnecessary and redundant work that can drive up data platform costs and slow delivery cycles.

IDC conducted in-depth research with organizations using the dbt platform to assess the impact on their data transformation and management capabilities in analytics and development workflows. Based on these interviews, IDC found that study participants are achieving substantial business-related benefits in improved data quality, higher data and development team productivity, and greater data scalability, as well as data platform cost and operational efficiencies.

On average, IDC projects that the interviewed dbt customers will realize \$8.14 million in annual benefits (\$25,500 per data team member/developer using dbt), driven by:

- **Tooling and maintenance cost savings and efficiencies** from retiring legacy tools, optimizing infrastructure, and reducing management overhead in support of business efficiencies
- **Enhanced productivity** across analytics, data developer, and governance teams through automation, higher-quality data, and reusable code
- **Improved data quality, trust, and timeliness** via centralized definitions, automated testing, and lineage tracking
- **Accelerated time to insight and time to market** for analytics and AI workloads and services through streamlined development cycles and ready availability of quality data

Situation overview

Modern organizations are striving to become AI-fueled businesses on their journey toward an agentic future. Board members and executives are putting pressure on business and IT to deliver in the hopes that agentic AI can improve productivity, reduce risk, and lower costs. Every organization on an AI journey quickly realizes that AI requires trusted data, and issues of data quality, lineage, and control quickly surface and impede progress. Taking control of data quality, lineage, and pipeline development to improve the reliability, trustability, and timeliness of analytic and AI outcomes is foundational to enterprise success.

Poor data quality remains a persistent challenge; IDC research finds that organizations adopting modern data engineering approaches can reduce data quality issues by more than 30% and late or incomplete data instances by over 35%. Without trustworthy and timely data, organizations risk undermining operational decisions, AI outcomes, and regulatory compliance. Trustworthy data is not only about quality and timeliness; it also requires lineage transparency and automated testing in modern data engineering processes. Nearly every (95%) organization responding to a recent IDC quick poll survey on the topic of agentic AI and data agreed that lineage tracking is essential for transparency, compliance, and reliability in agentic AI workflows. This ability to trace data across transformations and business processes reduces risk and ensures explainability for internal stakeholders and regulators.

In a landscape dominated by disparate systems across a wide vendor ecosystem, one of the key challenges in taking control of data for analytics and AI is making data accessible and business oriented, with accountability for control and consumption. Many organizations struggle because, while lines of business (LOBs) use the data to drive decisions, the responsibility for building pipelines, maintaining data integrity, and ensuring it reaches the right stakeholders falls on technology teams. This is where treating “data as a product” comes into play. Organizations assign ownership of data products to business teams and connect data producers with data consumers using DataOps processes that include continuous testing of data and pipelines to further improve the trust and reliability of data products. IDC research has shown that high-performing organizations treat data as a product. This has benefits such as improving time to value, multiplying innovation, enabling digital business, enabling data governance, improving success in AI initiatives, and increasing the utility of data across the organization.

For companies modernizing their data pipelines, the ability to integrate quality checks, enforce lineage visibility, and apply product-management discipline is not just an IT concern — it is a direct enabler of efficiency, AI readiness, and competitive advantage.

The dbt platform

The dbt platform is a SaaS solution that helps data teams transform raw data into trusted, analytics- and AI-ready data sets through code-based workflows. At its core, dbt enables users to write modular SQL models, apply version control, and orchestrate transformations directly in cloud data warehouses and lakehouses. The platform extends these capabilities with features such as a collaborative web-based integrated development environment, a VS Code extension plug-in for teams that prefer local development, automated testing, documentation, scheduling, and CI/CD pipelines. Additionally, dbt offers a visual drag-and-drop development tool called dbt Canvas, a data catalog, a semantic layer, an AI copilot, and agentic tooling that eases and accelerates routine analytics work, including data quality improvements. These capabilities ensure that data pipelines are transparent, auditable, and scalable, reducing reliance on fragile manual processes and helping organizations move toward more agile, software-engineering-style practices in data development.

The recently released dbt Fusion engine powers a step-function improvement to dbt. Key innovations include:

- **Stateful design:** Design that powers features such as state-aware orchestration to reduce unnecessary platform compute and spend
- **Advanced compilation:** Deep understanding of SQL syntax and semantics across data platforms, allowing for developer experience benefits such as in-line error detection as users code and smart auto-complete
- **High-performance architecture:** A programming language known to deliver low latency, highly parallel operations, and faster parse times, written in Rust

Because the Fusion engine is relatively new as of this writing, IDC was unable to speak to a customer that had deployed and measured the impact of savings realized by Fusion.

For data engineers, dbt provides a structured environment to manage complexity in modern data ecosystems, which are often distributed, dynamic, and multimodal. Engineers can define centralized business logic, enforce quality checks, and track lineage so that changes in upstream systems are reflected consistently across downstream analytics. This not only reduces errors but also accelerates collaboration between technical and business teams. By standardizing definitions and embedding testing into every pipeline run, data engineers can deliver trustworthy outputs faster, supporting operational decision-making and advanced use cases such as AI model training and real-time analytics.

Equally important, dbt enables organizations to treat data as a product and encourages developers to work like software engineers, an approach that aligns with emerging enterprise intelligence practices. With integrated documentation, discoverability, and governance, data engineers can publish reusable, well-defined data products that are easy to consume across the business. This shift transforms raw data sets into curated, reliable assets with clear ownership and quality guarantees, ensuring that data products support innovation, reduce time to insight, and enable broader self-service analytics.

Organizations in this study leveraged dbt to improve data quality, boost the productivity of data engineering teams, improve data governance efficiency, and realize business benefits, including faster time to value for analytics and increased revenue attributable to more accurate, timely, and trusted data.

The business value of dbt

Study firmographics

IDC interviewed eight organizations across industries about their experiences using dbt. IDC designed the interviews to understand the quantitative and qualitative impact of using the platform to manage and transform data in their analytics and development workflows. Interviewed organizations varied in size and scale of operations, with an average of 20,272 employees (median of 11,000) and an average annual revenue of \$16.75 billion (median of \$6.9 billion). Their data teams averaged 462 members, with a median of 115, and operated across an average of 545 business applications and 6,400 terabytes (TB) of storage. Thus, the sample reflects the experience of enterprise customers with diverse business operations and significant reliance on data and analytics to drive business operations. Please see [Table 1 \(next page\)](#) for additional firmographic details.

Table 1
Firmographics of interviewed organizations

| Firmographics | Average | Median |
|---------------------------------|---|---------------|
| Number of employees | 20,272 | 11,000 |
| Number of IT staff | 4,356 | 1,000 |
| Number of data team members | 462 | 115 |
| Number of business applications | 545 | 250 |
| Number of terabytes of data | 6,400 | 6,000 |
| Revenue per year | \$16.75B | \$6.90B |
| Countries | United States (6), France, United Kingdom | |
| Industries | Financial Services (2), Business and Personal Services, Energy, Healthcare, Retail, Technology, Utilities | |

n = 8; Source: IDC Business Value In-Depth Interviews, August 2025

Choice and use of dbt

Study participants commonly chose dbt to modernize and streamline their data transformation workflows. They cited the platform's engineering-centric design, ease of use, and strong integration capabilities. Many interviewed organizations sought a solution that could provide automated testing, version control, and robust data lineage while also enabling self-service analytics for less technical users. They explained that dbt stood out for its flexibility and ability to allow teams to enforce centralized governance while supporting federated ownership. They also referenced dbt's CI/CD capabilities, which are important for accelerating development cycles and reducing the frequency and impact of data-related manual errors.

Interviewed dbt customers spoke in greater detail about their decision criteria:

Platform for data transformation and core required functionalities:

"We were looking for a solution to support our data transformations and that would run automated unit tests and build a data dictionary. ... We chose dbt because it offered the two to three major things we needed."

No need to customize; value of flexibility:

"We didn't need to customize with dbt because everything is packaged as code or completely driven from metadata. ... We really chose it primarily for the flexibility that it offers."

CI/CD integration, driving greater speed:

"We've embarked on a new data strategy with dbt, and that is all around building the idea of data as a product. The biggest benefit we're getting with dbt ... is the full CI/CD integration, which is really an enabler to increase the pace of change and sophistication of the data products we're building."

Efficient and scalable platform:

"We chose dbt for its modern, scalable approach to data transformation. With a small team, we needed a tool with reusable models that's easy to use and govern. dbt makes governance, workflows, lineage, and tracking straightforward."

Study participants reported using dbt to support substantial data transformation workloads, with an average of 319 developers and data team members per organization engaged in building, managing, and deploying data and data-driven models. This level of adoption reflects dbt's central role in enabling scalable, collaborative, and efficient data operations. On average, study participants are using dbt for 101,970 models, working across 905 terabytes of usable data, and integrating with three cloud data platforms. These data and development environments underscore dbt's flexibility and reach across diverse enterprise settings. Please see [Table 2 \(next page\)](#) for additional details.

Table 2
Use of dbt by interviewed organizations

| Use of dbt | Average | Median |
|--|---------|--------|
| Number of models supported | 101,970 | 2,500 |
| Number of usable TBs | 905 | 300 |
| Number of business applications | 59 | 8 |
| Number of cloud data platforms | 3 | 3 |
| Number of business locations | 18 | 5 |
| Number of total developers/data team members using dbt | 319 | 116 |

n = 8; Source: IDC Business Value In-Depth Interviews, August 2025

Business value and quantified benefits of dbt

Study participants reported that dbt has delivered consistent and measurable value across their data and analytics operations by streamlining workflows, improving data quality, and enabling scalable development. Their data and development teams have benefited from enhanced productivity and efficiency, driven by higher-quality data; modular, reusable code; and self-service capabilities that allow non-developers to build and manage their own pipelines. The platform has also improved data quality and trust through automated testing and centralized definitions, ensuring greater consistency and traceability across dataflows. Its scalable architecture and CI/CD capabilities have minimized change-related issues and supported seamless integration with other tools. Additionally, study participants have achieved business and operational enablement through faster time to market for analytics workloads and realized data warehouse cost and operational efficiencies by retiring legacy infrastructure and leveraging a managed services model.

Platform customers spoke in more depth about the most significant benefits they have achieved:

Improved development collaboration and velocity:

"dbt has significantly improved developer collaboration and increased our development velocity. It introduced a structured deployment process through its integration with Git."

Higher data fidelity and quality positively affect deployment:

"dbt allows us to influence the fidelity of data as it moves through our pipelines and before it reaches production. ... dbt enables us to enforce centralized expectations with federated data ownership."

Data meets quality standards required for outputs:

"dbt helps us define and clarify both technical and business conventions, enabling us to deliver data with higher quality standards. ... By transforming complex dataflows into usable, consistent outputs, we've accelerated insight delivery by a factor of three to four."

Better scalability with data:

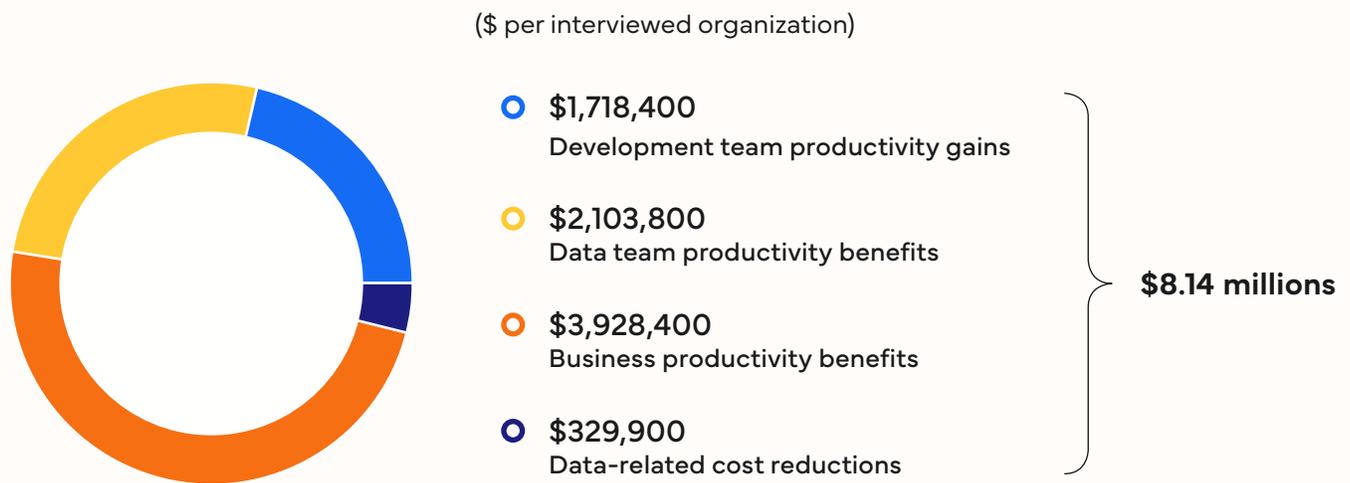
"dbt has enabled us to scale efficiently, handling massive volumes of sensor and grid data. It has also automated key workflows, improved data integrity, and helped us establish a single source of truth for regulatory and compliance needs."

Based on interviews with current dbt customers, IDC calculates that they will achieve average annual benefits worth \$8.14 million per organization (\$25,500 per data team member/developer actively using dbt) in the following areas of value (Figure 1, next page):

- **Data-related cost reductions:** Savings from retiring legacy data platform solutions and tools and reducing infrastructure costs while focusing on driving business efficiencies will total an average of \$392,000 per organization per year (\$1,200 per data team member).
- **Business productivity benefits:** The enhanced ability to leverage data in support of business efforts and faster delivery of data-driven insights to support new solutions and services will contribute to higher net revenue, worth an annual average of \$3.93 million per organization (\$12,300 per data team member).
- **Data team productivity benefits:** Time savings and efficiencies from modular code reuse, enablement of more efficient practices, and self-service capabilities result in efficiencies for data, analytics, and data governance team members, which IDC values at an annual average of \$2.10 million per organization (\$6,600 per data team member).

- **Development team productivity gains:** CI/CD integration, streamlined workflows, and enablement of non-technical development reduce data-related friction and generate efficiencies and productivity gains for development teams and business analysts, worth an annual average of \$1.72 million per organization (\$5,400 per data team member).

Figure 1
Average annual benefits per organization



n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Tooling cost and maintenance efficiencies

Interviewed organizations also attributed cost and operational efficiencies related to running their data platforms to dbt use. They described achieving these benefits in the context of seeking efficiencies while also realizing the value of dbt in terms of changing how their organizations consume and use data for business purposes. These team efficiencies and cost savings are important elements of dbt's value proposition and reflect teams' abilities to leverage the managed services model and strong functionality of dbt to achieve these efficiencies.

Interviewed organizations explained that dbt has significantly improved the efficiency of managing their data platforms, particularly through its managed services model and automation capabilities. By eliminating the need to maintain on-premises infrastructure

and reducing manual oversight, teams have reallocated time and resources toward higher-value strategic initiatives. **Table 3 (below)** demonstrates the data platform management efficiencies that study participants realized, with an average 51% efficiency gain for these teams.

Table 3**Impact on data platform management team efficiencies**

| Data Platform Management Efficiencies | Before/ Without dbt | With dbt | Difference | Benefit |
|---|----------------------------|-----------------|-------------------|----------------|
| Data platform management team, equivalent FTEs required per organization | 4.7 | 2.3 | 2.4 | 51% |
| Equivalent value of staff time per organization | \$465,100 | \$229,300 | \$235,800 | 51% |

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Study participants also reported achieving data platform and infrastructure cost savings through their use of dbt, primarily by retiring legacy tools, reducing reliance on on-premises infrastructure, and optimizing cloud resource usage. They cited dbt's support of incremental updates, automation of transformations, and integration with orchestration and BI platforms as helping reduce compute costs and avoiding full data refreshes. The managed services model further reduces overhead by minimizing the need for dedicated infrastructure and platform maintenance. In terms of cost savings, interviewed organizations reported saving an average of \$183,300 per year in infrastructure cost reductions and \$20,500 per year in data solution cost savings per organization. These cost savings underscore dbt's role in driving operational efficiency and lowering total cost of ownership.

Data quality and timeliness benefits

Study participants reported that dbt has significantly improved both the quality and timeliness of their data. Automated testing capabilities, such as checks for duplicates, nulls, and invalid values, allow teams to catch issues earlier in the cycle, which reduces manual errors and improves data usability. Centralized definitions and data lineage features help ensure consistency across data models and make it easier to trace and

resolve problems at the source. These capabilities not only enhance trust in the data but also enable faster delivery of reliable data sets to downstream users and applications.

Further, dbt's scheduling and CI/CD integration support more frequent and dependable data refreshes, with several organizations moving from daily to intraday update cycles. This shift has enabled their analytics teams to deliver insights quickly and confidently while reducing support tickets and cross-team conflicts.

Study participants provided examples of data-related improvements:

Improved data quality and trust increase value of data:

"dbt has helped us improve data quality by streamlining our development models. ... We've standardized many processes, including testing, and increased our overall trust in the data."

Enhanced data quality and lineage:

"We use dbt to run tests such as checking for duplicates, missing values, and incorrect data. dbt helps identify issues and traces them back to their source, allowing us to fix problems at the system level and deliver more reliable data."

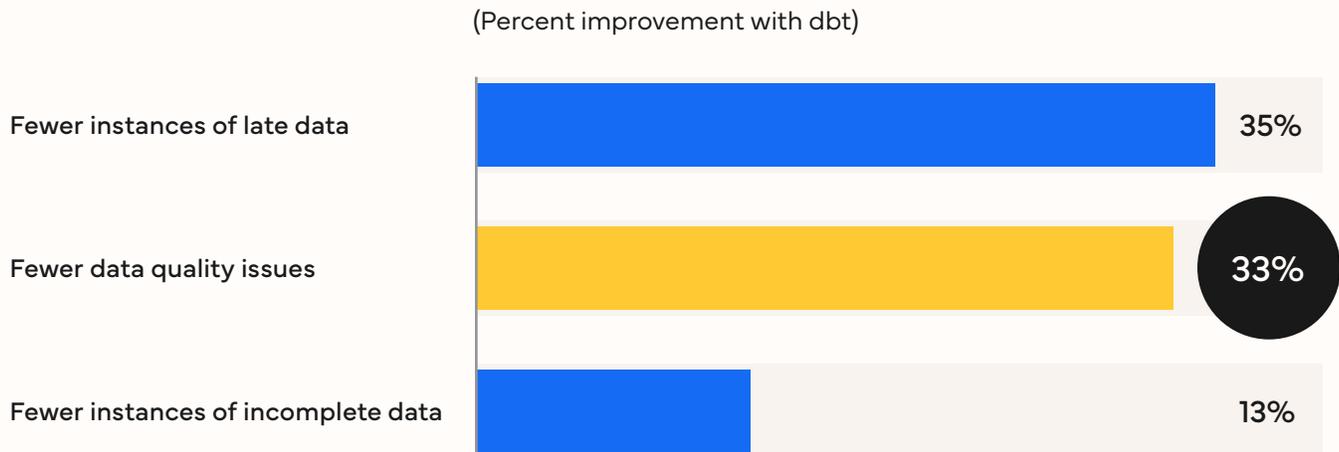
Earlier identification of errors improves data quality and ensures trust:

"dbt has helped us catch errors early through testing and alerting, which has significantly reduced dashboard issues and improved trust between technical and business teams."

Alignment on definitions and KPIs reduces data-related conflicts:

"dbt has enabled our business analysts to align on definitions, SLAs, and KPIs, creating a single source of truth and reduced cross-team conflicts."

Figure 2 (next page) demonstrates the impact on key data-related KPIs for organizations using dbt. Study participants attributed improved data quality and timeliness to dbt, including averaging 33% fewer data quality issues, 13% fewer instances of incomplete data, and 35% fewer instances of late data. These improvements underscore dbt's role in elevating data reliability and accelerating analytics workflows for interviewed dbt customers.

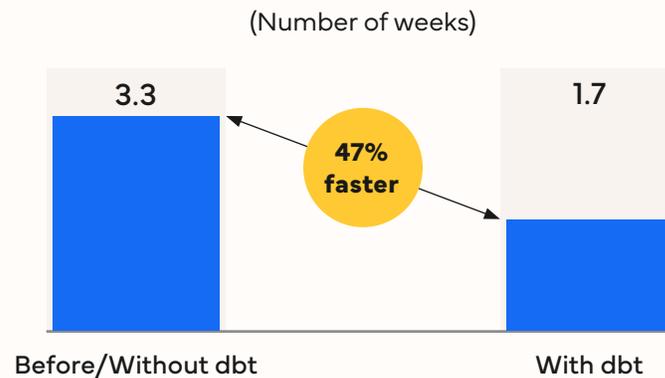
→ **Figure 2****Impact on data quality and timeliness KPIs**

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Study participants also highlighted how dbt has sped up the onboarding of new data team members. They cited its intuitive, SQL-based interface and templated workflows that enable new users to quickly understand the platform and begin contributing to data transformation efforts. One study participant noted: *"dbt platform is very easy to use for new employees. It's all templates and SQL, so people are comfortable with it."*

Figure 3 (next page) shows that study participants have reduced the average time to onboard a new team member by 47% with dbt, going from an average of 3.3 weeks to 1.7 weeks. This improvement reflects the platform's ease of use and its ability to standardize and simplify data development processes for new team members.

Figure 3
Impact on time to onboard new data team member



n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Business productivity benefits

Study participants reported that dbt has enabled their business operations to a meaningful extent by improving access to timely, high-quality data and accelerating the delivery of insights. Teams that use data can refresh more frequently, which ensures that business users have access to current and reliable information. This capability has been especially valuable for supporting operational decision-making, marketing performance analysis, and AI-driven use cases such as purchase order optimization and claim summarization.

Additionally, centralized definitions, modular code, and data lineage have helped align technical and business teams around more consistent KPIs and metrics. Several organizations noted that this alignment reduces cross-team conflicts and enables faster, more confident decision-making. The ability for business analysts and fewer technical users to build and manage their own pipelines further enhances agility, allowing teams to respond quickly to changing business needs.

Study participants detailed how dbt has enabled their business activities:

Value of more timely and accurate information provided to LOB teams:

"With dbt, we can give more accurate information to the business, especially the marketing and sales teams, who are getting more accurate contact information so that they can reach out to customers in much faster and more efficient ways."

Foundation for providing data to key AI model:

"We currently provide data for an AI model focused on purchase order optimization with dbt, supporting large-scale orders across numerous vendors. dbt helps deliver the necessary data, enabling optimization based on seasonality, sales patterns, and timing."

Clarity and quality of technical and business conventions:

"dbt really helps us build and clarify our technical and business conventions. It helps us offer data with higher quality standards. It's about increasing the overall quality of the data and clarifying conventions."

Foundation for customer-facing claim summarization engine:

"dbt supports the data products that are supporting our claim summarization engine, which enables our operation centers to answer customer queries and customer interactions faster. ... As a result, our customers can get a very tailored and custom experience. The data products that are feeding into it are all built through dbt."

The dbt platform has positively impacted important business-related KPIs that reflect **→** on study participants' ability to scale and deliver data-related insights. **On average, study participants reported that they are now 34% faster to market and scale to business needs 33% faster with dbt.**

Interviewed organizations emphasized that dbt has played a meaningful role in helping them win more revenue by improving the accuracy, timeliness, and usability of data used in customer-facing and operational decision-making. Several organizations noted improvements in engagement metrics, including email open and click rates, after implementing dbt, attributing these gains to more precise and timely data driving outreach efforts. IDC's analysis (**Table 4, next page**) quantifies this impact, showing that interviewed organizations will achieve an average of \$29.3 million in higher annual revenue with dbt (\$91,900 per data team member/developer using dbt).

Table 4
Business enablement: higher revenue

| Higher Revenue | Per Organization | Per Data Team Member/ Developer Using dbt |
|-----------------------------|------------------|--|
| → Higher revenue per year | \$29.30M | \$91,900 |
| Assumed operating margin | 15% | 15% |
| Higher net revenue per year | \$4.40M | \$13,800 |

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Productivity gains for data and analytics teams

Study participants attributed substantial productivity gains for their data and analytics teams to their use of dbt. By enabling modular, reusable code and integrating seamlessly with existing data platforms, dbt allows these teams to build and manage data pipelines more efficiently. Meanwhile, self-service capabilities empowered non-developers to contribute directly to data workflows, reducing bottlenecks and freeing up team resources.

Analytics workflows in particular benefit from dbt's automation and standardization features. Analytics teams can reuse models, apply prewritten tests, and schedule jobs with minimal manual intervention. The platform's intuitive interface and documentation tools support collaboration across technical and business teams, enabling faster delivery of insights and more agile decision-making. One study participant explained: *"dbt has enabled our analytics team to better deliver insights by enabling users to serve themselves to obtain data models and analytics that they need."*

IDC's analysis shows that analytics and other data teams have benefited from an average productivity gain of 44% with dbt, as [Table 5 \(next page\)](#) shows.

→ **Table 5**
Impact on analytics and data team productivity

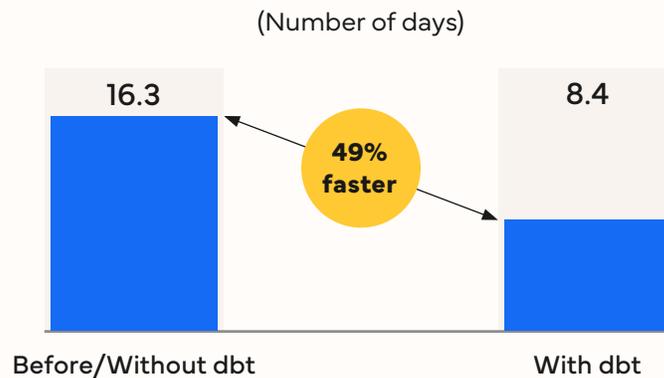
| Equivalent Productivity, FTEs per Organization | Before/ Without dbt | With dbt | Difference | Benefit |
|---|---------------------|----------|------------|------------|
| Data analytics team, equivalent productivity level, FTEs per organization | 30.6 | 44.4 | 13.9 | 45% |
| Other data team members, equivalent productivity level, FTEs per organization | 26.9 | 38.0 | 11.1 | 41% |
| Overall, equivalent productivity level, FTEs per organization | 57.5 | 82.5 | 25.0 | 44% |
| Equivalent value of productivity per organization | \$4.02M | \$5.77M | \$1.75M | 44% |

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

The impact of dbt on the delivery of data-driven reports and insights was especially notable. With dbt's automated testing, scheduling, and clear data lineage, analytics teams cut turnaround times nearly in half (49% improvement) (**Figure 4, next page**). One interviewed dbt customer commented: *"We've had a 50% reduction in the turnaround time for key analytics deliverables since moving to dbt because there's automated testing, automated scheduling, and clear data lineage."*

This acceleration enables organizations to respond more quickly to business needs and support time-sensitive analytics and data-driven workloads.

Figure 4
Impact on time to deliver data report



n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

The use of dbt has also offered significant efficiencies in data governance for study participants. Automated cataloging, lineage tracking, and embedded quality checks reduce the need for manual oversight and improve compliance readiness. Per one interviewed customer: *“Data governance is a big benefit of dbt. With the data cataloging and the table and column lineage, we can improve our data governance each quarter.”*

As **Table 6 (below)** shows, interviewed organizations benefit from average data governance efficiencies of 40% with dbt, which enables these teams to focus on strategic initiatives while meeting required standards of data integrity and transparency.

→ **Table 6**
Impact on data governance team efficiencies

| Impact | Before/ Without dbt | With dbt | Difference | Benefit |
|---|------------------------|-----------|------------|---------|
| Data governance team, equivalent FTEs required per organization | 6.2 | 3.8 | 2.5 | 40% |
| Equivalent value of staff time per organization | \$436,100 | \$263,800 | \$172,300 | 40% |

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Development enablement

The dbt platform has significantly improved the effectiveness and productivity of data developer teams by injecting greater structure, automation, and scalability into study participants' data engineering workflows. Participants reported that CI/CD integration has helped enforce consistent deployment practices, reduce accidental changes, and streamline code releases. Meanwhile, data developers can build pipelines more quickly and maintain them with less effort, while automated documentation and testing reduce the time spent on manual validation and debugging. These capabilities have shortened development life cycles, accelerated delivery of new features, and maintained higher standards of quality and compliance, all while freeing up engineering resources.

Study participants' feedback about the impact of dbt on data development activities echoes these themes:

Faster code releases:

"Development process improvements achieved with dbt allow us to release code faster. ... Because we're delivering change faster, we get outcomes out to our customers quicker."

Accelerated delivery of new application functionality:

"dbt has transformed our release cycle. With auto-documentation and CI/CD integration, we've accelerated the pace of change and improved observability, which allows us to deliver outcomes to customers faster."

Minimal manual errors with automation of processes:

"Since development processes are automated with dbt, we remove any manual errors in the processes. That's one of the important factors, especially from a compliance perspective."

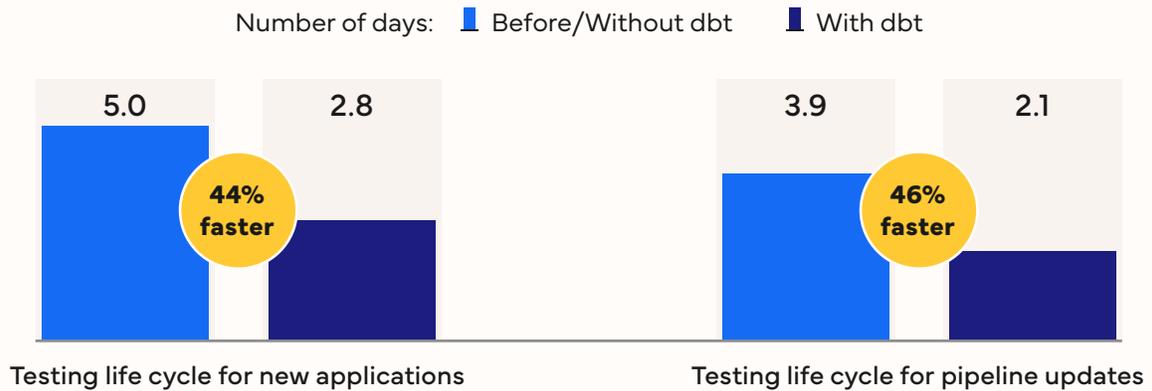
Adherence to technical and development standards:

"dbt enables us to respect technical and development standards. We have a lot of automation and documentation that maintain development standards."

Study participants reported that dbt significantly shortens testing life cycles by automating validation processes and embedding quality checks directly into development workflows, resulting in a 44% reduction in testing time for new applications and a 46% reduction for pipeline updates, as **Figure 5 (next page)** shows.

Figure 5 Impact on testing life cycles

See the figure data in an [accessible table format](#).

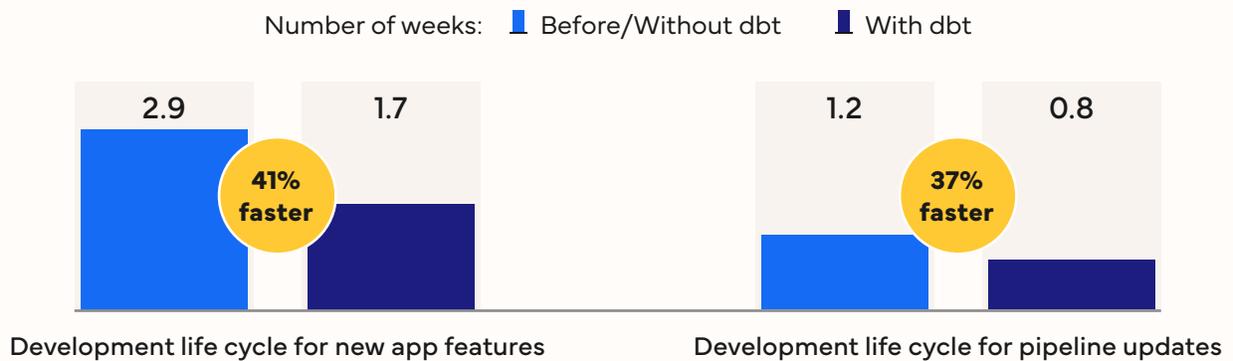


n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Similarly, through CI/CD integration, modular code reuse, and streamlined deployment processes, dbt has accelerated development life cycles, leading to a 41% faster delivery of new app features and a 37% faster turnaround for pipeline updates (Figure 6, below).

Figure 6 Impact on development life cycles

See the figure data in an [accessible table format](#).



n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

These improvements in testing and development outcomes based on better incorporation of data pipelines are reflected in the value that development teams deliver to their organizations. One study participant explained: *“We go to production with fewer errors and issues with dbt. A lot of this is having to do with us enforcing dbt’s product evaluator package. We’re able to control more before moving code to production.”*

Table 7 (below) shows that study participants attributed average productivity gains of 36% for their data developer teams to the use of dbt.

Table 7
Impact on data developer productivity

| Equivalent Productivity, FTEs per Organization | Before/ Without dbt | With dbt | Difference | Benefit |
|--|---------------------|----------|------------|---------|
| Data developer, equivalent productivity level, FTEs per organization | 31.1 | 42.3 | 11.2 | 36% |
| Equivalent value of productivity per organization | \$3.11M | \$4.23M | \$1.12M | 36% |

n = 8; Source: IDC’s Business Value In-depth Interviews, August 2025

The platform has also enabled more effective citizen development by empowering business analysts and nontechnical users to build and manage their own data pipelines. Its intuitive, SQL-based interface and templated workflows make it accessible to users with less coding expertise, allowing them to contribute more directly to data transformation efforts. Study participants noted that this shift reduces bottlenecks, improves alignment on KPIs and definitions, and fosters a more collaborative data culture. By democratizing access to data engineering capabilities, dbt helps organizations scale their analytics operations and respond more quickly to business needs.

This impact is reflected in IDC’s findings in **Table 8 (next page)**, which show a 28% increase in business analyst team productivity due to enhanced capabilities with dbt. One study participant explained: *“With dbt, we have been able to teach our business user teams to build and test new applications and features. We had conflicts before in terms of definitions; SLAs wouldn’t align with hours, and now they all align. It’s the same data, the same formulas; they all align.”*

These gains underscore the value of dbt in enabling cross-functional teams to work more independently and effectively.

→ **Table 8**
Impact on business analyst team productivity

| Equivalent Productivity, FTEs per Organization | Before/ Without dbt | With dbt | Difference | Benefit |
|---|---------------------|----------|------------|---------|
| Business analyst team, equivalent productivity level, FTEs per organization | 63.0 | 80.6 | 17.6 | 28% |
| Equivalent value of productivity per organization | \$4.41M | \$5.64M | \$1.23M | 28% |

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

ROI summary

IDC's financial analysis of study participants' use of dbt shows a strong ROI, with three-year discounted benefits averaging \$19.29 million per organization (\$60,500 per data team member or developer using dbt). Over the same period, the average discounted investment cost was \$2.93 million per organization (\$9,200 per data team member), which equates to an average three-year ROI of 559% and a payback period of just five months. These findings reflect the positive financial impact of dbt across both technical and business teams for study participants (**Table 9, next page**).

Table 9
ROI analysis

| Three-Year ROI Analysis | Per Organization | Per Data Team Member/ Developer Using dbt |
|-------------------------------|------------------|--|
| Benefit (discounted) | \$19.29M | \$60,500 |
| Investment (discounted) | \$2.93M | \$9,200 |
| Net present value (NPV) | \$16.36M | \$51,300 |
| → ROI (NPV/investment) | 559% | 559% |
| → Payback | 5 months | 5 months |
| Discount factor | 12% | 12% |

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Challenges/Opportunities

While organizations using dbt reported substantial productivity and quality improvements, this research also uncovered areas where challenges remain. Many enterprises operate across highly distributed, dynamic, and large-scale data environments, often involving hundreds of business applications, thousands of terabytes of data, and large teams of engineers and analysts. In such settings, ensuring consistent governance, minimizing manual errors, and managing cross-team alignment are nontrivial. Study participants noted that even with dbt, challenges can arise when coordinating centralized definitions and federated ownership across large, diverse teams. Additionally, accelerating change cycles with CI/CD introduces the need for more robust testing and monitoring to prevent unexpected downstream impacts, and organizations must still manage the cultural shift of treating data as a product while balancing speed with control.

These challenges create clear opportunities for dbt Labs to further enhance the value of dbt. For example, organizations emphasized that dbt's automated testing, centralized definitions, and lineage tracking reduced errors and improved trust, but they also pointed out that maintaining alignment on definitions, SLAs, and KPIs across teams is

an ongoing effort. The company can continue to strengthen features that help organizations automate governance at scale, enforce consistent standards, and integrate observability into pipeline development. Similarly, customers using dbt for CI/CD-driven pipelines benefit from shorter release cycles, but the risk of change-related issues remains; dbt Labs can expand tools for preproduction validation, rollback mechanisms, and performance monitoring to help mitigate these risks in fast-moving environments.

Another opportunity lies in supporting the broader enterprise transition to data products. Many organizations using dbt are adopting a mindset where accountability, accessibility, and quality are paramount. By embedding stronger product management capabilities into dbt — such as data product catalogs, policy-driven access, and life-cycle management — dbt Labs can help customers bridge the gap between technical pipelines and business-aligned data products. This would not only reinforce dbt’s current role in improving data engineering outcomes but also position it as a critical enabler for organizations seeking to operationalize trustworthy, AI-ready data at scale.

AI-ready data includes context, and dbt offers a rich semantic layer and a model context protocol (MCP) server to help enable AI-driven workflows. The semantic layer in dbt provides a governed, business-friendly abstraction on top of raw data by codifying metrics, definitions, and context that AI systems, analytics tools, or copilots can reliably reference. The MCP server is dbt’s unified API endpoint for discovering, querying, and executing models and metadata. AI systems and agents can “plug in once” to the MCP layer, discover the semantic definitions, trigger transformations, and deliver data outcomes in a governed, version-controlled fashion. By leveraging dbt’s semantic layer and MCP server, organizations have the potential to build AI-driven workflows on a foundation of trusted, consistent metrics and transformations; but to realize this value, organizations must invest in analytics engineering maturity, governance, and integration architecture.

Although organizations adopting dbt encounter such challenges, the measurable benefits dbt currently delivers outweigh them. The opportunities for dbt Labs to strengthen observability, governance at scale, and support for data products only add to the platform’s long-term promise.

By embedding stronger product management capabilities into dbt, dbt Labs can help customers bridge the gap between technical pipelines and business-aligned data products.

Conclusion

Organizations face mounting pressure to deliver trustworthy, timely, and scalable analytics and AI outcomes as their operations become more data centric. The dbt platform has emerged as a strategic enabler in this context, offering a modern, code-centric approach to data transformation and orchestration. By embedding CI/CD practices, automated testing, and lineage tracking into data workflows, dbt enhances collaboration, governance, and agility. The platform's flexibility, scalability, and engineering-first design allow organizations to unify business logic, enforce quality standards, and accelerate development cycles, positioning dbt as a foundational tool for enterprise intelligence and AI readiness.

The dbt customers this study interviewed described how they have transformed their approach to building and managing data pipelines. By enabling modular, reusable code and embedding automated testing and lineage tracking into workflows, dbt has enabled higher data quality, reduced manual errors, and greater trust in data assets. The platform's intuitive interface and SQL-based development environment allow both technical and nontechnical users to collaborate more effectively, align on shared definitions, and accelerate delivery of analytics-ready data sets. These improvements have fostered more agile, transparent, and scalable data cultures that are more efficient and have a greater positive impact on business outcomes. Based on interviews with these dbt customers, IDC calculated a 559% three-year ROI and a five-month payback period, reflecting the significant value study participants are achieving with dbt. ●

Appendix A: methodology

IDC utilized its standard Business Value/ROI methodology for this project, gathering data from organizations currently using dbt. Based on interviews with organizations using dbt, IDC performed a three-step process to calculate the ROI and payback period:

- 1. IDC gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of using dbt.** In this study, the benefits included data and analytics team efficiencies and productivity gains, data platform and IT infrastructure cost savings, IT infrastructure team efficiencies, and higher net revenues.
- 2. IDC created a complete investment (three-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using dbt and can include additional costs related to migrations, planning, consulting, and staff or user training.
- 3. IDC calculated the ROI and payback period.** It conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of dbt over a three-year period. ROI is the ratio of the net present value and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- Multiplying time values by burdened salary (salary + 28% for benefits and overhead) quantifies efficiency and manager productivity savings. For the purposes of this analysis, IDC has used its standard assumptions of an average fully loaded salary of \$100,000 per year for IT staff members and an average fully loaded salary of \$70,000 per year for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).
- IDC calculates the net present value of the three-year savings by subtracting the amount that organizations would have realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.
- Because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All dollar figures in this white paper are in USD.

Appendix B: quantified benefits of dbt

Table 10 (below) provides an overview of the quantified benefits attributable to interviewed organizations' use of dbt. As the table shows, IDC projects that study participants will realize benefits worth an average annual value of \$2.19 million per organization (\$25,200 per data and development team member using dbt).

Table 10
Summary of financial benefits

| Category of Value | Average Quantitative Benefit | 15% Margin Applied | Calculated Average Annual Value per Organization* | Calculated Average Annual Value per Data Team Member Using dbt* |
|--|--|--------------------|--|---|
| Analytics team productivity gains | 44% average productivity gain, worth 25.0 FTEs; \$70,000 salary | No | \$1.56M | \$4,900 |
| Data governance team productivity gains | 40% average efficiency, worth 2.5 FTEs; \$70,000 salary | No | \$154,000 | \$500 |
| Data developer productivity gains | 36% average productivity gain, worth 11.2 FTEs; \$100,000 salary | No | \$1.00M | \$3,100 |
| Business analyst team productivity gains | 28% average productivity gain, worth 17.6 FTEs; \$70,000 salary | No | \$1.10M | \$3,500 |
| Higher net revenues | \$29.30M higher revenue, 15% margin applied | Yes | \$3.93M | \$12,300 |
| → Annual data solution and infrastructure cost savings | \$20,500 saved per year, solutions; \$183,300 saved per year, infrastructure | No | \$182,200 | \$600 |
| → Data platform management efficiencies | 51% average efficiency, worth 2.4 FTEs; \$100,000 salary | No | \$210,800 | \$700 |
| Total annual benefits, use of dbt | | | \$2.19M per organization/ \$25,500 per data team member/developer using dbt | |

Note: *includes 3.8 months deployment time in year 1. All numbers in this document may not be exact due to rounding.

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

Appendix C: accessible data tables

This appendix provides an accessible version of the data for any complex figures in this document. Click "Return to figure" to get back to the original figure.

Figure 5 accessible data Impact on testing life cycles

| Number of Days | Before/Without dbt | With dbt |
|---|--------------------|-------------------|
| Testing life cycle for new applications | 5.0 | 2.8 |
| Testing life cycle for pipeline updates | 3.9 | 2.1 |
| Difference | 44% faster | 46% faster |

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

[Return to figure](#)

Figure 6 accessible data Impact on development life cycles

| Number of Weeks | Before/Without dbt | With dbt |
|---|--------------------|-------------------|
| Development life cycle for new app features | 2.9 | 1.7 |
| Development life cycle for pipeline updates | 1.2 | 0.8 |
| Difference | 41% faster | 37% faster |

n = 8; Source: IDC's Business Value In-depth Interviews, August 2025

[Return to figure](#)

About the IDC analysts



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Stewart Bond is vice president of IDC's Data Intelligence and Integration Software service. Mr. Bond's core research coverage includes watching emerging trends that are shaping and changing data movement, ingestion, transformation, mastering, cleansing, and consumption in the era of digital business. Having worked in the IT industry for over 30 years, from early experience in database and application development through solution design and deployment to strategic architectural consulting, Bond has worked through some significant changes in the IT industry. His depth of field experience coupled with market insight gives him a unique perspective, which his customers and peers value.

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Matthew Marden is responsible for carrying out custom business value research engagements and consulting projects for clients in several technology areas, focusing on determining the return on investment of their use of enterprise technologies. Marden's research often analyzes how organizations are leveraging investment in digital technology solutions and initiatives to create value through efficiencies and business enablement.

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