HOW TO GET MORE VALUE FROM YOUR DATA PROGRAMS

Five Ways to Increase Business Impact from Data Pipelines
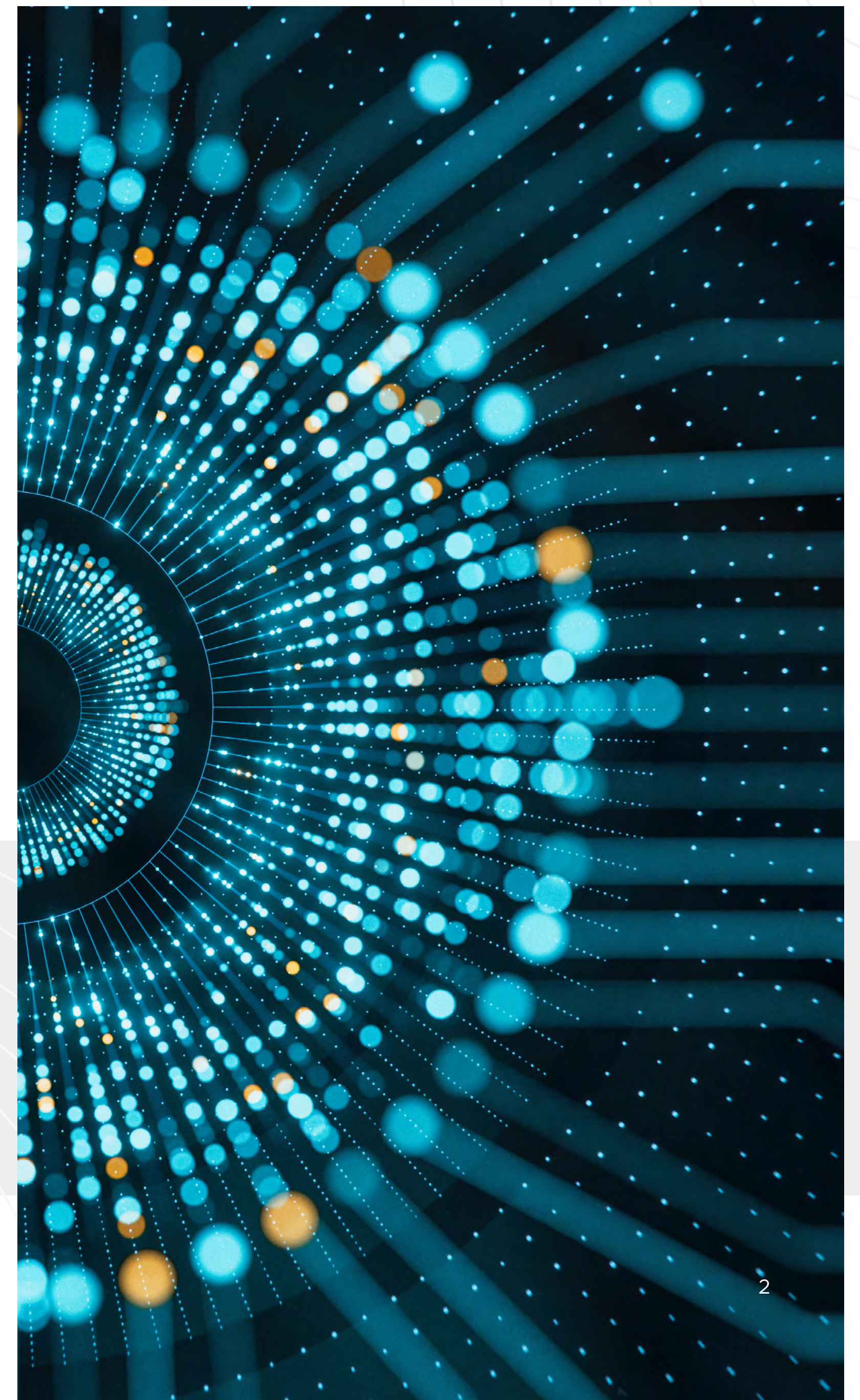
Executive Summary

In today's data-driven world, data leaders are under increasing pressure to deliver tangible business value from their data programs. However, many organizations struggle to bridge the gap between strategy and execution due to challenges in managing the complex web of data pipelines that fuel modern analytics and decision-making.

This eBook provides a strategic blueprint for improving operational control over data pipelines, ensuring they deliver consistent, reliable, and actionable insights.

Broadcom, a trusted data pipeline automation and management leader, empowers organizations with cutting-edge solutions for enhanced observability and orchestration. By helping businesses optimize performance, reduce inefficiencies, and accelerate time-to-value, Broadcom ensures that data programs deliver meaningful impact in today's competitive landscape and allow some of the largest organizations to become data-driven.

Over 70%[1]

stated that the use of multiple cloud automation solutions caused significant challenges with delivering data pipelines, including compliance, delays to delivery, and difficulties with troubleshooting.

[1] Dimensional Research, "Why Companies Lose Efficiency and Compliance with Cloud Automation Solutions," July 2023, URL: https://enterprise-software.broadcom.com/multi-cloudchallenges-automation-solution

BROADCOM®

Introduction

The hard reality is this: Data initiatives often fail to deliver maximum value.

This guide explores operational challenges, such as siloed teams, manual error handling, and inefficient processes, that often limit the potential of data initiatives. It provides actionable strategies to overcome these challenges, focusing on three critical areas: advancing the orchestration of data pipeline technologies, increasing the observability of data pipeline delivery, and establishing a framework for continuous improvement in service delivery.

By achieving tighter operational control over data pipelines, data leaders can unlock the full potential of their enterprise data. Improved observability ensures timely, accurate, and actionable insights, while enhanced orchestration streamlines complex workflows and minimizes disruptions. These capabilities empower organizations to innovate, scale, and maintain a competitive edge in an ever-changing business landscape.

Join us on this transformative journey to revolutionize your data operations and turn your data pipelines into powerful business growth engines. Let this guide be your roadmap to achieving excellence in data management and delivering maximum value from your data initiatives.

By implementing these strategies, you can:

1. Maximize Business Impact: Align data pipelines with organizational goals to deliver real-time insights that drive revenue, reduce costs, and mitigate risks.

2. Enhance Reliability: Reduce governance and data quality issues with proactive monitoring, automated error resolution, and streamlined data flows.

3. Accelerate Time-to-Value: Simplify the deployment and scaling of data pipelines, enabling faster delivery of analytics capabilities and business outcomes.

4. Strengthen Compliance: Maintain data governance and regulatory compliance through greater visibility and control across the pipeline ecosystem.

5. Optimize Resources: Minimize resource wastage and ensure teams focus on high-value initiatives to improve efficiency and ROI.

This eBook examines each of these areas, highlighting how modernizing automation can yield increased value and enable the attainment of your business's top-level strategic objectives.
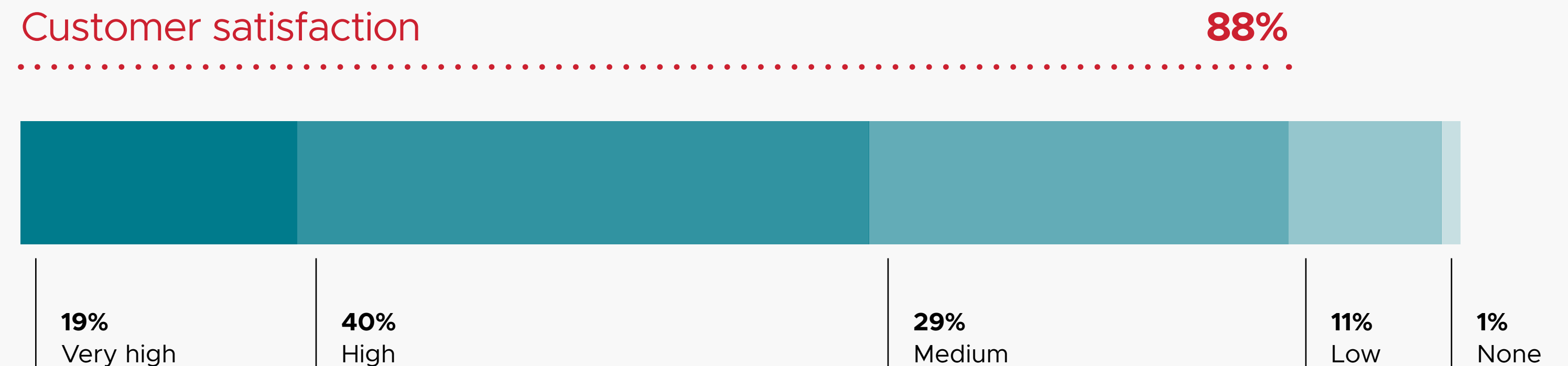
#1 Maximize Business Impact

Advanced operational control and governance are essential for ensuring that data programs deliver maximum business impact.

Observability and control enhance data pipelines' reliability, efficiency, and transparency, enabling data teams to proactively address issues before they impact a pipeline.

SLA governance complements operational control by formalizing data availability, quality, and performance expectations, ensuring alignment between data teams and business stakeholders. By establishing clear metrics and accountability frameworks, SLA governance fosters trust and collaboration across the organization. It also prioritizes mission-critical data workflows, ensuring they meet business deadlines and compliance requirements.

88% state breaching SLAs has a medium to very high impact on customer satisfaction

Please indicate the typical magnitude of the business impact for each of the following when a breach of an SLA occurs.

Customer satisfaction   88%

| 19% Very high | 40% High | 29% Medium | 11% Low | 1% None |

Dimensional Research: How too many tools obscure automation issues affecting the business, August 2023

#2 Enhance Reliability

Boost operational efficiency and productivity by upgrading to a modern automation platform.

Cloud-based tools often provide only basic operational controls, leaving gaps in the ability to fully manage data pipelines and prevent issues from impacting business operations. Organizations require advanced capabilities to ensure optimal performance and reliability. These platforms enable unified control across all data workflows in the cloud, on-premises, or hybrid environments.

To maintain agility in a rapidly changing business landscape, teams must have centralized visibility and fine-grained control over their data pipelines regardless of technology stack or cloud provider. This level of oversight allows them to quickly respond to shifting priorities, such as suspending, releasing, or reprioritizing processes in real time to meet organizational needs.

Investing in modern data pipeline management solutions will enhance reliability and operational agility, ensuring that organizations' data programs deliver consistent value.

Top 10 Global Financial Institution Reduces Data Pipeline Failures by

60%

"Daily liquidity reports were consistently late, with delays of up to six hours. This had an adverse impact on decision-making and regulatory compliance."

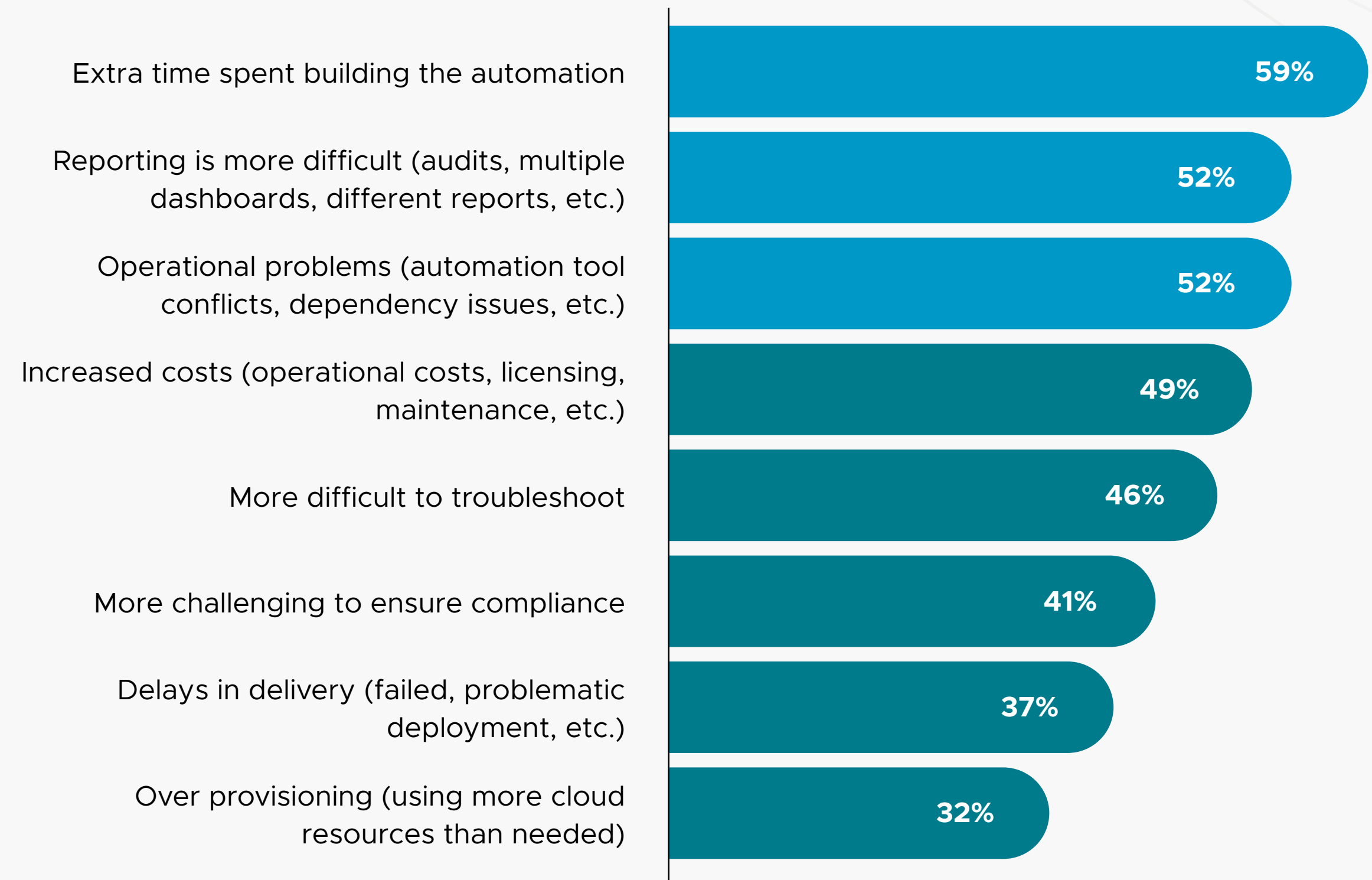Financial Services Customer Story," December 2024

#3 Accelerate Time-to-Value

Improved observability and operational control of data pipelines enables significantly faster and more efficient data processing and delivery.

With advanced observability, data teams gain real-time insights into data pipeline health, performance, and bottlenecks. This visibility allows them to quickly identify and resolve issues, ensuring that data flows smoothly and reaches analytics platforms or decision-makers without delays.

Operational control complements this by introducing orchestration and streamlined workflows that minimize manual interventions, allowing data pipelines to operate efficiently. Together, these capabilities reduce the cycle time from data generation to actionable insights, enabling organizations to respond swiftly to market opportunities and business demands.

With proactive capabilities, issues can be identified earlier and possibly mitigated while data pipelines are still running, avoiding potential business issues such as delayed decision-making or, worse, making decisions based on old or wrong data.

Category	%
Extra time spent building the automation	59%
Reporting is more difficult (audits, multiple dashboards, different reports, etc.)	52%
Operational problems (automation tool conflicts, dependency issues, etc.)	52%
Increased costs (operational costs, licensing, maintenance, etc.)	49%
More difficult to troubleshoot	46%
More challenging to ensure compliance	41%
Delays in delivery (failed, problematic deployment, etc.)	37%
Over provisioning (using more cloud resources than needed)	32%

Dimensional Research: How too many tools obscure automation issues affecting the business, August 2023

BROADCOM®
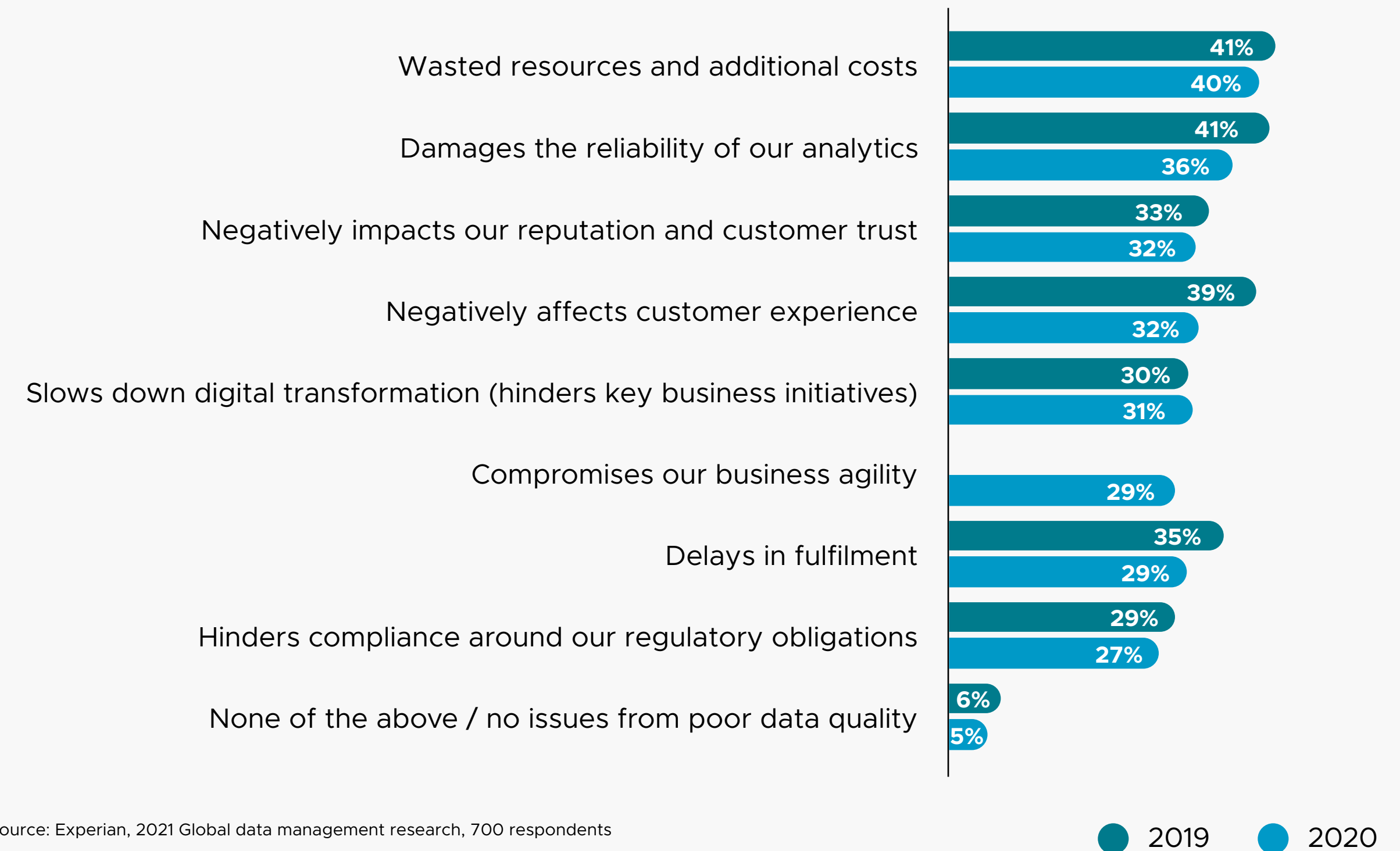
6

#4 Strengthen Compliance

Better observability in data pipelines is crucial in strengthening compliance and proving the provenance of data used to generate results.

With enhanced observability, organizations gain end-to-end visibility into data acquisition, movement, transformation, and usage throughout the pipeline. This allows data teams to prove the lineage of data, ensuring its origin and processing for regulatory standards and internal policies.

With detailed monitoring and logging, teams can quickly identify and resolve discrepancies, ensuring that only high-quality data informs analytics and reporting.

This capability builds trust among stakeholders, including regulators, customers, and partners, by demonstrating that the data used to generate insights is secure, properly governed, and free from manipulation.

How poor quality data impacts organization

	2019	2020
Wasted resources and additional costs	41%	40%
Damages the reliability of our analytics	41%	36%
Negatively impacts our reputation and customer trust	33%	32%
Negatively affects customer experience	39%	32%
Slows down digital transformation (hinders key business initiatives)	30%	31%
Compromises our business agility		29%
Delays in fulfilment	35%	29%
Hinders compliance around our regulatory obligations	29%	27%
None of the above / no issues from poor data quality	6%	5%

Source: Experian, 2021 Global data management research, 700 respondents

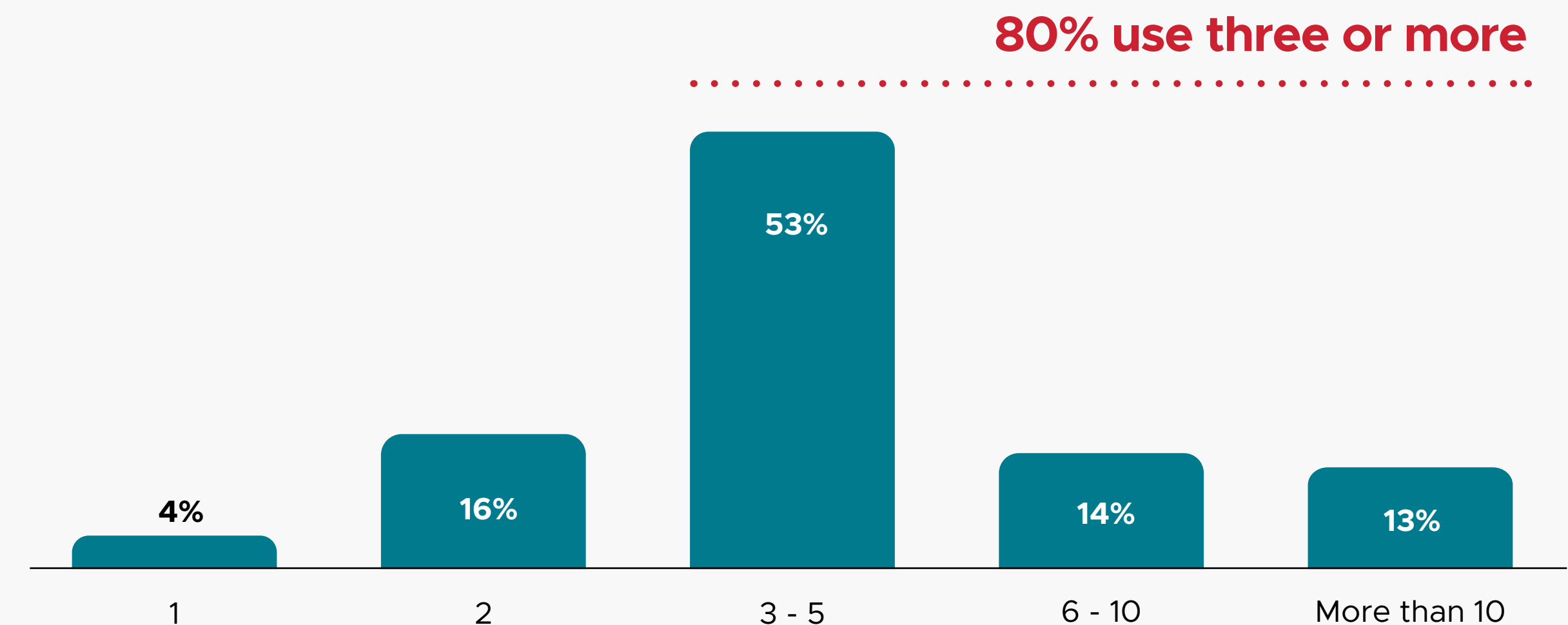● 2019   ● 2020

BROADCOM®

#5 Optimize Resources

Emport data teams to focus on delivering high-impact outcomes rather than being bogged down by manual, tedious tasks.

Traditional data pipeline management often involves time-consuming activities like troubleshooting failures, resolving data quality issues, manually monitoring performance metrics, and duplicating work across teams. For example, teams frequently create custom Python scripts for alerting, runtime monitoring, and reporting—tasks that centralized observability solutions can often handle natively, with more functionality and better scalability.

These reactive efforts slow down the delivery of insights, increase inefficiencies, and divert skilled resources from strategic priorities. By reducing manual interventions and eliminating redundant work, centralized observability and operational control free up data teams to focus on driving innovation, building predictive models, and delivering actionable insights that directly support business goals.

Operational control also improves resource efficiency by reducing downtime and waste, enabling data teams to handle higher volumes of work with existing resources while minimizing unnecessary overhead.

Approximately, how many different automation platforms and tools is your organization currently using to cover all environments and applications?

80% use three or more

Category	Percentage
1	4%
2	16%
3 - 5	53%
6 - 10	14%
More than 10	13%

Dimensional Research: How too many tools obscure automation issues affecting the business, August 2023

The Bottom Line

Building the foundation for a future-ready data ecosystem.

Investing in advanced operational control for data pipelines is more than a technical upgrade—it's a strategic decision that lays the groundwork for sustained organizational success. Isolated silos doing their individual processing slows down productivity and innovation—both drivers of business value. Modernizing your data pipeline capabilities enables your organization to build a scalable, future-ready data ecosystem that delivers a competitive edge in today's fast-paced, data-driven world.

This transformation goes beyond addressing the inefficiencies and limitations of legacy data systems. It unifies fragmented data processes, improves data quality and reliability, and ensures faster, more accurate insight delivery. The result is enhanced operational efficiency, reduced costs, and a more agile framework for decision-making.

It also shifts you from reactive data pipeline management to a proactive approach that helps identify issues before they impact the business.

By adopting state-of-the-art tools and practices to manage data pipelines, senior executives can ensure their organizations are well-equipped to harness the full potential of data, drive innovation, and achieve sustainable growth in an increasingly complex business environment. Now is the time to build a data foundation that powers tomorrow's success.

≫ **Contact Us To Learn More**

Advanced automation can...

Maximize Business Impact

Enhance Reliability

Accelerate Time-to-Value

Strengthen Compliance

Optimize Resources

About Broadcom

Broadcom empowers organizations to transform their data pipelines into engines of business value by providing comprehensive solutions for the observability and orchestration of data pipelines. Our solutions improve the reliability, scalability, and efficiency of pipelines to deliver timely, accurate insights, reduces manual effort, and drives innovation—positioning businesses for sustainable growth in a competitive, data-driven world. Learn more at the Future of Automation.

BROADCOM®