



WHITE PAPER

# Harnessing Unstructured Data is Critical for Business Success

THE RAPID GROWTH OF UNSTRUCTURED DATA REPRESENTS A SIGNIFICANT CHALLENGE AS WELL AS AN IMMENSE OPPORTUNITY TO GAIN A COMPETITIVE ADVANTAGE.

As the volume, velocity, and variety of data swells, so too does the need for a more sophisticated storage framework. Yet, building out a data storage platform can be a daunting task. A modern storage framework can help organizations leverage unstructured data generated across numerous divisions and departments that span the enterprise.

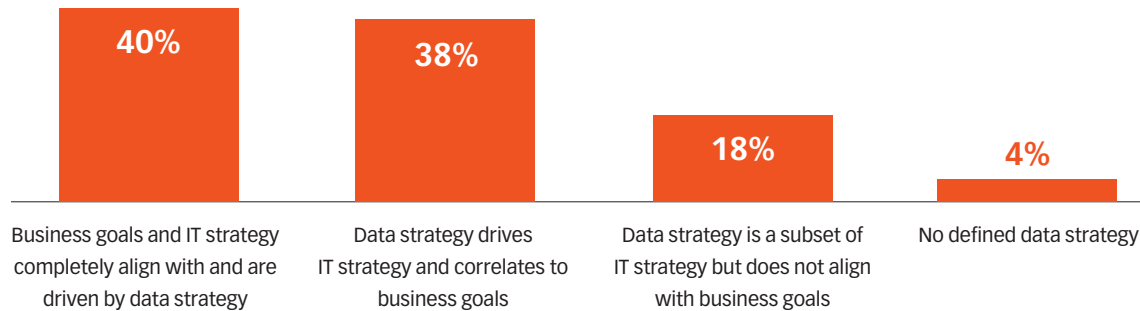
An IDG Market Pulse survey, sponsored by Pure Storage, examined this theme, and uncovered insights into both the market and the way organizations are currently approaching data storage. IDG polled more than 500 IT, business, and data science managers and executives at 258 companies in the US and Europe. Among the key findings:

- **Data, particularly unstructured data, is growing at a breakneck rate.** By some estimates, volumes are swelling at an average rate of 27% annually. This introduces new and sometimes formidable challenges, but also represents significant opportunities to effectively mine it and use it for faster and smarter decision-making.

## Glossary

- **Structured data:** Elements of data that are stored in formal databases, often in rows and columns, and consist of clearly defined attributes or other pieces of information.
- **Unstructured data:** This type of data—often in the form of web pages, audio files, and sensor data—does not follow semantic structure or rules.
- **File storage:** This framework, also referred to as file-level or file-based storage, involves a hierarchical storage approach that stores and organizes data on computer media.
- **Object storage:** Also known as object-based storage, this framework manages data as objects rather than blocks within sectors or tracks of hierarchical file systems.
- **Unified fast file and object (UFFO) platform:** A storage platform that delivers a complete solution for managing modern data and applications at scale.

Figure 1. How Aligned Are Organizations? Source: IDG



- **Many organizations continue to rely on the same storage strategies that they have had in place for years.** For example, 70% still use direct-attached storage and 66% rely on network-attached storage. Overall, 93% use hard disk drives and 38% use tape drives. These legacy storage frameworks are not equipped or optimized for today's complex and rapidly changing environment.
- **According to most estimates, unstructured data will account for 80% of all data in the next 2-3 years.** Businesses can gain critical insights from unstructured data, however with a legacy storage framework, organizations are unable to translate this massive amounts of unstructured data into business value. As a result, potentially half of unstructured data being generated today is not stored and utilized.

### Mining the Data

It's more important than ever to have a clearly defined data strategy. The good news is that 96% of organizations surveyed do.

However, when IDG peered beneath the surface, the findings were not as positive. Only 40% say their data strategy completely aligns with their business goals (see Figure 1). The remainder fall into a spectrum that ranges from some alignment with business goals to having no strategy at all.

There is good news on the budgeting front: 98% of respondents have a budget to fund their data initiatives. In addition, almost 60% believe the storage market has kept up with unstructured data growth. This means they don't see hindrances to advancing their storage platforms to meet today's data requirements.

It's also important to recognize that perceptions don't always match reality. Today, many organizations rely on older systems and legacy technology frameworks to manage their

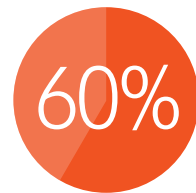
storage. These systems cannot accommodate the enormous volume, variety, and velocity of data that exists today. This includes unstructured data, which introduces an array of additional challenges and potential trip wires.

Although organizations believe they have the right framework in place for data management—particularly for handling unstructured data—the research shows that many are missing critical opportunities to capture and use it.

Neglecting to make use of this data impacts everything from business operations and customer interactions to bottom-line financial results.



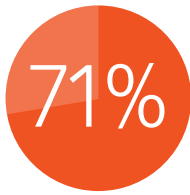
98% have a budget to fund data initiatives



60% say the storage market has kept up with unstructured data growth

### The State of Today's Data

The growth of unstructured data continues to accelerate. Somewhere between 80% and 90% of all data now resides outside formal databases. Documents, social media, sensor data, and numerous other sources are fueling remarkable increases in the volume of data that organizations must manage.



of organizations say modern apps and tech frameworks are driving unstructured data growth

By 2025, according to various industry estimates, 80% of all data will be unstructured. And the figure is likely to increase further as digital technologies—from autonomous vehicles and the internet of things (IoT) to chatbots and virtual reality take hold and become embedded in the business world.

In practical terms, unstructured data is growing at an average rate of 27% annually in organizations, according to the IDG research. Modern applications and technology frameworks are driving this spike. Overall, 71% of organizations say this is the case; only 7% disagree.

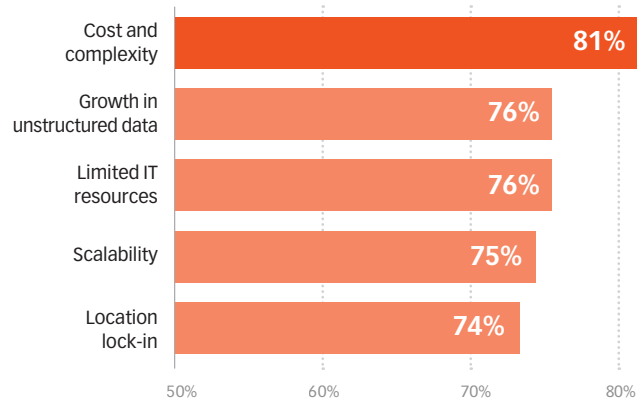
Figure 2. The Business Value of Unstructured Data Source: IDG



The factors contributing to this increase in unstructured data are varied and equally mixed.

The research leads to a clear takeaway: *Organizations that strategically use unstructured data generate greater value and, moreover, gain a competitive advantage in the marketplace* (see Figure 2). What’s more, they’re in a position to act and adapt to changing conditions in a more agile and flexible way.

Figure 3. Top Challenges Related to Unstructured Data Facing Organizations Source: IDG



But getting to this highly desirable place is extraordinarily hard. Unstructured data poses a variety of difficulties that rank somewhere between moderately to extremely challenging. These include cost and complexity (81%), growth in unstructured data (76%), limited IT resources (76%), scalability (75%), and location lock-in (74%) (See Figure 3).

Unstructured data represents less than 40% of the total stored enterprise data universe. Industry estimates project the percentage of unstructured data generated is above 80%, which implies that a significant amount of unstructured data is falling through the cracks and not being stored. These organizations can’t put the data to use and maximize its value. This translates into missed business opportunities and subpar performance across numerous areas of an enterprise.

This problem will undoubtedly worsen with increasing volumes of unstructured data and organizations struggle to collect and manage it. Those that lack the framework or capacity to store and use all this data to achieve critical insights will likely find themselves at a competitive disadvantage. Innovation will become more difficult.

Success ultimately hinges on finding the right mix of tools and technologies to activate your data, including moving to faster and more responsive technologies, and modernizing legacy storage systems to accommodate data generated from various sources and applications.

### It's Time to Reassess Storage Strategies

Business conditions aren't going to get any simpler in the months and years ahead. Faster and smarter decision-making will be crucial. The volume and complexity of data will continue to accelerate—and introduce even more challenges. Simply expanding capacity won't solve the problem. Organizations must fundamentally rethink and rewire their storage framework to fit today's requirements and prepare for tomorrow's needs.

Unfortunately, legacy storage architectures aren't equipped to support the next-generation business intelligence and operational intelligence necessary to fuel innovation. They were never designed to match the speed and flexibility required to manage the unstructured data of today.

Organizations require a formal strategy that addresses their industry, lines of business goals, and specific requirements.

But that is merely the starting point for success. There must also be full support for unstructured data. This is a foundational requirement for digital businesses, particularly as IoT and edge computing take hold.

Success ultimately hinges on finding the right mix of tools and technologies to activate your data. This includes moving to faster and more responsive technologies, and modernizing legacy storage systems to accommodate data generated from various sources and applications.

When organizations embrace a modern data and storage framework, they're better able to mine unstructured data and extract the most value from it. They're positioned to pivot and adapt to changing conditions as they emerge. It's a recipe for maximum success in the digital age.

### MORE INFORMATION

Learn more about adapting your storage framework to unlock the full value of unstructured data.

Visit Pure Storage at [www.purestorage.com/flashblade](http://www.purestorage.com/flashblade)