

F R O S T & S U L L I V A N

FROST & SULLIVAN BEST PRACTICES AWARD

STORAGE MANAGEMENT - NORTH AMERICA

Product Leadership 2019



Tintri
BY **DDN**

FROST & SULLIVAN

2019

BEST
PRACTICES
AWARD

Contents

<i>Background and Company Performance</i>	3
<i>Industry Challenges</i>	3
<i>Product Family Attributes and Business Impact</i>	4
<i>Conclusion</i>	6
<i>Significance of Product Leadership</i>	7
<i>Understanding Product Leadership</i>	7
<i>Key Benchmarking Criteria</i>	8
<i>Product Family Attributes</i>	8
<i>Business Impact</i>	8
<i>Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices</i>	9
<i>The Intersection between 360-Degree Research and Best Practices Awards</i>	10
<i>Research Methodology</i>	10
<i>About Frost & Sullivan</i>	10

Background and Company Performance

Industry Challenges

Data is quickly becoming one of the greatest assets businesses own. When exposed to analytics, data offers insights that enable businesses to differentiate themselves from competitors. In fact, 77% of IT decision-makers surveyed by Frost & Sullivan said that data-driven decisions are better than those based on intuition; while 74% cited use of big data, analytics and other advanced technologies as critical to effectively competing in the marketplace.

This need to capture and analyze data is a double-edged sword: while it helps businesses maintain a competitive edge, it also presents challenges in how to manage data growth. Among IT decision-makers, 47% cited “growth of data or storage requirements” as a top challenge when implementing their hybrid IT strategies. It’s costly to accommodate exponential data growth in-house. Storage hotspots and bottlenecks can degrade application performance, or cause hardware downtime, or even failure. Shifts in business resources or goals can impact how and where storage is used. Even with cloud storage, ensuring consistent application performance can be a challenge. While 70% of business leaders are using cloud to mitigate storage growth concerns, there is still need to manage those resources carefully to balance performance and cost.

In order to strike a performance-cost balance, IT departments require new levels of visibility into and control over their storage environments. They need a firm grasp of how much storage capacity is required today, as well as to support future needs, to prevent over- or under-provisioning of storage resources. Inefficiency can cause application performance problems, as in the case of too little storage; or cost overruns if the business is oversubscribed to storage infrastructure.

In order to mitigate this problem, analytics—the driver of many storage challenges—must be applied to the storage environment itself. Data management and mastery requires leveraging metadata—or data about data—to understand how Input/Output Operations per Second (IOPS), bandwidth usage, faults, latency, and business decisions can impact storage resources. By applying analytics, machine learning, and artificial intelligence (AI) to the storage environment, the business can:

- Mitigate or prevent faults
- Forecast usage trends, and plan appropriately
- Increase agility
- Reduce overhead

When storage management providers add intelligence to their platforms, they can offer significant value to businesses by showing them how to balance application performance against storage costs.

Product Family Attributes and Business Impact

Tintri, a storage analytics provider recently acquired by DDN, provides customers with a robust platform that provides valuable storage insights to help them better manage their storage arrays.

Matched to Needs

The Tintri Global Center platform is well-matched to current customer needs. Businesses need planning tools to help them handle data growth, new workloads, decommissioning old hardware, and more. The Tintri platform provides both the daily management tasks required to streamline storage management, as well as the forward-looking insights to help businesses plan accordingly.

Today, the platform handles all storage management functions, including:

- storage infrastructure deployment
- load balancing
- cloning and snapshots
- quality of service

The platform can manage up to 64 systems as a federated pool of storage, through its single-pane-of-glass management portal. Integrated analytics enable enterprises to diagnose issues or predict potential faults, which can be mitigated with little to no business impact. Today, the platform also uses metadata, machine learning, and proprietary algorithms to predict storage environment behavior and needs, for up to 18 months into the future, and suggest ways to optimize the environment during that timeframe. This enables storage managers to more accurately predict storage needs and to plan accordingly, or optimize as needed to ensure a cost-effective yet high-performing environment.

Reliability and Quality

The Tintri platform is very reliable, and the robust analytics were designed to ensure no interference with customers' business operations. The platform does all of its analytics processing in the cloud, transferring system performance metrics, such as growth in a storage array or increased application traffic, from the enterprise data center. The benefit of this is two-fold. First, data can be moved on regular intervals; and because the metadata being captured is non-proprietary and small in size, there is no disruption to the customers' business as data is transferred. Second, Tintri developers can enhance the service and upload new versions to the cloud, rather than having to install new versions directly onto customer storage hardware. This enables more frequent enhancements—again, with no customer disruption. These features help to ensure a frequently enhanced, stable service that does not disrupt customer business operations.

Some competitors deploy such analytic services directly onto customer hardware, making updates and enhancements more disruptive.

Positioning

Tintri by DDN holds a strong market position as a storage analytics provider. The company enhances its capabilities—and thereby its market position—by embedding business intelligence analysis into its platform. This is a unique capability that few, if any, other providers have brought to the market.

Tintri enables business information from storage managers to be ingested into its analytics platform. By combining business information with data from the storage environment itself, the platform can alert storage managers as to how such changes will impact the storage environment; and provide actionable storage optimization or changes. Tintri is also more advanced than many competitors in integrating full, real-time, AI-based storage management.

Few providers are integrating business intelligence into the intelligent storage platform today. Such information can strongly enhance the recommendations that the platform is able to provide.

Financial Performance

Within the first 90 days after acquiring Tintri, in the fourth quarter of 2018, parent company DataDirect Networks (DDN) quickly set a roadmap for service enhancements, as well as increasing and enhancing customer support for the company's extensive customer base.

As a result of the swift action and clear development roadmap, DDN announced in early January 2019 that Tintri had delivered nearly 300% growth in Q4 of 2018—its first quarter of ownership of Tintri. With extensive service capabilities on the roadmap for 2019, financial performance is expected to continue to be strong.

Customer Acquisition

Upon acquisition of Tintri, DDN announced that its first order of business was to boost customer service and support. The company's first move toward that goal came in December 2018, when DDN announced that it had opened more than 100 worldwide "service depots" to provide customers with support. The company also added numerous field technical engineers, quality assurance, and technical customer service personnel to its team.

Through these actions, DDN has increased Tintri's ability to better serve its customers with its robust management platform. The company's improved ability to serve customers in the field offers a customer acquisition advantage over some competitors.

Growth Potential

Since Tintri's acquisition, the DDN leadership team now running the company has provided solid leadership to the already strong analytics management platform that the company offers. With its defined plans for new features, and an increase in the advanced analytics and AI that the company plans to develop and launch in the near future, there is clear growth potential for Tintri as it eclipses competitors with its advanced storage analytics.

Conclusion

Tintri has made huge advances to its already robust, analytics-driven storage management platform. With a well-defined roadmap of ambitious service enhancements, Tintri's future and ability to continue as a leader in the intelligent storage space is bright.

With its strong overall performance, Tintri by DDN has earned Frost & Sullivan's 2019 Product Leadership Award for Intelligent Storage Management.

Significance of Product Leadership

Ultimately, growth in any organization depends on customers purchasing from a company and then making the decision to return time and again. A comprehensive product line filled with high-quality, value-driven options is the key to building an engaged customer base. To achieve and maintain product excellence, an organization must strive to be best in class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.



Understanding Product Leadership

Demand forecasting, branding, and differentiating all play critical roles in finding growth opportunities for your product line. This three-fold focus, however, must be complemented by an equally rigorous focus on pursuing those opportunities to a best-in-class standard. Customer communication, customer feedback, pricing, and competitor actions must all be managed and monitored for ongoing success. If an organization can successfully parlay product excellence into positive business impact, market share will inevitably increase.

Key Benchmarking Criteria

For the Product Leadership Award, Frost & Sullivan analysts independently evaluated 2 key factors—Product Family Attributes and Business Impact—according to the criteria identified below.

Product Family Attributes

Criterion 1: Match to Needs

Requirement: Customer needs directly influence and inspire the design and positioning of the product family.

Criterion 2: Reliability and Quality

Requirement: Products consistently meet or exceed customer expectations for performance and length of service.

Criterion 3: Product/Service Value

Requirement: Products or services offer the best value for the price, compared to similar offerings in the market.

Criterion 4: Positioning

Requirement: Products or services address unique, unmet needs that competitors cannot easily replicate or replace.

Criterion 5: Design

Requirement: The product features an innovative design, enhancing both visual appeal and ease of use.

Business Impact

Criterion 1: Financial Performance

Requirement: Overall financial performance is strong in terms of revenue, revenue growth, operating margin, and other key financial metrics.

Criterion 2: Customer Acquisition

Requirement: Product strength enables acquisition of new customers, even as it enhances retention of current customers.

Criterion 3: Operational Efficiency

Requirement: Staff is able to perform assigned tasks productively, quickly, and to a high quality standard.

Criterion 4: Growth Potential

Requirements: Product quality strengthens brand, reinforces customer loyalty, and enhances growth potential.

Criterion 5: Human Capital

Requirement: Company culture is characterized by a strong commitment to product quality and customer impact, which in turn enhances employee morale and retention.

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate award candidates and assess their fit with select best practices criteria. The reputation and integrity of the awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify award recipient candidates from around the world	<ul style="list-style-type: none"> • Conduct in-depth industry research • Identify emerging industries • Scan multiple regions 	Pipeline of candidates that potentially meet all best-practice criteria
2 Perform 360-degree research	Perform comprehensive, 360-degree research on all candidates in the pipeline	<ul style="list-style-type: none"> • Interview thought leaders and industry practitioners • Assess candidates' fit with best practices criteria • Rank all candidates 	Matrix positioning of all candidates' performance relative to one another
3 Invite thought leadership in best practices	Perform in-depth examination of all candidates	<ul style="list-style-type: none"> • Confirm best practices criteria • Examine eligibility of all candidates • Identify any information gaps 	Detailed profiles of all ranked candidates
4 Initiate research director review	Conduct an unbiased evaluation of all candidate profiles	<ul style="list-style-type: none"> • Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles 	Final prioritization of all eligible candidates and companion best practices positioning paper
5 Assemble panel of industry experts	Present findings to an expert panel of industry thought leaders	<ul style="list-style-type: none"> • Share findings • Strengthen cases for candidate eligibility • Prioritize candidates 	Refined list of prioritized award candidates
6 Conduct global industry review	Build consensus on award candidates' eligibility	<ul style="list-style-type: none"> • Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates 	Final list of eligible award candidates, representing success stories worldwide
7 Perform quality check	Develop official award consideration materials	<ul style="list-style-type: none"> • Perform final performance benchmarking activities • Write nominations • Perform quality review 	High-quality, accurate, and creative presentation of nominees' successes
8 Reconnect with panel of industry experts	Finalize the selection of the best practices award recipient	<ul style="list-style-type: none"> • Review analysis with panel • Build consensus • Select recipient 	Decision on which company performs best against all best practices criteria
9 Communicate recognition	Inform award recipient of recognition	<ul style="list-style-type: none"> • Present award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance 	Announcement of award and plan for how recipient can use the award to enhance the brand
10 Take strategic action	Upon licensing, company is able to share award news with stakeholders and customers	<ul style="list-style-type: none"> • Coordinate media outreach • Design a marketing plan • Assess award's role in strategic planning 	Widespread awareness of recipient's award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, resulting in errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.



About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's growth team with disciplined research and best practices models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join Frost & Sullivan's Growth Partnership, visit <http://www.frost.com>.