Total Economic Impact

# The Total Economic Impact™ Of Lightstorm

## Cost Savings And Business Benefits Enabled By Lightstorm

A FORRESTER TOTAL ECONOMIC IMPACT STUDY COMMISSIONED BY LIGHTSTORM, DECEMBER 2025

FORRESTER®

## Executive Summary

**Today, organizations face mounting pressure to deliver seamless digital experiences, yet legacy connectivity infrastructure often fails to meet the demands of modern, cloud-centric operations. Executives are looking for solutions beyond traditional telecom providers for more agile, scalable, and resilient networking solutions that empower businesses to interconnect data centers and hybrid cloud environments — consistently supporting their commitment to providing smooth and stable customer journeys.**

Lightstorm addresses the limitations of traditional telecom with Smartnet, an intelligent fiber infrastructure that serves as the technology backbone with Polarin — its network-as-a-service (NaaS) platform — operating on top of this foundation. Together, Smartnet and Polarin aim to deliver on-demand, scalable, and resilient connections seamlessly between hybrid and multicloud environments and data centers to overcome the high cost and rigidity of traditional connectivity methods.

Lightstorm commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Lightstorm.[1] The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Lightstorm on their organizations.

**174%**

**Return on investment (ROI)**

**$740K**

**Net present value (NPV)**

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four decision-makers with experience using Lightstorm. For the purposes of this study, Forrester aggregated the experiences of the interviewees and combined the results into a single composite organization, which is a technology organization operating across APAC, that has 30,000 employees and an annual revenue of $5 billion.

Interviewees said that prior to using Lightstorm, their organizations relied solely on traditional telecom providers for connectivity. However, legacy networking architecture was slow and unstable with rigid contractual procedures that constrained the flexibility to scale its bandwidth on demand. These limitations led to excessive networking costs, overburdened IT technicians, and broken customer journeys that eventually damaged brand reputation and trust.

After the investment in Lightstorm, the interviewees were able to interconnect data centers (DCs) across different regions, as well as across hybrid and multicloud environments. Lightstorm also provided tailored solutions for last-mile connectivity, along with self-service tools to easily scale/descale network provisioning. Key results from the investment include higher service level agreements (SLAs), optimized incident resolution, and strengthened network resiliency, which empowers networking operations and elevates customer experience (CX).

### Key Findings

**Quantified benefits.** Three-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Improved service availability that amount to a $1.1 million uplift in revenue.** Transitioning to Lightstorm's network enables consistent, high-availability performance for critical applications and real-time service deliveries. By eliminating bandwidth bottlenecks and enabling resilient architectures, the composite organization is able to improve their SLA from 99.5% to 99.99%. This elevated uptime directly translates to uninterrupted customer journeys, safeguarding operating income and reducing revenue loss of $1.1 million over three years.
- **Optimized incident management through reducing networking-related faults by 75% and effort for average incident resolution by 85%.** High-performance network drastically reduces both the frequency and duration of network incidents. The composite organization observes both drops in frequency of application outages, as well as time needed to resolve each incident. This efficiency reduces the burden on networking operations (NetOps) teams and also prevents widespread

productivity losses by minimizing disruptions to cross-functional employees and customer-facing services, resulting in a quantified benefit of $33,000.

- **Saved networking costs by 10%.** Lightstorm delivers significant cost savings by replacing rigid, long-term contracts with a flexible, pay-as-you-go model. The composite organization is able to save costs from streamlined procurement, free proof-of-concept (POC) testing, and the elimination of over-provisioning waste — adding up to a total savings of $35,000.

**Unquantified benefits.** Benefits that provide value for the composite organization but are not quantified for this study include:

- **Empowered IT operations.** The Polarin platform provides networking teams with self-service automation and real-time visibility, which eliminates reliance on external vendors. This enables lean networking teams to proactively manage bandwidth with low manual oversight while maintaining visibility and control over network performance.
- **Greater agility in service delivery.** By simplifying connectivity through a single cross-connect, the composite organization can dynamically adjust bandwidth based on its peaks and valleys and accelerate service provisioning from days to minutes, allowing businesses to respond immediately to changing customer demands.
- **Elevated CX and trust.** Lower packet-level latency and higher uptime directly impacts CX and strengthens brand confidence. Stable connections eliminate application slowdowns and outages that used to cause access failures and site abandonment, improving customer retention in the long term.
- **Enhanced compliance readiness**. Private, point-to-point connectivity provides the reliable, time-bound data replication required to meet stringent regulatory standards. Especially for sectors like finance and technology services, this enables customers to confidently demonstrate near real-time recovery capabilities during audits, supporting industry compliance with data resilience and zero-data-loss mandates.
- **Strengthened network resilience.** Lightstorm supports hybrid and multicloud connectivity that facilitates cloud-first strategies. Improved resiliency across data centers and clouds enables load sharing in distributed workloads, reducing stress of data replication and recovery while sustaining SLA commitments.
- **Improved budget predictability.** The pay-as-you-go pricing model and granular subscription costs allow for more control over technology spending. Additionally, a clear observation of the connectivity status helps justify investments in IT infrastructure.

**Costs.** Three-year, risk-adjusted PV costs for the composite organization include:

- **Vendor costs of $398,000.** This includes all subscription fees and customization service fees paid to Lightstorm over a three-year contract.
- **Internal implementation and ongoing management costs of $27,000.** The composite organization's networking team works with Lightstorm from the three-month POC period to implementation, integration, and all the way through onboarding, and continues to monitor its performance in the long term.

The financial analysis that is based on the interviews found that a composite organization experiences benefits of $1.2 million over three years versus costs of $425,000, adding up to a net present value (NPV) of $740,000 and an ROI of 174%.

## Key Statistics

**174%**

**Return on investment (ROI)**

**$1.2M**

**Benefits PV**

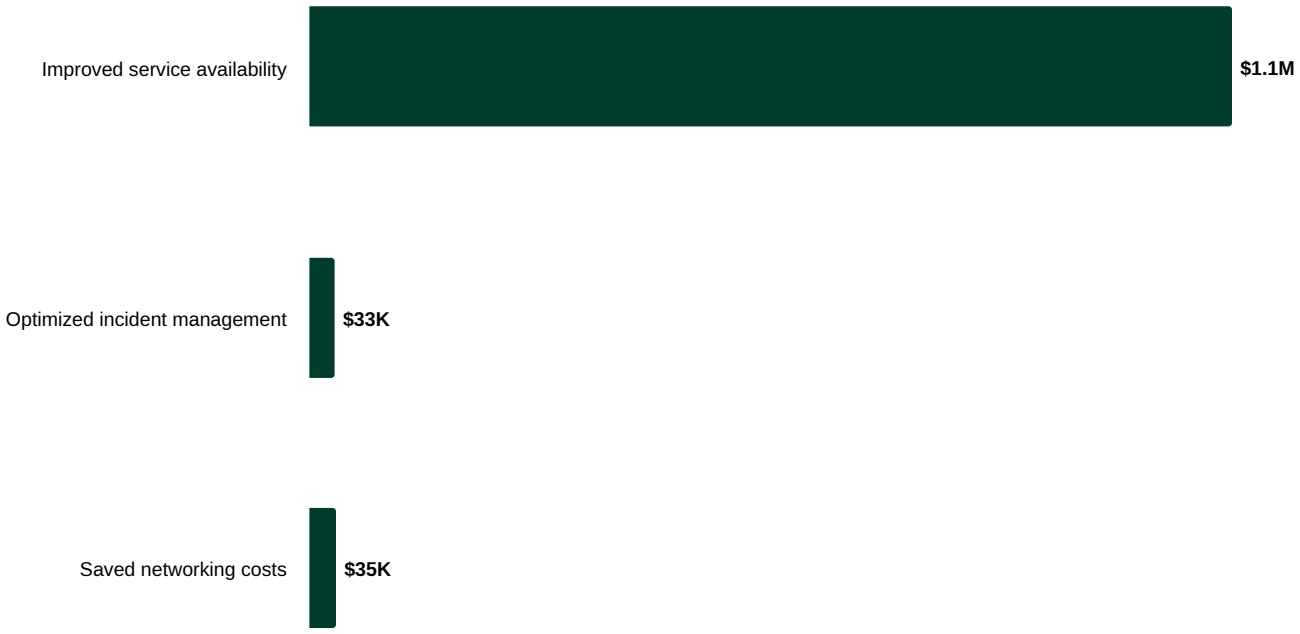
**$740K**

**Net present value (NPV)**

**<6 months**

**Payback**

## Benefits (Three-Year)



## The Lightstorm Customer Journey

Drivers leading to the Lightstorm investment

| Interviews | | | | |
|---|---|---|---|---|
| **Role** | **Industry** | **Headquarter** | **Revenue** | **Headcount** |
| Executive VP of networks and cybersecurity | Financial services | India | 13 billion | 80,000 |
| Manager of network planning and development | Telcom services | Australia | 15 billion | 33,000 |
| Associate practice manager of IT procurement | Digital services and consulting | India | 19 billion | 324,000 |
| Executive VP of technology | Technology and internet services | India | 0.3 billion | 6,000 |

### Key Challenges

Legacy networks were prone to disruptions and outages, causing underperformance of customer-facing applications. Customer organizations used to work with traditional telecom companies under fixed contracts and had to rely heavily on vendor support for even slight adjustments in bandwidth provisioning, which pushed their already lean networking team through cumbersome procedures.

Interviewees noted how their organizations struggled with common challenges, including:

- **Latency and performance issues.** Limited bandwidth created bottlenecks for cloud-first applications and impacted business performance, especially during peak hours. Interviewees recalled how their customers complained about slow and lagging web services, as well as application outages. The executive VP of networks and cybersecurity of a financial institution noted, “Customers don’t stand there and wait for things to be fixed, … they simply turn to another bank for transactions.”
- **Lack of flexibility and scalability.** Rigid architecture and contracts made it difficult to scale bandwidth on demand or customize services up to the last mile. Upgrades often required lengthy procedures, bureaucratic negotiations, and manual interventions. When the contracts were finally updated or renewed, business opportunities had already slipped away with ongoing market dynamics.
- **Vendor management complexity.** Traditional networking players in the market are not entirely dedicated to connectivity services, which can often result in conflict of interests with their customers. According to the manager of network planning and development at the Australian telecom organization, they initially evaluated telecom counterparts in India but soon realized that they faced more competition than partnership. Having multiple providers also caused inconsistent service levels and complexity in managing vendors.
- **Cost and transparency issues.** Legacy contracts often featured fixed pricing structures that forced organizations to commit to a minimal amount of spending regardless of their actual utilization. Certain providers offered burstable bandwidth that would initially appear to be a flexible option, but would later turn out to increase unpredictable costs during peak seasons.

### Investment Objectives

The interviewees searched for a solution that could:

- **Ensure reliable DC-to-DC connectivity.** The solution should be able to establish stable and low-latency connections to support critical workloads and customer-facing applications.
- **Support hybrid and multicloud connectivity.** The solution should have the technology maturity to fit hybrid cloud environments involving different cloud providers, with strong last-mile connectivity to different campuses.
- **Offer flexible bandwidth.** The interviewees require a solution with built-in agility to scale bandwidth on demand at zero disruptions to match fluctuating business needs.
- **Maintain security and resiliency.** Having a strong security posture will enable organizations to commit to consistent

provisioning of high-quality, real-time digital services.

> *"It was mainly the traditional connectivity model that forced us to look for an alternative. Also, with telecom companies comes traditional contractual obligations — you don't get that kind of flexibility in terms of consuming the services."*
>
> **Executive VP of technology, technology and internet services**

## Composite Organization

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an ROI analysis that illustrates the areas financially affected. The composite organization is representative of the interviewees' organizations, and it is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

- **Description of composite.** The technology company is headquartered in India and operates across APAC. It has 30,000 employees and generates an annual revenue of $5 billion. The industry requires the organization to maintain a stable SLA in order to serve customers in high volume.
- **Deployment characteristics.** The composite organization runs on a hybrid cloud environment and partners with different cloud providers. It also has several data centers distributed across APAC to facilitate real-time transmission of data and traffic. The deployment of Lightstorm started with a three-month POC, with the main users being their NetOps team of around 10 FTEs.

### KEY ASSUMPTIONS

- $5 billion revenue
- 30,000 employees
- 10 NetOps FTEs
- Multiple data centers
- Hybrid and multicloud setup

## Analysis Of Benefits

Quantified benefit data as applied to the composite

| Total Benefits | | | | | | |
|---|---|---|---|---|---|---|
| **Ref.** | **Benefit** | **Year 1** | **Year 2** | **Year 3** | **Total** | **Present Value** |
| Atr | Improved service availability | $441,000 | $441,000 | $441,000 | $1,323,000 | $1,096,702 |
| Btr | Optimized incident management | $13,260 | $13,260 | $13,260 | $39,780 | $32,975 |
| Ctr | Saved networking costs | $13,920 | $13,920 | $13,920 | $41,760 | $34,617 |
| | Total benefits (risk-adjusted) | $468,180 | $468,180 | $468,180 | $1,404,540 | $1,164,294 |

### Improved Service Availability

**Evidence and data.** Customers mentioned how the connectivity Lightstorm offers reduced the latency of data-driven applications, which in turn supported consistent and uninterrupted service delivery.

- The executive VP of technology from the Indian internet services organization recalled how their organization used to experience application outages and errors from hitting 100% bandwidth, and therefore was forced to look for a networking solution that could maintain service continuity.
- The executive VP of networks and cybersecurity at an Indian financial services organization further explained how stable connection is crucial to supporting their organization's real-time transactions in India, whether under instant transfer, trading, or foreign exchange scenarios. Smartnet has become a foundational part of their resilient network architecture for routing critical traffic. As a result, they were able to improve their SLA significantly from 99.5% to 99.95%.
- Meanwhile, the associate practice manager of IT procurement from the digital services and consulting organization noted that they had moved from centralized internet breakout to local internet access at each office, which enabled faster cloud access. They were able to adhere to their SLA commitment of 99.99% with zero disruptions during and after their transition to Lightstorm. Their IT team saw no escalations regarding SLA breaches, indicating that the new architecture was highly reliable.
- Elevated uptime directly translated to higher availability of customer-facing apps and services, which immediately impacted operating income. Providing a smoother CX also potentially reduced churn and drop in conversion rates, which reduced revenue loss in the long term.

**Modeling and assumptions.** Based on the interviews, Forrester assumes the following about the composite organization:

- Lightstorm contributes 20% to the composite organization's incremental SLA from 99.5% to 99.99%.
- The composite organization has an annual revenue of $5 billion and an operating margin of 12%.

**Risks.** Organizations may realize results different from those presented in the financial model due to:

- Impact of Lightstorm on actual improvement in uptime.
- Variation in size of business and profitability.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 25%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $1.1 million.

> *"I haven't seen a single outage on the Lightstorm link in the past year. Not even one physical outage nor any service degrade."*
>
> **Executive VP of networks and cybersecurity, financial services**

| Improved Service Availability | | | | | |
|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Source** | **Year 1** | **Year 2** | **Year 3** |
| A1 | Reduced downtime due to improved SLAs (hours) | Interviews | 8.58 | 8.58 | 8.58 |
| A2 | Impact of hourly downtime on revenue | Composite | $570,776 | $570,776 | $570,776 |
| A3 | Operation margin | TEI methodology | 12% | 12% | 12% |
| At | Improved service availability | A1*A2*A3 | $588,000 | $588,000 | $588,000 |
| | Risk adjustment | ↓25% | | | |
| Atr | Improved service availability (risk-adjusted) | | $441,000 | $441,000 | $441,000 |
| | **Three-year total: $1,323,000** | | | **Three-year present value: $1,096,702** | |

## Optimized Incident Management

**Evidence and data.** Having a higher level of availability, more elevated performance, and more flexible networking resulted in fewer incidents. Beyond decreased bottlenecks and timeout errors, the NetOps team also monitored connectivity with more transparency, receiving near real-time alerts, therefore accelerating incident resolution through clearer detection and faster troubleshooting.

- Customers reported a significant decline in number of faults as a result of having a more resilient network. The executive VP of networks and cybersecurity from the Indian financial services organization noted that they reduced its annual incident count from approximately 16 to not more than two. At the same time, the manager of network planning and development of a major telecom company from Australia compared Lightstorm to other incumbent networks and observed a lower possibility of faults by 50% to 60%.
- Adopting Polarin as a centralized hub to streamline network performance reduced time and effort required to remediate an incident to 30 minutes, when it previously took between two to six hours.
- Most of the incidents were resolved by networking FTEs from IT or Network Operations Center (NOC) teams. Furthermore, the executive VP of networks and cybersecurity from the Indian financial services organization told Forrester that outages of critical customer-facing applications can have widespread impact across several functions, which could cause at least five or six employees to pause their work — including but not limited to those in product management, application development, database, cloud infrastructure teams, and other telecom domain experts. In more complex cases where customers sense and complain about broken connections, customer communication specialists within dedicated incident management teams could also be involved.

**Modeling and assumptions.** Based on the interviews, Forrester assumes the following about the composite organization:

- The composite organization detects four incidents per quarter before using Lightstorm, and it takes five hours for each incident to achieve end-to-end resolution.
- A team of three networking engineers are responsible for handling incident resolution and response. On average, four additional FTEs from other business units also assist in incident resolution and response as network failures can affect business performance and disrupt customer journeys. These employees typically come from a mix of product applications, data, and customer communications teams, depending on the nature of the incident.
- The fully burdened hourly salary is $32 for networking operations engineers, and a blended average of $36 for employees from all other functionalities involved.
- After using Lightstorm, the frequency of incidents decreases by 75%, and time needed to resolve each incident is down by 85%.
- Forrester assumes 80% of productivity gains are effectively captured.

**Risks.** Organizations may realize results different from those presented in the financial model due to:

- Frequency of incidents and faults under the legacy networking architecture.
- Number of employees across departments required to resolve incidents, as well as their compensation rates.

- Actual productivity recapture rate.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $33,000.

## 75%

**Reduction in frequency of incidents after using Lightstorm**

## 85%

**Time saved resolving incidents with Lightstorm**

> *"We were able to move the traffic to the best available path with Lightstorm and things have become much more efficient. The possibility of faults is less than a third of what we are observing in other networking operators."*
>
> **Manager of network planning and development, telecom services**

| Optimized Incident Management | | | | | |
|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Source** | **Year 1** | **Year 2** | **Year 3** |
| B1 | Incidents before implementing Lightstorm | Composite | 16 | 16 | 16 |
| B2 | Networking FTEs required to resolve each incident | Composite | 3 | 3 | 3 |
| B3 | Additional FTEs (applications, data, customer teams) required to resolve each incident | Composite | 4 | 4 | 4 |
| B4 | Average time needed to resolve an incident before Lightstorm (hours) | Composite | 5 | 5 | 5 |
| B5 | Percentage reduction in frequency of incidents after Lightstorm | Interviews | 75% | 75% | 75% |
| B6 | Time saved resolving incidents after Lightstorm | Interviews | 85% | 85% | 85% |
| B7 | Networking FTE hours reallocated due to Lightstorm | B1*B2*B4*(1-(1-B5)*(1-B6)) | 231 | 231 | 231 |
| B8 | Employee hours (applications, data, customer teams) reallocated due to Lightstorm | B1*B3*B4*(1-(1-B5)*(1-B6)) | 308 | 308 | 308 |
| B9 | Fully burdened hourly compensation rate for network operations engineers | Composite | $32 | $32 | $32 |
| B10 | Fully burdened hourly compensation rate for average employees | Composite | $36 | $36 | $36 |
| **B11** | **Subtotal: Value of reallocated networking FTE** | **B7*B9** | **$7,328** | **$7,328** | **$7,328** |
| **B12** | **Subtotal: Value of reallocated employee hours** | **B8*B10** | **$11,088** | **$11,088** | **$11,088** |
| B13 | Productivity recapture rate | TEI methodology | 80% | 80% | 80% |
| Bt | Optimized incident management | (B11+B12)*B13 | $14,733 | $14,733 | $14,733 |
| | Risk adjustment | ↓10% | | | |
| Btr | Optimized incident management (risk-adjusted) | | $13,260 | $13,260 | $13,260 |
| | | **Three-year total: $39,780** | | **Three-year present value: $32,975** | |

## Saved Networking Costs

**Evidence and data.** Customers agree that Lightstorm's overall cost of ownership is notably lower in comparison to legacy solutions provided by traditional telecom vendors. All interviewees noted they were impressed with Lightstorm's on-demand bandwidth provisioning plans, and how implementing Lightstorm freed their teams from bureaucratic procedures and lengthy contract reviews.

- Customers highlighted the flexibility and ease of negotiation when working with Lightstorm, a contrast to their rigid contracts and tedious renewal/upgrade procedures with traditional telecom vendors.
- Lightstorm's pay-as-you-go pricing model enabled them to save initial testing and customization costs as a result of the free-of-charge POC process that facilitated smooth transition and onboarding, which avoided wastage in networking budget.
- The manager of network planning and development from a telecom customer estimated an overall cost savings of 5% to 10%, while the associate practice manager of IT procurement in digital services estimated Lightstorm to be at least 10% cheaper than comparable solutions in the market.

**Modeling and assumptions.** Based on the interviews, Forrester assumes the following about the composite organization:

- It saves 10% on networking costs after using Lightstorm.

**Risks.** Organizations may realize results different from those presented in the financial model due to:

- Reliance on traditional telecom providers versus Lightstorm, which constitutes the organization's overall networking landscape.
- Varying ability to manage networking budget planning and spending.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $35,000.

> *"After replacing my company's previous solution with Lightstorm, we doubled bandwidth with almost the same cost."*
>
> **Associate practice manager of IT procurement, digital services and consulting**

| Saved Networking Costs | | | | | |
|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Source** | **Year 1** | **Year 2** | **Year 3** |
| C1 | Investment in telecom network without Lightstorm | Composite | $154,667 | $154,667 | $154,667 |
| C2 | Cost reduction due to Lightstorm | Interviews | 10% | 10% | 10% |
| Ct | Saved networking costs | C1*C2 | $15,467 | $15,467 | $15,467 |
| | Risk adjustment | ↓10% | | | |
| Ctr | Saved networking costs (risk-adjusted) | | $13,920 | $13,920 | $13,920 |
| | **Three-year total: $41,760** | | **Three-year present value: $34,617** | | |

## Unquantified Benefits

Interviewees mentioned the following additional benefits that their organizations experienced but were not able to quantify:

- **Empowered IT operations.** Lightstorm equipped the networking team with self-service capabilities, real-time visibility into bandwidth provisioning, and automated monitoring. Through the Polarin platform, network administrators gained a centralized portal to independently manage bandwidth and connectivity, which eliminated dependencies on external vendor support and approval processes. Given that most interviewees operated with lean networking teams, this time-saving and effort-reducing setup proved highly beneficial. Lightstorm's ability to schedule bandwidth bursts and automatically revert to committed rates further minimized the need for continuous manual oversight. This shift not only provided greater control over network status but

also enabled staff to monitor network conditions in real time and dynamically adjust bandwidth based on business demands. As a result, the team transitioned from reactively addressing network issues to proactively supporting business needs.

- **Greater agility in service delivery.** Customers were able to adjust bandwidth provisioning at ease. This started on day one of implementing Lightstorm as the transition was extremely smooth and seamless. The manager of network planning and development from the Australian telecom services organization noted, "We were able to speed up service provisioning and accelerate onboarding, that means we can be connected to our clients immediately." Lightstorm implemented a virtual point of presence (vPOP) architecture for their organization to streamline capacity delivery to end customers. By establishing a single cross-connect from the company's rack to a Lightstorm-enabled router co-located within the same rack, they were able to dynamically provision 1G/10G circuits on-demand directly from their existing infrastructure.
- **Elevated CX and trust.** The executive VP of technology from the technology and internet services organization in India shared that their organization's conversion rates drop dramatically whenever application performance slows down, especially for retail customers. Similarly, the executive VP of networks and cybersecurity working in financial services pointed out the consequences of service disruptions and outages: "People won't trust you [to be able to support] high volume transactions if your app keeps failing. If they continue to get stuck for another two or three times, they might switch to other banking accounts entirely." With Lightstorm, faster site loading and smoother access to services reduced drop-offs and improved the organization's brand reputation in the market. This financial services organization has since received fewer reports from their corporate and wholesale customers, and the interviewee further highlighted how this helped with customer loyalty and stickiness, giving them the confidence to retain customer satisfaction.
- **Enhanced compliance readiness.** The point-to-point connectivity enabled by Smartnet does not directly translate to data privacy gains, but possessing such a private and secure connection has made it easier to facilitate auditing and meet service commitments. The executive VP of networks and cybersecurity from the Indian financial services organization emphasized that banks in India are mandated to declare their resiliency timeframe — that is, how soon they are able to recover a case — to auditors and customers. The interviewee noted, "External regulatory compliance is critical for our industry, so zero data loss between DC and DR [disaster recovery] needs to be reliable and timebound. Lightstorm's ability to provide near real-time replication is strong evidence to prove that we are secure."

> *"Even if one DC gets impacted, things will not be down and out — we always have the other side working. This is making life easier for my team. Lightstorm helps us deploy apps in active mode instead of the traditional active and failover mode."*
>
> **Executive VP of networks and cybersecurity, financial services**

## Flexibility

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Lightstorm and later realize additional uses and business opportunities, including:

- **Strengthened network resilience.** Customers consistently highlighted that Lightstorm significantly enhanced their network's ability to withstand failures. The solution enabled direct, hybrid and multicloud connectivity, which eliminated single points of failure by allowing workloads to be distributed across data centers and clouds. This architecture allowed applications to be deployed in an active mode, ensuring continuity even if one location is impacted. According to the associate practice manager of IT procurement from the Indian digital services and consulting organization, Lightstorm was able to extend last-mile connectivity directly to their organization's campuses, which potentially reduced latency compared to third-party routing.
- **Improved budget predictability.** The pay-as-you-go model provides superior financial control by aligning cost directly with usage. All interviewees mentioned how their organizations used to be locked in fixed contracts with traditional telecom providers, causing them to either hit bottlenecks during peak seasons and thus constrain service delivery, or pay for overprovisioning for at least a year. Certain vendors offered standard burstable billing but it often led to unpredictable overage charges. Lightstorm eliminates this waste and risk by allowing them to pay only for the bandwidth that was actually consumed, which reflected the current business needs more accurately.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Total Economic Impact Approach).

> *"The pay-as-you-use pricing model of Lightstorm enhanced operational agility. It works extremely well in supporting our short-term projects and dynamic workloads."*
>
> **Executive VP of technology, technology and internet services**

## Analysis Of Costs

Quantified cost data as applied to the composite

| Total Costs | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Ref.** | **Cost** | **Initial** | **Year 1** | **Year 2** | **Year 3** | **Total** | **Present Value** |
| Dtr | Annual subscription fee | $0 | $160,080 | $160,080 | $160,080 | $480,240 | $398,095 |
| Etr | Implementation and management costs | $22,334 | $1,675 | $1,675 | $1,675 | $27,360 | $26,500 |
| | Total costs (risk-adjusted) | $22,334 | $161,755 | $161,755 | $161,755 | $507,600 | $424,595 |

### Annual Subscription Fee

**Evidence and data.** The interviewees noted that their organizations paid an annual subscription fee for the license to use Lightstorm and its professional services.

- They used a mix of different Layer 1 and Layer 2 plans based on business needs, leveraging services from both Smartnet and Polarin.
- Certain organizations required add-on services such as customization for last mile connectivity or convergence into a single network service provider.

**Modeling and assumptions.** Based on the interviews, Forrester assumes the following about the composite organization:

- It pays for ports and support plans over a three-year contract, and on-demand costs for virtual routers (VR) and virtual connections (VC).
- The vendor costs applied to the composite organization do not represent an official quote or actual pricing. Please contact Lightstorm for additional details.

**Risks.** Organizations may realize results different from those presented in the financial model due to:

- Specific type and volume of connectivity required between different number of data centers and clouds.
- Any customization services needed from Lightstorm.

**Results.** To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $398,000.

| Annual Subscription Fee | | | | | | |
|---|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Source** | **Initial** | **Year 1** | **Year 2** | **Year 3** |
| D1 | Monthly subscription fee | Composite | | $11,600 | $11,600 | $11,600 |
| Dt | Annual subscription fee | D1*12 | $0 | $139,200 | $139,200 | $139,200 |
| | Risk adjustment | ↑15% | | | | |
| Dtr | Annual subscription fee (risk-adjusted) | | $0 | $160,080 | $160,080 | $160,080 |
| | **Three-year total: $480,240** | | | **Three-year present value: $398,095** | | |

### Implementation And Management Costs

**Evidence and data.** All interviewees went through a POC period before officially onboarding Lightstorm while the contractual agreements moved in parallel. Apart from networking FTEs, the product, finance, procurement, and legal teams may also be

involved depending on the organization structure.

- Organizations typically spent between three to five months on technical evaluation and vendor onboarding before arriving at initial deployment. This usually included a POC period of two to three months where organizations set up a test network and continued to measure and benchmark outcomes.
- End-to-end deployment duration can vary from weeks to a few months depending on the actual solution requirements.
- As the main users of Lightstorm, the networking teams were naturally involved in the initial testing and deployment stages. There were also more complicated cases where product managers and cloud architects from multiple business teams were also engaged to assist with the deployment.
- According to the executive VP of networks and cybersecurity from the Indian financial services organization, their IT team found the concepts and structure of Smartnet familiar, but went through three learning sessions of six hours each, to navigate the Polarin console properly.
- Ongoing maintenance and management effort proved to be minimal, with typically one to two networking FTEs spending less than a few days per quarter monitoring performance, introducing new users, adding new services, or having business reviews with Lightstorm.

**Modeling and assumptions.** Based on the interviews, Forrester assumes the following about the composite organization:

- The POC, onboarding, and deployment processes are condensed to within three months, during which half of the networking team are involved and dedicate 20% of their time.
- The composite organization arranges a two-day workshop to introduce Polarin to the entire networking team.
- Once the solution is deployed, ongoing management effort accumulates to a total of four hours per month.
- The fully burdened hourly salary is $32 for a networking operations engineer.

**Risks.** Organizations may realize results different from those presented in the financial model due to:

- Complexity of implementation and onboarding due to different customization requirements, legacy architecture, and technology maturity level.
- Number of internal employees across departments who are actively engaging with Lightstorm, along with their compensation rates.

**Results.** To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $27,000.

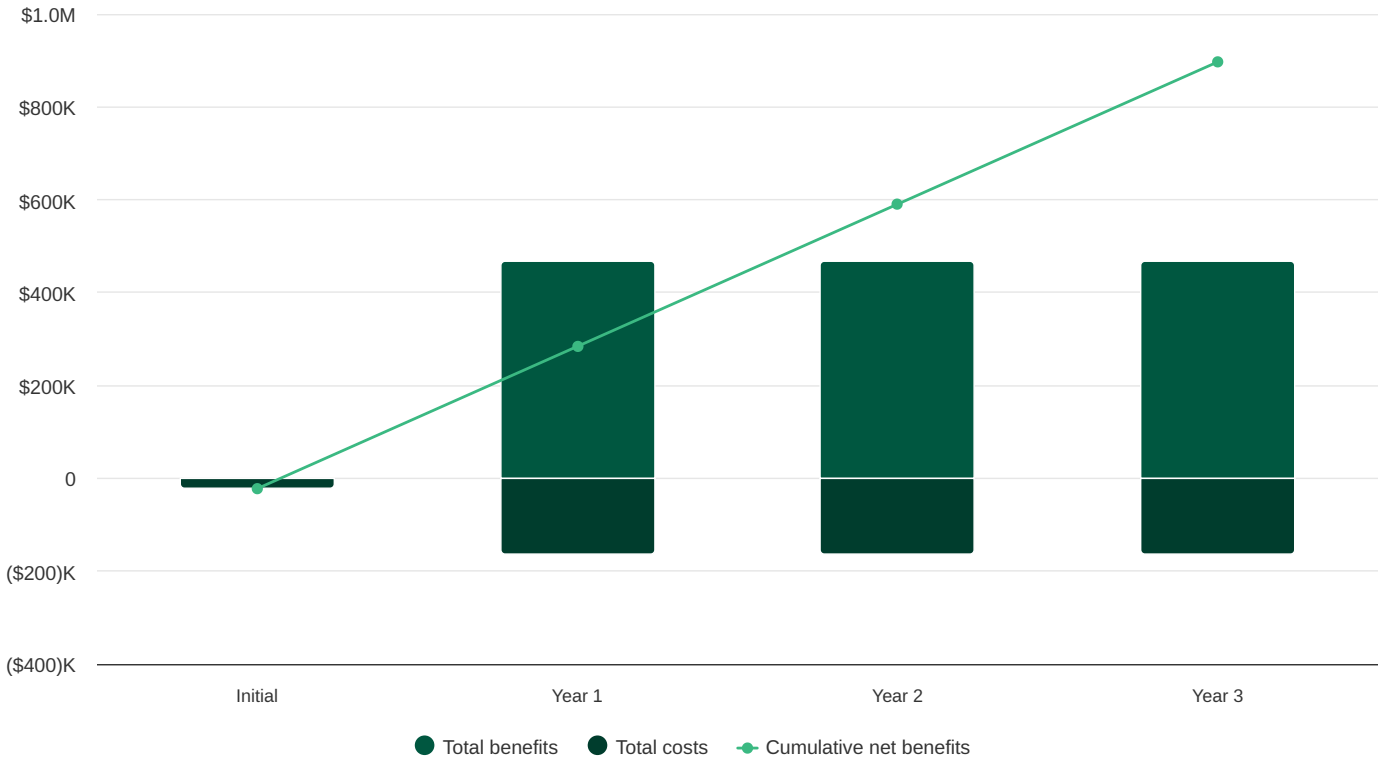
> *“Once we started moving our core production traffic onboard, the transition was very fast. I don’t think there was any handover process that required more than a few hours.”*
>
> **Manager of network planning and development, telecom services**

| Implementation And Management Costs | | | | | | |
|---|---|---|---|---|---|---|
| **Ref.** | **Metric** | **Source** | **Initial** | **Year 1** | **Year 2** | **Year 3** |
| E1 | Networking FTEs required for implementation | Composite | 5 | | | |
| E2 | Total implementation process (weeks) | Composite | 12 | | | |
| E3 | Time needed for implementation in a week (hours) | Composite | 8 | | | |
| E4 | Total time needed for implementation (hours) | E1*E2*E3 | 480 | | | |
| E5 | Total time needed for training (hours) | Composite | 160 | | | |
| E6 | Ongoing management hours | Composite | 0 | 48 | 48 | 48 |
| E7 | Fully burdened hourly compensation rate for network operations engineers | Composite | $32 | $32 | $32 | $32 |
| Et | Implementation and management costs | (E4+E5+E6)*E7 | $20,304 | $1,523 | $1,523 | $1,523 |
| | Risk adjustment | ↑10% | | | | |
| Etr | Implementation and management costs (risk-adjusted) | | $22,334 | $1,675 | $1,675 | $1,675 |
| | | **Three-year total: $27,360** | | **Three-year present value: $26,500** | | |

## Financial Summary

Consolidated Three-Year, Risk-Adjusted Metrics

### Cash Flow Chart (Risk-Adjusted)




| Cash Flow Analysis (Risk-Adjusted) | | | | | | |
|---|---|---|---|---|---|---|
| | Initial | Year 1 | Year 2 | Year 3 | Total | Present Value |
| Total costs | ($22,334) | ($161,755) | ($161,755) | ($161,755) | ($507,600) | ($424,595) |
| Total benefits | $0 | $468,180 | $468,180 | $468,180 | $1,404,540 | $1,164,294 |
| Net benefits | ($22,334) | $306,425 | $306,425 | $306,425 | $896,940 | $739,699 |
| ROI | | | | | | 174% |
| Payback period (months) | | | | | | Less than 6 |

## Please Note

The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.

## TEI Framework And Methodology

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in Lightstorm.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that Lightstorm can have on an organization.

### Due Diligence

Interviewed Lightstorm stakeholders and Forrester analysts to gather data relative to Lightstorm.

### Interviews

Interviewed four decision-makers at organizations using Lightstorm to obtain data about costs, benefits, and risks.

### Composite Organization

Designed a composite organization based on characteristics of the interviewees' organizations.

### Financial Model Framework

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewees.

### Case Study

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

# Glossary

## Total Economic Impact Approach

### Benefits

Benefits represent the value the solution delivers to the business. The TEI methodology places equal weight on the measure of benefits and costs, allowing for a full examination of the solution's effect on the entire organization.

### Costs

Costs comprise all expenses necessary to deliver the proposed value, or benefits, of the solution. The methodology captures implementation and ongoing costs associated with the solution.

### Flexibility

Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. The ability to capture that benefit has a PV that can be estimated.

### Risks

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

## Financial Terminology

### Present value (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.

### Net present value (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made unless other projects have higher NPVs.

### Return on investment (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.

### Discount rate

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.

### Payback

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

# Appendixes

## APPENDIX A

## Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists solution providers in communicating their value proposition to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of business and technology initiatives to both senior management and other key stakeholders.

## APPENDIX B

## Supplemental Material

Related Forrester Research

The State Of IT Networks, 2024, Forrester Research, Inc., December 19, 2024.

## APPENDIX C

## Endnotes

[1] Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists solution providers in communicating their value proposition to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of business and technology initiatives to both senior management and other key stakeholders.

## Disclosures

Readers should be aware of the following:

This study is commissioned by Lightstorm and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in Lightstorm. For any interactive functionality, the intent is for the questions to solicit inputs specific to a prospect's business. Forrester believes that this analysis is representative of what companies may achieve with Lightstorm based on the inputs provided and any assumptions made. Forrester does not endorse Lightstorm or its offerings. Although great care has been taken to ensure the accuracy and completeness of this model, Lightstorm and Forrester Research are unable to accept any legal responsibility for any actions taken on the basis of the information contained herein. The interactive tool is provided 'AS IS,' and Forrester and Lightstorm make no warranties of any kind.

Lightstorm reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

Lightstorm provided the customer names for the interviews but did not participate in the interviews.

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