



# On the Radar: Sea Street Technologies aims to lead the charge to autonomous operations

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Stephanie Gibbons

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## Summary

### In brief

Communication service providers (CSPs) are transitioning to intelligent, automated networks; at the heart of this transformation will be automation and abstraction, two factors that make web-scale companies, e.g., Google and Amazon, formidable competitors to CSPs. Through automation, these web-scale companies can operate at scale, reliably, and at lower costs. Sea Street Technologies, a software company based in Boston, Massachusetts, seeks to level the playing field and bring these same capabilities to CSPs and enterprises.

### Overview

- Service assurance through automation is becoming a growing priority for CSPs as they progress further into their NFV (network functions virtualization) and SDN (software-defined networking) deployments.
- The deployment of SDN and NFV architectures will enable faster service creation, activation, and provisioning processes, but only if supported by capabilities that allow for intent-based automation, e.g., APIs, analytics, and artificial intelligence (AI).
- Sea Street Technologies has created a model-based approach in its abstraction layer that delivers intent-based, autonomous operations across all network domains and resources.
- One of the main promises of NFV/SDN is cost savings: Sea Street reports 30–80% opex reductions per service automated, with the benefits being realized as either bottom-line returns or increased personnel efficiency.

## Recommendations

### Why put Sea Street Technologies on your radar?

As CSPs continue (or begin) the necessary shift to software-based networks and launch enterprise-facing NFV services that differ in network resource requirements, they will look for outside help in running their networks and ensuring performance and service quality. With \$41m in funding, and deployments in tier-1 CSPs, Sea Street is well positioned to provide service assurance through autonomous operations. The company also notes that its StratOS platform was designed so customers can integrate it seamlessly with their existing systems and processes, allowing them to preserve key competitive differentiators as they transition to autonomous operations for network monitoring, service creation, and delivery. This message should resonate well with customers that are hesitant to re-architect hardware-centric networks and data centers due to costs, incumbent KPIs, and service delivery processes.

## Evaluation

### Background

Sea Street was founded in 2012, the fourth start-up for Harley L. Stowell. Mr. Stowell's prior company, Linesider Technologies, was sold to Cisco in 2010, and Mr. Stowell served as Cisco's CTO for

Service Provider Cloud. Looking at the CSP space, it became clear to Mr. Stowell that a platform solution would be required to meet the explosion in manual operations, IT service complexity, and opex that would be the inevitable byproduct of virtualization, hybrid operations, and shortening software cycles. The idea for Sea Street was born and much of the former Linesider team joined Stowell at the new company.

Approximately six years later, Sea Street has emerged with US\$41m in funding, production deployments in tier-1 CSPs, and a combined product/services approach designed to deliver on a leading industry goal – achieving zero-touch, autonomous operations for network monitoring, resources allocation, and enterprise-facing service creation and delivery.

Much as autonomous-driving software distributes responsibility to individual, goal-seeking software modules such as traction control, stability control, and auto-cruise, the Sea Street approach modularizes service operations, and abstracts resource types to address enterprise autonomous operations with a swarm of small, abstracted interoperable models. Sea Street offers a combined approach of services, product licensing, and software utility fees.

Sea Street has focused on the CSP market to date, but the company expects to expand into enterprise verticals later in 2018.

## Products and services

Sea Street has created StratOS, a platform for designing and operating enterprise-wide zero-touch automation for IT. StratOS takes a top-down approach to enterprise automation, encapsulating the business goals of the services, continuously measuring the KPIs required to understand performance, and driving the services and infrastructure to meet changing conditions.

The Sea Street platform then goes one step further in that its models put all services and all resources in context with each other and under the governance of designable policy. This enables the platform to make decisions that optimize business outcomes across all services, even in extremely dynamic situations, such as preserving the most critical services and functions during broad outages.

Sea Street also uses a model-based approach in its abstraction layer, a key component of the system that enables Sea Street to connect to any IT system or data source, and makes the semantic operating models implementation-independent and portable across resource suppliers. Essentially, this model-based approach allows customers to integrate with their existing systems and processes, and to preserve their key competitive differentiators, even as they move to autonomous operations.

Finally, Sea Street offers a design methodology, an SDK (software development kit) and a set of software tools to industrialize the creation of both the semantic operating models and the domain models in the abstraction layer. Sea Street customers receive these tools, plus training in top-down automation approaches, so that they can execute progressive automation in-house or through Sea Street services.

## Business model and commercial strategy

Sea Street Technologies typically engages on a "build-operate-transfer" basis, deploying a model-based systems engineering (MBSE) team into a customer to quantify the autonomous operations' return on investment (ROI) and to start the automation transformation process. While automating the initial service targets, the MBSE team begins transferring the knowledge required to perform the

analysis, execute the methodology, and create the models to the customer, so the customer can expand or take over the automation transformation work.

The company's commercial strategy is "land and expand." The StratOS platform provides for convergence of service operations and infrastructure resources under a common platform and approach. Sea Street believes that as the financial benefits and efficiencies are realized through initial deployments, further expansion within the customer is inevitable. Initial deployments have generated returns for Sea Street customers, and the company reports 30–80% opex reductions per service automated, with the benefits being realizable either as true bottom-line returns or increased personnel efficiency.

Overall, the Sea Street approach and methodology are transferrable to partner organizations, and the company expects to take on execution partners as it enters additional markets later this year.

## Appendix

### On the Radar

Ovum's "On the Radar" series highlights up-and-coming companies bringing potentially disruptive ideas, products, or business models to their markets. "On the Radar" companies bear watching for their potential impact on the market for the current or future services of telcos and their suppliers.

### Further reading

*Market Opportunity Analysis: NFV/SDN*, SPT002-000027 (January 2018)

"Pace of NFV/SDN adoption does not meet initial vision," SPT002-000034 (December 2017)

*2018 Trends to Watch: Network Services*, TE0005-001004 (October 2017)

"CSPs form strategic alliances with cloud providers to accelerate NFV," TE0006-001436 (September 2017)

### Author

Stephanie Gibbons, Principal Analyst, Intelligent Networks

[stephanie.gibbons@ovum.com](mailto:stephanie.gibbons@ovum.com)

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[ovum.informa.com](http://ovum.informa.com)

[askananalyst@ovum.com](mailto:askananalyst@ovum.com)

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