Investorstack Research Report

Sterlite Technologies Ltd

what stl does

stl makes the physical infrastructure that carries the internet. they start with silicon and end with fiber optic cables that connect data centers, telecom towers, and homes. the company controls the entire process from making glass preforms (the heart of fiber optics) to designing high-density cables for ai data centers.

the founding story shapes everything about stl today. the agarwal family built this company through three distinct phases. first, they became india's largest copper telecom cable maker. then they pivoted hard into optical fiber when the world went digital. most recently, they bet the company on ai infrastructure just as hyperscalers started building massive data centers.

stl's core value proposition is simple: they can make fiber optic cables that pack more capacity into less space while costing less to install. their celesta intermittent bonded ribbon cable fits 864 fibers into an 11.7mm diameter - making it the slimmest high-density cable in the world. this matters because data centers need to pack thousands of fiber connections into cramped spaces between server racks.

the technical nature of the product is brutal. making fiber optic cable requires melting silicon into ultra-pure glass, drawing it into hair-thin fibers, then bundling hundreds of these into cables that can handle temperatures from -40c to +70c. stl operates 10+ zero-waste manufacturing facilities worldwide because environmental regulations in developed markets demand it.

here's what stl actually does for customers: when microsoft needs to connect 100,000 servers in a new data center, they call stl. the company designs custom cables that carry data at 400 gigabits per second between servers, across buildings, and between data centers. each cable might contain 1,728 individual fibers, each fiber carrying 100gb of data using different wavelengths of light.

business segments

stl operates through two distinct divisions that serve completely different customer bases with different economics.

optical networking business (onb) - this is the core. it makes fiber optic cables, connectivity products, and specialty cables for telecom operators and data centers. the segment runs on massive scale economics - their plants can produce thousands of kilometers of cable monthly. customers sign 3-year supply contracts with fixed volumes and pricing. the segment contributed 95% of revenue in fy26.

stl digital - the smaller but faster-growing division providing cloud, cybersecurity, ai, and enterprise saas services. this business scales through headcount - they bill clients based on number of consultants deployed. contracts are typically 1-3 years with milestone-based payments. the segment moved from loss-making to ebitda positive in recent quarters.

why these exist as separate entities: the optical business requires massive capex in manufacturing plants and benefits from scale. the digital business is asset-light and scales through hiring. they serve different customer decision-makers - cto offices buy fiber cables while cio offices buy digital services.

how they fit together: management uses cash from the stable optical business to fund growth in digital services. the digital business provides customer relationships that can eventually buy more optical products for data center builds.

products and business detail

stl's product catalog reads like a telecom engineer's wish list. their stellar fiber works with legacy networks while providing ultra-low splice loss. the celesta intermittent bonded ribbon cables pack maximum density for hyperscale networks. multiverse multi-core fibers multiply capacity 4-7x within the same footprint - crucial for ai workloads that need 36x more fiber than traditional setups.

the manufacturing process is where stl separates from competitors. they control everything from silicon tetrachloride formation to chemical vapor deposition and high-precision sintering. this vertical integration means they can tweak formulations for specific customer requirements. when a european telecom needed cables that could handle -50c for arctic deployments, stl modified their glass composition within weeks.

the company operates manufacturing facilities in india, italy, china, and the us. the italian plant serves european customers needing quick delivery times. the us facility in north carolina handles "made in america" requirements for government contracts. the indian plants act as the global mother facilities where they develop new products before scaling to other locations.

geographically, stl's revenue mix shows their global ambition: europe contributes 42%, north america 33%, and rest of world 25%. this diversification protects them from regional downturns. when european telecom spending slowed in 2024, their north american data center business accelerated.

customers

stl's customer base splits into three distinct groups, each with different buying behaviors and switching costs.

tier-1 telecom operators like at&t, bt, and verizon sign 3-year framework agreements for fiber optic cables. these contracts specify volumes, delivery schedules, and technical specifications. switching costs are massive - a single qualification test can take 6-12 months and cost millions. once approved, these operators rarely change suppliers because network reliability depends on cable quality.

hyperscalers and data center operators including microsoft, amazon, and google buy through different channels. they need custom cable designs for their specific server configurations. the sales cycle is shorter but technical requirements are more stringent. these customers pay premium prices for cutting-edge products like hollow-core fiber that reduces latency by 30-47%.

government and citizen network programs like bharatnet in india or bead in the us represent the third major customer type. these are massive multi-year programs with complex bidding processes. stl won the jammu & kashmir package of bharatnet phase iii - a rs 2,600 crore project covering 10 years of deployment and maintenance.

contract structures vary dramatically. telecom customers prefer 3-year take-or-pay contracts with fixed pricing. data center customers buy project-by-project with shorter lead times. government contracts span 5-10 years with milestone payments linked to network rollout progress.

competitive landscape

the global fiber optic cable industry is dominated by chinese manufacturers who control 50% of global capacity. stl competes as one of the few non-chinese players with global scale, holding 7-8% market share outside china.

the competitive dynamics are brutal. chinese players like yangtze optical and fiberhome can produce at lower costs due to government subsidies and scale. however, they face tariffs when selling to western markets. stl's strategy is to compete on technology and proximity to customers rather than pure cost.

in north america, stl competes against corning (the technology leader), commscope (the market leader), and several regional players. corning pioneered low-loss fiber but stl can match their technical specifications while offering faster delivery times from their north carolina plant.

european competition comes from prysmian (italy), nexans (france), and several smaller regional players. stl's italian facility gives them local manufacturing advantages for european union contracts that require eu content.

the industry is consolidating as chinese demand slows. several smaller chinese manufacturers are exiting, which should stabilize global pricing. stl is well-positioned because their global manufacturing footprint insulates them from china-specific risks while their technology portfolio commands premium pricing.

industry

the fiber optic industry sits at the intersection of three massive investment cycles happening simultaneously for the first time in history.

fttx (fiber to the x) deployments are accelerating globally. over 100 million us homes still need fiber connections, driving 10% cagr through 2030. india's bharatnet phase iii will deploy rs 1.3 trillion worth of fiber to connect every village. european operators are building fiber to compete with 5g fixed wireless.

data centers represent the fastest-growing demand driver. global data center capacity will grow 3.5x by 2030, with ai workloads accounting for 70% of new capacity. ai data centers require 36x more fiber than traditional facilities because gpu-dense racks need massive interconnectivity. north american data center capex alone exceeds $600 billion by 2027.

5g network densification drives the third wave. global 5g subscriptions will reach 6.3 billion by 2030, requiring fiber backhaul to every cell site. tower fiberization will increase from 38% today to 63% by 2029. each 5g site needs fiber connections to handle the massive data volumes.

the supply-demand balance is tightening. after two years of inventory destocking, north american lead times are extending. cru research projects global fiber demand will grow 1.7% in 2025 after declining for two years. north america will lead with 12% cagr through 2030.

regulatory factors favor non-chinese suppliers. us tariffs on chinese products, european anti-dumping duties, and indian domestic preference policies all benefit stl. the company's global manufacturing footprint allows them to serve markets from local facilities, avoiding trade barriers.

growth triggers

- multi-year supply agreements with leading european telecom operators signed in q1 fy26 (q1 fy26 concall, july 2025)
- breakthrough into tier 1 north american telecom customers after a year's pause, with strong order inflows (q3 fy26 concall, january 2026)
- data center business contributing 21% of revenue in h1 fy26, on track to reach 30% target (q3 fy26 concall, january 2026)
- us facility ramping up production to serve "made in america" requirements and mitigate tariff impacts (q2 fy26 concall, november 2025)
- bharatnet phase iii projects starting execution, with stl supplying cables through various consortium partners (q3 fy26 concall, january 2026)

- launch of world's slimmest 864-fiber intermittent bonded ribbon cable for hyperscale data centers (q2 fy26 concall, november 2025)
- multiverse multi-core fiber receiving strong response at connected britain, with pilot deployments starting (q2 fy26 concall, november 2026)
- capacity utilization improving from 40-50% toward 70% target, which management says supports 20% ebitda margins (q4 fy25 concall, may 2025)
- bead program expected to start contributing from q4 fy26 or q1 fy27, representing $42 billion us government funding (q4 fy25 concall, may 2025)
- quantum-secure communications partnerships with government agencies opening new market segments (q3 fy26 concall, january 2026)

key risks

tariff escalation represents the most immediate threat. us tariffs on indian optical fiber products increased to 50% in late 2025, directly impacting 33% of stl's revenue. while the company is passing some costs to customers and ramping us manufacturing, margins compressed 300 basis points in q2 fy26. if tariffs persist or escalate further, profitability could deteriorate despite volume growth.

germanium supply concentration creates a single point of failure. china controls 80% of global germanium production, essential for making optical fiber preforms. stl acknowledged this risk in multiple concalls, noting they're pursuing alternative sources and using their chinese facility when needed. a chinese export ban on germanium could halt production at non-chinese facilities.

customer concentration risk is growing as the company becomes more dependent on north american hyperscalers. while these customers provide premium pricing, they have significant negotiating power and can shift sourcing strategies quickly. microsoft's experiments with hollow-core fiber could bypass traditional cable suppliers entirely.

technology substitution threatens the core business. hollow-core fiber, quantum communications, and wireless alternatives could reduce demand for traditional fiber optic cables. stl is investing in next-generation technologies but commercialization timelines remain uncertain.

currency volatility affects competitiveness. with 80% of revenue from exports, stl is exposed to rupee appreciation against the dollar and euro. while they hedge major exposures, sustained currency moves could erode the cost advantage of indian manufacturing.

walk the talk

management's track record shows a pattern of setting ambitious targets and delivering on operational metrics while being optimistic on timing.

they promised to reach 20% ebitda margins when utilization hits 70% - this has been repeated across multiple concalls since fy25. while operational ebitda improved from 11.2% in q2 fy25 to 17.9% in q3 fy26, reported margins remain at 10.3% due to tariff impacts. the underlying operational improvement validates their operating leverage thesis.

the 30% revenue target from data center and enterprise business has been consistently guided since fy25. they achieved 21% in h1 fy26, showing steady progress toward this goal. management has not revised this target despite market volatility, showing conviction in the strategy.

tariff mitigation timelines have proven optimistic. management initially expected quick resolution of us-india trade discussions in q2 fy26, but tariffs actually increased to 50%. they guided for partial relief within the current quarter, but negotiations continue. however, their actions - ramping us manufacturing and passing costs to customers - demonstrate credible mitigation efforts.

the market share recovery timeline has been extended. originally targeting to regain lost share within 12-18 months, management now acknowledges this will take 3-5 years to reach top-3 global position. this reflects realism about competitive dynamics rather than overpromising.

debt reduction commitments have been met. management promised to bring net debt to ebitda below 2x by fy26 end, improving from 2.58x in q3 fy26. they've consistently reduced debt through cash generation, showing discipline in capital allocation.

scenarios

bull case: us-india bilateral trade agreement reduces tariffs to 10-15% by q4 fy26, restoring indian manufacturing cost advantage. data center demand accelerates beyond current 28% cagr as ai adoption explodes. stl's multi-core fiber and hollow-core products achieve commercial scale with hyperscalers paying premium pricing. utilization reaches 75% driving ebitda margins to 22-23%. the company gains market share from chinese competitors limited by trade barriers. data center revenue hits 35% of total by fy27. order book grows to rs 7,000+ crores providing visibility through fy28.

base case: tariffs remain at current levels but stl successfully passes 60% of costs to customers through contract renewals. us facility reaches 60% utilization, supplying 40% of north american demand. data center business grows steadily to 28% of revenue by fy27. operational improvements drive ebitda margins to 16-18% despite tariff headwinds. bharatnet phase iii and bead program provide steady domestic and export demand. the company maintains 7-8% global market share outside china while improving profitability through product mix enhancement.

bear case: us-china trade tensions escalate, bringing additional countries into the tariff net. chinese manufacturers dump excess capacity in europe and india, crushing global pricing. germanium supply disruptions force production cuts at non-chinese facilities. hyperscalers develop alternative technologies reducing fiber intensity per data center. utilization stalls at 55% keeping ebitda margins below 12%. debt reduction slows due to weak cash generation. the company is forced to delay capacity expansion and r&d investments, losing technology leadership to better-funded competitors. revenue growth remains below 5% for fy26-27.