

Strategy, business model, and innovation at Rivigo: Is Relay-as-a-Service the way forward?

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Abstract

This case documents the journey of Rivigo from being a humble logistics vendor to a unicorn in a short span of 5 years. The case provides information on the evolving landscape – regulatory, economic, substitutes, suppliers, and customers – of the Indian logistics industry including intensely competitive tech-based start-ups bent on disrupting the traditional industry normal. The case then notes Rivigo's reliance on driver and customer-friendly technology-driven processes and solutions, and product diversification choices as key to its competitive success. The case ends with questions about strategic choices that can help Rivigo keep up its growth trajectory.

Keywords

Digital platforms and ecosystems, entrepreneurship, innovation, teaching cases, business value and e-business, digitalization

Introduction

When he went on a road trip across Rajasthan, India, in 2014, little did Deepak Garg, an alumnus of the Indian Institute of Management Lucknow (MBA-2006), know that the journey would end with a billion-dollar start-up idea (Shrivastava, 2016). Having spent almost a decade at McKinsey and worked in the logistics space, Deepak noted that although the Indian economy was growing at an unbeatable pace, trucks' demand was not growing fast (see Exhibit 1; Shrivastava, 2016; YourStory Media Pvt. Ltd., 2019b). During his stint at McKinsey, a joint study conducted by McKinsey and the National Skill Development Corporation (NSDC) identified logistics as one of the sectors most in need of skilled jobs (YourStory Media Pvt. Ltd., 2019b). During his travels, Deepak interacted with several truck drivers to learn the Indian logistics sector's ground realities. He visited transportation hubs, met up with drivers, and even joined the drivers on long-haul trips to understand their working conditions (YourStory Media Pvt. Ltd., 2019b).

In August 2014, to make a difference in truck drivers' lives, Deepak conceived TrucksFirst, later renamed Rivigo. Starting as a logistics vendor to Gati, one of the

oldest courier services, Rivigo served more than 3000 customers across 20 sectors by 2019 (YourStory Media Pvt. Ltd., 2019b). From three routes in 2014, Rivigo scaled its operations to over 55 routes for its full truckload (FTL) service and over 29,000 pin codes for part truck load (PTL) service by 2019 (Khan, 2019a). Rivigo's revenue increased from INR 149 crore in 2016 to INR 1028 crore in 2019 (see Exhibit 2) owing to its diversified product portfolio (Bennett & Coleman Co. Ltd., 2017c). The headcount at Rivigo rose from 200 in 2016 to over 4000 in 2019 (see Exhibit 3); Rivigo Services Pvt. Ltd., n.d.-b). On 26 September 2019, after raising \$4.97million in a Series E round of funding from the KB Global platform fund, it acquired unicorn status with a \$1.05billion valuation (see Exhibits 4 and 5). With such a strong growth trajectory, Rivigo aimed to be EBITDA positive by FY 2020. The time had come for Rivigo's founding team to

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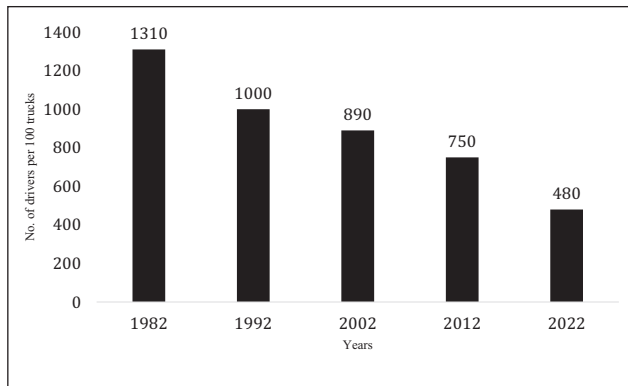


Exhibit 1. Changing scenario of supply of drivers in Indian logistics industry.

Source: Rivigo Services Pvt. Ltd (n.d.-f).

consider scaling-up strategies. The senior management contemplated three possible options to scale up. One way was to stick to the current business model and expand by adding to the fleet size. The other option was to follow the aggregator model adopted by its successful competitor like Blackbuck. Another choice on the table was to leverage the benefits of the relay trucking model and Rivigo's country-wide network by launching Relay-as-a-Service (RaaS) to individual fleet owners.

Rivigo: company profile

Background

While contemplating the idea of trucking services, Deepak met Gazal Kalra in 2014. Gazal had just returned from the United States after completing a master's in Public Policy from Harvard Kennedy School and an MBA from Stanford Graduate School of Business. Gazal came in touch with Deepak through her husband, who happened to be his colleague at McKinsey. To better understand the on-ground situation and meet the most critical stakeholder, the drivers, she also decided to hit the road (YourStory Media Pvt. Ltd., 2019b). Reflecting on one such trip, she commented,

At a village in Rajasthan, some three–four unemployed men were sitting around playing cards. I asked them: 'Why don't you consider the option of becoming a truck driver?' They took great offense to the question. One guy said no one would marry him if he took that option, while another said he had studied till Class 8, not for such a job.

– Gazal Kalra, Co-Founder Rivigo (YourStory Media Pvt. Ltd., 2019b)

Deepak faced several rejections from investors during the initial phase of setting up of Rivigo. He raised seed funding in 2014 while traveling on a flight to Singapore with the then chairman of Singapore Post (Bennett & Coleman Co. Ltd.,

Exhibit 2. Rivigo income statement (in million US dollars).

Particulars	FY 2018–2019	FY 2017–2018
Revenue	143.54	100.45
Expenses	227.57	138.17
Other expenses	163.98	101.05
Profit/(Loss) before tax	(84.05)	(37.71)

Source: Rivigo Services Pvt. Ltd. (n.d.-d).

2017c). Starting with two trucks in 2014, Rivigo had over 5000 trucks in 2019. Amazon India was one of its earliest customers (Business Standard Pvt. Ltd., 2018). For the next 2 years, after successfully winning contracts with significant players like Abbott, Hero MotorCorp, and ITC in the FTL (Prime) business, it forayed into Cold-chain (Green) business and then into the PTL (Zoom) business in mid-2016.

In the initial 5 years, Rivigo moved with great pace toward its ultimate mission of making logistics humane and leveraging data, technology, and human resources efficiently. Rivigo has a very experienced senior top management team from premier engineering and management institutes in India and abroad. Rivigo's senior executive team included Gaurav Punia, Kapish Saraf, and Vinay Dhanani. Gaurav and Kapish worked for over half a decade in McKinsey and Boston Consulting Group, respectively, before being inducted into Rivigo's board. Vinay, an IIT Delhi alumnus, spent more than 7 years in the operations domain with ITC before joining Rivigo in September 2015 and headed its network operations. Rivigo roped-in Qasim Zaidi as its technology head in September 2018. Qasim was leading Indonesian e-commerce unicorn Tokopedia as the Chief Technology Officer and had worked for around 3 years in digital payment platform, Paytm, as VP of Engineering.

Despite Rivigo hitting some significant milestones in a short period, the journey was not all smooth. For instance, on 8 November 2016, when the Indian Government decided to scrap higher denomination currency bills overnight, logistics companies experienced a 20% decline in volumes from e-commerce clients as they stopped accepting cash-on-delivery payments (Bennett & Coleman Co. Ltd., 2016a). On the contrary, the Government's decision to implement Goods and Services Tax (GST) in the following year rekindled hope among firms like Rivigo, as they benefited from the smoother transitions across the borders.

Technology – backbone of Rivigo's operations

At the heart of Rivigo's operations and a potential source of competitive advantage is the use of technology in India's one of the most fragmented industries. With trucks connected to the Internet (tracked by clients via apps) and sensors providing data to coders who crunch these data to

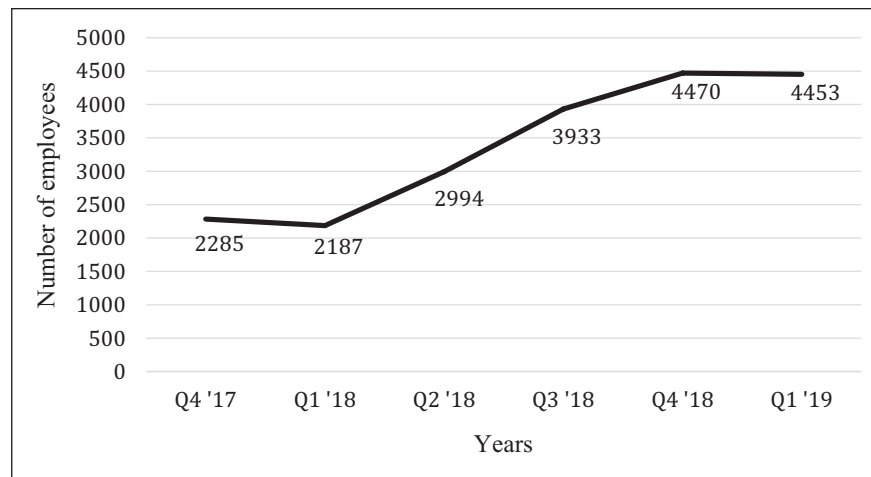


Exhibit 3. Rivigo employee count over time.

Source: Tracxn database: <https://tracxn.com/>

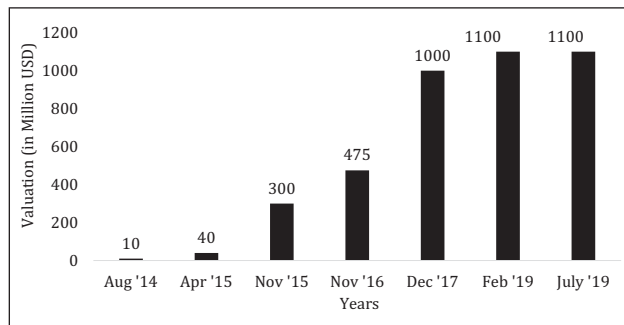


Exhibit 4. Rivigo's valuation with time (in million US dollar).

Source: Tracxn database: <https://tracxn.com/>.

map out the optimized routes and optimize drivers' allocation to pit stops, Rivigo is revolutionizing the trucking business. The sales and operations planning teams use this technology by tracking trucks' movement to estimate trucks' supply at different locations. This information is then shared with the sales team to hunt for customers at those locations to ensure the demand–supply balance of lorries (Khan, 2019b).

The United States Patent and Trademark Office granted a patent to Rivigo for its driver-relay model in 2019. The relay model employs algorithms to ensure optimum drivers' allocation to pit stops accommodating constraints such as driving hours and drivers' rest schedules (Bennett & Coleman Co. Ltd., 2019). This patent serves as a testament to Rivigo's continued commitment to its mission of making logistics more humane. Rivigo engineers work on large amounts of data captured from over 5000 trucks to develop complex models to improve service quality and time for its clients. Rivigo technology team also works on automatic pricing, similar to dynamic pricing, on different routes to react faster for contingencies like protests and strikes,

unrests, and the demand–supply gap. Highlighting the role technology played in its strategy, Deepak noted,

Rivigo's prices are on the higher side, but that's partly because of the investment in technology that the business is making, such as a live tracking app for clients and the ability to remotely control temperatures in refrigerated lorries. We've given an option of a modal shift from air to road, as costs are substantially less than air freight. In a lot of segments, we have given an option, from rail to road. In rail, there's a lot of pilferage and less control.

– Deepak Garg, CEO, Rivigo (HT Media Limited, 2016)

Key partners, suppliers, and customers

Initially, most of Rivigo's trucks were leased from Ashok Leyland, which also had the maintenance contract. In 2018, Rivigo ordered 3000 trucks worth INR 6000 crores from Tata Motors (e-Eighteen.com Ltd., 2018). Rivigo partnered with JK Tyres to introduce a patented tyre pressure monitoring system for commercial vehicles in India. This technology transmits live data on the condition of tyres. These data help predict tyre malfunction (puncture or burst probability) and tyre life by drawing a correlation between tyre pressure and temperature (Business Standard Pvt. Ltd., 2019). Since fuel comprises over 40% of the trucking industry cost, Rivigo partnered with petrol pumps across India and provided drivers with fuel cards to avoid cash dealings.

Rivigo started its journey with servicing e-commerce companies for whom the turnaround-time is of paramount importance, but later on expanded its client portfolio to other industries with the launch of Rivigo Green and part-truck-load service. As of 2020, Rivigo serves companies from various sectors, including e-commerce, fast-moving consumer goods (FMCG), pharmaceuticals, fresh

Exhibit 5. Funding rounds of Rivigo.

Funding date	Funding amount (approximately)	Funding round	Investors
September 2019	\$5 million	Series E	KB Financial Group
July 2019	\$65 million	Series E	Warburg Pincus, SAIF Partners
January 2018	\$50 million	Series D	SAIF Partners, Warburg Pincus
March 2017	\$15 million	Conventional debt	Kotak Mahindra Bank, HDFC Bank, YES BANK and one more
November 2016	\$75 million	Series C	Warburg Pincus
December 2015	\$30 million	Series B	SAIF Partners, Trifecta Capital
December 2015	\$2.25 million	Venture debt	Trifecta Capital

Source: https://www.crunchbase.com/organization/rivigo-2/company_financials.

perishables, automobiles, chemicals, food and beverages, and apparel. Some of its prominent customers include Britannia, ITC, Flipkart, and Amazon.

Roadblocks

Although technology led to the fast-paced growth of the Indian technology-based logistics startups, the path was not smooth. With the announcement of demonetization on 8 November 2016, the entire fleet came to a grinding halt at the tolls due to an acute shortage of cash, leading to congestion and the breach of service level agreement. Rivigo dealt with this by installing FASTags¹ on its lorries. This resulted in improving the trucks' turnaround time as it allowed swifter movement through lanes with FASTag service without waiting at toll gates. Apart from increasing the operational efficiency, it also helped monitor whether drivers are going through the planned routes or taking detours to skip the tolls. Within 2 months of demonetization, Rivigo had installed FASTags on 90% of its fleet. The Government of India later mandated FASTags on all private and commercial vehicles from 15 January 2020 (Bennett & Coleman Co. Ltd., 2020). Vinay shared some of the benefits of the FASTags:

The biggest headache was handling cash at toll plazas, and there was always the issue of change which was hard to get. So that got sorted completely. Secondly, a lot of time was spent in withdrawing the cash and running around the ATMs and then distributing it to the drivers. Now it is done centrally as one person can recharge all the tags within minutes and it saves a lot of manual effort.

– Vinay Dhanani, Head of network operations at Rivigo (HT Media Limited, 2017b).

Not every challenge, however, ended on a high. In early 2019, after successfully raising funds in the series E round, Rivigo was under pressure from investors to reduce its operational costs and shift from its current asset-owning strategy to an asset-light model and enhance its unit economics. The logistics unicorn had laid off around 70–100 employees in

the first half of 2019, mainly in the freight marketplace team, and rolled back over 50 offers from newly recruited engineering and B-school students (Shrivastava, 2019).

Evolution of the logistics industry in India

As per the 2017–2018 Economic Survey, India's logistics market grew at a 10.5% CAGR and was estimated to be a \$215b market by 2020 (NITI Aayog, 2018). In 2018, India's logistics expenditure as a percentage of its GDP was around 13.5% compared to about 8%–10% for the developed countries (NITI Aayog, 2018). The employment-intensive Indian logistics sector faced many issues, such as a lack of adequate infrastructure and technology, resulting in longer transit time and higher inventory holding costs. India's logistics industry was conventionally run by several small transporters and fleet owners, leading to inefficiencies in the operations and supply chain. For India, a truck's average distance traversed is around 225–400 km/day (post-GST) compared to 500 km/day for the BRICS (Brazil, Russia, India, China, and South Africa) nation and 700–800 km/day for the United States & Europe (Ernst & Young LLP, 2013). The absence of efficient cold chain infrastructure leads to a loss of about 40% of agri-product in the supply chain, which is almost 15–20 times higher than that of the Organisation for Economic Co-operation and Development (OECD) countries (Coldstar Logistics Pvt. Ltd., 2016). There is a vast potential in the cold chain business as India transports very little of its perishable goods like fruits and vegetables compared to 80%–85% in the United States (NITI Aayog, 2018).

The Government of India undertook several initiatives – implementation of GST, relaxation of foreign direct investment (FDI) norms, economic measures like demonetization, policy initiatives like Make in India, and a focus on digitizing the logistics supply chain – which affected India's logistics landscape. The passage of the GST Bill by the Indian Parliament in June 2017 had a twofold implication for the trucking industry. On one hand, it simplified the tax system, resulting in reduced wait times at various state borders

check-posts. At these border checkpoints, the trucks used to wait for about 10–15 h. Saving on wait time resulted in an additional 100–150 km distance covered in a day (Bennett & Coleman Co. Ltd., 2017b). On the other hand, its full pan-India implementation would result in the consolidation of warehouses across the nation. Around \$200b worth of inventory was estimated to be locked in the warehouses scattered across Indian states due to the supply chains designed with tax-saving objectives instead of supply-chain optimization (Bennett & Coleman Co. Ltd., 2016b). The Government also took steps like forming a national committee to suggest measures to reduce the logistics cost from 14% to 10% by 2022 (YourStory Media Pvt. Ltd., 2019a). Initiatives like ‘Smart Cities Mission’ were also expected to help reduce the transportation and storage bottlenecks in the infrastructure sector. Supportive regulatory changes and the latest technology trends like Internet of Things (IoT), blockchain, big-data analytics, robotics, and automation in the logistics industry painted a positive picture for future growth potential. However, the price sensitivity of the Indian market, liquidity risk, and global market conditions increased the challenges for the sector. Increased competition from large foreign players like DHL and Amazon Transportation services also caused trouble for startups like Rivigo.

The Indian Government implemented the stricter emission norms Bharat Stage VI from 1 April 2020. Bharat Stage VI was equivalent of Euro-VI standards enforced across European countries and was the most advanced emission norm for automobiles. Also, the Indian Government mandated safety norms including rear parking sensors, driver side airbag, a manual override switch for central locking systems, seat belt reminder, anti-lock braking system, and speed limit reminder to be implemented from October 2019 (Overdrive, 2018). These norms jacked up the prices of commercial vehicles increasing the costs of operating in the logistics industry.

Another major challenge faced by the industry is that of a driver shortage. Across most Indian villages, truck drivers lead a life of ill-health and social disrespect. Generally, a truck driver on long haul routes spent approximately 25 days per month on roads. Truck drivers often had a lonely life, irregular meals, and even lack of sleep. Many drivers were affected by HIV and indulged in substance abuse. An average truck driver usually drove for 14–16 h a day, which also put him at high risk of accidents due to stress and fatigue. As per 2013 statistics, an average of 24,000 people lost their lives due to drowsiness (Rivigo Services Pvt. Ltd., n.d.-g). For comparison, in Europe, the European Union (EU) had set out detailed drivers’ hours rules and sector-specific working time rules. The EU rules stated a maximum driving duration of 9 h per day (can be extended to 10 h twice a week, 56 h driving in a week, or a maximum of 90 h fortnightly driving limit. These challenges in the Indian context made truck driving a less desirable career choice (Department of Transport UK, 2014).

Competition

The entry of technology-enabled startups, introducing disrupting solutions, was dislodging the normal in the Indian logistic space. Established in 2011, Delhivery was the first startup in this space with a pan-India presence of over 2500 delivery centres by 2019. Rivigo and Blackbuck were also among the early entrants, but both companies started with entirely different business models. While Rivigo chose the asset-heavy model of owning trucks to create reliability among customers, Blackbuck took advantage of fleet owners’ unorganized industry by providing a platform for them to improve income.

Delhivery

Sahil Barua, Mohit Tandon, Bhavesh Manglani, Suraj Saharan, and Kapil Bharati founded Delhivery in 2011. Delhivery provided four – Express, Fulfilment, Freight, and Cross-border – services. Delhivery’s Express service involved the largest fully integrated parcel transportation network with pickup and delivery operations that reach 11 households every second across India. Fulfillment service relied on 75 fulfilment centres with six million square feet of storage and processing space. Delhivery Freight provides less-than-truckload and full-truckload services to meet freight requirements. Delhivery cross-border through Starfleet, a global alliance of leading logistics companies, offers multiple transport solutions for sea and air transport, express fulfillment, consolidation centres, and free trade warehousing infrastructures (Delhivery Pvt. Ltd., n.d.-b).

Delhivery served its clients – individuals, e-commerce companies, small and medium enterprises (SMEs), and large enterprises – via online and offline (traditional) channels. It boasted of robust information technology support, including inventory and order management, fulfillment and logistics services, payment handling, and supply chain management for e-commerce clients. Some of Delhivery’s key resources included 24 automated sort centres, 75 fulfilment centres, 70 hubs, 2500+ direct delivery centres, 8000+ partner centres, 14,000+ vehicles, and 40,000+ team members, and 6 million square feet of established infrastructure across 18,000+ pin codes and 2500+ cities (Delhivery Pvt. Ltd., n.d.-a).

Delhivery aimed to be the operating system for Commerce in India through world-class infrastructure, logistics operations of the highest quality and cutting-edge technology capabilities. Simultaneously, Delhivery maintained on-demand delivery, returns management, product replacement/exchange services, real-time monitoring and control, fraud detection, and flexible payment on delivery. Its revenue model was based on service provided (per consignment basis for transport, per unit stock for warehousing, and fixed charge or percentage of revenues for IT services; Chaudhary, 2015). Its major cost drivers included fixed costs for infrastructure man-

agement, monitoring, customer support, staff costs, and vehicle running expenses.

Blackbuck

Rajesh Yabaji, Chanakya Hridaya, and Rama Subramaniam founded Blackbuck in April 2015. Blackbuck offered path-breaking solutions ranging from matching a shipper with a trucker or improving the infrastructure around logistics to facilitating payments and financial services. Blackbuck received its first break with PepsiCo as its first client in Hyderabad for an intra-city project (YourStory Media Pvt. Ltd., 2016a). Blackbuck had partnerships with suppliers, SMEs, fleet owners, application developers (Zoho and dot-2Globe – asset management app), Dhaba (small road-side eateries) network (HT Media Limited, 2017a) to facilitate the drivers, and MSG91 (YourStory Media Pvt. Ltd., 2016b; real-time SMS communication). For policy interventions, it had partnered up with the World Bank and the Indian Government (Blackbuck, n.d.-b).

Its primary activities included connecting truckers and shippers, managing freight, tracking last-mile solutions, and facilitating payments, insurance, and financial services. It boasted of 15,000+ clients, 400,000+ trucks, 1500+ employees, presence across 2000+ locations (Blackbuck, n.d.-a), and four separate apps for supply partners, SME shippers, fleet owners, and truck drivers (Supply, Find Trucks, BOSS, and Inam apps; Khan, 2018).

By organizing, digitizing, and simplifying trucking, Blackbuck aimed to make transportation a reliable, efficient, and seamless experience for shippers and truckers. It meant easy capacity utilization for truckers, while for shippers, access to the right truck at the right time for the right price. It provided its customers exceptional pan India service, unique tracking solutions, hassle-free end-to-end freight management, fast payment settlements, and quick issue resolution. Its important customers included shippers, truckers, and clients like Amul, Asian Paints, Britannia, Coca Cola, Hindalco, Marico RIL, Saint Gobain, Tata Steel, Unilever, Ultratech, and so on. Blackbuck's major expenditure includes technology cost (Data Science, Machine Learning, and AI), advertising expenses, salaries and wages, freight cost, and loading and unloading costs.

Rivigo: road travelled

Rivigo, with its patented relay model, offered its customers reduced delivery time (comparable to air freight) and inventory costs, thus promising a leaner supply chain that was also reliable and responsive. Rivigo's fuel efficiency maximizer algorithm and fuel visualizer helped it achieve zero pilferage in its entire network. Rivigo had a pan-India presence. Over time, it expanded its product portfolio as described in the following paragraphs.

Rivigo's product portfolio

Rivigo Prime – FTL service. Rivigo started its operation with relay FTL² service in 2014 on a global-first and unique driver relay model leading for delivery in an unprecedentedly short time. With its fleet of 5000+ trucks and a network of drivers and pit stops, Rivigo ensured that truck moved non-stop with a change of driver at each pit stop. By 2020, Rivigo had an extensive network of 70+ pit stops across the country's length and breadth, ensuring that the transit time is 50%–70% less than the conventional transporters. To ensure that trucks move non-stop, the Rivigo team kept complete control over a truck's whole journey (Rivigo Services Pvt. Ltd., n.d.-e).

Rivigo's fleet ownership and a presence of pit stops across India ensured more than 95% placement assurance of trucks (Rivigo Services Pvt. Ltd., n.d.-h). All the trucks owned by Rivigo were GPS-enabled and containerized and had advanced locking mechanisms leading to safe and secure transit (Garg, 2016). Rivigo provided clients with a dashboard and an option of full app integration with clients' systems for tracking vehicles (Bennett & Coleman Co. Ltd., 2017a). These initiatives helped Rivigo gain its clients' confidence and trust.

Rivigo also has an app for pilots, as truck drivers are referred to at Rivigo. This image-based pilot app supported regional languages and tracked all aspects of the drivers' duties (Rivigo Services Pvt. Ltd., n.d.-h). The pilot, on getting the duty alert on his phone, reached the pit stop and scanned his unique quick response (QR) code to show he has arrived. The incoming pilot received information on his app about the pilot to whom he needs to hand the truck over. After a technology handshake, the pilot taking over the lorry received a checklist that he needed to verify through the app (Rivigo Services Pvt. Ltd., n.d.-h).

Rivigo Zoom – PTL service. Rivigo started offering PTL services³ to clients in early 2016. To expand its client base for Zoom, Rivigo set up a feeder network using smaller trucks through the business partners network and over 250 processing centres and branches spanning an area of 100 million square feet. Rivigo has a dedicated team of service account managers who stay in contact with customers for any issues, queries, or business requests. The clients consistently evaluated these managers with a customer satisfaction score (CSAT) of over 97%. Rivigo also provided a single-window client portal with end-to-end tracking of pickup, delivery, and invoicing of consignments (Rivigo Services Pvt. Ltd., n.d.-c). Rivigo also ensured smooth enterprise resource planning (ERP) integrations across clients' systems to reduce manual interference resulting in saving time (Rivigo Services Pvt. Ltd., n.d.-a). Having set up the nationwide infrastructure and right processes to handle consignments through its journey, Rivigo ensured error-free operations to minimizing damages, shortages,

thefts, or any misrouting to less than 100 ppm (parts per million) as compared to an average of 1000 ppm for the industry (Garg, 2016).

Freight marketplace. After scaling up operations of Rivigo Prime and launching Rivigo Zoom, Rivigo started building a digital trucking marketplace, Rivigo Vyom in 2017, which it renamed Rivigo Freight. Through its platform, Rivigo removed the inefficiencies caused by intermediaries. Customers could post or add trucking requirements and get trucks. The main attraction for the clients was the ease of use and best market rates. Rivigo Freight empowered shippers and fleet operators to optimize their fleet and achieve higher productivity by reducing search and transaction costs. Rivigo Freight aimed to develop an ecosystem by improving fleet owners' and shippers' digitalization and making the transactions fully digital and transparent. Within 2 years, Rivigo succeeded in on-boarding over one lakh suppliers with more than 10 lakh trucks on its platform (YouTube, 2018). Customers could select different truck types – open, closed, or trailer – and truck variants from 1 ton to 35 tons by selecting origin and destination. The platform provided the best price for any route in less than 30 s and ensured 100% placement assurance (Rivigo Services Pvt. Ltd., n.d.-h). Rivigo also launched the National Freight Index in 2019 to get live spot rates of different types of trucks on separate lanes across the country using complex dynamic algorithms and demand-supply velocity to predict rates.

Management practices

Rivigo had a robust technology infrastructure in place to expand its business. As compared to the old-school logistics players who preferred technology outsourcing, Rivigo relied mainly on internal research and development. Over the years, Rivigo developed multiple solutions. One of its earliest in-house technologies was map technology. It tracked trucks' movement accurately and used sensors to control the temperature remotely. It developed multilingual chatbots in multiple languages for solving driver queries as well as for communication among them. It designed and developed fuel sensors for fuel tanks, which sent real-time data to track fuel detail (Rivigo Services Pvt. Ltd., n.d.-b). This helped contain fuel cost and pilferage.

Rivigo set a very high standard for hiring, and all applicants were rated on leadership principles such as Ownership, Technology Obsession, Data-Driven, Boundless energy, Think big, and Frugality (Garg, 2016). Rivigo promoted high-performing employees through awards and recognitions. In terms of the senior executives, Rivigo had the right mix of people from consulting firms and operational domains to scale up Rivigo. The middle managers mostly consisted of young engineers and management graduates from Tier-I Indian colleges. Rivigo started Rivigo Hero's Journey (RHJ) in 2016, a 2-year life-changing experience where its

employees were exposed to unique challenges to unleash their maximum potential. According to Deepak, this program was designed to develop heroes who would solve never-solved-before problems and help build our country (Garg, 2016).

Whitherto?

With a huge potential still untapped in India's logistics industry, Rivigo's founding team contemplated ways in which Rivigo could scale up. Could they ride on India's growing economy and take advantage of government initiatives and increase its clientele? What strategy should they follow? Should they expand across the logistics industry's value chain into warehousing and inventory management, or should they stay focused on the trucking segment and explore different models. Rivigo was at a crucial juncture where one of the options was to focus on the aggregator model, like its closest competitor, Blackbuck, and the other was to go ahead with first-of-its-kind 'Relay-as-a-Service' (BW Online Bureau, 2019). RaaS involved offering a combination of the relay trucking model, technology, and drivers to fleet owners. In the relay trucking model, a driver X takes a truck from his home pit stop to the next pit stop a few 100 km away and hands over the truck to another driver, Y. The driver X, after a mandatory rest, then drives another truck back to his home base. On one hand, RaaS allowed for higher asset utilization; on the other, it significantly improved cargo safety and pilots' working conditions. Some early clients of RaaS claimed to have around 25% extra running per month per truck (BW Online Bureau, 2019).

With RaaS, we aim to offer the benefits of relay trucking to millions of fleet owners in India and bring in efficiencies in the logistics industry while directly addressing one of the biggest challenges of chronic truck driver shortage. In addition to the relay network, technology, and pilots, we will be making our fuel, maintenance, cashless payment solutions also available to fleet owners in the country through RaaS. Rivigo's mission is to make logistics in India humane, more efficient, and offer better service. Offering Relay-as-a-Service to fleet owners in the country is a significant step in that direction.

– Gazal Kalra, co-founder, Rivigo. (BW Online Bureau, 2019)

Does RaaS hold the ultimate key to beat the competition and help Rivigo emerge as the numero-uno player in the logistics sector, or would it turn out to be a costly mistake?

Assignment/case discussion questions

Q1. Analyse the macro-environmental factors affecting the logistics industry in India.

Q2. How structurally attractive is this industry for a new entrant?

Q3. Elucidate the business model for Rivigo. What business model choices Rivigo has made? What are the consequences?

Q4. Analyse the process – identify the top management factors, managerial levers, and activities – underlying Rivigo's innovativeness.

Q5. Is Rivigo leading a disruptive innovation?

Q6. What should Rivigo do?

Authors' note

This case was prepared by Professor Krishna Chandra Balodi, Rahul Jain, and Rituparna Das from published sources. This case is developed solely for the purpose of class-discussion. It is not intended to serve as source of information on the company or any endorsement of (in)effective handling of situation(s).

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Target audience

This case is aimed at B-School post-graduate and executive education participants.

Target courses

This case is best suited for courses focused on Technology, Innovation, and Strategy.

Target teaching modules/concepts

Following modules/concepts can be taught using this case: Macro and Industry environment analysis; Innovation process and Disruptive innovation; Business Model Innovation; and Platform-Mediated Business Networks (winner take all, challenges and strategies of multi-sided platforms).

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5. All errors are the responsibility of the authors. Upon being notified, the authors will undertake all reasonable efforts to rectify the errors.

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Notes

1. FASTags are RFID (radio frequency identification) tags that facilitate automatic online payments at toll plazas, which are fixed on the vehicle screens and are linked to a prepaid bank account from which the toll amount is deducted.
2. Full truckload (FLT) – Full truckload refers to the freight mode for shipments that take up a truck's entire capacity.
3. Part truckload (PTL) – Partial truckload is a freight mode for large shipments that may not require the use of a full truck load trailer.

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