

Case Study: Nepra Resource Management Pvt. Ltd.

Nepra's Story

India generates over 65 million metric tons (MT) of waste per annum, and this is expected to increase to 137 million MT by 2025, according to the World Bank. Recognizing the increasing magnitude of waste generation in India, venture capital investor Aavishkaar began an active search for a viable and sustainable solution. Through extensive research, the team discovered that most incumbent waste management businesses had a “lifting and shifting” model—in other words, transporting waste to a landfill site—in exchange for a tipping fee paid by the local municipality. Aavishkaar came to the conclusion that these existing models were not fundamentally addressing the underlying issue of waste management; and further believed that the landfills were creating a potential health and environmental hazard.

In August 2012, Aavishkaar was approached by the Nepra Resource Management team. The company diverted waste away from landfills by focusing on dry waste (recyclables such as plastics, glass and paper, which account for nearly 25% of the total waste generated), while engaging waste pickers, recyclers and waste generators, such as corporations and institutions, as key stakeholders in the supply chain. Ensuring it had the potential to scale sustainably,



Nepra's revenues were not dependent on municipal corporation contracts and tipping fees. Aavishkaar was attracted to the Nepra promoters' passion and deep sector expertise, as well as the fact that the company's business model didn't simply move the problem out of public sight.

In February 2013, Aavishkaar invested US\$500,000 in Nepra to help it streamline and expand operations, while making a more significant impact. Aavishkaar would continue to financially support the business, investing a total of US\$9.7 million over the following five years, including an investment in June 2018 alongside another investor. Since the time it began a partnership with Aavishkaar, Nepra has procured and recycled over 27,000 MT of waste, and currently collects, sorts and segregates over 50 MT of dry waste per day.

The Role Played by Private Capital

Aavishkaar entered the partnership with Nepra with significant optimism on the opportunity to build a unique waste management business but also maintained a healthy dose of realism regarding the effort that would be required to scale the business. Together, Aavishkaar and Nepra identified a number of value creation initiatives including improving and streamlining the segregation operations, upgrading the technology platform, introducing best practices in corporate governance and building the value proposition for waste pickers.

Prior to Aavishkaar's involvement, Nepra's Material Recovery Facility (MRF)—which is where recyclable materials are received, segregated and sorted—was rudimentary and unorganized. Manual segregation and sorting of waste caused the shop floor to be flooded with procured waste inventory, resulting in sub-optimal operating conditions. With Aavishkaar's guidance and support, Nepra streamlined and mechanized the MRF, while adding additional processes such as grinding and washing of plastic waste. As a result, inventory levels declined

The Company



Essentials

Company: Nepra Resource Management Pvt. Ltd. (Nepra)

Website: nepra.co.in

Country: India

Sector: Industrials

Business focus: Waste management

Size: US\$19 million in enterprise value (as of June 2018)

GP: Aavishkaar, an early-stage investor focused on catalyzing development in India's underserved regions (aavishkaar.in)

Dates of investment: February 2013, with follow on investments in June 2014, May 2016 and June 2018

Investment: Aavishkaar has invested a total of US\$9.7 million in equity in Nepra

Impact Highlights

Seeking a solution to the increasing magnitude of waste generation in India, Aavishkaar invested in Nepra Resource Management in 2013—and continued to financially support the company over the following five years—as it was attracted to its unique business model of diverting waste away from landfills by focusing on dry waste (recyclables such as plastics, glass and paper), while engaging waste pickers, recyclers and waste generators as key stakeholders.

Aavishkaar worked with Nepra to implement a number of value creation initiatives including preparing the company to scale its operations by improving and streamlining the segregation operations, upgrading the technology platform, formulating its growth strategy and introducing best practices in corporate governance. Since the time it began a partnership with Aavishkaar, Nepra has procured and recycled over 27,000 metric tons (MT) of waste, and currently collects, sorts and segregates over 50 MT of dry waste per day.

Nepra is positively impacting the livelihoods of waste pickers in India—who are typically poor, illiterate and unskilled—by providing them with fair prices, transparent service and immediate cash payments. By creating an organized waste collection supply chain and eliminating middlemen, the company has been able to offer incomes that are on average 30-40% higher than what these workers would have earned elsewhere.

The Company View

“We have been fortunate to have an investor like Aavishkaar who empowered us with capital when other investors were unwilling given our small size and rudimentary operations. We have benefited significantly from their unflinching support, guidance and networks in transforming our vision into a scalable business.”

Sandeep Patel
Co-Founder & CEO,
Nepra Resource
Management Pvt. Ltd.

from 50 days as of March 2013 to two days as of June 2018, while worker productivity improved from 50 kilograms per person per day to 300 kilograms.

In partnership with Aavishkaar, Nepra also upgraded its management information system (MIS). With waste being a constantly changing, multi-commodity business, it was important that the company have a robust technology platform to track processing and collection costs in order to ensure that all decision making was focused on driving the best economics. The use of vehicle tracking and better route planning additionally helped to bring collection costs down by 33% between 2013 and 2018.

In fiscal year 2013, Nepra reported annual revenues of US\$250,000; as of September 2018, the company is generating monthly



revenues of over US\$750,000 and is projected to close fiscal year 2019 with revenues greater than US\$10 million. A US\$8.8 million financing round raised in June 2018 will enable Nepra to establish operations in three other cities over the next 18 months.

Beyond the Bottom Line

By directly engaging with the waste picking community, Nepra is positively impacting the livelihoods of workers in India. Nepra currently procures waste from over 1,700 waste pickers—a 10x increase since Aavishkaar’s initial investment in 2013. Waste pickers are typically poor, illiterate and unskilled—with many being migrants and / or ranking lowest in caste hierarchy. Nepra provides these workers with fair prices, transparent service and immediate cash payments. By creating an organized waste collection supply chain and eliminating middlemen, the company has been able to offer stable and higher incomes. On average, waste pickers have seen a 30-40% increase in their income levels with Nepra.

As Nepra’s operations have grown, the company has been able to offer formal employment, including at its MRF, and, as of September 2018, employs 210 people. All of these employees undertake regular health and safety training, and are offered retirement benefits and health insurance. Furthermore, the company is promoting financial inclusion by ensuring all employees have a bank account to which paychecks

are deposited—as opposed to being paid in cash as was the case prior to Aavishkaar’s investment.

At the macro level, Nepra is focused on creating comprehensive and sustainable solutions to India’s waste problem. Given that the practice of source segregation of waste has traditionally not existed in the country, there is always some amount of wet (kitchen) waste—typically 10-15%—that is commingled with dry waste, making dry waste recovery from mixed waste difficult. Nepra had previously aggregated this mixed waste from its sorting operations and then periodically dumped it at a landfill site. However, in 2016, Nepra developed a use case for this mixed waste as Refuse Derived Fuel (RDF) for cement companies seeking a substitute for fossil fuels in the cement kilns. As a result, Nepra is now positioned as a “zero waste to landfill” company. As Nepra scales its operations across other cities, its inclusive model will result in increasing impact—in terms of jobs created, quantities of waste diverted from landfills, and the number of waste pickers who will see an improvement in their livelihoods.

IMPACT HIGHLIGHTS

As of:	Initial Investment	September 2018
Enterprise value (US\$m)	0.92	19
Revenue	Monthly revenue of US\$21,000	Monthly revenue of US\$769,000
Investments in local communities (US\$m)	.05	4.26 (since 2013)
# of employees	70	210
Environmental management system in place	No	Yes
Health and safety policies in place	No	Yes