

CASH FROM TRASH

With waste management proving profitable the world over, Indian entrepreneurs look at rubbish as a resource to build new businesses

By Nandini Vaish

The shiny, freshly-painted exterior of The Ideas Company (TIC) in Noida is quite a contrast to its interior, where cartons of broken computer monitors, printers and printed circuit boards (PCBs) lean against the walls. Men and women in fluorescent safety jackets tear computers apart with hammers and electric drills. There is 'e-waste' all around. Yet, unlike many of its peers, TIC is clean and organised. Its 22-year-old CEO Pranav Tripathi walks around ensuring all the components are in the right boxes. The PCBs are shipped to Belgium, Japan and Malaysia for precious metal extraction while the wires are sent to Singapore. "It may not be a fun job," says Tripathi, "but somebody's got to do it."

There is cash in trash and many entrepreneurs like Tripathi are getting their hands dirty. As there is a strong co-relation between a country's GDP and the municipal solid waste it generates (owing to higher consumption), developing economies like India and China are confronted with an enormous waste management problem that puts a strain on municipal resources towards the handling of the ever-increasing waste.

India's generation of e-waste alone touched 3.3 lakh tonne last year, while an additional 50,000 tonne was illegally imported, according to a study by the Manufacturers Association for Information Technology (MAIT) and GTZ, a German agency working on sustainable development. Thanks to the rapidly-growing IT and BPO industries, e-waste generation could well hit 4.7 lakh tonne by 2011. And that is only mobiles, desktops, notebooks and TV sets. For companies like TIC—which

started operations in January and recycles 4,000 computers a month—it is a goldmine. Tripathi recently bagged the licence for bonded areas, which means he will have access to e-waste from call centres, SEZs and export-oriented units that cannot be sold in the local market due to customs regulations. He expects to rake in Rs 3-4 crore in revenue in his first financial year which is likely to double the following year. Unlike in other countries, Indian companies are not mandated to pay for recycling their products, therefore TIC's revenues come from fixing and re-selling what is salvageable and then selling the waste. The company which rakes in over 30 per cent profit makes an average of Rs 500-700 on a com-



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◀ **PRANAV TRIPATHI**, CEO, THE IDEAS COMPANY Recycles 4,000 computers a month. Making Rs 500-700 per piece, he expects revenues of Rs 3-4 crore.

rial for medicines, aquatic and poultry feed, pet food and fertilisers. The Rs 7-crore company processes 160 tonne of waste annually, all of which is exported. India holds immense potential where 2.2 million tonne of poultry meat is consumed every year. Style Solutions expects to have 80 per cent of its business emanating from India by 2010.

Waste management has traditionally been a high-volume, low-margin business. Not anymore. With metals in short supply trading at a premium, 'urban mining', which involves scavenging through old electronic products for iridium and gold, has become a profitable global industry. While precious metals are melted down and sold as ingots, other recovered materials are reused in new electronics parts. A tonne of ore from a gold mine yields an average of 0.17 ounces or five g of gold, whereas over 150g can be recovered from a tonne of discarded mobile phones, says a study.

The ability to turn refuse into a resource presents a key opportunity for growth for a simple reason: even in a slump people will be throwing their trash away. A Goldman Sachs report published in November 2007 described alternative waste treatment in Britain as "an area with extensive growth opportunities" that could "improve investment fundamentals". To be sure, in the last couple of years there have been 16 major mergers and acquisitions of waste management companies in Europe, with private equity firms involved in half of the deals.

Waste management is supplemented by innovative and integrated collection. Take, for instance, M.M. Gupta, chairman of the Chennai-based Gupta Group, who has been processing discarded human hair—a \$1 billion market—and exporting it since 1974. Gupta, who supplies to Korea, Italy and China, has a turnover of Rs 225 crore. Contrary to popular belief, only 20 per cent of the hair is collected from temples and shrines. The rest comes from housewives who keep hair that fall off from everyday brushing and sell it to door-to-door scavengers, 3,000 of



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puter. A PCB brings in Rs 100, a floppy/CD drive Rs 100, a power supply unit Rs 60, and plastic and metal Rs 150-200.

"Electronics are the fastest-growing solid waste stream in the world," says Vinnie Mehta, executive director, MAIT. This corroborates the findings of the Swiss Federal Institute of Aquatic Science and Technology, which suggests that higher income, economic growth and changing lifestyles lead to a change in the composition of waste. Poor households generate more organic waste while the wealthy ones have a higher percentage of metals, plastics and glass.

In 2004, Sanjeev Ohri, a former food-and-beverages executive with ITC Hotels, set up Style Solutions at Manesar in Haryana, which processes slaughterhouse waste into raw mate-

◀ **T. RAGHAVENDRA RAO**, DIRECTOR, STEPS Using plastic and organic waste to make liquid fuel, he expects a revenue of over Rs 20 crore this year.



▲ M.M. GUPTA, CHAIRMAN, GUPTA GROUP
His group has been processing and exporting human hair since 1974 and has a turnover of Rs 225 crore.



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traditional recyclers, which require clean plastics or involve high costs". With rising oil prices, he may just have timed it right.

Profits may still elude, but optimism and innovation are in plentiful supply. If the chemical engineering department of Jadavpur University, Kolkata, is collaborating with Moromi, an NGO, to extract dyes from waste flowers for use in the textile industry as well as for bio-fertilisers, Rajendra Gandhi, MD of the Mumbai-based Rs 110-crore Gujarat Reclaim and Rubber Products has been successfully recycling old rubber from tyres since the '70s. With natural rubber in short supply, tyre companies, ranging from Goodyear, Michelin and Bridgestone abroad to Apollo and JK Tyres in India, mix 5-6 per cent reclaimed rubber in car tyres, whereas bicycle tyres contain about 40 per cent. Says Gandhi, "It is no longer enough to manage waste and minimise the environmental impact of its treatment. Waste must be used as a resource." Yet, rising manpower costs are forcing many of these players to rethink their strategies. The garbage warriors must plod on through millions of dustbins before they can have a good, clean run. ■

whom deposit it at Gupta's collection centres in Andhra Pradesh and Karnataka. Hair in its raw form commands Rs 1,700 a kilo.

Entrepreneurs are increasingly seeking ways to turn rubbish into value. Mumbai startup, Sustainable Technologies and Environmental Projects (STEPS), set up in June 2007 by T. Raghavendra Rao, uses a thermal catalytic conversion method called 'polycrack' to convert plastic and organic waste like kitchen, animal and agro refuse into petroleum fuels like

▲ MANIK THAPAR, CEO, ECO WISE
Provides waste management solutions by treating municipal solid wastes and now has a turnover of Rs 1.2 crore.

gas, liquid fuel or a combination of both. A kg of polypropylene plastic feedstock yields 1.2 litre of liquid fuel that can be used to power electrical generators, or 150g of LPG, at a conversion cost of Rs 11 per litre. Although the industry has a record of failure, Rao is undeterred. He argues that the technology is "far superior to