

minus

the relentless pursuit of less

THE PROBLEM



THE MAN WHO MOVES MOUNTAINS

Last year his company took control of Sharjah's largest landfill site. Now Samer Kamal's team is sifting through tonnes of waste, salvaging materials and changing people's attitudes. It's a dirty job, but someone has to do it, the recycling pioneer tells Jonathan Gornall

the green issue ■ ■ ■

Samer Kamal is a man with a bright green dream. It's also a filthy dirty, stinky dream, but all the more inspirational for that.

"This," says the 36-year-old managing director of Bee'ah, the Sharjah Environment Company, "is the battlefield." He is standing in a sorting shed in the newly built, four-storey material recovery facility at Al Sajah landfill site. The battle is to introduce universal recycling of household waste, first to Sharjah and then to the wider UAE and region, and in this vast hangar of a building is the frontline where the good fight will be fought – bottle by bottle, can by can.

An army of up to 300 freshly trained sorters, recruited in Nepal, man half a dozen conveyor belts, sifting through the passing household waste from 1,500 recycling bins throughout Sharjah. The end product is valuable raw materials – aluminium, steel, paper, different types of plastic – separated, neatly bundled and ready for sale back into the manufacturing process through a local market for recycled goods that is growing in tandem with the supply.

It is a dirty, smelly job, but someone has to do it, says Kamal. "It's a race against time, a race to draw the line in the sand and do something about the environment, to change attitudes and to help people to identify themselves as somebody who cares and is part of a community taking a stand."

Kamal's stand is an operation run with military efficiency – little surprise, with the recruiting and training of staff carried out by former members of the British army, who have come to Bee'ah with the experience of post-service careers at one of the UK's largest waste-management companies. To add to the sense of men with a mission, ex-Gurkhas patrol the site and fire off parade-ground salutes when Kamal and his team stride past.

Bee'ah's recruiters were, says Kamal, almost mobbed in Nepal due to the favourable working conditions on offer, but there was no question of money changing hands. "No one pays to have the right to interview for a job here. How credible would we be as an environmental company if we were not ethical as well?"

Kamal launched Bee'ah in 2007 in a public-private partnership with the municipality, in recognition that the emirate lacked the infrastructure to tackle the over-growing mountain of waste being created by its rapidly expanding population – up 600 per cent since 1990.

In May last year, the company took over the running of Al Sajah landfill site, an imposing 40 sq kilometre heap on the Sharjah-Al Dhaid road into which much of the emirate's waste

was being unceremoniously dumped. Less than a year on, the site has been transformed by Bee'ah's team of international experts and is the setting for an ambitious project putting Sharjah in the vanguard of environmental initiatives in the region.

"By taking control of landfills and waste collection and by building recycling facilities, we have created the necessary infrastructure in Sharjah to handle environmentally responsible behaviour for the entire community, from beginning to end," says Kamal.

Not bad for a man with no previous experience in the field. Smiling, he puts it down to "sheer force of will", but admits "it has been a major challenge to build credibility without a background in this".

The recycling plant, capable of processing up to 800,000 tonnes a year, has sprung up on the edge of the landfill in record time: the designer was briefed only in May 2008 and it was operational by the middle of last month. The offices might not be quite finished, but "offices be damned", says Kamal, watching with pride as the trucks back in to the unloading bays and the waste climbs up the conveyor belts towards rebirth.

About 4,500 tonnes of waste a day from Sharjah is buried at Al Sajah; the more that is diverted to recycling, the less goes into the land.

The man behind Sharjah's green vision was born in Montreal in 1974, the son of a Canadian-educated Palestinian civil engineer and a Palestinian graduate in business studies from the American University of Beirut. Kamal's first taste of the Middle East came as a toddler, when his father moved to Saudi Arabia to work on large infrastructure projects in the holy cities. In 1980, his father's engineering expertise brought the family, including six-year-old Kamal and brother Jamil, eight, to Sharjah, where they lived for five years and where his mother set up the Sharjah Ladies' Club before returning to North America.

After three years back in Canada, however, in 1988 his mother accepted a job as managing director of a Sharjah property company and from then on the family has had a foot in both countries.

In 1996, Kamal completed a double-honours science degree in pharmacology and toxicology, followed by a graduate course in organisational sociology and business. His first job, in 1997, was as a contract negotiator for Bell Canada, but he soon branched out on his own, organising marketing for a dotcom start-up and, in 2001, starting a business-development consultancy. By 2004, he was looking for business opportunities in the UAE, but he finally found what he was

Large, monolithic investments in traditional, transportation-based waste infrastructure results in down-cycling of resources to address the heterogeneity that is inevitably required due to scale, cost and transportation



Take garbage trucks off the road

THE OPPORTUNITY



ECONOMIC



ENVIRONMENTAL



CONTAMINATION

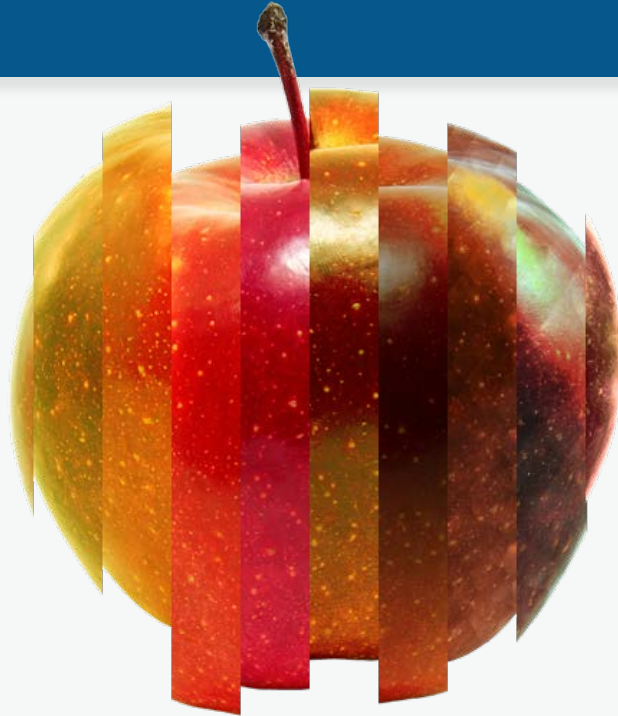
Replace expensive & harmful transportation that inevitably results in waste stream contamination with hyperlocal technology



CASE STUDY

Hyperlocal Digestion of Food Waste in Commercial Kitchens

ORCATM

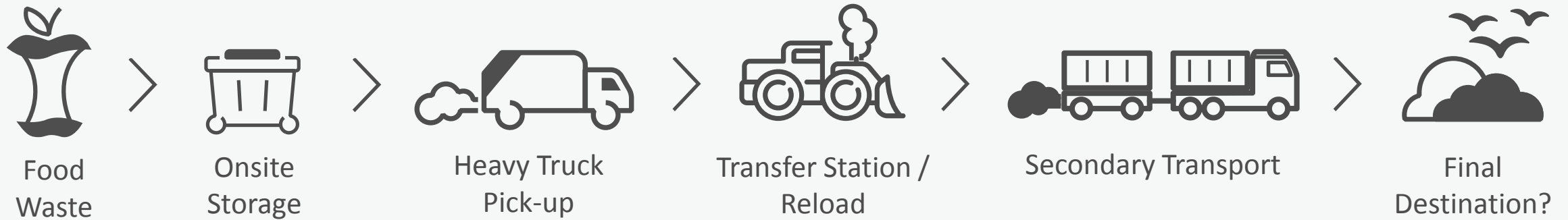


Inspired by Science,
Fueled by Nature

RETHINKING INFRASTRUCTURE

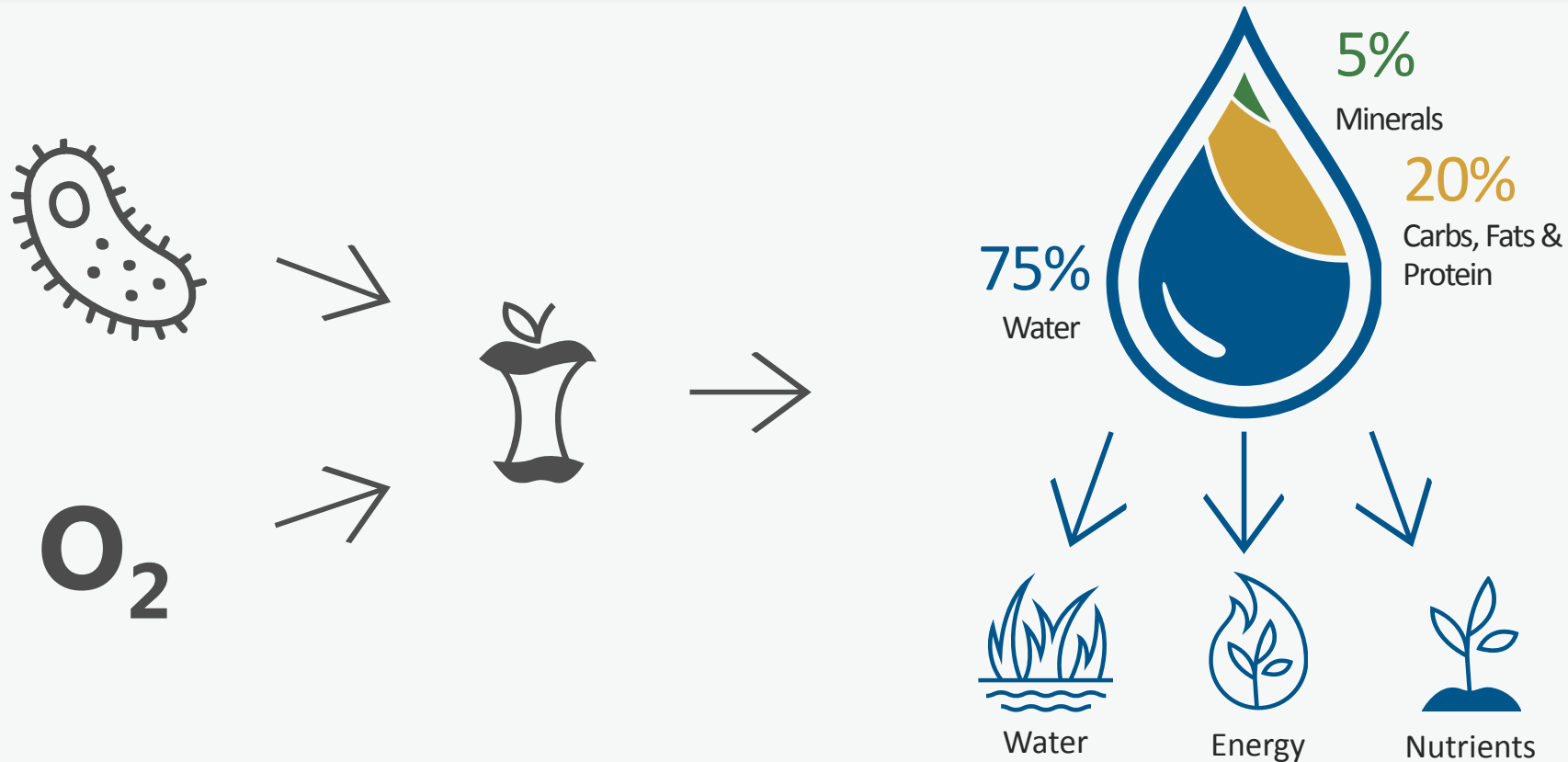
No trucks, No contamination, No landfill

Traditional Truck Dependent System

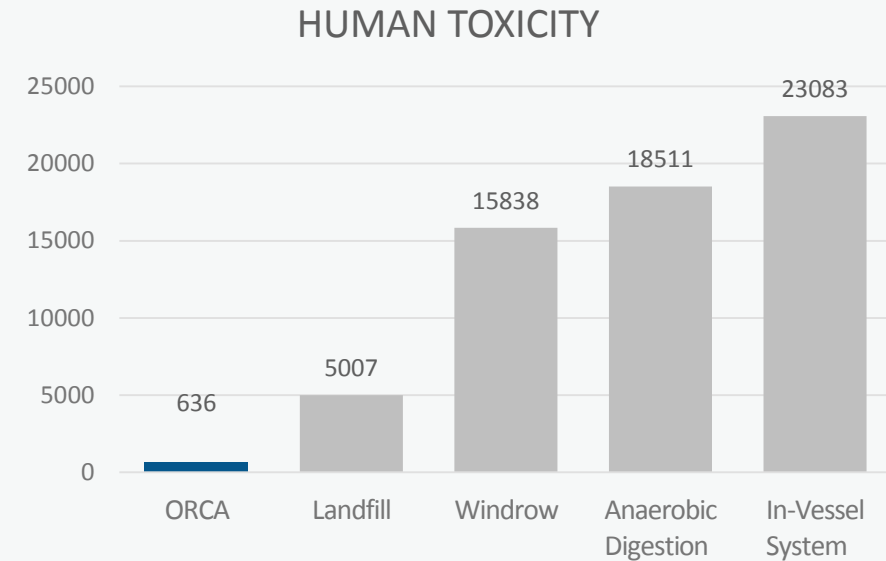
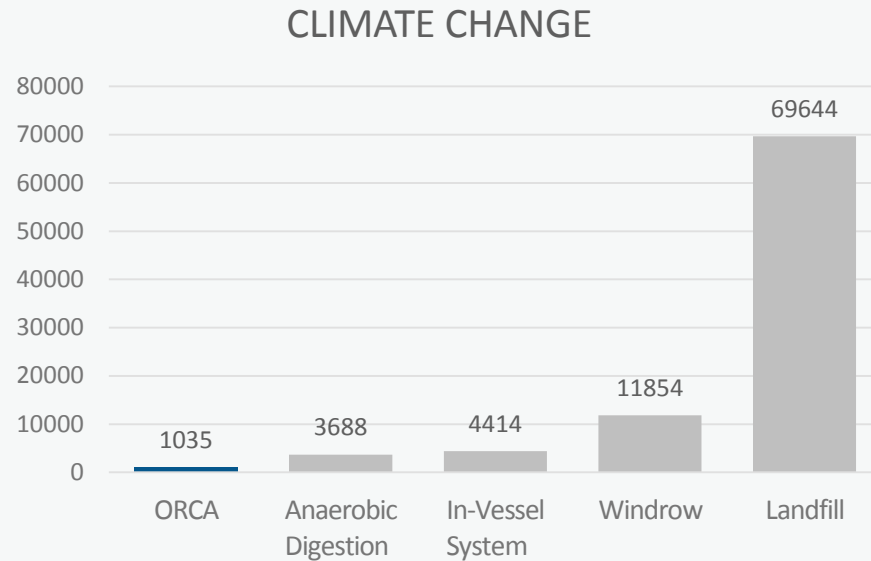


SECURING RESOURCES

Aerobic digestion is a natural, biological process by which purpose driven bacteria use oxygen to breakdown food waste into simpler substances such as water, carbon dioxide, and minerals. The environmentally safe liquid is then safely sent through the sanitary drain where it is eventually repurposed at an existing municipal water treatment plant.



LCA RESULTS



Climate Change

65x

Better than landfill

25x

Better than
anaerobic digestion

Human Toxicity

35x

Better than
in-vessel composting

10x

Better than
windrow composting



**Are you ready to start taking
garbage trucks off the road?**

www.minusglobal.com