FEATURE GREEN TECHNOLOGY

# Green Technology
# THE NEW IT

**As sustainability becomes the next big investment boom, RSM Outlook talks to venture capitalist and RSM alumnus, Nityen Lal, about the business of going green.** **text** Tim Skelton & Rebecca Morris **illustrations** Enio Ramalho **photography** Gerrit Pharos Advies

Until recently, sustainability was generally confined to the PR agenda of most big businesses. Now corporate giants from European food conglomerate Unilever, to U.S. retailer Wal-Mart, are committing themselves to ambitious sustainability goals as a strategic necessity for remaining competitive in the coming decades.

The factors behind this sea-change include tightening environmental regulations, rising oil prices, fears over energy security and pressure from an increasingly green public.

The result is a growing demand by corporations for clean or environmental technologies (ET), fuelling an investment boom that, so say observers, could eclipse the information technology frenzy of recent years. "The energy crisis and climate change are the biggest drivers of technological innovation right now," says venture capitalist Nityen Lal. "Innovation has driven this world from the very beginning. Real changes in the way we are using the earth's resources need to be driven by entrepreneurs."

## A BOOM IN GREEN INVESTMENT

Nityen Lal, an alumnus of RSM's MBA programme, is among this growing breed of green investors. Mr Lal is Managing Director and Partner of Icos Capital, a firm he set up in 2005 alongside two Dutch partners and several Dutch corporations, that invests in technologies that promote sustainability.

The firm targets technologies in the areas of food, energy and waste, and aims to attract scientists and technology experts, as well as entrepreneurs who can develop the technology into successful start-ups.

"We focus on funding first stage technol- ▸

ogy (ideas and products) that are out of the lab and ready for a market launch," says Mr Lal. "Quite simply it is hot. There is a rapidly growing demand for sustainable products and services; the business opportunities are tremendous."

Like Icos Capital, more and more investment firms are looking to financially back sustainable technology. The Economist reports that global investment in sustainable technology in 2006 was around US$63 billion, a figure that has doubled in just two years. Over the same period, input from venture capitalists and private equity companies quadrupled to around US$2 billion. And investment is increasing as more backers sense an opportunity.

'We are going to see an enormous amount of innovation coming out this' – Nityen Lal

New environmental regulations are one of the factors driving demand by companies for new technologies. In January 2007, the European Commission (EC) revealed its vision for a sustainable Europe. This includes the setting of new targets – 20% of all energy to be produced from renewable sources by 2020, along with a 10% share of biofuels in the transport sector. Such pledges have been made before, but this time they will be legally binding.

Consumer and market behaviour are also being increasingly driven by environmental concerns. The United Nations' Intergovernmental Panel on Climate Change's 4th assessment report released on February 3rd 2007 will only fan the fire. The work of 2,500 scientists, it gives the world its strongest warning yet that we must reduce greenhouse gas emissions or face "catastrophic" climate change.

Companies are switching gears so as not to be left behind. Marks & Spencer Group PLC, Britain's largest clothes retailer, has announced plans to become carbon nutral in five years under a £200m "eco-plan". Tesco, Europe's largest supermarket chain after the French-based Carrefour, has unveiled plans to publish environmental information on its products, allowing consumers to make informed choices.





The EC's energy targets have also made sustainable investment increasingly attractive for venture capitalists. The EU for instance, is offering subsidies, 'carrots', to investors in green projects. In Germany, these subsidies are considerable. For a windmill project, an investor can generate around 20% IRR at minimum risk. This focus on renewable sources will see some of the older industries get hurt. But it is all good news for investors in green technology and even better news for society.

Private investment in green technologies means innovation will soar. In a sustainable future shaped by green technologies, coal and gas-fired power stations will be replaced by renewable alternatives like solar and wind power; petrol and diesel by cleaner fuels derived from plants and waste matter; the internal combustion engine by fuel cells running on hydrogen. "We are going to see an enormous amount of innovation coming out this," says Mr Lal.

## GREEN ENTREPRENEURS

Matteo Prezzi is another alumnus of RSM's MBA programme and an entrepreneur in the business of sustainable technology.

Mr Prezzi set up SAFE Marine Nanotechnologies in 2005, a company that develops proprietary nano-material for industrial- and marine-application paints. The evaporation of solvents from standard-formula paint is a major factor in the reduction of the ozone layer; solvent fumes are also toxic when inhaled and can create health problems.

Nanocomposite materials are created with sol-gel technology and blend the properties of inorganic and organic matter: they are solvent-free.

"Solvent emissions are subject to increasingly stringent regulations so there is a real need by the market for this kind of technology," Mr Prezzi.

Mr Prezzi estimates that the marine market – mainly shipyards, shipping companies, and the navy – is around €1.5 billion. He estimates that the market for industrial applications is around €2 billion.

In fact, one of the biggest challenges for investors in green technology is not lack of technology or opportunity, but a lack of entrepreneurs like Mr Prezzi to develop the businesses they are willing to fund.

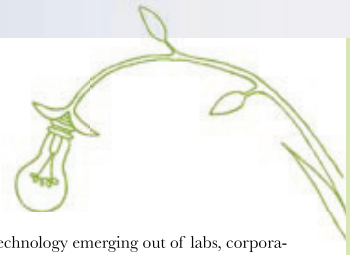
"We have a shortage of entrepreneurs willing to go all the way to make a company happen," says Mr Lal. "But it is an incredibly rewarding career for entrepreneurs both from an ethical standpoint and as a money-making opportunity."

Green entrepreneurship often has initial low returns, but the long-term rewards make it worthwhile, he says: "It is the people that are willing to persevere for more than the first couple of years who really reap the benefits. Once you get over the initial hurdles you start to see the returns come in, and eventually they keep coming."

## GOLDEN OPPORTUNITIES

According to Mr Lal, the opportunities are tremendous. "The business opportunities are beyond the dreams of most people," he says. "As investors, we are looking for a return, but it is the entrepreneurs who make the bigger profits."

On an average week he meets with a



couple of potential entrepreneurs: "We find them roles in existing start-ups, or in new start-ups," he says. "Others come to us with a project. They may be working for a large corporation and have an interesting in-house project, but the financing and scope are limited and they need our help to bring these out."
He looks for MBA graduates in their late 30s or early 40s: "The people we look for might be in middle management in a large company, and are now reflecting on their achievements," he says. "They realise they may not be able to achieve their financial and/or professional goals in a larger corporation, and are ready for a new approach with more independence. They really want to achieve something with their life. While you do not need an MBA to be these things, we look for people with MBAs because they have proven themselves to be driven and constructive in what they want."
Icos Capital target returns close to 40 to 50% IRR. While that is fairly high, it should only get higher. "Some proposals we are looking at, particularly involving converting waste into energy, steam, biofuels etc, are capable of delivering returns at considerably lower risk than we thought possible," he says. "We are constantly amazed by the interesting stuff coming out."
Certain technology is more likely to catch his eye than others: "We invest in disruptive technologies, improving by an order of magnitude solutions to existing problems" he says. "For example, a plant might contain enough energy to drive from Amsterdam to Eindhoven, but the technology is not yet available to convert that energy effectively. We invest in proven technology emerging out of labs, corporations and garage start-ups."

**A GREEN FUTURE?**

Given this new shift toward sustainable technology, the future certainly looks green.
"Sustainability will be one of the drivers of business ventures in the next 20 years or so," says Mr Prezzi. Mr Lal agrees. "Consumers have done the biggest service to the environment by asking for sustainable products and services. Now corporate executives are waking up to the fact that green technology is necessary to build a business. They are realising sustainability sells."
Previously shunned by the establishment, sustainability is now becoming the establishment. Yet in order for green technology to do the same, it needs serious innovators to join its ranks, he says.
"Sustainable innovation does not yet have a spokesperson like Al Gore," says Mr Lal. "Policy can only do so much. Richard Branson has done something interesting by putting together a plan which he thinks can drastically reduce pollution from his aircraft – he is what I would call an innovator. We need more people like that." ■

'One of the biggest challenges for investors in green technology is not lack of technology or opportunity, but a lack of entrepreneurs.'

**WEB** **For more information visit: www.icoscapital.com**





# THE ET CONSULTANT

Else Boutkan (MBA '00) develops business plans for entrepreneurs and companies with environmental technology suitable for the developing world.

**text** Rebecca Morris **Photography** Kimberly Gomes

Every minute, ten people in the world die because of lack of clean drinking water. That is 5 million a year. Everyone knows about poverty and hunger, but drinking water is one of the biggest disasters for the third world right now. This is the main message of the foundation I am setting up called the Blue Peter Foundation; and the focus of my work over the last few years.
I work as a consultant in sustainability. Many of my assignments involve developing business plans that enable entrepreneurs in the first world to bring their technology to the market in the third world. Sustainable technology is a rapidly growing industry with more and more opportunities. And entrepreneurship in third world countries is a tool that has value both for reducing poverty in a sustainable way, and for making money.
I set up my consultancy firm in 2001, a year after my MBA. My first assignment was with twelve multinationals, working with NGOs and other organisations to create an ecological programme. I built up a network of entrepreneurs and contacts in the water industry which lead to many more assignments, and I've been working in this field ever since.
The basic problem is that water in the third world is polluted. Around one billion people are forced to buy water from trucks or in bottles for which they pay ten to 100 times more than we pay; often 50 percent of the money they have.
In the first world, we have technology that would provide them with clean water at a much cheaper rate: solar-powered machines that remove the impurities in a distillation process, for instance. This technology is being developed by spin-offs of multinationals or small entrepreneurs working from home. And they all have the same question: how can we expand into third world markets?
This is where I come in. As a result of my MBA I know how to translate these ideas into a solid business case. The entrepreneur approaches me, and then I approach various organisations such as banks to finance the hardware, and NGOs to contact the local people and train a local entrepreneur close to the market. It is strange to talk about these people as a market. But bringing this technology to the people in a way that both the local entrepreneur and the entrepreneur here can make a living out of it, ensures we are helping them in a sustainable way.
A recent example is a programme we developed in India in which 50 small villages are each given a water-purification machine. An NGO has appointed a 'water entrepreneur' to be responsible for the machine, and trained them to maintain it and collect money from the villagers to repay the bank – in this case, a Dutch bank that is financing the local NGOs, who bought the equipment from the Dutch entrepreneur, who contacted me.
A lot of my work is about partnership building. Often I am like a bridge between the corporate world and the non-profit world, and a lot of differences still exist. This is getting easier as awareness grows and sustainability gets higher on the corporate agenda. Sustainability is only just reaching the mainstream now and I feel like one of the pioneers. But we still need development on the business side – more entrepreneurs, business concepts, and economic drivers.
My most recent assignment is the Blue Peter Foundation. Rather than technology, this is about generating publicity and media presence which requires marketing and strategic thinking – skills I learned in my MBA. Charities such as Blue Peter need a business perspective to boom, and I am in a position to provide that.
Al Gore's movie 'An Inconvenient Truth' was designed to raise public awareness. What we see now is that every political party has climate on his or her agenda. With the Blue Peter Foundation we want to achieve a similar thing – raise awareness about the world's water issues to increase pressure on governments to set this problem higher on the agenda. ■

**WEB** **Else Boutkan: www.somethingelse.nl**