



Against a backdrop of rising global concerns, from growing populations to climate change, companies are increasingly aiming to grow without compromising the ability of future generations to meet their own needs. Many investors around the world are also making impact investments to unleash capital for good – to generate a measurable, beneficial social or environmental impact alongside a financial return.

This issue of corporate sustainability was discussed at a company visit to Temasek on 9 November 2018, on the sidelines of the INSEAD Alumni Forum Asia 2018. At the forum, some 40 INSEAD alumni joined Temasek, local startup Sustenir Agriculture and ST Engineering's innovation laboratory Innosparks to exchange views on how businesses can be a force for good. At the heart of the conversation was: Can companies do good and do well at the same time?

Four key takeaways from the forum:

Doing good is a sustainable business practice

Businesses do not always have to accept lower returns to do good. Instead, it is about finding the right solutions and business models to combine commercial and other interests.

Sustainability-led innovations lead to long-term sustainable returns

Sustainability – be it to maintain economic growth or ecological balance – is a key factor in fostering the development of novel products and technologies. It has led to the invention of technologies that protect the environment and better lives while contributing to sustainable long-term returns for businesses.

Take a long-term approach to ensure sustainable returns

Making an impact on the future requires long-term planning. With growing resource scarcity and other global challenges, the link between sustainability and long-term value creation is becoming more evident to investors.

Put sustainability at the heart of businesses

The reward for making sustainability a key business focus can be substantial. According to a report by the Business & Sustainable Development Commission, sustainable business models could unveil economic opportunities worth up to US\$12 trillion (S\$16.5 trillion) and boost employment by up to 380 million jobs by 2030.1

Mark Malloch-Brown, Paul Polman, "Better Business, Better World", 2017. Available at: http://report.businesscommission.org/report

1) Doing good is a sustainable business practice



With the right solutions and business models, businesses do not have to accept lower returns to do good. Corporate sustainability practices can:

- Increase market value
- Reduce price volatility
- Decrease market losses from crises

Decline in share price of 2.4% - 3% companies with poor CSR reputations during crises



3) Think long-term

Instead of focusing on the next two years, companies are now shifting their horizons to focus on the next 20 years. This will not only boost sustainable returns but also mitigate risks and help capture new opportunities from emerging global trends.

Temasek

Against a backdrop of growing global food demand that will surge investing in food science research.



Faster-growing and more resilient sea bass

a higher yield, resist fungal and bacterial attacks and withstand extreme weather conditions





2) Embrace sustainability as a driver of innovation

Sustainability-led innovations lead to long-term sustainable returns. The focus on reducing waste and use of resources can technologies, fresh ideas and techniques to do more with less.

- Improves business operations and processes
- Reduces costs and waste
- Protects against market fluctuations

Sustenir

To make urban farming more viable, Sustenir developed a patented system that enables precise calibrations in lighting, nutrients, temperature and air.



in growth

50% Reduction



127 times more yield





4) Seize the big opportunities

Major market opportunities will emerge with the seismic shift in the way we view business.



US\$12 trillion

of market opportunities in achieving the UN Global Goals for Sustainable Development in areas such as food and agriculture; cities; energy and materials; health and well-being



In 2018, ESG investing was estimated at over US\$20 trillion in assets under management



DOING GOOD IS A SUSTAINABLE BUSINESS PRACTICE

Is doing good for society and doing well financially at odds with each other? The simple answer is no. Doing good and doing well can go hand in hand, without sacrificing commercial interests and revenue. Corporate sustainability practices can, in fact, increase market value, reduce price volatility and decrease market losses from crises, according to a report by international research firm IO Sustainability and top US entrepreneurship school Babson College.²

For instance, companies with strong corporate responsibility reputations experience no meaningful decline in share price compared to their industry peers during crises. Those with poor CSR reputations declined by 2.4 to 3 per cent, equivalent to a market capitalisation loss of US\$378 million per firm.

A case in point is the Southeast Asia haze crisis in 2015, which saw products from some companies pulled off shelves. Global personal care brand Kimberley Clark was spared as consumers looked at its Forest Stewardship Council (FSC) certification as an assurance of its sustainable business practices. As a result, the company – behind tissue brands Scott Naturals and Kleenex – saw increased brand recognition.³

Investors are also paying more attention to non-financial aspects when making investment decisions. Ernst & Young, in its survey of over 200 institutional investors, found that close to two-thirds are concerned about the risk of stranded assets – assets that lose value prematurely due to environmental, social, or other external factors. More than one in three investors cut their holdings of a company in the past year because of this risk, and they use a structured, methodical approach to analysing non-financial information related to these risks as part of their investment decisions.⁴

When companies target top-tier venture capital returns, impact investing across a range of asset classes can deliver returns similar to the range seen in conventional investing. A 2017 report by the Global Impact Investing Network (GIIN) found that 71 funds with social impact objectives had an aggregate net return of 5.8 per cent over two years, while returns for the top 5 per cent of funds reached 22.1 per cent or more.⁵ Overall, impact investments also doubled from last year to US\$228 billion.⁶

² Steve Rochlin, Richard Bliss, Stephen Jordan, Cheryl Yaffe Kiser, "Project ROI Report: Defining the Competitive and Financial Advantages of Corporate Responsibility and Sustainability", 9 July 2015. Available at: https://www.issuelab.org/resources/22448/22448.pdf

³ Economic Development Board, "Kimberly-Clark: Why sustainability matters", 19 April 2016. Available at: https://www.edb.gov.sg/en/news-and-resources/insights/headquarters/kimberly-clark--why-sustainability-matters.html

⁴ Ernst & Young, Tomorrow's Investment Rules 2.0 Emerging risk and stranded assets have investors looking for more from nonfinancial reporting, 2015. Available at: https://www.ey.com/Publication/vwLUAssets/ey-ccass-institutional-investor-survey-2015/\$FILE/ey-ccass-institutional-investor-survey-2015.pdf

⁵ "GIIN Perspective: Evidence on the Financial Performance of Impact Investments", November 2017. Available at: https://thegiin.org/assets/2017_GIIN_FinancialPerformanceImpactInvestments_Web.pdf

⁶ GIIN Annual Impact Investor Survey 2018, 6 June 2018. Available at: https://thegiin.org/research/publication/annualsurvey2018

SUSTAINABILITY-LED INNOVATIONS LEAD TO LONG-TERM SUSTAINABLE RETURNS

Sustainability-driven innovation goes beyond simply designing green products. It entails improving business operations and processes to reduce costs and waste, as well as protecting against market fluctuations, including price shocks and shortages.

American household product company Method, for instance, ensures every ingredient in its products is non-toxic and energy efficient throughout its manufacture, use, and disposal. It is a business decision by its founders who believe that competitive pressures, commodity costs, or regulation will eventually make all products non-toxic, energy-efficient, and sustainably packaged.

Similarly, an article by Deloitte noted how a major bottled water manufacturer decreased the amount of plastic in each of its bottles by about 40 per cent. While doing its bit for the environment, the company also enjoyed significant cost savings as well as cushioned itself from crude oil price shocks.⁷

At the forum, representatives from vertical farming firm Sustenir Agriculture and ST Engineering's innovation lab Innosparks shared their approach to sustainability.

⁷ Deloitte, "Using sustainability to drive business innovation and growth", 2012. Available at: https://www2.deloitte.com/insights/us/en/deloitte-review/issue-10/sustainability-2-0-innovation-and-growth-through-sustainability.html



Co-founder and CEO of Sustenir Agriculture Benjamin Swan didn't come from an agriculture background. He was in fact an engineer, who saw an opportunity to make agriculture more productive and attractive in an urban environment.

He experimented with the conditions affecting plant growth and spent 18 months testing before launching Sustenir in 2013.

His patented farming system has borne fruit. It enables precise calibrations in lighting, nutrients, temperature and air – allowing crops to grow in half the time and with 95 per cent less water compared to traditional farming.

Sustenir produces 1 tonne of kale or 3.2 tonnes of lettuce per month in a 54 sq m space. This is 14 to 127 times more than the yield from traditional farming on the same area of land, depending on the climate.⁸

The system also allows him to grow temperate vegetables and fruits, which he chose so as not to compete with local farmers. Producing non-native crops locally also helps to reduce the carbon footprint and food waste resulting from the transport of similar crops from overseas. Sustenir's strawberries made their debut at selected supermarkets in Singapore earlier this year.⁹

Sustenir is joining the ranks of global urban agricultural producers who can add as much as 180 million tonnes of food a year, according to a recent analysis in the journal Earth's Future¹⁰. This figure makes up perhaps 10 per cent of the global output of legumes, roots and tubers, and vegetable crops.

⁸ The Business Times, "Sustenir sows the seeds of success", 31 July 2018. Available at: https://www.businesstimes.com.sg/hub-projects/leaders-of-transformation/sustenir-sows-the-seeds-of-success

⁹ The Straits Times, "Strawberries grown in Singapore vertical farm make debut", 20 June 2018. Available at: https://www.straitstimes.com/singapore/strawberries-grown-in-singapore-vertical-farm-make-debut

¹⁰ Earth's Future, "A Global Geospatial Ecosystem Services Estimate of Urban Agriculture", 10 January 2018. Available at: https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017EF000536

CASE STUDY: INNOSPARKS



In 2013, the Pollutant Standards Index crossed 400 with Singapore witnessing its most severe haze season in over a decade. As people scrambled to buy masks as a shield against the haze, the crisis revealed a critical missing link: lack of protection for children.

Commercial N95 masks were too big for children, leaving them at risk of developing respiratory problems. A team at ST Engineering's Innosparks, Singapore's first engineering-based open innovation lab and incubator by ST Engineering, took up the challenge to design a mask for children that not only fits well but is also comfortable.

After a year of research – during which the team did 3D scans of more than 850 children and adults and came up with 200 design iterations – Innosparks produced a mask that works for the Asian facial profile including children 7 years and older. It was the pioneer in N95 masks certified for children.

The AIR+ Smart Mask, available in three sizes suitable for children and adults, also comes with an attachable micro-fan, which cuts the level of accumulated carbon dioxide in the mask from more than 3 per cent in a standard mask to less than 1 per cent. The micro-fan also keeps temperature inside the mask at a more comfortable 4 degrees Celsius lower than that inside an average N95 mask.¹¹

Innosparks solved a real problem and its product protects millions of people in 22 countries against air pollution. Today, the AIR+ Smart Mask is the second most popular anti-pollution mask brand for children in the China market, which was worth nearly 4 billion yuan (\$\$800 million) in 2015.¹²

¹¹ The Straits Times, "60 senior centres to get improved masks", 18 September 2015. Available at: https://www.straitstimes.com/singapore/environment/60-senior-centres-to-get-improved-masks

¹² Da Xue Consulting, "Anti-Pollution Mask Industry in China: An Enforced Trend", 31 January 2017. Available at: http://daxueconsulting.com/anti-pollution-mask-industry-in-china/

TAKE A LONG-TERM APPROACH TO ENSURE SUSTAINABLE RETURNS

If the broader community succeeds, so will companies. Understanding risks ahead of time and then planning how best to minimise them is the best recipe for success. With growing resource scarcity and other global sustainability challenges, the profitability of businesses over the long-term is directly impacted by material sustainability risks and opportunities.

Integrating corporate sustainability into strategic initiatives is especially important to tackle the most pressing global issues, from climate change to food security, to mitigate risks and capture opportunities.

Today, companies and investors are funding research to improve farm productivity¹³, to cope with the growing global food demand that will surge in the next 30 years. By some estimates, demand could double by 2050 when the world population hits 9.7 billion. Temasek, for instance, has invested in research to cultivate fastergrowing and more resilient sea bass and a breed of rice that can produce a higher yield, resist fungal and bacterial attacks and withstand extremely dry and wet weather for extended periods of time.¹⁴ ¹⁵

As the threat of climate change looms large and pollution levels in cities spike, a company's carbon footprint has also become a growing concern among consumers. Companies and investors are turning their

focus from traditional oil majors to companies in the renewable and clean energy space. This allows them to protect their existing portfolio against disruptions, and to tap on opportunities in the renewables sector.

One example is solar energy, which has caught on in Singapore due to rising carbon consciousness, advances in solar technologies and a concerted industry push. The cost of solar energy has fallen by about 85 per cent in the last decade, and it is now a competitive alternative to fossil fuel-based power in many countries.

Sembcorp Industries acquired 49 per cent of a firm developing a rooftop solar system at two airfreight terminals in Changi Airport in late 2016, and added two operating rooftop solar facilities through another acquisition last year. Sunseap Group, one of the largest solar players in Singapore, further bolstered its reach last year by acquiring SolarPVExchange, a crowdfunding platform that matches home owners with solar developers.¹⁶

This long-term mindset has also taken root in the boardrooms of companies in various sectors. Global management consulting firm Boston Consulting Group noted in a 2017 report that sustainability is no longer just a matter of complying with regulators and dealing with non-governmental organisations; customers and investors are now pushing to protect resources over the long term.¹⁷

¹³ Food and Agriculture Organization of the United Nations. "How to Feed the World in 2015." Available at: http://www.fao.org/fileadmin/templates/wsfs/docs/expert_paper/How_to_Feed_the_World_in_2050.pdf

¹⁴ Temasek Gives. "Fish for a Lifetime." Available at: https://www.temasek.com.sg/en/our-community/temasek-gives/community/fish-for-a-lifetime.

¹⁵ The Straits Times, "Hardy made-in-Singapore 'Temasek Rice' hits shelves", 19 September 2016. Available at: https://www.straitstimes.com/singapore/hardy-made-in-spore-rice-hits-shelves

¹⁶ The Business Times, "Green electricity catches on in S'pore", 8 January 2018. Available at: https://www.businesstimes.com.sg/energy-commodities/green-electricity-catches-on-in-spore

¹⁷ BCG, "Making a Business Case for Sustainability in Chemicals", 19 April 2017. Available at: https://www.bcg.com/publications/2017/making-business-case-sustainability-chemicals.aspx



PUT SUSTAINABILITY AT THE HEART OF BUSINESSES

Large corporations are paying close attention to the Environmental, Social and Corporate Governance (ESG) criteria – a set of operational standards that socially-conscious investors use to screen potential investments. ESG investing is estimated at over US\$20 trillion in assets under management (AUM), or around a quarter of all professionally managed assets around the world.¹⁸

In recent years, there has been a proliferation of ESG data and rating providers that measure and track impacts – identifying companies that are well positioned for the future. Bloomberg launched a dedicated ESG data service in 2009, which allows subscribers to evaluate the ESG performance of thousands of companies, enabling institutions and individuals to develop their own strategies for ESG investing.

Currently, less than 1 per cent of funds in Asia leverage ESG investing compared to 50 per cent globally in 2016, according to Singapore-based Asian Venture Philanthropy Network (AVPN). But Asia could overtake the US in the next two to three years due to the greater number of green bonds, financial instruments and opportunities for investment.¹⁹

Asia's government pension funds are taking the lead. For instance, Japan's Government Pension Investment Fund (GPIF), the world's largest pension fund with US\$1.3 trillion under management, has put US\$8.9 billion into three ESG indices to raise its allocation to ESG investments from 3 per cent to 10 per cent of its equity holdings.²⁰

Some organisations are shifting how they invest their funds. Technology giant Intel ramped up its investments over the past five years in energy conservation, spending US\$185 million on 2,000 projects. These have saved an estimated 3 million megawatt hours and led to over US\$400 million in economic savings – yielding a favourable return on investment.²¹

¹⁸ Forbes, "The Remarkable Rise Of ESG", 11 July 2018. Available at: https://www.forbes.com/sites/georgkell/2018/07/11/the-remarkable-rise-of-esg/
¹⁹ The Straits Times, "Asia lagging behind in socially responsible investments: Report", 4 June 2018. Available at: https://www.straitstimes.com/
singapore/asia-lagging-behind-in-socially-responsible-investments-report

²⁰ The Business Times, "The rise of ESG investing in Asia", 28 February 2018. Available at: https://www.businesstimes.com.sg/hub/whos-who-in-private-banking-2018/the-rise-of-esg-investing-in-asia

²¹ Adam Wentworth, "Intel makes sure sustainability is inside its business", 23 May 2018. Available at: http://www.climateaction.org/news/intel-makes-sure-sustainability-is-inside-its-business



There are several ways for organisations to approach the issue of sustainability. Companies of different sizes and types take different approaches, and doing good while doing well are not diametrically opposed ideas.

For investment firms like Temasek, taking a long-term approach is key to its view of sustainable growth and investing. They seek to safeguard the intergenerational interests of the communities in which they operate through innovative solutions and sustainable systems, science and technologies. Its investments in research to create more hardy crops to deal with long-term challenges in food security is one example.

For ST Engineering's Innosparks, the drive to contribute to society came about as part of its motivation to boost innovation. While originating from a desire to fill a gap and protect vulnerable children from air pollution, its innovative masks have gone on to become the second-best seller in China.

For start-ups like Sustenir, its founder's passion for sustainability shaped how the business and operations were developed – and will continue to develop.

Contrary to the preconceived idea that companies often sacrifice their bottom line for sustainability, doing good and doing well can be complementary to a business. It is about finding the right business model, identifying suitable investment opportunities and allowing sustainability to drive innovation.



