Knowledge Product

How to Get Stuff Done* through Sustainable Investment Clusters

*(GSD)




savo PROJECT DEVELOPERS

P4G Partnering for Green Growth and the Global Goals 2030

GGGI

UNIDO

NIRAS

London Business School

Wheeler Institute for Business and Development

GLOBESCAN

SYSTEMIQ

Key Contributors

ARISE is a pan-African industrial ecosystem developer that designs, creates, finances and builds interconnected infrastructure and provides logistics solutions.

Created in 2010 with the launch of the Gabon Special Economic Zone (GSEZ), ARISE has since built an entire ecosystem of infrastructure and logistics services in the country. Building on this success, they have launched operations in Mauritania and Cote d'Ivoire and have ongoing SEZ constructions in Benin and Togo, in partnership with local governments and investors. ARISE redefines infrastructure for its local context to ensure that sustainable ecosystems create value for stakeholders, communities and the environment for the long term.

Farmforte is an impact-oriented value chain development firm focused on creating novel solutions to existing problems in the African agriculture landscape and transforming them to economic opportunities. Farmforte aims to utilise technology and innovative models to create the most efficient and affordable methods to produce crops, add value and create access to markets locally and globally for these products.

GlobeScan is a global market research firm that advises companies, NGOs and governmental organizations on how to identify & engage with key audiences through research & data.

They provide services including stakeholder mapping, in-depth interviews and analytical modelling to inform clients about their stakeholders and advise on how these insights can be best used to build trust and long-term value.

IDH, The Sustainable Trade Initiative is an international organization that that works to accelerate transitions toward sustainability together with multinational and smaller companies, governments and civil society.

Funded by multiple governments and foundations, IDH delivers scalable, economically viable impact on the Sustainable Development Goals. IDH operates globally in industry sectors ranging from coffee and tea to cotton and apparel, and encourages joint investment in innovative models to realize long-term solutions for environmentally and socially sustainable production and trade.

Locus Economica is a legal and policy consulting firm that advises on the legal, regulatory, and operational frameworks of some of economic zones, free ports and enhanced industrial parks.

They provide program evaluation, policy design, operations structuring, regulation drafting and transactional advice to improve a zone's global competitiveness.

MAS Holdings is South Asia's largest manufacturer of intimates, activewear and leisurewear with a commitment to ethical and sustainable working environments. The organization is headquartered in Sri Lanka with 53 manufacturing facilities placed across 16 countries.

NIRAS is an international, multidisciplinary engineering consultancy company with over 2100 employees located in offices in Europe, Asia and Africa. Across their infrastructure projects, construction, or development aid, NIRAS is commitment to delivering sustainable solutions.

The Global Green Growth Institute (GGGI) is a treaty-based international, inter-governmental organization dedicated to supporting and promoting a low carbon, resilient world of strong, inclusive and sustainable growth.

As of 2020, GGGI has mobilized over USD 2 billion of green investments for its 38 Members which it supports in the transformation of their economies into a green growth economic model. GGGI's Strategy 2030 targets to mobilize over USD16 billion in green and climate finance commitments for its Members. At this scale, GGGI would support its Members to reduce emissions by an estimated one Gigaton of CO2e, generate 2 million green jobs and provide sustainable services to 100 million people.

Tiger Brands Limited, is one of the largest manufacturers and marketers of FMCG products in Southern Africa with footprint extends across the African continent and beyond.

Tiger Brands' focus is on the core business of FMCG categories that spread across the value chain. Tiger Brands is a world–class operation – and will continue to hold and grow its position through constant investment in every asset of the business, be it in people, brands, technology, efficiency, quality or sustainability.

TradeMark East Africa is a development organisation that promotes prosperity in East Africa through trade.

TMEA works with East African Community (EAC) institutions, national governments, the private sector and civil society organisations to increase trade through reducing barriers to trade and increased business competitiveness.

UNIDO is a specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability.

UNIDO helps industries achieve these goals by providing technical cooperation, research and policy advisory services, quality-related activities and coalition-building functions.

WEPZA is a global association of operators and developers, consultants, and academics engaged in evaluating, developing, promoting, and improving special economic zones ("SEZs") globally.

It advances its efforts through its publication, the Flagstaff Journal of Special Economic Zones as well as organising seminars, conferences, and workshops dedicated to improving the performance of EPZs as a vehicle for development.

The **Wheeler Institute** is a research group at London Business School developing, sharing, and implementing business expertise to solve the key development challenges surrounding communities, their livelihoods and their environments.

The Institute advances its efforts through conducting interdisciplinary business research, collaborating with other leading institutions and business, and shaping business education with evidence-based practices.

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About the authors – Savo Project Developers

Savo Project Developers is a dedicated project development company focused on identifying, building, and selling pioneer sustainable businesses and projects, working with leaders in high growth emerging markets. Our mission is to unlock sustainable growth through commercially viable, inclusive, and climate-resilient industrialisation by supporting Sustainable Development Goal (SDG) aligned investors, businesses, and champions. We act as a project developer, supporting individual projects to reach financial close and developing pipelines of bankable projects for investment funds. We aim to bring 25 profitable SDG driven projects to financial close by 2030, supporting the deployment of USD $2.5 billion into sustainable industrial projects and unlocking 1 million jobs. We take inspiration from the (at least) $12-trillion opportunity identified in our work with the Business and Sustainable Development Commission, and our wish to drive ACTION on the ground, incubated in SYSTEMIQ and supported by P4G through the SSEZ Africa Partnership.

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Note from P4G – Ian de Cruz

P4G is a global initiative that delivers impact by bridging the gap between development and investment through pioneering partnerships.

Our mission is to accelerate market-based partnerships to build sustainable and resilient economies. We invest in impact to deliver inclusive and tangible solutions that meet the UN Sustainable Development Goals and the Paris Climate Agreement.

Sustainable Special Economic Zones (SSEZ) is one such pioneering P4G partnership that is demonstrating its potential to scale, replicate and achieve financial sustainability. Through our approach, we have filled the role of the missing middle to unlock investment opportunities in SSEZ and bring it to financial close.

Our venture capital approach to co-creating, co-investing and accelerating our partnerships results in amplified progress on the SDGs and green economic growth in emerging markets. Using this approach, we have systematically created a pipeline of more than 50 market-based partnerships.

We deliberately match like-minded investors with relevant partnerships offering commercially viable and scalable opportunities. Our partnerships are on track to create transformative impact in five key areas: food and agriculture, energy, water, cities and the circular economy.

We believe that SSEZs can advance transformative change across sectors through its innovative private sector investment-driven approach. This is why we actively nurtured the development of the SSEZ partnership that included two rounds of funding to foster replication opportunities in SSEZs across our broader ecosystem.

Investing in P4G and our partnerships means investing in impact. We're interested in working with action-oriented organisations and partners on this journey to build back better and greener.

Note from PIDG – Philippe Valahu

The Private Infrastructure Development Group (PIDG) was established in 2002 and is funded by six governments (the UK, Netherlands, Switzerland, Australia, Sweden, Germany) and the International Finance Corporation (IFC). Our mission is to address market failures prevalent in our target markets of sub-Saharan Africa and south and south-east Asia, which we tackle by demonstrating to the market at large the commercial viability of private infrastructure investment in the poorest countries.

While economic zones may fall outside the more orthodox definitions of infrastructure (although they too will require sources of power, access roads, and availability of water), PIDG recognises the role that they can play in creating economic opportunities, fostering local and regional economic growth, preserving value chains in-country while integrating local firms into global value chains, thereby creating jobs and alleviating poverty.

As a leading proponent of Blended Finance, PIDG can commit to projects over the entirety of their life cycle and across the capital structure. By providing technical assistance, early-stage equity and long-term debt as well as local currency guarantees, our involvement contributes to the de-risking of infrastructure projects and by doing so, catalyses private sector involvement. Executed in a sustainable manner, economic zones can offer scale and replicability that are key tenets behind PIDG's development objectives. These are leading reasons which draw our interest to projects in this field and is why PIDG would be interested to develop relationships with aligned partners.

Note from GGGI – Frank Rijsberman

GGGI is intergovernmental organization established in 2012. Our vision is a low-carbon, resilient world of strong, inclusive, and sustainable growth. Our mission is to support our Member governments in the transformation of their economies into a green growth economic model. We do this through country teams embedded in key ministries in our member countries that contribute to: (1) the development of green growth and climate action plans and policies; and (2) the development of investment projects to implement such policies, together with the mobilization of green and climate finance from public and private sources. Through our partnerships with our member countries, our work has mobilized about US$ 2 billion in green and climate finance over the past 5 years. We help our governments demonstrate that green growth solutions are technically feasible and commercially attractive, when governments create the appropriate enabling environment and remove regulatory barriers.

Special Economic Zones have been an effective government policy to promote economic growth for decades. GGGI has worked with both governments and private sector partners to demonstrate that such Special Economic Zones can be green and sustainable – targeting zero net emissions and zero waste – while providing green jobs. In Indonesia, our GGGI team developed Green Special Economic Guidelines that were a key source of information for this publication. In Thailand we worked with an industrial estate owner to demonstrate the feasibility of a green special economic zone. In Ethiopia we carried out a feasibility study for renewable energy investments in its 16 special economic zones and in Cambodia we work with industry to improve their energy efficiency and use of renewable energy sources.

GGGI is an active partner in P4G and is looking forward to scale up partnerships such as this one around Sustainable Special Economic Zones in its member countries. We believe SSEZs are an excellent opportunity for the public and private sectors to generate green jobs while contributing to climate action. As many countries are developing Green Deals to build back better and greener, they should consider the potential of Sustainable Special Economic Zones as a critical policy instrument.

Note from UNIDO – Rana Ghoneim and Nilgün Tas

Inclusive and sustainable industrial parks are a feasible, innovative and integrated intervention, which can be used to support countries, especially developing countries and middle-income economies, in accelerating their inclusive and sustainable industrialization and structural transformation. Industrial parks have the capacity to generate high productivity, stimulate innovation, promote investment and foster social inclusion and environmental protection.

Over the past four decades, UNIDO has been assisting its Member States in the planning and establishment of industrial parks to achieve equitable economic growth without harmful effects to the environment. As developing and emerging economies seek to increase industrial output, there is also a pressing need to decouple economic growth from environmental and resource inefficiency to meet wider social objectives. As a result, UNIDO applies the concept of Eco-Industrial Parks (EIPs), which offers an effective tool to overcoming challenges related to inclusive and sustainable industrial development within the scope of Sustainable Development Goals (SDGs).

As industrial parks create clusters of energy consuming entities, industrial park operators and enterprises can optimize energy use through 'energy symbioses', by promoting energy efficiency, implementing energy management systems, using renewable energy, and industrial symbiosis where relevant. In addition, the industrial park itself offers

Farmforte, Cashew Processing Centre, Lagos, Nigeria

potential for low-carbon technologies and climate-smart infrastructure planning. These could include the supply of green energy (e.g. solar) for the park and neighbouring demand, act as a hub for sustainable logistics, coupled with sustainable transport systems, such as electric mobility, e-fleets, and cold chain.

The integration of sustainable industrial parks into the larger urban-industrial infrastructure presents unique opportunities with a transformational impact.

Note from SYSTEMIQ – Prof Martin R. Stuchtey

SYSTEMIQ

The great challenge is not just for the world to transition to a low-carbon economy, but to achieve this transformative change in a just, prosperous and sustainable way. It is an opportunity: to use our world's resources more productively, to build economic ecosystems that are more resilient, and to truly meet our societal needs.

The evidence base for this shift is ever more compelling. The policy responses are becoming more proactive, the appropriate technologies are rapidly emerging, the financial system is responding and the industry pledges and initiatives are bolder.

However, action on the ground is often lagging: transitioning whole economies globally, regionally or nationally takes time. Yet, in this decade of action to 2030, we do not have the luxury of time. We need to look for every way of accelerating this transition - and to develop the best.

We are seeing how sustainable investment clusters (SICs), as with sustainable cities, enable businesses to implement their sustainability ambitions more rapidly and more fully. They leverage economies of scale, collective bargaining power and the principles of systemic change. SDG-inspired clusters can provide proof cases for the 'new economy' transition – and show the world the true scale of what is achievable.

SYSTEMIQ is a systems change company that partners with business, finance, policy-makers, and civil society to make economic systems truly sustainable. We combine high-level research with high-impact, on-the-ground work. We work towards clean energy systems, nature-based solutions, and a circular economy for materials. We focus on the systems that will make the biggest impact in combating climate change, safeguarding our natural world and building human prosperity.

Savo is a SYSTEMIQ spin-off and a market-innovating company created around a unique vision: that the just development of the emerging economies should be anchored on a growing number of sustainable innovation clusters that drive local productivity, ease technology transfer and accelerate capital investment in circular and regenerative systems. We trust that Savo's initiatives will provide opportunities for our network of partners to DO things differently, with visible and measurable impact.

Cover photo credits:

Top Left: Greenhouse harvesting at Oserian Two Lakes, Naivasha Kenya
Top Right: Farmforte Cashew Aggregation Centre, Kogi, Nigeria
Bottom Left: Port of Nouakchott ARISE Mauritania
Bottom Right: Logistics Operator, LADOL Sustainable Special Economic Zone, Lagos Nigeria

Acknowledgements

The Savo Project Developers team would like to thank the collaborators and change agents who have contributed to this knowledge product and most particularly those who have supported us on our journey thus far. We know that many share the vision of lower carbon inclusive growth and share the desire of building more tangible examples of sustainable replicable businesses...businesses that generate revenue, profit and sustainable impact. Each of the remarkable individuals listed here below has contributed unique insight and support. Whether you represent a global organisation or a student who knows that there must be a better way...we have learnt from you and will continue to learn from you... THANK YOU.

Listed in organisational alphabetic order:

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Finally, in the spirit of GSD, we ask you to help us to encourage more sustainable entrepreneurs, more sustainable deal flow, and more sustainable real economy action. This knowledge piece will only have been worth it if we are able to name and visit more sustainable investment clusters by 2030 because, after all, the route to impact is to GET STUFF DONE (GSD)

Ade Okuwoga (Knowledge Product Lead, Co-Founder Savo Project Developers) &
Gail Klintworth (Chair, Savo Project Developers)

Executive Summary

In this discussion document, we set out what we hope is a series of practical guidelines and pointers for anyone interested in driving sustainable industrialisation, in a way that supports the green economy and creates jobs, via cluster developments. This "knowledge product" is not a technical user manual. It is not an academic report. It is the expression of our collective experience as project developers working across Nigeria, Kenya, and Ethiopia in trying to deliver sustainable industrialisation through Sustainable Investment Clusters (SICs). We borrow from our friends who share our mission, peppering the document throughout with illustrative case studies and insights from others, which we appreciate greatly. However, the views expressed are ours, and any factual inaccuracies are certainly ours too. Beyond being of general interest, we hope this will be of particular use to other cluster developers and operators, financial institutions interested in this space, policymakers looking to cultivate sustainable industrial projects, and companies looking to recognise the enormous impact they can have through their industrial facilities and value chains, and keen to use this opportunity wisely.

We invite you to delve into the body of this knowledge piece for more detail and useful examples.

Through the rest of this discussion document, we set out:

1. **Our Theory of Change:** By investing more today into sustainable infrastructure and services, we can increase the long-term competitiveness of our businesses and, in so doing, make sustainable choices the default commercial option.
2. **Our end-to-end project development process:** Successful execution of good ideas is only possible with good leaders, so we find the local champions and help them deliver change whatever the context.
3. **Our view on making clusters "bankable" for investors:** Despite the best intentions, sustainably oriented capital has seldom found the right balance between risk, return, and readiness to deploy.
4. **Our view on crucial considerations for governments and policymakers in planning and supporting SIC development:** There is no need to re-invent the wheel. Standardisation supporting frictionless integration into global trade is a must, and a coherent macro plan can help create a more competitive national economy of complementary clusters rather than competing ones.
5. **Our view on how tenant companies can enhance their value chain impact through proactive location and sourcing decisions:** The ultimate drivers of change in this context are the companies, the manufacturers, the offtakers, the employers. Be engaged, be an anchor, and be collaborative to drive impact up and down the value chain.
6. **Our view on how we, together, can create a new asset class and scale this work:** Demonstrating success, facilitating replication and incentivising mainstreaming.

Sustainable Investment Clusters

"Clustering" of commercial activities in support of trade and logistics efficiencies has existed for centuries, often linked to core resource deposits or sea routes, such as the 17th century Staffordshire Ceramics Cluster[26]. Today, clusters have evolved to include export zones, innovation hubs and trade corridors, with an abundance of designations used inconsistently across the world, including export processing zones (EPZs), special economic zones (SEZs), trade corridors, industrial parks, and more.

For our work, we have come to use the term "investment cluster" to capture any and all of the above (we recognise the irony of introducing yet another term; apologies). More specifically, **we use "sustainable investment clusters"** to denote the new horizon in industrial development and planning, which embeds sustainability at its core, and seeks to drive enhanced social and environmental impact while creating enhanced economic results over conventional (or "old economy") approaches.

Our sustainable investment clusters (SICs) are distinct from conventional zones, industrial parks or clusters, in five ways:

1. **We mandate sustainable operating principles and procedures:** Building on conventional standards, we have created a practical tool by way of a tenant-level "Sustainability Pledge", which allows commitment to sustainability with evolving adherence as our sectors develop.
2. **We support sectors to have an outsized social or environmental impact:** We prioritise sectors of the economy that have a direct positive impact through their products or services, such as our hospital in Lagos, while working with other sectors to enhance their impact, such a seeking to utilise the anchor water and power demand of a cement player to scale shared services to the community and SMEs.
3. **We take a landscape approach to value chain development:** We do not consider a cluster in isolation, but as a hub for ecological and social enhancement. For example, we are seeking ways to stimulate a regenerative bamboo supply chain, incentivising smallholders to plant bamboo via our offtake demand.
4. **We incorporate circular design principles to create reliable, renewable, and low-cost utilities and inputs:** Deploying captive power and water solutions, recirculating heat, or working with tenants to capture and create value from their waste.
5. **We invest more upfront, to reduce operating costs and increase long term competitiveness:** We take a long-term view to deploy the best technical solutions, so our investment can create economic value for our tenant companies from day one.

Though these five principles are not distinct to SICs on an individual level, their collective application in a practical and pragmatic manner often is. It is rarely viable to create a "100% best in class" sustainable zone or industrial park from day one. As such, we strive to develop our projects in a meaningful manner which actually "gets stuff done" (the GSD mentality), often using a modular approach that creates bankable projects, attractive to tenants, and in line with the growth agenda of the local government and community.

While public sector projects are essential, we have concentrated our attention on projects that are built around a significant private sector champion, and importantly, select potential cluster opportunities based on their ability to solve a market and ecosystem failure. This combination of a strong private sector champion and clear market need allows us to focus on removing substantial pain-points for businesses from the start and supporting a lower risk investment environment, while also contributing to economic and social development.

Creating a "bankable" SIC, attractive to commercial capital

The question of bankability is essential to any project hoping to attract commercial capital, and to varying degrees concessionary capital. Current times represent the greatest reallocation of capital towards SDG/ESG (environmental, social and corporate governance) or similarly designated investment mandates ever seen, up to USD 30 trillion in 2018 by one estimate.[17] However, despite this accumulation of capital looking to make sustainable investments, viable projects on the ground still struggle with access to capital. Just 20% of infrastructure projects in Africa initiated were successfully completed (compared to 46% in "industrialised" economies).[1] The issue is not purely a lack of decent projects, as anyone in any emerging market will attest; there is a glut of impactful projects for those willing to find them. The issue is bankability within existing mandates and investment readiness. Investment cluster projects struggle as the risk profile is not easily understood, conventionally hedged, or easily bucketed into existing asset mandates (the infrastructure versus real-estate dichotomy being a common investor dilemma). To bridge this gap, we have deployed three mechanisms to boost bankability for conventional investor mandates.

1

Creating high-quality cashflow: An investment cluster presents a range of revenue opportunities, with varying degrees of capital return, security, profitability and resilience (the quality aspects): i) lease and rental charges, for land and buildings; ii) core utilities, inputs essential to operating such power, water, waste, IT, and; iii) auxiliary services, non-essential but often profitable revenue streams such as accommodation, food provision, and facilitation services. Effectively structuring the insourcing versus outsourcing of these revenue streams allows you to create a balanced risk and return profile.

2

Disaggregating and aggregating the underlying assets: As alluded to above, there are multiple asset layers within any one investment cluster: infrastructure, real estate, utilities such as power generation or water treatment, and transport. Depending on the context, being able to aggregate and disaggregate these different asset types can help navigate and attract the right kinds of investors.

3

Structuring against the project lifecycle: Finally, the lifecycle of an investment cluster is such that you move from a period of high risk and uncertainty when both development and commercial risk are high (will you be able to build all the assets? will you get the clients you need to pay for them?), to a period of low risk and high certainty, where the cluste is fully built and tenants secured with long-term contracts with predictable revenue streams. The divergence of risk profiles allows you to front-load returns to the high-risk catalytic investors. Also, the nature of many of these projects is that they can be modular, so you can "tranche" the risk for investors. (Note that public sector clustes funded with free-flowing concessional debt is a different issue, which we do not attempt to address. We have chosen to work with projects which are driven by an identified business need and have an anchor commercial sector tenant as a champion)

Supporting a conducive policy environment

LADOL Sustainable Special Economic Zones, Lagos, Nigeria

Governments, cluster operators, and international organisations all hold some responsibility for developing the policy framework. Key to establishing an effective framework for clusters to operate within, is to ensure each player is working within their respective fields of comparative advantage. From our experience:

1. **The government should be creating fertile ground for attracting cluster developers and tenant companies.** This includes overarching regulations dealing with the macro environment (tax, duties, regional and domestic trade integration, currency convertibility, etc.) as well as targeted micro-level interventions enhancing the ease of doing business (one-stop shops for permitting, fast-tracked approvals, etc.).

2. **Investment Clusters should be responsible for regulating and supporting how their tenants operate,** creating standard operating procedures, one-stop-shop for services within the zone, and tenant-level commitments. For example, in our cluster, we mandate a tenant-level sustainability pledge obligating tenants to adhere to the principles of the SDGs and providing a pathway to improved positive impact in their value chain through in-house support and the facilitation of shared solutions.

3. **International organisations should bring standardisation to investment cluster, sectors, and tenants, creating frictionless trade** by developing shared global initiatives that align standards for products and supply chains, so companies in clusters anywhere can feed into global supply chains and compete within high-value markets.

Perhaps of even greater importance, however, is the initial decision to embark on a cluster development. Here, we have experienced a number of common pitfalls, across stakeholders, which are worth highlighting and are considered in more detail in the main document.

Finally, given the wealth of work in the space, we feel it is essential for policymakers at all levels to avoid re-inventing the wheel. While a one size fits all approach will not work, there is a wealth of resources and experience available to avoid learning anew.

Creating outsized commercial and environmental/social impact

While the role of governments, the Cluster operators, and investors is critical, the most vital driver of sustainable industrialisation is the companies who use and operate within the cluster. As developers, we seek to ensure our cluster are attractive commercially and set up to make operating sustainably the natural default for our tenants. With this in mind, we work with our tenants to help them drive value chain impact both in terms of their suppliers and the local community. Broadly, we have identified three mutually complementary roles we can support our tenants to have:

1. **Market shaper:** Large companies are often able to utilise their purchasing relationships to embed sustainable processes up and down the value chain, by aligning and setting long-term purchasing requirements with suppliers. Cluster operators can work with tenants to enable this by providing "standard ready" or policy-compliant operating conditions for suppliers, and support skills/supplier development in the local market. PVH offers an excellent example of an engaged offtaker helping to align suppliers behind sustainable manufacturing standards in parks like Hawassa.
2. **Anchor offtakers:** For large companies with high resource demands, we can develop core infrastructure utilising the steady offtake, buying power and creditworthiness to achieve economies. We can also create benefits for SMEs/ local community through shared utilities and services. In Kenya, for example, we are exploring a Utilities Trust to provide low-cost potable water to the local community via a solar desalination plant that supplies power and water to our commercial offtakers.
3. **Value chain collaborator:** Finally, all corporates can be collaborative, to support shared services within the cluster (waste to value, renewable energy, e-transport, entrepreneur incubators and more), and to find ways to invest and develop the value chain, for example pooling capital investment into shared pre-competitive processing facilities.

Overall, the key to ensuring positive social and environmental impact through investment clusters is cultivating a community of proactive tenants. These tenants can work together with the support of the cluster operator to achieve mutually beneficial results for the companies, the domestic economy, the local community, and the global consumer market.

We believe that sustainable investment clusters can help whole industrial sectors to transition to more sustainable solutions. If the many industry pledges and coalitions that have committed to sustainable transition were able to co-locate their pre-competitive transition pain-points in localities where fellow industry players and common suppliers also collaborate on pre-competitive pain-points, they could move with greater speed and scale. Our personal experience has identified obstacles in the timber, palm oil, cocoa, coffee, tea and apparel supply chain that could be much better resolved by pre-competitive collaboration around inputs, waste and distribution, standards and even innovation; facilitated in a sustainable investment cluster.

Scaling a new asset class

The above sets out our approach and highlights some of our early experiences in developing investment clusters across Nigeria, Kenya, and Ethiopia. Our aspiration, however, is much greater. Our vision is to inspire and support the creation of 50 sustainable investment clusters by 2030 and to help advance the move to a sustainable real economy. Our vision has three non-sequential implementation horizons:

1

To build clusters to demonstrate the concept of SICs. The first stage is on track and focuses on building sustainable industrial parks on the ground in diverse contexts with a range of different public, private, and other stakeholders in different countries. Through the P4G Partnership programme, we have expanded from Nigeria to Kenya and Ethiopia and we have three investment clusters under development all at different stages.

2

To help facilitate a Sustainable Investment Cluster Project Development facility to cultivate a new asset class. Building on our experience to date and the challenges highlighted, we see a significant gap in the market for a dedicated project development vehicle focused on sustainable investment cluster development. Early-stage risk capital could be deployed much quicker via a pre-approved vetting and selection process specific to investment clusters, allowing the international finance community to come in alongside project sponsors and entrepreneurs at a time where small amounts of catalytic capital are needed for a project to move forward. We are actively engaging with potential collaborator to develop this facility.

3

To catalyse a Global fund to incentivise replication. Finally, once we have created sufficient proof points to support investors to understand and profile sustainable investment clusters, we need to incentivise their replication. To do this, we want to work with the international and national financing community to launch a Global Sustainable 'SIC' Fund, which will aggregate mission-aligned capital and incentivise the development of sustainable industrial parks through providing dedicated capital to industrial facilities and tenants that meet the mandate.

We envisage SICs as a new asset class, which can scale as a default option for anyone considering sustainable investment clusters. Consider the renewable energy space ten years ago, when developing a captive solar project was difficult and expensive anywhere in the world, to today where, in Kenya, one can deploy a sub-1 MW captive solar facility in three months with well-understood vendor finance. We would like to see the same trajectory for sustainable industrial development. Just as with the renewable energy space, we need pioneers today who are willing to invest the time, the risk, and the dedication to make this happen. We invite you to join us.

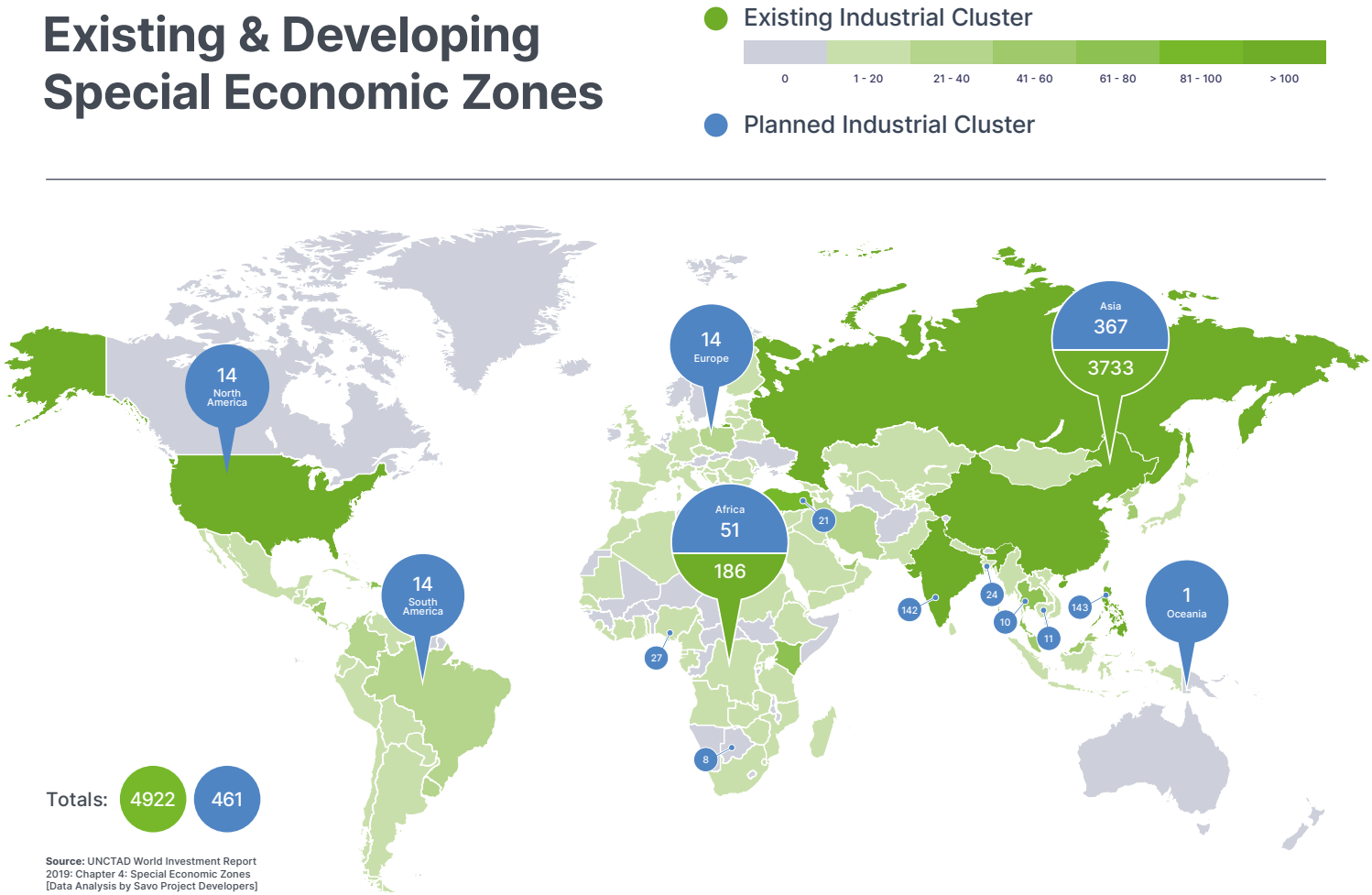
Yours,

Robbie Marwick & Gail Klintworth
CEO & Chairman, Savo Project Developers

Chapter 1
Sustainable Investment Clusters (SICs) - What Are They?

In the 21st century, 400 years since trading clusters were first recognised as a useful economic organising principle for development, economic clusters continue to proliferate across the world. These clusters are known by various names such as special economic zones (SEZs), economic processing zones (EPZs), free zones, industrial parks (IPs) or even trade corridors. For this document, we call them investment clusters (IC) since we wish to use a more generic term to encompass all of these. The number of ICs worldwide has grown ten-fold over the past 25 years, with more than 5,000 now active or gazetted in the world (excluding ICs which are not formally designated at the national level). ICs operate across 150 countries, with the majority in high growth emerging markets.

Existing & Developing Special Economic Zones



Source: UNCTAD World Investment Report 2019: Chapter 4: Special Economic Zones [Data Analysis by Savo Project Developers]

Yet, despite their historic role in powering trade, the touted success of the special economic zone programme in China, and their recent proliferation, zones per se have had varying levels of success. Indeed, 47% are reported as being massively underutilised or "largely vacant", and many are criticised for becoming disconnected enclaves that do not benefit the local economy. Also, zones have been extensively criticised for their negative social and environmental impacts due to unscrupulous tenant selection or lack of regulation and governance. In 2017, an International Labour Organization (ILO) survey found freedom of association, gender equity, occupational health, and unpaid overtime all to be prevalent problems within SEZs.[39]

However, sustainable industrialisation is **critical to the economic development of so many of our fastest-growing markets, markets which are home to the fastest growing and youngest populations.** When delivered through the responsible business activity of manufacturing and trading industries, infrastructure improvement and digitally-enabled advancement, sustainable industrialisation creates jobs and resilience in vulnerable communities, and is key to enabling a **just transition to a more sustainable global economy.**

We use the term **sustainable investment clusters (SIC)** to denote the new horizon in industrial development and planning, which embeds sustainability at its core, and seeks to drive enhanced social and environmental impact while creating enhanced economic results over conventional approaches. Multilateral agreements, regional/national green economy plans and policy packages, and industry and company pledges are beginning to nudge our economy to becoming more sustainable. Sustainable investment clusters can be a tool to further move this forward.

This potential has been recognised by several bodies in the context of economic zones:

"The 2030 Agenda to achieve the Sustainable Development Goals (SDGs) provides an opportunity for the development of an entirely new type of SEZ: the SDG model zone. Such zones would aim to attract investment in SDG-relevant activities, adopt the highest levels of ESG standards and compliance, and promote inclusive growth through linkages and spill-overs."
World Investment Report, UNCTAD 2019

But, as is so often the case, the gap between the vision and the action or "getting stuff done" is a gap in which we find a graveyard of good intentions, reports, wasted funding and stranded assets. We are setting out to **actualise a set of sustainable investment clusters** that can prove what is possible, during this **Decade of Action towards the achievement of the Sustainable Development Goals.**

There are two core beliefs we are building on, in our thinking around SICs:

1. **Businesses scale through creating best practice replicable models that rapidly multiply via entrepreneurial endeavour.** The best global companies have extended across the world through replicable models, and today entrepreneurs are rapidly replicating solutions that drive system change through activating consumer and customer demand for unmet needs. Online shopping platforms, more sustainable consumption choices, shared transport solutions, new solutions for education and health care, and new solutions for financial inclusion are among the many catalysts for system change that are driven by entrepreneurs. Very often, supportive policy packages are required to stimulate the market condition for scaling, but the product or service is an essential driver of the system change.
2. **Entrepreneurs, businesses and other knowledge stakeholders, collaborating in innovation clusters, can create broader solutions that create significant system change.** "Clusters emerge when a network of companies coexists within a geographic location, allowing each of them to collaborate – and compete – in a way which delivers greater productivity gains than they would achieve in isolation. Silicon Valley is the most famous, but there are countless others across every continent."[36] We believe geographic clusters are an essential component of the digital economy, and can support and be supported by digital business models.

We believe that we can use sustainable investment clusters to implement best practices – for sustainable energy, sustainable infrastructure, sustainable mobility, sustainable supply chains, sustainable agriculture, sustainable processing, industrial symbiosis, circular economy models and sustainable social systems. A SIC provides a geographically manageable area to enable change driven by a set of vision aligned stakeholders. We hypothesise that these entrepreneurially driven SICs will help drive the scale and build local system change proof points which are so often what is needed to close the knowledge/action or global/local implementation gap.

Oserian Flower Farm, Naivasha, Kenya

We believe SICs are a realistic ambition. In a dipstick survey of senior supply chain leaders completed by Globescan in 2020, we found the following:.

1. **96% of respondents are planning to operate in SEZs:** 35% are currently, and an additional 61% wish to do so in the future; there is significant and on-going demand for clustered industrial facilities.

2. **88% place a high or medium priority on sustainable development in the SEZs:** There is already strong recognition for the importance of inclusive development within SEZs.

3. **48% of respondents indicated interest for "zones/clusters" to assist in addressing their climate and emissions footprint:** There is a real appetite for convening infrastructure and intermediaries to facilitate the move to more sustainable industrial development.

Driving change in large industries or supply chains will usually depend on a successful proof of concept at smaller scale before global rollout. We believe that SICs provide this opportunity for large businesses that are seeking to adjust their business models to become more sustainable. Moving to lower carbon and more inclusive business practices will often require active engagement and changes to be introduced with suppliers and downstream customers; clustering provides an opportunity for aligned vision and co-creation, that can facilitate this. Driving sustainable change across whole industries will often involve pre-competitive collaboration between competitors to both minimise harmful impacts but more significantly, to maximise positive impacts.

There are already several examples of industrial, logistics, technology, and agri-food "zones" that have become shining lights of what clusters focused on sustainable development can accomplish, four of which are outlined here.

It is possible.

The Netherlands 'Foodvalley'

17.5% of Dutch exports come from agricultural produce. Tapping into its large agriculture sector, the Government of Netherland created a cluster of SMEs and research institutions to promote innovation in agri-foods. Two of the four fields of innovation are sustainability-oriented: circular agriculture and vegetable proteins. The cluster encourages knowledge sharing through networking events and the NIZO demonstration centre that translates research insights from the local Wageningen University into usable technologies for local SMEs. In addition, Foodvalley increases firm scalability through business development programmes and trade shows that help small companies access overseas markets.

Source: Government of the Netherlands; Udayasankar, K 2019

Rotterdam Industrial and Energy Cluster

Port of Rotterdam is a large industrial cluster of many fossil-fuel based businesses, and in 2016 emitted 18% of Dutch CO_2. With the Netherlands aiming to be carbon neutral by 2050, the port made it a central aim to lead the transition to a clean energy, circular economy whilst generating social and economic value aligned with the SDGs.
The Rotterdam Port utilised its existing, dominant industries to make the sustainable transition. In 2019, the Port partnered with Porthos for CO_2 capture and storage, and Royal Dutch Shell to develop a Waste-to-Chemicals plant. Shell will also deliver the Rotterdam region with the residual heat created from its Pernis refinery to heat 16,000 households. Finally, as a large liquid natural gas (LNG) import and export site, the Port is pioneering LNG marine fuel as a low-carbon transition alternative. They incentivise the market to adopt LNG vessels by offering due discount and investing 40 million euros in creating a sustainable, efficient LNG logistics chain.

Source: Port of Rotterdam: Continuously working on the future, 2020

Korean Government's support of the automotive industry

In order to support its automotive industry, South Korea introduced a series of export-led industrial policy in the 1960s. Free trade zones were established with tax and financial incentives in order to tap into the economies-of-scale benefits of (1) reducing costs through clustering and (2) increasing outputs through exports. As a result of these industrial clusters, South Korea's automotive industry rapidly expanded to become the fifth-largest global car exporter in 2010. They increased their output 11 times since 1985, producing a total of 4 million cars.[29] Most significant to our focus on SICs, however, is the more recent focus on green procurement and green supplier development and the transferring of best practices to second-tier and SME suppliers, which has catalysed a widespread adoption of best practice sustainable materials and practices.

Source: Handbook of Sustainability Management, Sustainable Supply Chain Initiatives in The Korean Automotive Industry (2012)

Chinese Economic Zones

13% of all Economic Zones in China belonged to one of the following three sustainability programmes: Eco-Industrial, Circular Economy Demonstration and Low-Carbon Industrial Parks. These programmes aim to minimise industrial waste, develop clean energy and reduce greenhouse gas (GHG) emissions whilst building human capital respectively. From 2005 to 2010, there was a 11% reduction in wastewater production, 76% increase in recycling, 110% more industrial waste was recycled or reused, and a 24% increase in energy yield per ton of coal.

Source: GGGI Case Study China's green Special Economic Zones

Chapter 2
Theory of Change for Sustainable Investment Clusters

We have seen in practice that SICs can work to the mutual benefit of investors and tenants. Now let's use these existing global visions, these best practice examples, this pent-up demand for sustainable industrialisation and all that we know about replication, to drive the action to build more successful and shareable examples.

We have started this journey in Africa where we are developing three bankable projects across entirely "different" commercial circumstances and geographically diverse countries. Our project selection and development is guided by our "Theory of Change" roadmap which we share here.

Theory of Change

Conditions for Success A	Strategy for Execution B	Target Outcomes C
Private Sector Champion	Mandate sustainable operating principles	Local Economic Growth
Dedicated Change agent	Sector selection	Inclusive economic growth
Government policy alignment	Landscape value chain approach	Sustainability
SDG aligned vision	Circular economy design	Scale & replicability
Strategic Value Proposition	Invest for the future	

LADOL, Sustainable Special Economic Zone, Lagos, Nigeria

A. We assess that a clear set of conditions for success are necessary, without which a project is likely to fail.

1. **There needs to be at least one pivotal private sector champion** to ensure the SIC is economically viable and will create a lasting commercial proposition by fostering a competitive local economy. A private sector champion can provide the value chain knowledge necessary to shape the tenants in and around the zone effectively, attracting the labour, materials, and quality control required to flourish. Similarly, the private sector may be able to foster a faster rate of change compared to public sector intervention and have a more direct incentive to reach the scalability required for rapid growth.

2. **There should be one dedicated and effective "change agent"** defined as a leader or sponsor who understands the need for change and can make progress towards it, such as a zone owner, a leader of a private company, or a minister within a local or national government**.** An individual with cross-sector "power and leadership collateral" committed to the execution of the project is often more critical than support from companies, organisations, or even governmental bodies. The change agent should be a core stakeholder in the vision development; be personally committed to and feel accountable for success; command respect within the business community and hold respectful relationships with local and federal government. They should have the commitment and ability to address obstacles to project progress and provide long-term resilience against competing objectives and short-term goals. The change agent should also be able to play this role due to their personal local leadership reputation and broad governance standing, independent of any political influence or patronage afforded by the current power construct (whether public or private).

3. **There should be government policy alignment** through the introduction of business-favourable policy incentives that align with the SDGs and to ensure that regulation does not slow sustainable private sector development.

In this document, we have focussed our attention on the project and enterprise development of **private** sector sponsored SICs since we believe that this is an area of untapped opportunity. However, as with any economic enterprise, appropriate government support is essential for the establishment of flourishing SICs. There are several excellent resource guidelines for policymaking and standards for public sector initiatives developed by our various knowledge partners. We steer you to this in Chapter 5.

Most importantly, the intended activity and location of the SIC must align with national and local economic planning, and government policy support should critically include integrated plans that consider the natural and social resources at the location. We have come across zones that fall foul of this most important consideration and which will fail, with a greater negative impact than before the intervention. Some examples:

- a zone designated for textile fabric processing and manufacturing, in an area short of water;
- a zone reliant on logistics infrastructure linkages, where the cost of moving goods by road or rail (even if they existed) would add untenable costs to the targeted product;
- a zone located in an environment that is uniquely appropriate for the highest quality coffee cultivation and processing, sold to an international garment producer for a cursory amount;
- a zone where the worker capacity requirement in the zone, at peak, is almost half of the total population in the city and housing supply is heavily constrained by high cost, lack of available land and government willingness to offer land for lease.

4. **The vision for the SIC needs to be SDG aligned** since we are seeking to foster growth that has a positive impact on the sustainable development goals. Our experience to date is that this is far from the reality for several potential projects which have come to our attention. We have found all too often (especially when there is political pressure to show progress) that there is frequently a short-term focus on trade promotion and foreign direct investment (FDI) attraction without any focus on "do no harm", never mind any "proactively do good" longer-term focus on maximising the value of sustainable raw material or natural resources.

5. **The SIC must have a strategic value proposition** relevant to its potential for economic success and its SDG impact. While a clear and uncontested land title deed or licence is the first, foremost condition to start developing a SIC, for long-term viability and significant impact, we evaluate SIC locations on a stringent set of criteria. Criteria we use include access to current core economic activity or utilities; logistics linkages and benefits; availability of natural resources that are fit for purpose and can or should be restored or protected; proximity to appropriately skilled or trainable people and SMEs; the appropriate regulatory frameworks and incentives; and finally, the social, environmental, or political significance IF the above criteria align. These criteria may seem obvious, but the literature shows that the many zone failures are undeniably inevitable due to these criteria not being met in the planning phase.

We need to ensure that the identified advantage of our strategic location is realisable within the project period. In the case of LADOL, for example, there is no question that its strategic location affords it logistical advantages. Similarly, the critical importance of Oserian Two Lakes to protecting a vital water site and its access to a natural renewable energy source is undeniable; as is the proximity of Green Heart of Kenya to a vital marine reef with potential for aquaculture.

B. Once we identify that these essential conditions for success are in place, our strategic approach to zone design and development is different from that of conventional zones or industrial parks.

1. **We mandate sustainable operating principles and procedures.** These often go beyond the government's environmental standards to push toward the objectives of the SDGs. While this cannot always be government-regulated, in our experience, a tenant pledge which holds tenants accountable to the values of inclusivity and sustainability before they enter the zone can be very useful. The tenant pledge helps the zone filter high-quality tenants who will have little issue meeting the requirements, provides metrics for reporting on achievements, helps tenants create and pursue their own sustainability goals AND when included as part of the commercial contract, can be used for enforcement.

2. **We support sectors to have an outsized social or environmental impact.** We support sectors that have a direct positive impact through their products or services while working with others to enhance their impact. We have mentioned examples elsewhere in this document and note that we steer our choices by the market opportunities aligned to delivering the global goals. These include renewable energy, circular opportunities in both manufacturing and the bio-economy, forest protection and restoration, climate change resilience, education and healthcare access, among others. For inspiration, we suggest you consider the 12-trillion dollar opportunity[10] linked to business activities associated with advancing the sustainable development goals and the vast set of resources around the energy transition and circular economy models and the restoration economy.

Sustainable Warehousing materials

Industrialisation is a key pillar in the development plans of most African countries, being seen as essential to the broader strategy of enhancing prosperity, creating new jobs and improving incomes. With this, comes huge demand for industrial space, building and warehousing, adding pressure to the construction sector that is already considered "hard to abate" and globally accounts for 39% of all energy-related global carbon emissions. Biomaterials, such as timber and bamboo, present opportunities as alternative building materials with the potential to improve the safety, quality and environmental sustainability of buildings. Savo Project Developers and BuildX have set-out to design and build Africa's first commercially viable, sustainable warehouse in Kenya as a proof of concept to be replicated across Africa, and potentially the world.

3. **We take a landscape approach to value chain development.**
   We consider SICs as a hub for ecological and social enhancement. Essential to our approach is understanding the local natural assets, and developing value chain approaches that support the sustainable management and utilisation of these assets, while creating value for the local community and economy. For example, we are intent on stimulating a regenerative bamboo supply chain in areas of the world where bamboo is a naturally occurring but unprocessed material, incentivising smallholders to plant bamboo.

LADOL Free Zone's industrial symbiosis

In the NIRAS masterplan for the LADOL Free Zone, cashew processors and other agri-tenants with significant biomass waste provide their production by-products (e.g. cashew husks) to the zone's captive power facility as a raw feedstock replacing part or all of the conventional gas demand. This waste to value set up has potential to reduce their power costs by 80% across the zone. Moreover, for tenants that require heat (e.g. cashew shelling), a distribution network of steam direct from the power facility provides a low-cost environmental solution. This is just one example of how LADOL ensures that greater economic growth can occur with a lower environmental impact.

Source: LADOL SSEZ Lagos, Nigeria

4. **We incorporate circular design principles to create reliable, renewable, and low-cost utilities and inputs.** We do this through holistic and complementary tenant selection as well as through the provision of green services such as waste reuse. The overall objective is to create value from waste, optimise operational efficiencies, reduce utility costs, and increase sector competitiveness. Our experience with the LADOL Free Zone and industrial symbiosis is a case in point.

5. **We invest for the future, to reduce operating costs and increase competitiveness going forward.** We do this by deploying the best technical solutions so that our investment can create economic value for our tenant companies from day one, and by investing in sustainable infrastructure today to ensure long-term commercial competitiveness.

Roof mounted solar power plant on a rose farm in Kenya.

ARISE, New Owendo International Port, Owendo, Gabon

C. Through SIC development, we seek to achieve four main sustainability outcomes.

1. **Local economic growth (beyond just jobs):** SICs should be designed to target **local,** sustainable economic growth and to catalyse the growth of industries that will address SDG challenges both locally and globally. Target outcomes will include mobilised FDI and contribution to local GDP, but should also include those relevant to the SDG agenda; for example:

   - Supporting SDG aligned industries and solutions to thrive with competitive industrial and service solutions
   - Catalysing unmet needs of the local economy such as health, education, energy, water, sanitation
   - Improving business climate measures to attract new investment: uninterrupted power and water supply, broadband connection, clearing time for customs goods, traceability enabled

2. **Inclusive economic growth (including decent jobs):** SICs need to provide decent jobs and critically should also integrate regional value chains, partnering across stakeholders and cultivating local pioneers. Regional value chain integration inextricably links the economic success of the SIC to the success of the domestic economy, and the benefits accrued by the zone are inclusive of the local communities. Examples of target measures include:
    - Number of decent jobs created and percentage of women/targeted minorities employed
    - Number of SMEs supported, trained, graduated
    - Number of smallholder farmers included in the input value chain
    - Knowledge transfer via training
    - Local content included in the goods or services produced or supplied

3. **Sustainable green growth:** We believe that SICs can act as an incubator or aggregation point for new approaches and provide a valuable vehicle from which to tackle critical issues around climate mitigation and adaptation. And so, we are building appropriate outcome measures for each of our SICs:
    - Renewable energy sources generated
    - Waste converted or diverted
    - Circular products produced
    - Forest cover or biodiversity protected
    - Land regenerated

4. **Scale and replicability (through financial viability):** Our SICs are intentionally "manageable" in scope and take a modular approach to development versus the centrally planned large priority infrastructure/zone projects that often have decades as their completion timeframe. We believe that:
    - Clusters and programmes championed by "successful" local entrepreneurs will build on invaluable local market insight and, if correctly conceived, monitored, and nurtured, will naturally scale
    - The development of local capacity supported by global best practices will allow for rapid and iterative localized innovation
    - Successful and profitable businesses and business models rapidly replicate locally, nationally, globally

Integrated value chains in India's agro-processing sector

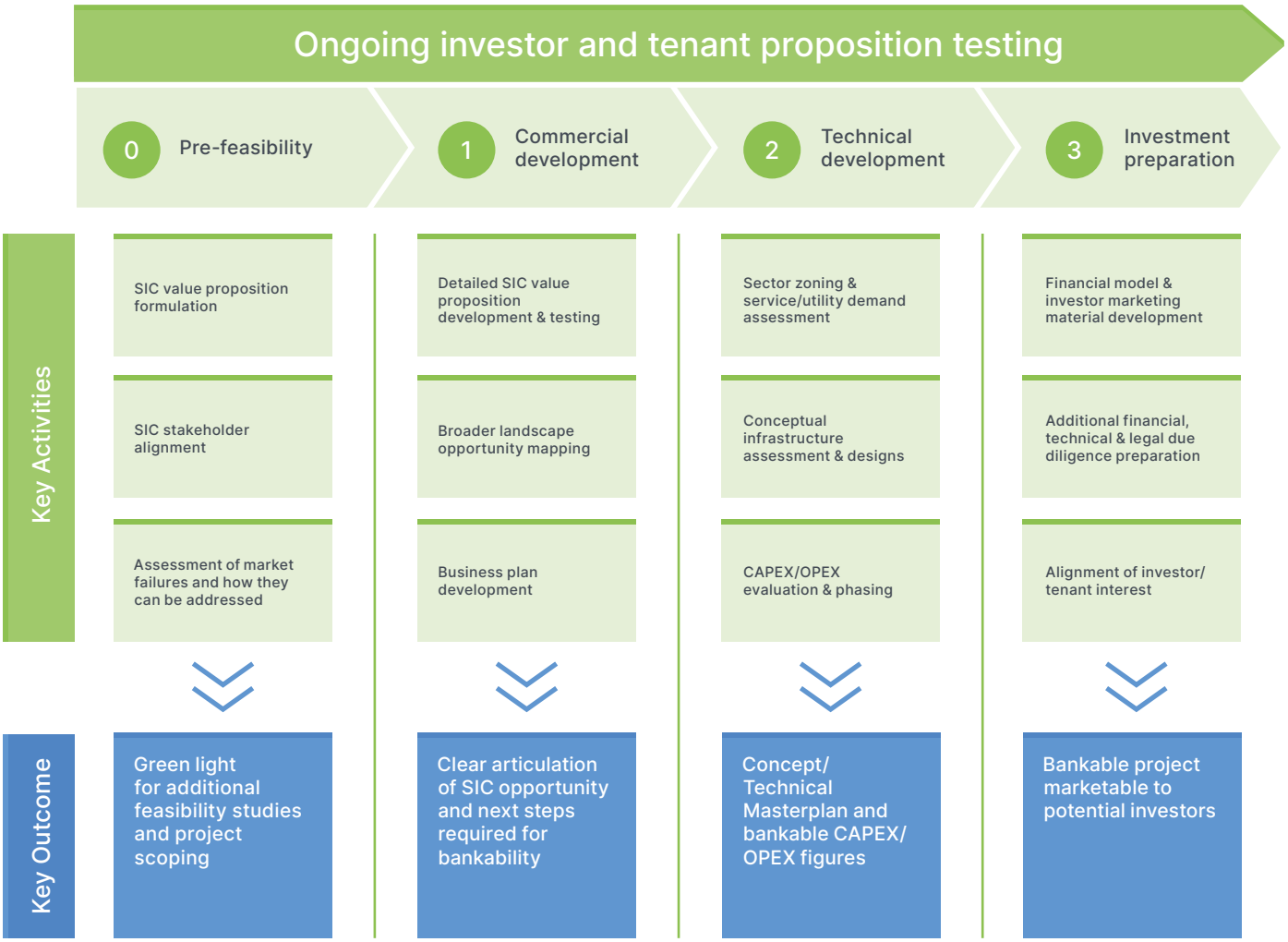
In 1992, to improve raw material quality and farmer's livelihoods, India's Ministry for Food Processing Industries established a scheme that incentivised robust industry-farmer linkages. The scheme provided grants for food processors to buy raw materials directly from 25+ farmers at the gates of the factory. This removed the need for middlemen that could suppress local farmer's revenues and made private processor's profits depend on the local agriculture and economy. In order to be successful under the scheme, processors would need to invest in the local community in order to reap good quality yields through the provision of technical assistance and high-quality seeds to local farmers.

SOURCE: Agro Industrial Parks India, Laxminarayana 2006

Chapter 3
The Process for Developing Investable SICs

Through the development of our SIC projects in Nigeria, Ethiopia, and Kenya, SSEZ Africa and Savo Project Developers have combined expertise on how to identify, design and execute private bankable SIC projects that drive outsized social and environmental benefits. The fully integrated process illustrated in this chapter, including pre-feasibility assessment, commercial plan development, initial technical design, and investment readiness has been curated through our practice to reduce project risks and increase project viability. The outcome of this process is a carefully considered project that attempts to pre-empt the concerns of commercial investors and builds in the full potential for SDG impact.

"In short, ideas inform the future, but someone needs to manage the actual action and see it through."
Senior Director/Director Indonesia



We will not begin to consider any project unless it can clearly meet each of the five conditions for success that we outline in our Theory of Change in Chapter 2. Any potential SIC project needs to have a **private sector champion, a dedicated change agent, government support with policy alignment,** an **SDG aligned vision,** and a **strategically significant location.**

Should a project pass each of these five pre-conditions, the project enters the project development funnel, through the four phases of **pre-feasibility, commercial plan development, technical development** and **investment readiness preparation.**

The Pre-feasibility phase

Pre-feasibility determines whether the project is worth progressing to project scoping. Our assessment includes both analytical work and field engagement to test the potential for a bankable proposition that has positive SDG outcomes. In our experience thus far, there is a 1:10 ratio of presented possibilities that are feasible to progress to the next stage.

1

SIC value proposition formulation: We consider the possibilities for sustainable growth inherent in the resources linked to the location of the SIC, the most apparent current anchor industries, and the SDG gaps for the region and specific location. Based on this, we form a hypothesis of the most likely sweet spot opportunities for economic development that have an outsized environmental and social impact. Our initial value proposition formulation includes a high-level market size and business model profitability judgement.

2

SIC stakeholder alignment: We usually find that there are currently "invested" groups of business partners or shareholders to align on a new potential vision. We do this upfront by sketching the potential and possibility for the SIC, which is often quite different from what may ever have been previously considered. For example, an oil and gas servicing "zone" may need some convincing to evolve their business to transition its own energy mix to more renewable energy; a "zone" that had been waiting to sell their land to a bidder with cash who has no concern about sustainable development may need some convincing that holding out for more sustainable returns over time is worth doing. To avoid wasting sponsor resources, we must get an early formal commitment from those who have the power to say YES or NO.

3

Assessment of market failures and how they can be addressed: We consider the critical market failures (externalities, public goods, merit and demerit goods, imperfect competition, imperfect information, immobility of factors of production, unequal distribution of income and wealth) that have created the opportunity inherent in each 'sweet spot'. We examine the reasons for them and develop hypothesised solutions on how to address them based on successful models elsewhere.

Should the project pass the pre-feasibility stage, it receives the green light to progress to further feasibility and to scope the commercial plan development phase.

Commercial Plan Development

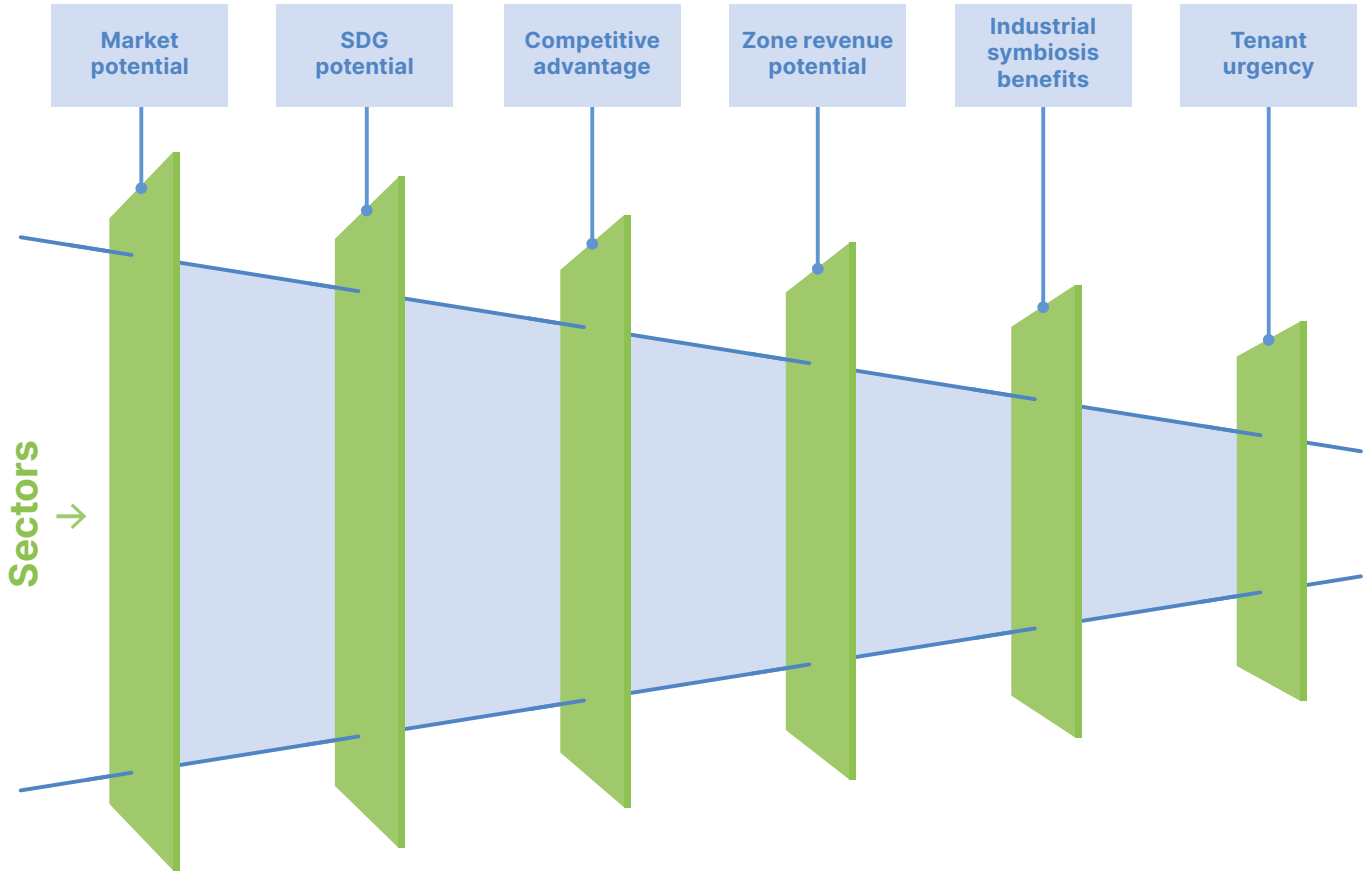
Oserian Two Lakes, Greenhouse, Naivasha, Kenya

In the commercial design phase of SIC development, the core outcome is a market-tested business plan that clearly articulates the fundamental value proposition of the SIC to investors and prospective tenants with a roadmap to execution. The commercial design should describe how the SIC development will address market failures to streamline, and encourage and nurture private sector activity that can have an outsized environmental and social impact in addition to strong economic returns.

1. **SIC value proposition and sector selection:** The plan pinpoints how the fundamentals of the development can spur on *additional* industrial actors/service providers in their core commercial business. This is the rationale for why the cluster should develop. It is relevant to the targeted industry sectors and the answer to the leading question that all tenant and investors will have. We also consider the social and environmental implications of the cluster, mitigating risks and augmenting the inherent benefits to have a greater impact. The SIC value proposition is consistently refined during each stage.

   We build a market understanding of why different private sectors actors are, or should be, interested in the SIC. We use key value driver benchmarks, market potential/interest and pain-points, and use both analysis and grounded reality engagement with potential value chain participants. The ability to quickly curate the sectors' specific business case transforms the SICs ability to attract tenants and thus its ability to reach financial close.

Typically, we screen through seven lenses when evaluating sectors to support within SICs.



- **Market potential:** Define potential sectors by their readiness to scale, maturity, raw material supply, local/global demand and supply, and anticipated growth, risk (political, legal, market, etc.)
- **SDG potential:** Evaluate sectors against their ability to deliver in line with the most critical SDGs for a country, directly and indirectly
- **Competitive advantages:** Explore the SIC sector based on the ability of the value proposition to create an advantage versus other facilities (e.g. partners, anchor businesses, services offered, utility costs, regulatory incentives, logistics benefits, proximity to resources such as natural and human)
- **Zone revenue potential:** Determine the revenue potential to the SIC based on the core services, utilities, and auxiliary services required and how effectively these can be delivered by the development
- **Industrial symbiosis potential:** Evaluate the inputs requirements, waste streams, and other service offerings to explore synergies or new sectors that can be supported/encouraged
- **Tenant urgency:** Determine the urgency of potential tenants identified with a view on their likelihood of tenancy with the SIC. Note that tenant urgency, particularly around an anchor, may come at the start rather than the end of the funnel when prioritising development

It is essential for this exercise to be conducted on a SIC- and location-specific basis. The large number of underutilised and vacant zones are often the result of poor planning in this feasibility phase, despite best intentions. Similarly, the sometimes-blanket prioritisation of sectors in line with national or federal economic policy, regardless of intrinsic qualities of the zone, often supports failure.

Ethiopia's sector prioritisation

In Ethiopia, the Federal Government has prioritised the textile/apparel sector as the flagship focus supported by significant infrastructure and initiative spending. They have set up entities such as the Ethiopian Textile Industry Development Institute to strengthen the value chain and encourage the investment climate for the textiles/apparel industry. The development of multiple textile/apparel focused investment clusters concurrently distributed across the country has led to an oversupply of textile/apparel focused industrial space with many sites lacking the inherent value proposition to attract tenants (utility availability, human resource, logistics, etc.)

SOURCE: Made in Ethiopia: Challenges in the Garment Industry's New Frontier, NYU Stern, 2019 (Synthesis)

2. **Mapping of broader landscape impact opportunities:** We actively search for broader landscape impact opportunities. If one purely considers a "cluster" as a protected enclave of activity, these opportunities will not reveal themselves, but if one considers a SIC as a hub for much broader transformation, the opportunities become apparent.

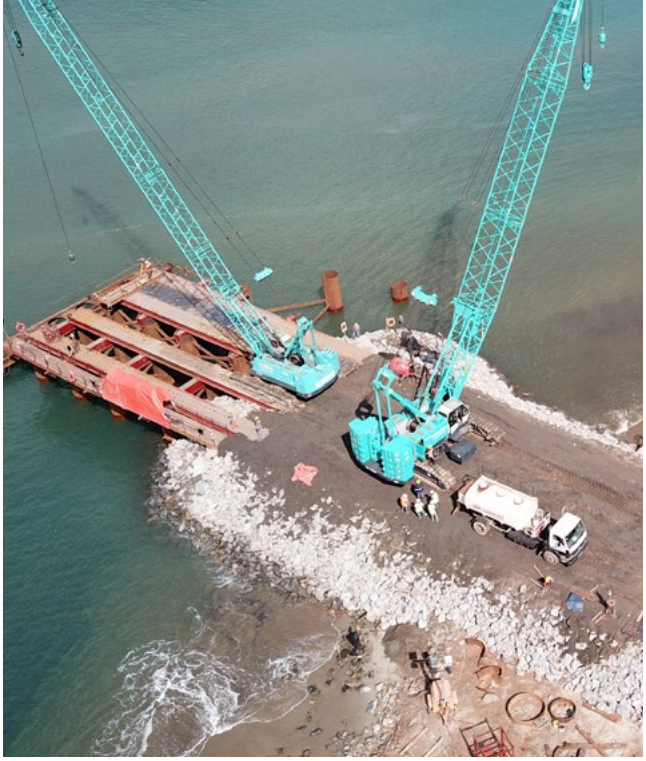
Oserian Two Lakes Industrial Park – support to wildlife sanctuary

Oserian Two Lakes Industrial Park (OTL IP) is a new 150-h sustainable industrial development on the southern banks of Lake Naivasha, Kenya. OTL IP is looking to host textiles and apparel, agri-processing and other light industrial businesses. Situated alongside OTL IP is Oserengoni Wildlife Sanctuary, a ~6,500-ha conservation area and wildlife corridors that boasts over 50 mammal species and over 400 species of birds all year round. Like many conservation areas in East Africa, Oserengoni Wildlife Sanctuary cannot rely on tourism and donations alone, which is why a portion of OTL IP profits are used to support the sanctuary and its wildlife corridors to ensure the future of its localised ecosystem.

SOURCE: Oserian Two Lakes Development Company

Urban and industrial construction, Addis Ababa, Ethiopia.

4. **Business plan development:** We design the SIC vision and business plan with clarity around the value proposition, sector focus and the infrastructure and services required to attract and retain private sector players. We syndicate and test the assumptions (with due consideration to IP protection and competitive privacy) across identified vital public and private stakeholders, which is crucial to the ultimate success of the development. We build the analyses that will be important for investor attraction.



ARISE, Plateforme industrielle d'Adétikopé (PIA), Togo

- **Resource requirements**: Based on sectors identified and their anticipated footprint, resource demands to support the initial technical design (land, utilities, logistics, natural resources, and human capital, etc.) It is crucial at this stage to consistently take the landscape approach looking for industrial symbiosis and circular economy opportunities to guide technical designs in the next stages.
- **Auxiliary services analysis**: The auxiliary services which will facilitate an efficient business environment (water treatment, waste upcycling, health clinics, employee upskilling programmes, etc.) These are not only essential services for potential SIC tenants or participants but are a core component of the SIC business model and an opportunity to support a broader impact.
- **Market testing:** Validation of the project's business model and proposed services, through market testing with potential stakeholders (future tenants, zone operators, regulatory bodies, and experts). SIC developers should actively and critically use market testing to inform the development and design actively.
- **Revenue design:** Given the range of assets deployed, an industrial zone presents a range of revenue opportunities, with varying degrees of capital return, security, profitability and resilience (the quality aspects). Effectively structuring the insourcing versus outsourcing of these revenue streams allows investors to create a balanced risk and return profile.
- **Phasing and timeline:** an integrated business plan for the SIC investment should be created for the duration of the project considering the following drivers:
  - Project size that will capture investor interest and financing
  - Demand projections, primarily based on anchor tenant offtake estimates for the early phases, plus associated sensitivity and risk analyses
  - Capital expenditure plan, staggered across phases as the SIC increases occupancy
  - Service boundaries for current and projected future needs, including land and resource needs for housing, energy, water, etc.
- **Impact measurement:** Early codification of how the commercial decisions implicate project revenue potential, profitability, GDP contribution, job creation, foreign direct investment, and broader SDG impact. In the journey to develop each SIC, every stakeholder has specific metrics they will be are looking to track. It is essential to identify these early, to support later alignment discussions.

Once the high-level business plan proves that the SIC is a viable proposition, across each of the outcomes we identified in our Theory of Change, (**financial viability for scale and replication, local- and inclusive economic growth**, and **sustainable green growth**), we progress to the Technical Development phase.

Technical Development (Master Planning)

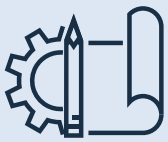
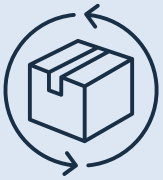
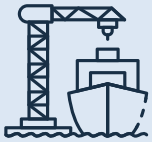
In our experience working with our master planning partners, there is a critical role for an **overall technical project manager**. This role serves as the translator and reality check between the overall SIC vision, commercial drivers and potential tenant requirements, and the technical development activities.

Since we are conceptualising sustainable investment clusters that are often a work in progress, it is essential to **work with a masterplan partner who is comfortable with moving between conceptualisation and calculated output**, with a lean planning and innovation orientation. NIRAS has been a great thought partner that has capabilities in dynamic and iterative planning and "what if" analyses and visioning tools, without incurring high consulting costs at the outset. We also look for expertise in emerging market-relevant climate-resilient and robust infrastructure, experience with new lean sustainable technologies that can apply affordably and reliably in "emerging markets", and industrial symbiosis expertise.

NIRAS

Conceptualising the design of SICs

The approach to SIC development requires multidisciplinary engineering design competencies including urban and industrial design, industrial ecology and participatory design innovation. It is the effective integration of these elements that generates the outcomes required for a successful SIC project. The emphasis on design is indicative of the inherent challenges of SIC developments where tenants have evolving requirements and the design needs to support the requirement sustainably. By considering the changing needs of future tenants, technical master planning must produce flexible and dynamic environments in which tenants have the tools to develop a future proof business model.

Core Design Areas	High-level considerations
Site planning, zoning and layout 	• Create flexible zoning-based layout to maximise the utilisation of available space and preserve adaptability • Support cross-sectoral synergies by co-locating sectors and industries with symbioses and circularity in mind • Ensure a strong interconnecting distribution and transportation infrastructure
Civil works, levelling, and sustainable soil handling 	• Ensure considerations made in site planning are followed through in the construction of the civil works • "Move as little as possible": utilise resources locally and take advantage of natural topographical features, while safeguarding against the spread of contamination from existing and future sources
Logistics and transportation 	• Facilitate accessibility to multiple modes of transport through a robust and flexible infrastructure • Utilise centralised storage and logistics facilities to ensure efficient movement of cargoes • Ensure road networks within the SIC facilitate efficient and safe logistics for movement of goods both in/out and within the SIC to reduce energy consumption and optimise operations
Marine infrastructure and coastal protection 	• Utilise local resources for coastal protection to lower resource expenditure (highly relevant for combined Port/Island SIC developments) • Build marine infrastructure with high capacity and robust structures, to ensure against bottlenecks in capacity and increase operational efficiency, while minimising O&M costs.
Climate resilient and robust utilities 	• Create robust, flexible and redundant utilities and distribution systems • Prioritize captive, renewable energy resources and efficiently utilise sustainably procured residuals • Create modular, scalable water systems that employ best-in-class technology for sustainable water management, while providing integrated climate adaptation

Designing for industrial symbiosis within SICs

Operators within SICs cannot be expected to have identical value chains or resource consumption patterns. Under such circumstances, an opportunity emerges for integrated planning and development to move away from "adequate handling" waste, to a circular approach to resource management. Utilising waste as a resource, by employing principles of circular economy and industrial symbioses, not only lowers the impact of industrialisation by minimising the material footprint of production activities, but also creates commercial value for actors participating within the cluster.

NIRAS has gathered experience from a wide range of industrial symbioses projects, in SICs and other contexts, which can serve as illustrative examples of the symbiosis potential in developing and future SICs.

Energy & Heat Utilising surplus heat from electrical generation or industrial processes	• Industrial steam and process heating networks, servicing a range of demands such as pre-heating, boiling, curing, drying, biochemical and chemical processes • Utilise excess heat to support central wastewater treatment • Boost biogas production via, for example, thermal hydrolysis of biomass to increase methane yields • Utilise absorption heat pumps to produce cooling from low-temperature surplus heat for utilisation in industrial purposes
Water Cascading water systems, utilising treatment solution and a distribution network to treat and distribute different water streams	• Collect, treat, and utilise surface water (rainfall, lake water, etc.) for industrial and domestic purposes • Treat industrial and sanitary wastewater and recirculate for commercial irrigation or for recreational areas to reduce overall water consumption • Utilise reject water from reverse osmosis or similar treatment as low-quality process water or for irrigation • Direct wastewater streams with strong carbon sources directly to biogas facilities to boost methane production and reduce treatment costs • Utilise soapy wastewater from industrial washeries to wash large machinery, trains, buses, etc.
New materials/ resources Utilising surplus materials to create new resources, raw materials, intermediates or finished products	• Construction materials from composites of waste plastics, lignocellulosic fibres and other residual waste elements • High-quality composites for automotive industries from recycled plastics and waste textile fibres • Thermal and acoustic insulation from non-recyclable paper or similar cellulosic fibres • Plasterboard with gypsum from flue gas cleaning instead of raw gypsum from pit mines • Fertiliser for non-consumable crops by combining surplus calcium from chemical processes with mineralised wastewater sludge

About Niras

Since 2018, NIRAS has played a partnering role in the planning and development of Sustainable Investment Clusters (SICs) in both West and East Africa. In this work, NIRAS draws upon decades of experience within industrial and infrastructure development, combined with a holistic approach that seeks to integrate sustainability in all its dimensions throughout the work. Its perspective, derived from this experience, is on the planning, development and implementation of the physical space, infrastructure, services, facilities and technical network within SICs. Special attention is given to designing functional, integrated "infrastructure and utility solutions", e.g. energy, water and transportation solutions that accommodate evolving commercial needs and sustainability goals of the site and its constituent companies.

"If we design and build it right, meaning that we design, develop and implement solutions that are efficient, match the actual needs and avoid lock-ins through flexibility/ phasing/modularity, we've come a long way towards a sustainable design"

Green and Smart Industrial Estate Model: Case study of Amata City Chonburi, Thailand

Future international industrial competitiveness will increasingly be linked to sustainability performance. The **"Green and Smart Industrial Estate Model"** focuses on using sustainable landscape and master planning - namely through green infrastructures and the smart management of energy and waste - to identify, recommend, and outline green projects to implement in industrial areas. Amata City Chonburi, one of the biggest industrial estates situated in the middle of the Eastern Economic Corridor (EEC), was selected by GGGI to demonstrate the potential path in transition to a smarter and greener industrial park. Amata Corporation PCL, the estate developer, aims to provide state-of-the-art facilities for businesses and create integrated cities with a range of services and long-term design to support businesses and communities in and around the estate.

GGGI's and Amata's mutual vision on economic and social development translates into a shared objective to pioneer a green city-industry development model. The objectives of the project *'Transitioning to Green and Smart City: Case Study of Amata'* carried out in Thailand are to work with Amata Corporation PCL (i) to develop

green and smart industrial estate as a best practice for Thailand, and (ii) to share the experiences obtained from this assessment to interested parties across public and private stakeholders nationally and internationally. The project is expected to spur economic growth in Thailand, improve the living standards of the communities in the estate and surrounding areas, and support a more climate resilient and environmentally sustainable industrial transformation.

The ten key green and smart improvement categories[1] of the "Green and Smart Industrial Estate Model" were used to perform a gap analysis that compared the variance between the existing performance of Amata City Chonburi and the performance of an ideal green and smart industrial estate. The outcomes of the gap analysis were used to identify targeted areas for green and smart improvement in Amata which enabled the project team to recommend a number of green projects at different scales, including green infrastructures, social enhancement programs, and other related industrial projects.

Whilst a strong corporate vision is the key element paving the way towards "green and smart" development, a number of collaborative efforts between estate developers, governmental bodies, partners, tenants and relevant stakeholders and communities are all key in advancing the green and smart industrial agenda.

Green Spaces	Renewables Energy & Green Buildings	Smart Manufacturing & Data Infrastructures	Green and Smart Transportation	Smart Water Management
30% of the park dedicated to transportation and green spaces. Design mimics surrounding landscape.	100% green buildings. Renewable energy infrastructures installed in many buildings for dece tralized power generation.	Central data facility and Smart Grid to optimise operations. Industry 4.0 and smart manufacturing programs.	Connected to local, national and international rail networks.	Uses sponge city concepts to protect against flooding. Uses retaining basins to store water.

Industrial Symbiosis	Smart Waste Management	Community Enhancement	Regional Infrastructure Extended	Economic Value Added
Targeted strategic Industries (e.g. new energy auto, life science but no material exchange network used currently.	Basis management program to reduce waste to landfills.	Universities, primary schools and training centers on site. Facilities for community collaboration.	Within an Economic and Technological Development Zone.	Leisure areas (e.g. shopping malls) near site. Facilities to support small and medium businesses generate alternate sources of incomes.

Footnote 1: The ten key green and smart improvement categories are: Green Spaces, Green Buildings and Renewable Energy, Smart Manufacturing and Data Infrastructure, Green & Smart Transportation, Smart Water Management, Smart Waste Management, Industrial Symbiosis, Community Enhancement, Regional Infrastructure Extended, and Economic Value Added.

Investment Readiness and Tenant Acquisition

1

Financial model and investor materials preparation

While we refine our financial model for the SIC throughout the process, once the technical plans and CAPEX/OPEX costs are available, we can finalise the bankable business plan which will be used to raise investment for the SIC developments (Please see Chapter 4). To shape the most investable plan we use creative project phasing, we build further interconnectivity for efficiency, and we include interests and commitments from prospective tenants and stakeholders who we are proactively engaging.

We have come across numerous projects where a vision and a rough masterplan (essentially just a conceptual layout of the physical area) is the sum preparedness in the project sponsor's arsenal as they begin to seek development funds. Unless the project is a centrally funded government project, this is unlikely to be sufficient. The work we do to prepare the business can be essential to securing investment.

2

Project and sponsor detail due diligence preparation

There is a standard list of items project developers run through in the process of getting projects ready for investor diligence, including the clarification of project governance, key person background checks/KYC and the list of standard studies (environment, social, etc.). However, in these projects, there are several more nuanced elements we have experienced that can typically cause friction in the investment raising discussions.

- **Setting up clean SPV structures:** To avoid legacy asset liabilities it is often easier to create clean entities and move assets in rather than attempting to raise investment into legacy/more complex structures.
- **Ensuring land rights:** The right to manage and operate the land is a fundamental precondition; it will be difficult to move any investor conversation forward without clear evidence of such from the appropriate government/ legislative authorities.
- **Project sizing:** Initial phase development needs to match both the appetite of the investors and have a reasonable line of sight for tenant demand (captured through MOUs or LOIs with prospective tenants).
- **Matching deployment of capital to offtake:** To avoid the risk of stranded/ underutilised assets and an appropriate return on capital throughout the project lifecycle it is crucial for the uptake of infrastructure, utilities and services to be matched with the capital deployed.

3

Tenant acquisition

The **ability for the SIC to attract tenants and long-term paying customers** is obviously the core proposition in project bankability. Thus, a codified process of how a pipeline of tenants will be developed and how new tenants will be seamlessly onboarded to the development is necessary.

Anchor tenants and first signed-up tenants for both green and brownfield projects are strategically critical to both the confidence of investors and to the potential for the SIC to deliver against its impact objectives.

We have found that we play an essential role in keeping an **active dialogue with targeted sectors and potential tenants throughout the process.** The right level of conversation around the linkages and value the SIC can bring and the circular impact to be made often moves the relationship with the project sponsor from simply "transactional buy and sell" to a "vision aligned" conversation – assuming that the commercials make sense. **(Please see Chapter 6)**

Chapter 4
Financing for Sustainable Investment Clusters

As we have already outlined, Sustainable Investment Clusters (SICs) represent a significant opportunity for positive industrial development. The Business and Sustainable Development Commission has estimated that implementing and achieving the UN Sustainable Development Goals could generate over $12 trillion of economic value and up to 380 million jobs globally. In 2015, the UN estimated that a total investment of $5–7 trillion a year was required in order to achieve the SDGs by 2030. However, there is still an estimated funding gap of $2.5 trillion a year in developing countries.

It is evident that sources and levels of financing need to be expanded, yet there is a significant pool of capital already available that is not being successfully deployed. By one estimate, in 2019 there was up to $30 trillion of capital designated for ESG/SDG or similar investment mandates.[17] However, despite this accumulation of capital looking to make sustainable investments, viable projects on the ground still struggle with access to capital. Just 20% of infrastructure projects in Africa initiated were successfully completed, compared to 46% in "industrialised" economies[1] suggesting a dislocation between the aspiration of these funders and execution. The issue is not a lack of decent projects but one of bankability within existing mandates and investment readiness. Industrial zone projects struggle as the risk profile is not easily understood, conventionally hedged or easily bucketed into existing asset mandates. To address this, we have deployed mechanisms to meet conventional investor mandates which we discuss later in this chapter..

Financing costs can be one of the highest components of overall costs in infrastructures projects in Africa, accounting for an average of 14% of total project development spend and can reach as high as 30%. Optimising for financing can be critical to a project's success.

Investors

There is a wide range of potential investors, varying in terms of risk appetite, preferred financing instruments, targeted returns and timeframes. Each have their own advantages and challenges.

Prior to the 2000s the majority of investment clusters (ICs) and industrial parks were publicly financed; however, with public resources heavily constrained, there is an increasing trend towards private financing (typically via PPPs). The impact of private investors can also be far broader than the provision of financing. As a rule of thumb, private participation and ownership in such assets drives greater market orientation, industry knowledge and efficiency and can be critical to a project's success.

Yet private investors have a wide range of alternative ways to invest their assets and many are wary of the risks of investing in ICs. In order to attract such investors, it is important to understand their concerns and requirements. As a result, careful financial planning and transaction structuring is required, which we will go on to discuss in more detail.

Depending on the transaction it is often necessary to work with a combination of investors across different stages of the project lifecycle and asset type. And for many investors, individual projects at the early stages remain too small and too risky to deploy capital. One model being deployed is to create "platform investments", where developers aggregate a pipeline of projects, normally at various stages of maturity, into a single hold co-entity that allows larger investors to deploy meaningful ticket sizes while also de-risking early stage projects with the cashflows from mature ones. The ARISE platform in West Africa is a good example of this (See page 50).

The key investor groups and their characteristics are summarised below.

Exhibit 1:

Investor Group	Source of Funds	Risk Tolerance & Cost of Capital	Ticket Size	Primary Financing Instruments	Advantages	Challenges
Government – i.e. domestic or foreign	Public	• Risk Tolerance: Medium - High • Cost: Low	• Varied, across life of project	• Grants • Subsidies • Equity • Debt (loans)	• Govt. participation can reduce risk for other investors and make it easier to secure private financing • Generally lower cost than private investors	• Financing can come with other conditions attached, such as single-source EPC contracts which can be costly • May be a lengthy process to finalise
DFIs/ MDBs i.e. EBRD, AFDB, AFC, IFC	Quasi - Public	• Risk Tolerance: Medium • Cost: Low	• Medium - Large	• Grants • Debt (loans) • Equity	• DFI/MDB participation can reduce risk for other investors & make it easier to secure private financing • DFIs and MDBs can also contribute technical advice • Generally lower cost than private investors	• Some institutions require that financing be channelled through the domestic government • May not have sufficient risk appetite for the development phase
Commercial Banks - local or international	Private	• Risk Tolerance: Low • Cost: Medium-high	• Small -Medium	• Debt (loans)	• Can offer attractive terms for asset backed financing – i.e. commercial units	• Shorter loan tenors (as opposed to DFIs/MDBs) • May require syndication in order to achieve the required scale • Can be expensive given lower risk tolerance
Private Equity and Venture Capital Funds – i.e. AIIM,	Private	• Risk Tolerance: Medium - High • Cost: High	• Medium - Large	• Equity • Debt (bonds, convertibles)	• Higher risk appetite means PE can be a useful source of financing at early project development phases • Private sector expertise	• Higher expected returns (and therefore cost of financing vs public / quasi-public investors)
Real Estate / Infrastructure Funds – i.e. AIIM	Private	• Risk Tolerance: Medium • Cost: Medium	• Medium - Large	• Debt (bonds, convertibles) • Equity	• Private sector expertise	• Higher expected returns (and therefore cost of financing vs public / quasi public investors)
Other Institutional Investors – i.e. Pension Funds, Sovereign Wealth Funds	Private	• Risk Tolerance: Low - Medium • Cost: Low-Medium	• Medium - Large	• Equity • Debt (bonds, convertibles)	• Local investor participation can contribute local expertise and can also be a positive signal to international private investors	• Participation largely dependent on local financial regulation • Low allocation to infrastructure assets (i.e. African pension funds allocate est. 0.1% to infrastructure32 • May not be able to invest directly, instead needing to invest via specialised Private Equity or Real Estate / Infrastructure Funds
Strategic / Industrial Partner – i.e. Olam	Private	• Risk Tolerance: Medium - High • Cost: Low-Medium	• Small - Medium	• Equity • Debt (convertibles, loans) • Contractual – i.e. offtake agreement	• Likely to contribute expertise, operational experience, or offtake agreements	• Not broadly available, ad hoc
Project Development Partners / Investors – i.e. InfraCo Africa	Quasi - Public	• Risk Tolerance: High • Cost: Medium	• Small	• Equity • Debt (convertibles, loans	• Willing to invest at early stages given high risk tolerance	• Lengthy due diligence process • Small ticket size

ARISE: A platform approach to SIC development

Background

The ARISE Group was created out of the Gabon Special Economic Zone (GSEZ) which itself began in 2010 as a PPP between Olam International and the Gabonese Government. GSEZ has since developed infrastructure in parallel with supporting the transformation of critical related industries such as timber and mining. GSEZ has four core business units:

- Nkok SEZ – a 1,126 ha industrial park with 600 ha already operational
- Mineral Port – a mineral port terminal with a capacity of 10 million tonnes pa
- New Owendo Cargo Port – a multi-purpose port with a capacity of 3 million tons pa
- Libreville Airport – where GSEZ has a concession to operate the existing airport and are also developing a new, larger airport

Financing

GSEZ was initially financed by a $240 million investment from Olam, who owned 60% of the joint venture with the Gabonese government.[8] As the zone has progressed, GSEZ has been able to secure financing at both the group level and the asset level in order to finance the development phases and then subsequently refinance with additional investors once at the operational phase.

Various risk mitigation and credit enhancement instruments have been utilised in order to support various elements of the zone's financing. For example, as part of their 2017 investment into GSEZ Mineral Ports, institutional investor Meridiam was able to secure political risk insurance which was reinsured by the US International Development Finance Corporation (DFC).[9] In 2018, GSEZ announced a $57 million local currency corporate bond which was credit-enhanced by Private Infrastructure Development Group (PIDG), who guaranteed the first tranche. The local currency infrastructure bond was the first of its kind in Gabon. For many of the local institutional investors, this was the first non-government bond that they had invested in and as part of PIDG's role they played a key part in helping advance the market.[10]

Platform benefits

GSEZ has been successful in utilising a platform structure in order to attract investment and realise growth opportunities. The platform structure can be an effective way of overcoming some of the challenges previously outlined in this chapter such as transaction size and also scaling of investment. Through creating a platform, investors can deploy more capital and also deploy it faster, in turn helping improve investment returns. In this case this can be seen initially through the GSEZ entity which grouped the various assets within Gabon. This allowed the group to attract an initial $140 million investment from AFC in 2016 who are themselves actively pursuing a platform approach to their investments.

ARISE group and future strategy:

In 2019, GSEZ was reorganised as the ARISE group. GSEZ's infrastructure and logistics businesses were moved into three verticals: (i) ARISE Ports & Logistics (P&L), (ii) ARISE Integrated Industrial Platforms (IIP) and (iii) ARISE Infrastructure Services. Each vertical is a unique joint-venture partnership, with strategic partners and host government shareholders.

This reorganisation takes the platform structure to the next level, allowing each entity to pursue its own growth path on a bigger scale and selectively expand into other markets in Africa. This approach has allowed Olam to be successful in monetising their own investment while also bringing in new investors, such as APMC, to participate in the future growth of each of these distinct verticals. It has also encouraged additional investment from AFC who have increased their shareholding in both ARISE P&L and IIP.

Impact:

GSEZ/ARISE has facilitated significant multi-sector development impact, whilst enabling the effective diversification of the Gabonese economy from its erstwhile dependence on crude oil exports. Sectors that have been enhanced as a result of the GSEZ investment include timber and mining in addition to improved efficiencies for the import and export of containerised and bulk goods.

To date, the GSEZ has created over 8,000 direct, highly and semi-skilled jobs while also financing various educational, training and health related initiatives,[12] thereby contributing to Gabon's socio-economic development. Sustainable development has also been at the core of GSEZ's operations. For example, in 2019, GSEZ implemented a chain of custody system to ensure that all timber logs coming into the SEZ were from sustainably managed forests.

Recognising the gap between commercial capital and asset mandates, we have deployed three mechanisms to boost bankability for conventional investor mandates: creating high-quality cashflow; disaggretating and aggregating the underlying assets; and structuring against the project lifecycle.

Creating high quality cashflows

Given the range of assets deployed, an industrial zone presents a range of revenue opportunities, with varying degrees of capital return, security, profitability and resilience (the quality aspects). Broadly, these can be bucketed into: i) lease and rental charges for land and buildings; ii) core utilities, inputs essential to operating such power, water, waste, IT; and iii) auxiliary services, non-essential but often profitable revenue streams such as accommodation, food provision and facilitation services. Effectively structuring the insourcing versus outsourcing of these revenue streams allows you to create a balanced risk and return profile.

Disaggregating and aggregating the underlying assets

The combination of assets in SICs pose a particular financing challenge to investors' mandates: they do not easily fit within "conventional" real estate, infra or energy funds. However, SICs can be thought of as a collection of sub-assets, typically categorised into four buckets (i) real estate and infrastructure (though note mandate issues), (ii) utilities, (iii) buildings and industrial property and (iv) services. Each of these sub-assets has their own characteristics and risk profiles, which will also vary over time. As a result of these differences, some of these sub-assets can be more relevant to certain types of investor groups and certain types of financing. Depending on the context, being able to aggregate and disaggregate these different asset types can help navigate and attract in the right kinds of investors.

Green Heart of Kenya, Gateway Development, Kilifi Coast, Kenya

These sub-asset buckets are outlined below:

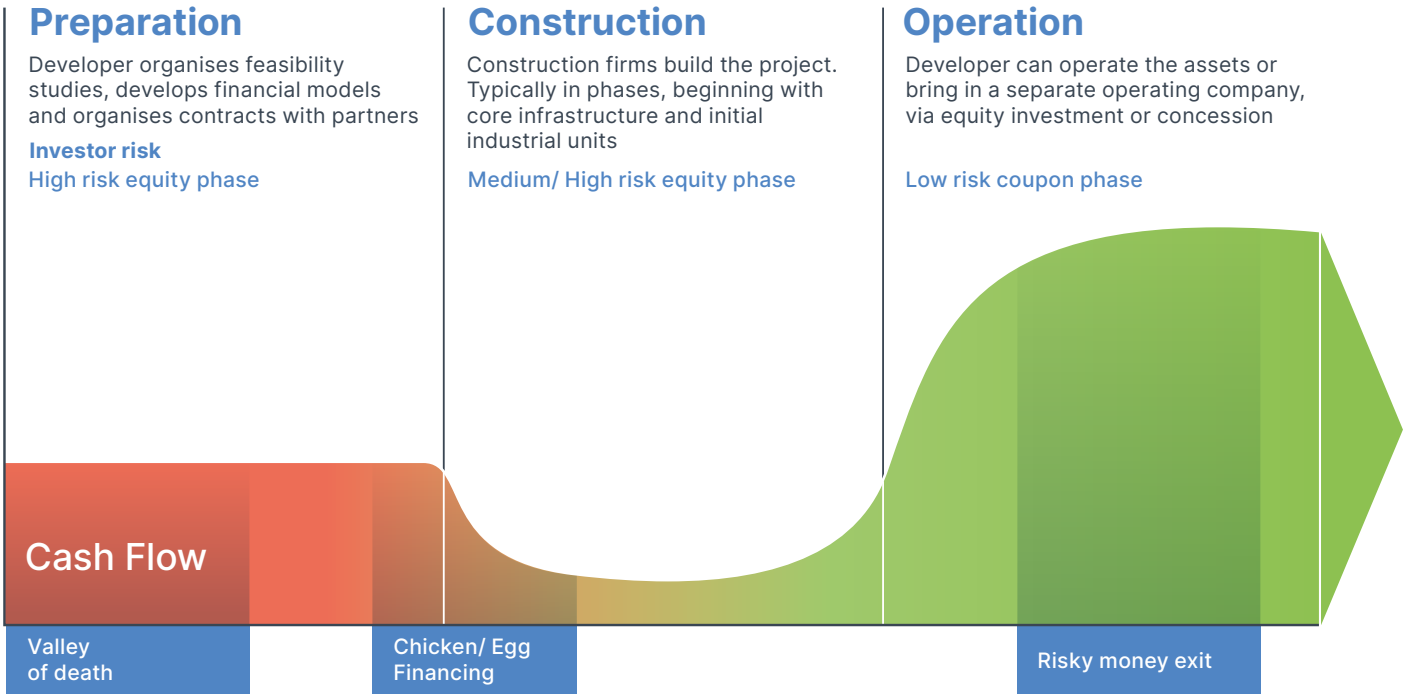
Sub-Asset	Real Estate and Infrastructure	Utilities	Buildings / Industrial Space	Services
Description	• Land acquired for the SIC • On-site roadways, distribution networks – i.e. ports, railroads • Off-site linkages – e.g. roadways, railroads	• Water (either pumping or capture) and waste treatment • On-site / captive power generation (e.g. natural gas generator, solar). • Connection and integration to the local grid)	• Commercial units such as factories or processing sites • Serviced industrial space	• Auxiliary services such as: food; accommodation; security; IT; people movement; cargo movement
Operating Model	• Owner-operated, or for large mixed-use developments these may be operated via partnerships	• Owner-operated or via a joint venture with a technical partner	• Owner-operated or tenant-operated	• Owner-operated or outsourced, potentially via a joint venture
Revenue Model	• Rental income on land and charges or tolls on infrastructure	• Tenant charges (either fixed or based on usage)	• Rental income on commercial units	• Tenant service charges or payments based on usage
Quality of Revenue	• High quality revenue streams, linked to long term contracts • Dependent on quality of local legal and regulatory frameworks / institutions	• Medium / High quality revenue streams, linked to medium-long term contracts • Dependent on quality of local legal and regulatory frameworks / institutions	• Medium / high quality revenue streams, linked to medium term tenancy contracts	• Medium quality revenue streams, a combination of medium-term tenant agreements and charges based on usage
Cash Flow Profile	• High upfront investment • Low / medium margins, with long payback period (i.e. >10 years)	• High upfront investment • Low / medium margins, with long payback period (i.e. >10 years) • Cash flow visibility can be improved via offtake contracts	• Medium upfront investment • Medium margins, with medium payback period (i.e. 5-10 years)	• Low / medium upfront investment (typically lower if outsourced) • High margin and short payback period • Cash flow visibility can be improved via outsourcing
Risk Factors	**Macro Risk:** • Medium / High – large assets carry a higher level of macro and political risk **Development Risk:** • Medium / High – large scale, capital intensive projects carry higher construction and execution risk **Commercial Risk:** • Low / Medium – given long term contracts	**Macro Risk:** • Medium / High – large assets carry a higher level of macro and political risk **Development Risk:** • Medium – can be reduced through bringing in a JV technical partner **Commercial Risk:** • Low / Medium – relating to demand and power price. Risk can be reduced through offtake agreements or FiTs	**Macro Risk:** • Low / Medium – smaller individual assets **Development Risk:** • Low – generally simple commercial units. Risk increases for larger, specialised spaces **Commercial Risk** • Low / Medium – risk relates to securing tenants, risk falls once secured and contracted	**Macro Risk:** • Low – due to limited nature of related infrastructure **Development Risk:** • Low – due to limited nature of related infrastructure. Risk can be reduced / shared via outsourcing **Commercial Risk:** • Low / Medium – risk can be reduced / shared via outsourcing
Relevant Investor Groups	• Government • DFI / MDB • Private Equity • Infrastructure and Real Estate Investors • Strategic • Banks – more relevant for refinancing	• Government • DFI / MDB • Private Equity • Infrastructure & Real Estate Investors • Strategic – technical partner • Banks – more relevant for refinancing	• DFI / MDB • Private Equity • Infrastructure and Real Estate Investors • Other Institutional Investors • Banks	• Private Equity • Infrastructure and Real Estate Investors • Other Institutional Investors • Banks • Strategic – i.e. outsourcing JV partner
Investor Requirements	• Anchor tenant(s), in order to reduce commercial risk • Regulatory approval from Government • Robust legal and tax framework • Experienced management team, with track record	• Offtake agreement or Feed in Tariffs in order to reduce earnings volatility • A strategic technical partner with operational expertise	• Anchor tenant(s), in order to reduce commercial risk • Robust tenant contracts	• Medium / long term contracts with outsourcing partner • Contracts with tenants
Typical type of Financing	• Predominantly equity / grant pre-development • Transitioning to predominantly debt-financed once assets are in operation and / or long-term contracts are in place	• Predominantly equity / grant pre-development • Transitioning to predominantly debt-financed once assets are in operation and / or long-term contracts are in place	• Commercial debt given low / medium risk and asset backing • Equity or debt from institutional investors	• Equity and debt from outsourcing joint venture partner • Commercial debt given the low risk profile, particularly if outsourced

Farmforte Cashew Drying Hub, Nigeria

Structuring against the project lifecycle

The lifecycle of an industrial zone is such that you move from a period of high risk and uncertainty when both development and commercial risk are high (will you be able to build all the assets?
will you get the clients you need to pay for them?), to a period of low risk and high certainty, where the zone is fully built and tenants secured with long-term contracts and predictable revenue streams.

The divergence of risk profiles allows you to front-load returns to the high-risk catalytic investors. For example, on an illustrative 20-year 15% IRR project, you might offer a guaranteed exit to the high-risk period investors, who might need, say, 20% over seven years, achievable by offering a lower-yielding bond to the low-risk period investors who are comfortable with a 7% coupon over ten years.



Recommendations

Despite the mechanisms described above, viable projects still struggle to raise funding. To help counter this, we propose two areas where innovative investors can help close the gap.

a. **Solving the Chicken and Egg.** There are two questions we are always asked when developing an investment cluster. From investors: How many tenants are secured? From tenants: Do you have the facilities ready to move in? Unless you are creating a taxpayer subsidised "build it, and they will come" zone (which we know have already created many stranded assets), these two questions create a consistent chicken and egg scenario, where investors are not willing to put in cash until x% of tenants are secured, and tenants are not willing to commit until we can guarantee facilities. The conventional wisdom presents this as a typical "blended finance" opportunity, where a development finance institution (DFI) type investor is willing to take a higher risk and a lower return to incentivise commercial capital to come in. However, our experience is that the development finance community are only willing to take the lower return, and not comfortable with higher risk. Before DFIs are willing to come in, we first have to de-risk the project with commercial capital . This is not how it should be.

   While we, as the developers, can counter this issue to some extent with phasing (as discussed above) to create "investable chunks", this modularisation can only go so far and creates inefficiencies of scale increasing overall project cost. We see two opportunities for innovative finance: firstly, re-assess the risk/return trade-off, taking a higher risk for the higher reward would be much more catalytic than simply discounting already matured projects; secondly, consider new ways to provide the early stage de-risking. It is easy enough to de-risk political and currency risk via standardised guarantees from entities such as MIGA (Multilateral Investment Guarantee Agency), but difficult and time-consuming to get any sort of guarantee for commercial risk, which is often the most enabling. Enhancing commercial risk guarantee schemes to close the gap between tenants secured and tenants required would unblock all sorts of bankable projects.

b. **Bridging the Valley of Death.** As with start-ups within the venture capital industry, industrial projects also hit a valley of death, the period at which a sponsor is no longer able to fund development privately, and they are still jumping through available funding hurdles. The issue is not a lack of intent to provide early-stage project development funding – several "DevCo's" exist – rather that industrial zones do not fit easily within existing funding buckets, so the process of approval is very slow if successful at all. Organisations like TradeMark East Africa (TMEA) are doing a good job here, with a flexible approach to industrial development, while InfraCo, as part of PIDG, has recently expanded its mandate to cover industrial zones explicitly. However, swift execution is sometimes hindered either by approval processes that can take years not months and approved vendor framework agreements that are often contracted to consortia of development consultancies (who at times have limited experience of executing projects in these environments and are often "re-learning" the tricks and tips with the deployment of each new team) who have to subcontract appropriate vendors. The solution to our mind is to establish a dedicated project development facility focused exclusively on sustainable SEZ/IPs, which can then deploy capital much quicker via a pre-approved vetting and selection process specific to zones and investment clusters.

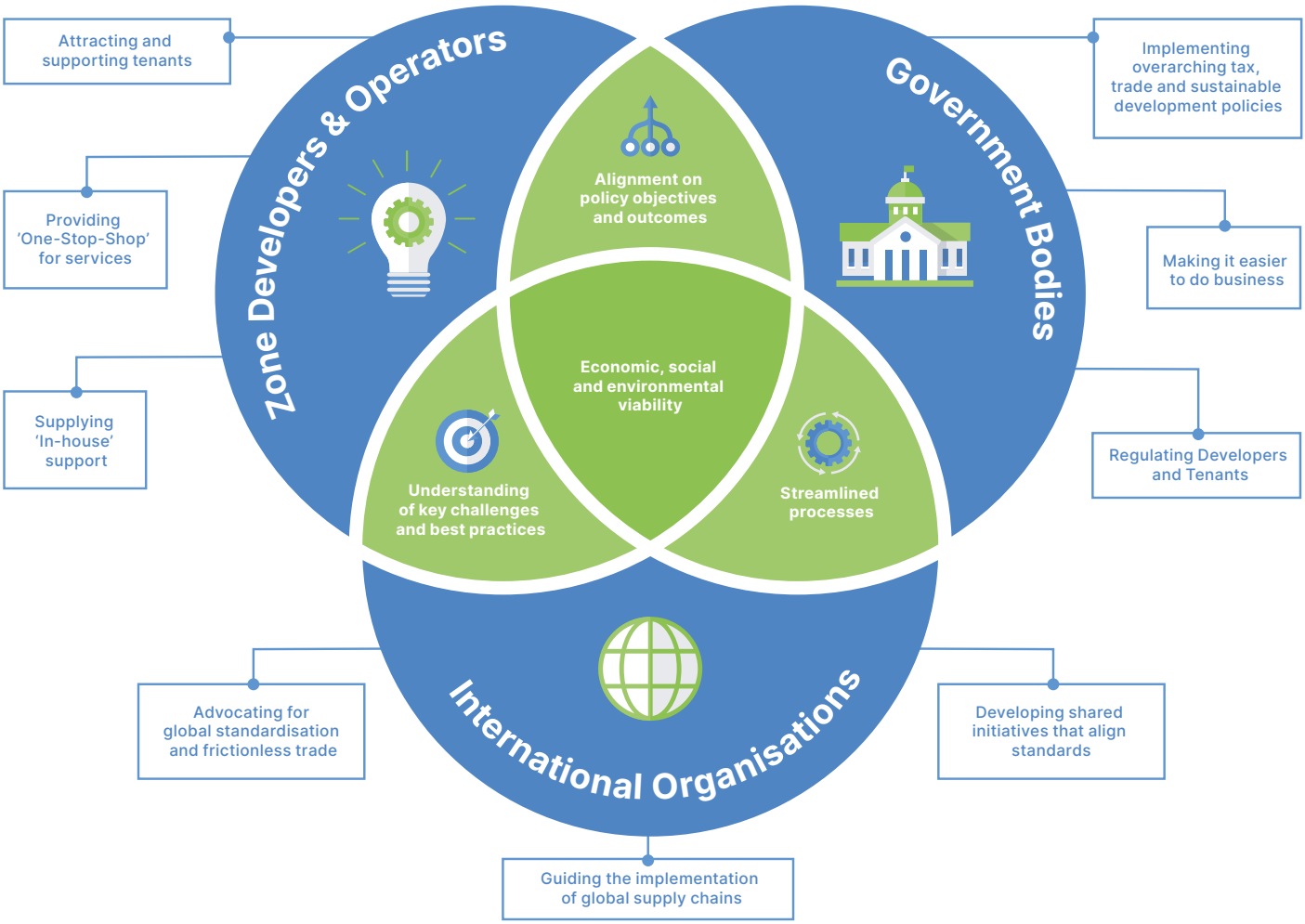
Chapter 5
Supporting a Conducive Policy Environment

Zones will only achieve economic success if there is an effective policy framework in which to operate. This in itself is a challenge. SSEZ Africa has been primarily concerned with how one uses sustainable investment clusters to symbiotically advance the sustainable development agenda and value creation, predominately focusing on private zones.

This chapter sets out recommendations for policymakers, distilled from extensive global experience as informed by World Economic Processing Zones Association (WEPZA), the practical observations of the SSEZ Africa team and the valuable inputs from thought-leader partners. We outline here some of the key takeaways from this experience and practice for policymakers to consider in order to ensure the economic success of managed investment clusters.

1. Policymaking should be a joint effort and benefits considerably from alignment across government bodies, cluster operators, and international and local business and oversight organisations. Many of the challenges we have seen are due to a lack of coordination between these different entities.
2. At the outset, policy stakeholders must robustly and quantitatively answer some fundamental questions as to whether this SIC should exist and whether it has a decent chance of succeeding as an economic entity.
3. In addition to best practices, "negative lessons" learned from past experience should also be borne in mind. We therefore highlight some examples of common mistakes in an attempt to stop history repeating itself, as well as point you towards some resources that should support the process of establishing a sustainable investment cluster.
4. Including the SDGs and the broader impact agenda in the planning process will certainly open up new consideration opportunities, and to this end we include a set of steering questions around the SDG agenda.

Governments, zone operators, and international organisations all hold some responsibility for developing the policy framework. Key to establishing an effective framework for zones to operate within, is to ensure each player is working within their respective fields of comparative advantage.



From our experience:

1. **The government should prioritise creating fertile ground for attracting cluster developers and tenant companies,** covering overarching regulations dealing with the macro environment. Tax, duties, regional and domestic trade integration, currency convertibility, as well as targeted micro-level interventions enhancing the ease of doing business and one-stop shops for permitting and fast-tracked approvals are all policy levers that can be deployed.

   Including the environment and social development policymakers in the design phase is essential to the sustainable development agenda. Government officials at a local, regional, or national level need to on the same page and work to ensure the cluster's business environment is better than the national average.

   The business environment should have simplified and streamlined procedures and regulatory requirements for businesses, to make government interactions less burdensome, costly, and time-consuming, without compromising national sustainable development objectives. See the case study, 'GGGI support of Indonesia Government to develop the Green SEZ Certificate,' which highlights how governments can set in place guidelines that accelerate development through SICs. Moreover, it is strongly advisable that the government involve (or, at a minimum, consult) existing and potential developers and operators, as well as international organisations, in the policy and regulatory development process.

Special Economic Zones and Green Growth in Indonesia

The Special Economic Zones Programme in Indonesia is one of the critical national priority programmes to accelerate regional development for the next five years, as stated in the National Medium-term Development Plan 2020-2024. The National Council for Special Economic Zones (NCSEZ) plans to establish 25 new SEZs over the period, as policymakers expect SEZs will attract $57.2 billion by 2025. However, there is still a need for better SEZ alignment with national environmental objectives, such as reducing GHG emissions by at least 29 per cent.

To support sustainable development in Indonesia, GGGI proposed that the Government introduce an incentive – a Green SEZ Certificate – to economic zones willing to credibly commit to implementing policies, actionable investment targets and institutional mechanisms that lead the zone towards green growth. Developers are incentivised to adopt the certificate as they act as a premium marketing tool to attract high-quality investment, both foreign and domestic.

Parallel Green SEZ Guidelines were also proposed to aid developers to achieve accreditation by providing a set of actions for stakeholders to integrate green growth objectives within the current SEZ planning framework.

Notable highlights from the Green SEZ Certificate accreditation process include:

- **Developer commitment:** Developers commit to design investment plans which include green growth targets and measurable indicators.
- **Implementation support:** Green Growth Technical Team are responsible for supporting the inclusion of green growth objectives into the zone site selection and proposal phases utilising the Green SEZ Guidelines.
- **Ongoing evaluation:** A Green SEZ Committee together with the NCSEZ would assess the overall zone proposal and subsequent operations, and award or revoke the Green SEZ Certificate.
- **Integrated accountability:** Use of a Green Growth Framework which integrates a key domestic environmental business rating instrument issued by the Ministry of Environment and Forestry (MoEF) – to evaluate environmental performance of industries in which zone tenants are involved, which includes sustained economic growth inclusive and equitable growth social, economic and environmental resilience, healthy and productive ecosystems providing services and greenhouse gas emission reductions.

2. **Zones should regulate tenants' operations in a supportive manner,** creating standard operating procedures, a one-stop-shop for services within the cluster, and tenant-level commitment charters. For example, in the Africa SSEZ partnership clusters, we mandate a tenant-level sustainability pledge, binding tenants to adhere to the principles of the SDGs and providing a pathway to improved positive impact in their value chain through shared solutions. However, the core proposition of the zone must be founded on a broader sustainable impact proposition without which all of the internal supportive measures are mitigating measures.

3. **International organisations should bring practical approaches for standardisation to zones, sectors and tenants, creating frictionless trade.** Aligning standards for products and supply chains for companies in zones, anywhere, can maximise scale benefits, efficiency and flexibility of global supply chains, and enable clusters to both compete for and find their particular niches within high-value markets. NGOs and supranational bodies have developed globally acceptable product compliance frameworks; accordingly, their input can play a valuable role in creating an optimal policy landscape.

Despite the best intentions, however, we have come across **common pitfalls that stakeholders need to consider.** Here, we set out our recommendations for how best to respond.

- **Challenge the market failure that is to be solved:** An industrial cluster may not be the solution in every situation and should be carefully assessed in their fitness to address specific market failures or barriers. Often, we see SEZs and IPs rolled out as a generic solution or on a "one zone per region" basis, where the driver is more social or political than economic. Poorly located clusters failing to meet essential economic criteria constitute a significant driver of stranded assets. Rather than achieve political goals, these stand as empty and expensive monuments to poor planning and become a lasting drain on public balance sheets. Neither are SICs suited to address fundamental structural economic constraints relating to geography, labour productivity, environmental problems or macroeconomic imbalances. Fiscal, education policy and other macro-level reforms are generally the most appropriate levers to address these issues.

- **Ensure integrated planning:**
  - Assuming there is economic rationale at the cluster level, it is also important to ensure clusters do not become destroyers of local economic value by competing with, rather than complementing, one another or their host economies. While some degree of competition is good, failing to manage sector selection based on the comparative and competitive advantage provided by regional resource endowments and strategic assets can have negative consequences. For example, in Kenya, the apparel supply chain may be best served by locating fabric wet processing around geothermal energy where nearby steam can fulfil power demand efficiently and cost effectively, and locating labour intensive industries near population densities to improve production competitiveness.
  - Regulation of land holdings through binding tenant obligations must be operationalised; clusters need to ensure tenants are required to invest within a specific timeline or face punitive payments and land retrocession, to avoid land speculation. (This 1970s approach kills innovation, start-ups, incubation, SME development and supply chain lengthening with linkages to Tier 2 & 3 suppliers)
  - Proper zone dimensioning and design based on internal rate of return and cost-benefit of land use compared with counterfactuals is a critical discipline. Zone planning needs to focus on the appropriate metrics, such as sqm of industrial space, rather than sqm of the zone. An average zone, for example, might have a share of rentable

Abuja early showcase for city planning in Nigeria.

industrial space to non-rentable space (roads, green space, utilities, etc.) of 50-60%, depending on the level of utilities, greenspace, social amenities and common services provided within the cluster. We have seen a zone designed to have an industrial space share of just 8%: on a 100-ha site there was only 8 ha of rentable industrial space, the other 92 ha remaining non-rentable. While one can assume this looked great on a capital cost per hectare basis for the 100-ha site, it is dubious on different benchmarks.

- **Think about financing and return on investment:** Managed clusters are expensive. And while they can create meaningful multipliers in terms of economic development, like any asset-heavy investment, if poorly utilised or contracted, they can also become significant drains on public finances. A "build it, and they will come" approach, only works if companies see value in locating within the zone. If the fundamentals do not add up (location, workforce, utilities, regulation, currency, etc.) then not only will the project struggle to attract many companies but, to attract even a few, it will need to offer substantial subsidies and other financial inducements. If subsidies go too far, developers may end up throwing good money after bad, multiplying the cost of the cluster to the rest of the economy and society rather than sharing any benefits. Building around an anchor tenant base and their requirements can help mitigate these risks, as can effective partnering and ensuring effective incentivisation either by entering joint ventures with private sector investors/operators or by rewarding private cluster management on a performance basis.

- **Correctly incentivise investment in the public utilities market space:** We need to incentivise cluster private developers and managers to improve the quality and provision of utilities and services, and ultimately be rewarded based on zone-level operating and financial performance. We should allow them to own and set tariffs for the infrastructure they build, encouraging them to develop cluster solutions and to operate bulk purchasing and pass-through mark-ups. We should encourage them to sell utility services to adjacent and nearby communities outside their cluster to make their investments in public services financially viable. One zone we visited had multiple tenants installing individual gas engines as the zone manager had no interest in how they procured their power or how it was managed. Each tenant in the zone had a personal diesel generator. Such system failures create massive inefficiencies.

- **Be clear on domestic and regional trade integration:** A point of contention can sometimes arise around

whether cluster tenants may sell goods equally in the international, regional and local markets. This issue has for instance arisen in the Greater Arab Free Trade Area (where accommodation has been reached on the matter in recent years) and in the East African Community (where disagreements around the issue remain unresolved).
We have seen the following partial solutions assist in avoiding customs duty leakages, in ensuring equal-footing cross-border trading: i) electronic containers, to minimise customs duty leakages, and segregated internal zoning of "customs controlled" and "non-customs controlled" spaces, to distinguish export and domestic production and sales areas; ii) Compliance with global and regional quality and safety standards; iii) measures to prevent leaking of duty-free goods from clusters into the domestic economy, such as RFID and ANPR technology-based tracking of cargo movements, use of scanners and weigh stations, customs corridors, warehouse and port management systems, TIR Carnets, etc.

- **Define the benefits of and for the local economy:** SICs can act as regulatory laboratories for their broader national host economy, asking tough questions, and testing new approaches to policies. Associated results-oriented programmes and cooperation mechanisms can be then rolled out across the country or region.

IDH, The Sustainable Trade Initiative, 'Race to the Top' Vietnam case study on sector policy

Through the 'Race to the Top' initiative, IDH is working with the Vietnamese Ministry of Natural Resources and the Environment to contextualise 'Zero Discharge of Hazardous Chemicals' guidelines, which move industry away from utilising and discharging hazardous chemicals. The project provides the government and the apparel and footwear industries the opportunity to support Vietnamese factories and protect the environment from hazardous chemicals. Environmental best practices have been put in place to alleviate concern about the increase in pollution from these industries. IDH works to ensure strong policies are implemented to sustainably manage these clusters, especially the wet processes, such as textile mills.

Myriad auditing and assessment standards are driving sustainability in the apparel and footwear sectors. The IDH apparel programme promotes harmonisation in standards to shift away from compliance to capacity building in order to address the root causes of unsustainable practices. The environmental solutions are rolled out through three different components: firstly, existing factories are targeted for efficiency improvements, and, secondly, in the creation of guidance for new firms entering Vietnam to help them address sustainability challenges before they even arise. Finally, the programme works with investors to either establish efficient and clean production processes from the get-go, or to become more efficient and cleaner, for instance through energy and water efficiency programmes, or enhanced wastewater and emissions treatment; this requires investment in green technology. IDH therefore assesses, identifies and strengthens opportunities related to energy and water use efficiency, and wastewater and chemicals treatment, that also result in cost savings.

The business case for sustainability needs to engage all stakeholders and be clear on how incentive structures can be set up correctly to ensure participation, and find ways everyone can benefit from a more efficient and sustainable sector. In Vietnam, the first batch of programme participants has saved 12GWh of energy, the equivalent of 400,000 laptops being turned on for a year. Reductions in annual costs, saving US$966,000, based on decreased electricity and water use, have also been registered. The factory optimisation programme has a typical payback period of 12 to 18 months based on cost reductions as a result of more efficient processes. This programme demonstrates the clear value of such collaborative platforms and public-private dialogue for the development and anchoring of sustainability.

For more information visit https://www.idhsustainabletrade.com/sectors/apparel/

Finally, given the wealth of existing intellectual and academic thought leadership work already undertaken in the policy space, we feel it is essential for policymakers at all levels to avoid reinventing the wheel. **We have seen plenty of resources (with considerable funds supplied to consultants) wasted on repeatedly preparing anew frameworks and strategies year after year, without any notable progress on the ground.** In particular, we would suggest reviewing and leveraging

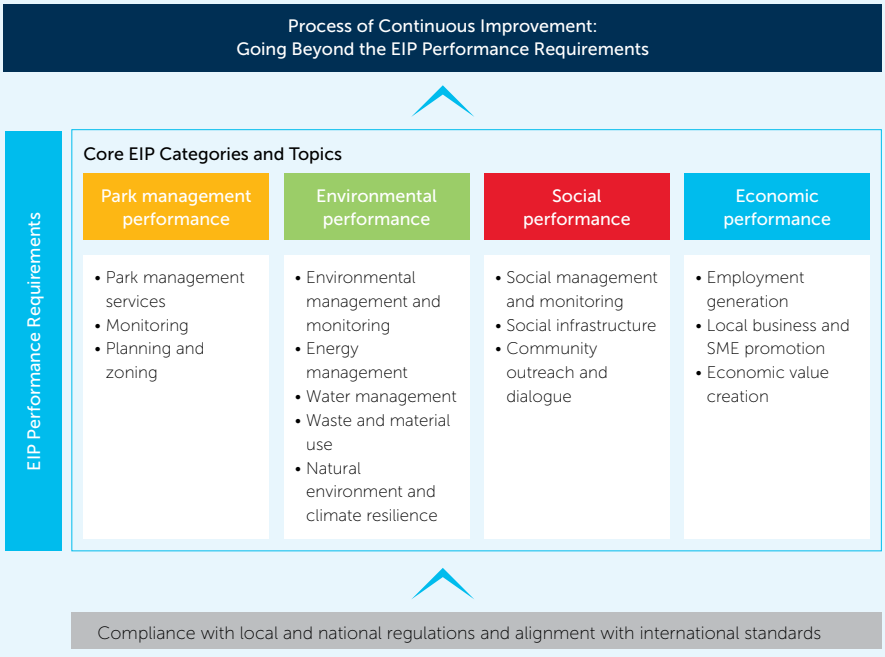
- The World Bank's *Guidance Framework for Policymaking', Practitioner's Handbook For Eco-Industrial Parks,* Special Economic Zones: Performance, Lessons Learned, and Implications for Zone Development, 2008 (http://www.wepza.org/sez-knowledge-bank), and *Special Economic Zones: Progress, Emerging Challenges, and Future Directions*, 2011 *(https://openknowledge.worldbank.org/handle/10986/2341*).
- UNIDO's resources on industrial parks, in particular, the UNIDO, World Bank and GIZ working paper *'An International Framework For Eco-Industrial Parks'*, 2017, and UNIDO International Guidelines for Industrial Parks, 2019 (*https://www.unido.org/sites/default/files/files/2019-11/International_Guidelines_for_Industrial_Parks.pdf*). UNIDO's Theory of Change case study below also sets out how parks can achieve inclusive, sustainable development.
- UNCTAD's World Investment Report 2019: Special Economic Zones *https://unctad.org/en/PublicationsLibrary/wir2019_en.pdf*

UNIDO's 'Theory of Change' – Eco-Industrial Parks

To achieve inclusive, sustainable development, UNIDO supports industrial parks and relevant government entities to meet the performance requirements of eco-industrial parks (EIP), defined as "A community of manufacturing and service businesses located together on common property [wherein member] businesses seek enhanced environmental, economic, and social performance through collaboration in managing environmental and resource issues."[40]. As of 2018, UNIDO had assisted EIP projects across eight countries, with an additional one eco-city, 12 EIPs, and seven EIPs in the pipeline for assistance as regards green development, operations or transformation.

Under these projects, UNIDO assists national industrial park government counterparts to set policy that directs private actors to move towards sustainable industrialisation, ensuring that the regulatory environment provides the conditions necessary to set up and operate EIPs, and integrate them into the economy.

With the host government's approval, UNIDO also assists private zone developers set up, operate or deepen the green transformation of potential EIPs. They assess current practices and identify areas in which developers are not meeting EIP performance standards, as defined below (UNIDO 2018):



Senegal: Promoting sustainable practices in industrial parks

The capital city of Dakar has been expanding, outgrowing the initial infrastructure while hosting the bulk of the country's industrial activity in the Greater Dakar region. As part of the new city development 30km south-west of Dakar, the Government of Senegal has developed the Diamniadio Industrial Park, along with 11 other key industrial zones across the country.

While the economic benefits of industrial zones are undeniable, they also have the potential to create negative socio-environmental impacts. Indeed, most industries are still lacking the capacity to adopt renewable energy and energy efficient processes and technologies, efficient resource management initiatives, chemical and waste treatment.

UNIDO through the GEF funded project Sustainable cities management initiative for Senegal: promoting renewable energy and integrated waste management in sustainable industrial parks in Senegal and in partnership with key ministries and agencies of the Senegal government is developing a strategy to guide the design, implementation, and management of sustainable industrial parks under an integrated urban planning approach.

"The strategy is also expected to guide the future industrial parks towards becoming eco-industrial parks", says Mr. Bohoum Sow, Secretary-General of APROSI, the industrial park manager in Diamniadio.

Mark Draeck, UNIDO Project Manager explains: "The project aims to develop a detailed understanding of the performance of the industrial system in Senegal against the sustainable development standards such as the EIP framework, and build capacities of its key stakeholder to deploy sustainable practices at the industrial level."

In parallel, UNIDO is supporting Diamniadio urban pole in creating and managing targeted climate action plans and enable the monitoring of progress towards their GHG mitigation goals over time. The overreaching goal is to provide tools and capacity buildings to replicate best practices in other cities and industrial parks in Senegal.

Reference: https://open.unido.org/projects/SN/projects/150270

Chapter 6
Using the Structure and Scale of Companies for Good

Historic use of ICs have prioritised utilising cheap labour for low-cost production; centralised strategic business decisions, far removed from operations; limited knowledge or technical spill-over to a very narrow segment of the value chain; and have generally overlooked the upskilling potential for the domestic market as is commonly seen in the textiles industry[6]. Or, ICs have been used as channels to simply extract raw material from their sources with minimal processing, taking the crop's ultimate value and any industrial development that comes with more value-added activities (such as sorting, grading, processing, and packaging) away from the growers.

Oserian Flower Farm, Naivasha, Kenya

Even as companies aspire to increase the positive impact they have with people and planet, mobilisation of resource and time is difficult. As one South African C-Suite member responded in a 2020 GlobeScan Survey: Business is tough. First comes operational needs, cost management, staffing, financing, etc. Sustainability is another challenge that most business owners simply cannot get the hours or dollars to invest in . . . until it has a positive and negative impact on operations, the top and bottom line."

Organisations the world over will sympathise with that view. Yet to achieve the SDG goals, companies are going to have to do more than just aspire to increase the impact that their value chain can have. By working together with other like-minded organisations they can actually compound that impact. Our zones can act as a platform for outsized tenant impact, through creating a conducive environment for collective and integrated action.


Value-added processing activities
Access to global value chains
Healthcare facility
SMEs from local economy
Smallholder farmers
Water treatment
Upskilling facility
Industrial activity / offtaker production
Renewable power / waste to energy
Protection of intact forests & reforestation

Unlocking more impact through SICs

The collective and integrated nature of SICs allow them to be a delivery vehicle for this sustainable supply and more, but will only be realised if there is a shift in the policy, programmes, and collective proactivity of tenants that support SICs to act as centres of excellence driving sustainability into value chains. However, many companies do not see it as their responsibility or do not understand the benefits to be realised from proactively driving development through ICs in the regions that they operate.

In order to achieve the SDGs, offtakers (those that agree to certain purchase quantitates to enable cluster viability) or manufacturers in the zone need to take responsibility for the impact that they can have in the region and proactively seek to improve the situation. Offtakers critically provide size and scale of operations that support commercial viability of a cluster, but of equal importance to cluster sustainability are the resources and capabilities they bring to upskill the value chain and transform operations. Tenants in the zone, with the support and mechanisms of the zone owners/ developers, should work together to build a community of proactivity – seeking to further the positive impact that they can have as a group through a demand for sustainable, inclusive operations.

> "To manage future risks and shocks such as climate-change related severe weather events or as experienced with the COVID-19 pandemic, companies require more flexible and resilient supply chains. However, developing a broad base of suppliers that allows for this flexibility in sourcing while remaining sustainably produced requires collective action from all companies operating in this space. Just as a rising tide lifts all boats, companies collectively need to be the force for change that heightens expectations to operate in this sector"
> **– Chief Sustainability Officer (Anon. Global Apparel Off-taker)**

Without programmes in place to integrate an offtaker's sourcing requirements, associated knowledge, and related investments into the local economy, any investment in a cluster has limited potential. We have identified three areas that offtakers and zone operators/ developers can work on together to their mutual benefit.

1

Market shaper: Large/ multinational companies can utilise their purchasing relationships to embed sustainable practices along the value chain by aligning and setting long-term purchasing requirements with suppliers. Connections with local suppliers can be supported via local content teams in the zone and easy "export" processes to SICs by the government.2 "Standard ready" or policy-compliant operating conditions for suppliers can be provided by zones in collaboration with tenants to ensure quality control and standards are met.

It is important to note that supporting programmes such as management trainings, workstation investment in work environments, and governance development are required by those operating in the cluster in order to realise the potential gains. PVH offers an excellent example of a market shaper helping to align suppliers behind sustainable manufacturing standards in parks like Hawassa.

2

Anchor offtakers: Large companies with high resource demands can utilise their industrial footprint to demonstrate the feasibility of broader initiatives. Leveraging high resource demands, clusters can develop core infrastructure utilising their steady offtake, buying power and creditworthiness to achieve economies of scale that also creates benefits for SMEs/local community through shared utilities and services. For example, we are exploring a Utilities Trust that will utilise a solar desalination plant that is providing power and water to commercial offtakers in Kenya to also provide low-cost potable water to the local community where 60% of water needs are currently unmet.

3

Value chain collaborator: Finally, it is the collaboration between all stakeholders that creates a win-win result. Working with other tenants, suppliers, and the community more broadly to cultivate shared services within and around the zone (like waste-to-management programmes, e-transport, entrepreneurship incubators, and more) and supporting skill and technological development in the local market to invest and develop the value chain. This includes:

- Broader management training – including upskilling facilities that are available for tenants, suppliers, but also the broader community to support "horizontal linkages" that increase knowledge transfer and skills in the region
- Financing for technology upgrades or access to financing – enhancing the company capabilities of those directly in the value chain, but also in complementary industries, and developing the region's competitive advantage in core and ancillary industries that increases investment appetite5
- Supporting shared services deployment – building shared services that utilise the strengths and needs of others located in and near the zone and that eases entry into the market for new suppliers and supporting industries
- Creating broader linkages – linking domestic suppliers with each other, supporting services, and pathways to the market to increase knowledge transfer, market efficiency, and domestic market potential

When SIC partners act as market shapers, anchor offtakers, and value chain collaborators, they can recognise a significant positive impact through their own industrial facility operations and value chains. Here are three projects who are doing just this.

Tiger Brands: cultivating sustainable supply

Tiger Brands is a South African packaged goods company with sustainability at its heart. The organisation is committed to sustainable growth in Africa; they believe that communities should be better off because they are there and take an active role in driving food and nutrition security, consumer education and food safety imperatives, plus supporting the development of small suppliers to actively compete within their supply chain. To this end, they are pursuing an ambitious Enterprise and Supplier Development (ESD) strategy to drive capacity and inclusion of agricultural farmers, black agriculture aggregators and black agro-processing enterprises into their supply chain – including their immediate supplier base and beyond, to the suppliers of their suppliers.

However, there were initial issues in identifying sufficient supply from black-owned smallholder enterprises to meet the programmes goals. That is because, despite having 8 million hectares of land transferred into black ownership through the country's National Development Plan, almost 90% have become dysfunctional due to lack of knowledge, access to finance or inputs, and disconnect from markets. Tiger Brands had the opportunity and the responsibility to take action to create the supply base they wanted to see, and did just that through the following initiatives:

- **Import replacement programme** – They identified grains such as wheat that could be grown on black-owned agricultural land that was currently being sourced in bulk globally. Tiger Brands used their significant purchasing power to guarantee offtake and expanded the domestic supplier market by localising sourcing as opposed to switching between domestic suppliers.
- **Investing in holistic development** – They launched a R100 million ESD fund to provide below prime interest rate loans and co-investment opportunities into direct capacity building and technical support. Collaborating with partners such as existing aggregators of black farmers and community trusts, Tiger Brands investments were able to improve the entire landscape for black-owned enterprises through aggregator development, increased access to markets for farmers, and job creation that uplifted the rural areas of operation.
- **Promoting domestic capabilities and expertise** – They invested in training programmes for farmers, supported capability building and crop rotation plans, and agreed to future offtake of 1000 metric tonnes for 2020 that allowed farmers to reinvest profits into the land for another season.

The success of their efforts is seen in the 4500 metric tonnes of wheat that was contracted and successfully provided by 48 black farmers in Taung, and full repayment of the loan. A secondary project in the Western Cape Province encountered drought conditions and therefore had interrupted supply, but were still able to repay 80% of their loan and will be supported for another year with investment and offtake agreements.

As a company, Tiger Brands demonstrates the engagement required alongside a sustainability strategy in order to drive change. These supporting programmes provide outsized impact by creating a larger pool of diverse, sustainable suppliers to the company and industry as a whole. We believe that continuing to scale these initiatives in collaboration with other similar offtakers in a food industry agro-processing zone could indeed be a way to drive industry-wide change faster.

Green Heart of Kenya, Gateway Development, Kilifi Coast, Kenya

TradeMark East Africa: Kwale Content Project, integrating local cotton suppliers into the value chain

TradeMark East Africa (TMEA) works with East African Community institutions, national governments, the private sector, and civil society organisations to promote prosperity in the region through increased trade. TMEA's initiatives work to reduce barriers to trade (e.g. improving the trade regulatory environment or transport infrastructure capacity) and increase business competitiveness (e.g. increasing exports and piloting trade and logistics clusters). A key component of these trade and logistics clusters is connectivity – mandating that any investment is matched with local economic connections through the value chain. One example of TMEA's interventions is driving scale and improved market access to the Cotton On Initiative in the Kwale region of Kenya.

The cotton market in Kenya is constrained by limited access to farm inputs/supplies, technical advice to increase yields, and transportation to markets, plus the structures and governance for cooperatives, aggregation, and ginning processes are relatively weak. Additionally, integration of local suppliers and operators into the textiles and garments supply chain are limited by the requirements many global companies have for internationally standard materials and use of established suppliers. However, TMEA and their partners, Kwale Cotton Project, Base Titanium, and Cotton On Group, identified an opportunity to provide brand-agnostic cotton and develop the ancillary operations in the region of the PVH cluster to create opportunities for up to 20,000 coastal cotton farmers and generate additional income of $15 million over five years.

The Kwale Cotton Project (KCP) has focused on training farmers, increasing access to finance, advocating for more equitable prices for farmers, and increasing governance processes and professionalism in cooperatives. Utilising a key component of their connectivity strategy, TMEA will be able to further the impact of these initiatives by introducing mechanisms to increase these farmers access to industrial clusters and markets more broadly and improving the skills and capacity of farmers and cooperatives to better compete. This includes activities such as:

- Developing links between the local ginnery in Kwale and the nearby Kilifi Eco Industrial Park as well as other market opportunities in Kenya and EAC
- Piloting and scale up of alternative aggregation business models including farmer-owned aggregation and ginnery combinations
- Providing technical assistance to support inventory management and optimising transport and distribution
- Supporting the design, implementation and capacity building for appropriate certification and standards in line with market demand

The increased connectivity and competitiveness that TMEA prioritises in their projects illustrates the importance of linking value chain investments to the broader market in order to have an outsized impact. In this case, providing the ginneries with access to an established IC as well as broader markets, increasing capabilities of aggregators, improving transportation options, and introducing market-standard quality certifications will not only support coastal farmers' abilities to supply cotton to the ICs involved in the project but prepare them for future success.

MAS Fabric Park: A model zone influencing and innovating

MAS Fabric Park (MFP) is Sri Lanka's first privately owned apparel free trade zone, covering 165 acres in Thulhiriya and serving as a strategic link in the MAS apparel and textiles supply chain. The park was designed to be sustainable from the start, now ISO 14001 accredited, and utilises a dedicated park sustainability team that focuses on bringing the zone's operations on par with sustainability global best practices. MFP has an ISO accredited laboratory to monitor the park's environmental impact (noise levels, waste, etc.) and has driven innovations resulting in reduced water usage by 42% per kilo of fabric, methods to generate steam power from sustainable biomass, and a process to manage 100% of textile sludge into eco-bricks that can be used in construction. Within the park and beyond, the MFP Sustainability Policy Group has set targets for social sustainability including gender parity in management, providing living wages, and freedom of expression and identity for all.

The programmes at MAS Fabric Park have been set up to drive increased transfer of knowledge, structure, and technology to the surrounding area. The Sustainability Policy Group provides direct donations to education, healthcare, schools, and public infrastructure to develop the area around the zone. In addition to this, key programmes within the zone are enablers of spill-over effects, such as:

- **Nike Apparel and Innovation Training Centre:** This learning and development centre in the park is used to develop the management skills of park employees, but has also been utilised by external companies, such as the national airline, fostering an environment of learning and innovation.
- **Eco Park Status:** Over 18% of the park is dedicated green space, with an analog forest, vegetable plots for the on-site restaurants, and chalets that make the park feel less like an "Industrial Park" in order to attract talent to the area.
- **Eco Go Beyond Programme:** A partnership with schools in rural Sri Lanka to educate students on sustainable development practices.
- **Future of Green Parks:** MFP representatives are working with the Board of Investment core team in Sri Lanka to drive more parks to include green features and processes adapted for Sri Lanka's economy such as waste symbiosis, dedicated green lands, and rainwater harvesting.
- **Chemical Input Management Programme:** MFP has been controlling chemical usage in the park since 2013 following global tools, in partnership with ZHDC, and now is working to roll out the programme to their facilities and suppliers in order to control chemical inputs and standardise sustainable processes throughout the process.

The sustainability-focused environment at MFP requires a high standard of operation for all tenants, but it is supported with programmes and solutions developed by the Sustainability Policy Group that provide the resources required to do so. MFP works with potential investors from the start to outline the park's sustainable operation standards to ensure there is a fit between the company values and MFP operations, with the first notable success being the MAS purpose-built green facility. This environment has also fostered strong customer relationships that have proved beneficial during the COVID-19 pandemic, where the park experienced fewer cancelled orders from customers.

As these case studies demonstrate, SICs give tenants the opportunity to drive entire sector change towards sustainability. The value of SICs can be to bring together the collective action of sustainably minded players within an industry to combine efforts for larger scale impact. By collaborating on methods for sustainable and inclusive growth, demanding a change in operations from suppliers at scale, and investing in building a broader sustainable supply base, companies can accomplish more than acting on their own. As a community, they can drive their own sustainability agenda.

Chapter 7
The Roadmap to Scale

Our vision is to inspire and support the creation of 50 Sustainable Investment Clusters by 2030 and to help advance the move to a sustainable real economy. We envisage SICs as a new asset class, which can scale as a default option for anyone considering industrial development in a sustainable investment cluster. Comparable to the renewable energy space, ten years ago, when developing a captive solar project was difficult and expensive anywhere in the world, to today where, in Kenya, one can deploy a sub-1 MW captive solar facility in 3 months with well-understood vendor finance. We would like to see the same trajectory for sustainable industrial development. Like the renewable energy space, we need pioneers today who are willing to invest the time, the risk, and the dedication to make this happen.

Our vision has three non-sequential implementation horizons:

1. **Build zones to demonstrate the concept of SICs:** The first stage is on track and focuses on building sustainable industrial parks on the ground in diverse contexts with a range of different public, private, and other stakeholders in different countries. Through the P4G Partnership programme, we have expanded from Nigeria to Kenya and Ethiopia, and we have three industrial zones under development, all at different stages. Tenants and investors are deploying at LADOL, in Lagos; at Oserian in Naivasha, the site is secured, technical masterplan complete and early-stage investor conversations underway; and, after an initial false start in Ethiopia, a brownfield upgrade and expansion underway with East Africa Holdings in Bishoftu which we sincerely hope will embrace the SDG vision and the learnings from this knowledge product.

2. **Help facilitate a Sustainable Investment Cluster Project Development facility to cultivate a new asset class:** Building on our experience to date and the challenges highlighted, we see a significant gap in the market for a dedicated project development vehicle focused on sustainable industrial zone development. Early-stage risk capital could be deployed with more speed via a pre-approved vetting and selection process SPECIFIC to investment clusters and zones. This will enable bankable assets to be created, allowing the international finance community to come in alongside project sponsors and entrepreneurs at a time where small amounts of catalytic capital are needed for a project to move forward.
A few leading investors are already starting to work out how we can make this happen and there is no shortage of opportunities from existing mandates for catalytic capital to create a pipeline for much larger follow-up capital.

3. **Catalyse a global fund to incentivise replication:** Finally, once we have created sufficient proof points to support investors to understand and profile sustainable investment clusters, we need to incentives their replication. Ideally, the international and national financing community could launch a Global Sustainable 'SIC' Fund, which will aggregate mission-aligned capital and incentivise the development of sustainable industrial parks through providing dedicated capital to industrial facilities and tenants that meet the mandate. Since this is not our mandate, we are keen to partner and collaborate with institutions and asset managers to help design and launch this fund.

1 Phase — Demonstrate the SIC Concept

2017 – 2019

Develop the world's first SIC, demonstrating that it is commercially viable in multiple countries

- Secure first SIC-aligned tenants, starting a network of tenants in impact sectors
- Secure first SIC investor, starting a network of investors for future pipeline

2 Phase — Demonstrate SICs as an asset class

2020 – 2023

Develop a dedicated SIC development facility in Africa, demonstrating that SICs are a new asset class

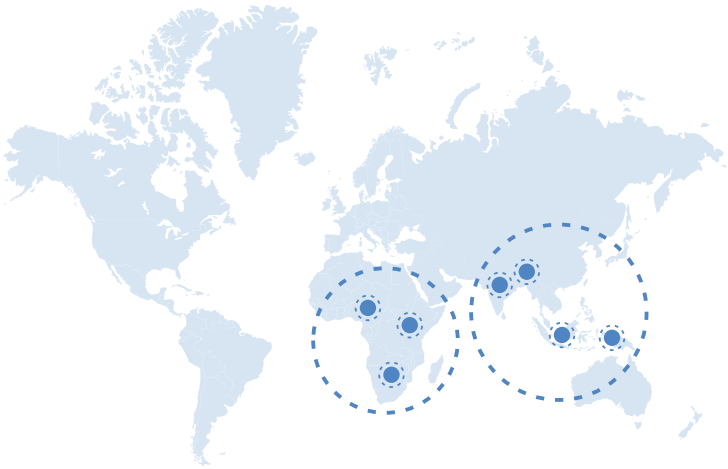
- Secure first SIC as catalyst for market shift
- Publish practical guidelines for developing SICs and demonstrate retrofitting

3 Phase — Galvanise a global fund

2023 – 2030

Develop a SIC Fund, demonstrating sustainability as a default approach to investment clusters

- Scale SIC development facility globally, deploying SICs outside of Africa as the default model for sector development



To make these projects possible, a systemic mindset shift across a broad range of stakeholder is required to:

- **Increase the SDG ambition level:** Developers need to start viewing investment clusters as vehicles for broader SDG impact outside, considering the broader environment and social landscape that they can support.
- **Create real bankable assets:** Investors should work with developers recognising that the development of SIC should be commercial at their core by simplifying the model by disaggregating the underlying assets, creating high quality cashflows, and structuring financing against the project lifecycle.
- **Enable a conducive policy environment:** Governments should be creating fertile ground for attracting developers and investment, zone operators should feel responsible for regulating and supporting how their tenants operate and international bodies should bring standardisations to zones, sectors and tenants to create frictionless trade.
- **Drive impact purposefully with commercial activity:** Tenants within SIC should be proactive on how they view their role within a cluster whether that be anchoring infrastructure investment, engaging more broadly in the value chain to develop local capacity or collaborating with the zones to enhance SDG outcomes.

P4G Perspective on Scaling the Sustainable Investment Cluster Model – Ian de Cruz

P4G's venture capital approach focuses on unlocking the investment potential of pioneering partnerships so they can deliver impact at speed and scale. P4G has applied this approach to scale and replicate the SSEZ model across its ecosystem by seeking out and aligning complementary work done by organisational partners like GGGI across Asia. P4G co-hosted an acceleration workshop on green industrial parks with GGGI to bring the two partnership portfolios together so SSEZ could discover synergies with others in the field and generate greater momentum. The increasing interest in this model shows its potential to be replicated not only across P4G's 12 country partners and GGGI's 37 member countries but also in other regions around the world.

P4G continues to advance SSEZs within the P4G Partnership Family by bringing together partnerships working in circular economy in a Community of Learning specifically designed to enable collective action and collaboration.

ARISE, Gabon Special Economic Zone, Libreville, Gabon

Just Imagine . . .

. . . if companies in an industry co-located and collaborated to invest and develop local regions into competitive markets. More value would be kept at the source of agricultural raw materials with the creation of value-added activities near the farms. Ancillary industries would thrive as companies invested in the technology and skills the local economy needs to provide high quality goods for them and for the market. A common cry for sustainably sourced and traceable goods would launch industry-wide change in order to fulfil the demand of large, global companies.

Companies operating in high growth emerging markets have the capacity to lead this change through the standards they set in their organisation, the investments they make in the surrounding areas, and the partnerships they form with others to bring them along on the journey.

We believe that sustainable investment clusters are the best vehicle to support companies on this journey, with the facilities, partners, and purpose to kickstart this change.

Gail Klintworth, Chair, Savo Project Developers, Board Director and Ex-Unilever Global Chief Sustainability Officer

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COVID Reflections and the importance of SICs

The UN Secretary-General, Antonio Guterres in July 2020, in the eye of the COVID-19 storm, delivered the Nelson Mandela Lecture:

"At a time when we desperately need to leap ahead, COVID-19 could set us back years and even decades, leaving countries with massive fiscal and growth challenges. The crisis is taking us further away from the Sustainable Development Goals (SDGs)"

In the first quarter of 2020 when we started to reach out to partners who might wish to contribute to this knowledge piece, none of us had any conception of the massive disruption that would be coming our way with the global pandemic. COVID-19 has infected millions and claimed lives but has also visited severe consequences on most economies, supply chains and individual livelihoods.

We do, however, have an opportunity to use this crisis to "build back better". There is a growing chorus of leadership voices from across the public and private sector calling for a "just and green recovery". However, as all change initiatives experience, the gap between the vision and plan outlined via global or national insight, policy or best practice AND meaningful, effective and lasting local delivery is what scuppers even the best intention.

While policy packages, pledges and guidance or compliance frameworks are all critical elements to driving this systemic 'green and just economic change', replicable and scalable implementation vehicles in real, local economies to enable 'just and green trade', are essential. We believe that this is where SICs can play a role.

LADOL Freezone, Lagos Nigeria

Throughout the 2020 COVID-19 lockdown, LADOL Sustainable Special Economic Zone (SSEZ) has maintained 24/7 operations for all it's key clients. They have enabled a safe, efficient and a contained working and living environment for the uninterrupted high value services within the Apapa harbour of Lagos. The business continuity and health and safety protocols ,implemented at short notice, allowed the movement of essential goods and services between the LADOL SSEZ, Lagos mainland and offshore operations. A well run cluster can make a significant difference to the resilience of supply chains.

MAS Holdings Eco Park Thurulie, Sri Lanka

Despite MAS apparel plants shutting down on 17th March 2020 as per government directive, MAS was able to restart operations on 28th April 2020 at 30% capacity (and progressively to 100%) thanks to the effective implementation of COVID-19 preventative measures. These included contacting almost all 75,000+ employees to assess their readiness to return to work as well as implementing social distancing and sanitation & temperature monitoring systems in all plants with the oversight of public health officials and the Sri Lanka Police Department.Daily awareness, education and monitoring with employees and the extension of these disciplines to their communities, is playing an important role in pandemic management. In addition to all of the remarkable economic, efficiency, social and environmental benefits of SICs, their potential role in de-risking supply chains, enabling local economic activity and building greater resilience should not be overlooked.

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