Climate Technology Program | *In Brief*

No. 7

Designing an Innovative Financing Model for Early Stage Clean Technology Companies:

Kenya Climate Ventures

A great number of clean energy, water supply, and climate-smart agriculture business models are emerging to address climate challenges in developing countries. While encouraging, many of these businesses lack the access to appropriate early stage patient and risk financing, as well as bespoke post-investment business support to further validate their business models and scale up. To bridge the financing gap for such promising startups, the World Bank Group's Climate Technology Program (CTP) has designed and launched the Kenya Climate Ventures (KCV). This In-brief examines the KCV design to inform similar efforts addressing the 'financing gap' for climate innovation in developing countries.

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Financing Gap

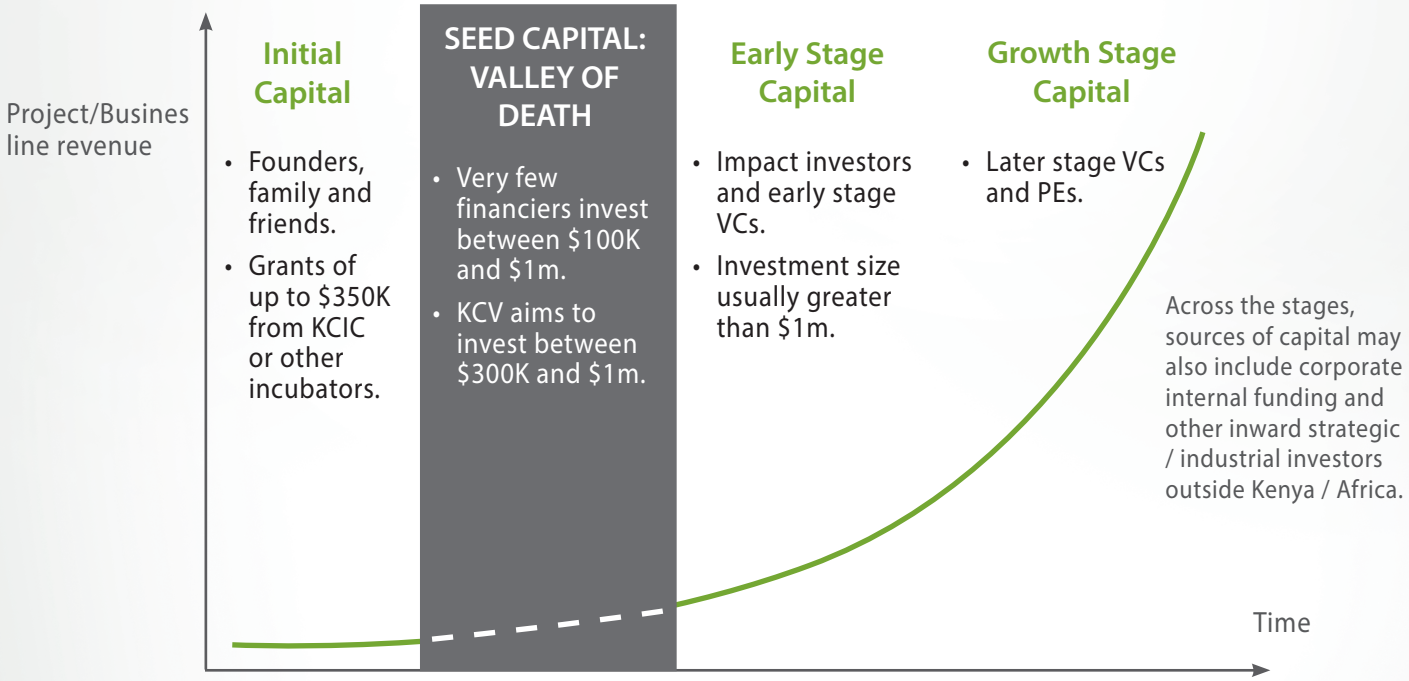
Early stage clean technology companies in developing countries typically turn their own innovative technology into a new product or service, or adopt and adapt proven technologies or business models from other markets. In both cases, customer discovery and verification, business model validation, confirmation of the product commercialization strategy, and efficient distribution channels are essential for success. During this transition stage — from ideation to scale up — companies require both access to capital and a strong management team with access to the information, talent, and knowledge.

Unfortunately, in many cases, the needed capital and the business development support are not always available for early stage clean technology companies in developing countries. These companies can often find support through grants and business incubation programs, but too often funding is limited and not adequately tailored, and the available business development services are insufficient to support growth.

At the same time, while commercially minded investors are interested to invest in the clean technology sector, the majority of them focus on established companies with a proven track record. In case of bank debt financing, the companies are also required to offer collateral. For these investors, early stage clean technology companies in developing countries are not attractive due to their small investment size, need for intensive management support, and a low likelihood that the investment would meet their expectations within an acceptable time frame.

As a result, many early stage clean technology companies in developing countries are stuck in the "valley of death" (see figure 1) where they require a significant amount of cash over time to test their product in the market, validate their business model, and scale. The valley of death is particularly

Figure 1. Valley of Death – Financing Gap in a Firm's Life Cycle in Kenya



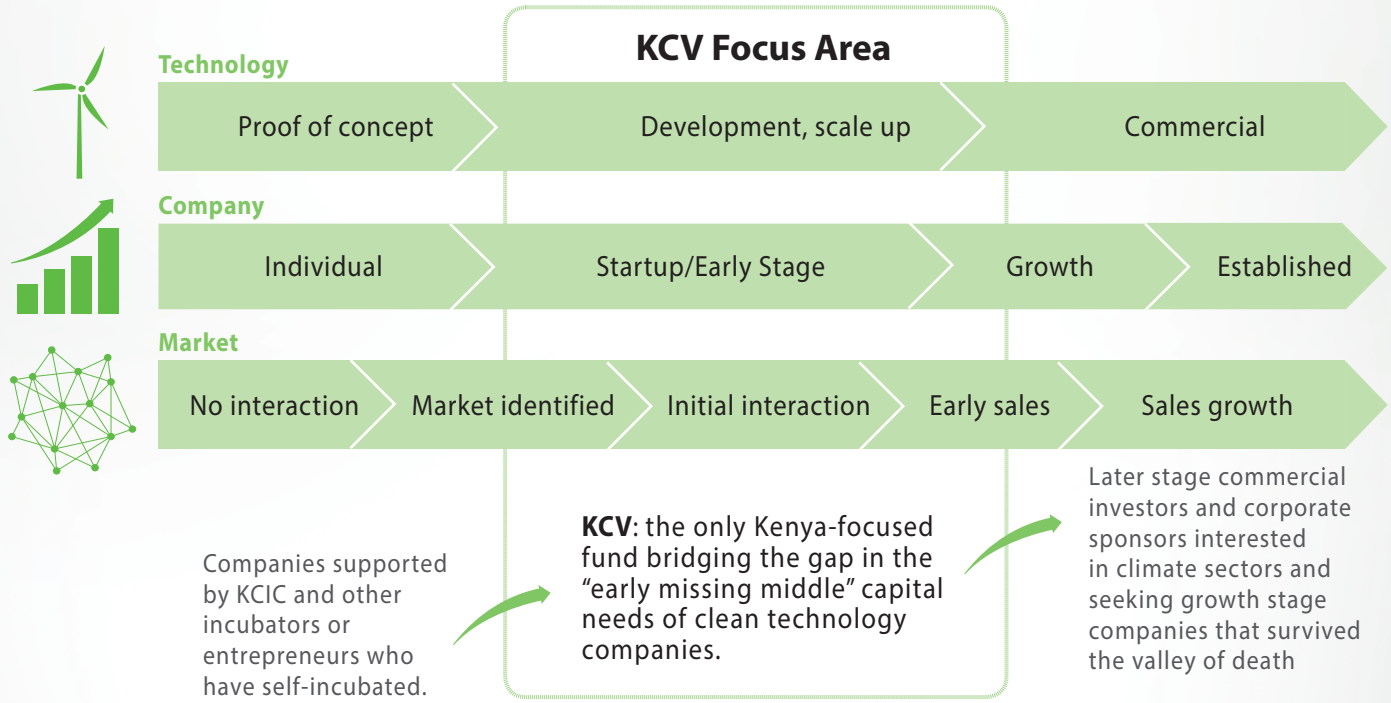
problematic for clean technology companies because: (i) they often require higher upfront capital; (ii) take a significantly longer time to realize returns; (iii) need to develop a new market themselves; (iv) rely on infrastructure that may not exist or is weak; (v) compared to other technology sectors, are heavily affected by government policy.

In Kenya and similar countries, clean technology companies can usually obtain grants up to $350K for ideation and incubation, while more established companies can secure approximately $2M and up from venture capital and private equity investors. However, companies seeking investment from $100K to $1M have a difficult time accessing appropriate financing and are at the risk of stalling in the valley of death. Although the number of impact investing venture funds focusing on the Sub-Saharan Africa region has increased in recent years, these funds typically target companies with more developed business models, in sectors where market uptake is easier to gauge.

The Kenya Climate Ventures (KCV) is defining a new model for investment in clean technology. It is the only Kenya-focused fund bridging the gap in the early capital needs of clean technology companies. By identifying and executing good investment opportunities and realizing near commercial returns at the portfolio level and/or attracting a significant follow-on investment, the KCV helps demonstrate the attractiveness of early stage investments in Kenya's clean technology market.

As illustrated in **figure 2**, if successful, the KCV can function as a bridge for companies coming out of the Kenya Climate Innovation Center (KCIC), other incubators, or entrepreneurs who have self-incubated. The KCV would also serve as a source for attractive deal flow for later stage commercial investors interested in climate sectors and growth stage companies

Figure 2. The Role of the KCV



that survived the valley of death. Furthermore, it could demonstrate to new funds and investors that there is a model, approach, and a viable opportunity to accelerate the flow of commercial capital into early stage companies and that such model and approach could be replicated in other sectors and geographies.

For the prospective investees, the KCV will be the only Kenya-based fund investing in Kenyan shillings focused on early stage climate companies. Kenyan early stage entrepreneurs will also take advantage of tailored technical assistance, such as support for supply chain development and improvement of information systems, management, and recruiting processes.

Designing the KCV

Origin of the Idea

In 2012, the World Bank Group's Climate Technology Program (CTP) established the Kenya Climate Innovation Center (KCIC) (**see box 1**) to provide promising clean technology companies with business development advisory services and proof-of-concept grants. While many KCIC clients are at the proof-of-concept stage, some are more advanced with established distribution partners and supply chain infrastructure. These companies require additional financing beyond grants to further validate their business model.

Refining the Vision and Objectives

To address the early stage financing gap, the team proposed to establish a 10-year impact fund — the Kenya Climate Ventures (KCV) — focused on investments between $500,000 and $1 million. Managed by a private fund manager, its success is defined both by its return on investment and impacts on the environment and the local economy, including greater access to energy and job creation.

During the design and consultation process, the team refined its approach to respond to the need for more patient, flexible, tailored, and risk-tolerant capital for early stage companies. The team revised the concept of a 'fund' into a permanent 'investment company' with no fixed time horizon for liquidation.

Although the KCV is not a fund, it has a team of investment management professionals, a board of directors, and an investment committee, all of which mimic the governance structure of a typical fund. The team also developed linkages between the fund and other ecosystem intermediaries, such as the KCIC.

The team also increased emphasis on intensive, or 'high touch,' business advisory assistance for investee companies, recognizing that, in the scale-up stage, they require not only financial resources but also high engagement management and technical support.

Moreover, to meet the varying needs of early stage clean-tech companies, the team refined the KCV investment strategy, using public and private funds to invest patient capital between $250,000 and $1 million in the form of equity, debt, and related instruments.

Establishing the KCV

With this vision and value proposition, the KCV was established in 2016 by the KCIC with an initial World Bank grant of US$4.9 million. The KCV Board and Investment

Box 1. Kenya Climate Innovation Center

The Kenya Climate Innovation Center (KCIC), launched in Nairobi in September 2012, was the first Climate Innovation Center (CIC) to be established by the World Bank Group's Climate Technology Program. The KCIC was originally managed by a consortium of local and international institutions and later evolved to a local, independent, non-profit company by guarantee. The KCIC in 2016 is supporting more than 130 startup and early-stage Kenyan companies based on innovative technologies and business models in climate-related sectors, such as renewable energy, bioenergy, climate-smart agriculture, water, and low-carbon services. Support services provided by the KCIC include business advisory, access to finance, access to information, access to facilities and enabling envrionment promotion. For more information, please see CTP In Brief No.2 The Kenya Climate Innovation Center: How it Operates and Lessons for Clean Tech Incubation.

Committee, with deep local knowledge and investment experience, has been established and the Chief Investment Officer, Paul Ohaga, who has an investing and private equity background, was hired in mid-2016.

Hiring staff was challenging due to the relatively small pool of professionals with experience in early stage financing and clean technology sectors. Moreover, while Kenya has a pool of top-quality finance professionals, the depth of talent in the seed, venture capital, and private equity areas is still evolving and investing in clean technology is very new.

A quality management team and advisors with the required technical and industry expertise are critical to the success of the KVC. Therefore, the team was very selective during the recruitment process of key staff and the members of the Investment Committee (IC), and is actively working to assemble a support team of coaches to guide the development and evolution of the KCV.

Since late 2016, the KCV has been originating potential investee companies, including those supported by the KCIC or other intermediaries in the ecosystem. While many clean technology companies are looking for support and financing, selecting investment opportunities that align with the KCV outlook and aspiration requires time, effort, and calibration. Selected companies have been presented to the Investment Committee and a handful have been taken into formal due diligence.

The KCV is expected to execute its first investments in 2017. This initial experience will inform the KCV strategy and approach to deal origination and investment assessment and processing.

Below is a summary of the current KCV business model architecture. The investment company structure and business model may be refined as the KCV gains more experience with Kenyan early stage clean technology companies and collaborates with funders, intermediaries, and other stakeholders.

- **Investment thesis:** KCV targets renewable energy, climate-smart agriculture, and water management companies that are generating revenue and developing a customer base. The investee is expected to have identified credible distribution models and suitable supply chain infrastructure for initial service delivery and market penetration at an appreciable pace. Furthermore, the investee should have a competitive advantage to allow the company to continue growth, or be an attractive acquisition target over time.
- **Investment size and instrument:** The KCV plans to raise additional capital for a total fund size of approximately $8 to 10 million and make about 16 to 20 investments of $300,000 to $1 million each, in the form of debt, equity, and/or related instruments. The expected average initial investment will be about $250,000. For successful companies, the KCV expects to provide follow-on investment. Over time, the KCV expects an average of $400,000 to 450,000 investment per company. To mitigate risk, investments are to be milestone-based, with smaller initial capital and subsequent capital injections tied to performance milestones and growth outlook. The KCV also expects its portfolio to have unsuccessful companies where it either loses or only recoups the money invested.
- **Investment Company structure:** The current legal structure of the KCV is a private company limited by shares, which is wholly owned by the KCIC. Additional funding from new funders could be provided either directly to KCV or channeled through KCIC.
- **Co-funders and investors:** The KCV will engage with a range of different types of funders — commercial investors, consisting of financial investors (banks, funds) and strategic investors (corporates from Africa and elsewhere), donors, philanthropic, or impact investors — to assess options and test the investment opportunity at both portfolio company level and KCV level. To attract and build confidence among potential co-investors, the KCV seeks promising investment deals in the early phase of its operation and develop a strong pipeline of potential investment opportunities.
- **Technical Assistance (TA):** TA required by investees will vary and the KCV team may recommend additional support based on investee needs. Some of the areas for management/technical assistance include: talent development (mentoring/coaching for entrepreneurs, and building a core team), strategy and business model development, financial and operational systems

development, market intelligence and marketing support, government linkages and assistance on getting regulatory approvals, access to finance linkages (with banks, donors, other investors) for companies, value-chain players, and end-consumer financing, and new business development and partnerships.

Moving Forward

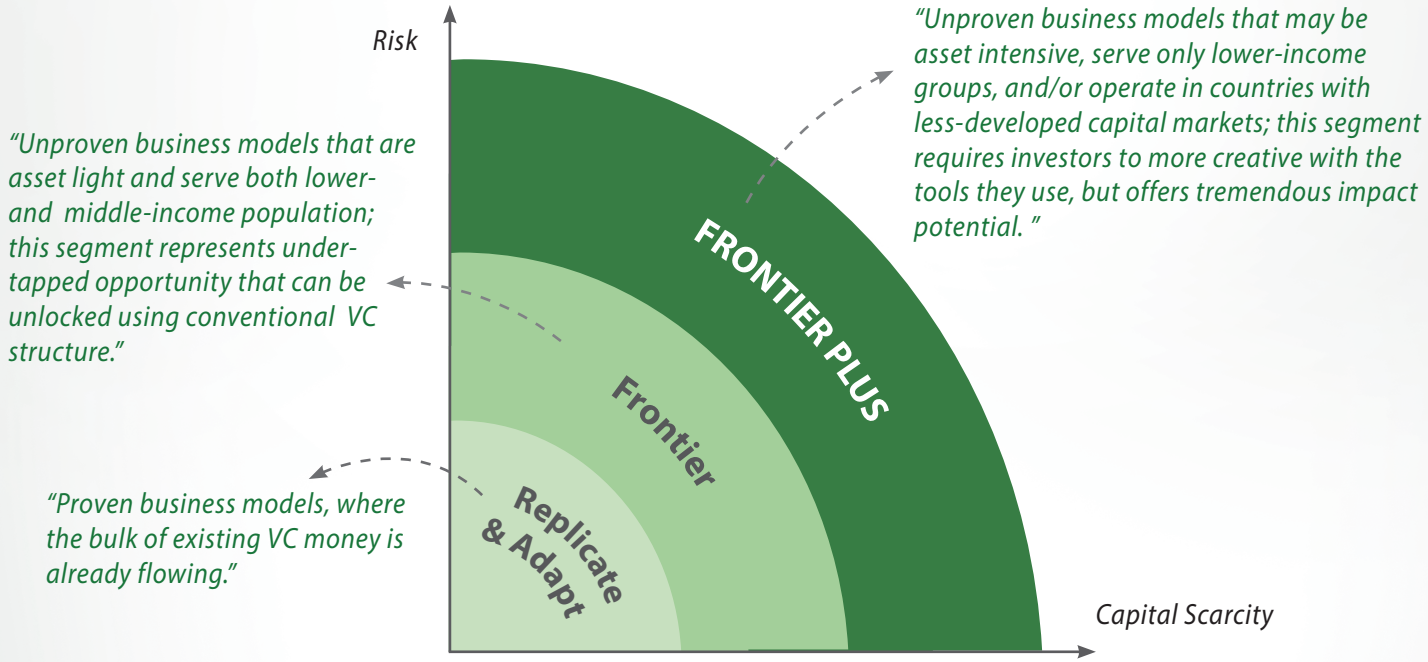
As the KCV moves forward with investments, its operation and results will provide further insights on how to fill effectively the financing and technical assistance gap for early stage clean technology companies in developing countries. Two areas will be especially important.

Can the KCV Build A Financially Viable Portfolio?

Early stage clean technology companies are considered "frontier plus," which pose the highest risk and face the most capital scarcity among the three segments of the "frontier capital" opportunity, as defined by the Omidyar Network. Frontier plus companies have unproven business models that may be asset-intensive, serve only lower-income groups or underserved communities, and/or operate in countries with less-development capital markets. There is also little precedence on how similar early stage funds make exits from their investments and what kinds of returns can be achieved. **Figure 3** shows the three types of companies operating in frontier markets.

Given the high risks and long time horizon for early stage clean technology companies to scale, the KCV may not be fully compensated for risks it takes over a seven to ten year investment horizon. At the same time, the success of the KCV will be measured by not only financial returns but also by the lessons learned on the financing instruments deployed and TA provided, the volume and type of follow on investments that

Figure 3. Three Types of Companies in Frontier Markets



Source: Omidyar Network (2015, October). Frontier Capital: Early Stage Investing for Financial Returns and Social Impact in Emerging Markets.

KCV portfolio companies will be able to receive, and what kinds of early stage clean technology companies have most potential to scale.

How Will the Combination of an Incubator and Seed Fund Model Work?

The KCIC is closely linked to the KCV. The KCIC is expected to vet companies and help them become investment-ready, reducing transaction cost and deal execution timelines for the KCV. While the KCV is considering both KCIC and non-KCIC client companies, a significant portion of the initial pipeline of companies is expected to come from the KCIC portfolio. On the other hand, the KCV's role is to provide commercial capital to its investees that were incubated by the KCIC, as well as technical assistance tailored for the scale-up phase. In terms of legal structure, the KCIC is the anchor shareholder of the KCV — although as the KCV raises funds from public and private investors, the KCIC shareholding may be diluted — but the KCV is operationally independent.

This combination of an incubator purposefully aligned to a seed fund is fairly new phenomenon. In the United States, 1776 started off as a startup incubator and later established a $12.5 million seed fund to provide funding to its startups with the potential to disrupt and scale. Y Combinator provides seed funding to a large number of startups and put them through an intensive acceleration program. To date, Y Combinator has provided $125,000 each to 105 companies. Both programs have been in place only for a couple of years and it is too early to evaluate the results of this combination.
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The KCIC-KCV combination will be the first application in the clean technology sector in developing countries. The management teams behind these two organizations hope this unique combination will bring transformative changes to the growth of the clean technology sector in Kenya. To achieve this, the teams will test various modalities to support their clients, analyze their effectiveness, and course-correct them by rapidly responding to what works and what doesn't.

Looking Forward

The KCV represents an exciting venture for the Climate Technology Program. The financing gap for early stage clean technology companies is significant and considerably limits economic growth. This gap can be also seen as a huge opportunity to transform the development of clean technology sectors, if the mechanism for effectively and efficiently deploying early stage capital and technical assistance — and subsequently de-risking the sector for later stage investors — can be unlocked.

The lessons learned from KCV's success, as well as failures, will provide stakeholders — from investors to development practitioners — with valuable insights on how to refine and adjust their approaches in investing and supporting the growth of the clean technology sector in Kenya and beyond.

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About Us

The Climate Technology Program (CTP) In Brief series is a publication of the World Bank Group's Trade and Competitiveness (T&C) Global Practice and infoDev. infoDev's CTP is managed by the Innovation and Entrepreneurship Unit of T&C.

CTP focuses on the growing opportunities of the clean technology sector in developing countries. Through a global network of seven Climate Innovation Centers, the program provides local entrepreneurs with the knowledge and resources they need to launch and scale their innovative business solutions to climate change. CTP In Brief is a series of knowledge briefs highlighting important aspects of the CTP global and in-country operations and research.

Learn more at www.infoDev.org/climate.

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