CONVERGENCE
BLENDING GLOBAL FINANCE

SISTEMA.bio®
CREATING VALUE FROM WASTE

CASE STUDY

SISTEMA.BIO

MARCH 2021

EXECUTIVE SUMMARY

Founded in 2010, Sistema.bio is a social enterprise that sells small-scale biogas digesters and appliances. Sistema.bio aims to address a set of integrated problems faced by smallholder farmers, who often lack access to the technology, capacity, and financing required to improve agricultural productivity and sustainability. Using its simple and affordable technology, Sistema.bio works to advance sustainable agricultural practices and economic prosperity for smallholder farmers by transforming organic waste into renewable biogas and fertilizer.

Over its 10-year history, Sistema.bio has grown from a small, regional enterprise to a global company with subsidiaries in Latin America, East Africa and India. The company has used various types of blended capital, including grants, concessional financing, and commercial debt and equity to support its expansion. Sistema.bio presents several insights for how other social enterprises can leverage blended finance to expand operations and attract commercial funders:

- Fit-for-purpose fundraising can enable success for blended finance structures
- Grant capital is most effective when structured for specific risks
- Technical assistance bolsters both financial returns and development impact
- A compelling and consistent impact narrative can lead to successful fundraising

SYNOPSIS

Year Founded	2010
Mandate	To create value from waste through renewable energy (biogas) and organic fertilizer.
Capital Raised to Date	Grant: ~$3 million Equity: $ ~12 million Seed $0.5 million Series A $7 million Bridge $4.5 million (*Convertible*) Series B $10+ million (*Target*) Debt: ~$ 5.5 million
Technical Assistance	Technical assistance grants are used to fund capacity building, R&D, product development, and inform the company's gender strategy.
Revenue	$17 million (2010 - 2020)
Key Donors and Investors	AlphaMundi; DILA Capital; Eco-Enterprises Fund; ElectriFI; Endeavour Catalyst Fund; ENGIE RDE; Factor[E] Ventures; FMO; Shell Foundation; Triodos Bank
Impact Metrics	Sales units by digestor / region, CO2 reduction (MTe), # of jobs created
Impact to date	18,000 units installed benefitting over 100,000 beneficiaries

INTRODUCTION

Smallholder farmers grow over 80% of the developing world's food, yet are amongst the poorest and most disenfranchised communities globally, lacking access to the technology and financing needed to improve their productivity. Consequently, most smallholder farms in the developing world often suffer from economic and energy inefficiencies, which carry high health and environmental costs.

Founded in Mexico in 2010, Sistema.bio is an anerobic biogas company that sells small-scale, affordable biogas digestors to smallholder farms. Biogas digestors convert animal waste into biogas, a clean and renewable energy source, and biofertilizer for crop production. At the heart of the company's innovation is its biodigester technology; Sistema.bio has developed a prefabricated product which is easy to use, high-quality, and scalable. The company combines its biogas product with comprehensive capacity building and in-house financing to ensure affordability for its customers.

Over time, Sistema.bio has developed a proven business model and strong value for its customers, successfully expanding to new markets in Latin America, East Africa and India. To enable its global expansion, the company has drawn on various types of capital. This includes grant capital provided by the Shell Foundation, and commercial debt and equity provided by impact investors, venture capital (VC) funds, and development funders.

DESIGN AND FUNDRAISING

Sistema.bio was founded by Alex Eaton and Camilo Pages in 2010 with the goal of developing a biodigester system that could meet the needs of smallholder farmers. While there had been previous attempts to develop small-scale biodigesters, including in Latin America, India, and East Africa, few have been successful in the long-term due to various challenges, including low-quality systems and inappropriate technology; insufficient training to ensure long-term uptake in the community; and high costs.

Early growth and market proof

With these challenges top of mind, the founders were determined to create a business model that could achieve both quality and affordability. Sistema.bio's business model evolved significantly from its initial concept; an early model of the company involved the sale of carbon credits based on CO_2 reductions achieved through its biodigesters. However, this model was set aside by the time the business was up and running, as the carbon market had crashed with prices dropping to 0.6 cents per ton.

Barrier to Scale	Sistema.bio's Offering
Poor ROI to customers (due to low-quality systems)	Durability and quality of raw materials (IS09001 certification)
Installation cost and complexity	Technology is easily distributed and installed
Lack of finance options	Interest-free and in-house financing
Biogas appliances not widely available	The company's biodigesters come with a range of appliances, for use of biogas, such as cookers and stoves.
Consumer awareness and education	Focus on education and capacity building throughout diagnostic, installation and monitoring visits
Wide variation in feedstocks	Field staff are trained in finding right solution for each farmer

Table 1: Key barriers to scaling biogas technology (Source: Inter-American Development Bank)

Using founder equity and funding from several angel investors such as Satila Impact, Sistema.bio spent its early years developing the technology for its biodigester system and building a local market in Mexico. During this time, the company also worked on improving the affordability of its product. With the average upfront price of a biodigester ranging from $600-900, cost is a leading constraint for many households. Consequently, the company developed a financing program that could spread out the costs for farmers over 9-12 months. While Sistema.bio first considered partnering with microfinance institutions (MFIs), skyrocketing interest rates and lengthy application processes led the company to develop its own loan underwriting and repayment program that better matched their social mission. In 2012, Sistema.bio partnered with the crowdfunding platform KIVA to source 0% loans, removing a key cost barrier for its customers.

As revenue increased, the company attracted financial support from private individuals, companies, and development institutions. In 2012, the company received a grant for $250,000 from the International Development Bank (IDB) "Opportunities for the Majority" portfolio to support the systemization of internal processes and to develop a more sophisticated CRM system. In 2014, the company reached breakeven, achieving its $1 million in sales from its operations in Mexico. During this time, Sistema.bio also gained international recognition, receiving an Ashoka Fellowship Award amongst other accolades.

With proven profitability, the company scaled operations to other Latin American countries. In 2015, Sistema.bio received debt financing from ENGIE Rassembleurs d'Energies (ENGIE RDE), the corporate impact venture fund of the multinational electric utility company ENGIE. Sistema.bio presented a fitting and timely investment opportunity. While ENGIE RDE's mandate is to promote access to sustainable energy solutions for poor and remote populations, the company was specifically looking for debt opportunities that promoted the scale-up of clean and safe cooking solutions. Given Sistema.bio's status as an early-stage company, ENGIE RDE agreed to make a small debt commitment with the option to convert to equity as the company demonstrated a solid track record.

Growth and regional expansion

As Sistema.bio showcased growing revenue, the company faced a crossroads; while Sistema.bio had demonstrated profitability and clear value for smallholder farmers in Mexico, the company's business model was designed to be replicable and scalable in different regions and markets. While the company recognized the benefits they could bring to smallholder farmers on a global scale, it lacked the equity financing required to expand globally, including to assess local markets and further develop its technology.

The turning point for the company came in 2017, following support from Factor[E] Ventures, in coordination with the Shell Foundation. Factor[E], a venture capital firm that supports early-stage tech companies providing access to energy solutions, was familiar with anaerobic digestion technologies but had struggled to find scalable business models. Recognizing the promise of Sistema.bio's modular design and replicable structure, Factor[E] was eager to provide $395,000 in seed equity to further develop the technology for commercial markets. In turn, Factor[E] would work with Shell Foundation in a coordinated risk strategy; with Factor[E] managing technology-related risks, Shell Foundation could provide long-term grant support to develop the business model for new markets, namely East Africa and India.

Using a tranche-based approach, Shell Foundation has provided three grants to date to fund the following activities:

- Market Expansion (2017): Initial grant support was used to establish a local team in Kenya, develop its value chains and partner networks, and navigate the new regulatory and legal environments.
- Diversify products (2018): Shell Foundation and the UK Foreign, Commonwealth and Development Office (FCDO, then the Development for International Development), supported significant research to develop and test productive biogas appliances for larger farmers, diversifying their products beyond domestic use (e.g., to run pumping, milling, and milk machines). Select products were scaled in 2019.
- Scale (2019): The most recent grant support from Shell Foundation was used to hone in on unit economics and reduce costs for specific market segments, particularly in India.

Sistema.bio quickly demonstrated steady growth. Within one year of commercial activities commencing in Kenya, Sistema.bio became the largest biogas company in East Africa, accounting for over 70% of the Kenyan market share.

Equipped with a growing track record and Shell Foundation's global brand recognition, the company kicked off its Series A fundraising round in 2018, completing two rounds with a final close of $12 million in 2019. The fundraise was roughly equally split between equity and debt financing; participating investors included VC firms such as Endeavour Catalyst Fund and DILA Capital, as well as development-focused impact investors such as ElectriFI, funded by the EU. In addition, creditors such as AlphaMundi, Lendahand and Triodos Bank also participated.

To complement these fundraising efforts, Sistema.bio routinely raises working capital financing. Sistema.bio's in-house loan program incurs significant working capital pressures: the company will often cover the upfront costs of biodigester units with a payback term extending over a year. To date, the company has received working capital from lenders including Triodos Bank ($1 million), AlphaMundi ($500,000), and Beneficial Returns ($75,000). Moreover, Sistema.bio has repeatedly partnered with the crowdfunding platform Lendahand to raise low-interest (6.5%) short- and medium-term working capital, conducting 15 campaigns to date to raise a total of 1.5 million EUR. Most recently, Sistema.bio raised a two-year loan at an annual interest rate of 6.5% on the platform, which was fully funded in less than a day, with proceeds used to help manufacture and export 125 biodigesters to Kenya for sale on credit to smallholder farmers.

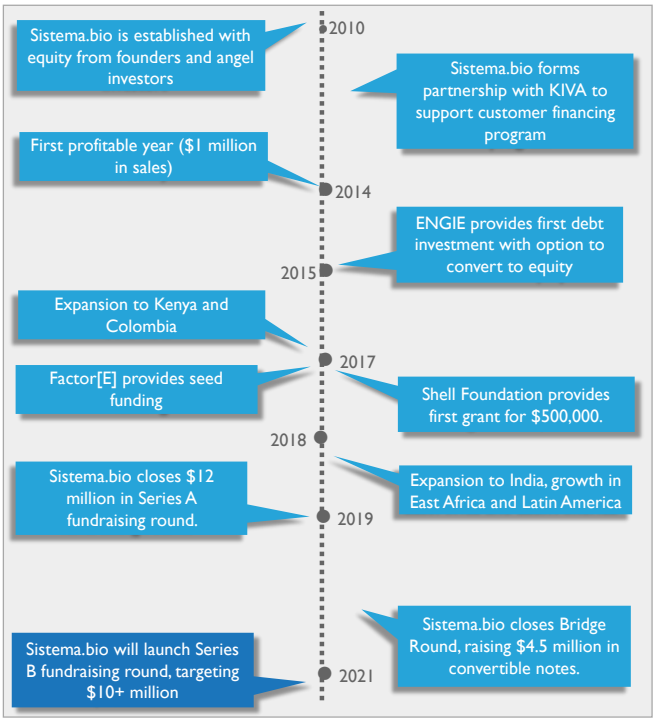

Figure 1: Timeline of Sistema.bio

In 2020, Sistema.bio completed a small bridge round, raising $4.5 million in convertible notes. While the company initially anticipated launching a larger Series B round in 2020, the company postponed this in the wake of COVID-19. Instead, bridge financing has enabled the company to finance its working capital needs, while providing additional preparation time for a Series B fundraise in 2021. Participants in the bridge round included $3 million from existing investors, such as Co-Capital, ENGIE, ElectriFI, FMO, and Triodos Bank. In addition, Sistema.bio also raised $1.5 million from new investors who were familiar with the company. This included Chroma Capital, a Belgian renewable energy investor, and Blink C.V., a Dutch family office and investor in EcoEnterprise Fund, who is also an investor in Sistema.bio.

Sistema.bio will be launching a Series B fundraising round in 2021, aiming to secure $10+ million in total to fund its continued global expansion.

STRUCTURE AND GOVERNANCE

CAPITAL STRUCTURE

To date, Sistema.bio has deftly drawn on various types of capital to grows its operations and expand its presence globally, including a combination of grants, debt, and equity.

Grant capital: Sistema.bio has received both repayable and non-repayable grants from philanthropic organizations and multilateral development banks (MDBs). The most notable provider of grant capital to date has been the Shell Foundation; since 2017, the foundation has provided a total of $1.5 million in repayable and non-repayable grants. Grant capital has been essential to the company's global expansion, providing the necessary risk capital to assess the feasibility of new markets, cover operational costs, and conduct R&D for product development. Effectively, grant capital has enabled Sistema.bio to take risks while preserving more expensive equity capital for revenue generating activities. Total grant capital received by the company to date is approximately $3 million.

Equity: Initially, Sistema.bio relied on equity provided by founders and angel investors. As the company reached profitability, Sistema.bio received seed equity from Factor[E] in 2017 to further develop and commercialize its technology. In 2018, the company raised $6 million in equity in its Series A round to fund its move to international markets from a combination of impact investors and VC funds seeking both commercial and below-market returns. Sistema.bio will launch a Series B equity round in 2021.

	Pre-Series A	Series A Round	Bridge Round
Total Equity Raised	$500,000.00	$7,000,000.00	
Total Debt Raised	$500,000.00	$5,000,000.00	$4,500,000.00 (Convertible)

Shareholder	*% Ownership*	*% Ownership*
Founder	26.50%	11.50%
Founder	26.50%	11.50%
Private Company	25.20%	10.90%
Impact Investor	10.80%	4.70%
Private Company	8.50%	3.70%
Employee Trust Fund	13.00%	15.00%
Individual	2.60%	1.10%
Impact Investor		14.70%
Impact Investor		5.60%
DFI Impact Facility		11.10%
Impact Investment Fund		5.60%
Local Impact Investor		2.80%
Impact Investment Fund		1.90%

Figure 3: Summary of financing and ownership of Sistema.bio

Debt: Sistema.bio has received senior, junior and convertible debt from a range of creditors. Debt has been used to aid expansion into new markets, cover the company's working capital requirements, and support its asset financing program. Debt provided to the company has varied both in terms of length and interest rates, ranging from short-term loans (2 years) to longer-term loans (6 years). Interest rates have also varied (typically ranging between 6% - 12%).

Approximately half of the Series A funding raised in 2019 was in the form of commercial senior debt, including from lenders such as the Alpha Mundi Foundation and Triodos Bank at an interest rate of ~11%. In 2020, Sistema.bio completed a small bridge round, raising $4.5 million in convertible notes. In addition, since 2016, the company has partnered with the crowdfunding platform Lendahand to raise low-interest debt (6.5%) to cover specific projects, amounting to $1.5 million in current finance to date. These projects have ranged in size from 100,000 to 300,000 EUR and include activities such as purchasing raw materials, transportation, and supporting its loan program.

TECHNICAL ASSISTANCE

Technical assistance has been a core component of Sistema.bio's business model from the onset. A lack of education amongst smallholder farmers has been a key barrier in scaling the use of biogas digestors in the past. Therefore, the company focuses on education and capacity building throughout its diagnostic, installation, and monitoring visits. Sistema.bio's unique emphasis on local capacity building has been a key part of its strategy to ensure long-term adoption and customer buy-in.

Ongoing advisory and support provided by the company is covered by general operational funding.

In addition, Sistema.bio also draws on technical assistance grants to fund its R&D, in-house financing program, and gender strategy. In 2020, Sistema.bio received technical assistance from the Clean Cooking Alliance to build a Special Purpose Vehicle (SPV) to finance clients in Kenya off the company's balance sheet. This arrangement has enabled Sistema.bio to offer clients longer term-financing (3-4 years) to reduce their monthly payments well below their baseline energy costs.

Moreover, in 2018, Sistema.bio, alongside ValueforWomen, received two grants from AlphaMundi and the USAID Powering Agriculture Investment Initiative. Technical assistance was deployed here for two purposes. Firstly, grant funding was used to develop product suppliers, distribution partners and service providers to strengthen the supply chain, improve operational efficiencies, and meet the large demand for agricultural energy products in new markets. Technical assistance was also used to develop gender-specific interventions by leveraging its sales team.

Sistema.bio has previously worked to develop a gender-lens within its operations, recognizing the key role women play both as smallholder farmers and as beneficiaries of cleaner household energy. While the company was already collecting data on women users, it sought a better understanding of how to reach women in more meaningful ways. Subsequent funding from AlphaMundi was used to assess the company's sales and loan collection / repayment processes in Kenya. Findings from the report have contributed to the company doubling the number of women on its sales team and improving its collection of gender-disaggregated data.

LEGAL AND GOVERNANCE

Sistema.bio was registered as a limited company under the legal name Buen Manejo del Campo (translated in English to Good Farmland Management) in 2010 in Mexico. In 2015, Sistema.bio was certified as a B Corporation. In line with its global expansion, Sistema.bio has grown to establish four subsidiaries to date; Good Farmland Nicaragua, created in 2016, Good Farmland Colombia, created in 2017, Good Farmland Kenya,

created in 2017, and Good Farmland India, created in India in 2018. Local subsidiaries are incorporated as private limited companies and are wholly owned by its parent company, Good Farmland Management, headquartered in Mexico. For the purposes of this case study, unless otherwise indicated, all references to Sistema.bio include its parent company and subsidiaries.

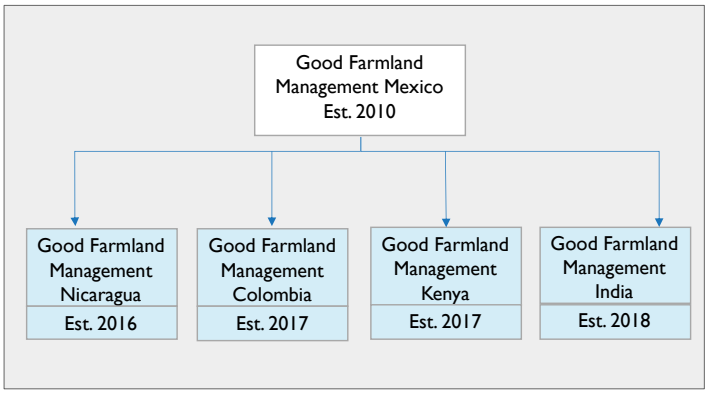

Figure 4: Corporate Structure of Sistema.bio

To support its global expansion, Sistema.bio has hired local teams to oversee its regional subsidiaries. Each country office is led by a local Country Director who oversees regional operations including partnership development, and the technical, sales, and administrative teams. Each subsidiary company is governed by a local Board of Directors. Regional offices are supported by the central management team to ensure alignment and coordination of programming, and a Global Board oversees all strategic decisions. Members here include the company's co-founders and core funders. To support with Sistema.bio's expansion, the company also hired an independent chairperson to strengthen governance oversight.

BUSINESS MODEL

SALES APPROACH

Sistema.bio relies on rural social networks and the success of its current clients to grow its markets and expand its reach. The company uses a direct-to-client (B2C) sales approach in its core markets, which accounts for the most of the company's total sales revenue. Sales agents are instrumental in building the market locally, including via community events, fairs, and door-to-door client marketing.

Sistema.bio has also tailored its sales approach to suit specific markets. For example, the company launched a B2B approach in India, recognizing an opportunity to sell products directly to organizations that in turn distribute to farmers. In 2020, Sistema.bio relied on three sales channels to expand its partnership network: (I) national organizations, MFIs, and businesses, (ii) governments, and (iii) country level export partners (used in countries where the company lacks direct sales or technical staff).

SALES CYCLE AND IMPLEMENTATION PROCESS

To ensure the needs of smallholder farmers are prioritized in its approach, Sistema.bio has carefully designed its sales and technical implementation process using a six-step model:

1) Demonstration event: The company begins by showcasing its biogas technology to users, and demonstrating the system works. Sistema.bio employs a "train the trainer" model, whereby existing farmers explain the model to future users.
2) On-site diagnosis and financing: Technicians then visit the farm to recommend an appropriate system and develop a financing plan unique to the needs of the specific client.
3) Manufacturing: The company's global manufacturing, distribution and product development centre is headquartered in Mexico. In Q4 of 2020, the company set up a local manufacturing plant in India.
4) Installation: Local technicians work with farmers to install the unit, with a fast service time of 2-5 hours. The company has developed robust training materials to quickly onboard technicians as needed.
5) Maintenance: The company closely monitors the system on scheduled visits at 30-, 90-, and 180-days post-installation. Maintenance visits also provide an important opportunity for field staff to collect data to measure the impact of their product over the long-term. Sistema.bio leverages the TaroWorks technology platform to track the status of loan repayments and manage the client's financing program.
6) Capacity building: The company provides ongoing technical assistance, including both pre- and post-installation.

Sistema.bio's innovative six-step process departs from other models in a few key ways:

i) Peer to peer validation: Sistema.bio employs exist farmers to explain their product
ii) Custom financing: Sistema.bio creates a custom payment plan based on the individual needs of farmers, taking into account their cash flow and savings.
iii) Capacity building and technical assistance: To ensure the adoption of its product, Sistema.bio provides comprehensive training to its customers, including for installation and long-term maintenance.

Asset Financing Program

The goal of Sistema.bio's loan program is designed to create a payback scheme whereby monthly payments are less than the monthly savings generated by the biodigester (for example, through displaced energy and fertilizer expenditure). This ensures that farmers can benefit from net savings immediately.

To develop its credit methodology, the company employed a customized approach. Given the lack of widespread data on smallholder farmer payment activity, the company relies on alternative indicators in addition to standard metrics such as client revenue and costs to predict repayment behaviour; these include animal health, farm cleanliness, and customer costs.

Over time, Sistema.bio has refined its credit assessment model to optimize efficiency. Prior to its global expansion, the company relied on paper forms for gathering data, which were then manually entered into spreadsheets. To achieve scale, the company needed a more modern, efficient, and transparent way to manage customer data, assess creditworthiness, and make loan decisions in real time. As a result, Sistema.bio partnered with TaroWorks, a technology platform that allows technicians to enter information in the field, which can later be uploaded to a cloud-based information management system (i.e., Salesforce). Using TaroWorks, Sistema.bio was able to streamline processes for global expansion. Moreover, through its SMS messaging platform, credit coordinators can send mass payment reminders to clients.

Sistema.bio's credit program contains the following steps:

1) Loan Origination: Sales agents identify the need for credit using a loan appraisal survey, based on 30 indicators.

2) Credit Assessment: The Credit Committee convenes to study available data and approve loan. Key criteria considered here include:
   i) Savings are 2x greater than installation and down payment
   ii) Farm and home of the farmer are within 3 hours of a field office
   iii) Age of borrower is below 70
3) Collection: Collections are conducted by the field team who use the TaroWorks platform and SMS messaging to inform customers when payment is due, and to monitor the loan portfolio.
4) Recovery/Uninstallation: In cases where the client wishes to remove the system, or where the client is more than 180 days late on at least 1 payment, the technical team will uninstall the system and redeploy to another paying client.

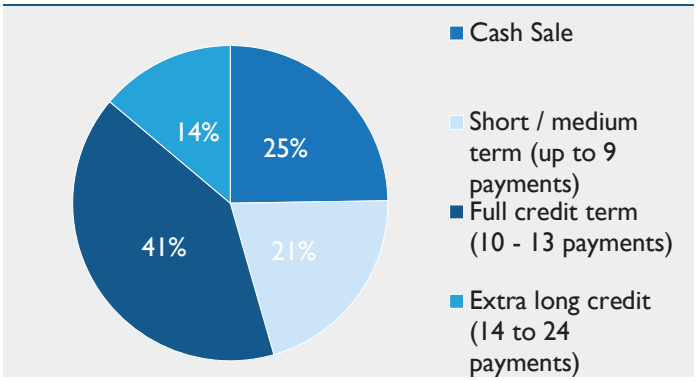

Figure 5: Sistema.bio sales by length of credit extended (Source: IPE Triple Line)

IMPACT TO DATE

SDG	Pathway
2 ZERO HUNGER	1. Increasing smallholder farmers' productivity and household incomes 2. Ending food security and malnutrition within households owning biodigestors 3. Ensuring sustainable good production
7 AFFORDABLE AND CLEAN ENERGY	1. Increased access to clean energy (including clean cooking) 2. Increased affordability of energy 3. Improving reliability and sustainability of energy access
13 CLIMATE ACTION	1. Reduced methane emissions from improved manure management 2. Reduced N20 emissions from fertilizers 3. Reduced deforestation linked to energy transmissions and land-use changes 4. Displacement of GHG-emitting sources of energy

Table 2: Theory of Change (Source: IPE Triple Line)

Biogas digestors have important links to achieving the SDGs, including SDG 2 (Zero Hunger), SDG 7 (Clean Energy) and SDG 13 (Climate Action), with indirect links to other SDGs such as SDG 3 (Better Health), 6 (Clean Water) and SDG 8 (Decent Work and Economic Growth). The impact pathways between SDGs 2, 7, and 13 are explored above:

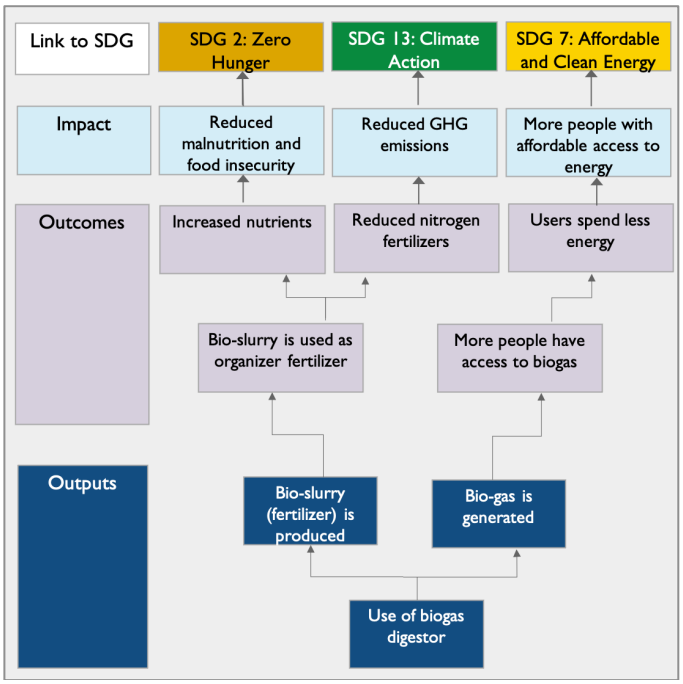

Figure 6: SDG Biogas Impact Pathway (Adapted from: IPE Triple Line)

As of the end of 2020, Sistema.bio has achieved over $17 million in total sales revenue (2010-2020), with over 18,000 units installed benefitting over 100,000 people.

IMPACT METRICS

KPI	Sample Indicators
Commercial Indicator	• Sales units by digestor type
Financial Indicator	• Total Credit Portfolio • Total FX exposure
Impact Indicator	• CO2 reduction (MTe) • # Clients (units sold) • # Female Clients
Operations Indicator	• # jobs created • Total employees • Female Employees
Governance Indicator	• # Board Members • # of Female Board Members

Table 3: KPIs developed by Sistema.bio

Sistema.bio has developed a single set of KPIs to assess performance and impact across all regional markets. These indicators have been developed to align with investor requirements and are standardized across all subsidiaries to simply reporting.

RESPONSE TO COVID-19 AND NEXT STEPS

In the wake of the COVID-19 pandemic, Sistema.bio focused on maximizing its efficiencies. This included reducing staff expenses by moving employees to variable contracts; this allowed employees to continue to be paid with the opportunity to increase salaries once business resumed. Moreover, Sistema.bio also focused on honing its remote capabilities, moving post-installation check-ins and training activities from in-person to over the phone.

In addition, Sistema.bio has limited its country headquarters to existing offices, while leveraging its remote capabilities to continue scaling in other regions. For example, Sistema.bio is focusing on building new partnerships in countries such as Cambodia, Guatemala, and Malawi to deliver its products to local markets. At the same time, the company is also ramping up its manufacturing in India. At the time of publishing this case study, 70% of Sistema.bio's units are produced in the country.

To achieve this, the company is planning to launch a Series B equity round in 2021 with a target fundraise of over $10 million. The company also plans to raise first-loss capital from DFIs to provide a risk buffer for vulnerable clients who require longer payback times. Sistema.bio aims to hit an annual revenue target of $20 million and reach more than 35,0000 clients by 2022.

KEY INSIGHTS

Sistema.bio provides several insights for how other social enterprises can effectively use blended finance to expand operations and attract commercial investors:

- **Fit-for-purpose fundraising can enable success for blended finance structures:** From the onset, Sistema.bio has skillfully drawn on different types of

capital, including grants, equity, and debt – from multiple types of funders – to purposefully build and scale its business model. To this end, Sistema.bio has differentiated its approach to investors by providing specific entry points based on the company's stage of development. Recognizing the need for in-house financing to meet its customer base, Sistema.bio developed an innovative partnership with Kiva to source zero interest debt. After establishing a profitable business model and regional footprint, grant capital provided by the Shell Foundation was key to enabling their international expansion, providing the company with flexible capital needed to cover a wide range of costs, including product development, market scoping, and operational costs. After establishing a strong commercial track record, Sistema.bio entered its next phase of fundraising, approaching commercial debt and equity investors to participate in its $12 million Series A round. To ensure the company does not face cash stress, Sistema.bio has further supplemented its fundraising rounds with ongoing short and medium-term working capital raises. For blended finance practitioners, the ability to intentionally draw on purposeful capital to suit their needs can therefore be a crucial.

- Grant capital is most effective when structured for specific risks: Over its first five years of operations, Sistema.bio developed a profitable business model and regional footprint. However, the company lacked the risk capital needed to tap into new markets abroad. Here, the company recognized grant capital could play a crucial role, by covering its expansion risks. Over its course of funding, grant capital provided by the Shell Foundation has been used intentionally; firstly, to establish operations overseas by setting up a local team and establishing its value chain, secondly to diversify its product base to include new biogas appliances, and thirdly to focus on unit economics. As a testament to the company's use of grant capital, within 1 year of commencing operations in Kenya, the company had grown to be the largest biogas company in the region. Sistema.bio remains the only biogas company operating at international scale through new market entries. Well-structured grant capital that gives donors a specific purpose can provide the groundwork for blended finance structures seeking commercial capital.

- Technical assistance bolsters both financial returns and development impact: Technical assistance can be a highly effective way for donors to engage strategically to support social and financial outcomes. In the case of Sistema.bio, the company recognized early on that capacity building and support would be key to reaching its customer base and developing an effective business model, as well as to ensure long-term adoption and success. As a result, the company has integrated capacity building throughout its sales and implementation process, including long-term follow up. In addition, technical assistance grants have also been used to conduct R&D and diversify the company's line of products, and develop gender strategies, thereby expanding its target market while furthering its impact.

- A compelling and consistent impact narrative can lead to successful fundraising: A clear impact narrative can be an important incentive for investors – even those that are more commercially oriented. Throughout its evolution, Sistema.bio has maintained a commitment to its core mandate; to increase energy access for smallholder farmers. Throughout its fundraising, this narrative has resonated with foundations, development funders and commercial investors alike. Examples include philanthropic entities such as Shell Foundation, impact investors such as ENGIE RDE, and development funders such as ElectriFI, who all share a commitment to clean energy access. A compelling impact narrative can be a key advantage to the success of blended finance vehicles.

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ABOUT CONVERGENCE

CONVERGENCE is the global network for blended finance. We generate blended finance data, intelligence, and deal flow to increase private sector investment in developing countries.

BLENDED FINANCE uses catalytic capital from public or philanthropic sources to scale up private sector investment in emerging markets to realize the SDGs.

Our GLOBAL MEMBERSHIP includes public, private, and philanthropic investors as well as sponsors of transactions and funds. We offer this community a curated, online platform to connect with each other on blended finance transactions in progress, as well as exclusive access to original market intelligence and knowledge products such as case studies, reports, trainings, and webinars. To accelerate advances in the field, Convergence also provides grants for the design of vehicles that could attract private capital to global development at scale.

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