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Water and Energy for Food (WE4F) Grand Challenge for Development

West Africa landscape mapping

October 2019

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Objectives and methodology

CrossBoundary analyzed the enterprise, investment and service provider landscape to identify opportunities to grow the WE4F nexus

The Water and Energy for Food (WE4F) Grand Challenge for Development (GCD) aims to scale innovations that impact the nexus (food, water, energy) primarily through the private sector to increase the sustainability of agricultural food value chains in developing countries and emerging markets – with a particular focus on the poor, youth and women.

CrossBoundary has been mandated to support the WE4F GCD West Africa Regional Hub by providing a current investment opportunity pipeline and landscape assessment focusing on innovators in the sector, the capital and technical / advisory services needed to grow and scale these companies, and the market operators who could provide these services.

CrossBoundary analyzed the following questions:

- **Which scalable enterprises are operating in the WE4F nexus in West Africa?**
- **What types of capital are available to support the growth of WE4F enterprises in West Africa?**
- **Which financial / investment partners would be able to support the enterprises' growth objectives?**
- **What kinds of technical and advisory services are needed by the enterprises and what is the availability of service providers linked to these needs?**

CrossBoundary synthesized regional experience gained since 2014 with interview insights from 50 enterprises, 21 investors and 15 service providers

The transaction team performed an in-depth analysis of the West African business environment at the nexus of water, energy and food.

The purpose of the project was to better understand the enterprises operating in the sector and their unmet financing and advisory requirements, and to provide input to the Hub on the best ways to facilitate investment in the sector.

The team conducted interviews with enterprises, investors and service providers. The enterprise list was developed from multiple sources, including the CrossBoundary network, Securing Water for Food, Powering Agriculture, conference attendance (AFSIC, ANDE and AGRF) and various referrals. **The list of enterprises, investors, and service providers is intended to be illustrative and, to the extent possible, comprehensive.**

In order to source data and insights for this project, CrossBoundary conducted:

Outreach / interviews with:

50	21	15
Enterprises	Investors	Service providers

The team also undertook a comprehensive review of **literature** and **databases** to supplement the informational interviews, including the following:

- Global Financial Development database
- World Bank Ease of Doing Business and World Development Indicators databases
- African Private Equity and Venture Capital Association reports
- IMF International Financial Statistics database

The enterprise pipeline was developed by drawing on previous West Africa experience, investor and service provider introductions, travel and desk research

We developed the enterprise pipeline using CrossBoundary's strong institutional track record and key partnerships throughout West Africa

We relied on a number of channels to cover the region

- Our Bamako-based team conducted outreach in the capital district and in rural areas like Segou, relying on years-old networks and new connections alike
- Our Lagos-based team leveraged its strong off-grid energy ecosystem to source leads in agricultural areas north of the capital
- Our Conakry-based team member liaised with DFIs and local professional associations to secure interviews around Guinea
- We sent a team member to work out of our Accra office, attending trade conferences and sourcing leads through pre-arranged meetings
- We deployed a trusted consultant to Dakar, where he met with a range of nexus-relevant stakeholders active across Senegal
- A trusted consultant based in Abidjan tapped into local and regional networks to gain Ivoirian perspectives on the WE4F mandate

The team held pre-arranged and opportunistic telephonic meetings with stakeholders in a number of additional countries in the region.

We used the following methodology to source a range of enterprises across the region

1. Leveraged existing pipeline and enterprise engagement in the region to identify similar or related enterprises operating at the WE4F nexus
2. Referenced CrossBoundary institutional relationships with pan-African organizations operating in the region
3. Undertook trips to Senegal and Cote d'Ivoire to conduct interviews in key markets
4. Attended regional conferences sponsored by ANDE, Power Africa and AGRF

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Executive summary

Executive summary - key findings: Enterprises

1 **Enterprises in West Africa are predominantly self-funded and have found it difficult to raise capital due to challenges around prohibitive costs of local bank financing, evolving business structures and smaller ticket sizes**

- **Similar to findings in East Africa, the majority of enterprises profiled are focused on improving yields and maximizing input efficiency, especially for small scale farmers**, mainly through deploying technology which is appropriately sized, made affordable through innovative financing, and often powered by clean energy
- There is a **high concentration of enterprise activity within irrigation** due to the dry climate in West Africa. There is **strong demand for enterprises to facilitate year-round productive land use** since West Africa has some of the continent's most populous countries and both food security and potential exports are critical to the region
- Geographically, **enterprises are more distributed across West African economies unlike in East Africa** where innovation was heavily concentrated within the largest economy, Kenya
- **Enterprises are collectively seeking ~US$ 71m in financing over the next 2-3 years**; the median ticket size is **US$ 900k to fund growth, particularly equipment**. West African companies are smaller in size and are currently absorbing less capital compared to companies in East Africa
- There is a **preference for grant financing** because it is non-recourse, is often aligned with enterprise needs and is offered in combination with subsidized BAS / TA; there is also a desire **for more hands-on equity partners who can contribute meaningfully to the strategy and operational direction of firms** as they expand
- **The enterprise category with the highest financing need is *Irrigation* (US$ 18.8m)** due to high working capital needs and delayed cash flows
- Companies are at the cusp of expansion and the TA / BAS most requested to guide the transition is **general business strategy and transaction advisory and facilitation**
- Although **over 80% of enterprises have at least one female in management positions**, similar to our findings in East Africa, challenges remain in creating an equitable investment landscape across genders

Executive summary - key findings: Investors

2 **Domestic and regionally-focused investors recognize the critical importance of agriculture to the region's economies and to food security in general, but tend to diverge in terms of structuring flexibility**

- **Private equity is scarce in West Africa** with Nigeria accounting for the vast majority of PE deals (76%) in recent years; the median ticket size of US$ 6m is too large for most SMEs' expansion plans – and these enterprises are often too small to absorb that much equity
- Investors may **benefit from the stability of the pegged Franc CFA** when making USD- or EUR-denominated investments into the West African Economic and Monetary Union (WAEMU) zone, but this bloc only covers ~20% of regional GDP
- **Impact-oriented debt and equity investors** are able to tailor their product offerings more closely to enterprise requirements, offering flexible structuring and (in some cases) applying a portfolio approach whereby large debt investments' regular interest income reduces the risk of a portfolio that includes smaller equity tickets in early-stage firms
- **Local and regional banks,** many with **a specific mandate to support the agricultural sector**, are often large and highly bureaucratic; high interest rates, monthly straightline principal amortization and significant overcollateralization help banks compensate for weak institutions (property registration, e.g.) but are punitive to borrowers
- **Investors frequently identified high upfront diligence costs** as a barrier to making more investments, indicating an opportunity for WE4F grant capital and transaction advisory services to realize catalytic interventions
- 40% of investors cited **informality and a lack of documentary preparedness as barriers to investment**; this deficiency was **not similarly interpreted by enterprises**, which did not identify help from tax, audit and accounting consultants as a priority
- While **impact-oriented investors and equity investors** were most interested in service providers that could assist with **capacity building**, commercial **banks** preferred borrowers to be connected with financial advisors that could assist with **cash flow forecasting**
- **Impact-oriented investors** were likely to apply **active and deliberate gender lens programming** to their investment decisioning, while **banks** recognized the economic vitality of female-led businesses as a **purely commercial matter**

Executive summary - key findings: Service providers

3 **Service providers can play a critical role in helping formalize entrepreneurs' businesses in order to provide investors with an unambiguous view of these innovators' commercial viability and investment theses**

- Enterprises overwhelmingly indicated a **need for general business advisory services**[1] **and transaction advisory and facilitation**, while **downplaying the need for legal, audit and tax consultancies**
- This was somewhat contradictory to what **investors identified as the principal barrier** to developing strong pipelines of investable companies and projects: namely **informality and a lack of documentary preparedness**
- While specialist TA providers are sought for capacity building in technical and general managerial areas, interviews with enterprises found that as part of the marketing process **many enterprises provide technical assistance-style demonstrations directly to target segments to demonstrate the merits of a new technology**
- This suggests that **an increase in 'train the trainer'-style services** could benefit management and have a direct linkage to revenue generation
- While certain advisory services have immediately recognizable benefits (e.g. financial statement preparation, negotiation of supply contracts), others **lack tangible value in the short term**, leading to skepticism about their utility
- The value of documents such as business plans or financial models is not always immediately discernible to informal businesses which are **guided by undocumented commercial intuition**
- Overcoming this dynamic requires tactful **management education and effective intervention** to bridge the gap between what investors require and what entrepreneurs are willing to undertake; judicious **use of grant capital to provide pre-funded solutions** can mitigate the costs of addressing such gaps

[1] General business advisory includes drafting business plans, performing market research and analysis, creating performance measurement methodologies and others

Executive summary - key findings: Contrasts with East Africa and within the region

4 **While some challenges to accessing capital and quality advisory services are common across sub-Saharan Africa, capital markets are generally shallower in West Africa, where weak institutions and high private sector informality serve as barriers to quality pipeline;**

- Nexus innovators in West Africa were **considerably more likely than their East Africa peers to be involved in the irrigation subsector**, largely a function of the region's semi-arid climate and food security concerns
- Firms in **East Africa** sought **growth capital** for equipment purchases and physical expansion and **working capital** in **roughly equivalent proportions**, while **West African enterprises overwhelmingly sought expansion capital only**; as many of these firms reported not yet having reached full capacity utilization, an important TA / advisory function may be to educate firms on how to approach growth
- Outside of Nigeria, **West African private equity markets were considerably shallower** than in East Africa, and across both regions median ticket sizes (US$ 6m) **were too high to be of relevance to growing SMEs**, which generally demanded investments below US$ 2m in both regions
- Credit markets in both regions are underdeveloped, and while banks finance twice as many projects in East Africa as in West Africa this figure is still just 12% on average

Within West Africa, despite currency stability, francophone countries still attract less investment

- Within francophone West Africa, the Franc CFA currency union offers investors a **stable FX environment** through a fixed peg to the euro; though helpful, currency union **member states only account for ~20% of regional GDP** and other barriers like **weak institutions and private sector informality make investing there consistently challenging**
- Anecdotally, investors and others suggest that legacy colonial institutional structures in francophone West African countries' governments result in a heightened bureaucratic burden, but there is no conclusive proof of this

Consistent with our East Africa program recommendations, we favor a combination of services coordination and targeted provision of grant capital

	Summary of key pain points	CrossBoundary recommendations	
		Services	**Capital**
Enterprises	Common themes: • Onerous and costly debt terms • Small ticket sizes unpalatable • Limited understanding of capital raising process West Africa considerations: • Emphasis on documentary readiness • Challenges with collateral requirements	Recommended Hub activity / structure: • **Source, vet and coordinate TA and investment advisory service providers** that can address firms' specific hurdles to investability • Form a **Technical Assistance Unit** and a **Brokering Unit** to promote or directly establish investor connections West Africa considerations: • Firms may require guidance on what types of advisory services they should seek	Recommended Hub activity / structure: • **Subsidize TA and investment advisor fees** to assist firms in overcoming cost barriers • **Provide milestone-based grants and repayable grants** to boost firms' revenue-generating asset base West Africa considerations: • Poor discipline with approved use of proceeds requires heightened monitoring
Investors	Common themes: • High DD costs • Perceived outsized risks related to sector or firm size • Limited pipeline of investable projects West Africa considerations: • Hard currency instruments advantaged by FX stability	Recommended Hub activity / structure: • **Coordinate required pre-investment DD and post-investment TA** in line with identified barriers • **Provide introductions** between investors and third-party providers of risk mitigants like credit guarantees or first-loss tranches West Africa considerations: • Bilingual legal advisors often critical for francophone deals with impact investors	Recommended Hub activity / structure: • **Subsidize pre-investment DD and post-investment TA** to get deals across the line • **Fund first-loss tranches** to help de-risk commercial or impact investors West Africa considerations: • Pre-investment DD should focus on documentary readiness; post-investment TA must balance value creation with cash flow budgeting
TA & Advisory	Common themes: • Difficulty identifying the type of TA needed and / or who the appropriate provider is West Africa considerations: • Managers of informal firms are skeptical of some advisory outputs' value and hesitate to pay	Recommended Hub activity / structure: • **Vet TA / advisory providers and recommend a phased approach** • Perform **limited direct investment advisory role** through Brokering Unit West Africa considerations: • Hub teams must decide how much vetting to do before Brokering Unit makes introductions	Recommended Hub activity / structure: • **Subsidize** enterprises and investors seeking TA or advisory services with grant capital • **Pay retainers and success-based fees** to transaction service providers West Africa considerations • Subsidies particularly useful where firms unwilling (or unable) to pay for services

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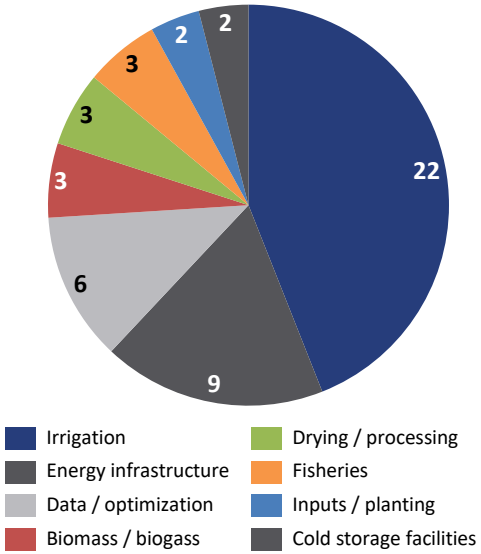
Key findings: Enterprises

West African nexus enterprises are predominantly innovating within the irrigation space, driving year-round productive land use to meet increasing food demand

About half the enterprises focus on transforming the irrigation space

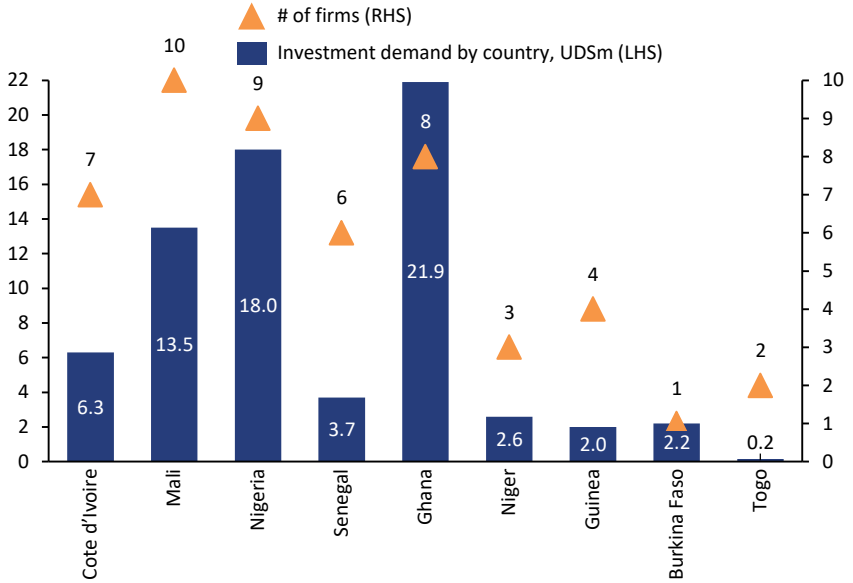
Number of companies by innovation type



- There is **heavy innovation within the irrigation** space with the following focus areas:
  - **Tailoring irrigation mechanisms towards intended use**, e.g. mist irrigation for greenhouses
  - Providing solutions for **smaller scale producers**
  - **Incorporating solar** PV into irrigation systems
- The heavy adaptation of irrigation is **contributing to higher yields** as land can be used all year round

WE4F nexus activity is more consolidated in larger economies and fragmented in the smaller ones

Aggregate investment demand by country



- Nigeria and Ghana, West Africa's two largest economies, have the highest investment demand
  - Nigeria's **large population provides a strong domestic market** for enterprises, and Ghana's government is **actively pushing policies** targeted at facilitating more foreign investment, which has encouraged local entrepreneurship
- **Smaller economies** such as Mali[1] and Senegal are **heavily participating in the nexus** but demand smaller ticket sizes per enterprise

[1] Most enterprises identified were in Mali despite its small economy, due to CrossBoundary's long-term presence in the market

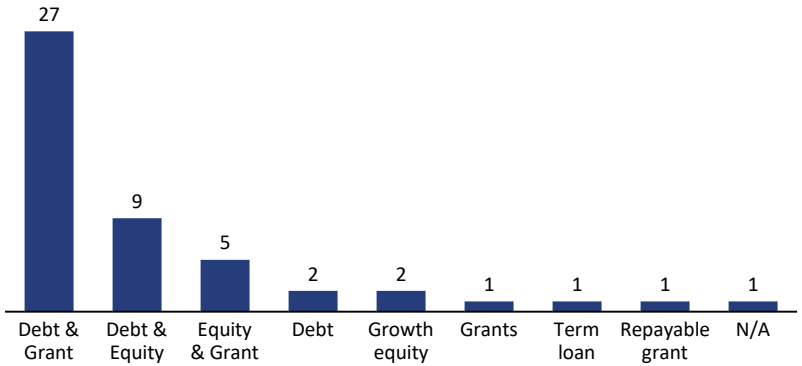
Enterprises identified are seeking an aggregate ~US$ 71m in growth capital, with individual ticket sizes mainly below US$ 2m

Firms are seeking ~US$71m in aggregate

No. of active companies	50
Total market investment demand	US$ 70.7m
Median firm investment demand	US$ 0.9m
Highest firm investment demand	US$ 11m
Lowest firm investment demand	US$ 50k

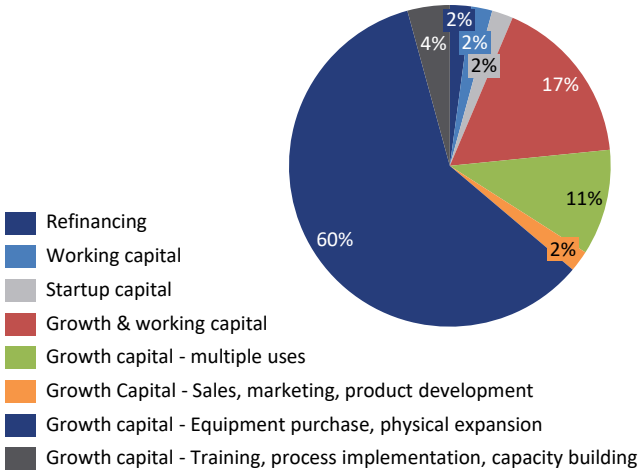
Grant financing is the most attractive for the enterprises

Type of financing sought



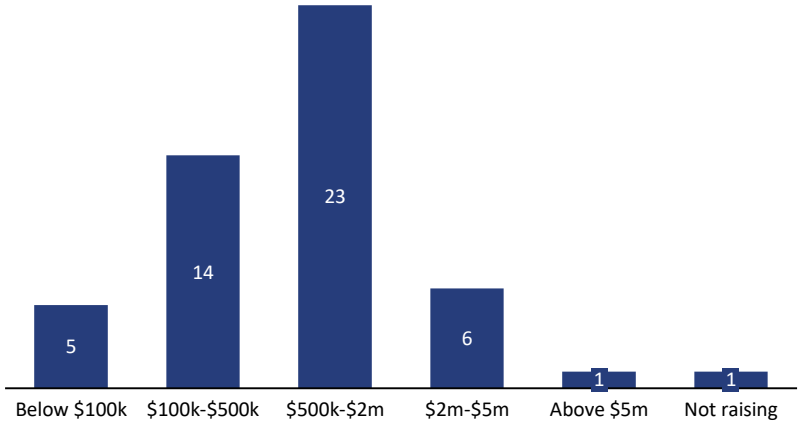
Enterprises seek capital to finance equipment purchases

Intended use of proceeds



Investment sizes sought are predominantly less than US$2m

Ticket size

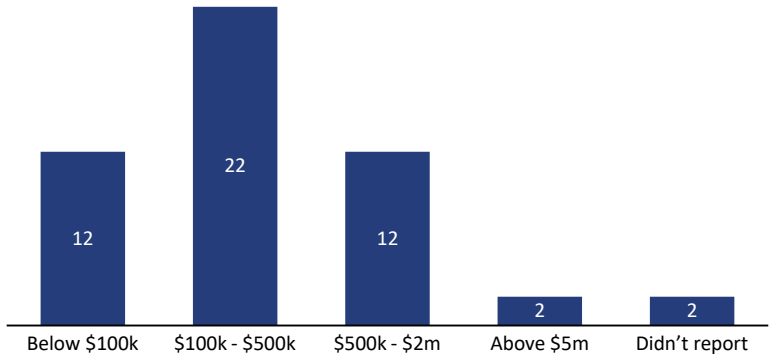


Sources: Enterprise interviews; CrossBoundary analysis

Most enterprises generate between US$ 50k-500k in revenue and have previously benefited from grants and subsidized TA and advisory services

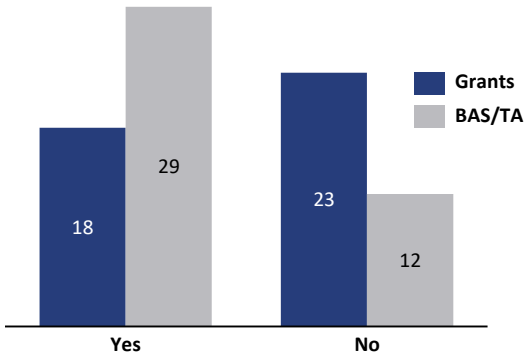
Most enterprises are still small in size

Companies by revenue range (#)



Enterprises are taking advantage of grants and BAS / TA

Grants and BAS / TA previously received



Most enterprises seek grants to supplement equity and debt

- As indicated by level of revenues, **68% of the enterprises surveyed are in the start-up and early growth stages**
  - There is **large opportunity for investors** in the nexus given enterprises are still in nascent stages
- 18 of the enterprises surveyed had previously received grant financing. **Grants are favored among enterprises** for a variety of reasons including:
  - Grants received have been **offered in combination with subsidized technical assistance**, which enterprises cited as being instrumental to growth
  - **Grants are free** and connect recipients to donor networks
  - **Grant programs are usually tailored** and well aligned to the needs of targeted businesses
- Enterprises **cited growth capital as the primary use of proceeds**, particularly to finance the following:
  - **Equipment purchases and physical expansion (28)**
  - Working capital (9)
  - Multiple uses including expanding to new geographies (5)
- Equipment purchasing is crucial as enterprises are **implementing financing mechanisms** to ensure affordability
- **BAS / TA is well received and is actively sought among enterprises.** All surveyed companies expressed additional need for BAS / TA
- Enterprises **are interested in equity partners but would like hands-on partners who can bring value to the business**

Sources: Enterprise interviews; CrossBoundary analysis

Enterprises find the capital raising process costly and time-intensive, and they have trouble finding value-adding growth partners

- Most enterprises only have experience raising debt and they **find debt unappealing or prohibitive**:
  - Early-stage firms **lack adequate collateral** and cash flows to make banks comfortable, and are also often **too informal**, lacking standardized financial records
  - Loans made to smaller firms generally have **punitively high interest rates** and require **principal repayment at unrealistically frequent intervals** (sometimes monthly)
  - Commercial banks are not perceived as growth partners, seen as focusing solely on debt repayment and being **unable to take a longer view on firm success**
  - Loan **approval processes can be lengthy**, yet capital needs are usually urgent
- Entrepreneurs find that **equity partners can be overly passive** and removed from their businesses, not adding value beyond capital provision
  - Outside equity injections that aren't accompanied by TA may not be value-creating
- Some entrepreneurs **erroneously consider grants and equity to be the same thing**, especially when there is a competitive process to "win" a grant
  - **Investee education** about financing options should be a core element of advisory and TA provision
- Other entrepreneurs understand equity but **dislike the idea of being diluted** or losing control of their company, especially when the investor is a regional or international organization with little local credibility

Enterprise perspectives on challenges faced

> *Our business has a lot of promise, but no investor will look at us…we are too young.*
> *- Ghanaian enterprise*

> *We've borrowed from a local bank before, but the interest rate was so high, and it really cut into our margins… it is not a sustainable route.*
> *- Ilemel*

> *A lot of investors are showing interest in us but no one is willing to be actively involved beyond monthly updates. We need someone who can guide our growth.*
> *- Ghanaian Greenhouse Operator*

> *Our market is the small farmer who has a small plot of land… but he can't afford our product – we need to finance the equipment upfront.*
> *- Regional enterprise*

Sources: Enterprise interviews; CrossBoundary analysis

Firms that offer new technologies find various challenges selling to unfamiliar and generally low-income segments

Clients are skeptical of untested technologies and systems

- **Consumer uptake of data optimization services is low** and involves a lengthy education process, yet volume is crucial because of low margins
- Some **products or technologies are unfamiliar to traditional smallholders** and require detailed demonstrations as part of the marketing process

Innovator snapshot: CUECDA

- CUECDA produces an innovative biofertilizer using local waste and biomass composites, reducing fermentation
  - The formula is unfamiliar to traditional smallholders, who **resist switching to an untested product**
- The solution: CUECDA initiated a trial program for farmers to use their product for free; thus far 2,000 farmers have participated and have been converted into paying customers

Innovator snapshot: WeFly Agri

- WeFly Agri Provides farmers with a range of IT-enabled tools for land management, crop progress tracking and other activities promoting efficient land use
  - Technology includes sensors and drones, which have a **steep learning curve**
- The solution: WeFly offers hands-on instruction and a strong support staff, coaching clients through use cases and helping demonstrate products' on-the-ground value

High purchase prices necessitate innovative workarounds

- Firms selling irrigation solutions or other pieces of expensive infrastructure find that their **target market of smallholders struggle to pay up front**
  - This may be mitigated by a collective **pooling cash to purchase equipment** that will benefit all
  - In other scenarios, enterprises have devised **innovative workarounds**

Innovator snapshot: AgricCo

- AgricCo provides an all-in-one portable solar irrigation kit that includes a solar panel, pump, and spray tape
  - The unit costs around US$ 1,200 which is **unaffordable for most target segments**
- The solution: AgricCo plans to implement a mobile money-equipped pay-as-you-go (PAYG) option, allowing clients to pay for service incrementally

Innovator snapshot: Ilemel Energy

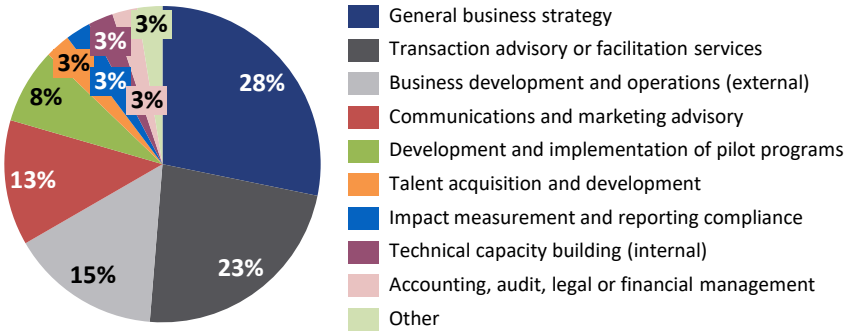
- Ilemel sells solar pumps and multi-use solar power units for processing and cold storage equipment
  - The unit costs around US$ 3,000 which is **prohibitively expensive**
- The solution: Ilemel operates a captive financing entity which provides financing directly to clients, allowing them to avoid cumbersome and costly loans from banks

Sources: Enterprise interviews; CrossBoundary analysis

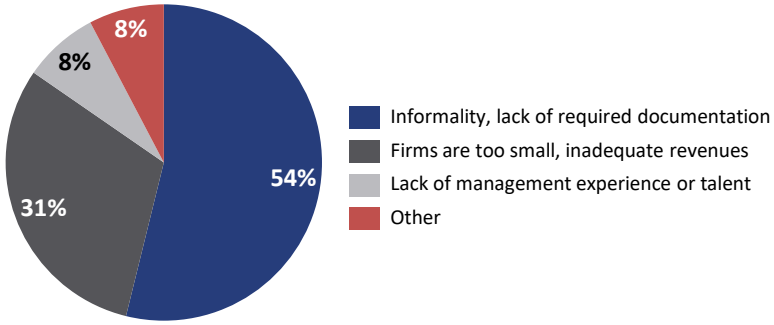
Access to subsidized technical assistance and advisory services will permit enterprises to develop coherent expansion plans and present strong cases to investors

- An important advisory function is **helping businesses determine what kind of assistance they actually need**
  - Over half of interviewed lenders identified **firms' informality and lack of required documentation** – not a fundamental issue with business model or profitability – as the **main barrier to investability**
  - Only 3% of interviewed enterprises, however, sought help from an accounting or legal firm with preparing accurate and presentable financials
  - While all enterprises interviewed envisioned raising capital, **44% did not have audited or complete financial records**
- Another important consideration is **phasing support appropriately** – if an entrepreneur's investment thesis is not well planned or articulated, even if underlying business fundamentals are attractive, they should not solicit assistance with a capital raise
- The **average management estimate for compounded annual growth over the next 5 years was a staggering 74%** - likely overstated by most
  - Furthermore, of the 28 firms (56%) planning for equipment purchases and physical expansion, 21 also stated they were **not operating at full capacity**
  - Enterprises possibly confused working capital for inventory purchases with expansion capex
  - While each expansion plan has its own nuances, these figures suggest a **misunderstanding of when to seek growth capital, and what for**

BAS / TA sought by entrepreneurs



Investors' challenges in finding leads



44%
Firms that did not have audited or complete financials

56%
Firms seeking growth capital for equipment purchases and physical expansion

78%
Of these firms, % stating they had not yet reached full capacity with the assets they already own

Sources: Enterprise interviews; CrossBoundary analysis

As in East Africa, we recommend that WE4F Hubs coordinate and fund technical assistance and advisory services – while considering West Africa contrasts

We recommend that the West Africa Regional Innovation Hub coordinate the provision of tailored TA and investment advisory services, and when appropriate, deploy grant funding to subsidize these services

Services

Provide budget for tailored TA and investment advisory services

- **Subsidize tailored TA to unlock growth** for enterprises with specific product / capacity constraints to scaling
- **Subsidize tailored investment advisory** services (e.g. fundraising, deal structuring and valuation) for more advanced enterprises who are seeking external capital

Provide cross-enterprise services via the TA and Brokering Units

- **Form a Technical Assistance Unit** that helps equipment suppliers design financing, leasing and / or pay-as-you-go (PAYG) programs for clients and that supports talent acquisition and capacity building, including 'train the trainer' programs for firms providing upskilling clinics as part of an integrated marketing and sales strategy
- **Form a Brokering Unit** to facilitate introductions to investors or sources of credit support such as loan guarantees, potentially supporting the initial phases of a capital raise process ahead of handoff for targeted support; develop and regularly maintain / circulate enterprise pipelines to investors

East Africa considerations

- East African enterprises sought introductions to investors, talent acquisition and upskilling, and help optimizing operating margins
- A majority of innovators planned to spend growth capital on sales, marketing and R&D efforts; 44% of firms sought working capital

West Africa considerations

- Most West African enterprises sought business advisory services such as business plan creation and market research, as well as transaction advisory and investor introductions
- Most firms sought growth capital for equipment purchases and physical expansion; only 16% of firms sought working capital

Commentary

- While East African firms seem focused on increasing capacity utilization and efficiency, West African firms appear to require a more hands-on approach to becoming investment-ready
- It is likely that upon closer review of their growth plans, more WA firms will be found to need working capital instead of a growth investment

Note: Complete overview available in Appendix 3

As in East Africa, WE4F West Africa should deploy grant capital to assist enterprises in overcoming hurdles to investability, but only after a thorough commercial review

We recommend WE4F provide various forms of grant capital directly to innovators – though not until a careful review of expansion plans and existing capacity utilization has been conducted

Capital

Milestone-based grants

- Adhering to hurdles simulates the operational and financial discipline required by risk capital
- This allows firms to build a track record in a non-recourse scenario

Repayable grants

- Firms can create a precedent for creditworthiness, still in a non-recourse relationship with donors; opens capital to recipients with little or no suitable collateral

Grants structured into a larger transaction

- Grants can act as a non-recourse 'first-loss' instrument, comforting lenders
- Product assets capitalized by grants enhances cash flow without the associated interest expense or repayment, increasing creditworthiness

East Africa considerations

- Enterprises sought a workable local currency financing solution that didn't expose them to harsh terms on loans; local currency grants could provide this
- Grants allow East African recipients to expand without concerns about repaying hard currency dent amidst FX volatility

West Africa considerations

- A number of entrepreneurs mistakenly equated grants with equity, seeing both as capital that does not need to be repaid; **education should be a priority**
- Some banks noted in interviews a lack of discipline around approved use of proceeds; borrowers outlined a certain project to get debt funding but then spent differently

Commentary

- In countries and markets with greater development challenges, prevalent in West Africa, some entrepreneurs rely on donors perpetually, becoming aid agency favorites
- Without careful structuring, monitoring, and simulated recourse, grants can artificially buoy poorly run firms and prevent true value creation; **strict oversight is critical**

Note: Complete overview available in Appendix 3

A majority of the companies interviewed have women in management positions, but few in the nexus are female-founded or -run enterprises

In WA women are secondary beneficiaries of WE4F activity

- **Over 80% of nexus companies have women in leadership** positions, but there are only four with female founders
- However, **women are** taking advantage of income-generating opportunities offered by the enterprises, e.g. **pooling money to buy inputs in aquaculture and greenhouse operations**, and realizing returns once output is sold to offtakers
- Most **enterprises view the work they do as physically intensive** and cited this as the primary reason for less female representation in operational leadership
- **Some enterprises run or participate in gender-focused programs** that aim to provide technical training to women and provide women with alternative sources of livelihood

Enterprises with female leadership (c-suite or equivalent)

FOFIEX, ignitia, SOSAI, E&S Energy and Services, SolarCreed, CompleteFarmer, agricCo, RUBITEC POWER RUBITEC SOLAR, TECHSHELTA, reelfruit, AquaFarmsAfrica, SkyFox Ltd., LIGHTBOX, ASOLAR, ilemel Energy Solutions, SEV, Quintas

Gender initiative highlight: Matan Arewa Initiative (MASAI)

SOSAI renewable energies company


Ladies from MASAI presenting Sosai's Fosera PAYGO systems

- *The project mission is to strengthen capacity of women in Northern Nigeria in the production, sales, service and installation of renewable energy products*
- *Women are trained to become distributors of energy products within their local communities with the goal of increasing their incomes*
- *Women apply and once approved, are introduced to the enterprise's range of products and provided with NGN 20,000 (US$ 55) of startup capital*
- *The program is focused on rural areas where women are usually disenfranchised due to lack of financial independence*

Sources: Enterprise interviews; CrossBoundary analysis

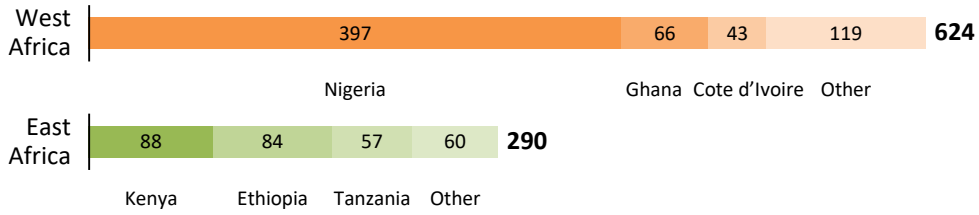
CROSSBOUNDARY

Key findings: Investors

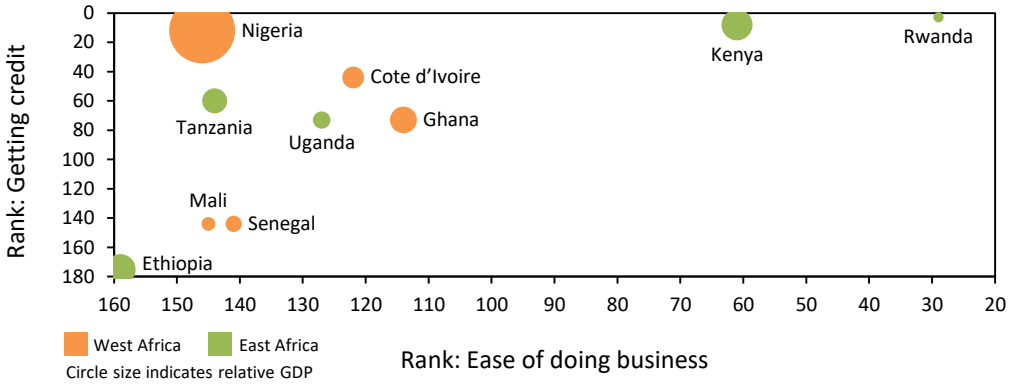
West Africa's shallow capital markets and challenging commercial climate present barriers to investment compared to leading East Africa peers

- The commercial climates of East Africa and West Africa have **several important macroeconomic differences** that affect the investment landscape:
  - **Nigeria's GDP dwarfs those of its smaller West African neighbors** – but the country is largely closed to regional trade
  - While regulatory hurdles to getting a loan are light in Nigeria, it has **some of the shallowest credit markets in the region**, with domestic credit to the private sector just 15.7% and only 3.4% of investments financed by bank loans
  - Kenya's relative **institutional strength** readily attracts investors, but this **applies mostly to private equity** (60% of East Africa PE deals by value) while debt investors finance just 24% of projects
  - Total PE capital deployed in West Africa far outpaced East African amounts between 2013-2018, but **74% of these deals took place in Nigeria**
  - Median PE **ticket sizes are still well above what most SMEs require** to grow – or can absorb in equity
  - Unlike in East Africa, the West African Economic and Monetary Union **provides currency stability to investors** in 8 fast-growing francophone West African states – though these together represent only 20% of the regional economy

Largest economies by region (2018 GDP, current USDb)



Commercial climate: 5 Largest economies by region



Selected indicators: Availability of capital

	West Africa	East Africa
Value of total PE deals 2013-2018 (USDb, % SSA)	$10.8, 25%	$2.4, 8%
Median PE ticket size (USDm)	$6.0	$6.0
Domestic credit to private sector (% of GDP)[1]	17.9%	20.8%
Investments financed by banks (%)[1]	6.3%	12.3%
Ease of doing business ranking (low, median, high)	181, 149, 114	190, 152, 29
Getting credit (low, median, high)	161, 144, 12	186, 168, 3
Protecting minority investors (low, median, high)	180, 149, 38	190, 132, 2

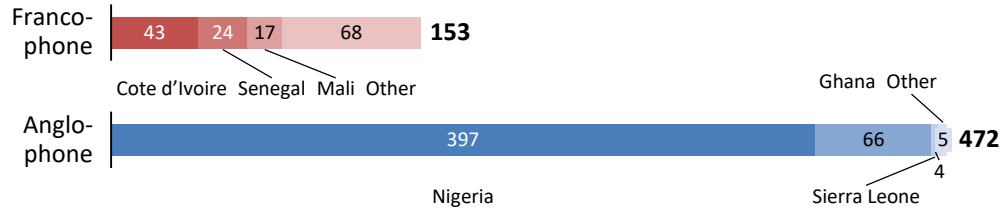
[1] GDP-weighted average using 2018 GDP and most recent country data available

Sources: World Bank World Development Indicators; World Bank Ease of Doing Business Index, IMF International Financial Statistics, African Private Equity and Venture Capital Association

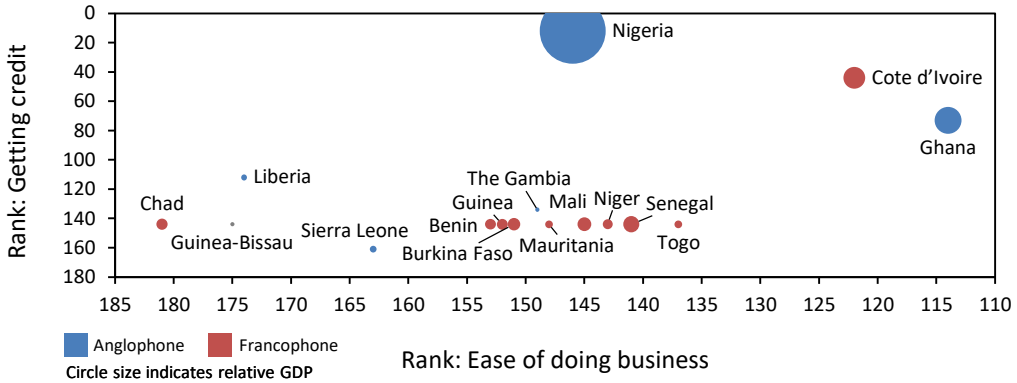
Within the region, scattered indicators render investment theses drawn along anglophone or francophone lines difficult to defend

- Within West Africa, contrasts can be seen between regional economies – sometimes along the line between francophone and anglophone
  - Though **francophone West Africa consists of 10 countries** compared to 5 anglophone counterparts, these 10 economies **account for just 24% of the region's GDP**; this is due to Nigeria's economy being massively larger than its neighbors'
    - Ex-Nigeria, francophone states' share is 66%
  - Regarding commercial climate, outliers like Cote d'Ivoire and Ghana **refute potential correlation**:
    - **Coastline and an active port do not correspond to an improved business climate** (Cote d'Ivoire and Ghana vs. Senegal)
    - GDP does not correspond to credit-related regulations or business climate
    - **Francophone vs. anglophone institutions** and legacy governance structures from the colonial era **don't advantage or disadvantage business climate** (Cote d'Ivoire vs. Ghana)
  - **Very little PE capital was deployed in francophone markets** between 2013-2018, but **francophone banks financed more investments**
  - Despite Ghana and Nigeria having higher ease of getting credit rankings, **domestic anglophone lending lagged overall**

Largest economies within region (2018 GDP, current USDb)



Commercial climate: West Africa



Selected indicators: Availability of capital

	Anglophone	Francophone
Value of total PE deals 2013-2018 (USDb, % WA total)	$10.2, 94%	$0.7, 6%
Median PE ticket size (USDm)	N/A	N/A
Domestic credit to private sector (% of GDP)[1]	16.2%	23.1%
Investments financed by banks (%)[1]	4.7%	11.3%
Ease of doing business ranking (low, median, high)	174, 149, 114	181, 148, 122
Getting credit (low, median, high)	161, 112, 12	144, 144, 44
Protecting minority investors (low, median, high)	180, 99, 38	161, 149, 110

[1] GDP-weighted average using 2018 GDP and most recent country data available

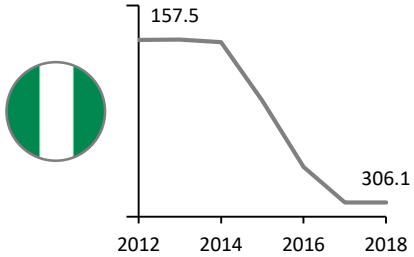
Sources: World Bank World Development Indicators; World Bank Ease of Doing Business Index, IMF International Financial Statistics, African Private Equity and Venture Capital Association

Investors preferring hard currency benefit from the stability of the francophone West African Economic and Monetary Union (WAEMU) currency peg

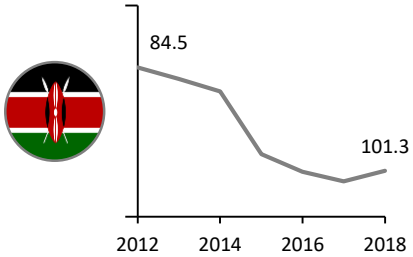
- Currency volatility both within West Africa and compared to East Africa make **investments in the WAEMU countries attractive to investors preferring USD, EUR or GBP**
- The eight-country currency union's Franc CFA has been **pegged to the Euro** and **backed by the French Treasury** since 1994
- While local or regional banks offer local currency loans, these **often come with onerous terms**; impact investors prefer USD or EUR instruments
- The below examples of other regional currencies illustrate the **relative difficulty** a borrower would have servicing hard currency (USD) debt **if earning revenues in local currency**

WAEMU member states using the Euro-pegged Franc CFA

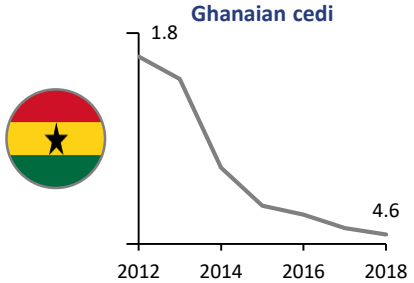
Nigerian naira



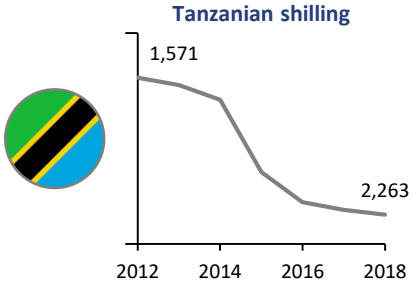
Kenyan shilling



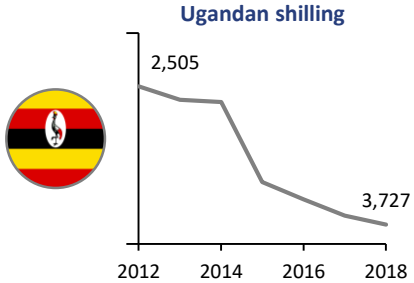
Ghanaian cedi



Tanzanian shilling



Ugandan shilling



Note: All exchange rates are annual averages vs. USD, shown on inverted scale
Source: IMF International Financial Statistics

Weak national institutions, short-term capitalization and general risk aversion drive commercial banks to impose onerous terms on borrowers

- West African commercial lenders are often **squeezed from two directions**: potential or existing borrowers with **poor credit fundamentals** and an **inability to secure loans** with properly registered property, and loan portfolios financed largely by on-demand sight deposits, making **longer-term loans difficult**
- They compensate by protecting themselves with onerous terms: **monthly amortization**, **high interest rates**, extremely **restrictive covenants**, and **collateral** worth well more than the value of a loan
- These "protective" measures often **choke borrowers**, who must prioritize debt repayments over positioning for growth
- The deal detailed at right required **collateral worth 171% of loan principal**, for example
- Rigid terms are **usually unsuitable for agricultural borrowers**, whose cash flows are timed with intermittent harvest periods and who must often sell in times of peak supply

Selected credit-relevant metrics by country

	Collateral required (% loan value)[1]	Ease of registering property (Rank, out of 190)[2]	Investments financed by banks[1]
Liberia	172%	182	10.9%
Niger	160%	111	14.1%
Sierra Leone	355%	167	1.3%
Benin	231%	130	3.6%
Cote d'Ivoire	157%	112	14.9%
Mali	233%	141	19.0%
Togo	226%	127	17.6%
Nigeria	227%	184	3.4%
Senegal	272%	118	6.6%

[1] Source: Global Financial Development Database (July 2018); uses most recent data available
[2] World Bank Ease of Doing Business Index, 2019

Excerpt from Malian commercial bank term sheet

Sûretés

Ci-dessous les sûretés à constituer, en garantie du Crédit:

- Gage sur les équipements financés
- CIH de premier rang sur le Titre Foncier devant abriter la polyclinique à hauteur de F CFA 1600 millions
- Gage sur les équipements financés par la banque
- CPS du promoteur à hauteur de F CFA 500 millions
- BO
- Lettre de confort/ d'accompagnement des partenaires tunisiens.
- Domiciliation irrévocable de tous les flux entrants et autres paiements ou règlements de fournisseurs dans nos livres.

A

B Nantissement en priorité de toutes créances émanant de contrats signés entre la polyclinique et ses clients

entreprises.

C Engagement de domiciliation de toutes les recettes de l'activité dans nos livres

D Signature d'un contrat de Ramassage de fonds avec une mention d'exclusivité pour la Banque Atlantique.

Engagements de l'Emprunteur

L'Emprunteur s'engage à :

- Préalablement à tout tirage sur le Crédit, l'Emprunteur, devra avoir versé l'apport personnel
- Utilisation du Crédit conformément à l'Objet du Financement ;
- Respect des Documents de Projet ;
- Aucun Endettement supplémentaire hors ceux prévus dans le Plan de Financement (dette mezzanine et d'exploitation) sauf accord préalable des Préteurs ;
- Engagement de l'Emprunteur de domicilier la totalité des revenus inhérents à l'activité de la clinique ;
- Engagement de l'Emprunteur de maintenir les assurances afférentes au Projet pendant toute la durée du Crédit et jusqu'à son remboursement définitif ;
- Engagement de l'Emprunteur de ne pas constituer un privilège sur les biens donnés en garantie du Crédit.

E

A Personal guarantee from borrower (unrelated to project being financed)

B Pledge of all future receivables from commercial counterparties as security

C E Mandatory depositing of all operational revenues and other earnings in an account at the lending bank

D Exclusivity clause stating that all future borrowing be done through the bank

Innovative and flexible structuring of loans can have a significant positive impact on growth; TA and grants have a role to play in permitting such structures

- Conventional debt instruments used for expansion capex are often inflexible, characterized by **short or non-existent grace periods** and **principal repayment schedules that are rigid and frequent**
  - In some West African markets, monthly loan amortization is the norm; cash flow challenges just once a year can **thrust borrowers into technical default**
  - If the loan is financing **productive assets that require a ramp-up period** to generate cash flow, borrowers will struggle to service the debt
  - **Reinvestment of earnings** early on in an SME's expansion phase can be **critical to growth**; requiring this cash to go towards debt service can keep a young SME fragile, straining working capital
- Compared to local commercial banks, impact-oriented lenders are **willing to innovate and take a long view of borrowers' growth**
  - Lengthy grace periods and principal repayment sculpted to borrower cash flows are **simple structures that ease upfront burdens on cash flow**
  - More advanced structures like equity warrants allow investors further flexibility, letting them **act as partners**
- Grant capital deployed into a debt service reserve account (DSRA) or posted as collateral for a letter of credit can de-risk such structures
- Investment advisory focused on such structures should complement grantmaking to ensure effectiveness

Suggested structures to increase debt flexibility

Structure	Effect	Role of WE4F
Long grace periods	Permits revenue-generating assets financed by debt to ramp up adequate cash flows for debt service and reinvestment for growth	• TA supports cash management and operational milestones during grace period • Grant capital can fund a DSRA
Sculpted amortization schedule	Favors different business models' seasonal cash flows over rigid repayment schedules	• TA supports cash management and operational discipline • Grant capital can fund a DSRA
Equity warrant	Aligns incentives between borrowers and investors due to potential for outsized equity returns	• Hands-on, shareholder-style partnership increases borrower's ability to repay and lender's likelihood of capturing equity upside
Debt service reserve account (DSRA)	Provides a predetermined amount of liquidity to mitigate cash flow volatility	• Grant capital funds and / or replenishes
Letter of credit / guarantee	Acts as additional collateral for secured lenders, underwritten or administered by a bank	• Grant capital is posted as collateral to secure the letter of credit

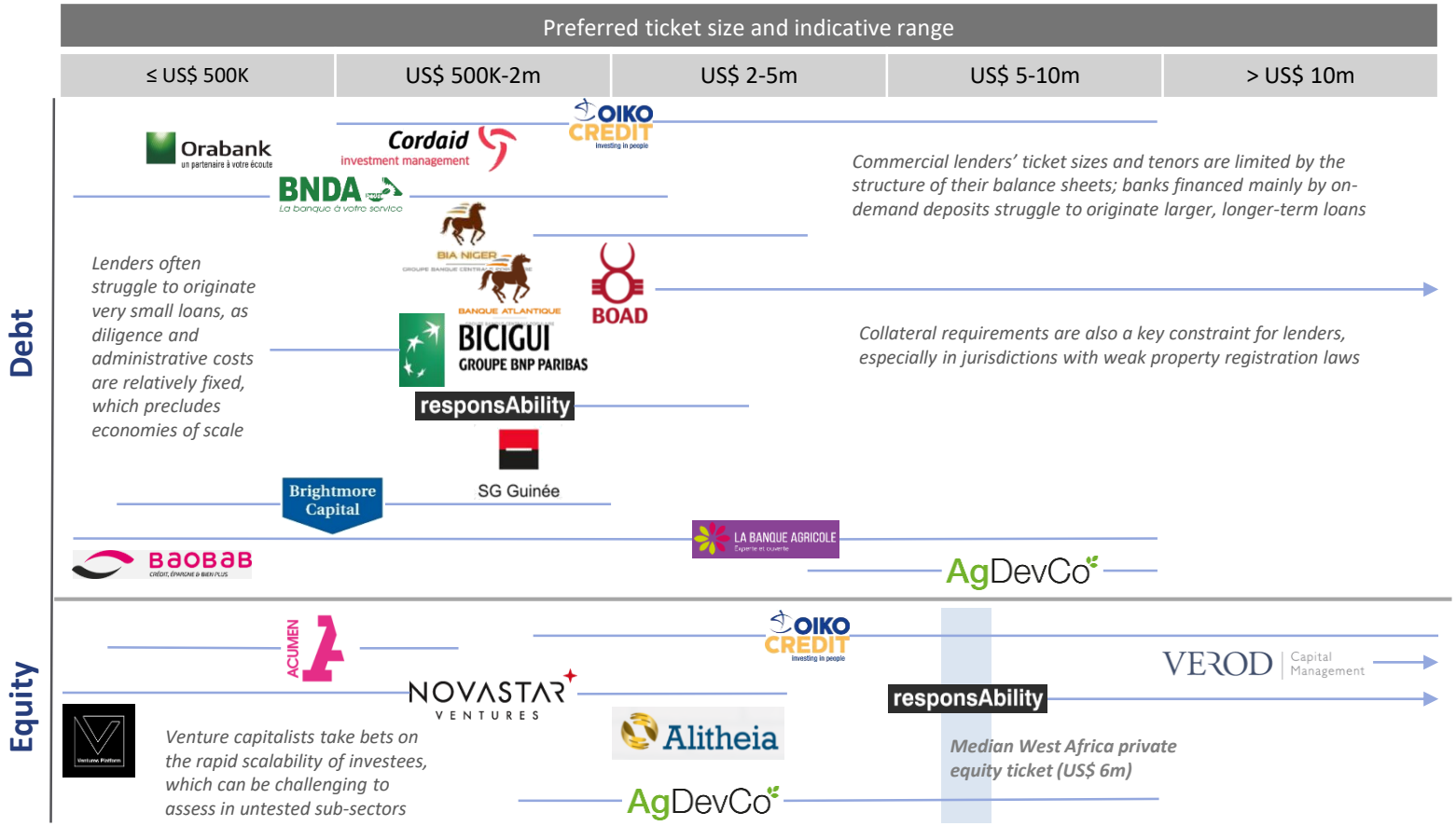
Source: CrossBoundary analysis

Mission-driven investors are often constrained by limited capacity, while larger organizations may experience sluggish bureaucracy or high turnover

Note: Headcount covers firm employees based in the region, not total corporate personnel (where applicable)
Source: Investor interviews and websites; CrossBoundary analysis

Investors' ability to provide a wide range of ticket sizes is a factor of structuring flexibility, capitalization and portfolio composition

- Investors must consider a range of factors when originating new deals, and can often face difficult decisioning tradeoffs
- For smaller investors entering a lesser-known sector or geography, allocating **upfront due diligence costs** to a potential future portfolio will sometimes **prevent smaller ticket sizes**, as these expenses elevate cost recovery thresholds on a transaction basis
- A **portfolio approach** in which larger and safer debt investments provide **steady interest income** whilst smaller and riskier equity deals serve as **proof-of-concept or discovery investments** in untested sectors or markets is an innovative workaround

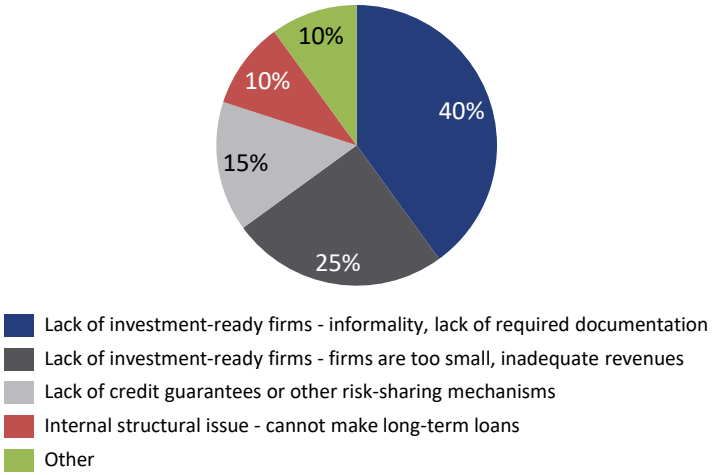


Source: Investor interviews and websites; African Private Equity and Venture Capital Association; CrossBoundary analysis

In sourcing new opportunities and during post-investment implementation, investors are challenged by informality and insufficient managerial expertise

- Investors must assess the upfront costs of sourcing quality leads and then **consider these costs in the context of post-investment risks and returns**
- Informal business plans, incomplete or nonexistent financial records and informal agreements with suppliers and customers are just some of the **information asymmetries that investors must pay to overcome** before deploying capital
- While equity investors are positioned to take a hands-on approach to partnering with and providing technical assistance to management teams, **banks are often passive and are not seen as growth partners**
- The **scarcity of quality management and operational talent** is a key concern voiced by investors

Investor perspectives on origination challenges



Investor perspectives on implementation challenges

> *Management, management, management. It's the management team you're investing in, not the business. The central thing is execution.*
>
> *- Pan-African impact investor*

> *A lot of SMEs… never hire a finance officer. They tend to mismanage their debt.*
>
> *- Regional bank credit officer*

> *The main challenge investees face is with actualizing expansion plans, resourcing roles and building the best team to execute on growth plans at competitive levels.*
>
> *- Impact-oriented private equity investor*

> *Accessing talent… is one of our key issues.*
>
> *- Venture capital investor*

Source: Investor interviews; CrossBoundary analysis

Investors' preference for third-party financial guarantees as a way to increase nexus exposure indicates an aversion to untested sectors

Interventions identified by investors to alleviate nexus or ticket size concerns

	Post-investment TA	A Third-party financial guarantees	B Grants concurrent with investment	C Donor-funded DD or advisory services	Co-investing with a sector veteran	Co-investing with a first-loss partner
Interventions to increase nexus exposure	OIKO CREDIT, Brightmore Capital, LA BANQUE AGRICOLE, BOAD	Cordaid investment management, BNDA, BIA NIGER, BANQUE ATLANTIQUE, VEROD Capital Management, BICIGUI GROUPE BNP PARIBAS, Orabank, SG Guinée 47%	NOVASTAR VENTURES, Venture Platform	ACUMEN, Alitheia, AgDevCo	BAOBAB	
Interventions to reach earlier-stage firms	A VEROD Capital Management, Alitheia, BOAD	BIA NIGER, BNDA, Orabank, BICIGUI GROUPE BNP PARIBAS, BAOBAB 24%	Venture Platform	ACUMEN, Cordaid investment management, Brightmore Capital, AgDevCo, BAOBAB	B BANQUE ATLANTIQUE, OIKO CREDIT, LA BANQUE AGRICOLE, SG Guinée 24%	

- **A** *That credit guarantees were demanded by both impact investors and commercial banks indicates a general wariness of untested nexus business models and products, regardless of mission-driven investment mandates*
- **B** *VC investors may realize that banks won't lend to pre-revenue or pre-positive free cash flow firms, so seek to substitute grants for debt*
- **C** *Firms with well-developed impact models still seek to offset upfront costs when diligencing untested sectors or products*

- **A** *An emphasis on post-investment TA can indicate confidence in business fundamentals but concerns around execution; TA can be provided through grant capital*
- **B** *Demand for a first-loss tranche of capital for investing in earlier-stage firms but not for nexus sector exposure emphasizes startup risk in general over concerns about demand for nexus products or services*

Source: Investor interviews; CrossBoundary analysis

Within an investment's capital structure, equity guarantees and / or junior equity instruments may help crowd in additional equity providers

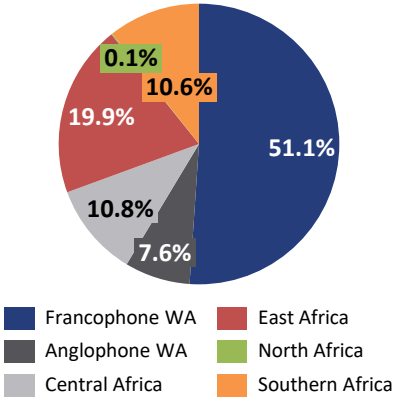
- While **equity investors assume the most risk** relative to lenders or providers of mezzanine capital or similar instruments, there are **tools to mitigate the risks inherent to equity investments in SMEs**
- An **equity guarantee** provides a floor to the value of an equity investor's investment, acting as an insurance policy against a severe drop in equity value
- Alternatively, structuring in **junior equity (sometimes referred to as "catalytic first-loss capital")** – which is concessional and absorbs losses before they affect normal shareholders – may help to achieve the same financing outcomes
  - Such a structure should not be confused with a "first-loss tranche" within the debt portion of the capital structure, if it exists, which would be more senior
- While these tools alter equity investors' risk exposures, they **may not address fundamental questions around equity financing**
  - An SME must still be able to "absorb" the equity, meaning the required investment amount must correspond to an acceptable ownership stake
  - From the investor perspective, a ticket must be sizeable enough to justify incurring the various upfront costs required by the transaction; **investment facilitation and subsidies can assist with offsetting this cost**
- Such tools are broadly considered catalytic to private capital participation, and **are not seen as distorting markets**

Provider snapshot: African Guarantee Fund

African Guarantee Fund (AGF) is a mission-driven guarantee provider offering bank fundraising guarantees, loan guarantees, equity guarantees and capacity development services to both SMEs and investors

- As of December 2018, AGF had partnered with over 100 investors and had guaranteed 20,500 investments in SMEs
- Over US$ 1.8b in AGF-guaranteed investments have been originated; around US$ 515m is currently outstanding

AGF guarantees by geography



Indicative AGF equity guarantee terms

Term	Amount
Coverage limit	50% up to US$ 1m (higher with co-guarantee)
Origination fees	0.50% - 1.00%
Tenor	Up to 10 years
Pricing	2.00% - 4.00%

Source: AGF website; GIIN website; CrossBoundary analysis

As in East Africa, TA and advisory providers can improve pipeline quality and enhance post-investment implementation; first-loss capital will also be catalytic

We recommend the Regional Innovation Hub provide the following services and capital:

Services	Develop a marketing list of investable opportunities	• The Regional Innovation Hub should consider **marketing investable firms to capital providers** as a core focus area
Services	Develop and deploy a bespoke engagement model for service providers	• **Provide access to tailored investment advisory services** pre-transaction, understanding and responding to barriers identified by investors and linking deficient capital seekers with appropriate service providers • **Provide access to tailored TA to support post-investment monitoring and value creation**, balancing investors' competing priorities (e.g. cash reserves for debt investors vs. reinvestment for shareholders)
Capital	Provide risk mitigants to promote nexus exposure	• **Target inclusion of private equity / venture capital investors** by providing **catalytic first loss capital** or **grant capital matching** • Arrange for and deploy **enterprise-specific TA providers in partnership** with risk mitigation measures

East Africa considerations

- East African investors expressed the need to select the advisory provider that appropriately meets the quality and experience necessary for their diligence requirements
- 12 EA investors observed that risk-reduction instruments would drive increased investment in nexus firms

West Africa considerations

- West African investors overwhelmingly (40%) identified informality and a lack of required documents as the main pre-transaction barrier
- Post-transaction, equity and impact investors stressed capacity building while banks stressed cash flow management

Commentary

- Mediating between commercial lenders and impact-oriented debt and equity investors requires a deliberate approach and **partnership with a law firm**
- Plan ahead for a language barrier by **sourcing bilingual advisors as required**; law firms must possess expertise across jurisdictions

Note: Complete overview available in Appendix 3

Whether by mission-driven mandate or commercial practicality, nexus investors incorporate a gender lens to their portfolios and their teaming

- Despite lingering notions of women's traditional roles in society, **West Africa boasts a vibrant ecosystem of female entrepreneurs**
- Ghana, for example, has the **highest percent of women business owners worldwide**, with over 46% of businesses owned by women; 40% of business leaders in Ghana are women
- In Nigeria, women are **as likely as men to engage in entrepreneurship**
- A number of nexus investors run gender lens workshops or female-focused accelerators, while others build gender into their ESG DD
- Non-impact commercial banks also value new and ongoing business with female borrowers

CrossBoundary and the Oikocredit due diligence team perform a site visit with the leadership of all-female shea nut collection cooperatives in Sirakoro, Mali in 2018.

Impact investor

Female involvement in our portfolio companies and their value chains is a core investment criterium.

Impact investor

A gender lens is really important for us – fully 45% of our portfolio companies are led by women.

Venture capital fund

Women outnumber men two to one at Acumen, and we target companies with a strong female Board presence.

Impact investor

We run [gender lens investing] workshops. And when we have ownership or leverage over an investee, we push a strong gender agenda.

Venture capital fund

We established an accelerator program specifically for women entrepreneurs and women-run businesses.

Regional commercial bank

Our deputy head is a woman, as are 50% of our c-suite and 40% of our Board.

Regional commercial bank

We have lending programs specifically aimed at female producers and collectives, who are a critical part of Niger's economy.

Regional commercial bank

We generally find women to be more reliable at paying back their loans than men.

Sources: Investor interviews; Mastercard Index of Women's Entrepreneurship (MIWE) 2018; CrossBoundary analysis

Case study in gender lens investing: Alitheia Capital is a pan-African impact equity investor with strong gender alignment

Alitheia IDF
GROWING BUSINESSES

- Alitheia IDF is the **only private equity fund manager in Africa prioritizing growth stage companies which have gender diversified management teams**
- Tailored GLI sourcing strategy:
  - The fund invests in sectors that engage a significant percentage of women, either as entrepreneurs, distributors or consumers
  - Sectors include agribusiness, consumer goods, health, education, creative industries, and financial and business services
- Alitheia targets female entrepreneurs through investment education
- Tailored GLI portfolio management:
  - Portfolio management activities include **mentorship** and advisory services related to near-term **growth opportunities** and **strategic expansion**
  - Alitheia ensures that women-led businesses have access to networking in the sector / industry of the company

Alitheia IDF West Africa team

Tokunboh Ishmael
Principal Partner
Tokunboh is a CFA Charterholder, corporate financier and M&A banker having worked on over US$ 5.6b in M&A deals across the United States, UK and Africa. Exceptionally experienced in the energy, oil, gas, technology and financial services sectors, she is now focused on helping to invest and build sustainable SME growth businesses.

Mobola Onibonoje
Investment Manager
Mobola's career spans private equity, management consulting and financial advisory in West, East and Southern Africa, and the United States. She sits on a number of advisory boards, and is also a Certified Public Accountant, a WimBoard Institute Fellow and an AJC Project Interchange Alumni.

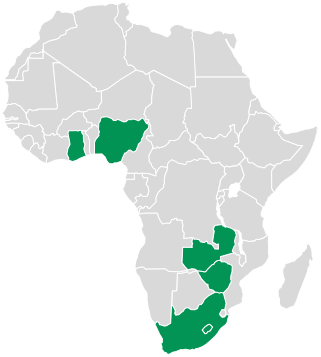
Recent media coverage

FINANCIAL TIMES

AFRICAN DEVELOPMENT BANK GROUP

Forbes

Country coverage



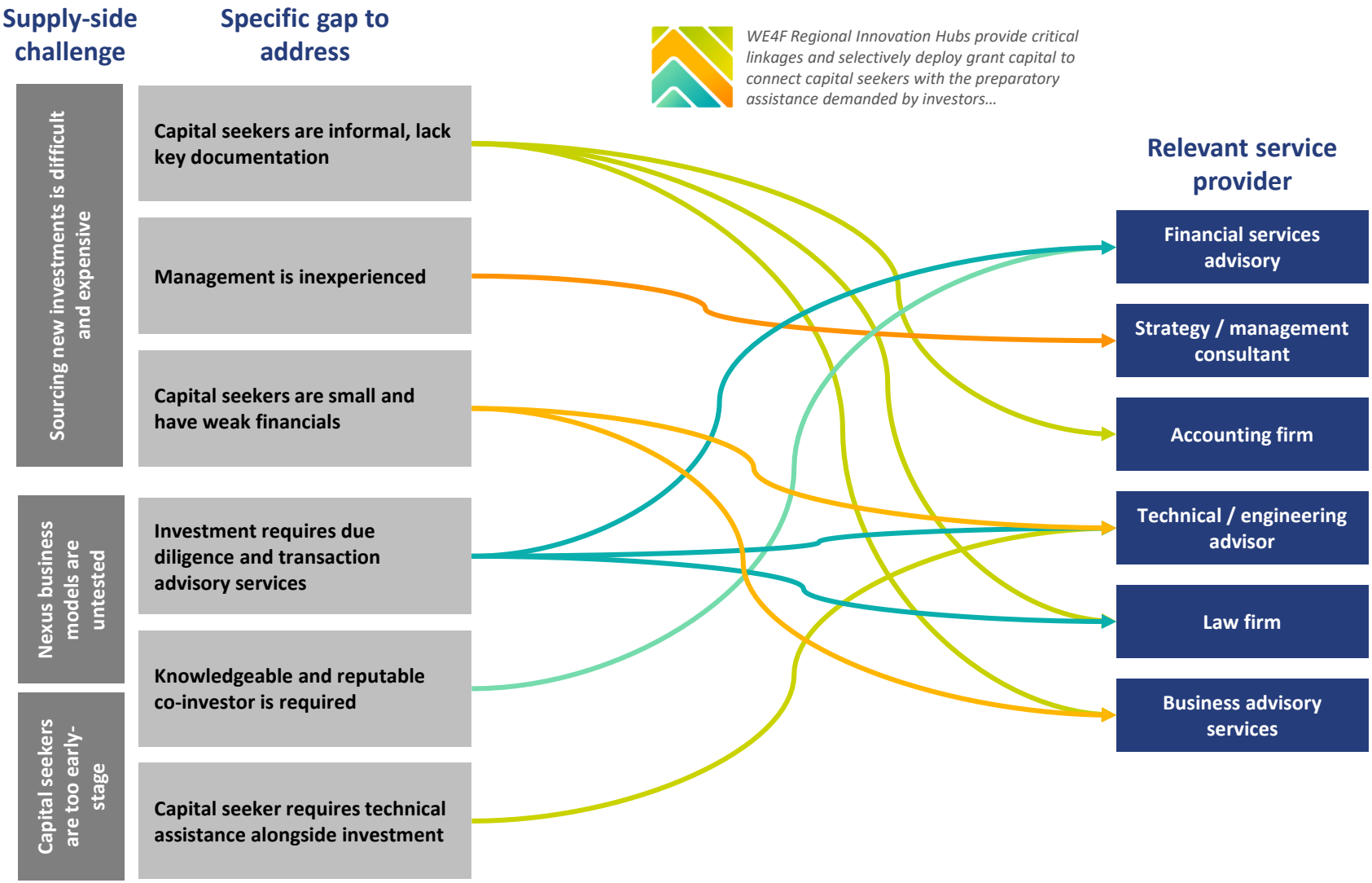
> *We must stop speaking about gender empowerment and instead speak about high net returns on investment in an untapped market.*
>
> *- Alitheia IDF investment professional*

Sources: Investor interviews; CrossBoundary analysis

CROSSBOUNDARY

Key findings: Service providers

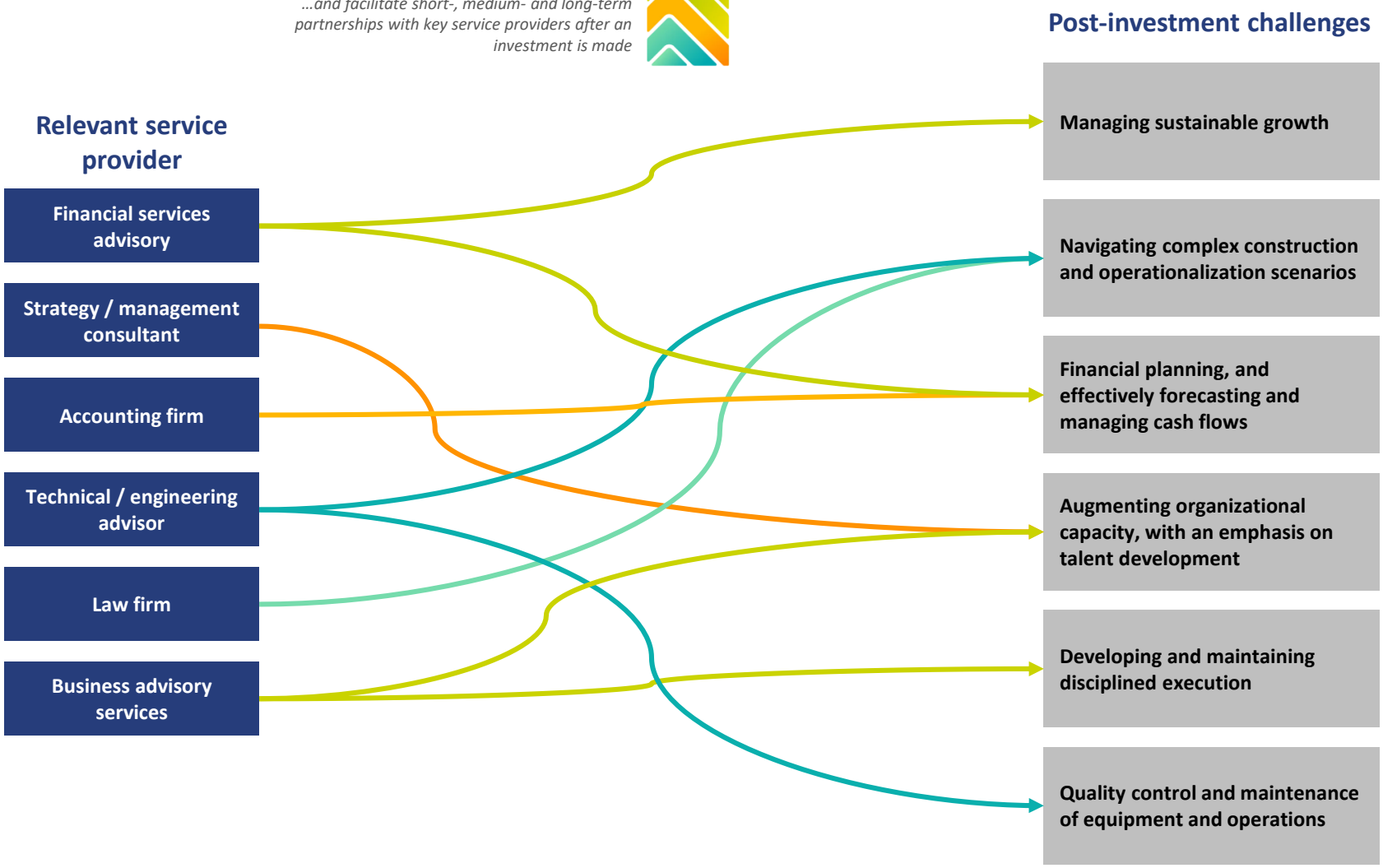
Service providers are critical to bridging gaps between supply and demand within an investment ecosystem, both leading up to a transaction…



Sources: Investor interviews; CrossBoundary analysis

…and afterwards, during implementation and growth stages

…and facilitate short-, medium- and long-term partnerships with key service providers after an investment is made



Sources: Investor interviews; CrossBoundary analysis

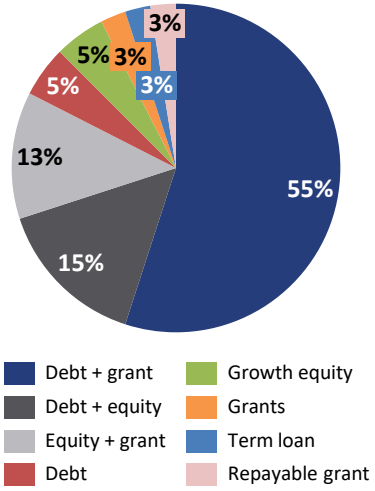
Investors identified catalytic service provider interventions that can address various barriers and challenges both pre- and post-investment…

A Increase comfort with nexus and early-stage firms		A Augment quality of pipeline		Provide post-transaction support		
Offer TA along with investment	Donor-funded DD or advisory services	Overcome informality and lack of docs	Support growth and cash generation	B Capacity development	C Financial management	Operational excellence
OIKO CREDIT, Brightmore Capital, LA BANQUE AGRICOLE, BOAD, Aliteia, VEROD Capital Management	ACUMEN, Cordaid investment management, Aliteia, AgDevCo, Brightmore Capital, BAOBAB	SG Guinée, Cordaid investment management, Brightmore Capital, ACUMEN, BICIGUI GROUPE BNP PARIBAS, OIKO CREDIT, Orabank	BNDA, VEROD Capital Management, Aliteia, NOVASTAR VENTURES	OIKO CREDIT, ACUMEN, NOVASTAR VENTURES, Aliteia, LA BANQUE AGRICOLE, AgDevCo	BNDA, BICIGUI GROUPE BNP PARIBAS, SG Guinée, BANQUE ATLANTIQUE, BAOBAB, Orabank, BIA NIGER	Cordaid investment management, Ventures Platform

- **A** Sourcing and curating a pipeline of nearly investment-ready WE4F enterprises, and connecting them to (and where appropriate, subsidizing the cost of) service providers before approaching investors should be catalytic to nexus growth
- **B** Post-transaction, **equity investors, mission-driven investors and others focused on longer-term value creation value capacity development…**
- **C** …while **lenders are predictably focused mainly on conservative cash budgeting**

- The majority of enterprises identified a combination of loans and grants as the desired financing structure
- Ideally, **grant capital finances productive assets** or physical expansion that increases capacity and / or utilization, **driving more robust cash flows** to support the debt
- In practice, this takes careful coordination and phasing – placing **critical importance on sound financial management and cash budgeting**

Investment sought by type



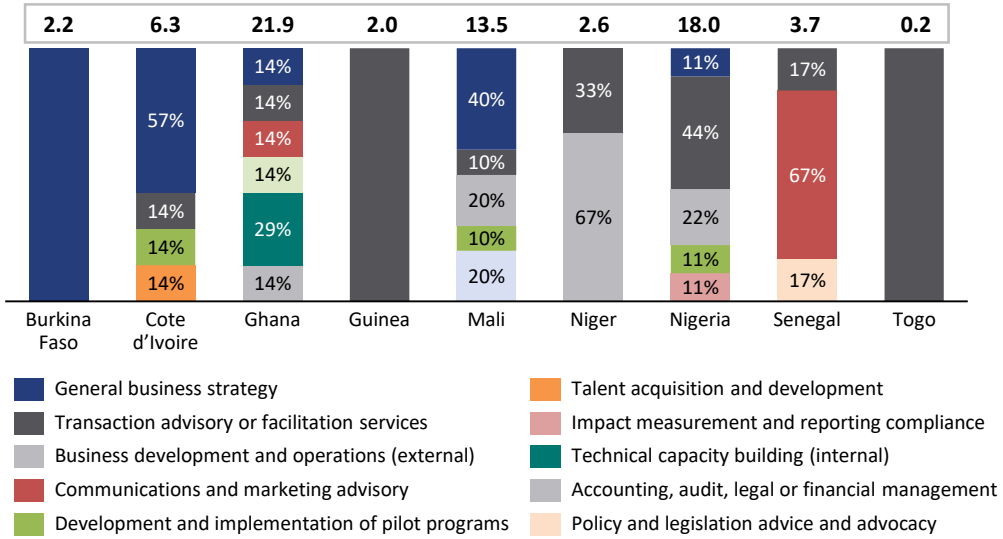
Source: Investor interviews; CrossBoundary analysis

Demand for TA and advisory services becomes varied as aggregate investment amount increases – though investors' desired interventions are more uniform

- Service providers identified cover 5 specific countries representing **79% of regional GDP**, while an additional 3 firms offer complete regional coverage
- **Larger aggregate investment amounts** by country predictably **demand a greater variety of TA and advisory services**
- While regional service providers have broader reach, **referrals are also a powerful way of finding the best service provider** to meet requirements
- **WE4F Hubs should play an active role** in structuring and phasing these resources

Demand for TA and advisory by country and type (%)

Total investments sought, USDm



Regional coverage

We recommend the TA and advisory network be leveraged to provide targeted services to both enterprises and investors in a sustainable manner

We recommend WE4F develop and provide funding for the service provider network in the following ways:

Setup

Hub team to structure and facilitate key functions across the nexus

- Vet and oversee selection of preferred TA / investment advisory providers
- Provide TA support via the TA Unit for cross-enterprise competencies
- Provide investment advisory support via the Brokering Unit
- Manage process to allow enterprises or investors to select TA / investment advisory providers based on skills, geography, and budget

Compensation

Subsidize TA spend for enterprises and investors; provide success-based fees for advisory work

- Allocate grant-based budget to enterprises and investors to utilize for services
- Develop success-fee based transaction facility whereby a portion is paid to transaction service provider based on capital raise success
- Provide additional incentive-based fees for transactions with gender-based impact

East Africa considerations

- Advisors proved helpful through their role as a local intermediary with context-specific knowledge; EU-based impact investors, e.g., lack the in-country familiarity to guide investees
- Few law firms were available to nexus firms in the region, though not many required sophisticated legal advice given their small size

West Africa considerations

- Similar to enterprises trying to educate client segments pre-sale, some TA providers in the region are also practicing agricultural producers; they show empirical evidence of their recommendations' viability
- Firms' demand for general advisory, including drafting business plans, must be reconciled with a reticence to pay high fees for what some view as a formality; **subsidies can assist here**

Commentary

- In West Africa, informality often belies a strong commercial intuition and sound fundamentals; **Hub should prioritize and phase TA / advisory engagements to get firms pipeline ready** in an efficient way
- Coordinating a 'document check' as a screening tool before including firms in the recommended marketing list is an effective first step

Note: Complete overview available in Appendix 3

The Hub would provide enterprise-wide services while external TA / advisory firms would provide tailored enterprise and investor support

Regional Innovation Hub

Technical Assistance Unit

Enterprise-wide TA

- Development and implementation of pilot programs
- Consolidation of and training enterprises on impact measurement and reporting compliance, particularly since these capabilities are often required from recipients of grant financing
- Talent acquisition and upskilling of key positions for enterprises (middle mgmt., finance and marketing functions)

Tailored TA

Connecting enterprises to TA services meant to support constraints to scale including:

- Business development
- Business mentorship
- Business modelling
- Environmental compliance
- Gender-related programming
- Marketing (graphic design, branding, site development)
- HR Management
- Legal resources
- Media / presentation coaching, PR / comms
- Organizational capacity building
- Partnership identification
- Policy & advocacy
- Product development
- Smallholder marketing / sales
- Supply chain development
- Technical writing and scope

Brokering Unit

Enterprise- / investor-wide advisory services

- Developing, maintaining, and circulating enterprise pipeline to be shared with investors regularly
- Facilitating introductions to external capital sources (e.g. DCA, regional crowdfunding platforms

Tailored enterprise / investor advisory

Connecting enterprises and/or investors who are considering a WE4F enterprise investment with Investment Advisory providers who offer the following types of services:

- Fundraising
- Commercial due diligence including market validation, competitive landscape, customer profiling
- Financial modelling
- Valuation
- Deal structuring

TA Unit leadership should have strong strategy and product skills, while leaders of the Brokering Unit should have investing and commercial due diligence skills

Regional Innovation Hub

Technical Assistance Unit

The TA Unit should be led by someone with specific experience in **agronomy, capacity building, product design**, **data collection**, and who has **deep West Africa market experience**[1]

- Building, enhancing, and leading core skills of strategy, **capacity building** and innovation
- Utilizing **data and information to develop sound strategies**, anticipate trends, and articulate future needs
- Developing **strategic performance metrics** and **targets**; implementing plan across organization
- **Designing products** in the water, energy, food sectors

Brokering Unit

The Brokering Unit should be led by someone with **experience in investment banking** or **private equity,** and who has **deep West Africa market experience**[1]

- **Capital raising** and **investment structuring**
- Providing a **"buy-side" investor perspective**, including experience in commercial due diligence (e.g. market validation, competitive landscaping)
- Identifying **post-investment value creation opportunities**
- Engaging and **mobilizing financing** from various external capital providers

[1] Candidates will likely not match all skills listed

CROSSBOUNDARY

Recommendations for WE4F

Careful coordination with firms, investors and service providers, along with precision deployment of grant capital, will unlock growth in WE4F nexus sectors

Nexus innovators face numerous hurdles to outside financing and sustainable growth

- With a **median investment size of just under US$ 1m**, capital-seeking nexus firms are **difficult to finance**
- **Significant upfront diligence costs** and overhead make small deals in challenging geographies **economically unattractive, even for impact investors**
- **Traditional private equity tickets are generally too large** for growing SMEs
- **Accessibility to local bank financing is limited** due to onerous terms, including outsized collateral requirements and revenue domiciling among others; interest rates are punitively high
- **Entrepreneurs may not know where to start** when seeking TA and advisory services, as informal commercial intuition doesn't always map well to investors' documentary requirements

Hub Technical Assistance Units and Brokering Units coordinate support…

- Regional Innovation Hubs should form Technical Assistance Units and Brokering Units to assist entrepreneurs by **coordinating support and introductions to investors**
- Units should be staffed and equipped to **perform limited initial due diligence of their own** in order to **understand the nature of entrepreneurs' challenges** and recommend the most efficient and holistic solution
- In addition to coordinating and brokering connections, Units may judiciously **deploy grant capital to subsidize TA or advisory fees**

…while judiciously deploying grants to bridge impasses to investment

- Grants may be used in parallel or sequentially, providing recipients an **opportunity to increase their revenue-generating capital stock** while building a **demonstrable track record of disciplined financial management**
- Grants may be **milestone-based**, **optionally repayable** or structured into a capital stack as a **first-loss tranche or similar risk mitigation tool**
- By abiding by the terms of donors, entrepreneurs **demonstrate their commercial discipline and viability to potential investors**, signaling their readiness for larger follow-on investments

CROSSBOUNDARY

Appendix 2: Country snapshots

Cote d'Ivoire – Country deep-dive

Cote d'Ivoire has enjoyed economic success over the last decade, the county's **positive reputation among investors** works in favour of nexus enterprises when they're raising capital

Macroeconomic Snapshot[1]

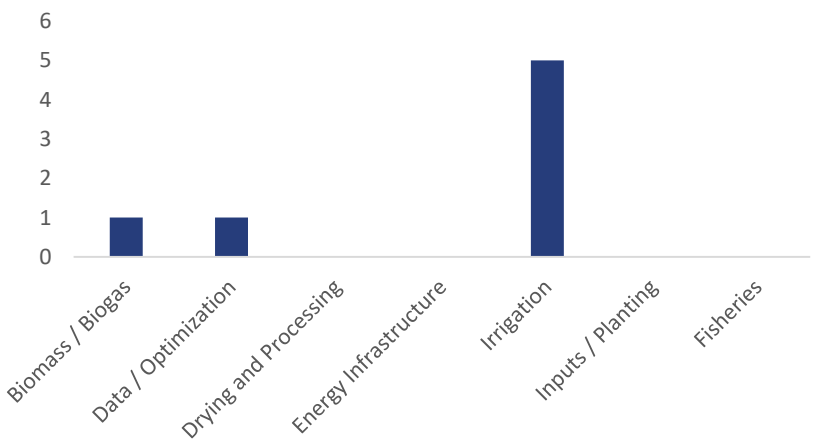
Ease Of Doing Business	122	Real GDP Growth	7.4%
Protecting Minority Investors	149	Access to Electricity	36.6%
Registering Property	112	Rural Employment in Ag	48.4%

Investment Opportunity

No. of profiled companies	7
Total market investment demand[2]	US$6.3m
Market demand for equity	US$1.4m
Market demand for debt	US$4.9m
Median firm investment demand	US$0.4m

- GDP growth has averaged 8% per year since the post-electoral unrest in 2011, making this one of the fastest growing economies in the world
- Cote d'Ivoire is a net food exporter of major cash crops including cocoa, coffee, cashew nuts, bananas, cotton, palm oil
- Most of the agricultural products are exported raw indicating opportunity for local enterprises to shift/expand from focusing on production to processing
- Despite, Cote d'Ivoire's economic dominance, the enterprises profiled are smaller in scale (revenues for all were below $700K). This could be due to the fact that companies with larger scale operations have had success finding funding due to the country's favorable FDI policies
- The most requested TA/BAS was business strategy to guide businesses as they transition from early stage to growth

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database

Mali – Country deep-dive

Mali previously saw minimal foreign investment, but thanks to donor intervention, the **country is on investor's radars and WE4F enterprises are poised to benefit**

Macroeconomic Snapshot[1]

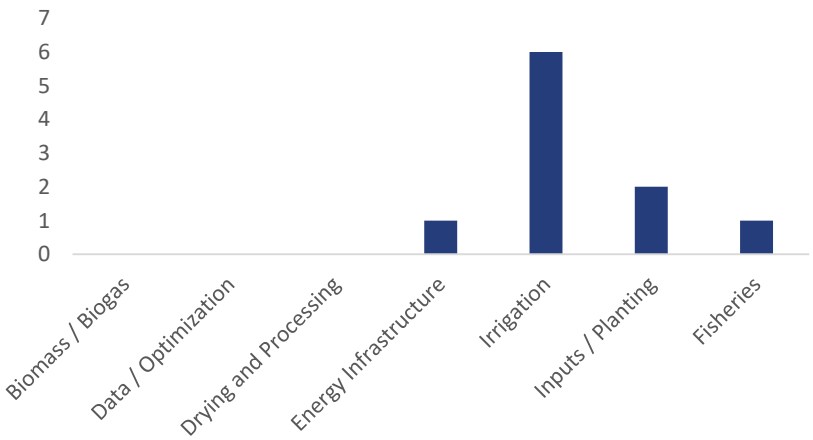
Ease Of Doing Business	145	Real GDP Growth	4.9%
Protecting Minority Investors	149	Access to Electricity	11.7%
Registering Property	141	Rural Employment in Ag	65.7%

Investment Opportunity

No. of profiled companies	10
Total market investment demand[2]	US$13.5m
Market demand for equity	US$5.4m
Market demand for debt	US$8.1m
Median firm investment demand	US$0.8m

- Despite a short-lived military coup in 2012 and the ongoing armed secessionist struggle in the north, the macroeconomic performance of Mali over the past decade has been strong, with GDP increasing at an annual rate of 5.9% GDP growth expected to remain robust at >5% over the next five years, driven by services and industry
- "Access to finance" was identified by the same survey as the second main obstacle to conducting business and was of particular concern to small and medium enterprises according the World Bank's Mali Enterprise Survey
- Despite Mali's shallow economy, we were able to identify the most enterprises there due to our long-term presence in the market and our experience sourcing and facilitating deals in the market

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database

Nigeria – Country deep-dive

Nigeria is experiencing slow economic growth, underlined by the implementation of President Buhari's recent protectionist policies

Macroeconomic Snapshot[1]

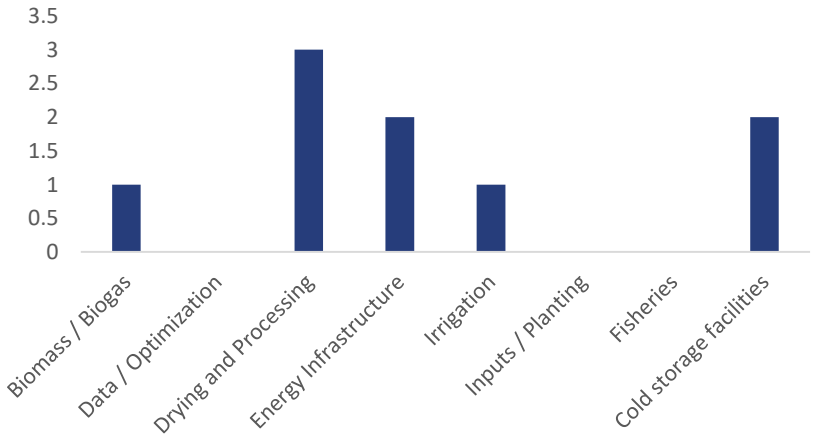
Ease Of Doing Business	146	Real GDP Growth	1.9%
Protecting Minority Investors	38	Access to Electricity	22.6%
Registering Property	184	Rural Employment in Ag	36.8%

Investment Opportunity

No. of profiled companies	9
Total market investment demand[2]	US$18m
Market demand for equity	US$14.2m
Market demand for debt	US$3.8m
Median firm investment demand	US$1.8m

- Nigeria's economic growth pattern has historically been dominated by oil prices, and the government has been actively seeking economic diversification, with agricultural development as one of the key focus areas
- Growth of the agriculture sector, which accounts for 22% of the country's GDP, has slowed down significantly due to conflict and weather events
- The country's agricultural sector is dominated by smallholder farmers who work on an average of 4-5 acres each under rain-fed conditions, and lack knowledge of modern practices, and have insufficient capital
- All the enterprises profiled are focused on extending solutions to small scale farmers in remote areas; including solar powered equipment for cold storage, drying and processing as well as irrigation to support year-round land use

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database

Senegal – Country deep-dive

Plan Sénégal Emergent (PSE), an ambitious national development plan, has reversed Senegal's GDP slump since its implementation in 2015 and improved Senegal's standing on most attractive economy rankings

Macroeconomic Snapshot[1]

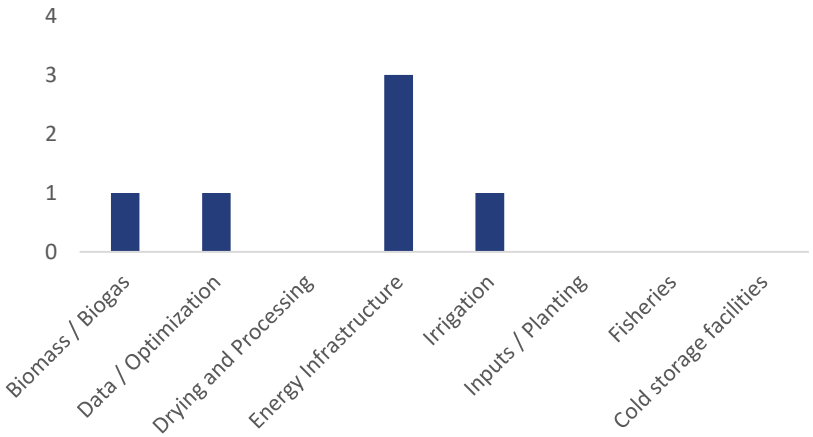
Ease Of Doing Business	141	Real GDP Growth	6.1%
Protecting Minority Investors	140	Access to Electricity	35.4%
Registering Property	118	Rural Employment in Ag	32.5%

Investment Opportunity

No. of profiled companies	6
Total market investment demand[2]	US$3.7m
Market demand for equity	US$0.7m
Market demand for debt	US$3.0m
Median firm investment demand	US$0.6m

- Senegal's GDP growth has seen a positive trend since the implementation of the current government's flagship program, which has macroeconomic and political stability as two of its primary backbones
- The government has made strides in creating a conducive environment for private investors. The country was the first to adopt a law on PPP, which will allow the government to have set structures for engaging technical partners and private investors
- Despite the country's wins, it is still one of the poorest nations in the world with a high income disparity. There is need to extend infrastructure to the rural population to promote more equitable growth
- Enterprises profiled in Senegal are predominantly focused on extending energy infrastructure to rural areas, to electrify and mechanize operations of off-the grid farmers

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database

Ghana – Country deep-dive

Ghana currently has one of Africa's fastest growing economy thanks to stable government policies that are focused reducing the country's reliance on Aid

Macroeconomic Snapshot[1]

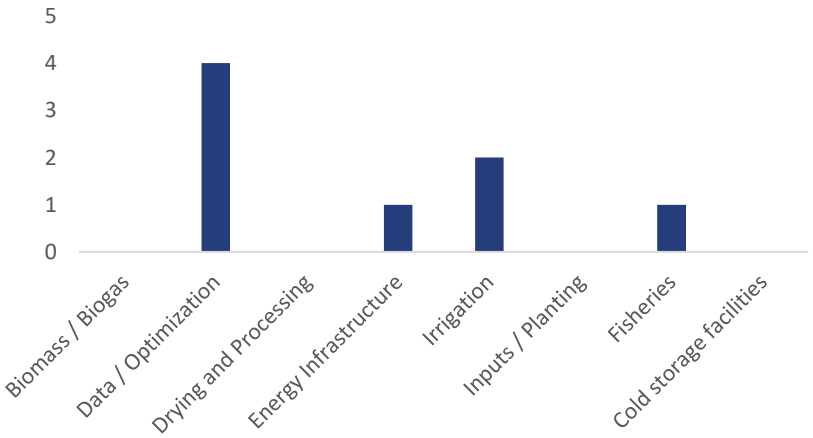
Ease Of Doing Business	12.2m	Real GDP Growth	5.6%
Protecting Minority Investors	8.3%	Access to Electricity	65.3%
Registering Property	861.09	Rural Employment in Ag	34.3%

Investment Opportunity

No. of profiled companies	8
Total market investment demand[3]	US$16.9m
Market demand for equity	US$9.5m
Market demand for debt	US$7.4m
Median firm investment demand	US$1.5m

- The IMF predicts that, Ghana will have the world's fastest growing economy in 2019 buoyed by recent oil discovery and exploitation
- Ghana is gradually building industrial capacity on the back of President Nana Akufo-Addo's campaign promises, and growth in the industry projected at 9.8% in 2019 and 5.9% in 2020, promising higher demand for industry inputs including agricultural produce
- Our interviews with enterprises in Ghana indicated that there is a strong entrepreneur ecosystem. 5/6 of the profiled enterprises had gone through acceleration programs such as MEST and Kosmos Innovation Centre which are offering crucial support and direction to early stage innovators
- Profiled enterprises are all seeking growth capital for expansion and equipment purchases

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database

Niger – Country deep-dive

Despite being landlocked, Niger has enjoyed robust growth led by mineral exports but the **lack of entrepreneurial dynamism** will undermine longer term development

Macroeconomic Snapshot[1]

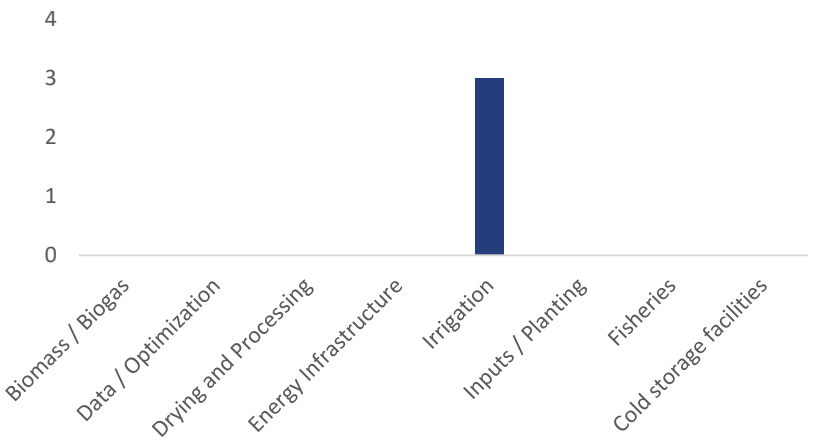
Ease Of Doing Business	143	Real GDP Growth	5.1%
Protecting Minority Investors	149	Access to Electricity	10.8%
Registering Property	111	Rural Employment in Ag	76.1%

Investment Opportunity

No. of profiled companies	3
Total market investment demand[2]	US$2.6m
Market demand for equity	US$0.7m
Market demand for debt	US$1.9m
Median firm investment demand	US$0.3m

- The financial system is underdeveloped, weak, and fragmented reflecting the small size of the economy
- The economy has been hampered by security threats since the arrival of Boko Haram, jihadist attacks and drug trafficking in the Tillabery and North Tahoua regions, and is heavily reliant of uranium exports
- However, the agricultural economy has previously registered a strong performance and remains a priority under the country's strategy to strengthen and accelerate economic development
- There is strong potential in renewable energy, sector as the government is exploring alternative energy sources to address the recurring shortage of electricity
- The companies profiled in Niger are exploring these opportunities and delivering solar solutions for agri production and processing

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database

Guinea – Country deep-dive

Despite **ongoing security issues** in the area, WE4F enterprises in Somaliland have **achieved reasonable scale** and are seeking investment facilitation support, particularly for fundraising

Macroeconomic Snapshot[1]

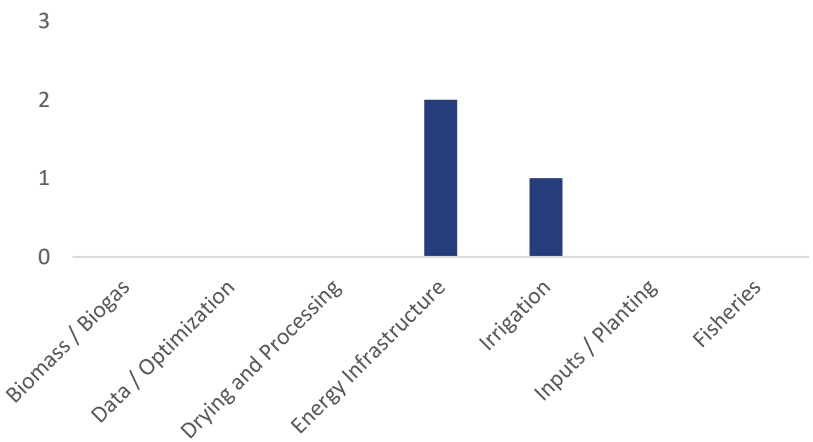
Ease Of Doing Business	152	Real GDP Growth	5.7%
Protecting Minority Investors	149	Access to Electricity	8.8%
Registering Property	138	Rural Employment in Ag	67%

Investment Opportunity

No. of profiled companies	3
Total market investment demand[2]	US$1.8m
Market demand for equity	US$0.3m
Market demand for debt	US$1.5m
Median firm investment demand	US$0.3m

- The government taking steps to attract foreign investors to agriculture, construction, education, finance, and communication including sending government officials to meet with foreign investors, and launching an investment promotion agency
- Guinea enjoys favorable climate and geography which offers considerable potential for growth in the agricultural and fisheries sectors
- WE4F enterprises have seen minimal scale with revenue remaining under $100k over eight-year period of operation
- Enterprises were not specific in their request for TA/BAS but indicated that they would be happy to receive whatever they were offered, potentially indicating a lack of clear focus
- Firms are seeking financing for growth, but unspecific in terms of particular use

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database

Burkina Faso – Country deep-dive

An unskilled and uneducated workforce, along with poor public infrastructure pose challenges for entrepreneurs; **enterprises requested capacity building programs** to train needed labour

Macroeconomic Snapshot[1]

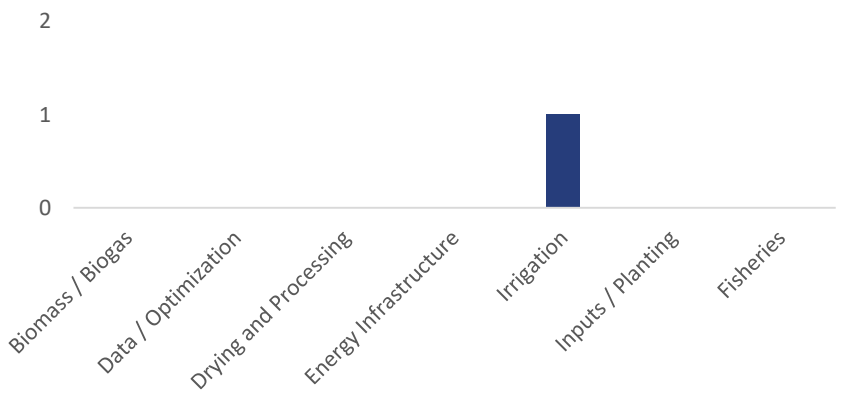
Ease Of Doing Business	151	Real GDP Growth	6.0%
Protecting Minority Investors	149	Access to Electricity	9.6%
Registering Property	145	Rural Employment in Ag	29.2%

Investment Opportunity

No. of profiled companies	1
Total market investment demand[2]	US$2.2m
Market demand for equity	US$0.4m
Market demand for debt	US$1.8m
Median firm investment demand	US$2.2m

- Burkina Faso is currently in the process of developing a second Millennium Challenge Corporation (MCC) compact. The compact will focus on the energy sector, including policy reform and capacity building, energy (especially solar) production and grid expansion
- Weak rule of law and systemic weaknesses in the protection of property rights still hinder the emergence of a more vibrant entrepreneurial
- We have only profiled one firm in the WE4F nexus that is focused on providing solar powered irrigation solutions to off the grid farmers
- There are a good number of government projects that the enterprise has bid for, but for long term sustainability there is need to focus on private sources of revenue

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database

Togo – Country deep-dive

Togo has maintained steady growth despite growing political instability due to government efforts to modernize banking, transportation and commercial sectors; **enterprise seeks assistance in capital raising**

Macroeconomic Snapshot[1]

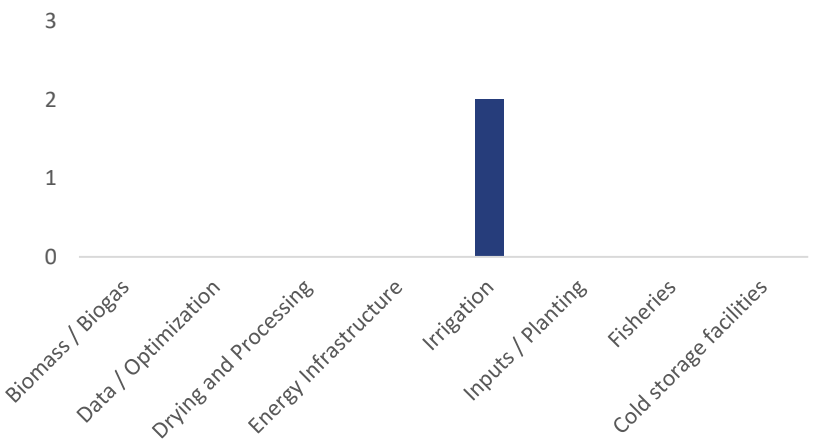
Ease Of Doing Business	137	Real GDP Growth	4.7%
Protecting Minority Investors	149	Access to Electricity	19.5%
Registering Property	127	Rural Employment in Ag	34.9%

Investment Opportunity

No. of profiled companies	2
Total market investment demand[2]	US$0.16m
Market demand for equity	US$0.07m
Market demand for debt	US$0.09m
Median firm investment demand	US$0.08m

- The agricultural sector accounts for about 40% of GDP and over 60% of employment
- Women in Togo are especially vulnerable as they have fewer economic opportunities and are under-represented at high levels of decision making
- However, the country is experiencing an up rise of gender equality laws, female-led protests and national women's conferences, and is looking toward a better future as far as gender equality and women's rights are
- The profiled enterprise shows good promise having achieved over $100K in revenue within four years of operations
- Firm is seeking transaction advisory services to guide its capital raise process. They should benefit from the government's focus on improving local financing institutions

Number of firms by innovation type



Sources: CrossBoundary analysis, Global Financial Development database, World Bank Ease of Doing Business and World Development Indicators database, African Private Equity and Venture Capital Association reports, IMF International Financial Statistics database