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Table of contents

1. Executive Summary
2. Objectives and Methodology
3. Regional Overview
4. Enterprises
5. Investors
6. Technical Assistance Providers
7. Recommendations
8. Appendix
Executive Summary
In order to support WE4F’s objectives, more than 160 entities were identified and interviewed.

**WE4F aims to scale innovations in target sectors**

The Water and Energy for Food (WE4F) Grand Challenge for Development (GCD) aims to scale innovations that:

- Impact the nexus of food, water, and energy
- Operate within the private sector
- Increase the sustainability of agricultural food value chains
- Are based in developing countries and emerging markets
- Have a focus on the poor, youth, and women.

**160+ interviews were conducted for the landscape analysis**

In order to source data and insights for this project, over 160 interviews were conducted:

- 100+ Enterprises
- 30+ TA/BAS providers
- 30+ Capital providers

**To identify and understand main stakeholders and their needs**

A current investment opportunity pipeline and landscape assessment, was created identifying:

- Innovators in the sector
- The capital providers and technical advisory services available to grow and scale these companies
- The ways in which intervention can increase the availability and efficacy of these capital providers and TA services
Investors in MENA, both equity and debt, do not cater to start-ups and less mature companies

SME investment accessibility and terms vary by country

- Overall, the SME finance gap in MENA as a percentage of GDP is the highest in the world
- Availability of SME loans varies by country, with the lowest rates in Egypt, Yemen, and Palestine
- Private equity transactions are most scarce in Yemen, Iraq, Algeria, and Palestine, whilst Morocco and Egypt account for over 30% of all transactions in the region
- The scarcity of transactions in Yemen, Iraq, Algeria and Palestine is driven by political instability

Most investors focus on more mature companies

Most investors focus on mature or growth stage companies due to lower risks: on average, SME loans account for only 7.6% of finance to the region
- In the absence of significant commercial debt and private equity investment for SMEs, informal sources of financing are prevalent

Investor ticket sizes do not fit with SME needs

- The average PE ticket size in MENA is US$29m, which is still well above what most SMEs require to grow, or can absorb in equity
- For commercial lending, collateral requirements can be over 200% of the loan value, thus prohibiting the maximal ticket size of these loans
- Interest rates vary by region, but reach as high as 7.6% net interest rate spread in Iraq, which again prohibits SMEs from taking out high amounts in loans

A total of 69 companies were identified, with the majority concentrated in more stable geographies and water-related sectors.

Developed markets have more good-fit firms
- The prevalence of WE4F companies varies by market with the highest concentration in more developed markets, such as Morocco, Tunisia, Egypt, and Jordan, and fewer in Algeria, Palestine, and Iraq.
- Overall, the team identified 46 priority 1 companies (i.e. thematic and size fit) and 23 priority 2 companies (i.e. thematic fit only).

Most WE4F MENA firms are water-related
- The final catalogue includes 25 water-for-food, 26 water & energy-for-food, 11 energy-for-food/food-for-energy companies, as well as 7 other agriculture companies.
- The majority of enterprises are water-related, due to the relative abundance of cheap energy in MENA.
- Energy-related enterprises are mostly concentrated in countries with limited electricity access, such as Yemen, Lebanon, and Jordan.

Firms identified skew towards >$500k sales
- Almost 40% of enterprises generate revenue of US$500k and above; median revenues are US$300k.
- Larger companies are concentrated among irrigation solutions providers, solar power, and composting enterprises.
- Average growth rates are 69%, driven by companies’ access to stable markets.

Younger firms have higher impact and growth
- Over 75% of nexus companies have women in leadership positions and over 68% have youth in leadership positions.
- Younger firms tend to have more inclusive work-forces, with more women and youths in leadership positions and more such representation within their value chains.
- Younger firms have higher long-term potential for revenue growth and end-user reach.

Source: WE4F analysis and stakeholder interviews
These companies were mostly seeking equity investment to expand sales and marketing and purchase equipment

- In total, enterprises are seeking US$80m investment, with an average ticket size of US$1.3m
- 2/3 of companies are seeking equity investment, largely due to the high cost of commercial debt

Source: WE4F analysis and stakeholder interviews

**Most companies are seeking equity investment**

- **Firms by type of financing sought**

<table>
<thead>
<tr>
<th>Financing Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth equity</td>
<td>20</td>
</tr>
<tr>
<td>Debt &amp; Equity</td>
<td>12</td>
</tr>
<tr>
<td>Term loan</td>
<td>10</td>
</tr>
<tr>
<td>Debt &amp; Grant</td>
<td>6</td>
</tr>
<tr>
<td>Equity &amp; Grant</td>
<td>6</td>
</tr>
<tr>
<td>Repayable grant</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
</tr>
<tr>
<td>Grants</td>
<td>1</td>
</tr>
<tr>
<td>Receivable financing</td>
<td>1</td>
</tr>
<tr>
<td>Trade finance</td>
<td>1</td>
</tr>
</tbody>
</table>

**Investment typically is for growing sales and buying equipment**

- Firms primarily are seeking capital to **expand sales and marketing** into new markets and channels, and to **purchase equipment**
- Investment sizes therefore vary depending on the capital intensity of the industries – more capital-intensive energy companies are seeking larger investments
- Smaller IoT/hydroponics-related start-ups are seeking investments to expand sales & marketing efforts

**Most firms have raised early-stage equity locally**

- Most enterprises have raised seed capital from local investors
- Not many have past experience of debt, deterred by high interest rates, strict collateral requirements, and lack of flexible payment terms
Local TA providers focus on general business strategy and development, and often have an impact-oriented mandate

Few existing TA providers offer transaction advisory

<table>
<thead>
<tr>
<th>TA providers by type of advisory offered</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy and Comms Advisory</td>
<td>10</td>
</tr>
<tr>
<td>Bus. Dev. (incl. Supply Chain R&amp;D)</td>
<td>7</td>
</tr>
<tr>
<td>Accelerator/Incubator</td>
<td>4</td>
</tr>
<tr>
<td>Capacity Building</td>
<td>3</td>
</tr>
<tr>
<td>Legal and Audit Firms</td>
<td>2</td>
</tr>
<tr>
<td>Transaction Advisory</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Advisory</td>
<td>1</td>
</tr>
<tr>
<td>Market/Network Access</td>
<td>1</td>
</tr>
</tbody>
</table>

- Existing local TA providers typically focus on **general business strategy and development**
- Only one firm out of fifteen profiled offered targeted capital raising and transaction advisory services

TA providers are more prevalent in Morocco and the Levant

- TA providers are **prevalent in Morocco and the Levant** region, reflecting the more developed enterprise landscape of those countries
- However, specialized or sector-specific support is typically provided by companies that are **MENA-wide**, reflecting a need for scale across markets
- Transaction advisory services usually sit with financial services firms that focus on larger sized companies in more developed sectors. For the size of companies and the sector for WE4F there is a lack of such services

Most TA firms have a development / impact mandate

- Most TA firms profiled have a **development mandate** and engage in gender and youth initiatives: 76% have gender advocacy initiatives in place, and 83% have youth empowerment initiatives in place
- 41% charge below commercial rates to clients due to their development focus
- TA providers serve a median of 25 clients, and **72% of firms have already provided specific support to companies within the WE4F nexus**

Source: WE4F analysis and stakeholder interviews
Innovation in the WE4F sectors can help to overcome MENA-specific issues such as high unemployment and water scarcity

<table>
<thead>
<tr>
<th>Regional issue</th>
<th>Description</th>
<th>How WE4F addresses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water scarcity</strong></td>
<td>§ Most water-scarce region out of all WE4F regions</td>
<td>§ Target TA for water-innovation firms to scale to new MENA markets</td>
</tr>
<tr>
<td></td>
<td>§ Poor waste-water management practices causing health problems and low resource efficiency</td>
<td>§ Educate water-innovation firms with cross-sector learnings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>§ Incentivize investment in water-innovation sector through blended finance tied to water treatment</td>
</tr>
<tr>
<td><strong>Public sector dominance</strong></td>
<td>§ MENA has the highest government wage bill in the world (9.8% of GDP compared to a global average of 5.4%), drawing key talent away from private enterprise</td>
<td>§ Incentivize movement to private sector by providing sustainable, high quality jobs through investment, and providing training</td>
</tr>
<tr>
<td></td>
<td>§ State-owned enterprise financing crowds out private sector investment</td>
<td>§ Incentivize private sector investment through blended finance and subsidized TA</td>
</tr>
<tr>
<td></td>
<td>§ State subsidies slow take-up of alternative energy solutions</td>
<td></td>
</tr>
<tr>
<td><strong>High unemployment</strong></td>
<td>§ MENA has the highest unemployment rate in the world (30% as of 2017), with youth-heavy demographic</td>
<td>§ Attract investment to create quality jobs targeting youths and women, currently underrepresented in the workforce</td>
</tr>
<tr>
<td></td>
<td>§ Urgent need for jobs to address growing dissatisfaction and social unrest</td>
<td></td>
</tr>
<tr>
<td><strong>Prevalence of oil</strong></td>
<td>§ Rentier economy in countries like Iraq and Algeria that can rely on oil revenues, diminishing impetus for innovation through private sector</td>
<td>§ Help to scale firms, increasing tax revenues and growing the non-oil private sector</td>
</tr>
<tr>
<td></td>
<td>§ Cheap availability of oil deters up-take of alternative energy</td>
<td>§ Incentivize take-up of alternative energy solutions through subsidies for investment into e.g. solar companies</td>
</tr>
</tbody>
</table>

Sources: IMF Regional Economic Outlook, World Resources Institute Water Scarcity Index, IFC Report: Financial Inclusion of Small and Medium-Sized Enterprises in the Middle East and Central Asia 2019, IMF Commentary: Youth Unemployment in the MENA Region
Compared to East and West Africa, the SME finance gap in MENA is more significant, and companies focus more on water-related sectors

<table>
<thead>
<tr>
<th></th>
<th>East and West Africa</th>
<th>MENA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company sectors</strong></td>
<td>West Africa’s semi-arid climate and food security concerns made irrigation companies more prevalent; East Africa saw more firms within the captive power (solar PV) space</td>
<td>The abundance of cheap energy in the region means there are fewer firms devoted to energy infrastructure</td>
</tr>
<tr>
<td><strong>Company maturity</strong></td>
<td>Only 6 firms were above 15 years old in West Africa; small companies (11-49 employees) made up the majority of firms in East Africa. High potential early-stage businesses presented the most attractive investment opportunity in both.</td>
<td>Firms identified in MENA are typically older (15 over 15 years old) than in East and West Africa, but the best investment opportunities for high-potential innovation and returns are similarly fast-growing start-ups</td>
</tr>
<tr>
<td><strong>Investment use</strong></td>
<td>Roughly similar numbers of firms in East Africa sought growth capital for physical expansion and working capital; West African firms overwhelmingly sought expansion capital only</td>
<td>More firms in MENA are seeking growth capital for sales and marketing, as well as to for physical expansion such as equipment purchase</td>
</tr>
<tr>
<td><strong>Previous investment</strong></td>
<td>In West Africa, most companies had experience of raising debt, but were too small for local equity investors</td>
<td>Unlike in East and West Africa, many of the companies have experience of raising VC or seed investment</td>
</tr>
<tr>
<td><strong>TA needs</strong></td>
<td>Enterprises sought support mostly for business advisory in West Africa, and transaction advisory in East Africa</td>
<td>Companies are seeking mostly transaction advisory; many providers focus on bus. dev. and strategy; higher willingness to pay than W. Africa</td>
</tr>
<tr>
<td><strong>SME investors</strong></td>
<td>SME private equity markets are deeper in Nigeria and Kenya, but shallow in the wider regions of East and West Africa</td>
<td>Overall availability of financing in MENA is higher than in E. and W. Africa, but MENA has the highest SME financing gap in the world (26% of GDP)</td>
</tr>
<tr>
<td><strong>SME access to credit</strong></td>
<td>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</td>
<td>Debt providers do not target SMEs, and have strict terms. Whilst overall access to credit in MENA is higher, SME loans account for only 7.6% of financing – MENA has the largest SME finance gap in the world. Most firms find debt unappealing and banks are not seen as growth partners</td>
</tr>
<tr>
<td><strong>SME equity investment</strong></td>
<td>Median PE ticket sizes are US$6m in EA and WA</td>
<td>Median private equity ticket sizes are even greater in MENA (US$29m) and thus less accessible to SMEs</td>
</tr>
</tbody>
</table>

Consistent with themes in E. & W. Africa, WE4F will support innovators through service coordination and targeted provision of capital (1/2)

<table>
<thead>
<tr>
<th>Key pain points</th>
<th>Hub Recommendations</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Services</td>
<td></td>
</tr>
<tr>
<td>Onerous and costly debt terms</td>
<td>Source, vet and coordinate TA and investment advisory service providers that can address firms’ specific hurdles to investability</td>
<td></td>
</tr>
<tr>
<td>Small ticket sizes unpalatable</td>
<td>Form a TA Unit and a Brokering Unit to promote or directly establish investor connections</td>
<td></td>
</tr>
<tr>
<td>Limited understanding of capital raising process</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>§ Source, vet and coordinate TA and investment advisory service providers that can address firms’ specific hurdles to investability</td>
<td>§ Subsidize tailored investment advisory services (e.g., fund raising support, deal structuring) for more advanced enterprises who are seeking external capital</td>
</tr>
<tr>
<td></td>
<td>§ Form a TA Unit and a Brokering Unit to promote or directly establish investor connections</td>
<td>§ Leverage innovative blended finance structures (e.g., milestone grants and matching debt) to lower overall financing costs and attract commercial capital</td>
</tr>
<tr>
<td></td>
<td>§ Emphasize sales and marketing TA to help SMEs expand to more stable markets with less government intervention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>§ Support solar companies with entering markets with higher cost of energy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>§ Emphasize sales and marketing TA to help SMEs expand to more stable markets with less government intervention</td>
<td>§ Provide milestone grants and repayable grants to earlier stage companies to enable the highest impact</td>
</tr>
<tr>
<td></td>
<td>§ Support solar companies with entering markets with higher cost of energy</td>
<td>§ Adjust investment terms depending on maturity/impact level of firm</td>
</tr>
</tbody>
</table>

Source: WE4F analysis and stakeholder interviews
Consistent with themes in E. & W. Africa, WE4F will support innovators through service coordination and targeted provision of capital (2/2)

<table>
<thead>
<tr>
<th>Key pain points</th>
<th>Hub Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Common Themes</strong></td>
<td><strong>Services</strong></td>
</tr>
<tr>
<td>High DD costs</td>
<td>Coordinate required pre-investment DD and post-investment TA in line with identified barriers</td>
</tr>
<tr>
<td>Perceived outsized risks related to sector or firm size</td>
<td>Provide introductions between investors and third-party providers of risk mitigants like credit guarantees or first-loss tranches</td>
</tr>
<tr>
<td>Limited pipeline of investable projects</td>
<td>Engage throughout the investment process, providing market and sector insights within MENA WE4F nexus to attract potential new investors</td>
</tr>
<tr>
<td><strong>MENA-specific</strong></td>
<td></td>
</tr>
<tr>
<td>Most investors focus on more established companies due to lower risk</td>
<td></td>
</tr>
<tr>
<td>Electricity subsidies crowd out commercial investment in solar</td>
<td></td>
</tr>
<tr>
<td><strong>Common Themes</strong></td>
<td><strong>Services</strong></td>
</tr>
<tr>
<td>Difficulty identifying the type of TA needed and / or who the appropriate provider is</td>
<td>Vet TA / advisory providers and recommend a phased approach</td>
</tr>
<tr>
<td></td>
<td>Perform limited direct investment advisory role through Brokering Unit</td>
</tr>
<tr>
<td><strong>MENA-specific</strong></td>
<td></td>
</tr>
<tr>
<td>Few transaction-focused TA providers in the region</td>
<td>Encourage strategic partnerships to create an ecosystem of knowledge sharing for WE4F SMEs</td>
</tr>
</tbody>
</table>

Source: WE4F analysis and stakeholder interviews
Objectives and Methodology
The team focused on gathering information in service of WE4F’s objectives

This work is supporting the WE4F GCD MENA Regional Hub by providing a current investment opportunity pipeline and landscape assessment focusing on innovators in the sector, the capital and technical assistance (TA) / business advisory services (BAS) needed to grow and scale these companies, and the market operators who could provide these services.

To achieve this, the team analyzed the following questions

1. Which scalable enterprises are operating in the WE4F nexus in the MENA region?
2. What types of capital are available to support the growth of WE4F enterprises in the MENA region?
3. Which Financial / Investment partners would be able to support the enterprises’ growth objectives?
4. What kinds of Technical and Advisory services are needed by the enterprises and what is the availability of service providers linked to these needs?

The Water and Energy for Food Grand Challenge for Development aims to scale private sector innovations to increase the sustainability of agricultural food value chains in developing countries.
The team synthesized regional experience with interview insights from 100+ enterprises, 30+ capital providers, and 30+ TA/BAS providers.

The outreach list was developed from multiple sources, including:

- The team’s network and previous work in the region
- Conference attendance (Iraq British Business Council, Iraq Business Forum) and various referrals

In order to source data and insights for this project, over 160 interviews were conducted: ....and built detailed profiles for enterprises, service providers and investors within the MENA region.
Reach-out to enterprises, investors, and TA providers was simultaneously initiated to utilize feedback loops

Developed the pipeline leveraging strong country presence and track record across the region

- Sent a team member to Cairo to meet with enterprises, TA/BAS, & investors
- Conducted extensive desk research, sought referrals from capital providers (e.g., IFC, local banks) for companies in their networks which best matched the WE4F criteria
- Utilized networks and previous work in Algeria to source and screen leads in WE4F areas

Further utilized existing and new networks, relationships, and referrals to supplement the pipeline

- Casablanca and Tunis-based teams leveraged strong market mapping and project execution to source leads in WE4F areas
- Utilized networks and previous work in Algeria to source and screen leads in WE4F areas

The team spoke with stakeholders across the region through the following

1. Leverage existing pipeline and enterprise engagement in the region to identify similar or related enterprises operating at the WE4F nexus
2. Referenced existing institutional relationships with pan-African organizations operating in the region
3. Attended regional conferences sponsored by USAID and other developmental partners
Enterprises
From the 100+ enterprises, 46 priority 1 companies and 23 priority 2 companies were identified and assessed.

Enterprises were split into priority 1 and 2 companies

Each of the 69 identified companies fit the theme criteria

- **Water/Food**
  - e.g., reduce water usage or efficient use of water resources

- **Energy for Food & Food for Energy**
  - e.g., energy usage for farm input

- **Water/Energy/ Food**
  - e.g., efficient energy use for food production, leveraging food waste for energy

### Breakdown of companies by country and priority group

<table>
<thead>
<tr>
<th>Country</th>
<th>Priority 1</th>
<th>Priority 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Egypt</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Iraq/KRI</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Jordan</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Lebanon</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Morocco</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Palestinian</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Territories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tunisia</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Yemen</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

46 Priority 1 companies fit the size requirements

23 Priority 2 companies did not fit the size requirements

Existing customers/ end users

- for companies with unit cost of <$100
- for companies with unit cost of >$100
- within 5 years

Source: WE4F analysis and stakeholder interviews
The MENA region’s high availability of cheap energy and scarcity of water drives the profile of water- and energy-related companies.

**Regional water scarcity means heavy innovation within the water usage sustainability space**

**Breakdown of water related enterprises**

<table>
<thead>
<tr>
<th>Water efficient IoT</th>
<th>Inputs / Planting</th>
<th>Irrigation</th>
<th>Water treatment</th>
<th>Composting</th>
<th>Fisheries</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>2</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**IoT related innovators** use sensors enabled by machine learning and AI allowing farmers to **track/optimize water usage**

**Hydroponics /aquaponics** innovators help farmers **reduce water usage**

**Irrigation solutions** contribute to **higher yields** allowing land to be used all year round

**Abundance of cheap energy means energy-related firms are concentrated in countries with limited electricity access**

**Breakdown of energy related enterprises**

<table>
<thead>
<tr>
<th>Solar power</th>
<th>Biogas/pellet</th>
<th>Energy efficient IoT</th>
<th>Distribution and Export</th>
<th>Wind power</th>
<th>Inputs / Planting</th>
<th>Composting</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Most **solar innovators** are located in Yemen (where only 40% of the population has access to electricity) and Palestine (where national sources supply less than 10% of total demand)

In Lebanon and Jordan, several **energy-efficient IoT start-ups** are solving the problem of regular blackouts in the light of recent economic turmoil

In more developed and stable markets (Tunisia, Egypt, Morocco) energy innovation occurs within **biogas/biofuel space**

Source: WE4F analysis and stakeholder interviews
The median revenue of identified enterprises is US$300k; the size of the companies is related to the nexus themes they operate in.

Many companies generate over US$500K in revenue

Breakdown of companies by revenue:
- <$50K: 23%
- $50K-$100K: 16%
- $100-$500K: 23%
- >$500K: 38%

Median Revenues: ~US$300K
Avg. Revenues: ~US$2.5m

Larger companies are concentrated among mature irrigation solutions providers, solar power, and composting enterprises.

- Irrigation, solar power, and composting firms are more established.
- Most of the young and fast-growing startups are concentrated among IoT related, water treatment, biogas/pellet and hydroponics sectors.

Source: WE4F analysis and stakeholder interviews.
Younger and smaller firms tend to have more inclusive workforces when it comes to female and youth empowerment

Younger and smaller firms tend to have a higher female / youth representation

Companies by size, age, and female/youth representation

Female/youth representation is reflected by representation in the company, value chain, and community

- Over 75% of nexus companies have women in leadership positions and over 95% have female representation within their value chain. Unsurprisingly, more conservative countries such as Yemen and Iraq/Kurdistan have lower female representation (between 0 and 20%)
- 68% of nexus companies have youth in leadership positions and 88% have youth representation within their value chain

Impactful Innovator snapshot: IoTree
- A wireless network of smart traps that are developed using a deep learning algorithm and machine vision designed for the early detection, classification, and counting of different types of harmful pests.
- Gender/youth representation: All 4 co-founders are women. 70% of the team are youth; internship program where the hires are youths.

Impactful Innovator snapshot: iFarming
- Web and mobile apps based on Internet of Things (IoT) and AI for precise irrigation, making water usage more sustainable for farmers
- Gender/youth representation: a woman-led company that tries to tackle water scarcity and climate change. 60% of the employees are youth and the firm actively encourages young farmers to work and to invest in the agricultural sector via new technologies

Source: WE4F analysis and stakeholder interviews

Note: Female and youth representation reflects an estimated average % of women and youth within the firm and value chain
More established firms will allow WE4F to achieve its objectives quicker, with younger companies having higher long-term potential.

- Targeting established companies with higher revenues can help WE4F achieve its objectives sooner.
- The majority of younger startups would not qualify for the program in terms of revenues and customer base today.
- However, they expect to demonstrate significantly higher growth rates moving forward (understandably some estimates are clearly unrealistic). As a result, by focusing on the bigger SMEs the program could be overlooking some of the most high-potential startups.

Source: WE4F analysis and stakeholder interviews.
Average growth rates are 69%; these are driven by relative domestic political stability and/or access to stable markets

Companies in more politically stable markets enjoy higher growth rates

In more volatile political environments, companies often have to revisit their strategy to sustain their business

Current economic crisis in Lebanon has slowed growth and halted expansion plans for our irrigation and greenhouse operations. Uprisings and economic crisis are making us more conservative in the Lebanese market; however, we are currently analyzing potential plans for expansion beyond Lebanon.

Robinson Agri (Lebanon)

We have experienced constant growth since we started in 1970. During the ISIS occupation, we experienced a dip in our profit and had to limit its regional coverage. However, since 2017, we have returned to growing its profit, matching its pre-ISIS revenue. With our current investment plan, we expect to reach more clients in different regions in Iraq.

Al Jabri (Iraq)

We are currently held back by transportation issues, related to the conflict in Yemen. As a result of the war, transportation of their equipment via land from Dubai passes through multiple check points in Yemen, which each have a high level of associated duties.

Delta Tech (Yemen)

Source: WE4F analysis and stakeholder interviews
The majority of firms are B2B and have higher reach than B2C companies based on their estimated number of end users

Most companies are B2B due to the nature of their products and B2B being a more reliable revenue source than B2C

- Most companies are B2B, due to the type of products/services they offer, only the companies that are involved in the process of growing crops are selling directly to customers
- Several companies highlighted that growing their B2B or B2G (business-to-government) sales has been easier than expanding their B2C sales

For most B2B companies, reach was identified by estimating number of end-users

- B2B companies have higher end user reach (117,000 end users avg.) vs B2C (6,500 end users)
- 60-70% of B2B firms sell directly to farms of various sizes
- Other customers are multinationals in food business, retailers, wholesalers and other SMEs

In the most challenging markets like Yemen, focus on B2B expansion has been critical

**Supplying [B2B] clients is a key strategic priority for Al Wadi. As soon as more C&I projects begin to appear in the market, we believe we will be able to scale rapidly.**

Al Wadi Solar (Yemen)

**We can reach scale quickly by targeting large industrial scale solar projects. This is contrary to the majority of solar energy providers in Yemen who sell to individuals and small-holder businesses.**

Tayseer (Yemen)

**Currently our products largely cater to individuals or small holder farmers. We have been unable to supply larger irrigation or solar projects, due to the heavy upfront working capital requirements such projects demand. With the resources to execute larger projects on the B2B side, we will enter a new market with strong potential for scale.**

ATG (Yemen)
Enterprises are seeking a total US$80M investment (US$45M equity and US$35M debt), with an average ticket size of US$1.3M

Equity financing is the most attractive for the enterprises

- 2/3 of companies are looking primarily for equity investments
- Companies are deterred from taking out loans due to high cost of debt and limited appetite of local banks to lend to SMEs

Source: WE4F analysis and stakeholder interviews

Firms primarily seek capital to expand sales & marketing and for equipment

- Equipment purchase is the most common use of funding indicated by 37% of firms
- 27% of companies are looking to fund their sales and marketing efforts to help them enter new markets and sales channels

Investment sizes sought relate to capital intensity of the sector

- More capital-intensive energy related companies are seeking larger investments for equipment purchase/physical expansion
- Smaller IoT/hydroponics related start-ups are seeking investments to expand sales & marketing efforts
Enterprises find the capital raising process costly and time-intensive, and they have trouble finding value-adding growth partners

While many enterprises are familiar with debt as a financing instrument, the process remains challenging

- 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
- Loan requirements such as audited financials are beyond what some of the enterprises are capable of providing

Many smaller enterprises are apprehensive about the benefit and function of equity financing

- 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 want to be educated about financing options and it 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

Enterprises are challenged by poor access to finance

- Having additional financing will allow us to expand to other proven markets. We need additional working capital to cover the expansion cost.
  - Green Engineering Mission (Morocco)

To acquire new customers we need flexible loans that we can later pay off through customers service fees on a monthly basis.

ESCOM (Palestine)

Source: WE4F analysis and stakeholder interviews
Most enterprises are seeking strategic investors to help them expand to new markets

<table>
<thead>
<tr>
<th>Robinson Agri</th>
<th>AYAVA Solar</th>
<th>Millennium Energy Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logo</strong></td>
<td><img src="image" alt="ROBINSON AGRI logo" /></td>
<td><img src="image" alt="AYAVA Solar logo" /></td>
</tr>
<tr>
<td><strong>Company</strong></td>
<td>Produces greenhouses, PE pipes, grafted vegetable plants and organic certified seedlings in Lebanon</td>
<td>A renewable energy and water technologies systems integrator and service provider in Palestine</td>
</tr>
<tr>
<td><strong>Challenge</strong></td>
<td>Current economic crisis in Lebanon has slowed growth and halted expansion plans for the firm’s irrigation and greenhouse operations</td>
<td>Company works in food and agriculture, which could experience rapid growth if political stability is achieved</td>
</tr>
<tr>
<td><strong>Solution: entering new markets</strong></td>
<td>They would like to expand operations outside Lebanon in a developed exporting strategy – previously exported in one-off orders</td>
<td>They are now looking for strategic partners that can help them with defining and implementing expansion plans to enter Jordan and other more stable markets</td>
</tr>
</tbody>
</table>

Source: WE4F analysis and stakeholder interviews
52% of enterprises have fundraised before, largely from local equity investors

A significant portion of enterprises were able to **raise seed capital from local accelerators, VC funds and angel investors**

While the VC/angel investor landscape is quite developed in MENA, companies face an **uphill battle raising growth capital** that would take them to the next level and help enter new markets

On the debt side, companies are deterred by punitively **high interest rates, strict collateral requirements and lack of flexible payment terms**

Source: WE4F analysis and stakeholder interviews

Some firms have raised seed rounds despite challenging environments, and are now seeking growth capital

In 2015, we borrowed US$139,000 from GroFin to buy raw materials, to be repaid over 20 quarterly payments at a 10% interest rate. The issue we faced/face is the **stringent reporting requirements from GroFin**. To solve this issue, we bought and now use an accounting software to keep proper accounting and hired a full-time employee to work on this. Now we are looking for additional capital to increase current capacity and add additional products to its portfolio, including the manufacturing of solar panels (which are currently imported).

Al Jabri (Iraq)

Our company is a hardware startup which is something that is **difficult to fundraise for in Lebanon**. To secure VC investor interest, we had to show that we are unique, solving a real pain, and are able to improve food production by 30%. Now we face a big **challenge given the current situation in Lebanon** - we don’t have dollars to pay for inputs. This is partly because we received money in Lebanese currency from the last investor and then the **currency was devalued** which had a negative financial impact on the firm. Now we are looking to register a company in **Europe to make us more attractive to potential investors**

IoTree (Lebanon)
84% of enterprises have used TA support before, largely for general business development, and are now more interested in specialized support

A significant portion of enterprises has received TA support for general business development/ business strategy

![Bar chart showing BAS / TA received by entrepreneurs]

<table>
<thead>
<tr>
<th>Service</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting, audit, legal or financial management</td>
<td>5%</td>
</tr>
<tr>
<td>Business strategy</td>
<td>3%</td>
</tr>
<tr>
<td>Capacity building support</td>
<td>3%</td>
</tr>
<tr>
<td>Communications functions</td>
<td>9%</td>
</tr>
<tr>
<td>Development and implementation of pilots</td>
<td>5%</td>
</tr>
<tr>
<td>Environmental impact assessment and review</td>
<td>5%</td>
</tr>
<tr>
<td>General business development</td>
<td>30%</td>
</tr>
<tr>
<td>Policy and legislation advice</td>
<td>5%</td>
</tr>
<tr>
<td>Transaction advisory</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
<tr>
<td>Have not received TA support</td>
<td>17%</td>
</tr>
</tbody>
</table>

 Enterprises are now looking for more specialized support across transaction advisory and engineering

Most of our current investors are venture capital/accelerator programs that provide initial business development support. However, we need support in the technical areas such as larvae production optimization, entomology, among other areas.

Proteinea (Egypt)

We have previously received technical assistance from USAID which included training on marketing and sales. While that helped us build strong operational capabilities, our team does not have any experience fundraising and does not have the required materials (pitch deck, fin. model) that are constantly requested by potential investors.

IGT (Lebanon)

We have mentors through which we received support on aligning the products’ technical development with market needs/perspectives. Moving forward, on a technical side we are looking for advice on modularity of different systems and their integration with cloud in a way that becomes essential for farmers. We are also interested in market analysis support, any help related to sales & marketing, and capacity building.

Green Essence (Lebanon)

Source: WE4F analysis and stakeholder interviews

General business development entails initial support with supply chain, product (including R&D) development and other non-specialized support
Identifying high impact WE4F firms and delivering targeted TA and subsidies will accelerate transformative capital (1/2)

<table>
<thead>
<tr>
<th>Common Barriers</th>
<th>Pain Points</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Onerous and costly debt terms</td>
<td>Source, vet and coordinate TA and investment advisory service providers that can address firms’ specific hurdles to investment-readiness</td>
</tr>
<tr>
<td></td>
<td>Limited understanding of capital raising process</td>
<td>Subsidize tailored TA to unlock growth for enterprises with specific product / capacity constraints to scaling</td>
</tr>
<tr>
<td></td>
<td>Lack of access to specialized TA support</td>
<td>Form a Technical Assistance Unit and a Brokering Unit to promote or directly establish investor connections</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MENA specific considerations</th>
<th>Pain Points</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High dependence/reliance on government support across the region</td>
<td>Consider providing milestone grants and repayable grants to earlier stage companies to enable the highest impact</td>
</tr>
<tr>
<td></td>
<td>Younger and smaller companies tend to be more innovative, have more gender/youth impact but face an uphill battle fundraising</td>
<td>Provide equity/debt guarantees to investors or concessional capital to incentivize solar investments</td>
</tr>
<tr>
<td></td>
<td>Subsidized cost of electricity and fuel across the region is a key barrier for higher adoption of solar and wind power</td>
<td>Adjust investment terms depending on maturity/impact level of firm</td>
</tr>
<tr>
<td></td>
<td>Support companies with sales and marketing TA to help them expand to more stable markets with less government intervention</td>
<td>Support companies with sales and marketing TA to help them expand to more stable markets with less government intervention</td>
</tr>
<tr>
<td></td>
<td>Emphasize TA support to younger impactful enterprises</td>
<td>Emphasize TA support to younger impactful enterprises</td>
</tr>
<tr>
<td></td>
<td>Support solar companies with entering markets with higher cost of energy</td>
<td>Support solar companies with entering markets with higher cost of energy</td>
</tr>
</tbody>
</table>

Subsidize tailored investment advisory services (e.g. fundraising, deal structuring and valuation) for more advanced enterprises who are seeking external capital

Use milestone grants and matching debt to lower overall financing costs
Identifying high impact WE4F firms and delivering targeted TA and subsidies will accelerate transformative capital (2/2)

<table>
<thead>
<tr>
<th>Pain Points</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country specific considerations</strong></td>
<td><strong>Pain Points</strong></td>
</tr>
<tr>
<td>In the <strong>Maghreb</strong>, capital controls and closed borders mean <strong>less goods integration</strong></td>
<td>Target specialized <strong>TA providers that understand interregional dynamics</strong> and can help companies navigate both interregional and outside expansion</td>
</tr>
<tr>
<td>Limited opportunities to scale domestically in Lebanon, Palestine and other less developed markets</td>
<td>Support Yemeni companies with finding <strong>new B2B sales channels</strong> both locally and internationally</td>
</tr>
<tr>
<td>Yemeni solar companies are having difficulties finding customers that can pay for their services</td>
<td>Providing <strong>first loss capital</strong> to de-risk investment, <strong>credit guarantees</strong> for receivable facilities, or <strong>subsidized transaction advisory</strong> to reduce information asymmetry</td>
</tr>
<tr>
<td></td>
<td>Emphasize providing <strong>equity/debt guarantees</strong> and <strong>concessional capital</strong> in <strong>less developed markets</strong> to attract commercial investments</td>
</tr>
</tbody>
</table>
Strategic considerations for WE4F

While the public sector plays a significant role it should not be a cause for a reluctant approach

- There is high potential to **drive innovation** in the region through investing in **smaller younger firms** that are less impacted by the government
- Younger start-ups are expected to **surpass more established companies in revenues and in reach within 5 years**
- Younger start-ups are **more inclusive** and have explicit focus on **females and youth**

WE4F will push forward the private sector and provide an alternative channel for jobs

- WE4F will provide an alternative channel for jobs to the often **bloated and bureaucratic/innovative public sector**
- The program will help **address the contributing factors behind weak youth employment outcomes** leading to migration flows outside the region
- The hub will also be able to **bridge the existing gap in access to finance** between public and private sector

Sources: Brookings: Youth employment in the Middle East and North Africa: Revisiting and reframing the challenge, February 2019
Investors
MENA investors are not always sustainable or easily accessible to enterprises

Despite SMEs’ essential role in the economy, financing is scarce

- The role of enterprises, especially small and medium enterprises (SMEs) cannot be over emphasized in terms of its contribution to GDP and employment generation in the region as it contribute up to 45% of employment and up to 33% of the GDP
- However, the commercial climate of the individual countries and the macroeconomic differences result in disparity in the investment landscape
- On average, the SME finance gap as a percentage of GDP is 26% in the MENA region, making it the highest in the world
- For the small number of enterprises that receive financing there are three key sources of financing in MENA: informal financing, commercial lending, equity investments

Available financing is far below SME needs in MENA

<table>
<thead>
<tr>
<th>Potential demand and financing gap for 5 million SMEs in MENA (US$bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Demand</td>
</tr>
<tr>
<td>Current volume</td>
</tr>
<tr>
<td>Financing gap</td>
</tr>
</tbody>
</table>

Informal channels such as financing from family and friends are more commonly utilized in MENA

Informal lending competes directly with commercial lending

- Businesses favor sources of financing coming from family and friends which often exists in a highly informal fashion. Financing from family and friends is often obtained with solely capital recovery in mind
- Informal financing sources rarely enjoy the scalability of formal institutions, and may also limit the possibilities for accessing formal financing at a later stage
- 66% of all businesses seeking investments expressed that loans from family and friend would be their first preference before seeking commercial financing from other institutions
- Favorable terms lead to social financing often crowding out more commercial options

Individuals are ~4x more likely to have taken out a loan from informal sources than a financial institutions

MENA loans taken by adults in 2011

Commercial banks primarily serve large companies, with limited commercial lending at the SME level

Commercial banks are risk-averse and there is limited lending to SMEs

- The average share of SME loans in total loans is only 7.6% despite the enterprises accounting for almost 40% of the employment. This picture of access to finance is consistent throughout the region.
- Access to commercial loans varies by country. For instance, 32% of companies in Lebanon finance investments through banks, compared to 1% of enterprises in Yemen.
- In addition to the worsened political condition in some countries, the lack of formal credit history and financial records makes banks justifiably cautious when lending. As a result, **terms are often quite restrictive**, with high interest rates and high collateral requirements.
- Thus, to generate higher revenue, banks resort to other sources such as foreign exchange trading and financing public sector activity.

<table>
<thead>
<tr>
<th>Country</th>
<th>SME loans (% of total loans)</th>
<th>Net interest rate spread (%)</th>
<th>Collateral required (% loan value)</th>
<th>Investment financed by banks (% of firms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>25%</td>
<td>6.3%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Egypt</td>
<td>5%</td>
<td>6%</td>
<td>272%</td>
<td>5%</td>
</tr>
<tr>
<td>Iraq</td>
<td>8.7%</td>
<td>7.6%</td>
<td>200%</td>
<td>N/A</td>
</tr>
<tr>
<td>Jordan</td>
<td>10%</td>
<td>4.3%</td>
<td>127%</td>
<td>25%</td>
</tr>
<tr>
<td>Lebanon</td>
<td>16%</td>
<td>1.4%</td>
<td>208%</td>
<td>32%</td>
</tr>
<tr>
<td>Morocco</td>
<td>25%</td>
<td>6.8%</td>
<td>233%</td>
<td>23%</td>
</tr>
<tr>
<td>Tunisia</td>
<td>15%</td>
<td>N/A</td>
<td>251%</td>
<td>13%</td>
</tr>
<tr>
<td>Yemen</td>
<td>N/A</td>
<td>6.8%</td>
<td>281%</td>
<td>1%</td>
</tr>
<tr>
<td>Palestine</td>
<td>6%</td>
<td>4.4%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

In addition to debt, equity investing is a crucial source of financing that is not always available to all countries in the region.

- Since 2009 there have been **611 private equity transactions**.
- Discrepancy within the 9 countries covered here are wide. Transactions in Morocco and Egypt make up **>30% of all transactions**, but there are few records of any in Yemen and Iraq.

The average PE ticket size in MENA is ~US$29m, which is above what most SMEs require to grow – or can absorb in equity.

- Lebanon and Jordan had the **most VC transactions** in tech and start-ups. The avg. ticket size here is below regional average.

- Countries with a stronger economy and consumer base with higher disposable income (e.g. GCC countries) have the highest share of transactions in the consumer discretionary sector (>85 transactions).
- **80% of transactions in the consumer staples** sector happened in countries with higher population such as Egypt.

Source: EMPEA database 2008-2018
The majority of investors are more interested in financing more established companies and are increasingly moving away from investing in start-ups.

Most investors prefer investing in more established companies

- Most investors are focusing on growth stage and mature enterprises with more predictable cash flows, lower commercial risk, and clear exit route.
- Several investors are flexible when it comes to enterprise stage provided investments meet IRR expectations.
- 82% of investors would consider investing in smaller targets with certain incentives/interventions.

Several investors are moving away from financing start-ups but credit guarantees / grants could make them reconsider these.

While used to finance early stage projects, we recently moved away from VC-style investments. Having credit guarantees in place or anything that can increase IRR can make us more comfortable in investing in smaller targets. We also open to investing in smaller pilot projects that use proven technologies and have potential for bigger follow-on projects.

Source: WE4F analysis and stakeholder interviews

Catalyst PE

Equity and mezzanine investors are more flexible in ticket size and are more likely to meet firms’ financing requirements

Investors by ticket size and investment instrument

Commercial lenders’ ticket sizes and tenors are limited by the structure of their balance sheets; banks financed mainly by on-demand deposits struggle to originate larger, longer-term loans.

Equity investors are more flexible and more likely to match enterprises’ investment asks.

Given the uncertainty of success and scalability, particularly in the current Lebanese economic and political context, we have been trying to move away from very early stage companies, unless they have a real innovative product. Support from donors and commercial investors could increase our investment into earlier stage companies and increase the investments’ impact potential.

Foundation Diane
Thus, innovative loan structuring should be utilized as it can have a significant impact on growth; TA and grants have a role to play in permitting such structures.

### Lending instruments are often inflexible

- Conventional debt instruments for expansion capex are often inflexible, with short / no grace periods and rigid / frequent repayment schedules
  - Monthly loan amortization means any cash flow challenges can push borrowers into technical default
  - With loans for assets requiring ramp-up to generate cash flow, borrowers will struggle to service debt
  - Reinvestment of earnings can be critical to early growth; requiring cash to go to debt service can keep young SMEs fragile, straining working capital
- Compared to local banks, impact-oriented lenders are willing take a long view of growth
  - Lengthy grace periods and repayment sculpted to borrower cash flows ease initial burdens on cash flow
  - More advanced structures (e.g. equity warrants) give further flexibility, letting them act as partners

### Grants can help accessing this financing

- Grant capital deployed into a debt service reserve account (DSRA) or as collateral for a letter of credit can de-risk loans
- Investment advisory focused on such structures should complement grantmaking to ensure effectiveness

### There are several structures to improve flexibility of debt financing

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

Source: WE4F 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 debt or mezzanine investors, there are tools to mitigate the risks of equity investments in SMEs

- **Equity guarantee**: provides a floor to the value of an equity investor’s investment, an insurance policy against severe drop in equity value

- **Junior equity (catalytic first-loss capital)**: junior equity is concessional, absorbing 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

Source: WE4F analysis and stakeholder interviews

Enterprises feel the benefit directly from donor interventions in this

*We were developed as a greenfield joint venture project. Access to commercial lending for a greenfield project was the biggest challenge until we were provided with credit guarantee from USAID*

Friopuerto (Morocco)

*Circular 331 initiative funded by the Central Bank of Lebanon had not only helped us access financing that otherwise would have been prohibitively expensive, but it also helped bring in over US$400m into the development of Lebanese startups*

IoTree (Lebanon)
Investors are mostly development-oriented and represent a wide range of capital types and ticket sizes

- For equity investors, average preferred ticket sizes are $2.2m with ticket sizes ranging from $4,000 to $8m
- For debt investors, average preferred ticket sizes are $1.2m with ticket sizes ranging from $10,000 for a MFI in Yemen to $25m for a regional PE fund

- Most investors have a double bottom line focus through investing in enterprises with positive social impact
- Investors execute their developmental mandates through choice of sector (e.g., agriculture, waste management, renewable energy) and operational metrics (e.g., jobs created) among others

- The wide range of ticket size will help meet the various capital needs from the enterprises (e.g. working capital, bridge financing, growth capital, etc.)

Source: WE4F analysis and stakeholder interviews
Investors profiled incorporate youth, women, and ESG considerations into their portfolios and their teaming

Investors offer various avenues for youth to gain and develop skills

We recruit youth for junior positions and mentor them with an aim to give them a chance to evolve toward higher positions within the structure

SEAF (Morocco)

Majority of pooled investors are adopting gender lens investing strategies

We recognize that female founders perform better than their male counterparts and thus actively seeks to support such businesses

HIMangel (Egypt)

Investors play a key role in helping investees develop and monitor ESG

IDB takes into consideration social and governance metrics and is more likely to lend for projects that are deemed to have a positive contribution to society

IDB, Iraq

While the founders bring a wealth of investing knowledge, they have tapped into young professionals to run operations and support enterprises

HIMangel (Egypt)

Women in Yemen have weak access to collateral. To get round this problem we have designed a community guarantee system whereby women are able to secure loans through guarantees from their friends and family

Tadmahon Microfinance Bank (Yemen)

We conducts and update investees’ ESG ratings annually, and provide ESG management formalization support to all its portfolio.

GroFin, Iraq

Source: WE4F analysis and stakeholder interviews
Subsidized TA/BAS services can reduce pre-investment barriers; first-loss capital, innovative structures, and credit guarantees will be catalytic (1/2)

<table>
<thead>
<tr>
<th>Pain Points</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Common Barriers</strong></td>
<td>Coordinate required pre-investment DD and post-investment TA in line with identified barriers</td>
</tr>
<tr>
<td></td>
<td>Provide introductions between investors and third-party providers of risk mitigants like credit guarantees or first-loss tranches</td>
</tr>
<tr>
<td></td>
<td>Subsidize pre-investment DD and post-investment TA to close deals</td>
</tr>
<tr>
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<td>Electricity subsidies crowd out commercial investment in solar</td>
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- High due diligence costs
- Perceived outsized risks related to sector or firm size
- Limited pipeline of investable projects

- 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
- Subsidize pre-investment DD and post-investment TA to close deals

- Fund first-loss tranches to help de-risk commercial or impact investors
- 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

- Engage throughout the investment process, providing market and sector insights within MENA WE4F nexus to attract potential new investors
- Support to capital providers’ existing TA/BAS teams to expand their scope of services (e.g., virtual CFO, regional expansion support, etc.) and enterprises supported

- Provide equity/debt guarantees to investors or concessional capital to incentivize solar investments
- Subsidize TA to strategic investors that can help companies with expansion to targeted markets
Subsidized TA/BAS services can reduce pre-investment barriers; first-loss capital, innovative structures, and credit guarantees will be catalytic (2/2)

<table>
<thead>
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<th>Pain Points</th>
<th>Recommendations</th>
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<td><strong>Country specific considerations</strong></td>
<td><strong>Services</strong></td>
</tr>
<tr>
<td>▪ Lebanon and Jordan have developed VC environments, but this is not consistent through the region</td>
<td>▪ Target firms that have resilience to market shocks e.g. that cover a spread of markets, or which have fewer fixed assets</td>
</tr>
<tr>
<td>▪ Large population in Egypt provides higher end-user reach potential – other markets more limited</td>
<td>▪ Attract existing VC investors to opportunities in other MENA countries</td>
</tr>
<tr>
<td></td>
<td>▪ Incentivize smaller ticket investments through subsidized TA for such firms</td>
</tr>
<tr>
<td></td>
<td>▪ Support firms in expanding to new markets with more stability to increase end-user reach</td>
</tr>
</tbody>
</table>
Enterprises most commonly request capital raising related assistance...

Companies require transaction advisory support the most

<table>
<thead>
<tr>
<th>Current Technical Assistance needs (# of firms)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Advisory</td>
<td>15</td>
</tr>
<tr>
<td>Business Development (incl. Supply Chain; R&amp;D)</td>
<td>15</td>
</tr>
<tr>
<td>Business Strategy</td>
<td>14</td>
</tr>
<tr>
<td>Capacity Building</td>
<td>7</td>
</tr>
<tr>
<td>Pilot Development and Implementation</td>
<td>6</td>
</tr>
<tr>
<td>Environmental Advisory</td>
<td>1</td>
</tr>
<tr>
<td>Other*</td>
<td>6</td>
</tr>
</tbody>
</table>

Most companies have paid for technical assistance before

- All companies profiled have mentioned current capital raising efforts could benefit from TA services, with close to a quarter requiring direct transaction advisory support
- 86% of companies profiles have received TA support before, and close to half of those have paid for such services – indicating a potential greater willingness/ability to pay if compared to West African profiled firms (29%)
- Of the firms that have worked with service providers in the past, only 13% sought the same type of assistance for its expansion needs
- While all enterprises profiled envisioned raising capital, 30% had incomplete or unaudited financial records, indicating a significant need for accounting, audit and legal assistance

Source: WE4F analysis and stakeholder interviews

Other includes product specific support such as: systems development, engineering services, cryptocurrency integration support, water treatment plant design, modularity of different systems and their integration with cloud
...But few of the identified local TA providers offer direct transaction advisory support

Not many local TA providers offer transaction advisory

Existing TA providers by specialism (# providers)

- Strategy and Communications Advisory: 10
- Business Development (incl. Supply Chain R&D): 7
- Legal and Audit Firms: 2
- Accelerator/Incubator: 4
- Capacity Building: 3
- Transaction Advisory: 1
- Environmental Advisory: 1
- Market/Network Access: 1

Source: WE4F analysis and stakeholder interviews

Cross-MENA TA providers offer specialized, whilst local providers tend only to offer general services

- The majority of local TA providers typically offer general business strategy and development support, however only one firm profiled offer capital raising and transaction advisory services
- Specialized, sector-specific support are more often provided by TAs with a broader geographical footprint (i.e. MENA-wide), reflecting the need for scale across markets

Source: WE4F analysis and stakeholder interviews
While disparities in size and reach are significant, most TA firms profiled have a development mandate and engage in gender and youth initiatives.

### TA Providers in Numbers

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>72%</td>
<td>of TA firms profiled have already provided specific support to companies within the Water &amp; Energy for Food (17), Energy for Food (2), and Water for Food (2) nexus</td>
</tr>
<tr>
<td>80%</td>
<td>of TA providers have less than 25 employees, which can be explained by the limited geographical reach of most firms, as well as the fact that many of the firms will often hire independent contractors on a temporary basis</td>
</tr>
<tr>
<td>3-360</td>
<td>is the range of client volume among TA providers profiled, with average level of 54 and median of 25 clients, attesting to the size disparities within the region</td>
</tr>
<tr>
<td>76%</td>
<td>of TA firms have gender advocacy initiatives in place, and only 2 providers do not employ women</td>
</tr>
<tr>
<td>65%</td>
<td>of TA firms have a development mandate, and 41% charge below commercial rates to clients</td>
</tr>
<tr>
<td>83%</td>
<td>of TA firms have youth empowerment initiatives in place, and 90% employ young consultants</td>
</tr>
</tbody>
</table>

Source: WE4F analysis and stakeholder interviews
The WE4F Regional Innovation Hub can fill local TA gaps through strategic partnerships, technical assistance, and transaction-related support

Strategic Partnerships
- Several firms, particularly tech-focused, have raised keen interest in pursuing strategic partnerships, which could take the form of joint ventures; commercial and/or supply agreements; tech transfers; and others.

Technical Assistance
- Tailored technical assistance services will unlock growth for enterprises with specific product/capacity constraints to scaling both locally and internationally.

Investment Facilitation
- There is a significant gap between the existing supply and demand of transaction-related support in the region. The Hub could provide investment facilitation support both at transaction and ecosystem level, and to both firms and investors.

Strategic partnership brokering unit
- Facilitating introductions between international/multinational corporations and local firms
- Promoting B2B matchmaking opportunities (e.g. promoting visits from local firms to countries of strategic interest, organizing conferences, among others)

Technical assistance unit
- Support in product and service related areas such as new product development, product refinement to meet international standards, etc..
- Growth and expansion related support including distribution & logistics network optimization, capacity building, marketing strategy & implementation among others

Transaction specific support & broader investment mobilization
- Commercial due diligence, financial modelling, valuation, deal structuring, among others
- Developing, maintaining and circulating enterprise pipeline with investors regularly
- Facilitating introductions between enterprises and investors
- Promoting B2B matchmaking opportunities (e.g. through conferences)

Source: WE4F analysis and stakeholder interviews
The Hub can support BAS/TA providers by helping make their services accessible to nexus firms and build capacity to offer specialized services

<table>
<thead>
<tr>
<th>Common Barriers</th>
<th>Pain Points</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Most enterprises are unable to cover the full cost to utilize BAS/TA services</td>
<td>Vet TA / advisory providers and recommend a phased approach</td>
</tr>
<tr>
<td></td>
<td>Limited team capacity/knowledge to provide more specialized support</td>
<td>Perform limited direct investment advisory role through Brokering Unit</td>
</tr>
<tr>
<td></td>
<td>Difficulty identifying the type of TA needed and / or who the appropriate provider is</td>
<td>Subsidize enterprises and investors seeking TA or advisory services with grant capital</td>
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<td></td>
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<td>§</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>MENA specific considerations</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Most BAS/TA firms focus on early stage support and do not provide services required for scaling</td>
<td>Capacity building workshops and targeted training (e.g., business strategy workshops) to local firms to help them provide more specialized services</td>
</tr>
<tr>
<td></td>
<td>Significant disparity of knowledge and size between local and international BAS/TA firms</td>
<td>Help local TA firms foment partnerships with more experienced international firms to create an ecosystem of knowledge sharing for WE4F SMEs</td>
</tr>
<tr>
<td></td>
<td>Few transaction-focused TA providers in the region</td>
<td>Subsidize BAS/TA providers to engage subject matter experts and build capacity for more specialized services</td>
</tr>
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<tr>
<td>Egypt</td>
<td>few BAS/TA resources that provide specialized support (e.g., strategic plan, industry specific expertise, international expansion strategy, fundraising support, etc..) to businesses during their growth phase</td>
<td>Create a pool of specialized TA providers that understand interregional dynamics and can help companies navigate both interregional and outside expansion</td>
</tr>
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</tbody>
</table>

51
Recommendations
Innovation in the WE4F sectors can help to overcome MENA-specific issues such as high unemployment and water scarcity

<table>
<thead>
<tr>
<th>Regional issue</th>
<th>Description</th>
<th>How WE4F addresses</th>
</tr>
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</table>
| Water scarcity            | - **Most water-scarce region** out of all WE4F regions  
- **Poor waste-water management practices** causing health problems and low resource efficiency                                                                                                         | - Target TA for *water-innovation firms* to scale to new MENA markets  
- **Educate** water-innovation firms with cross-sector learnings  
- **Incentivize investment** in water-innovation sector through blended finance tied to water treatment                                                                                     |
| Public sector dominance   | - **MENA has the highest government wage bill** in the world (9.8% of GDP compared to a global average of 5.4%), drawing key talent away from private enterprise  
- **State-owned enterprise** financing crowds out private sector investment  
- **State subsidies** slow take-up of alternative energy solutions                                                                                                                          | - **Incentivize movement to private sector** by providing sustainable, high quality jobs through investment, and providing training  
- **Incentivize private sector investment** through blended finance and subsidized TA                                                                                                        |
| High unemployment         | - **MENA has the highest unemployment rate** in the world (30% as of 2017), with youth-heavy demographic  
- Urgent need for jobs to address growing dissatisfaction and social unrest                                                                                                                                           | - Attract investment to **create quality jobs targeting youths and women**, currently underrepresented in the workforce                                                                                     |
| Prevalence of oil         | - **Rentier economy** in countries like Iraq and Algeria that can rely on oil revenues, diminishing impetus for innovation through private sector  
- Cheap availability of oil *deters up-take of alternative energy*                                                                                                                                 | - Help to scale firms, increasing tax revenues and **growing the non-oil private sector**  
- Incentivize take-up of alternative energy solutions through **subsidies for investment into e.g. solar companies**                                                                                     |

Sources: IMF Regional Economic Outlook, World Resources Institute Water Scarcity Index, IFC Report: Financial Inclusion of Small and Medium-Sized Enterprises in the Middle East and Central Asia 2019, IMF Commentary: Youth Unemployment in the MENA Region
The main barriers to innovation in the WE4F nexus were:

1. Few investment-ready companies
2. Poor access to finance
3. Lack of incentives for up-take of innovation

Overall insights

1. Tailor TA to firm maturity and country fragility – ensure TA mandate remains flexible so it delivers what firms most need
   - Establish a hub which can oversee the end-to-end set of TA activities, ensuring providers remain efficient and aligned with the needs of individual companies

2. Help investors overcome the information gap that prevents them from entering new unknown markets or sectors by subsidizing market analysis and investment advisory
   - Subsidize TA and blended finance instruments to encourage investment in targeted companies

3. Set milestone incentives based on indicators such as end-user reach and introduction of innovations in target sectors
   - Educate firms about the benefits of alternative energy solutions and effective water management
Consistent with themes in E. & W. Africa, WE4F will support innovators through service coordination and targeted provision of capital (1/2)

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<th>Key pain points</th>
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<td><strong>Common Themes</strong></td>
<td><strong>Services</strong></td>
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<td>Onerous and costly debt terms</td>
<td>Source, vet and coordinate TA and investment advisory service providers that can address firms’ specific hurdles to investability</td>
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<td>Small ticket sizes unpalatable</td>
<td>Form a TA Unit and a Brokering Unit to promote or directly establish investor connections</td>
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<tr>
<td>Limited understanding of capital raising process</td>
<td><strong>Capital</strong></td>
</tr>
<tr>
<td><strong>Enterprises</strong></td>
<td></td>
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<tr>
<td>High government influence</td>
<td>Subsidize tailored investment advisory services (e.g., fund raising support, deal structuring) for more advanced enterprises who are seeking external capital</td>
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<td>Younger and more innovative firms are especially capital constrained</td>
<td>Leverage innovative blended finance structures (e.g., milestone grants and matching debt) to lower overall financing costs and attract commercial capital</td>
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<td>Subsidized electricity and prevalence of oil crowds out clean energy alternatives</td>
<td><strong>MENA-specific</strong></td>
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<tr>
<td><strong>Sales and marketing TA</strong> to help SMEs expand to more stable markets with less government intervention</td>
<td>Provide milestone grants and repayable grants to earlier stage companies to enable the highest impact</td>
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<tr>
<td>Support solar companies with entering markets with higher cost of energy</td>
<td>Adjust investment terms depending on maturity/impact level of firm</td>
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Source: WE4F analysis and stakeholder interviews
Consistent with themes in E. & W. Africa, WE4F will support innovators through service coordination and targeted provision of capital (2/2)

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- Offer first loss capital to de-risk investment, or subsidize transaction advisory to lower information asymmetry
- Subsidize enterprises and investors seeking TA or advisory services with grant capital
- Pay retainers and success-based fees to transaction service providers
- Subsidize tailored TA to unlock growth for enterprises with specific product / capacity constraints to scaling

**TA Providers**
- Difficulty identifying the type of TA needed and / or who the appropriate provider is
- Few transaction-focused TA providers in the region

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