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Entrepreneurship for Sustainable Economic Development & Employment (E4DE)









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On behalf of

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Abbreviations

GIZ

Aqaba Entrepreneurial Network		
Agaba Container Terminal		Home-based business
Agaba Development Corporation	ISSF	Innovative Start-ups and SMEs Fund
·	JEDCO	Jordan Enterprise Development Corporation
·	JRF	Jordan River Foundation
	MoDEE	Ministry of Digital Economy And Entrepreneurship
·	MoU	Memorandum of Understanding
	NARC	National Agriculture Research Centre
• •	NET	National Employment & Training
•	QRCE	Queen Rania National Entrepreneurship
·	SaaS	Software as a Service
•	SEZ	Special Economic Zone
	SWOT	Strengths, Weaknesses, Opportunities, Threats
	UNICEF	United Nations International Children's Emergency Fund
·	USAID	United States Agency for International Development
		Unique Value Proposition
		Vocational Training Corporation
Economic Modernisation Vision		
Entrepreneurial support organisation	ZINC	Zain Innovation Campus
European Union		
	Aqaba Container Terminal Aqaba Development Corporation Aqaba International Industrial Estate Aqaba Logistics Village Aqaba Maritime Education and Training Center Aqaba National Vocational Training Hub Aqaba Special Economic Zone Authority Business Development Center Federal Ministry for Economic Cooperation and Development of Germany Crown Prince Foundation Development and Employment Fund Entrepreneurship for Sustainable Economic Development and Employment Education For Employment Jordan Economic Modernisation Vision Entrepreneurial support organisation	Aqaba Container Terminal Aqaba Development Corporation Aqaba International Industrial Estate Aqaba Logistics Village Aqaba Maritime Education and Training Center Aqaba National Vocational Training Hub Aqaba Special Economic Zone Authority Business Development Center Federal Ministry for Economic Cooperation and Development of Germany Crown Prince Foundation Development and Employment Fund Entrepreneurship for Sustainable Economic Development and Employment Education For Employment Jordan Economic Modernisation Vision Entrepreneurial support organisation HBB ISSF ISSF JEDCO JRF MODEE MOU NARC NARC NET ORCE SaaS SEZ SWOT UNICEF USAID UVP VTC ZINC

Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH

Executive Summary

Method

- Utilising qualitative data collection methods including desk research, workshops, and interviews, the study comprehensively explores the entrepreneurial ecosystem in Aqaba, drawing insights from diverse perspectives and data sources.
- Isenberg's model is employed to identify and categorise stakeholders.
- An economic analysis of Aqaba, based on both quantitative and qualitative data, informs the compilation of its economic profile and identification of priority sectors, validated through consultation with key stakeholders.
- The study encompasses mapping of start-up actors, start-up assessments, and value chain assessments, aiming to understand the dynamics of the entrepreneurial ecosystem, identify economic opportunities, and address challenges. However, limitations such as sector definitions variability, data availability constraints, exploratory nature of the analysis, and sampling limitations should be acknowledged.

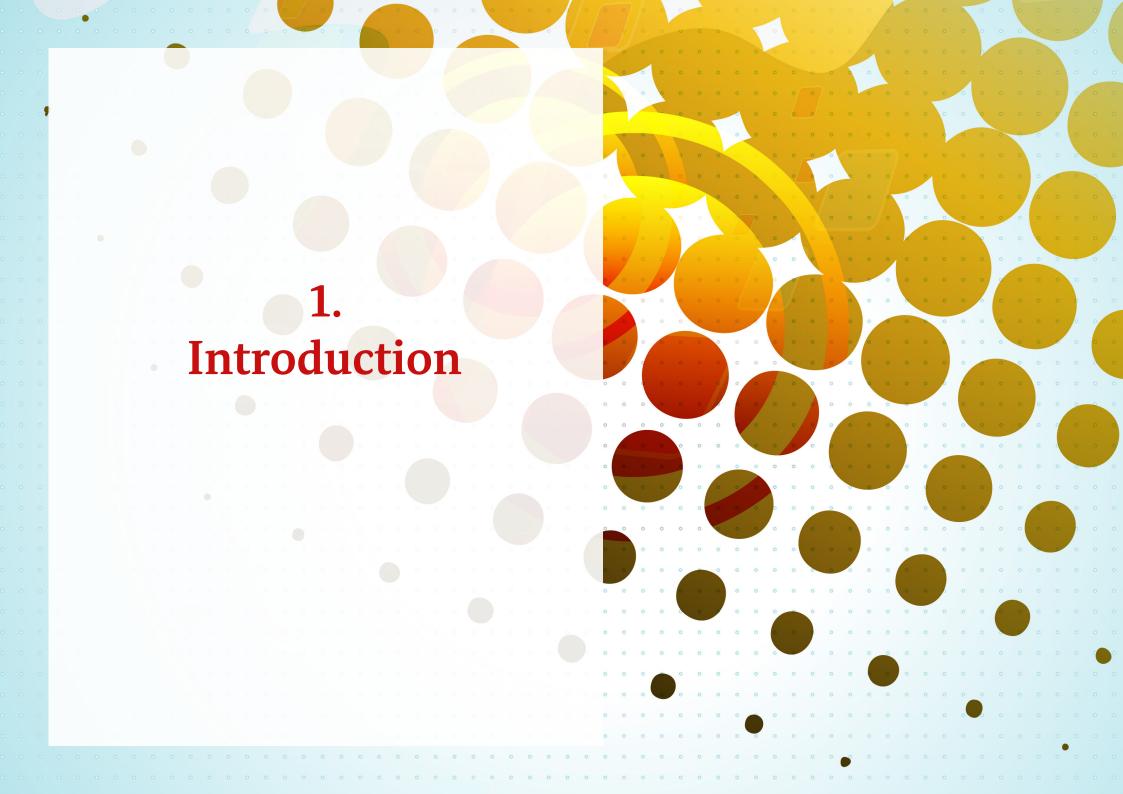
Findings

- The entrepreneurial ecosystem in Aqaba is in its developmental stages and is perceived as the second-best location for entrepreneurial activities in Jordan, lacking the diversity seen in more developed ecosystems like Amman. Despite this, there is a variety of services provided, and entrepreneurial support organisations show willingness to collaborate and invest resources, albeit with a gap in strategic direction and vision. Recognising diverse needs, tailoring support, and bridging gaps in services and engagement with large corporations are essential for the ecosystem's growth.
- Aqaba's diverse human capital provides a strong foundation for its entrepreneurial ecosystem, offering a wide range of skills and resilience to navigate challenges. However, there's a gap between education and the skills needed for entrepreneurship, with limited access to specialised training. The risk of brain drain also poses a threat to the local talent pool and ecosystem growth.
- Aqaba's government and local authorities have introduced financial incentives and grants to promote entrepreneurship, including subsidies and tax breaks. Despite efforts, access to financing remains challenging, with limited options for early-stage funding, venture capital and angel investments. Entrepreneurs also encounter high interest rates and collateral requirements, reflecting the region's less mature financial infrastructure.
- The Jordanian government and local authorities have established clear action plans to promote entrepreneurship in Aqaba, offering incentives like grants and subsidies. Aqaba's economic zones attract investors with favourable tax policies. However, challenges include bureaucratic hurdles and difficulties in the registration process which disproportionately affect women entrepreneurs.
- The market demand for start-ups in Aqaba exists, especially in tourism, food and beverage sectors and logistics, but start-ups lack network-ing opportunities. While companies are open to sourcing from regional start-ups, larger corporations prefer Amman-based suppliers due to perceived reliability. Start-ups face challenges in defining their business case, generating revenue, and accessing financing, highlighting the need for comprehensive support.

• Aqaba's start-up landscape is dominated by traditional businesses despite significant economic potential and collaborative stakeholder engagement. While entrepreneurs demonstrate passion and commitment, there's a need to foster an entrepreneurial culture among youth and transform mindsets across generations. Successful start-ups could play a more active role as mentors, addressing the lack of collaboration and knowledge sharing. Sociocultural barriers, especially for women and youth, hinder their participation in Aqaba's entrepreneurial ecosystem.

Recommendations

- Entrepreneurial Support Organisations (ESOs) in Aqaba should prioritise assisting start-ups in refining their business cases and providing ongoing advanced support services. They are also encouraged to facilitate networking events and innovation awards to enhance visibility and investor engagement. Additionally, establishing a joint roadmap for the Aqaba Entrepreneurial Network (AEN), promoting knowledge of ASEZA's Smart City plan, and setting up support services tailored to the needs of female entrepreneurs are recommended strategies to foster a thriving entrepreneurial ecosystem in the region.
- Start-ups in Aqaba should regularly assess and refine their business models to adapt to market changes and maintain a compelling value proposition. It is important for them to focus on enhancing their professionalism and reliability to build stronger relationships with larger corporations. Additionally, entrepreneurs should seek cofounders with complementary skills to strengthen their start-up teams, while successful start-ups should engage in mentorship and knowledge-sharing initiatives to support emerging businesses and foster a supportive entrepreneurial ecosystem.
- Large corporations in Aqaba should invest in qualifying local start-ups and MSMEs as reliable suppliers and partners, leveraging their innovative solutions to address operational challenges. Senior business members can mentor young entrepreneurs, aiding their growth. Collaboration should focus on promising sectors like tourism, green manufacturing, and IT, facilitating exchanges to identify and address market needs effectively.
- Development partners should focus on enhancing the quality and professionalism of start-ups and MSMEs in Aqaba by providing capacity development measures such as financial literacy training and mentorship programmes. Conducting further assessments of existing value chains with a larger number of participants can provide a comprehensive understanding of start-up opportunities and challenges. Additionally, development partners should support access to finance for start-ups and promote green businesses to leverage the ecosystem's potential in sustainable initiatives.
- The government should streamline registration and licensing processes for start-ups and MSMEs to facilitate their access to support services and financing. Consideration of local sourcing quotas in procurement regulations could further promote sustainability. Establishing business clusters closer to key markets and providing incentives for incubator spaces, particularly in areas like the Aqaba International Industrial Estate and the Southern Industrial Area, can enhance market access for start-ups.
- Universities play a vital role in fostering entrepreneurship by offering dedicated programmes and courses that increase interest in entrepreneurship among students. Collaborative initiatives between universities and start-ups, such as internships and joint research projects, can further enhance this ecosystem. To bridge the gap between academia and industry, a central platform for collaboration between researchers and entrepreneurs is proposed, facilitating seamless interaction and idea exchange. Clarity on intellectual property rights is essential to avoid conflicts and encourage collaboration between universities and start-ups. Additionally, addressing socio-cultural barriers to entrepreneurship through educational programmes and awareness campaigns can promote entrepreneurship as a respected career choice and garner support from the broader community.



1. Introduction

This report introduces the Entrepreneurial Ecosystem Mapping of Aqaba and Analysis of Start-up Economic Sectors, designed to delve into the region's entrepreneurial landscape and pinpoint areas where support for start-ups may be lacking.

The structure of the mapping is as follows: Chapter 3 offers an outline of the methodological framework. Chapter 4 unveils the results of Aqaba's economic analysis. Chapter 5 provides insights into stakeholder mapping, while chapter 6 summarises available services in Aqaba. Chapter 7 offers an assessment of start-ups in the region, and chapter 8 delves into linkages with the value chains of large companies. Chapter 9 concludes the mapping by highlighting strengths and weaknesses. Chapter 10 furnishes recommendations based on the conclusions. The annex features a table of key definitions applied and a list of references and data sources. In addition, a methodological annex, details on potential joint project initiatives for the network, and an anonymised list of interviewees for the assessment are included.

The Entrepreneurial Ecosystem Mapping of Aqaba and Analysis of Start-up Economic Sectors scope of work is financed by the Entrepreneurship for Sustainable Economic Development and Employment (E4DE) project. The E4DE project is implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) under the technical cooperation agreement with the Ministry of Digital Economy and Entrepreneurship (MoDEE). A memorandum of understanding (MoU) was signed between E4DE and the Aqaba Special Economic Zone Authority (ASEZA) to foster entrepreneurship in the governorate of Aqaba. One of the project's focuses is supporting the entrepreneurship ecosystem in Aqaba through promoting cooperation among stakeholders and setting up mechanisms to support entrepreneurs through private sector development approaches. Mainlevel has implemented the scope of work under the guidance of the GIZ-E4DE project.

The target audience of the study is twofold.

On the one hand, the study is directed to start-ups on governorate level as well as recently established MSMEs and on the other hand to the broader entrepreneurial ecosystem development partners including governmental stakeholders, incubators, non-governmental institutions, large corporates, academic institutions, and non-governmental organisations. This study will ultimately develop, (i) recommendations for strengthening the entrepreneurial ecosystem, (ii) identify capacity-building and potential joint projects of key stakeholders that provide start-up support service delivery and (iii) identify potential opportunities to link small companies with large corporates.



2. Acknowledgment Section

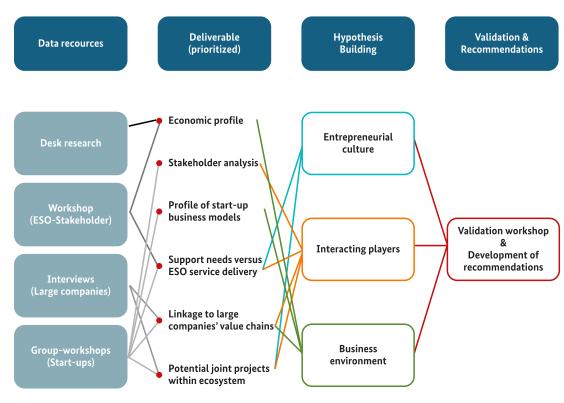
We express our gratitude to the following stakeholders and contributors for their valuable support and contributions throughout the Entrepreneurial Ecosystem Mapping of Aqaba and Analysis of Start-up Economic Sectors:

- MoDEE (Ministry of Digital Economy and Entrepreneurship): We acknowledge their assistance and availability during the research process, which significantly facilitated our work.
- **ASEZA (Aqaba Special Economic Zone Authority):** We are grateful for their invaluable assistance, consistent availability, facilitation of access to stakeholders and resources, and substantial contributions during the workshop. Their assistance in the report publishing process was also highly appreciated.
- Stakeholders and Entrepreneurial Support Organisations: We commend their willingness to provide information and actively engage in discussions. Their collaboration and insights were fundamental to shaping this mapping.
- Large Companies in the Value Chain Assessment: We extend our appreciation for their willingness to share information, which was integral to the success of the value chain assessment.
- Start-ups in the Start-up Assessment: We appreciate their openness in providing information, which significantly enhanced our understanding of the entrepreneurial landscape in Agaba.
- Incubator and accelerators: We highly appreciate the efforts for facilitating exchange by readily sharing the contact details of start-ups from your database, allowing for seamless communication and connection within the ecosystem.
- The collective efforts and dedication of these stakeholders and contributors have played a crucial role in the success of the Entrepreneurial Ecosystem Mapping of Aqaba and Analysis of Start-up Economic Sectors. Their support has been foundational to this endeavour, and we express our gratitude for their collaboration and contributions.



3. Methodological Framework

The Entrepreneurial Ecosystem Mapping of Aqaba and Analysis of Start-up Economic Sectors is based on four qualitative data collection methods that contribute and shed light on the entrepreneurial ecosystem in Aqaba from different perspectives.



To gather comprehensive data, the research design utilises a range of data sources (Figure 1). These include desk research to gather information from existing reports and studies on the economic profile of the region, workshops with ecosystem stakeholders to gather insights and perspectives, interviews with large companies to understand their linkages to the ecosystem, and group workshops with start-ups to capture their experiences and challenges.

To identify all relevant stakeholders in the ecosystem and ensure the representation of diverse perspectives on the ecosystem, Isenberg's model for conceptualizing entrepreneurial ecosystems is used (Isenberg, 2011). To take the specific context of the project into account these categories of actors will be extended to incorporate accelerators and incubators as key actors into the analytical framework. Incubators and accelerators (e.g. iPARK in Aqaba) are of particular importance to entrepreneurial ecosystems as they provide start-ups with support, resources, and mentorship. They validate and refine business ideas, offer skill development programmes, and facilitate access to funding. By fostering a sense of community and collaboration, they contribute to the overall growth and success of start-ups, while also stimulating economic development, job creation, and innovation within the ecosystem.

Figure 1
Overview of Research Design

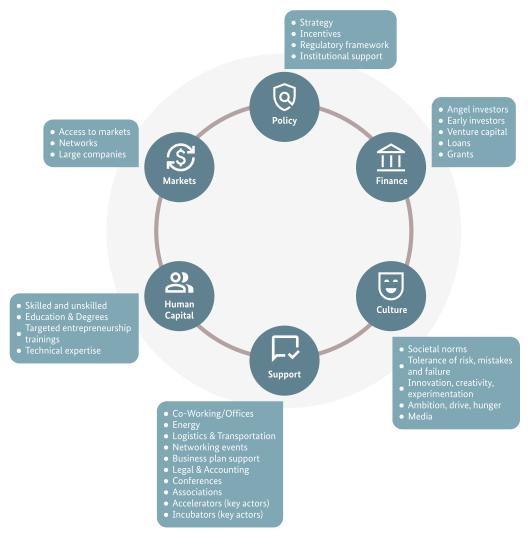


Figure 2
Isenberg's Model for conceptualising Entrepreneurial Ecosystems

Economic analysis of Aqaba

Based on desk research of quantitative and qualitative information and available data on selected indicators, an economic analysis of Aqaba was conducted, the economic profile of Aqaba was compiled, and priority sectors were identified. The identified priority sectors were validated in consultation with key stakeholders of the region.

Entrepreneurial Ecosystem Mapping

The Entrepreneurial Ecosystem Mapping primarily focuses on mapping startup and entrepreneurial actors relevant to the ecosystem in Aqaba. The actors in the entrepreneurial ecosystem were classified according to established methods and an overview table of stakeholders was developed. To this end, a 2-day workshop was conducted in August 2023 in Aqaba, where stakeholders within the Aqaba ecosystem were brought together. The workshops objectives were to

- a. discuss the entrepreneurial culture in Agaba
- b. assess the ecosystem's strengths and challenges
- c. take stock of relevant actors, their support services
- d. identify ideas for projects and entrepreneurial initiatives that can be jointly implemented by the entrepreneurial network

Start-up Assessment

For the Entrepreneurial Ecosystem Mapping in Aqaba information from start-ups in three key areas were gathered: general company characteristics, business model and market performance insights, and perception of support services. The start-up assessment covered various start-up lifecycle stages, as well as female-led, green-business, and failed start-ups. The process involved interviews with 40 start-ups, ensuring representation from different stages, gender, and business types to shape the entrepreneurial ecosystem and support services effectively.

Value Chain Assessment

In the scope of the research, a value chain assessment was conducted. The aim was to identify key sectors and economic opportunities for start-ups. The widely used Porter Value Chain Framework (Porter, 1985) is applied as the overarching analytical frame to assess the Value-Chain opportunities and linkages of start-ups' business models with large companies' value chains.

Limitations

It is important to note that there are some limitations for the Entrepreneurial Ecosystem Mapping of Agaba and Analysis of Start-up Economic Sectors:

- Sector Definitions: Sector definitions can vary significantly among different sources, and these variations may lead to inconsistencies and discrepancies when comparing sectors using data from various sources. To address this challenge, a sector mapping is applied to ensure alignment and consistency as far as possible.
- Availability of secondary data: There is a limitation in the availability of disaggregated data at the regional and sectoral level. In cases where such data gaps exist, efforts are made to fill them by utilising national data or employing alternative methods, such as proxies. These measures help compensate for the limitations in data availability and enhance the comprehensiveness of the analysis.
- Explorative Analysis: The mapping process is primarily exploratory in nature, which means it may not provide an in-depth analysis of all aspects of the entrepreneurial ecosystem and of start-ups needs and opportunities in the region. Mapping of Aqaba and Analysis of Start-up Economic Sectors. Their support has been foundational to this endeavour, and we express our gratitude for their collaboration and contributions.
- Only a sample of the existing start-ups and corporates in Aqaba were interviewed. Due to resource constraints, the study involved several selected interviews with start-ups and corporate entities. This may result in a less comprehensive representation of the ecosystem.
- Limited Depth of Analysis of Services and Ecosystem Stakeholders: The analysis of support services and ecosystem stakeholders may not delve into a high level of detail, which could limit the depth of understanding in these areas.

The annex contains relevant definitions, additional data, and a list of sources and references. More details on the methodological framework are provided in the methodological annex.



4. Economic Analysis of Aqaba

Economic profile of Aqaba

- Aqaba's strategic location as Jordan's main port on the Red Sea facilitates significant economic opportunities, serving as a vital link to Middle Eastern markets.
- Economic growth in Aqaba has been fuelled by investments, particularly in trade, tourism, and transportation sectors.
- The Aqaba Port plays a crucial role in international trade, especially for mineral exports and transit trade, with ongoing infrastructure enhancements to attract foreign investment.
- Aqaba's tourism sector, complemented by luxury resorts and historical attractions, contributes significantly to the local economy, supported by special economic zones incentivising foreign investment diversifying the economy.

Priority sectors

- Key sectors for Aqaba are the Manufacturing, the Tourism, and the Logistics, Transport and Storage Sector. These were identified based on a desk research and validated with political stakeholders.
- Furthermore, the Wholesale and Retail Trade, incl. E-Commerce, the Agriculture and the Creative Industries sectors are important emerging sectors for the region.
- The sector of ICT and tech-enabled start-ups represents another important layer of the future economic profile of Agaba.

The Economic Analysis provides an overview of the economic profile of the governorate of Aqaba and presents the relevant sectors in the governorate, including an overview of key development indicators. Besides sectoral data, the analysis provides available data on a selected set of economic, social, political and sustainability indicators at a regional level. Based on a sector selection, three key sectors and further secondary sectors for the region and for the Entrepreneurial Ecosystem Mapping for the governorate of Aqaba were identified.

4.1 Economic profile of Aqaba

Aqaba is a strategically important region in Jordan, located on the Red Sea coast and serving as the country's only port. It holds immense economic potential due to its favourable geographic location and proximity to major markets in the Middle East. The region has seen significant development and investment in recent years, driving economic growth and diversification. Aqaba's economy is heavily reliant on trade, tourism, and transportation. The Aqaba Port plays a crucial role in facilitating international trade, serving as a gateway for imports and exports, particularly for Jordan's mineral exports and transit trade to neighbouring countries. Efforts have been made to enhance port infrastructure and logistics services, attracting foreign investments, and strengthening trade links.

Tourism is another vital sector in Aqaba. The region boasts coral reefs, pristine beaches, and historical sites, attracting both domestic and international visitors. The development of luxury resorts and entertainment facilities has boosted tourism activities, creating employment opportunities and contributing to the local economy. Furthermore, Aqaba benefits from special economic zones (SEZs) that offer tax incentives and streamlined regulations to attract foreign direct investment (FDI). The Aqaba Special Economic Zone Authority (ASEZA) oversees these zones, promoting business activities and fostering economic growth. SEZs have attracted investments in industries such as manufacturing, logistics, and services, diversifying the region's economy.

The following table presents key indicators that summarises the economic profile of Aqaba quantitatively. For comparison, the respective data for the whole of Jordan is provided as well.

Relevant strategies at national and regional levels

Jordan's Economic Modernization Vision aims to transform and diversify the economy, achieve sustainable growth, enhance competitiveness, and improve living standards. The vision focuses on economic transformation, private sector development, human capital development, sustainable practices, and regional integration. Initiatives include promoting innovation and technology adoption, improving the business environment, developing a skilled workforce, prioritising environmental sustainability, and expanding trade ties.

Jordan's national entrepreneurship policy aims to create a supportive environment for entrepreneurs and start-ups by focusing on access to finance, business incubators and accelerators, regulatory reforms, entrepreneurship education, innovation and research, networking and collaboration, international market access, and social entrepreneurship. Overall, the policy aims to create an enabling environment that encourages entrepreneurship, innovation, and inclusive economic growth while addressing regulatory barriers and promoting collaboration among stakeholders.

Table 1Latest available data on key indicators for the governorate of Aqaba in comparison to national data.

		Aqaba	Jordan
	GDP per capita	No data available	2776,5 JOD
Economic indicators	Average GDP growth (2017-2022, at market prices)	No data available	1.5%
	Number of companies (2021)	3.563 (5,5 %)	64.872 (100%)
	Average Monthly Wage in JOD (2021)	740 JOD	586 JOD
Social	Unemployment rate	14,8% (2021)	22,9%¹ (2022)
indicators	% of youth in the labour force	31,7% (2022)	23,8% (2021) ²
	Unemployment rate	14,8% (2021)	22,9% (2022)³
Sustainability	Number of tertiary education institutions	2	794
indicators	Number of tertiary education students	30005	236,000 ⁶

¹ According to the Department of Statistics, as reported here: 0.4% drop in unemployment rate in Q4 2022 — DoS | Jordan Times

² Attention: Different definition of Youth applied here (ages 15-25): Labor force participation rate for ages 15-24, total (%) (national estimate) - Jordan | Data (worldbank.org)

³ Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate) - Jordan | Data (worldbank.org)

⁴ 10 public universities, 17 private universities, 51 community colleges plus the World Islamic Sciences and Education University. Higher Education in Jordan - The Ministry of Higher Education and Scientific Research (mohe.gov.jo)

⁵ Jordan University – Aqaba Branch: 2351 students; Aqaba University for Technology: 649 students

⁶ Year not specified. Higher Education in Jordan - The Ministry of Higher Education and Scientific Research (mohe.gov.jo)

4.2 Overview of economic sectors in Aqaba

To identify the three most important sectors, all relevant sectors in Aqaba need to be considered to start with the assessment. It is known that the region of Aqaba has a diverse economy with several important sectors.

The table gives an overview of 10 key economic sectors in the region.

Trade and Logistics	Aqaba's strategic location and the presence of the Aqaba Port make trade and logistics a key sector, facilitating imports, exports, and transit trade.
Tourism	Aqaba's natural beauty, coral reefs, historical sites, and luxury resorts make tourism a vital sector, attracting both domestic and international visitors.
Aqaba Special Economic Zone (ASEZ)	The ASEZ aims to attract investments and promote exports, offering tax incentives and streamlined regulations to businesses in industries such as manufacturing, services, and logistics.
Manufacturing	Aqaba hosts various manufacturing industries, including food processing, pharmaceuticals, chemical products, and textiles.
Construction and Real Estate	Aqaba's ongoing development and infrastructure projects fuel the construction sector, while real estate activities support commercial and residential property development.
Financial Services	Aqaba houses banks, insurance companies, and financial institutions, providing financial services to businesses and individuals.
Education and Research	Aqaba is home to educational institutions, including universities and vocational training centers, contributing to human capital development and research activities.
Renewable Energy	Aqaba aims to harness its solar and wind energy potential, with ongoing projects and investments in renewable energy infrastructure.
Agriculture and Fisheries	Despite the arid climate, agriculture and fisheries play a role in the region's economy, with farming activities and marine resources.
Information and Communication Technology (ICT)	Aqaba is witnessing growth in the ICT sector, including software development, IT services, and digital transformation initiatives.

Figure 3
Key sectors in Aqaba

To systematically assess the sectors, an empirical approach using available sectoral data is used. The key factors for the sector selection for the Entrepreneurial Ecosystem Mapping and Analysis of Start-up Economic Sectors are:

- **Economic potential and entrepreneurial opportunity:** Size of sector and growth prospects, potential for entrepreneurship, innovation, self-employment, and start-ups, e.g. as measured by number of start-ups.
- Social factors: Employment potential, especially for women and youth.
- Sustainability factors: Green business and innovation potential.
- Political factors: Relevance of the sector for policymakers.

To operationalise these factors and measure, assess, and identify key factors systematically, a robust selection method is proposed. The result of the application of this method to the economic sector setup in the region of Aqaba is summarised in a sector selection matrix.

The sector overview presents indicators for the sectors (for details on the method of calculation see the annex). This evaluation assesses the sectors by considering their economic potential, entrepreneurial opportunities, social, sustainability, and political factors. Regional data for the governorate of Aqaba are used as far as available. The matrix enables the identification of priority sectors for entrepreneurship and start-up promotion, utilising both quantitative and qualitative evidence. A scoring mechanism is employed to determine sector relevance, with sectors appearing among the top three performers being highlighted in red. The score is calculated based on the frequency of a sector's inclusion in the top three performers. By identifying sectors with the highest frequency, the priority sectors for the governorate of Aqaba can be determined. The three proposed sectors for further in-depth analysis are highlighted with red borders.

			Sectors												
Category	Criterion	y Criterion	National / regional data	Agriculture, Hunting, Forestry	Mining and quarrying	Manufacturing	Electricity and water	Construction	Wholesale and Retail Trade	Restaurant and Hotels*	Transport, and Storage	Information and Communication	Finance and Insurance	Real estate	Community, Social and Personal Services
	GDP in % in 2022	National	6	3	24	2	4	11	2	12	12	10	15	11	
Economic	Average GDP growth in % (2017 – 2022)	National	2.2	8	1.4	1.1	1.1	1.7	2.1	2	2	2.4	1.8	1.4	
factors	Share and relevance for MSMEs	Regional	No data	Low	Medium	Low	Medium	High	Medium	Low	Low	Low	Low	No data	
	Share and relevance for start-ups	Regional	Medium	Low	Low	Low	Low	High	High	Low	High	Low	Low	Medium	
	Average Wage in JOD in 2021	National	537	1242	512	953	607	520	445	749	749	1053	653	569	
	Employment by sector in %	National	2	4	19	7	5	18	9	15	0 (0,4%)	2	No data	18	
	Average Employment Growth in % (2017 – 2022)	Regional	22	20	9	24*	-9	2	1	-3	135	-5	No data	11	
Social factors	Relevance for youth (share of youth of employed persons per sector)	Regional	40 High	12 Medium	54 High	18 Medium	28 Medium	57 High	34 High	28 Medium	0 Low	52 High	No data	39 High	
	Relevance for women (share of women of employed persons per sector)	Regional	6 Medium	0 Low	12 Medium	0 Low	6 Medium	6 Medium	2 Low	2 Low	0 Low	46 High	No data	40 High	
	Private sector share of all employment in the sector	Regional	100	100	100	100	97	97	100	48	100	100	No data	26	
Sustainability factors	Green business potential	National	Medium	Low	High	High	Low to Medium	Low	Medium to high	Medium	Low	Low	Low	Low	
Political	Priority sector in the EMV	National	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	
factors	Export relevance	National	High (e.g. pitted fruits, tomatoes)	High (e.g. potassic fertilisers)	High (e.g. garments, medicaments)	Low to Medium	Low	Low	High	High	Medium	Low	Low	Low to Medium	

Table 2
Sector overview

4.3 Selection of priority sectors

Informed by comprehensive economic analysis and meticulous data aggregation across various sectors, a set of priority sectors was delineated. These recommended sectors underwent in-depth discussions with pivotal stakeholders, including MoDEE, ASEZA, and GIZ. The primary objective of these consultation sessions was to refine and authenticate the choice of priority sectors, in addition to pinpointing pertinent subsectors.

Building upon the initial suggestion to prioritise Manufacturing, Wholesale and Retail Trade, Restaurants and Hotels, and the Information and Communication sector, a series of considerations emerged and were seamlessly incorporated into the ultimate selection of priority sectors.

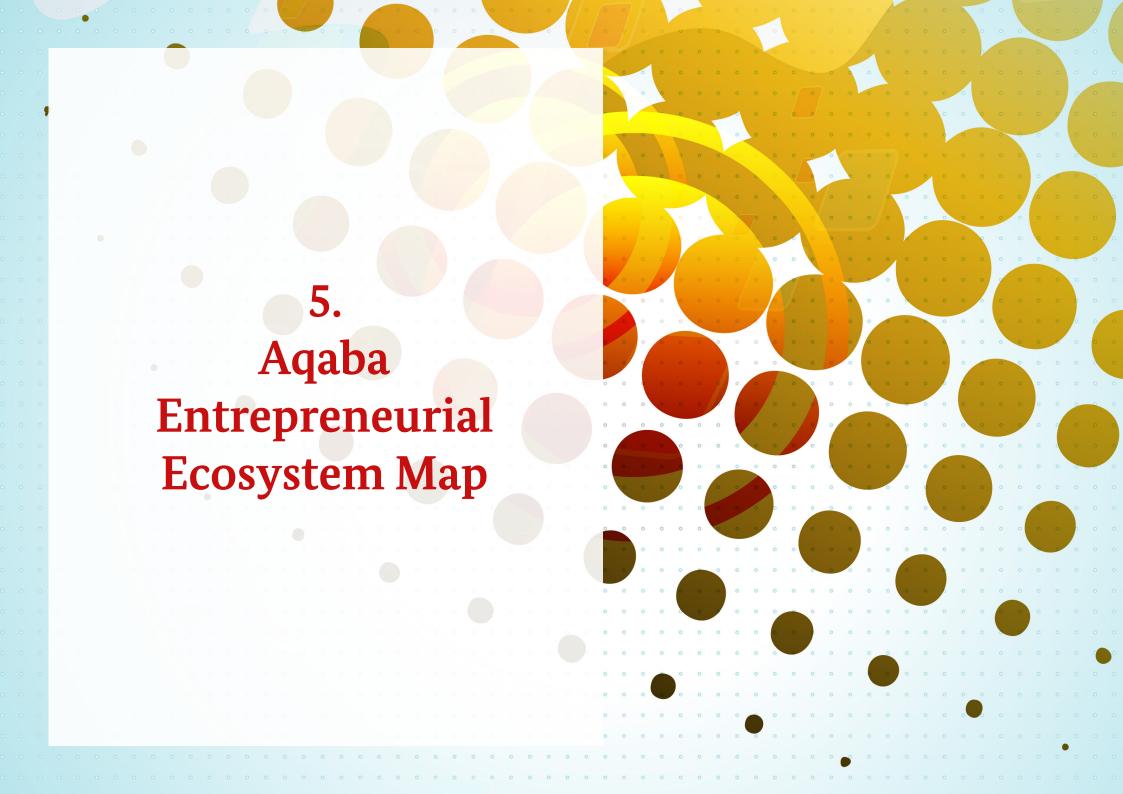
Priority sectors	Manufacturing	Tourism	Logistics, Transport & Storage	Secondary sectors			
	Garments	MICE		Wholesale and Retail Trade, incl. E-Commerce			
Subsectors	Food- processing	Sea & Desert activities and Adventure		Agriculture			
	Chemicals			Creative Industries (incl. gaming, film, design)			
Crosscutting sector	Tech and Tech-enabled Start-ups (incl. ITC, Business Process Outsourcing, Fintech)						

Figure 4
Priority sectors in Agaba

MoDEE's strategic recommendation highlights the pivotal role of Logistics, Transport, and Storage as one of the three key sectors in Jordan's economy, alongside Manufacturing and Tourism. This emphasis is underpinned by the profound significance of Aqaba sole port in the nation. All key stakeholders agreed on extending the Restaurant and Hotel sector to include the Tourism sector and to highlight specific subsectors, such as the MICE and the subsector of Sea & Desert activities and Adventure Tourism. Notably, both MoDEE and ASEZA are aligned in their prioritization of the Logistics, Transport, and Storage sector, with a shared focus on specific subsectors such as Garments, Food processing, and Chemicals within the Manufacturing domain. Furthermore, MoDEE proposes the incorporation of additional secondary sectors.

These encompass Agriculture, the integration of E-Commerce as a subsector within the broader domain of Information and Communication Technology (ICT), the burgeoning realms of Gaming, and the burgeoning Film Industry as part of the creative industries. To better reflect national priorities, it was agreed to include the Wholesale and Retail Trade sector as a secondary sector and focus here on E-Commerce. To enhance economic synergy and efficiency, MoDEE suggests the integration of ICT as a crosscutting sector rather than as an independent entity. Additionally, the recommendation includes exploring the potential of Fintech as an auxiliary subsector. It was agreed that both suggestions are incorporated within this strategic framework as part of the crosscutting sector of Tech- and Tech-enabled start-ups.

The table (Figure 4) summarises the final sector selection.



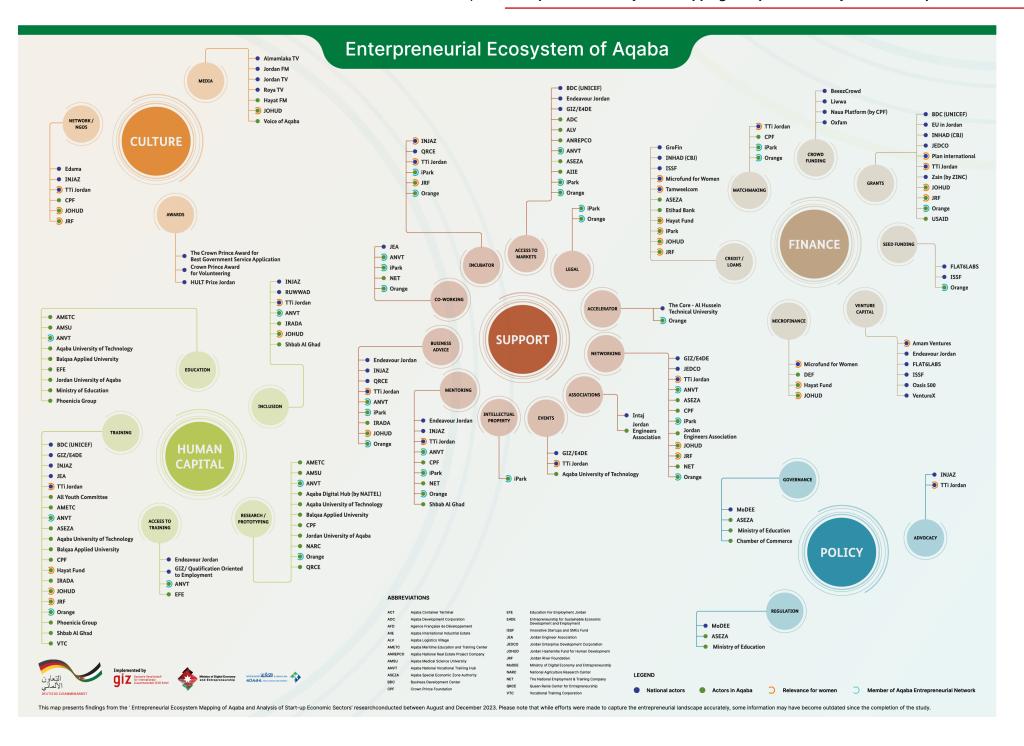
5. Aqaba Entrepreneurial Ecosystem Map

The Aqaba Entrepreneurial Ecosystem Map presents a comprehensive overview of pertinent entities within the entrepreneurial landscape of Aqaba.

This encompasses both physically present actors and those without a regional footprint but extending services. Organisations with physical presence are denoted by a green dot, organisations with outreach to Aqaba but without physical presence are denoted by a blue dot, and members of the Aqaba Entrepreneurial Network are marked with a *. Notably, the inclusion of actors is driven by perceived relevance, as determined by key stakeholders in the region, potentially excluding national actors covering the region if not highlighted in stakeholder consultations.

The start-up ecosystem map illustrates various institutions categorised according to the Isenberg model elements, showcasing their roles in fostering entrepreneurship:

- **Policy** (Governance, Regulation, Advocacy): Institutions involved in Governance and Regulation impact the operational environment for start-ups, while Advocacy groups actively promote policies favourable to start-ups, creating a supportive ecosystem.
- Finance (Microfinance, Venture Capital, Seed Funding, Crowd Funding, Grants, Credit / Loans, Matchmaking): Financial institutions such as Microfinance providers, Venture Capital firms, providers of Seed Funding, and Crowdfunding platforms offer diverse funding sources. Banks and other financial institutions provide Credit and Loans. Entities providing Grants, contribute crucial financial support, while Matchmaking services connect start-ups with suitable investors.
- Culture (Awards, NGOs, Media): Award-granting bodies recognise and incentivise entrepreneurial accomplishments, fostering a positive start-up culture. Non-governmental organisations (NGOs) play a pivotal role via influencing public opinion and connecting individuals with common purpose. This may set the ground for new ideas and social initiatives that can turn into businesses. Media outlets contribute to building awareness and cultivating a culture of entrepreneurship through coverage and success stories.
- Support (Business Advice, Mentoring, Incubator, Accelerator, Co-Working, Networking, Associations, Legal advice, Events): Institutions providing Business advice, Mentorship, and support services, such as Incubators and Accelerators, play key roles in start-up growth. Co-working spaces offer collaborative environments that facilitate networking and resource-sharing. Opportunities for Networking are offered by many organisations. On a sectoral level, Associations play a key role in connecting businesses in the same industry. Legal advisory services ensure start-ups navigate regulatory challenges, while Events provide valuable platforms for learning and for mingling with similar business, suppliers, investors or clients. Institutions facilitating Access to markets are crucial for start-ups to broaden their customer base and scale operations.
- Human Capital (Education, Research / Prototyping, Training, Access to Talent, Inclusion): Educational institutions and Training providers equip individuals with the necessary skills for entrepreneurship. Institutions offering a space for Research and prototyping contribute to innovation. In the area of human resources, specialised organisations offer Access to Talent by connecting to qualified industry experts. The category of Inclusion includes organisations that aim at enhancing diversity and the inclusion of marginalised groups in the start-up ecosystem.





6. Available start-up services in Aqaba

Key findings of assessment of start-up services in Aqaba

Idea stage

- » Awareness and ideation: AUT and INJAZ organise workshops to inspire creative thinking, fostering an entrepreneurial spirit from a young age.
- » Mentorship and resources: JRF, INJAZ, iPARK, IRADA, and CPF offer mentorship and guidance to shape raw ideas into actionable business plans, while ASEZA provides advice through its directorates.
- » Networking opportunities: ASEZA, JRF, iPARK, Ayla Oasis Development Company, JOHUD, and CPF facilitate connections with the broader entrepreneurial ecosystem, enabling partnerships and collaborations.
- » Market research: ASEZA, JRF, IRADA, and JOHUD support entrepreneurs with market research, providing insights to refine business strategies.
- » Business plan development: JRF, iPARK, IRADA, JOHUD, and CPF assist in developing practical roadmaps for start-ups, translating ideas into actionable plans.

Seed stage

- » Incubator and accelerator programmes: iPark and Orange in Aqaba provide comprehensive support for start-ups, offering physical spaces, resources, and mentoring. Other organisations like ASEZA, JOHUD, CPF, INJAZ, and JRF also contribute through advisory services and pitch competitions, with a focus on supporting women-led start-ups.
- » Product development and prototyping: Orange in Karak assists start-ups with product development and prototyping, crucial for refining ideas into market-ready products. CPF facilitates partnerships to help start-ups establish relationships leading to funding and collaboration opportunities.
- » Pitch competitions: INJAZ organises national pitch competitions, providing seed-stage start-ups in Aqaba a platform to showcase their ideas and attract potential investors.
- » Access to investors: While specific services for connecting with local investors are limited, start-ups may seek venture capital in Amman or explore international opportunities. Organisations like JOHUD and CPF offer advisory services to guide start-ups through early-stage funding challenges.

Start-up stage

- » Co-working Spaces and Office Facilities: Organisations like JOHUD, ORANGE, iPARK, and CPF provide essential co-working spaces and office facilities for start-ups in Aqaba, offering physical locations and comprehensive support for incubating innovative ideas.
- » Access to Networks and Partnerships: JOHUD, JRF, ORANGE, iPARK, TTi, and CPF facilitate access to mentors, industry experts, and potential collaborators, strengthening the growth prospects of start-ups by forming valuable connections and partnerships.
- » Legal and Regulatory Compliance Assistance: iPARK and Etihad Bank offer guidance and support to start-ups in navigating legal and regula-tory complexities, ensuring they operate within established frameworks and build a strong legal foundation for their businesses.
- » Access to Investors and Financing: Financial institutions like Etihad Bank and initiatives led by ASEZA collaborate to provide start-ups with access to necessary funding, fostering their growth and development while promoting investment incentives to attract businesses to Aqaba's entrepreneurial ecosystem.

Expansion stage

- » Access to Growth Funding: ASEZA, ORANGE, JRF, Etihad Bank, and JOHUD provide funding avenues for start-ups entering the expansion phase, offering loans and financial support.
- » Market Expansion Guidance: ASEZA, ORANGE, JRF, and CPF offer advisory services to help start-ups navigate market expansion, providing strategic guidance.
- » International Market Entry Support: JOHUD assists start-ups with international expansion through events like bazars and trade fairs, facilitating market entry.
- » Partnerships and Distribution Channels: ASEZA, JRF, CPF, and JOHUD aid start-ups in forming strategic partnerships and accessing distribution channels, leveraging their networks.

The start-up life cycle encompasses several distinct stages, each crucial in the development and growth of a new venture.

There are various ways in differentiating between the stages. For this ecosystem mapping, a relatively simple differentiation into four phases is used. We will differentiate between Idea, Seed, Start-up and Expansion stage. The initial phase is the "idea" stage, where aspiring entrepreneurs conceptualise their business concepts and identify opportunities in the market. This is followed by the "seed" stage, where the founders work on validating their ideas, conducting market research, and securing the necessary resources and funding to kickstart their business. Upon the completion of refining the business idea and establishing its operations, the start-up initiates its formal journey, transitioning into the designated "start-up" stage. This phase involves the launch of the business, focusing on early customer acquisition, product development, and establishing a solid market presence. As the start-up progresses and demonstrates sustainable growth, it enters the "growth" stage, where it scales operations, expands market reach, and targets profitability.

Entrepreneurial support organisations play a vital role throughout these stages. During the idea stage, they offer mentorship, workshops, and resources to help budding entrepreneurs shape their concepts. In the seed stage, these organisations provide access to investors and funding networks to secure initial capital. As the start-up takes off in the start-up stage, they continue to offer guidance, networking opportunities, and specialised training to navigate the challenges of early growth. Finally, in the growth stage, entrepreneurial support organisations assist in accessing new markets, facilitating partnerships, and optimising operational processes to ensure sustainable expansion. In essence, these organisations act as a critical backbone for start-ups, providing the necessary support and resources at every key milestone in their life cycle. The following table gives an overview of typical support services from entrepreneurial support organisations for each of the four stages.



Figure 5
Typical start-up services by ESOs

6.1 Idea stage

The idea stage of a start-up is a time of creativity and testing out possibilities.

At the same time, it can also be a period of great uncertainty and vulnerability. In this phase, it is crucial that a network of entrepreneurial support organisations stands ready to provide a range of essential services that can help budding entrepreneurs navigate this exciting yet challenging phase. The services provided in this phase are pivotal in shaping the raw concepts and ideas into well-defined, viable business prospects. Here, we will delve into the services offered by various organisations in this crucial idea stage in the Aqaba entrepreneurial ecosystem, while contextualising their significance in the entrepreneurial journey:

- Awareness raising, ideation and brainstorming: The process begins with raising awareness and igniting ideation. AUT and INJAZ contribute by organising workshops and outreach campaigns. These initiatives inspire creative thinking and help individuals refine their initial ideas. Investing in the next generation is a forward-looking approach that INJAZ takes. By offering training opportunities to school and university students, they nurture an entrepreneurial spirit from an early age, creating a pipeline of innovative thinkers who are prepared to contribute to the start-up ecosystem in the future.
- **Provision of resources and mentorship:** Once the spark of an idea is ignited, mentorship becomes essential. JRF, INJAZ, iPARK, IRADA, and CPF offer this invaluable service. ASEZA helps through guidance and advice by its directorates. Experienced mentors guide aspiring entrepreneurs, helping them shape their raw ideas into actionable business plans and navigate the challenges of the early stages. JRF and JOHUD provide psycho-social services. These services offer support and resilience, ensuring that innovators are equipped to handle the challenges of the entrepreneurial journey.
- Facilitation of networking opportunities: An entrepreneur's journey continues by connecting innovators with the broader entrepreneurial ecosystem. Organisations such as ASEZA, JRF, iPARK, Ayla Oasis Development Company, JOHUD, and CPF play a vital role in facilitating these connections. Networking opens doors to partnerships, collaborations, investments, and even potential team members from job seekers.
- Offering market research: Comprehensive market research is pivotal for validating start-up concepts. ASEZA, JRF, IRADA and JOHUD provide support in market research. They provide data and insights that help entrepreneurs better understand their target markets, identify opportunities, and finetune their business strategies based on data-driven decisions.
- Assistance in business plan development: With the knowledge gained from market research, entrepreneurs can structure their ideas into well-defined business plans.
 JRF, iPark, IRADA, JOHUD and CPF offer services for business plan development and management, enabling entrepreneurs to create a practical roadmap for their start-up.

These services are interconnected and build upon each other, forming a holistic ecosystem that supports innovators from the moment they conceive their ideas to the point where they develop a well-defined business plan. The comprehensive support offered at the idea stage paves the way for entrepreneurs to progress towards creating successful, sustainable start-ups.

Available services for start-ups in the idea stage in Aqaba.

	Awareness raising, idea	tion and brainstorming	Provision of resources and mentorship			Facilitation of networking opportunities	Offering market research	Assistance in business plan development
	Awareness-raising campaigns in general	Awareness-raising campaigns and training of school/university students	Ideation and brainstorming workshops	Mentorship	Psychosocial services		Research Center / Market Research	
ASEZA	8					\otimes	\otimes	
AUT	\otimes		\otimes					
AYLA						\otimes		
CPF	\otimes		\otimes	\otimes				\otimes
INJAZ	\otimes	\otimes	\otimes	\otimes				
iPARK			\otimes			\otimes		\otimes
IRADA			\otimes			\otimes	\otimes	\otimes
JOHUD	\otimes		\otimes		\otimes	\otimes	\otimes	\otimes
JRF	\otimes		\otimes		\otimes		\otimes	\otimes
ORANGE			\otimes			\otimes		

Figure 6

Available services for start-ups in the idea stage in Aqaba

6.2 Seed stage

In the seed stage of a start-up's journey, the focus shifts from ideation to turning ideas into tangible products and services while preparing for market entry.

This stage involves refining the business model, developing prototypes, and securing initial funding. Various entrepreneurial support organisations provide a range of services in Agaba during this phase to help entrepreneurs transition from ideas to market-ready products or services. In the following, the most relevant services are presented.

- Provision of access to incubator or accelerator programmes: Incubation is a pivotal phase in the journey of start-ups, providing them with the essential nurturing environment to transform ideas into tangible products or services. In Aqaba, entrepreneurs have a strong ally in iPark and Orange, which offer a comprehensive incubation programme. Their programme provides not only physical spaces but also resources that enable start-ups to develop and prototype their innovative concepts. While Orange and iPark in Aqaba serve as significant incubators, organisations like ASEZA, JOHUD, CPF, INJAZ (based in Amman but accessible to Aqaba start-ups), and JRF also contribute to the incubation process. Their support comes in various forms, ranging from mentoring and advisory services to facilitating partnerships and organising pitch competitions. In particular, the Women Digital Center, run by Orange, JOHUD and supported by the EU, provides support, especially for start-ups founded or led by women in Aqaba. This support could include resources for product development, mentorship, and access to a network of like-minded entrepreneurs. Acceleration services are another vital component in the start-up ecosystem, designed to propel early-stage companies towards rapid growth and market entry. In the Aqaba region, organisations like ASEZA, ORANGE, JOHUD, and CPF recognise the significance of acceleration in the start-up journey. However, it's important to note that, given the early stage of the Aqaba ecosystem, acceleration programmes in the region may not yet differentiate significantly from incubation programmes. These organisations are working diligently to provide start-ups with services that facilitate growth, including mentorship, access to resources, and opportunities for funding. While the distinction between acceleration and incubation may not be stark at this stage, the coherent and tailored supply of support programmes are laying the foundation for a thriving start-up ecosystem in Aqaba. The collective efforts in incuba
- Assistance in product development and prototyping: Product development and prototyping are key for certain start-up business models. Orange in Karak offers support for product development and prototyping, which may be used by start-ups in Aqaba and can be essential for refining an idea into a market-ready product. Partnerships and linkages are essential to a start-up's growth. CPF in Aqaba takes an active role in facilitating these connections, helping start-ups in the seed stage in Aqaba establish relationships that can lead to funding, collaboration, and distribution opportunities. Advisory services, critical in the seed stage, can help start-ups in Aqaba navigate the challenges of product development, business modelling, and early-stage funding. JOHUD offers advisory support in Aqaba, providing entrepreneurs with guidance and expertise.

- Organisation of Pitch Competitions: Pitch competitions are an excellent opportunity for start-ups to showcase their ideas, gain visibility, and secure initial funding.
 INJAZ organises national pitch competitions for entrepreneurs, including those in Aqaba, giving seed-stage start-ups a platform to present their ideas and attract potential investors.
- Connecting with angel investors or venture capitalists: Specific service for connecting with local angel investors or venture capitalists in Aqaba was not widely available or established, since the ecosystem might still be in the early stages of developing such services. Aspiring entrepreneurs in Aqaba might rather seek venture capital in Amman or explore opportunities abroad, as the availability of local angel investors is limited. Alternatively, they also rely on personal or family resources to fund their ventures. This approach reflects the current reality where accessing external investment can be more challenging within the Aqaba entrepreneurial ecosystem.

While not all organisations offer services directly related to the seed stage, their contributions are interconnected and collectively support start-ups in this critical phase, particularly in Aqaba. The incubation facilities provided by ORANGE in Aqaba and the advisory services offered by JOHUD in Aqaba and CPF create an environment where product development and prototyping can thrive. Simultaneously, the outreach to partners and organisation of pitch competitions, provide opportunities for start-ups to access funding, mentorship, and networking, accelerating their journey from the seed stage to the next phases of growth and development.

Services provided by organisations in Aqaba in the seed stage.

	Provision of access to incubator or accelerator programmes	Assistance in product development and prototyping			Organisation of pitch competitions and investor events	Connecting with angel investors or venture capitalists
		Prototyping Outrea partners/l		Advisory		
ASEZA	\otimes	€	í			
CPF	\otimes	€	í			
INJAZ	in Amman but accessible to Aqaba start-ups				\otimes	
iPark	\otimes	€	í		\otimes	
JOHUD	\otimes	€	í	\otimes		
JRF	\otimes	€	í			
ORANGE	⊗	in Karak but accessible to Aqaba start-ups	í			

Figure 7
Available services for start-ups in the seed stage in Aqaba

6.3 Start-up stage

In Aqaba's entrepreneurial ecosystem, several organisations offer pathways for entrepreneurs in their start-up stage.

In the following, we explore how services can be interlinked to nurture and guide budding businesses:

- Offering Co-working Spaces or Office Facilities: In Aqaba, the significance of the right working environment for start-ups is well-acknowledged. Organisations like JOHUD, ORANGE, iPARK, and CPF have recognised the need for providing co-working spaces and office facilities. JOHUD steps up to ensure that start-ups have access to co-working spaces, offering them a physical location to bring their innovative ideas to life. ORANGE takes this a step further by not only offering working spaces but comprehensive co-working facilities, where entrepreneurs can incubate their concepts and access mentorship and resources. iPARK offers co-working spaces, creating a conducive environment for start-ups to develop their innovative ideas, while CPF ensures that start-ups have the working spaces they need as a strong foundation for their growth. With these organisations collectively providing these facilities, start-ups in Aqaba have the physical space and support to nurture their ideas and transform them into thriving businesses.
- Offering Access to Networks and Partnerships: As in almost all stages of the development of start-ups, access to networks and partner-ships is essential for start-up growth, and this service is well-covered by organisations in Aqaba. JOHUD forms the cornerstone of this aspect, creating strong connections for start-ups. They facilitate access to mentors, industry experts, and potential collaborators, significantly enhancing the growth prospects of start-ups. JRF understands the importance of partnerships and actively fosters access to networks and partnerships, ensuring Aqaba's entrepreneurs can tap into valuable collaborations with industry experts and potential allies. ORANGE takes its role seriously, extending its reach to ensure start-ups in Aqaba have access to a broad network of mentors, industry experts, and potential collaborators. iPARK plays a significant role by connecting start-ups with mentors, industry experts, and collaborators who contribute to their growth, and TTi recognises the value of networking and creates opportunities for start-ups to connect with valuable mentors, industry experts, and potential collaborators. CPF ensures that connections with industry experts and potential collaborators are facilitated. This collective effort ensures that start-ups in Aqaba can access valuable networks and partnerships, a crucial aspect of their success. A key challenge in the start-up stage is building a capable team. JOHUD steps in by providing a database of jobseekers that connects entrepreneurs with potential employees who share their vision and passion, forming the foundation for a strong team.
- Assistance in Legal and Regulatory Compliance: Navigating the complexities of legal and regulatory compliance is a vital but often challenging task for start-ups. iPARK and Etihad Bank step in to provide much-needed assistance in this domain. iPARK recognises that legal and regulatory compliance is crucial and offers start-ups guidance to ensure they operate within the established legal framework. Etihad Bank plays a pivotal role by assisting start-ups with legal and regulatory compliance, helping them navigate these complexities and operate in compliance with the law. These organisations ensure that entrepreneurs in Aqaba can establish a strong legal foundation and operate within the necessary legal parameters. Ensuring the quality and reliability of a product or service is essential for building trust. IRADA assists entrepreneurs in achieving this by providing quality testing and supporting to obtain certificates, strengthening their credibility in the eyes of potential customers and investors.

• Offering Access to Investors and Financing: Access to investors and financing is a fundamental need for start-ups. In this realm, financial institutions such as Etihad Bank play a pivotal role. They ensure that start-ups in Aqaba can access the necessary funding to fuel their growth and development. With their support, entrepreneurs can find the financial backing required to take their ideas to the next level and build sustainable businesses. In addition to these, ASEZA enhances its support by offering facilitated loans through collaborative funds with DEF, ADC, and JOHUD. This initiative aims to provide start-ups with easier access to financing, fostering their growth and development. Furthermore, ASEZA actively promotes investment incentives, creating an environment conducive to attracting and retaining businesses. These incentives, outlined in the Investment Incentives programme, contribute to the overall attractiveness of Aqaba as a destination for entrepreneurial ventures.

In Aqaba's evolving entrepreneurial ecosystem, services for start-ups are gradually taking shape, albeit at various stages of development. These services encompass the provision of co-working spaces, access to networks, assistance with legal and regulatory compliance, and connections to investors and financing. While these services are valuable in nurturing and guiding emerging businesses, the ecosystem is still in the process of maturation. With continued growth and refinement, the entrepreneurial landscape in Aqaba is expected to become even more conducive to the success and growth of start-ups in the start-ups stage.

Services provided by organisations in Aqaba in the start-up stage.

	Offering co-working spaces or office facilities	Offering access to ne	tworks and partnerships	Assistance in legal and regulatory compliance		Offering access to investors, investment incentives and financing
		Access to networks	Job seekers database	Advisory	Quality Testing and Certification	
ASEZA		\otimes		8		
AYLA	\otimes					
Etihad Bank				⊗		\otimes
iPARK	\otimes	\otimes		\otimes		
IRADA					\otimes	
JOHUD	\otimes	\otimes	\otimes			\otimes
JRF		\otimes				\otimes
Orange	\otimes	\otimes				

Figure 8 Available services for start-ups in the start-up stage in Aqaba

6.4 Expansion stage

In Aqaba's entrepreneurial ecosystem, the expansion phase for start-ups is marked by a set of services designed to facilitate growth and sustainability.

These services are categorised into five key pillars, each contributing to the success and expansion of start-ups.

- Provision of Access to Growth-Stage Funding Sources: Several organisations in Aqaba recognise the importance of access to growth-stage funding sources for start-ups in the expansion phase. ASEZA, ORANGE, JRF, Etihad Bank, and JOHUD play pivotal roles in this regard. ASEZA offers facilitated loans in collaboration with DEF, ADC and JOHUD. ORANGE extends its support beyond the start-up stage, ensuring that entrepreneurs can access growth-stage funding sources to fuel their expansion. JRF is equally committed to providing access to funding options, helping Aqaba's start-ups secure the necessary financial backing for growth. Etihad Bank also plays a critical role in this phase, ensuring that start-ups can access the required funding for their expansion endeavours. JOHUD, with its extensive network and resources, fosters connections to growth-stage funding sources, enabling start-ups to take their operations to the next level.
- Offering Market Expansion Strategies and Guidance: As start-ups transition into the expansion phase, market expansion strategies and guidance become vital. Several organisations are equipped to offer this support. ASEZA, ORANGE, JRF, and CPF extend their advisory services to provide start-ups with the guidance they need to navigate market expansion. This strategic advice assists entrepreneurs in developing a clear roadmap for their expansion journey. Furthermore, JRF takes an active role in promoting activities that facilitate market expansion. Their promotional efforts contribute to the visibility and growth of start-ups in new markets, ensuring a smoother transition into the expansion phase.
- Assistance with International Expansion and Market Entry: International expansion is a significant milestone for start-ups, and ASEZA and JOHUD play a key role in this regard. Through initiatives like bazars and trade fairs, JOHUD offers practical assistance with international expansion and market entry. These events provide start-ups in Aqaba with opportunities to showcase their products or services to a global audience, facilitating the initial steps of entering international markets.
- Facilitation of Connections with Strategic Partners and Distribution Channels: Connections with strategic partners and distribution channels are vital for start-ups in the expansion phase. Organisations like ASEZA, JRF, CPF, and JOHUD play critical roles in facilitating these connections. JRF leverages its extensive network to help start-ups identify and establish partnerships with strategic allies. CPF also ensures that connections with industry experts and potential collaborators are facilitated, which can lead to strategic partnerships. JOHUD, through its extensive resources, fosters connections that enable start-ups to access distribution channels and key partners, making market expansion a more seamless process.
- Offering Leadership Development Programmes and Executive Coaching: While there is no specific service provider mentioned for leadership development programmes and executive coaching in Aqaba, entrepreneurs often seek these services externally or independently to develop their leadership skills and strategies, which are essential for managing an expanding start-up effectively.

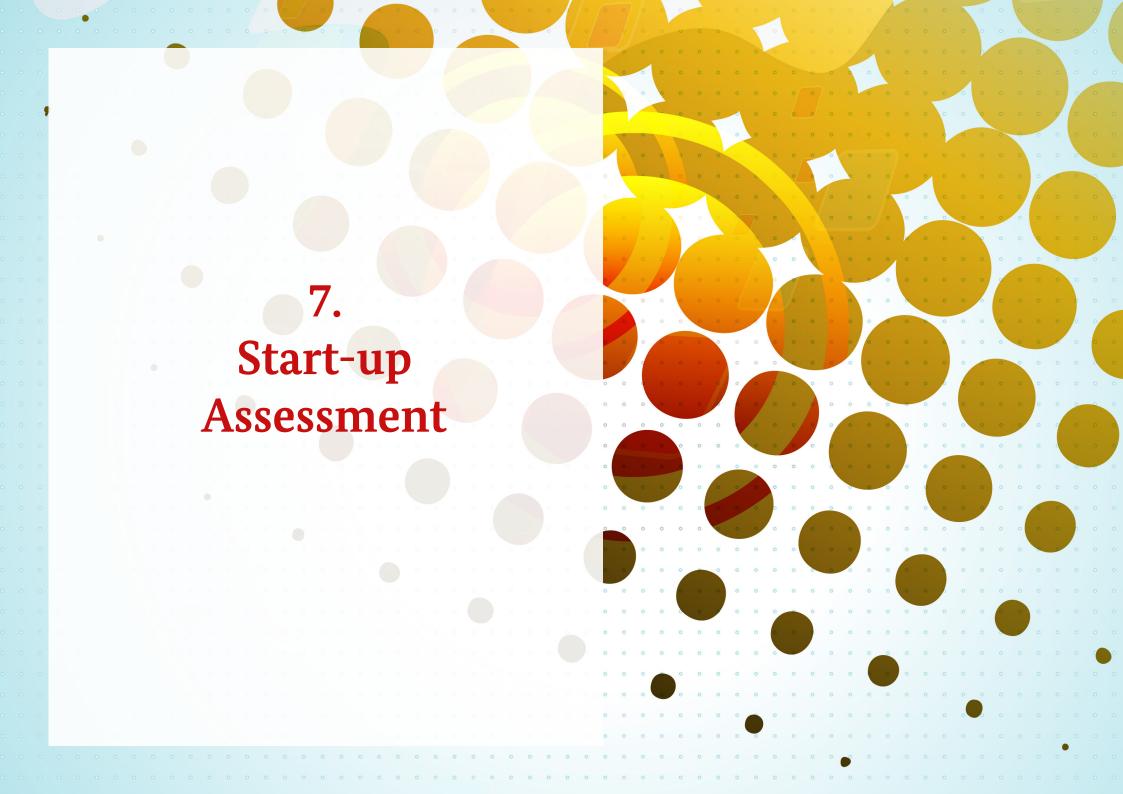
The services collectively form a strong foundation for start-ups in their expansion phase. Whether it is access to growth-stage funding, market expansion guidance, international market entry, or strategic partnerships, these pillars provide the necessary support to help start-ups expand and thrive in new markets. However, it's worth noting that while Aqaba's start-up ecosystem is rapidly evolving, the services provided in the expansion stage are not yet sector specific. Tailoring services to specific industry needs can be particularly beneficial for start-ups, as different sectors often face unique challenges during their growth phase. Moreover, the range of services, while growing, is not yet fully diversified to cater to every aspect of expansion. As Aqaba's entrepreneurial scene continues to flourish, there is potential for the development of more specialised and sector-specific services to further enhance the support system for start-ups during their expansion journey. This diversification can ultimately bolster the success of start-ups in various industries and contribute to the overall growth of the region's entrepreneurial ecosystem.

Services provided by organisations in Aqaba in the expansion stage.

		of access to funding sources	Offering marke strategies and		Assistance with international expansion and market entry	Facilitation of connections with strategic partners and distribution channels	Offering leadership development programmes and executive coaching
	Access to finance	Provision of finance or grants	Advisory services	Promotion activities			
ASEZA	\otimes	\otimes			⊗	\otimes	
CPF			\otimes			\otimes	
Etihad Bank	\otimes	8					
JOHUD	\otimes	\otimes			\otimes	\otimes	
JRF	\otimes	\otimes		\otimes		\otimes	
ORANGE	\otimes		\otimes			\otimes	

Figure 9

Available services for start-ups in the expansion stage in Aqaba



7. Start-up Assessment

Key findings of start-up assessment

Socio-economic profiles of founders

- » A significant portion of interviewed start-ups are in the advanced stages of the start-up lifecycle.
- » Women play a vital role as founders in the ecosystem.
- » Majority of founders are highly educated.
- » Many founders started a company for the first time.
- » The entrepreneurial ecosystem consists of both young and established start-ups.
- » Most entrepreneurs start out on their own with potentially negative implications for knowledge and resource diversity within the start-up.
- » While external financing options exist, they are not widely adopted, suggesting room for improvement in this aspect of the entrepreneurial ecosystem.

Business Model

- » Great focus on B2C and B2B business models with start-ups primarily focused on traditional offerings, such as goods and services, but innovative and digital ventures exist, as well.
- » Start-ups operate in almost all identified key economic sectors with a stronger focus on tourism, but only limited start-up activity in logistics.
- » Local market in Agaba is the main target market for almost all start-ups. About half of start-ups also target the national market.
- » Low impact of start-ups on employment creation.
- » Most start-ups generate little revenue, with a few exceptions in the tourism and retail sector.
- » Start-ups lack a well-defined business case.
- » The business models of start-ups lack unique value proposition (UVP) and face high competition in the local market.
- » Start-ups struggle to maintain business, with the most challenges experienced in sales, revenue generation and subsequently financing.
- » Start-ups experience difficulties to scale-up and grow their businesses.
- » Start-ups only exhibit limited integration in value chains of large companies.
- » Successful start-up businesses exist and should be embedded in the local ecosystem as mentors and success stories.

Support Needs

- » Basic support services are available, but more advanced support services from ESOs are needed.
- » Start-ups need support to define a business case, find unique value proposition and maintain a sustainable business.
- » Start-ups require better access to funding, particularly to grants and microfinance.
- » Advanced advisory services and financial support must be closely interlinked.
- » Enhance mentoring and networking opportunities for start-ups.
- » Ease the registration process for unregistered start-ups and support start-ups in their licensing effort.

Female Entrepreneurs

- » Female entrepreneurs are an integral part of the ecosystem in Agaba and require gender-specific support in the areas of financing and child-care.
- » Women and youth face social-cultural barriers in their entrepreneurial journey.

Green Businesses

- » Agaba has a multitude of green businesses, demonstrating the potential for sustainability as a business case.
- » Green start-ups do not require specific support services.

The start-up assessment

The start-up assessment aimed to gather information from start-ups in three key dimensions. The assessment structure was divided into three main parts, each designed to elicit specific information. The first part focused on gathering general information about the start-up and its founder. The second delved into the start-up's business model and the challenges they encountered in their daily operations. The third and final part investigated the particular support requirements of each start-up, fostering a comprehensive analysis of their unique needs. The assessment was conducted with a diverse group of 40 male and female start-ups and entrepreneurs, each interview lasting approximately one hour.

Selection of Start-ups

In total, 40 start-ups from the Aqaba region were assessed. The list of start-ups was sourced from local entrepreneurial support organisations. The start-ups were chosen based on key sectors identified through the ecosystem assessment, including manufacturing, logistics, tourism, wholesale and retail trade, and food and beverages. Representation of women entrepreneurs in the sample was an additional key factor. The sample is not representative of start-ups in Aqaba in a statistical sense and was not randomly drawn.

Hence, while the 40 interviews conducted within the framework of this assessment offer valuable insights into the entrepreneurial ecosystem and the diverse landscape of start-ups, it's essential to approach the findings with caution and not overgeneralise. The assessment provides a meaningful indication of the challenges, opportunities, and support needs encountered by start-ups at various stages of their lifecycle. However, it's crucial to recognise that the sample size is limited. The entrepreneurial landscape in Aqaba is dynamic and multifaceted, and the experiences of these 40 start-ups may not fully represent the entire spectrum of entrepreneurial ventures in the area. Therefore, while the insights are informative and can inform tailored support strategies, the findings should be considered indicative rather than exhaustive, and further research and data collection may be necessary for a more comprehensive understanding of the ecosystem.

7.1 Socio-Economic Profiles

7.1.1 Founders

Women account for almost half of all interviewed start-up founders.

A nearly equal distribution of male and female founders exists among the interviewed start-ups, with 19 female founders and 21 male founders. The share of female founders, at 47 %, appears notably above the national average for Jordan, where female founders account for approximately 21 % of the start-up landscape. Throughout Jordan, the start-up scene is usually dominated by men (79 %). The situation of women-led businesses is examined in more detail in Chapter 7.3.1.

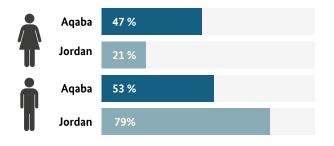
Founders are highly educated.

The majority of interviewed start-up founders have strong academic backgrounds (85%), with a vast majority holding a bachelor's degree (67%). The large proportion of founders with an academic background is in line with findings from the 2019 Jordan Start-up Ecosystem Survey, where 94% of respondents had completed an academic education (GIZ, 2019).

Most start-ups report demand and previous experience as main motivation to start business, but passion and financial necessity are also frequently cited reasons.

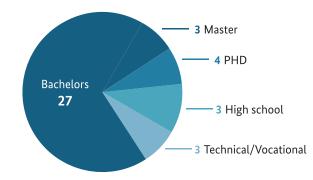
A closer analysis reveals that the majority, precisely 24 out of 40 founders, cite either market demand or previous experience as fundamental motivators, emphasising a business response to market needs and their professional background. However, a significant number of founders (17) underscore their passion for their chosen venture, demonstrating a strong personal connection to their business endeavours. Another 7 entrepreneurs also report necessity and financial need as catalyst for their businesses, while 4 state community orientation and empowerment as main reasons to start their business.

Figure 10Gender of Founders

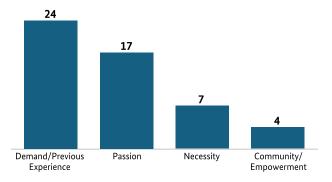


Source: Interviews with Start-ups in Aqaba in September 2023 and Jordan Start-up Ecosystem Survey Results (GIZ, 2019)

Figure 11
Education of Founders



Source: Interviews with Start-ups in Aqaba in September 2023 and Jordan Start-up Ecosystem Survey Results (GIZ, 2019)



Source: Interviews with Start-ups in Aqaba in September 2023 [Multiple Choice]

Figure 12
Motives

Majority of start-up founders are under the age of 34.

With 75 % of interviewed founders being between 18-34 years old. This means that the founders interviewed appear to be younger than the national average. On the national level, 40 % of the founders were between 35-44.

Vast majority of interviewed entrepreneurs pursue start-up business fulltime.

The data indicates a strong commitment to entrepreneurship, as 33 out of 40 founders dedicate themselves fulltime to their start-ups. This dedication reflects the entrepreneurial culture in the region and the founders' willingness to fully engage in their ventures.

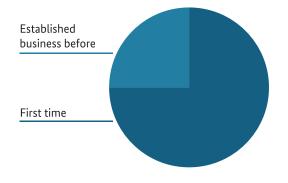
Many founders started a company for the first time (75 %) with business experience mostly gained in their own company.

Among the 40 founders, 30 are initiating their entrepreneurial journey for the first time, while 10 founders have prior entrepreneurial experience. This mix of first-time and experienced entrepreneurs may appear somewhat contradictory to the finding that most founders have worked in their own companies. However, it suggests that these founders might have exclusively worked within the companies they eventually founded or assumed executive roles within their own businesses after initiating them.

Founders primarily set out on their own.

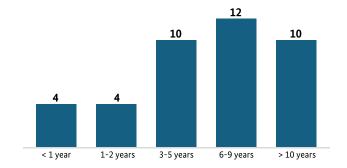
Among the interviewed start-ups, 26 are led by sole founders, with a smaller cohort having two co-founders (8). A few start-ups started with three or four co-founders. This distribution signifies that most entrepreneurs venture into the business world individually or with a single partner, which can have negative implications for resource and knowledge diversity within these start-ups.

Figure 13Serial Entrepreneur



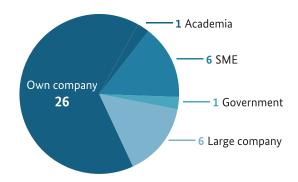
Source: Interviews with Start-ups in Aqaba in September 2023

Figure 14
Years of Professional
Experience



Source: Interviews with Start-ups in Agaba in September 2023





Source: Interviews with Start-ups in Aqaba in September 2023

7.1.2 Start-ups

A significant portion of interviewed start-ups are in the advanced stages of the start-up lifecycle, indicating maturity.

Roughly 80 % of interviewed start-ups categorise themselves as being in the start-up or expansion lifecycle, meaning that they are either at the point where they focus on product development, customer acquisition, and establishing a viable business model (start-up phase) or at the point where they seek to increase market presence, expand their customer base, and achieve sustainable profitability (expansion phase). In addition, a few emerging start-ups, at either the idea (4) or seed stage (5), were interviewed.

The entrepreneurial ecosystem includes both young and long-established startups.

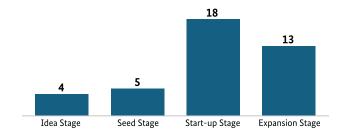
With the oldest interviewed start-up being established in 2010. However, the greatest share of start-ups is less than 5 years old (76 %). This diversity in company age showcases the need for support tailored to both emerging and established start-ups.

Start-ups primarily rely on own funds and family contributions to start business.

This pattern suggests that entrepreneurs often bootstrap their businesses, using personal savings and family support, indicating the importance of self-funding and family support within the local entrepreneurial ecosystem. While external financing options exist, they are not widely adopted, suggesting room for improvement. The utilisation of grants as a financial resource indicates the importance of government and non-governmental support in nurturing the ecosystem.

The limited use of angel investors and venture capital is worth highlighting, standing in strong contrast to the availability of financing at the national level. According to the Jordan Start-up Ecosystem Survey 61 % of respondents at the national level raised funding via equity, meaning angel investors, venture capital or accelerators, while only 14 % relied on personal savings (GIZ, 2019). Overall, this insight underscores the need for promoting external financing options and investment opportunities in the Aqaba entrepreneurial ecosystem.

Figure 16Start-up Lifecycle



Source: Interviews with Start-ups in Agaba in September 2023

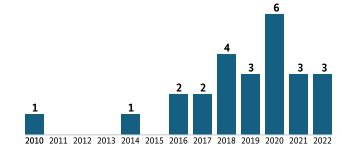


Figure 17Year of Establishment

Source: Interviews with Start-ups in Agaba in September 2023

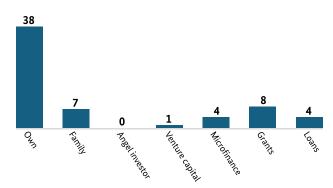


Figure 18 Financing

Source: Interviews with Start-ups in Aqaba in September 2023 [Multiple Choice]

Most companies in the start-up and expansion phase are officially registered, but mature unregistered start-ups exist as well.

More than half of the start-ups in the start-up and expansion phases have undergone the official registration process (24 out of 40), while 16 operate as unregistered entities. It is worth noting that 8 out of these 16 unregistered businesses are in the idea and seed stage, which is expected given their early development. Yet, 8 start-ups in the more advanced lifecycle are not registered. This indicates that a few entrepreneurs operate within the realm of unregistered businesses, which has implications for regulatory compliance and their ability to receive financial support.

7.2 Business Models

7.2.1 Overview of Business Models

Great focus on B2C and B2B business models.

The majority of start-ups, precisely 27 out of 40, primarily target consumers (B2C). Additionally, 10 start-ups concentrate on business-to-business (B2B) interactions. Against this background, a distinctive feature of the Aqaba ecosystem becomes apparent. In contrast to the national trend where start-ups predominantly gravitate toward B2B (business-to-business) prospects, the Aqaba entrepreneurial landscape showcases a unique inclination to B2C business models. Furthermore, 3 start-ups adopt a hybrid approach, engaging both B2C and B2B markets. In such instances, products or services may be bought directly by customers or obtained through intermediary businesses, as seen in examples like selling chocolate or organising tourist activities for hotels. Notably, no start-ups in the sample operate within the business-to-government (B2G) sphere.

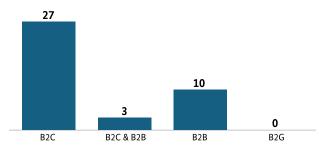
Start-ups are mainly focused on traditional offerings, such as goods and services.

The prevailing focus of start-ups lies on traditional business types, with a significant number of start-ups concentrating on the sale of goods and provision of services. Among the interviewed start-ups, 21 primarily sell goods, and 29 are service-oriented.

Innovative and digital ventures exist within the ecosystem.

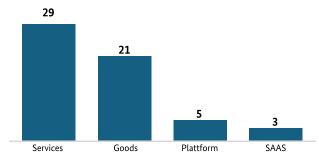
The presence of innovative and digital business models in the ecosystem is noteworthy. The SAAS business models (3) mainly focus on App development. Meanwhile, the number of start-ups with platform business models must be interpreted with caution. A deeper analysis of the business models suggests that platforms such as social media or online shops are used for marketing and selling products or services, rather than developing platforms as part of their core business model.

Figure 19
Business Models



Source: Interviews with Start-ups in Agaba in September 202

Figure 20 Business Offerings



Source: Interviews with Start-ups in Aqaba in September 2023 [Multiple Choice]

Start-ups operate in almost all identified key economic sectors, except logistics, with a stronger focus on tourism.

Among the 40 start-ups, 13 are engaged in tourism-related activities. Other key economic sectors experience start-up activity, most notably the secondary sector (10), consisting of agriculture, creative industries, and retail, and manufacturing (8). In line with the finding about innovative and digital ventures within the Aqaba ecosystem, 8 start-ups are classified as tech or tech-enabled. In line with the definition of tech and tech-enabled start-ups from the Jordan's start-up economy study, advanced technologies, such as app deployment, use of artificial intelligence for logo design, drones or virtual reality are used (GIZ, 2019). According to the conducted interviews, there appears to be hardly any start-up activity in the logistics sector, even though the Aqaba port is an important economic hub in the region. A more detailed assessment of the business opportunities and challenges in each primary sector can be found below.

Priority sectors	8 Manufacturing	13 Tourism	1 Logistics	10 Secondary sectors	8 Tech and tech-enabled
	2 Garments	5 MICE	1 Air, sea freight and land shipping	2 Agriculture	2 App and website development1 IT infrastructure
Priority subsectors	5 Food-processing	8 Sea & desert activities and Adventure		5 Creative industries	1 Digital marketing services1 Drones2 Online training
	1 Chemicals			3 Retails	1 Virtual reality glasses

Figure 21
Sectoral distribution of interviewed start-ups

Most start-ups generate little revenue, with a few exceptions in the tourism and retail sectors.

The majority of these start-ups, precisely 21 out of 40, reported annual revenues of less than 5,000 Jordanian Dinars (JOD). This finding indicates that a significant proportion of the ecosystem is currently operating on limited financial resources. The second most common revenue bracket is 5,000 to 10,000 JOD, comprising 12 start-ups. The most successful start-ups (5) report annual average revenues ranging from 25,000 to 50,000 JOD, coming from both the tourism (3) and retail (2) sectors.

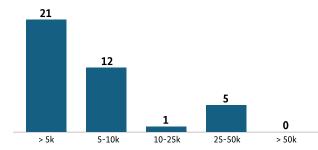
Start-ups focus on local and national markets, with regional and international markets playing a secondary role.

The interviews indicate a strong orientation towards the local market in Aqaba. Almost all interviewed start-ups (37) demonstrate a focus on the local market, while 21 start-ups also target the national market. A smaller share pursues regional (14) and international (6) business opportunities. In a policy context, this points to the potential for supporting and enhancing local and national market initiatives for these businesses.

Low impact of start-ups on employment creation.

Within the 40 interviewed start-ups only 4 additional full-time positions were created. About 50 % of start-ups do not have additional employees at all. If start-ups hire employees, these are primarily part-time. Together, the 19 start-ups that reported additional employees, created 71 part-time positions, averaging about 1.8 part-time positions per interviewed start-up. Information on the scope of the part-time positions (i.e., weekly hours or fulltime equivalents) is not available.

Figure 22 Annual Revenue (in JOD)



Source: Interviews with Start-ups in Agaba in September 2023

Figure 23
Target Markets



Source: Interviews with Start-ups in Aqaba in September 2023 [Multiple Choice]

⁸ Regional refers to other specific governorates within Jordan.

7.2.2 Assessment of Business Models

The following paragraphs take a detailed look at the business models of start-ups in Aqaba. Despite the methodology's robust structure (see Chapter 2), it was vital to acknowledge certain limitations inherent in the assessment process. The subsequent assessment relied heavily on self-assessment by entrepreneurs, which could introduce bias as entrepreneurs might have a vested interest in portraying their business models more positively than it actually is. To mitigate this limitation, the assessment aimed to triangulate self-assessment data with information from other sources, enhancing the objectivity of the evaluation. Secondly, it was important to recognise the assessment's scope. It was not intended to provide an in-depth analysis of start-up business models akin to the scrutiny conducted by venture capital funds when making investment decisions. Instead, the assessment focused on understanding whether start-up founders engaged with the success factors of their business models and how confident they were in meeting market demand. The assessment sought to characterise and profile start-up business models as they existed at the time of evaluation, without providing an exhaustive examination of their future prospects.

Start-ups lack a well-defined business case.

Start-ups tend to operate in an ad-hoc manner without a clear plan, and this tends to be a common approach among most of them. The impression from the interviews was, that start-ups rush to the market without systematically determining the key building blocks or sections on how they create, deliver, and capture value for customers. This would explain the high share of start-ups in the start-up and expansion life stage (see Figure 16 - Start-up Lifecycle) despite low turnover (see Figure 23: - Annual turnover). The lack of a strategic approach to product and service development, can also be traced back to the fact that a significant portion of start-ups originates from entrepreneurial passion or necessity, resulting in a lack of a well-defined business case. In addition, this phenomenon can be attributed to the limited experience in running or initiating businesses, as most founders have exclusively worked within the companies they eventually founded (see Figure 15: Previous Employment).

The business models of start-ups do not feature unique value proposition (UVP) and face high competition in the local market.

Another formidable challenge for start-ups is the prevailing high competition in the local market. The competitive landscape stems from the presence of start-ups and small to medium-sized enterprises (SMEs) in Aqaba, that offer similar products and services. Many businesses seem to replicate existing, successful business models, complicating start-ups' efforts to attract a larger customer base and expand their market share. Moreover, the lack of distinctive business models contributes to the competitive pressure. Entrepreneurs often face difficulties in identifying their UVPs and distinguishing their offerings, primarily due to a self-identified lack of know-how and expertise by founders. As a result, many entrepreneurs tend to emulate existing business models and ideas from other start-ups and SMEs. This highly competitive environment underscores the need for start-ups to develop clear and compelling USPs to stand out in the market.

Start-ups struggle to maintain business, with the most challenges experienced in sales, revenue generation and subsequently financing.

Stemming from the lack of a well-defined business case and unique value propositions, one major challenge for the interviewed start-ups is revenue generation. As depicted in Figure 22: Annual Revenue, most start-ups generate little revenue, which is in line with the fact that many start-ups named revenue generation as one of their main business challenges. An interlinked challenges is the one of sales, where many entrepreneurs confront difficulties related to identifying their target market and diversifying their sales channels for market growth. Furthermore, it's observed that some start-ups in the region display a desire to move swiftly to produce and sell their products, often lacking a strategic approach to market strategy. The situation is aggravated by the fact that, start-ups also struggle to optimise their operational and administrative costs, leading to diminished profit margins. Issues such as high rent, costly utilities, and substantial employee salaries contribute to these financial strains. Moreover, collecting outstanding payments from customers, seems to be a common challenge in this ecosystem, which further impedes the financial health of these enterprises.

Due to the difficulty of generating revenues and reducing costs, start-ups sooner or later run into financing difficulties. For this reason, financing is the most frequently mentioned challenge. Particularly, in order to adapt their product or service developments, marketing strategies and distribution channels and marketing activities to bring their businesses on a more financially sustainable footing, they often require financial investments that are challenging for start-ups to acquire. Here, however, there also seems to be a problem of understanding on the side of the founders. Most start-ups focus on the social and community side of their idea or business, while investors prefer to hear about profitability and growth.

Start-ups experience difficulties to scale-up and grow their businesses.

As start-ups face strong competition and struggle to maintain business, they also express challenges in expanding their businesses. All interviewed start-ups except for one, see growth potential for their businesses, but **only a small fraction of four start-ups identify the local or regional market in and around Aqaba as potential for growth.** This indicates that the local market in Aqaba is either satisfied, due to the strong competition and the copying of successful business models by others or that founders did correctly assess all available business opportunities, for instance with value chains of large companies (see next paragraph). The vast majority of start-ups believes there is potential to expand into the national market. However, as explained above, neither the know-how, the strategy, the sales channels nor the financial resources are available to move to the national market, as interviewees struggled to explain, where exactly the business opportunities lie. The issue is aggravated by the fact that some start-ups complain about a lack of skilled workers and reliable suppliers and would therefore not be able to cope with the additional demand.

Start-ups only exhibit limited integration in value chains of large companies.

The assessed start-ups hardly tap into business opportunities in value chains of larger companies in Aqaba's entrepreneurial landscape. In fact, very **few respondents indicated existing linkages with larger companies**, and these connections are predominantly concentrated within the tourism sector. Here, start-ups or small-scale service providers provide services to or through hotels and tourism organisations, exemplified by activities like diving lessons or supplying confectionery to large hotels. Intriguingly, no start-up reported initiating their business based on identified opportunities with large corporations or securing contracts with these entities. Furthermore, none of the surveyed start-ups cited challenges related to integration within the value chains of larger companies, suggesting that such potential business avenues might not be fully realised or explored. Although start-ups recognise the potential of these partnerships, they express a need for support in locating large corporate partners and initiating meaningful business discussions. Establishing a number of networking events to bring together established businesses and young start-ups could be an initial action to facilitate such interaction and provide a floor for further discussions based on participants' demands and interests. Supporting the negotiations of mutually beneficial agreements could be an additional area in which ESOs could support. Governmental incentives, such as reduced taxes, for cooperation with regional start-ups could also be considered. A perceived power imbalance between start-ups and large corporations further underscores the significance of tailored support mechanisms. Additionally, unregistered start-ups and larger enterprises could unlock substantial business opportunities within Aqaba's entrepreneurial ecosystem, as three out of five companies reporting an annual revenue between 25,000 – 50,000 JOD regularly collaborate with larger companies.

Successful start-up businesses exist and should be embedded in the local ecosystem as mentors and best-practice examples.

Within Aqaba's entrepreneurial landscape, a **notable presence of thriving businesses serves as a valuable resource for the ecosystem**. Several start-ups have matured into established MSMEs given their more than five years of operational experience and sustained success, with annual revenues ranging from 25,000 to 50,000 Jordanian dinar. **These start-ups exclusively operate in the tourism and secondary sector in the area of renewable energy**. These accomplished start-ups have overcome the challenges of entrepreneurship and grown into successful businesses and represent an untapped wealth of knowledge and expertise. Their experiences and best practices could provide indispensable mentorship to younger, emerging entrepreneurs. Their insights can provide guidance, transfer knowledge and help less experienced start-ups navigate the complexities of the business world. Encouraging collaboration and knowledge sharing between these experienced entrepreneurs and the younger generation can contribute significantly to the growth and sustainability of Aqaba's start-up ecosystem. Existing ESOs could offer a mentoring programme which features owners and experienced staff of successful start-ups and probably senior members of the Aqaba business community, and which regularly guides new entrepreneurs in growing their business. Through a mentoring approach, lessons learnt on challenges for start-ups could also be gathered systematically to inform future interventions and to share with government and development partners in line with an integrated knowledge management approach.

Vast majority of start-ups is in favour of the idea to establish a Tech Hub or Innovation Lab in Aqaba.

The overwhelming support among start-ups for establishing a Tech Hub or Innovation Lab in Aqaba is underpinned by a range of perceived advantages. Start-ups foresee gaining access to cutting-edge technology, tools, platforms, and programmes, fostering an environment conducive to innovation. Additionally, the prospect of accessing investors, securing free workspace, and networking with other start-ups is seen as pivotal for their growth. Furthermore, the potential to connect with larger companies and markets, as well as tapping into a pool of IT staff, developers, and specialised advisors, adds significant value to the envisioned Tech Hub or Innovation Lab. The emphasis on community-building within such a hub is viewed as essential for creating a collaborative and supportive entrepreneurial ecosystem.

However, several **open questions** surround the establishment of the Tech Hub or Innovation Lab. The scope of the hub, including its size and reach, remains a point of consideration. Determining the necessary technological equipment and the sectoral orientation of the hub also demands careful evaluation. Two distinct options can be considered to address these open questions. The first option suggests the creation of a **Generic Hub**, necessitating the identification of technological commonalities and needs among start-ups to cater to a broad base. Conversely, the second option advocates for a **Specialised Hub**, concentrating efforts on key economic sectors with the highest potential for start-ups. This approach involves providing tailored support services to enhance the success potential of a limited number of promising start-ups in specific sectors, ensuring a focused and impactful contribution to the entrepreneurial landscape in Aqaba.

7.3 Start-up Support Needs

Basic support services are available, but more advanced support services from ESOs are needed.

Interviews with Aqaba's start-up community have shed light on the essential support services accessed within the ecosystem. Notably, these emerging businesses require a diverse range of assistance, with particular emphasis on local and regional expansion, networking, and securing (growth) financing. Encouragingly, many start-ups were able to access these support services to some degree. Leading key players in this support landscape are iPark, Orange, and ASEZA, demonstrating their significant role in nurturing Aqaba's start-ups. It is apparent that various organisations, such as Injaz, JRF, JOHUD, Zink Amman and BDC in Amman, are involved in offering support services as well. According to the interviewees, the majority of these services encompass fundamental offerings, including short-term business training, awareness programmes, or basic capacity building on subjects such as business planning and financial management. The satisfaction rates with the offered support services vary. On a scale of 1-10, two-thirds of the start-ups rate the support services as 5 or higher. However, the average rating is 5.1 underscoring the need to ensure that support services align more effectively with start-up demands and expectations. No difference was observed in the rating of support services broken down by lifecycle stage.

It is noteworthy that almost all respondents (37) expressed difficulties in accessing support services, emphasising the need for a more comprehensive support infrastructure. This shortfall is primarily due to existing support services not adequately meeting the evolving needs of start-ups. The consensus among respondents is that there is an urgent demand for more advanced support services delivered by ESOs. This need is especially prominent for start-ups in their growth phase, where comprehensive assistance is highly sought after. Missing services encompass a broad spectrum, from advanced training and mentorship to logistical support and financial assistance. Some start-ups emphasise the need for guidance and follow-ups, recognising the value of **ongoing advice and support**. Several start-ups indicate that they require financial support, echoing the common challenge of securing adequate revenue and funding (see Chapter 7.2.2.). They are also looking for advanced training, such as cashflow management, marketing and distribution channels, suggesting a desire to continuously enhance their skills and knowledge. An intriguing observation is the limited awareness of local ESOs and their specific services among some start-ups. This signals the necessity for concerted efforts to better inform start-ups about the available resources and support networks in their local ecosystem.

Start-ups need support to define business case, find unique value proposition and maintain a sustainable business.

Based on the business challenges faced by start-ups in Aqaba, it's evident that a tailored and comprehensive support framework is imperative to assist these emerging enterprises. As the assessment of the business models revealed (see Chapter 7.2.2), start-ups often lack a well-defined business case, leading them to operate in an adhoc manner without a clear strategic plan. To address this, more advanced support services should focus on **strategic guidance and business planning** to help start-ups build a robust foundation for their ventures. Additionally, advanced training and mentorship programmes can enhance their skill sets and strategic thinking. The prevalent competition in the local market underscores the need for start-ups to develop unique value propositions and differentiation strategies. To tackle this, support services must provide assistance in UVP identification and market positioning. Offering guidance on **business canvas development, market research and competitor analysis** can enable start-ups to stand out in a crowded marketplace and grow beyond the local market.

With revenue generation and sales being primary challenges, start-ups require access to (growth) financing and sales strategies. To address these financial challenges, support services should emphasise financial planning, access to funding sources, and financial management training. Additionally, mentorship and guidance in sales techniques can assist start-ups in effectively identifying their target markets and diversifying sales channels. As start-ups aim for expansion, support services need to facilitate access to the right networks and distribution channels. Market understanding, business development, and strategic partnerships are to be promoted. Training in customer relationship management (CRM) and support in managing accounts receivables can assist in boosting revenue streams. Moreover, workshops and programmes on operational cost optimisation can help address the challenge of reducing costs.

Regarding integration into value chains of larger companies, start-ups require **guidance in finding potential corporate partners** and initiating meaningful discussions. Support services should include programmes that educate start-ups on effective communication with larger corporations. A particular obstacle in this context is the lack of official registration for a few start-ups. Hence, collaboration with local business registration authorities **to ease the registration process for unregistered start-ups** can facilitate integration into larger companies' value chains (see below).

Additionally, start-ups expressed various specific needs within the interviews, such as access to equipment, hiring, leadership training or specialised sector support. These specific requirements should be addressed on a case-by-case basis.

Start-ups require better access to funding, particularly to grants and microfinance.

Start-ups in Aqaba's entrepreneurial ecosystem encounter a substantial hurdle in the form of limited financing options (see Figure 18). This challenge significantly impedes their growth and sustainability. To address this issue, there is a clear need for the development of a more robust and diversified financial support system. This could involve creating specialised financial programmes tailored to the unique needs of start-ups at different stages of development. To cultivate a thriving entrepreneurial scene, it's imperative to ensure that financing solutions are both accessible and appropriate to the diverse needs of start-ups.

However, attracting equity investors like local and regional investors, venture capitalists, and angel investors could be challenging. This is primarily due to the limited revenue and growth potential of the traditional business models prevalent in the ecosystem. These models often do not align well with the preferences of equity investors, as they tend to favour more innovative and high-growth opportunities. Here, not only the unattractive investment opportunities, but also the start-ups' lack of knowledge about pitching and presenting business ventures to investors, and skills in dealing with investors pose a significant challenge. The role of banks is also limited due to religious restraints especially in the Aqaba region (in addition to general reluctance of banks to invest in start-ups given the higher risk and the lack of collateral). Nevertheless, exploring alternative financing mechanisms becomes an imperative task. Government involvement and incentives should be at the forefront of these efforts, particularly through the provision of grants for start-ups, especially those with innovative or socially impactful business models. These grants can offer the initial financial impetus so vital in the early stages of a business. In addition, expanding access to microfinance could help start-ups with another form of financial support.

During the assessment of the value chains of larger cooperation in the region (see section 8) it has also become evident that there is a lack of interaction between the start-up community and establish business community. This can further exacerbate the challenges start-ups face in attracting investors and funding. Companies or individuals potentially open to invest in promising young businesses are often not aware of local start-ups and MSMEs and thus will not consider them for investments.

However, it's essential that the financing modality aligns with the specific needs of each business, considering factors like repayment terms, cash flow, and the nature of the business model, such as seasonality in the case of tourism. As all ESOs in Aqaba require official registration of mature start-ups to receive grants, facilitating the registration and licensing process for start-ups represents an interlinked challenge. Furthermore, financial support should not be confined to working capital or operational expenses. Start-ups often require funding to invest in tools and equipment, such as assets for production, or to cover overheads like rent and employee salaries. The availability of financing in these areas is notably restricted. The funding of the Business Development Center (BDC) in Amman, which a few start-ups in Aqaba were able to access, was cited as a positive example within interviews.

Advanced advisory services and financial support must be closely interlinked.

Expanding financing options for Aqaba's start-ups is undoubtedly a crucial step in addressing their challenges. On one hand, expanding financing options addresses the critical issue of capital scarcity. This means providing accessible and flexible financing modalities tailored to the specific needs of start-ups. It should encompass mainly grants and loans but also consider different repayment schedules, aligned with the nature and growth stages of these businesses. This accommodative financing can serve as the lifeblood of start-ups, enabling them to cover operational costs, invest in assets, and make necessary expenditures such as rent and salaries. A critical caveat here is the need to ensure that this financing is not overly restrictive.

However, it's essential to recognise that merely increasing access to capital is not a panacea. There's a **crucial link between funding and strategic guidance** that must be acknowledged, as it is not enough to provide start-ups with strategies and insights on how to navigate their business challenges. Capital infusion, without a clear plan on how to deploy it effectively, can lead to inefficient spending, reducing the likelihood of business sustainability and growth. To ensure that financial resources are used effectively and strategically, it's imperative to pair these financing options with advanced support and advisory services. Without proper guidance on how to effectively use the available capital, start-ups might still struggle to optimise their operations, even with access to funds. On the other hand, without the financial resources to implement the strategies developed with advisory services, these insights remain theoretical and cannot be translated into practical business improvements.

To create a sustainable and prosperous entrepreneurial ecosystem in Aqaba, it's essential to understand that **financing and advisory services should work in harmony**. Startups need financial support to implement their growth plans, but they also need strategic guidance to ensure that these plans are well-conceived. The two must go hand in hand, as successful start-ups not only have access to capital but also the knowledge to spend it wisely, making these intertwined services a potent force in the development of Aqaba's start-up landscape.

Enhance mentoring and networking opportunities for start-ups, including with large companies.

Mentoring, networking initiatives and community-building offer invaluable pillars of support for businesses within Aqaba's burgeoning entrepreneurial ecosystem. Even though start-up communities are available within iPark and Orange, the feedback received in the interviews, indicates that these communities lack a regular and structured set-up.

As numerous start-ups in Aqaba grapple with the complexities of refining their business models (see Chapter 7.2.2), the value of ongoing support becomes evident. One avenue for bolstering the entrepreneurial environment lies in harnessing the collective wisdom and experience of long-standing, successful start-ups native to Aqaba. These homegrown champions, those that have navigated the challenges and achieved sustained growth, can play a pivotal role as mentors. Simultaneously, Aqaba's start-ups can reap substantial benefits from broader networking endeavours. By fostering connections and collaborative opportunities with start-ups from more advanced ecosystems, such as Amman, the flow of ideas, innovation, and knowledge amplifies. These connections can provide invaluable insights to newcomers, guiding them in building a viable business.

Crucially, networking doesn't end at the start-up-to-start-up level. **Establishing connections with larger companies** plays a pivotal role in this equation. Strengthening interaction between those actors could therefore be supported through the government and by utilising the existing ESOs as platforms offering get-together formats such as inviting high-level speakers on networking events or having inputs of innovation leaders on themes relevance to the Aqaba business community. Bringing together Aqaba's experienced business leaders and innovative new businesses can also help creating an interest of senior businessmen and women to become mentors to young business owners. The establishment of a business mentor programme could be considered as another activity supported by the government and development partners. Potential topics for business mentorship can be derived from the described business challenges in chapter 7.2.2., such as financial management, market research and positioning, or sales and customer acquisition. At present, such networking with established enterprises hardly exists. However, a tailored networking strategy within Aqaba, perhaps led by local entities like iPark and Orange, can amplify opportunities for start-ups. This alignment can introduce entrepreneurs to potential corporate partners, clients, and mentors while also enabling large companies to tap into the agility and innovation of the start-up sphere and potentially identify new suppliers and partners for their own business needs.

Ease the registration process for unregistered start-ups and support start-ups in their licensing efforts.

The process of registration and licensing proves to be a notable challenge for numerous start-ups within Aqaba's ecosystem. A few interviewees reported struggles in obtaining licenses from ASEZA, while others found difficulty registering their businesses due to a lack of understanding from the relevant government entities regarding their business activities (see 7.1.2). Consequently, some start-ups expressed a critical need for assistance and guidance in navigating the intricacies of government regulations.

Against this background, it is imperative to recognise the significance of the official registration process. Beyond regulatory compliance, it brings a range of tangible benefits, including eligibility for various financing options such as government grants, as well as an enhanced ability to access critical support services. Furthermore, registration and licensing opens up new avenues for securing other businesses or large companies as potential customers, underscoring the pivotal role that registration and licensing play in the journey of Aqaba's start-ups towards growth and sustainability.

7.3.1 Female-led Start-ups

Female entrepreneurs are an integral part of the ecosystem in Aqaba and require gender-specific support in the areas of financing, child-care and registration.

Within the interviewed start-ups, there were 19 female founders and 21 male founders, hence a **significant representation of women entrepreneurs in the sample** (see Figure 10). Notably, the percentage of female founders, at 47 %, significantly surpasses the national average in Jordan, where female founders typically constitute around 21% of the start-up community. A difference in the underlying business models, the sectoral distribution or the lifecycle stage between men and women cannot be observed. Women pursue B2C and B2B business models to the same extent as men, including innovative business models such as SaaS. However, women seem to be less growth oriented and exhibit a slightly lower average annual revenue compared to their male counterparts. A distinct support requirement for women-led businesses in Aqaba is evident in the notable challenge they encounter when seeking financing. This issue necessitates targeted gender-specific support and assistance.

A distinctive gender difference is the fact that a subset of women entrepreneurs operates **home-based businesses** (HBBs). These women have to balance family and home with business responsibilities, adding additional complexities and burdens. Particularly for those with young children, the overlapping responsibilities can impede the progress and expansion of their start-ups. One distinctive support requirement that emerges is the call for a childcare facility within start-up incubators, to enable business development while accommodating the care demands of young families.

Home-based businesses face significant registration challenges, ranging from cumbersome paperwork and multiple requirements to potential financial trade-offs. Registering with Social Security, for instance, may result in the loss of government aid. Moreover, HBB owners encounter additional financial burdens, including annual fees and Chamber of Commerce membership fees. ASEZA recently updated and implemented regulations that simplifies registration of HBB. HBB can be registered under three different categories: intellectual professions, handicrafts, and food preparation. Embracing registration could offer HBBs opportunities for growth, improved practices, better working conditions, and consistent income throughout the year, highlighting the potential long-term advantages of formalising their businesses.

It's noteworthy that JRF, Irada and JOHUD are the primary entities within the ecosystem that offer specialised support services tailored to the unique needs of women entrepreneurs. Particularly, **JRF and JOHUD offer specialised programmes designed for women**, such as JRF Women Do Business initiatives and the JOHUD Women Digital Centre, which are specifically tailored to support home-based business owners. In addition, **special programmes of donors in collaboration with civil society organisations** provide gender-specific support to women-led businesses.

Women and youth face social-cultural barriers in their entrepreneurial journey.

Significant concern raised by female respondents revolves around the societal undervaluation of women's work and women as business owners. Despite the increasing presence of women entrepreneurs, their contributions continue to be undervalued by broader society. This gender-specific challenge indicates the imperative of elevating the status and contributions of women in Aqaba's entrepreneurial sphere.

Several start-ups also expressed that societal perceptions often question the preparedness of young individuals to embark on entrepreneurial journeys, including their own families, which are not supportive of the idea of establishing a business. Fostering a culture that believes in the potential of young entrepreneurs and equips them with the essential tools and knowledge can be instrumental in shaping a more entrepreneurial and forward-thinking community in Aqaba.

7.3.2 Green Businesses

Agaba has a multitude of green businesses, demonstrating the potential for sustainability as a business case.

In the context of the study, green businesses encompass a twofold perspective: they either offer environmentally friendly products or services, or they engage in economic activities with an eco-friendly approach, employing clean technologies to minimise negative environmental impacts (see Chapter []11.1 Definitions). Within the Aqaba ecosystem, a notable percentage of self-identified green businesses exists (60 %), with several enterprises actively engaged in environmentally friendly practices. The presence of businesses involved in waste recycling, soil conservation, reduction of paper usage, sustainable agriculture, renewable energy, clothes and fabric recycling, and nature conservation underscores a substantial interest in green initiatives. This indicates a promising potential for green businesses in the Aqaba ecosystem, reflecting a growing awareness of environmental concerns and the significance of sustainability within the entrepreneurial landscape. The diversification of green businesses across multiple sectors, from agriculture and recycling to tourism and renewable energy, suggests a potential for these eco-conscious endeavours to become increasingly integrated and influential in fostering sustainable economic growth and environmental stewardship in the region.

Green start-ups do not require specific support services.

No difference in the business models, their market fit, and challenges could be found between green businesses and ordinary start-ups. Green start-ups also did not mention any additional specific support needs.



8. Linkage to Large Companies' Value Chain

Key findings of assessment of large companies

Integration of start-ups in value chains of large companies

- » Assessed companies in various sectors rely on external suppliers, including MSMEs and start-ups, often governed by formal contracts, presenting opportunities for local small-scale companies to provide services and products.
- » Tourism and food and beverage sectors exhibit higher reliance on local suppliers and interactions with start-ups, suggesting potential for enhancing awareness and engagement in networking events to foster dynamic collaborations and innovation within the local business ecosystem.

Opportunities for start-ups

- » Surveyed companies express willingness to engage with small businesses and start-ups, facing challenges in sourcing goods and formal service providers in Aqaba, with some preferring established Amman-based companies for perceived higher product quality and reliability.
- » Despite the willingness to engage with start-ups and MSMEs, most companies prefer procuring goods or outsourcing activities rather than directly investing in individual start-ups, yet express readiness to help small companies become qualified suppliers by quiding them through procurement processes.
- » Corporate engagement in community support activities is evident, including environmental protection, donations, and youth training, with a focus on green and sustainable solutions presenting untapped business potential for start-ups, e.g. in renewable energies, energy efficiency, and IT-related fields.

Selection of Large Corporations:

In total, 12 large corporations operating in the Aqaba region were assessed. These corporations were chosen based on key sectors identified through the ecosystem assessment, including manufacturing, logistics, tourism, wholesale and retail trade, and food and beverages. Additionally, we included a communication company with IT-related services. About half of these corporations have export-oriented business models, while others primarily serve local and regional markets.

Value-Chain Considerations:

The value chains of these corporations were assessed, both in their primary business activities (e.g., manufacturing, shipping, sales) and their support activities (e.g., technology development, raw material procurement, human resource management).

Corporate Business Operations of Large Companies

The assessed companies exhibit diverse business models encompassing industries such as textile and apparel, tourism, food and beverages, and fertiliser production. All these enterprises rely on external suppliers and service providers within their value creation process, with a **significant portion having experience in collaborating with MSMEs and start-ups**, both in Aqaba and often in the broader Amman region. Formal and binding contracts usually govern the business relations between these companies and their suppliers. Various services and products are sought, presenting opportunities for local and regional small-scale companies to establish themselves as suppliers. These opportunities span a range of areas, including maintenance, store management, packaging, raw materials, spare parts, tools, event management, food items, and IT services.

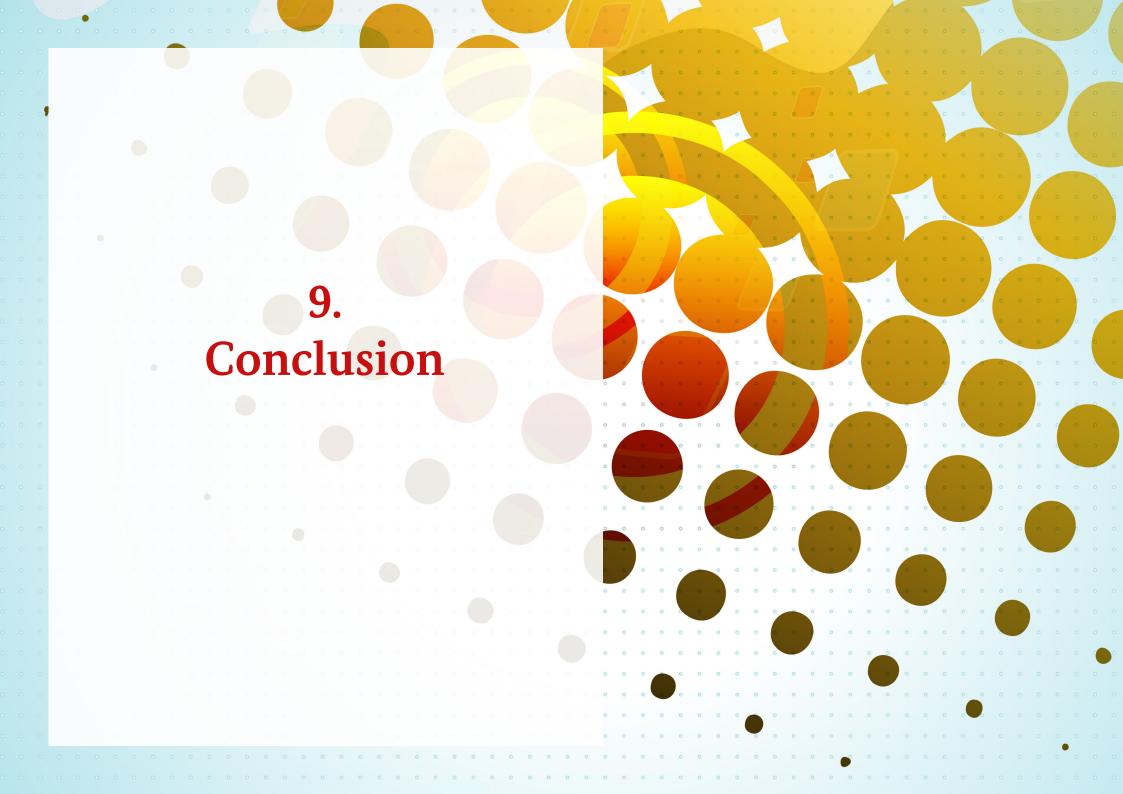
Companies in the **tourism and food and beverage sectors demonstrate a higher reliance on local suppliers** and more frequent interactions with local start-ups and small businesses. Leveraging their existing networks, these companies identify business opportunities and discover new suppliers. While some engage in field visits or market research activities, others utilise their websites to communicate procurement opportunities. However, it is evident that established business links and networks serve as the primary methods for sourcing services and goods. Despite these practices, many large corporations lack regular interactions with local start-ups and may be unaware of networking events in the region. Enhancing awareness and engagement in such events could potentially foster more dynamic collaborations and innovation within the local business ecosystem.

Opportunities for Aqaba based Start-ups and MSMEs.

The surveyed companies express a willingness to engage with small businesses and start-ups, with many already doing so. However, certain challenges arise when attempting to source goods within the Aqaba region or finding formal service providers. Some companies exhibit a **preference for relying on established Amman-based companies**, attributing this choice to a perceived higher level of product quality, professionalism and reliability. Notably, sourcing from Aqaba encounters additional challenges, as start-ups and SMEs often lack full registration and the necessary financial history to establish trust with larger corporations. Despite the willingness to engage with start-ups and MSMEs, most companies prefer procuring goods or outsourcing activities rather than directly investing in individual start-ups. Nevertheless, they express a willingness to help young and small companies become qualified suppliers by guiding them through the systems, policies, and procedures used in their procurement processes.

While two out of twelve companies are open to considering **joint investments** on a sectoral level, this possibility requires further exploration. Some corporations form partnerships with female-led businesses, although the gender of company leadership is not a significant factor in their decision-making, and they do not actively promote cooperation with female-led businesses. Corporate engagement in community support activities is evident, ranging from environmental protection to donations and youth training and education.

Participants consistently highlight **green and sustainable solutions** as untapped business potential for start-ups, emphasising the importance of renewable energies, energy efficiency, and environmental impact reduction. These corporations actively pursue activities to reduce their carbon footprints and environmental impacts, recognising business opportunities for start-ups to support these initiatives. Additionally, opportunities for start-ups are identified in the fields of IT, digital services, and data management, aligning with the corporates' recognition of the potential in these areas.



9. Conclusion: Strength and Weaknesses of the Entrepreneurial Ecosytem in Aqaba

Entrepreneurship is a dynamic force in regional economic development, and Aqaba has the potential to emerge as a significant entrepreneurial hub within Jordan. This assessment aimed to address three fundamental questions:

- What are the key motivating factors for young entrepreneurs in Aqaba? How does this differ from other governorates in Jordan?
- What are key hinderers that prevent entrepreneurs to start their business in Agaba? How is this different from other governorates in Jordan?
- What are strong and weak aspects of the integral elements of the entrepreneurial ecosystems (support organisations, human capital, finance, policy, markets, culture)?

The analysis is based on Isenberg's model of entrepreneurship ecosystems.



Figure 24
Simplified version of Isenberg's model

The following table concludes the analyses by summarising the key strengths to capitalise on and the key weaknesses subject to improvement using the different domains of the Isenberg model.

	Strengths to capitalise on	Weaknesses to improve
Support organisations	 The entrepreneurial ecosystem in Aqaba is still evolving and lacks the diversity seen in more developed ecosystems, with Amman being the primary benchmark at the national level. Aqaba is perceived as the second-best location in Jordan for entrepreneurial activities, surpassing the other governorates. There is a certain variety of services provided in Aqaba (e.g., incubation services and advisory services for different stages of start-ups). Entrepreneurial support organisations are willing to collaborate and motivated to lift the ecosystem to the next level. This is expressed by the engagement of entrepreneurial support organisation in the entrepreneurial network, and by the willingness of the organisations to invest time and resources in the network. Entrepreneurial Support Organisations expressed the desire for ASEZA to take the lead in developing Aqaba's entrepreneurial network and distributing key roles using the respective strengths of each member of the network. 	 Recognising the diverse needs of entrepreneurs is crucial. Entrepreneurs may be driven by necessity or opportunity or a mixture of both as well as by various other motives, and their support requirements vary. Tailoring support to the entrepreneur's specific needs and to project stages is critical. A more comprehensive understanding of the complexity of entrepreneurship is necessary among support organisations, as different types of entrepreneurs require different forms of support. This understanding may be less developed in Aqaba compared to the more mature ecosystem in Amman. There are specific gaps in support services (e.g. sector-specific advisory, longer-term advice, that are not available in Aqaba and in the combination of services at one location, which would be favourable for the growth and professionalisation of start-ups. Large corporations often lack consistent engagement with local start-ups. This underscores a compelling imperative to establish networking and innovation-oriented gatherings, or alternatively, enhance the appeal of existing events. These efforts should be designed to facilitate meaningful interactions among larger corporations, potential investors, and start-up ventures, fostering a conducive environment for collaboration and engagement. There is a gap in the ESO's strategic direction and vision. While their willingness to collaborate is evident, there is a conspicuous absence of a concrete plan or clear vision regarding their next pivotal milestone or strategic objective.

	Strengths to capitalise on	Weaknesses to improve
Human capital	 Aqaba's human capital encompasses a wide range of skills, knowledge, and expertise due to the diverse population and educational opportunities. This diversity can be a significant strength in the entrepreneurial ecosystem, as it provides a pool of talent with various skill sets, including technical, managerial, marketing, and financial skills. This diversity can lead to well-rounded entrepreneurial teams capable of addressing a broad spectrum of business challenges and opportunities. The human capital in Aqaba, like in many entrepreneurial ecosystems, often exhibits a strong sense of adaptability and resilience. This is particularly valuable in the face of the uncertainties and challenges that entrepreneurs frequently encounter. People in the region may be accustomed to navigating through dynamic economic conditions, which can translate into a capacity to innovate, pivot, and persist in the face of adversity, all essential qualities for successful entrepreneurs. Founders are well educated, given the education and human capital available in the Aqaba region. 	 Essential entrepreneurial skills are often lacking in the education system, and outreach from relevant institutions is insufficient. Furthermore, it's worth noting that the training and educational resources for entrepreneurship in schools may benefit from periodic updates to ensure their continued relevance. There is a mismatch between education and the needs and skills required on the private sector and for entrepreneurship in particular, and limited access to specialised entrepreneurial education and training. While there may be a pool of talent, there appears to be a lack of formalised programmes and resources to equip aspiring entrepreneurs with the knowledge and skills necessary to succeed. Another challenge is the risk of brain drain, where highly skilled individuals, particularly those with technical and business expertise, may choose to migrate to more established entrepreneurial hubs or overseas for better opportunities. This talent migration could deplete the local entrepreneurial talent pool and hinder the ecosystem's growth.
	Strengths to capitalise on	Weaknesses to improve
Finance	 The government and local authorities in Aqaba have implemented various financial incentives and grant programmes to encourage entrepreneurship. These incentives may include grants, subsidies, and tax breaks for start-ups and small businesses. These policies aim to reduce financial barriers, promote innovation, and stimulate economic growth within the region. Loans and other financial products and services are available as well (although only to a limited extent and for specific purposes). Green finance will be introduced soon from financial service providers, which might give a new impulse for entrepreneurs focussing on environmental and climate challenges. 	 While there have been efforts to promote entrepreneurship in Aqaba, access to financing and investment remains a challenge. One of the primary weaknesses is the limited availability of early-stage funding options for start-ups. On the one hand, access to finance remains a challenge due to limited revenue and growth potential of traditional businesses. On the other hand, policies related to venture capital, angel investment networks, and access to loans for start-ups and small businesses are not yet in place or not yet implemented. Thus, only little venture capital and other private equity is available in Aqaba and, compared to Amman, the interest of VC firms to invest in Aqaba is rather low. Additional challenges that entrepreneurs in Aqaba state include high interest rates, short payback periods and high requirement in respect to collaterals. This reflects the shortcoming of Aqaba in regard to the state of development of the financial infrastructure compared to more mature entrepreneurial ecosystems. Moreover, for some entrepreneurs, loans are no suitable financing option due to religious reasons. This could mean limited access to and use of financial services, inadequate banking support for start-ups, and a lack of specialised financial institutions or organisations catering to the needs of entrepreneurs.

	Strengths to capitalise on	Weaknesses to improve
Policy	 There is a clear vision and action plans to guide the direction for entrepreneurship development, as well as the responsible institutions to implement the plans. The Jordanian government, in collaboration with local authorities, has been actively promoting policies and initiatives to foster innovation and technology-driven entrepreneurship in Aqaba. This includes incentives such as grants, subsidies, and support for research and development activities. Aqaba is home to several free economic zones and special economic zones that offer favourable tax policies, customs exemptions, and reduced regulations for businesses. These policies are aimed at attracting local and foreign investors and entrepreneurs. 	 Reinforcing the focus on opportunity-driven entrepreneurship through national reforms and local-level initiatives is crucial for creating an enabling environment for entrepreneurial activities. Moreover, emphasising support for businesses in the Start-up and Expansion stages with practical experience and growth potential is vital for sustaining these enterprises and expanding opportunities for the youth. Specific challenges involve bureaucratic hurdles, unclear authority responsibilities, and the lack of comprehensive data to assess the entrepreneurial ecosystem's status effectively. The registration and licensing process presents a notable challenge for start-ups in Aqaba's ecosystem, with reported difficulties ranging from obtaining licenses from ASEZA to registering businesses due to issues related to government entities' understanding of their activities. As a result, there is a clear demand for support and guidance in navigating the intricacies of government regulations. Recognising the importance of the official registration process, beyond regulatory compliance, is essential, as it offers tangible benefits like access to financing options and support services. Additionally, registration and licensing create opportunities for start-ups to attract other businesses or large companies as potential customers, emphasizing their pivotal role in the growth and sustainability of Aqaba's start-ups. Additionally, the financial burden associated with annual fees and membership costs often deters women from formalizing their businesses, limiting their access to larger markets and hindering potential for growth and empowerment.

	Strengths to capitalise on	Weaknesses to improve
Markets	 The market demand for start-ups seems to be there, whereas start-ups do not yet have the capacity to identify and grasp the potential and lack networking opportunities. Untapped potential persists particularly in the tourism and the logistics sector, since companies in tourism and food and beverage sectors tend to rely on local suppliers and interact more frequently with local start-ups and small businesses. All companies participating in the value-chain assessment are willing to buy from regional small businesses and start-ups, in fact many already do so. Although larger corporations do not show a high interest in investing directly in start-ups, many of them are willing to qualify them on the systems, policies and procedures used in their procurements. This can help young and small companies become a supplier for them provided that they are formally registered and supply the required level of quality and are reliable business partners. Larger corporations frequently mentioned green and sustainable solutions as untapped business potential for start-ups. They see the demand in their own operations and believe start-ups could help filling some of these gaps. 	 A need to increase transparency and accessibility of information and market intelligence was expressed. This would provide potential entrepreneurs and investors with a clear understanding of available opportunities, facilitating better decision-making and engagement in the entrepreneurial ecosystem. The link between public and private sector is not yet very strong and the opportunities for start-ups are limited. Many companies interviewed in the value chain assessment stated that they prefer relying on Amman-based start-ups and MSMEs as suppliers rather than sourcing from Aqaba. Start-ups from Aqaba are not well integrated in value chains of large companies. This is mainly due to a perceived higher professionalism and reliability of Amman based suppliers. Furthermore, many of the Aqaba start-ups and MSMEs are not yet fully registered which is a requirement for most large companies' procurement and contracting requirements. Start-ups lack a well-defined business case, often compounded by the absence of a unique value proposition (UVP) and fierce competition in the local market. This inhibits their ability to convince potential business partners and secure a solid footing. Moreover, these nascent enterprises encounter hurdles in maintaining their operations, with notable difficulties in sales, revenue generation, and, therefore, accessing necessary financing. The struggle to scale up and expand further exacerbates the challenges faced by these start-ups, underscoring the need for comprehensive support and solutions to nurture their growth.

	Strengths to capitalise on	Weaknesses to improve
Culture	 The predominant start-up landscape in Aqaba is characterised by traditional businesses rather than tech-enabled enterprises. While the number of start-ups in Aqaba is relatively high considering the city's size, a majority of these start-ups follow conventional business models, with a limited presence of tech-enabled and scalable ventures. Aqaba's economic opportunities are substantial, driven by its diverse population, fostering an open society that encourages innovation and entrepreneurship. The collaboration between stakeholders seems to become stronger since the stakeholders see benefits from it and are willing to invest in joint initiatives. The entrepreneurial landscape is prominently shaped by a remarkable level of commitment, with passion serving as a cornerstone for founders in their pursuit of establishing businesses. This passion-driven approach underscores the profound dedication and determination of these entrepreneurs to transform their projects thriving enterprises. It reflects not only a financial motivation but also a genuine enthusiasm for their ventures, signifying their resilience and enduring commitment to surmount challenges and achieve business success. 	 There is a need to instil entrepreneurial culture in Aqaba's youth from an early age. Entrepreneurship is not as visible to young people in Aqaba as it is in Amman. Both the younger and older generations must undergo a mindset transformation. People need to become more courageous and empowered to start their businesses, understanding that entrepreneurship comes with risks and benefits. While Aqaba boasts successful, long-standing start-up businesses, often overlooked is their potential role as mentors and exemplars within the local ecosystem. The notable gap lies in the lack of effective collaboration and knowledge sharing between these thriving enterprises and emerging entrepreneurs, representing a missed opportunity to harness the wealth of experience and best practices accumulated by the successful start-ups. In the entrepreneurial ecosystem of Aqaba, women and youth encounter significant socio-cultural barriers that impede their progress. Gender-based restrictions and societal norms (especially societal undervaluation of women's work and women as business owners) hinder women from expanding their networks, especially in male-dominated sectors, and may limit their access to markets due to concerns about interacting with males.

As a preliminary conclusion, it becomes clear that the entrepreneurial landscape in Aqaba holds substantial potential, with unique strengths and challenges that distinguish it from other governorates in Jordan. By addressing the identified issues and leveraging its strengths, Aqaba can nurture a thriving entrepreneurial culture, foster innovation, and contribute significantly to regional economic growth.



10. Recommendations

Support organisations (ESOs) and the Aqaba Entrepreneurial Network (AEN)

- Help start-ups define their business case: Supporting start-ups in defining and sharpening their business case as
 a fundamental step in nurturing a robust entrepreneurial ecosystem. Clear and well-articulated business cases not
 only enhance a start-up's understanding of its target market and competitive advantage but also instil confidence
 in potential investors and partners. By offering mentorship, workshops, and resources focused on refining business
 strategies, value propositions and market strategies, ESOs can empower start-ups to grow and expand their business.
- Advanced and continuous support: ESOs should recognise the critical need for ongoing, advanced support services, and mentorship for start-ups. While start-ups may have a solid grasp of the basics, the complexities of business often present challenges that require a permanent point of contact for guidance and clarity.
- Networking and mentoring events: There is a lack of communication between the start-up ecosystem and the established business community in Aqaba. As a result, there is limited awareness of the challenges faced by large corporations and the potential opportunities for start-ups. To address this, we recommend organising regular networking events to facilitate the exchange between those actors. Entrepreneurial support organisations (ESOs) could provide the platform for this, assist in identifying relevant topics and speakers, and assess client preferences. Good practices from other regions in Jordan or internationally may serve as valuable references.
- Innovation awards: Start-ups and MSMEs often lack visibility outside their immediate networks. For innovative ventures, gaining exposure beyond their current ecosystem is essential for attracting new clients and fostering growth. Innovation awards that garner media attention can aid these companies in gaining momentum, attracting funding, and promoting new and green technologies and could be organised and facilitated through the ESOs. Special events to promote female leaderships could be considered as well.
- **Pitch events:** Lack of finance and access to investment is a common challenge for start-ups. This has become evident in the start-up assessment and is a common phenomenon around the world. Hosting pitch events allows start-up owners to practice pitches and gain feedback from experienced business stakeholders and investors, while the established business community gains insights into new regional offerings, potentially increasing their willingness to invest. Capacity development for entrepreneurs should also take place at this point to prepare them for pitch events and investor relations.

Support organisations (ESOs) and the Aqaba Entrepreneurial Network (AEN)

- Joint roadmap for the AEN: At the time of this assessment and during the ESO workshop in August 2023, the groundwork for establishing the AEN has begun. The AEN comprises of several key entrepreneurial stakeholders of the Aqaba region. It is therefore crucial to discuss a separation of tasks and responsibilities and align a common roadmap taking into account the ESOs activities in their individual capacity. The AEN should continue to strengthen its foundations by emphasising the development of strong linkages, offering more advanced support services, and promoting a shared understanding among its members. Additionally, the AEN should clarify its strategic orientation, determining whether it will primarily focus on supporting traditional businesses with conventional services, foster an innovative, high-tech ecosystem with relevant support services, or adopt a mixed approach. This approach will enhance the network's effectiveness in fostering entrepreneurship and innovation within the Aqaba region.
- Aqaba Smart City: One such activity under the joint umbrella of the AEN could be the "Activation of the Master Plan for Aqaba Smart City". At present there is limited knowledge of ASEZA's vision on turning Aqaba into a Smart City amongst the network members. The project's aim would be to increase the network members' knowledge of the plan and reflect in the planning on their future activities.
- Data and statistics on entrepreneurial activities: There is a lack of research and up-to-date data on entrepreneurial activities in Aqaba that can support decision-making and strategy building. The aim of the project would be to create a robust data analytics platform that aggregates analyses and visualises entrepreneurs' data fostering data-driven decision making and tailored support for Start-ups in Aqaba. This project could be supported by development partners and the government as well.
- "Grow in Aqaba": At the time of this assessment, there appears to a lack of financial support or lack of access to finance for start-ups in Aqaba. An idea could be to create a platform that links start-ups and investors, VCs, financing organisations, for instance at a later and more advanced development stage of the network. This could include standardised pitching processes to attract funding. Through the platform also advisory services and capacity building measures for the start-ups could be offered. In the meantime, the focus could be to work on advancing start-ups' preparedness for investors and to focus on providing channels to financing sources and educating start-ups on various finance options.
- Enhance access to finance: Since opportunities for equity investment and loans are limited in the ecosystem, grants and microfinance schemes should be offered to start-ups. It is important to ensure that the available financing is flexible enough and can be spent on important investments such as assets or salaries to grow the business. It is crucial to inter-twine access to finance with advisory services to empower start-ups with both the resources and knowledge needed for sustainable growth.
- **Expansion:** ESOs should consider offering support to start-ups with the expansion to the national market, provided they possess a viable business model and have conducted a realistic market assessment.
- Support for female entrepreneurs: Women make up a significant part of the ecosystem and need support in the areas of financing, child-care, and home-based business. Support services that address these needs should be set up by local ESOs.

Start-ups and MSMEs

- Critically assess and refine business model: Regularly reviewing and updating their business case helps adapt to changing market conditions, identify potential weaknesses or opportunities, and maintain a clear and compelling value proposition. This ongoing process of self-evaluation and improvement is key to staying competitive and achieving sustainable growth in today's dynamic business environment.
- Reflect work culture and improve business behaviour: In the assessment of larger scale corporations, it has become evident that they often perceive a lack of quality and professionalism in Aqaba's start-ups and MSMEs. This favours activities to support young companies to improve their reputation as goods and service suppliers for larger coop-erations. This is also mentioned in the recommendations for development partners. However, it also calls for the start-ups and MSMEs to establish work culture which focuses more on reliability and building lasting business relations rather than to pursue short-term gains.
- Entrepreneurs should look for co-founders with complementary skills: Co-founders can enhance the diversity in skills and expertise within a start-up. While one co-founder may excel in technical development, the other may have a deep understanding of marketing and sales. This diversity enables the start-up to make more informed decisions, build a stronger product or service, and navigate various aspects of business development with a well-rounded skill set, increasing the chances of success.
- Lessons-learnt initiative from successful start-ups: Successful start-ups should actively engage as mentors and share their success stories and challenges with other start-ups. By offering guidance, insights, and inspiration, these experienced entrepreneurs can provide valuable support to emerging businesses, helping them navigate challenges and accelerate their growth. This mentorship and knowledge-sharing initiative can create a supportive ecosystem that not only promotes the success of individual start-ups but also strengthens the overall entrepreneurial community.

Larger Corporations

- Qualify start-ups to become suppliers: Larger cooperations currently perceive local start-ups and MSMEs mostly as one of the options available to them to procure services and products from. This is certainly in the heart of their opera-tions and the basis for lasting business relations. However, corporations could consider investing more in further qualifying such young entrepreneurs to leverage their potential in assisting the larger scale companies in their own challenges. This could include research and innovation activities as well as outsourced service provision i.e., in IT or tourism services and activities.
- Become mentors for young entrepreneurs: Many cooperations engage in CSR activities, often with a focus on community work. Start-ups and MSMEs are an essential part of the local economic and social ecosystem and often lack guidance from experienced mentors on how to behave in the business environment and grow their businesses. Senior members of Aqaba's business community could fill this gap and through regular exchanges with young entrepreneurs help them on their path of professionalising their business endeavour.
- Tourism, Green Solutions in Manufacturing and IT-Sector: Within the limits of this assessment, these sectors seem
 to be the most promising sectors for integration of innovative start-ups into value chains. A recommendation would
 therefore be to approach additional companies in this sector for exchanges with ESOs and members of the start-up
 community to have a better understanding of current demand and supply baselines and match those accordingly.

Development Partners

- Enhance quality and professionalism: In the assessment of larger scale corporations, it has become evident that they often perceive a lack of quality and professionalism in Aqaba's start-ups and MSMEs. Supporting the enhancement of quality and professionalism could be supported through development partners. Capacity development measures for start-ups, such as financial literacy training, mentorship programmes, and BDS support, could be an essential component for such programmes.
- Further assessments of existing value chains: The value chain assessment was exploratory, limited to 12 interviews with a diverse set of companies. To obtain a more comprehensive picture, further assessments involving a larger number of participants are needed to better understand start-up opportunities and challenges within existing value chains. A recommendation therefore is to conduct follow-up assessments with the established business community of Aqaba to deepen the understanding of their operations, needs and requirements.
- Enhance access to finance: Development partners should support the government and local authorities in providing access to financing for start-ups. This can be done through the provision of adequate financial resources, as well as capacity building to administer those funds.
- Foster green businesses: The ecosystem has great potential for green businesses. This potential should be promoted.

Government

- Registration and licensing of start-ups and MSMEs: For companies to cooperate with start-ups and local MSMEs, formal processes and binding agreements are essential. Official registration is also important for start-ups to access financing and support services from ESOs. However, registration and licencing barriers currently exist for start-ups. Simplifying the registration process and offering more guidance on the required processes could help alleviating these challenges. One possibility is also to reduce fees for new businesses.
- Review of incentives, subsidies and tax reliefs: The government and local authorities in Aqaba have implemented various financial incentives and grant programmes to encourage entrepreneurship. The government could review those schemes towards their impacts on promoting Aqaba's start-up ecosystem. Based on this assessment targeted adjustments could be implemented and/or other types of subsidies or tax relief could be designed. Subsidies and taxes can be powerful tools to incentivise new technologies and start-ups, although the implementation of such interventions is complex and would need to be assessed carefully.
- Local sourcing quotas: Another measure government can consider, is to include local sourcing quotas in own procurement regulations to support green and sustainable solutions and promote technologies which are fit for the future.
- **Business clustering:** The geographical distance between corporations and start-ups can pose a barrier to meetings and networking. Establishing offices closer to specific markets, such as the Aqaba International Industrial Estate and the Southern Industrial Area, could simplify market access for start-ups and ESOs. Additionally, the new digital hub in Aqaba holds promise as an attractive location for tech start-ups or even a dedicated incubator. If they lack the financial means to secure office space in this area, government could provide incentives to establish an incubator, subsequently creating opportunities for working space of tech and green start-ups.
- **Enhance access to finance:** The government assumes a crucial role in access to funding, as it has the financial and administrative capacity to set up tailored grant schemes.

Education providers

- Universities as key stakeholders: Due to the fact that universities educate the majority of the entrepreneurs in the ecosystem, dedicated programmes offered by universities can help increase interest in entrepreneurship and thus motivate more students to start their own business (e.g., as the University of Jordan Amman's Innovation and Entrepreneurship Center). In addition, degrees or courses specifically designed around entrepreneurship can enhance business readiness. Another interesting idea coming out of the presentation of the report to local stakeholders, is to encourage collaboration between universities and start-ups through initiatives like internships, mentorship programmes or joint research projects. In addition, universities can facilitate industry partnerships or provide resources, such as a start-up office or incubators for start-ups.
- Enhance collaboration opportunities between researchers and entrepreneurs through a central platform: The concept of enhancing collaboration opportunities between researchers and entrepreneurs through a central platform is a strategic move toward bridging the gap between academia and industry. By creating a centralised space, this initiative aims to facilitate seamless interaction, fostering a dynamic exchange of ideas, expertise, and resources. Researchers and entrepreneurs can converge on this platform to explore potential collaborations, share innovative insights, and collectively contribute to the development of groundbreaking solutions.
- Clarity on intellectual property (IP) rights is needed: Universities need to clearly define intellectual property (IP) rights when start-ups emerge from their academic ecosystem to avoid potential conflicts and facilitate seamless collaboration. Clarity on IP ownership is crucial to establish a transparent and fair framework that acknowledges the contributions of both the university and the start-up founders. This ensures that innovative ideas and inventions originating from university research are appropriately protected, fostering a conducive environment for entrepreneurial activities. Implementing well-defined policies for IP management can enhance collaboration, attract external investors, and encourage the successful transfer of knowledge and technology from academic institutions to the commercial sector.
- Norms and socio-cultural barriers to entrepreneurship: To foster an entrepreneurial culture in the broad public, education providers should focus on promoting entrepreneurship as a viable and respected career choice. This can be achieved through targeted educational programmes, workshops, and awareness campaigns that showcase the success stories of local entrepreneurs and highlight the economic and social benefits of entrepreneurship. Not only does that encourage more individuals to pursue entrepreneurial endeavors, but it also ensures that existing entrepreneurs receive more support and encouragement from their families, friends, and communities.



11. Annex

11.1 Definitions

Term	Definition
Large companies	Large companies are defined as companies with 100 or more employees.
Green Businesses	In Jordan, MSMEs are categorised by their number of employees as micro $(1-4)$, small $(5-19)$ or medium $(20-99)$. This is in line with the definitions of the DoS of Jordan, the World Bank's SMEs database, the Central Bank of Jordan and the Jordan Enterprise Development Corporation (JEDCO).
Micro, Small and Medium Enterprises (MSME)	Green business can be defined from two perspectives: one relates to the output in the form of green products or services, while the other relates to the process of an economic activity. This means entrepreneurs can enter into the "green" business sector by either providing environmentally friendly products or services or through an environmentally friendly process or with the help of clean technologies which reduce any negative effects of the business (ILO). (businesses with green mission/vision)
Start-up	Start-ups are companies in the formation and growth phase up to 4 years after formation. Currently, there is no official definition of start-ups in Jordan. For the scope of this study, the proposed definition is applied.
Youth	Youth is defined by the National Youth Strategy 2019-25 as the age group between 12-30.

11.2 Description of Stakeholders in Aqaba and National Stakeholders Relevant to the ecosystem

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Al-Mamlaka TV	National				Al-Mamlaka TV is a Jordanian Public Service News Channel, offering a diverse range of content, including news, entertainment, and educational programmes, enriching the media landscape in Jordan.
Amam Ventures	National	Yes			Amam Ventures is an impact fund that invests with a gender lens. That means we finance existing companies (SMEs) that have identified a growth opportunity and need risk capital to grow and we finance start-ups that are building great things who needs capital to fuel their growth.
BeeezCrowd	National				BeeezCrowd is a specialised online platform that provides a method of raising funds used by start-ups and early-stage companies (SMEs) adopting the model of Equity crowdfunding (also known as crowdinvesting or investment crowdfunding).
Business Development Center (BDC, by UNICEF)	National				UNICEF-BDC refers to a partnership between the United Nations Children's Fund (UNICEF) and Business Development Center (BDC) aimed at supporting initiatives that benefit children and youth, particularly in Jordan.
Crown Prince Award for Volunteering	National				The Crown Prince Award for Volunteering is a prestigious recognition in Jordan presented to individuals or groups in acknowledgment of their exceptional contributions and efforts in volunteer work and community service. This award celebrates the commitment and positive impact of volunteers in various aspects of society.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Development and Employment Fund (DEF)	National			Yes	Established in 1989 and gaining independence in 1992, the Development and Employment Fund encourages economically disadvantaged individuals to create sustainable employment through projects in industry, crafts, services, or tourism. The Fund's mission is to provide loans and assistance, fostering independent work opportunities to reduce poverty and unemployment while contributing to lasting sustainable development and community welfare.
Edama	National		Yes		The Edama Network is a Jordanian organisation promoting sustainable development in energy, water, and the environment. It is associated with entrepreneurship through its support for green and sustainable business practices, helping entrepreneurs and businesses incorporate environmental considerations into their operations, which is increasingly important in today's world where sustainability is a growing concern.
Endeavour Jordan	National				Endeavor is a global non-profit organisation that selects, mentors, and accelerates high-impact entrepreneurs and their companies. Endeavor Jordan focuses on fostering entrepreneurial growth in Jordan. There are activities of Endeavour in Aqaba with a focus on technical assistance to MSMEs in Aqaba.
EU in Jordan	National				The European Union (EU) in Jordan represents the interests and support of the European Union within Jordan. It engages in various partnerships, projects, and collaborations aimed at promoting EU-Jordan relations and addressing regional challenges.
FLlat6Labs	National				Flat6Labs is a regional start-up accelerator that provides funding, mentorship, and resources to early-stage companies. They aim to nurture and scale entrepreneurial ventures across the Middle East and North Africa.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
GroFin	National			Yes	GroFin is an international development finance institution that specialises in providing finance and support to small and medium-sized enterprises (SMEs) across emerging economies.
HULT Prize Jordan	National		Yes		HULT Prize Jordan, in partnership with the University of Jordan's Aqaba Branch, is dedicated to promoting social entrepreneurship and innovation. It offers a platform for young innovators to develop and implement solutions that address pressing social challenges.
INHAD (by Central Bank of Jordan)	National				INHAD, a programme by the Central Bank of Jordan, focuses on enhancing financial inclusion and literacy in the country, ensuring access to financial services for a wider segment of the population.
INJAZ	National				INJAZ is a non-profit organisation that empowers young people with skills and knowledge to succeed in the global economy. They achieve this through experiential learning programmes and partnerships between the business and education sectors.
Innovative Start-ups and SMEs Fund (ISSF)	National				ISSF is a financial institution or fund dedicated to supporting innovative start-up companies and small and medium-sized enterprises (SMEs) in their growth and development by providing investment capital and financial resources.
Intaj (ICT association)	National				Intaj is a professional association that represents the Information and Communication Technology (ICT) sector in Jordan. It works to promote the growth and development of the ICT industry in the country.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Jordan Enterprise Development Corporation (JEDCO)	National				Jedco, or the Jordan Enterprise Development Corporation, is a key organisation dedicated to supporting and fostering entrepreneurship, innovation, and economic development in Jordan.
Jordan FM	National				Jordan FM is radio station that provides a mix of music, news, and entertainment programming, catering to the preferences and interests of its audience in Jordan.
Jordan TV	National				Jordan TV, officially known as Jordan Radio and Television Corporation (JRTV), is the state-owned broadcaster in the Hashemite Kingdom of Jordan. JRTV serves as the national television and radio network, delivering a diverse range of programmes, including news, entertainment, cultural
Liwwa	National				Liwwa is a financial technology (fintech) platform based in Jordan. It primarily focuses on providing online lending services to small and medium-sized enterprises (SMEs) and start-ups. Liwwa's platform allows businesses to access loans and financing to support their growth and development. Liwwa plays a significant role in the start-up ecosystem by offering accessible and streamlined financial solutions for emerging businesses.
Ministry of Digital Economy And Entrepreneurship (MoDEE)	National				MoDEE's mission is to promote the digital economy and entrepreneurship on a national level through a comprehensive process that supports the development of digital skills, digital services, digital assets, digital and social entrepreneurship, and the enabling environment, in partnership with public and private sectors and civil society organisations.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Ministry of Education	Regional			Yes	The Ministry of Education in Jordan is the government body responsible for overseeing and implementing educational policies and programmes in the country. The Ministry is present in Aqaba with its Directorate of Education.
Mircofund for Women	National	Yes			Microfund for Women is a Jordan-based microfinance institution that provides financial services and support to women entrepreneurs, enabling them to start and expand small businesses.
Naua Platfom (by CPF)	National				The Naua Platform, a Crown Prince Foundation Initiative, was established in partnership with the private sector and is included in the Citizenship Pillar of the Foundations Strategy. Naua is an online platform that aims to increase and facilitate philanthropy, developing a sense of community responsibility, and connecting charities with individual and corporate donors as a form of crowdfunding for projects within a clear impact measurement framework.
Oasis500	National				Oasis 500 is a well-known Jordanian early-stage investment and accelerator programme that supports and funds start-ups and entrepreneurs, helping them to develop and grow their businesses.
Oxfam	National				Oxfam is a renowned international non-governmental organisation dedicated to alleviating poverty, advocating for social justice, and providing humanitarian assistance worldwide.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Plan International	Regional	Yes			Plan International is a global NGO dedicated to children's rights and gender equality. Plan supports youth entrepreneurship, particularly among girls, by offering training and resources to help young entrepreneurs establish and grow their businesses.
Roya TV	National	Yes			Roya TV is a Jordanian television network and media company. It offers a wide range of programming, including news, entertainment, cultural content, and more. Roya TV is known for its diverse content, which caters to various interests and demographics in Jordan and the wider Arab world.
RUWWAD	National				Ruwwad is a community development organisation that works to address social challenges and empower marginalised communities through various programmes, including education, youth development, and economic opportunity initiatives.
Tamweelcom	National	Yes			Tamweelcom provides finance for productive and low-income individuals who are bank excluded. Tamweelcom provides various financial products, solutions and services that are responsible within international standards and align with digital transformation strategy. Tamweelcom strives for financial inclusion, by preparing and providing various financing programmes, products and services to support their personal or commercial needs.
TTi Jordan	National				TTi is a non-profit Jordanian organisation, founded in 2010 with the mission of spreading Entrepreneurship and Innovation culture among youth and women living in disadvantaged communities.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
VentureX	Regional	Yes			VentureX creates accelerators to promote innovative solutions and bridge the in-novation gap. They focus on entrepreneurial and economic development through industry and regional-specific programmes. They also manage investment funds, including Venture Capital and Micro Funds.
Zain Innovation Campus (by ZINC)	National				ZINC is an innovation and entrepreneurship hub backed by the telecommunications company Zain. It offers co-working spaces, training, and resources for start-ups and innovators in the technology and business sectors.
Actual 360 Production	Regional				Actual 360 is the first Jordanian media production company that is specialised in shooting and developing 360 videos, Virtual Tours, Virtual Reality videos, and Augmented Reality.
All Youth Committee	Regional				The All Youth Committee is a dedicated organisation committed to the empowerment and engagement of young people in Aqaba. It initiates various youth-oriented programmes and initiatives to address the unique needs and aspirations of the local youth community.
Aqaba Container Terminal (ACT)	Regional				ACT plays a pivotal role in Aqaba's logistics and trade ecosystem. It serves as a major hub for containerised cargo, facilitating the efficient handling and movement of goods through the region, thereby enhancing Jordan's international trade.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Aqaba Development Corporation (ADC)	Regional				Aqaba Development Corporation manages the development and urban planning of Aqaba, focusing on enhancing the city's infrastructure, amenities, and overall quality of life for its residents and visitors.
Aqaba Digital Hub (by NAITEL)	Regional				Aqaba Digital Hub is an innovation and entrepreneurship hub at the forefront of fostering digital innovation and technology-driven start-ups in the region. It provides a collaborative environment, resources, and support for tech entrepreneurs, contributing to the growth of the digital economy.
Aqaba International Industrial Estate (AIIE)	Regional				The Aqaba International Industrial Estate is a specialised industrial area that promotes industrial and manufacturing activities in Aqaba. It is an essential component of the region's economic landscape, contributing to industrial growth and development.
Aqaba Logistics Village (ALV)	Regional				ALV is a specialised logistics and industrial zone established to streamline supply chain operations and trade services in Aqaba. It provides essential infrastructure and facilities for logistics and industrial businesses, contributing to the region's economic development.
Aqaba Maritime Education and Training Center (AMETC)	Regional				AMETC is a prestigious institution that focuses on providing comprehensive maritime education and training. It equips individuals with the skills and knowledge required for a successful career in the maritime industry, supporting the growth of the maritime sector in Aqaba.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Aqaba Medical Science University	Regional				Aqaba Medical Science University (AMSU) is a research university dedicated to education, and open to local and global societies. AMSU are the only private medical university that have only two faculties: Faculty of Medicine & Faculty of Dentistry.
Aqaba National Real Estate Project Company (ANREPCO)	Regional				Aqaba National Real Estate Project Company (ANREPCO) is a real estate development entity based in Aqaba, Jordan. It is primarily focused on the planning, construction, and management of real estate projects in the Aqaba Special Economic Zone (ASEZ). ANREPCO plays a pivotal role in driving urban development, infrastructure improvement, and economic growth within the Aqaba region.
Aqaba National Vocational Training Hub ANVT / National Employment & Training NET	Regional			Yes	ALV is a specialised logistics and industrial zone established to streamline supply chain operations and trade services in Aqaba. It provides essential infrastructure and facilities for logistics and industrial businesses, contributing to the region's economic development.
Aqaba Special Economic Zone Authority (ASEZA)	Regional			Yes (network lead organisation)	AMETC is a prestigious institution that focuses on providing comprehensive maritime education and training. It equips individuals with the skills and knowledge required for a successful career in the maritime industry, supporting the growth of the maritime sector in Aqaba.
Aqaba University of Technology	Regional			Yes	Aqaba University of Technology is an academic institution specialising in technical and technological programmes, preparing students for careers in fields related to technology and innovation.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Ayla Oasis	Regional			Yes	Ayla Oasis is a luxury mixed-use residential and tourism development situated along the picturesque shores of the Red Sea. It offers an array of world-class amenities, including hotels, marinas, golf courses, and leisure activities, making it a premier destination for travelers and residents seeking a unique, upscale experience.
Balqaa Applied University - Aqaba Branch	Regional				Aqaba's branch of Balqaa Applied University is an academic institution that offers a diverse range of applied programmes and educational opportunities, contributing to the development of a skilled workforce in the region.
Chamber of Commerce	Regional				The Chamber of Commerce in Aqaba is a local organisation that supports businesses, trade, and commerce in the region. It provides advocacy, resources, and networking opportunities to promote economic growth and prosperity.
Crown Prince Foundation (CPF)	Regional			Yes	CPF is a pioneering Jordanian organisation dedicated to advancing technology, innovation, and entrepreneurship. Under the patronage of His Royal Highness Crown Prince Hussein bin Abdullah II, CPF's TechWorks initiative fuels technological progress and entrepreneurial growth in Jordan. CPF empowers Jordan's youth through education, mentorship, and STEAM programmes, enabling them to navigate the evolving global landscape.
Crystel	Regional			Yes	Crystel is a customer experience and business process outsourcing company that specialises in providing high-quality customer support and service solutions to businesses across various industries.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Education For Employment (EFE) Jordan	Regional				EFE Jordan collaborates with Ayla Oasis to create training and employment opportunities for young people in Aqaba. These initiatives aim to bridge the gap between youth seeking employment and the region's economic opportunities.
Etihad Bank	Regional				Etihad Bank is a Jordanian financial institution that offers a range of banking and financial services, including personal and business banking, investment, and lending solutions to its customers.
Hayat FM	Regional			Yes	Hayat FM is a radio station in Jordan that broadcasts a variety of programmes, including news, music, entertainment, and cultural content, serving as a source of information and entertainment for its listeners.
Hayat Fund	Regional	Yes	Yes		Hayat Fund is a charitable organisation focused on philanthropic activities and supporting various humanitarian causes in Jordan and the region. It plays a vital role in contributing to the well-being of underprivileged communities.
Hyatt Regency Aqaba Ayla	Regional				Hyatt Regency Aqaba Ayla is a luxury hotel and located in the Ayla Marina Village.
iPark	Regional			Yes	iPark Aqaba is an innovation and technology park that nurtures entrepreneurship, research, and development in Aqaba. It provides a platform for start-ups, researchers, and technology enthusiasts to collaborate and innovate.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
IRADA	Regional			Yes	IRADA Centers provide social and developmental services to vulnerable and underserved populations in Aqaba, addressing the unique needs of these communities and promoting social inclusion.
Jordan Engineers Association Aqaba	Regional			Yes	The Jordan Engineers Association (JEA) is a professional organisation that represents engineers in Jordan. Established to promote and regulate the engineering profession within the country, the JEA serves as a platform for networking, knowledge sharing, and professional development among engineers.
Jordan Hashemite Fund for Human Development (JOHUD)	Regional	Yes		Yes	JOHUD is a prominent non-governmental organisation dedicated to community development and the empowerment of marginalised communities in Jordan. It addresses various social and economic challenges, offering assistance and opportunities to those in need.
Jordan River Foundation (JRF)	Regional	Yes		Yes	The Jordan River Foundation is a non-profit organisation dedicated to improving the lives of marginalised communities, particularly children, in Aqaba and across Jordan. It implements a wide range of programmes and initiatives to address social and economic challenges.
Jordan University of Aqaba	Regional			Yes	Jordan University of Aqaba is an esteemed academic institution offering a wide range of academic programmes and research opportunities. It plays a pivotal role in providing higher education in Aqaba and contributing to the region's intellectual and economic growth.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Kemapco	Regional				Kemapco is a mining company based in Aqaba. KEMAPCO is primarily involved in the extraction and processing of phosphate ore, which is an essential raw material used in the production of fertilisers. Kemapco Arab Fertilisers & Chemicals Industries Ltd is a limited liability company, fully owned by Arab Potash Company.
NaiTel	Regional				NaiTel is a technology company in the Middle East operating a regional fiber-optic network and a carrier-neutral 3 data center in Aqaba.
National Agriculture Research Centre (NARC)	Regional				NARC's Aqaba Branch focuses on agricultural research and development in the region. It conducts research to enhance agricultural practices and contribute to food security in Aqaba.
Nuber Dates Farm	Regional				Nawa Dates Farms, a family-owned business established in 1997, is located in the Jordan Valley, Jordan, benefiting from an ideal climate for date palms with abundant underground water and mineral-rich soil. Spanning 50 acres, the farms yield both Medjool and Barhi dates. Nawa Dates Farms serves professional buyers in Jordan and exports to various countries, including India, Maldives, Thailand, UK, Germany, and more.
Orange	Regional			Yes	ORANGE is a leading telecommunications company providing mobile and internet services in Jordan. Its presence enhances connectivity, communication, and access to digital resources in Aqaba and beyond.
Phoenicia Maritime Shipping Services Limited	Regional			Yes	Phoenicia Maritime Shipping Services was established in Cyprus in 2004. The company offers services in the Freight and Package Transportation area.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Queen Rania Center for Entrepreneurship (QRCE)	Regional				QRCE is a dynamic center that champions entrepreneurship and innovation in Jordan. It offers a wide range of resources, including incubation services, mentorship, and training programmes, to support aspiring entrepreneurs and start-ups as they navigate the challenges of the business world.
Rum Agricultural Company	Regional				NaiTel is a technology company in the Middle East operating a regional fiber-optic network and a carrier-neutral 3 data center in Aqaba.
Shbab Al Ghad	Regional				Shbab Al Ghad is an NGO dedicated to empowering youth through upskilling in IT and digital skills. With a particular emphasis on fostering self-employment, the organisation aims to equip young individuals with the expertise needed for the digital era, promoting opportunities for self-sufficiency and career advancement rather than focusing solely on entrepreneurship.
Sidney Apparel LLC	Regional				Sidney Apparel LLC is a Aqaba company in the textile manufacturing sector.
Tala Bay	Regional				Tala Bay is a prominent real estate and resort development company located in Aqaba,. The company offers a mix of residential properties, luxury hotels, and a wide range of recreational and leisure facilities.
USAID	Regional				USAID in Jordan supports entrepreneurship by providing training, access to finance, and creating an enabling business environment. They focus on helping individuals, especially women and youth, start and grow businesses, ultimately aiming to stimulate economic growth and reduce poverty in the country.

Stakeholder of the Aqaba entrepreneurial ecosystem	National or Regional Actor	Relevance for women	Relevance for green business	Member of AEN	Description
Vocational Training Corporation (VTC)	Regional				USAID in Jordan supports entrepreneurship by providing training, access to finance, and creating an enabling business environment. They focus on helping individuals, especially women and youth, start and grow businesses, ultimately aiming to stimulate economic growth and reduce poverty in the country.
Voice of Aqaba	Regional				Voice of Aqaba is a local media outlet that serves as a platform for news, events, and discussions in Aqaba, contributing to the region's information and communication network.

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11.4 Methological annex

In the following, the method for indicator calculation and sector comparison is described in more detail. The economic, social, sustainability and political factors are operationalised using a selection of indicators. Both quantitative and qualitative information is used to assess the sectors.

First step: Quantitative Analysis using available data

To this end, available data, for instance on regional GDP and employment for eleven key sectors of the economy in Aqaba are analysed. The following data is available on a sectoral basis and will be used to assess the sectors using a quantitative approach.

	Indicator	Source and available data	Description
	GDP share per sector	National, GDP at constant prices (Department of Statistics).	The analysis of GDP share from 2017 to 2022 will provide a systematic understanding of the economic landscape.
Economic indicators	Average GDP growth	National (2022), GDP development by sector (Department of Statistics).	The table with the GDP development of the past years (2017-2022) will help identify sectors with the highest and lowest average growth rates respectively.
	Number of companies	Regional data from the Annual Report on Social Security. The most recent data available is the data from 2021.	The number of companies will help in understanding the sector structure. A higher number of micro, small, and medium-sized companies indicates that the sector is accessible for start-ups.
	Average wage	Regional data from the Annual Report on Social Security. The most recent data available is the data from 2021.	Sectoral data on average wages indicate the relative productivity of the sector. This is a proxy for labour productivity.
Social indicators	% of overall employment per sector	Regional (Aqaba), Employment numbers in the private sector by sector type in the Aqaba region.	By analyzing employment data, we can also determine where the majority of people are employed and understand the sectors that play a crucial role in providing employment opportunities. This analysis will shed light on sectors that are vital for the labour market and can serve as a foundation for assessing the overall economic stability. In addition, the analysis allows us to assess the relevance of the sectors for youth and for women when the data are disaggregated.

Table 3Quantitative indicators

To make data across different sources comparable, sectors from different sources have been mapped onto each other as described below.

For the Social Factor analysis in all subcategories "Employment of sector in %", "Average growth", "Relevance for Youth" and "Relevance for Women", the following four Sectors from the employment data from the Department of Statistics have been excluded from the Social Factor analysis (Employment data) because the data was incomplete (either all entries 0 for all years, or only 1 or 2 entries provided for singular years):

- Activities of extraterritorial organisations and bodies.
- Activities of households as employers; undifferentiated goods and services-producing activities of households for own use.
- Public administration and defence; compulsory social security.
- Unspecified.

	GDP data	Employment data
1	Agriculture, Hunting, Forestry, And Fishing	Agriculture, forestry and fishing
2	Mining And Quarrying	Mining And Quarrying
3	Manufacturing	Manufacturing
4	Electricity And Water	Electricity, gas, steam and air conditioning supply AND Water supply, sewerage, waste management and remediation activities
5	Construction	Construction
6.1	Wholesale And Retail Trade	Wholesale and retail trade; repair of motor vehicles and motorcycles
6.2	Restaurant And Hotels	Accommodation and food service activities
7	Transport, Storage & Communications	Transportation and storage AND Information and communication
8.1	Finance And Insurance Services	Finance And Insurance Services
8.2	Real Estate	Real estate activities
9	Community, Social And Personal Services	Activities of extraterritorial organisations and bodies AND Activities of households as employers AND Administrative and support service activities AND Arts entertainment and recreation Education AND Professional, scientific and technical activities AND Public administration and defence; compulsory social security AND Other service activities

For the analysis of GDP data, only national data is available. Data from 2017 to 2022 has been used. The GDP data include the public sector as well as the private sector.

- GDP in % (2022): calculated as percentage of the sector on the overall GDP of all private sectors in the categories 1-9.
- Average GDP growth in %: calculated as averaged GDP growth rate per sector from 2017-2022.

For the analysis of employment, data from the Jordan Department of Statistics has been used. From the data, only employment figures relevant to the private sector has been considered. In the following, the calculation is specified in more detail:

- Employment in %: calculated as the sector percentage of all employment data for 2022.
- Average employment growth: calculated as averaged growth of sector for the following five time periods: 2017-2018; 2018-2019; 2019-2020; 2020-2021; 2021-2022.
- Relevance for Youth: calculated as employees aged below 30 of all employees per sector.
- Relevance for Women: calculated as percentage of female employees of all employees per sector.

Second step: Qualitative explorations using available literature

Since some key factors for the sector selection cannot be assessed using quantitative data, qualitative information and additional sources are used to include other factors relevant to the sector selection and thereby providing a more holistic picture. It is important to note that only little research, that specifically looks at the region of Aqaba, is available for most of the indicators.

	Indicator	Source and available data	Description
	Green Business potential	a) National (2023), Green Jobs Assessment in Jordan Synthesis Report. Exploring the Employment Impact of selected Green Economy Initiatives. b) Regional (2023), the Green Growth Strategic Roadmap for the ASEZ was used.	The report will help identify green business potential within the sectors chosen for analysis.
Sustainability indicators	Innovation potential	a) National (2019), Jordan's Start-up Economy. Assessing the economic contribution and potential of tech and techenabled start-ups. b) National (2020), Global Entrepreneurship Monitor Jordan National Report.	Both reports will be used to attain additional information on the potential for innovation in different sectors of Jordan's economy. The indication of which sector is of particular relevance will be subject to qualitative data collection since the documents do not discuss the innovation potential on a sectoral level. See the third step.
Political	Priority sector in the EMV	National (2022), Economic Modernization Vision Jordan.	The EMV will be consulted to figure out which sectors have been identified as priorities.
factors	Export relevance	National (2021), Trade data compiled by the Observatory of Economic Complexity.	The export relevance of all sectors is estimated by a cursory analysis of Jordan's main exports.

Table 4Qualitative indicators

Third step: Discussion of potentials and defining sub-sectors

Once a selection of sectors has been made in the first step, we will examine these sectors in more detail and consider the following aspects during the data collection:

- Evaluating "game changers": Sectors are analysed in their innovativeness and their potential to drive significant advancements in various connected industries. By closely examining these sectors, we can uncover emerging technologies, trends, and practices that have the potential to advance the local ecosystem. Additionally, a specific focus will be given to sectors with the potential for green business, as sustainability and environmental consciousness are becoming increasingly important.
- Identifying the most dynamic subsectors: This evaluation will encompass various factors such as investor attractiveness, capital inflow, and business dynamics. By considering these elements, we can pinpoint the sectors that attract substantial investments and exhibit a high growth potential. Understanding the dynamics of these sectors can provide valuable insights into the evolving local ecosystem, allowing policymakers, investors, and entrepreneurs to make informed decisions.

This will enable us to draw a SWOT analysis and identify subsectors and key value chain players that are of relevance among the three key sectors identified.

Assessment of potential for Green Business

The Report on Green Jobs in Jordan (GIZ, 2023a) presents a thorough examination of Green Growth Potential for key sectors in Jordan. A regional perspective is provided by the Green Growth Strategy of ASEZ. The following priority areas and sectors can be highlighted after analysis of the two documents:

- In the agriculture sector, there is an opportunity to promote organic farming practices and implement drip-irrigation techniques to conserve water resources and reduce chemical inputs. In the governorate of Aqaba, the cluster at Wadi Araba is proposed as a location for a green agri-innovation cluster.
- The waste and water sectors offer potential for green job creation through initiatives such as waste collection and effective water treatment, which can reduce pollution and create employment opportunities. Such opportunities are currently assessed at tourist destination in Aqaba, such as in Wadi Rum and in south beaches of Aqaba.
- The energy sector is closely linked to green jobs, particularly in renewable energy sources like solar PV and wind. Retrofitting old buildings for energy efficiency also presents opportunities for job creation. There are key initiatives in place in Aqaba as part of the Green Growth Strategy of ASEZ, that concentrate on solar photovoltaic farms, distributed power, and hydrogen use.
- Manufacturing can contribute to green growth by adopting sustainable production processes with lower energy and resource intensity. Utilising waste as raw material for recycling (such as plastic and used garments/textiles) can further enhance sustainability. Making yarn from old garments could also reduce Jordan's import dependency on raw materials and intermediate goods. In Aqaba, key initiatives focus on green raw materials (e.g. ammonia, methanol).
- **Eco-tourism** is a promising sector for green growth in Jordan, attracting environmentally conscious tourists and promoting responsible tourism practices. It offers opportunities for eco-friendly accommodations and nature-based activities. Sustainable tourism products and marketing is foreseen also for destination in the governorate of Aqaba (e.g. Wadi Rum and mountain areas). One of the priority initiatives is to pursue green accommodation certification.
- In the transport sector, promoting public or shared transport solutions can contribute to reducing emissions and creating green job opportunities. The development of a sustainable mobility plan is proposed as part of the Green Growth Strategy of ASEZ. In addition, the sustainability of the Aqaba port infrastructure is promoted (e.g. through decarbonization of port operations).

Accordingly, we can classify the eleven sectors discussed as follows. It is important to note, that this classification applies not only to the governorate of Aqaba since the underlying assessment was carried out at a national level.

Green growth potential per economic sector

Sectors with high potential for Green Growth	Sectors with medium potential for Green Growth	Sectors with low potential for Green Growth
Manufacturing	Agriculture, Hunting, Forestry	Mining and quarrying
Electricity and water	Restaurants and Hotels	Construction (except retrofitting old buildings)
	Transport	Wholesale and retail trade
		Finance and Insurance
		Real Estate
		Community, Social and Personal Services

Table 5Green growth potential per economic sector

Limitations

It is important to note that there are some limitations to this approach. Firstly, the definitions of sectors vary significantly among sources. The different sources used to examine the sectors do in many cases do not correspond and match with each other in terms of the sector definitions. To be able to compare sectors using data from different sources, a sector mapping is applied. Secondly, availability of disaggregated data on a regional and sectoral level is limited. Wherever possible, these gaps in data are filled by the use of national data or with alternatives such as proxies.