



# ICT Start-ups in Saudi Arabia

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# Executive summary

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The Kingdom of Saudi Arabia's (KSA's) ICT start-up ecosystem is expanding and broadening. The number of new start-ups is growing year-on-year, the supporting network of incubators and investors is strengthening, and there is a government commitment to further develop the ecosystem. However, several elements are still missing. Administrative processes are complex, the investor base has limited experience of working with entrepreneurs, and attracting talent is not easy. For this report, we analyzed over 350 KSA start-ups and found that most were still focused on replicating successful business models from elsewhere, rather than generating their own new intellectual property (IP). However, this is now beginning to change.

To address the challenges for its start-up ecosystem, KSA needs to create an environment that focuses on two areas. It should look to simplify the entrepreneur's life (such as by protecting IP, reducing the time to set up a business, and developing sandbox environments). At the same time, it should look to develop a unique value proposition in the region by leveraging its strengths in sectors such as oil and gas or its leadership position in cybersecurity (as confirmed in the Global Cybersecurity Index<sup>1</sup>). In this change process, the KSA government has a key role to play. Achieving success should focus on adopting a three-level approach, centered around collaborating, coordinating and nurturing the start-up ecosystem.

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<sup>1</sup> KSA ranked as the top Arab State in cybersecurity and 13 globally in the Global Cybersecurity Index 2018

# 1. Ecosystems as enablers of start-ups

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An overall start-up ecosystem, including the ICT start-up ecosystem within it, is made up of multiple agents who interact with one another, coexisting within a specific context. These agents include entrepreneurs, investors, advisors and customers. The context is defined by the culture, regulation, market dynamics, and prevalent social norms. However, it takes more than simply the presence of these individual agents to develop a start-up ecosystem. In fact, the critical consideration that determines whether an ecosystem is effective is the level of alignment and interactions between these agents. Maintaining an overall delicate yet functional balance is crucial to the ecosystem.

Depending on the level of development and involvement of each of the agents, start-up ecosystems vary in their maturity. Based on the different criteria that influence their development, they can be classified as nascent, evolving, mature or self-sustaining. Some of the most important criteria are:

- Number and types of start-ups (e.g., total start-ups, quantity in high-tech, number in each sector).
- Support infrastructure (e.g., how many incubators, co-working spaces and start-up events there are).
- Flow of funds (e.g., early-stage funding per start-up, total capital raised, funding deals per year, exits).
- Quality and cost of human capital (e.g., salary of specialists, access to a pool of talent).
- Education and culture (e.g., entrepreneurship courses in universities, mentorship, acceptance of risk).
- Ease of doing business (e.g., time to register a company, number and complexity of administrative procedures).

## 2. Setting a vision for the ICT start-up ecosystem

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Vision 2030 focuses on an overarching theme of economic diversification, with the target of the SME contribution to the national economy reaching approximately 35 percent.<sup>2</sup> This indirectly provides a strong push to make a start-up ecosystem a strategic priority within KSA. Since the announcement of the vision in 2016, its positive impact on the country's development has already be seen, reinforcing the transformative power such a strategy provides. For instance, by August 2019 more than 820 start-ups had been financed by Monshaat (Small and Medium Enterprises General Authority). Badir, one of the most important technology start-up incubator and accelerator programs in KSA, is well on track to achieving its goal of incubating 600 start-ups by 2020.<sup>3</sup>

A strong start-up ecosystem can unlock economic development by leveraging innovative technologies and solutions, generating quality jobs, and attracting an international workforce. Additionally, it can set new competitive dynamics, promote research and innovation, foster a dynamic society, and have an indirect positive impact on the wider support network. Put into figures, the global start-up economy created almost USD 3 trillion in value between 2016 and 2018, which was more than the GDP of economies such as the United Kingdom.<sup>4</sup>

Vision 2030 shows the power of a strong, aligned strategy in achieving measurable results within a short time frame. While different start-up ecosystem development visions exist among government-backed and independent organizations, KSA should strive to have an integrated and coordinated vision that aligns all relevant agents.

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<sup>2</sup> Vision 2030

<sup>3</sup> Badir Technology Incubators and Accelerators Program and Monshaat press release (Feb 2019)

<sup>4</sup> Global Startup Ecosystem Report 2019, published by Startup Genome



### 3. A nascent ecosystem with high growth potential

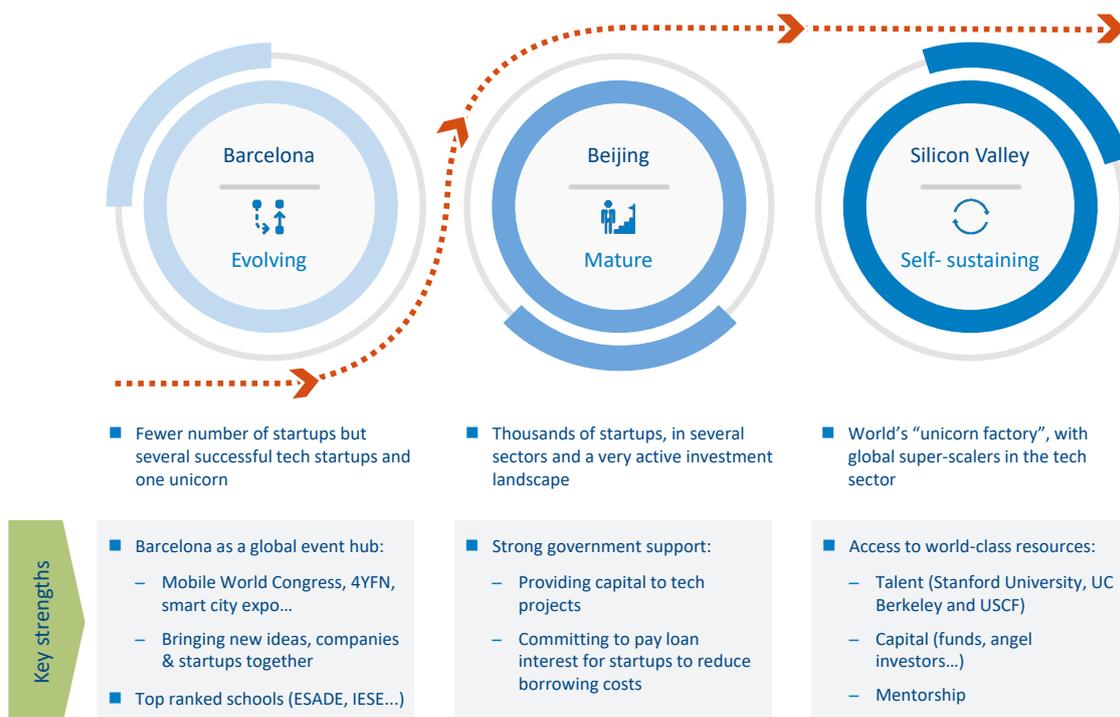
We performed an in-depth assessment to understand the current state of KSA's start-up ecosystem. To provide global context, we analyzed KSA's ecosystem alongside three other international benchmarks with different maturity levels: Silicon Valley (self-sustaining), Beijing (mature), and Barcelona (evolving).

The KSA start-up scene is growing, but still at the nascent level. High-level numbers for the ecosystem show promise. For example, there are now over 20 incubators in the country, with around half focused on the technology sector. However, only three were founded before 2010.<sup>5</sup> Additionally, few incubators offer integrated portfolios of services (such as education & training, coaching & mentoring, financial support, office space & equipment, marketing & promotion and legal support). This requires entrepreneurs to move between incubators to receive all the support required to successfully launch a new venture.

According to the KSA Innovation Economy: Tech Startup 2017 report,<sup>6</sup> the Saudi ecosystem provides essential services such as mentorship and available co-working spaces. However, the start-ups surveyed claimed that they had experienced difficulties receiving specific mentorship support in terms of legal and accounting advice, networking with potential customers, and go-to-market strategies. Likewise, the availability of talent and technology skills remains challenging: whereas needs for traditional business roles such as marketing, media, and communications are being met among more than half of start-ups, technical skills such as development and coding, product design, and data and analytics are less available.

Furthermore, while salaries for ICT-related professionals are in line with other global start-up hubs, the alternative to high-paying, stable government jobs in KSA prevents more professionals from venturing into the start-up world.

Figure 1: Global startup hub characterization

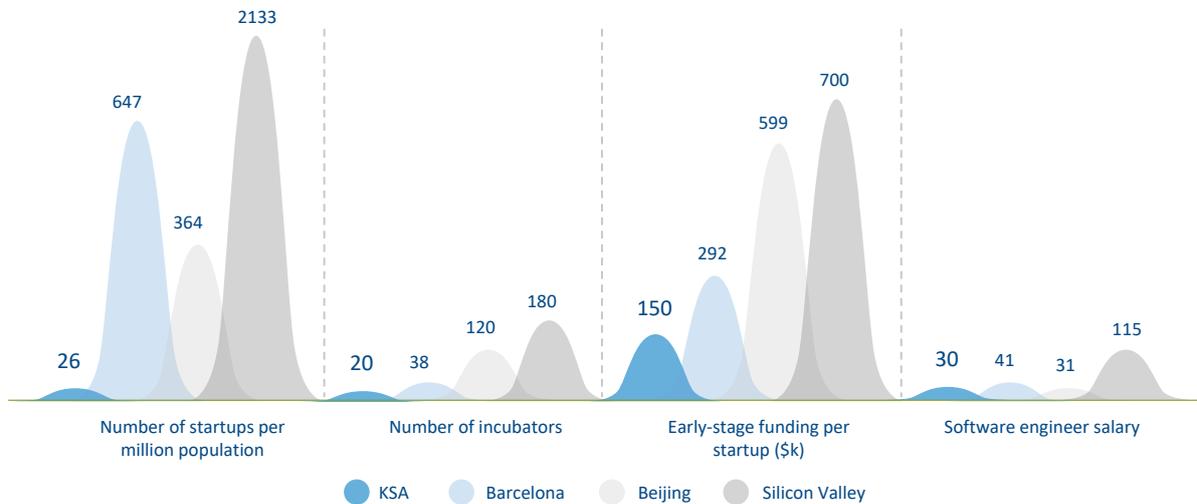


Source: Arthur D. Little analysis

5 Arthur D. Little analysis

6 KSA Innovation Economy - Tech Startups 2017. Report published by Arabnet and Ministry of Communications and Information Technology (MCIT)

Figure 2: KSA start-up ecosystem benchmark analysis



Source: Arthur D. Little analysis

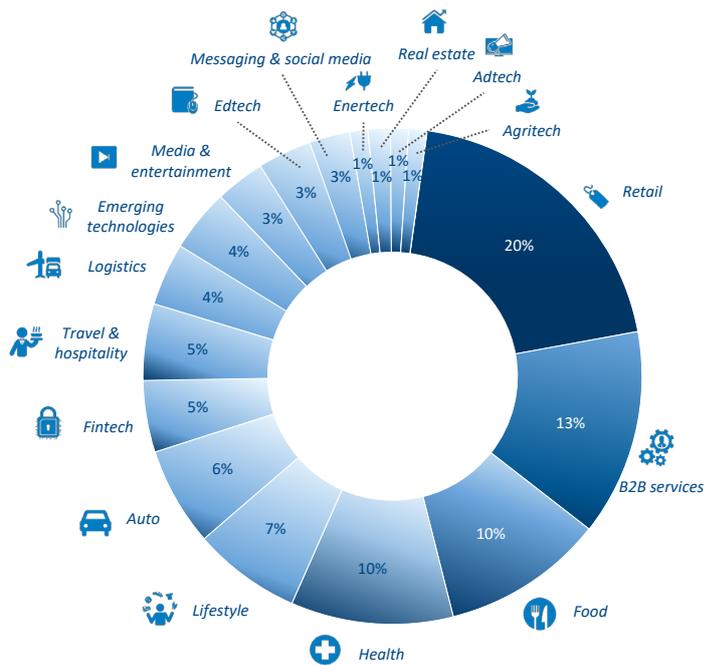
### 3.1 Moving beyond business replication to innovation

Our analysis of 350 KSA start-ups shows that three sectors, retail (20 percent), B2B services (13 percent) and food service (10 percent) together account for 43 percent of Saudi start-ups. In comparison, these accounted for less than 4 percent of total start-up investment in the US in 2018.

Globally, there has been a shift towards advanced technologies as the basis for start-ups. Although in 2010/11, the majority (77 percent) of all start-ups launched worldwide were in fintech, gaming, edtech or digital media, just seven years later, the number of new launches in these sectors had fallen to approximately 55 percent.<sup>7</sup> We are now entering the era of “deep tech,” in which start-ups leveraging novel IP and emerging technologies, such as AI, blockchain and robotics applied to life sciences, advanced manufacturing, agritech & new food and cleantech, are experiencing the highest growth rates. Nearly half (45 percent) of new start-ups now focus on them.

The global shift towards advanced technology has still not reached KSA, where the percentage of start-ups in “deep tech” sectors is below 15 percent. KSA start-ups are primarily focused on replicating international successful business models, rather than creating and leveraging their own innovative and proprietary IP. The innovation component in these start-ups is limited, and in today’s global dynamic business environment, their offerings are becoming commodities. While the current business replication model is useful as a short-term solution to kick-start the ecosystem, it does not position the country as an innovative, leading start-up ecosystem.

Figure 3: Arthur D. Little analysis on the current technology start-up pool in KSA split by sectors, 2019



Source: Arthur D. Little analysis

However, there are reasons to believe that KSA will close this gap, thanks to a positive trend in the number of new technology-related start-ups. In 2018, 68 new tech start-ups were launched in KSA, up from 40 in 2017 and just 15 in 2012.<sup>8</sup> Ten KSA start-ups are currently in deep tech sectors, with innovative propositions such as an augmented reality social network, an indoor positioning system, a virtual reality gaming hub, a 3D printing design marketplace, and robotics solutions for industrial applications.

7 Global Startup Ecosystem Report 2019 (Startup Genome)  
 8 Arthur D. Little analysis of 350 KSA technology start-ups

### 3.2 Maturing the investment landscape beyond seed capital

Funding networks are at a similarly nascent stage. The Public Investment Fund (PIF) set up a SAR 4 billion “fund of funds” to stimulate venture capital investments in SMEs and start-ups, Monshaat created a government-owned VC firm with SAR 5 billion to invest in other Saudi VC firms and start-ups, and MCIT and the Social Development Bank launched a SAR 1 billion fund for emerging technology start-ups.<sup>9</sup> However, these funds have not been effectively reaching entrepreneurs. Limited experience among investors in working with entrepreneurs results in low tolerance of risk. This greatly limits the breadth and number of start-ups in which they are willing to invest.

We analyzed 350 start-ups founded after 2007 in KSA, which had associated technology components embedded within them (ranging from e-commerce to deep tech), in order to understand the KSA start-up investment landscape. Eighty-five percent had not secured any financing, 7 percent had raised seed capital, and 2 percent had moved on to Series A.<sup>10</sup> Just one out of the 350 had reached Series B. While some financing does reach seed capital, there is limited funding available for late growth and maturity stages. This prevents start-ups from scaling up, thereby limiting exits and IPOs. While most start-ups that have

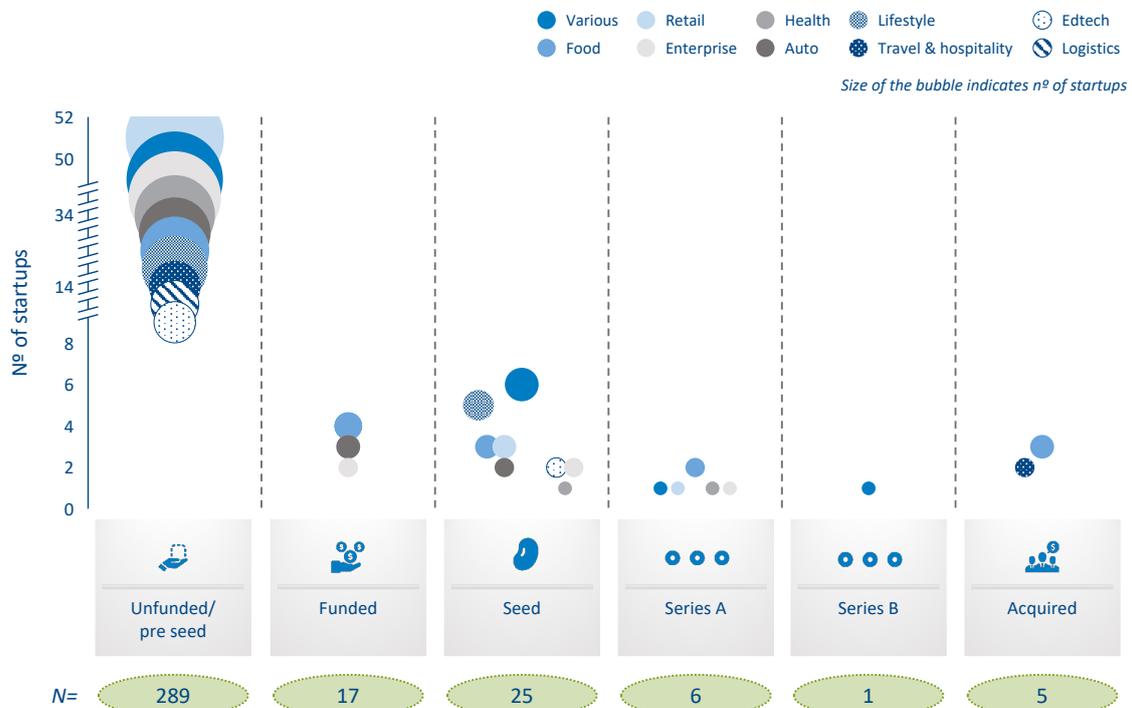
secured funding are those that have replicated successful business models, there are some exceptions. There are three funded fintech start-ups offering POS and payment gateway systems – two in agritech, which provide LED lighting for indoor farms and greenhouse technology, start-ups in robotics, and media; and one focusing on the IoT.

The investor base in KSA is essentially made up of institutional investors, as angel networks are mostly non-existent. Of the top 20 institutional investors, only four focus on specific sectors, including:

- Saudi Aramco’s entrepreneurship center, Wa’ed, on energy, mining and chemicals.
- KAUST, on agritech and energy.
- Riyadh Valley, on smart city developments.

Most of the others have generic investment strategies. Investors, however, do specialize in the type of investment mechanisms used. While Wa’ed mostly invests in start-ups through debt, incubators such as Flat6Labs do so exclusively through seed capital, and larger investors, such as Raed Ventures, primarily show interest in Series A and larger investment rounds.

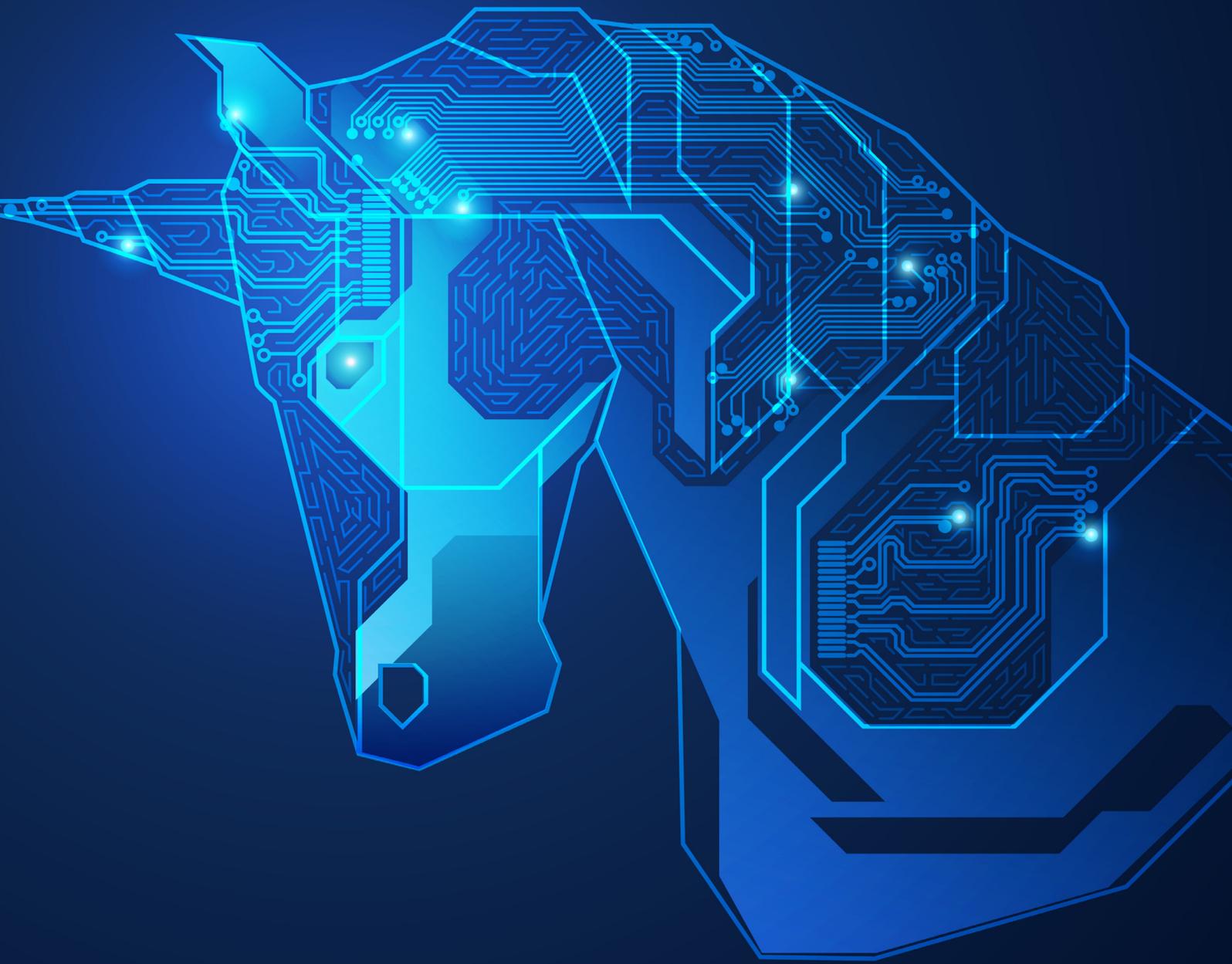
Figure 4: KSA start-up funding map analysis from 2007 to March 2019



Source: Arthur D. Little analysis

<sup>9</sup> Press releases

<sup>10</sup> Series A financing refers to an investment in a privately-held, start-up company after it has shown progress in building its business model and demonstrates the potential to grow and generate revenue



## 4. Time to accelerate

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Ten years ago, it was difficult to imagine any city being able to develop a start-up ecosystem at par with Silicon Valley. Today, challengers such as Beijing, New York, and Shanghai have demonstrated that it is possible, becoming dynamic hubs that foster innovative ideas, have strong flows of funds, and are established as breeding grounds for successful “unicorns.” In 2018, when 1,092 new start-ups were founded in the Bay Area, New York followed closely behind with 904. One hundred and eight started up in Beijing. Silicon Valley has seen the growth of 57 tech unicorns within its ecosystem between 2012 and 2018, and Beijing, New York and Shanghai are performing strongly, growing 29, 13 and 11 tech unicorns, respectively.<sup>11</sup>

KSA has a golden opportunity at hand to develop both its broader and ICT-focused start-up ecosystems. Its young, digitally enabled population (more than 96 percent of Saudis own smartphones) provides a large local digital consumer base. Multiple governmental initiatives aim to increase the availability of support for start-ups, acting as enablers that strengthen the ICT start-up ecosystem. To succeed, KSA should not try to replicate other ecosystems, but rather, leverage its unique strengths, as other countries have done. Emerging global start-up hubs such as New Zealand and Busan (South Korea) are successfully following this differentiation strategy. New Zealand, a global leader in dairy exports, is developing a strong agritech start-up ecosystem, while Busan, traditionally a ship-building city, has supported multiple marine tech start-ups.

Although the opportunity is clear, there are challenges that KSA needs to overcome to succeed in its start-up ecosystem objectives. Some of these were highlighted in our discussions with both global start-up ecosystem experts and successful Saudi entrepreneurs (listed in the acknowledgements section):

- The Saudi population tends to be risk averse, with fear of failure as a key obstacle preventing potential entrepreneurs from establishing their own businesses.
- KSA's low-risk, yet high-paying public sector jobs continue to be aspirational for a large proportion of Saudi youth.
- Although many universities are setting up incubators and entrepreneurship centers, entrepreneurship is still not fully embedded within the education system.
- Most start-up hubs in the world have rolled out start-up visa schemes that allow entrepreneurs to relocate and start businesses with minimal criteria. However, although KSA recently announced its “Privileged Iqama” residency scheme, which does not require local sponsors, there is little clarity as to who can apply for it, what criteria must be met, and what specific benefits it provides.
- There are limited incorporation models that do not allow for stock sharing among employees, which reduces exit options for entrepreneurs.
- Although government measures can make a positive contribution to the development of a country's start-up ecosystem, a local start-up “unicorn” will strongly accelerate the growth of KSA's ecosystem, providing a boost to drive awareness, motivate young talent and position the country on the global stage.

<sup>11</sup> Global Tech Hubs Report 2018, published by CB Insights

see the change  
from his work

? Why did  
you expect  
to see  
death scene  
in WHB'S HCE  
- what did that  
tell you about us

? Does the group feel  
like these types of  
issues has decreased  
over the last 12  
mos?  
"Narcotics heroes"

? Why does  
this seem  
to not  
improve  
another  
community

? Why need to  
change organization

? How do we  
find what  
matters most  
to create  
change in people

? What was the  
issue



## 5. Fixing the basics and building on strengths

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Successful start-up ecosystems offer a unique value proposition, but to thrive, they require a series of key success factors to be met. These include basic elements, as well as specific, innovative factors that highlight the ecosystem's uniqueness.

### 5.1 Fixing the basics

Creating an environment that simplifies entrepreneurs' lives, as well as administrative and legal processes, is a "must have" for any successful ecosystem. IP protection is a key concern for entrepreneurs, and relevant lessons can be learned from Singapore's approach to addressing it. In addition to encouraging development of IP through generous financial incentives and grants, Singapore created a specialized IP court to manage complex cases and a WIPO<sup>12</sup> arbitration and mediation center to protect and settle IP disputes. In KSA, Saudi Authority for Intellectual Property is pushing to raise awareness of IP in the country, and to facilitate entrepreneurs' access to key aspects of IP protection, such as patenting, copyrighting and registering of trademarks.

Ease of setting up a business and simplifying the number of administrative procedures required is also high on entrepreneurs' priority lists. Countries across the world have taken action to address this. Estonia has launched an e-residency program that allows entrepreneurs to set up EU companies from anywhere in the world, while New Zealand enables entrepreneurs to both set up and register businesses within a day's time.

While KSA has managed to simplify some procedures, which means a business can be registered within one day, the effective time it takes for entrepreneurs to set up companies is longer, due to complex import/export procedures and long lead times for setting up a bank account or getting an office license. For example, an entrepreneur who recently launched an online platform to organize sporting events highlighted that challenges with customs processes led to significant delays in the clearance and delivery of race-timing systems.

In February 2019, the Saudi Arabian Monetary Authority (SAMA) began designing a sandbox regulatory environment to test fintech start-ups in the country. Additionally, MCIT has recently set up an innovation hub that aims to be a technology incubator and bring in private/public partnerships and connect entrepreneurs with all relevant agents within KSA's start-up ecosystem. Although there is progress being made, it is not being communicated well enough to ensure that entrepreneurs are fully aware of opportunities. KSA is missing a "one-stop shop," comprehensive, nationwide entrepreneurship promotion and guidance platform to showcase available benefits and incentives and provide administrative guidance and support for start-ups.

Additionally, while over 70 percent of Saudi adults see many entrepreneurial opportunities around them, and 75 percent believe they can start businesses,<sup>13</sup> these figures do not correspond with current low levels of entrepreneurial activity – with only 68 start-ups having been founded in 2018. Thirty-five percent of Saudis cite fear of failure as the primary reason preventing them from setting up companies.<sup>11</sup> Additionally, safe and high-paying government jobs disincentivize young professionals from trying entrepreneurship. According to KSA's General Authority for Statistics' latest information on the labor market, covering Q4 2018, the average monthly salary for Saudi citizens in government jobs is approximately SAR 11,200, while Saudi citizens working in the private sector make only about SAR 7,200 per month. Specific initiatives aimed at increasing the financial attractiveness of entrepreneurship, such as allowing equity-based compensation, could help attract more talent into start-ups.

<sup>12</sup> World Intellectual Property Organization

<sup>13</sup> Global Entrepreneurship Monitor 2019, published by Utrecht University (Netherlands) and Babson College (US)

## 5.2 Creating a compelling value proposition

While having these basic elements in place is considered a given for any start-up ecosystem, successful ecosystems generally supplement them with unique value propositions. Trying to replicate Silicon Valley in Riyadh, Jeddah or Dammam might not be effective, as each of these cities have their own dynamics and contexts.

Some of the expanding start-up ecosystems around the world are leveraging industry verticals in which they have traditionally been strong and creating innovative platforms to accelerate growth in these sectors. At a national level, KSA could potentially leverage its position in oil & gas and its strong status in cybersecurity to create unique start-up hubs focusing on these areas. Its breakthrough smart city initiative, NEOM, and other significant developments in Riyadh are further potential areas where KSA has an edge.

It is important to note that start-up ecosystems are developed on a “city basis” rather than a “national basis,” and entrepreneurs should not adopt a “one size suits all” approach, but rather, understand each city’s USP and select the ecosystems that are best suited to developing their ideas. In such a development process, both the public and private sectors (investors, companies) have roles to play, and should embrace a cooperative approach when doing so.

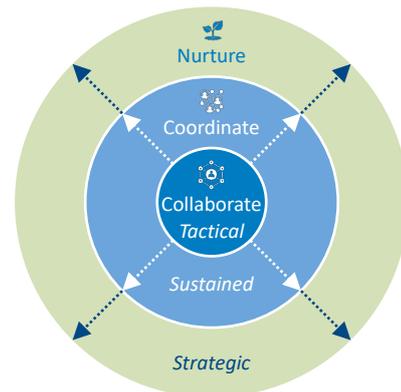
# 6. The government has a role to play

The government has a key role in addressing the pain points identified in KSAs ICT start-up ecosystem. It can do so through an actionable approach aligned with MCIT’s mandate.

The approach should act on three different levels, beginning with a tactical strategy that aims to achieve “quick wins”; then moving on to higher-level initiatives that must be sustained over time, and finally, adopting an overarching, long-term strategic orientation that fosters a start-up culture.

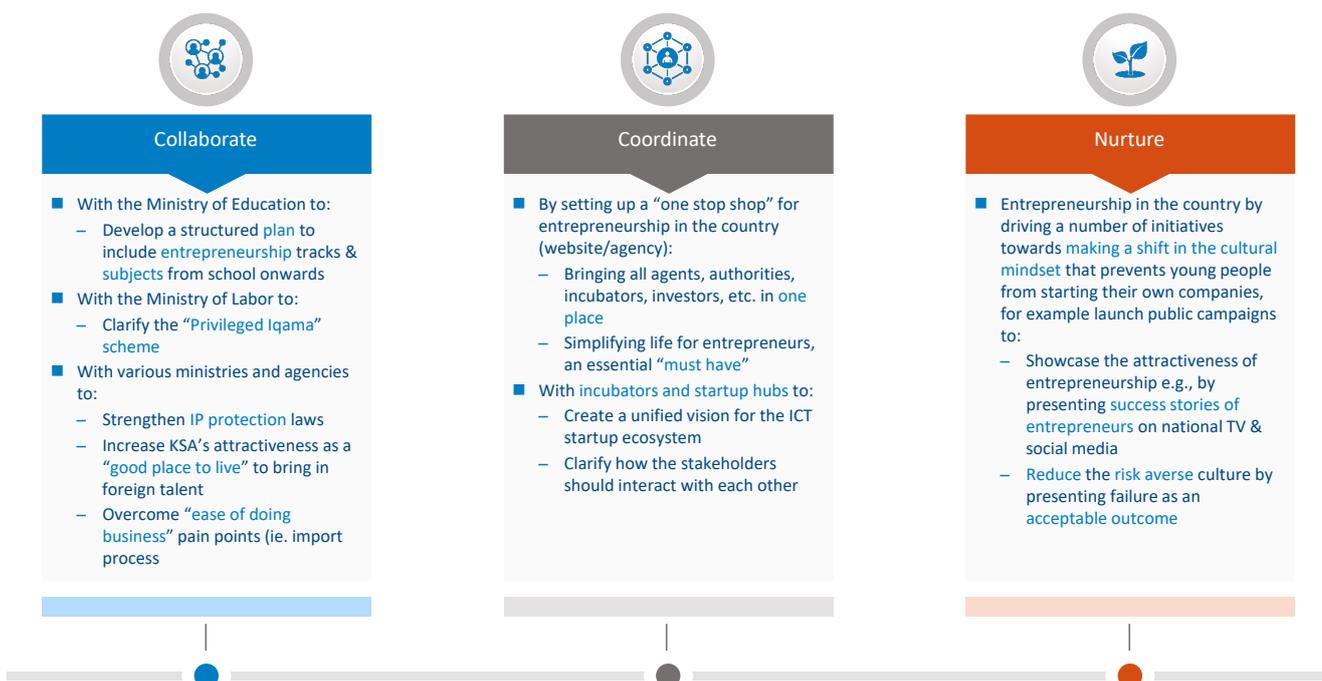
- **Collaborate** focuses on a “hands on” approach, working with other ministries and agencies to undertake the most urgent and easy-to-implement initiatives, in order to create an ideal environment for entrepreneurship in the Kingdom.
- **Coordinate** involves high-level engagement with all stakeholders, including entrepreneurs, incubators, investors, and universities to align on a collective vision for the ICT start-up ecosystem, as well as creating an informative “one-stop shop” for entrepreneurs.
- **Nurture** strives to achieve a shift in the cultural mind-set through a long-term strategic effort and orientation activities.

Figure 5: Start-up ecosystem promotion approach



Source: Arthur D. Little analysis

Figure 6: Start-up ecosystem promotion approach with selected potential initiatives



Source: Arthur D. Little analysis

## 7. The road to success

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Although the start-up ecosystem in KSA is developing rapidly, it still lacks coherent direction and structure. This situation is typical among nascent start-up ecosystems but must be addressed appropriately to ensure the KSA ecosystem's current and future effectiveness and sustainability.

The large local customer base, young and tech-savvy Saudi population, growing number of innovation hubs and university research centers, availability of capital, and global leadership in specific industry verticals are all strengths that the KSA ICT start-up ecosystem can leverage. However, they have not yet been effectively brought together. Acceptance of failure, greater entrepreneurial ambition and higher risk tolerance are required from both entrepreneurs and investors. Additionally, enabling regulations should be pushed by the government to enhance the ecosystem's attractiveness. Moving forward, KSA could follow a two-track, parallel approach:

- A **long-term**, strategic view that strengthens the **ecosystem's** foundations – Focus on IP, innovation and new content/services development where local strengths can be leveraged.
- A **short-term**, “quick win” approach – Focus on tried-and-tested business model application/implementation in sectors where KSA has attractive addressable markets – underserved or struggling sectors and those with large customer bases/domestic markets.

The government and policy makers could effectively leverage this proposed approach, focusing on collaborating, coordinating and nurturing to support both these tracks. This would address the short-term, tactical policy updates required to transition KSA into an attractive breeding ground for start-ups, as well as drive its longer-term transformation towards a dynamic entrepreneurial society.

# Abbreviations

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**AI** – Artificial intelligence

**B2B** – Business to business

**GDP** – Gross domestic product

**ICT** – Information communication technology

**IP** – Intellectual property

**IPO** – Initial public offering

**KSA** – Kingdom of Saudi Arabia

**LED** – Light emitting diode

**MCIT** – Ministry of Communications and Information Technology

**POS** – Point of sale

**SAMA** – Saudi Arabian Monetary Authority

**SME** – Small and medium enterprise

**USP** – Unique selling proposition

**WIPO** – World Intellectual Property Organization

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**Esam Al-Thukair** – Vice Governor of Entrepreneurship at Monshaat (General Authority for Small and Medium Enterprises)

**Nadeem Bakhsh and Farrukh Bandey** – Founders of Uxbert, a KSA company providing UX advisory and design, e-commerce, entrepreneurship and digital marketing services for companies, as well as developing in-house start-ups

**Chris Heivly** – VP Innovation at Techstars, a global ecosystem that helps entrepreneurs build businesses through accelerator investment programs across 25 countries

**Wael Kabli** – Co-founder of Cura Healthcare, a leading KSA health tech start-up

**Nicolai Schättgen** – CEO at Matchmaker Ventures, a global platform linking corporates and start-ups

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