



ICT SECTOR IN LEBANON

➤ 2020 FACTBOOK



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COVID-19 UPDATE

ICT SECTOR IMPACT

The negative impact of COVID-19 on national economies has been felt across the globe. Nevertheless, the ICT sector has been able to weather the crisis more efficiently than other sectors and has thus proven its resilience, including here in Lebanon.

As working modalities began to shift worldwide, a greater reliance on digital services emerged allowing many Lebanese ICT firms to thrive. Mature ICT SMEs and scaleups in particular have been faring better than others, with some actually witnessing growing sales. This is the case for companies involved in IT Outsourcing servicing international clients, E-Commerce and specifically E-Grocery, and EdTech. In addition, a number of HealthTech companies quickly adapted to the prevailing situation by developing innovative products to tackle the pandemic. The Lebanese scaleup Proximie, for instance, is using its technology platform to support more than 50 hospitals internationally, including in the UK and US, by remotely connecting self-isolating healthcare professionals to the frontline to support their colleagues in ER and ICU facilities.

Although Lebanon is currently facing challenging economic times, international investors can still benefit from a wealth of opportunities. The de-facto devaluation of the Lebanon Pound is serving as an attractive offering for global ICT companies and multinationals looking to outsource part of their operations to Lebanon while still leveraging one of the most talented workforces in the region at competitive rates. Similarly, the many tax benefits offered under the offshore business structure continue to serve as an ideal tool for local and international companies seeking to sell exclusively abroad.

While the majority of the data presented in this report was compiled prior to the outbreak, some estimates should be handled with caution as official data for 2019/2020 has yet to be compiled.



SECTOR OVERVIEW

01. LOCAL OVERVIEW

The ICT sector in Lebanon has witnessed extensive government attention and reform over the last decade, that has supported its growth over the last decade. In 2018, ICT contributed to around 2.1% of the nation's GDP, the equivalent of USD 1.1 billion, and expanded at an annual rate (CAGR) of 4.8% since 2004, from USD 565 million (Figure 1).¹

Its total impact on GDP, whether direct or indirect, is forecasted to reach USD 7 billion by 2025.² This growth will be fueled by investments in the telecommunications infrastructure, modernization initiatives by both the public and private sector, and improvements to the business environment, resulting in greater demand for ICT services.

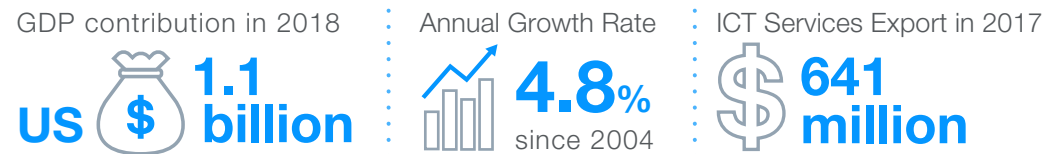
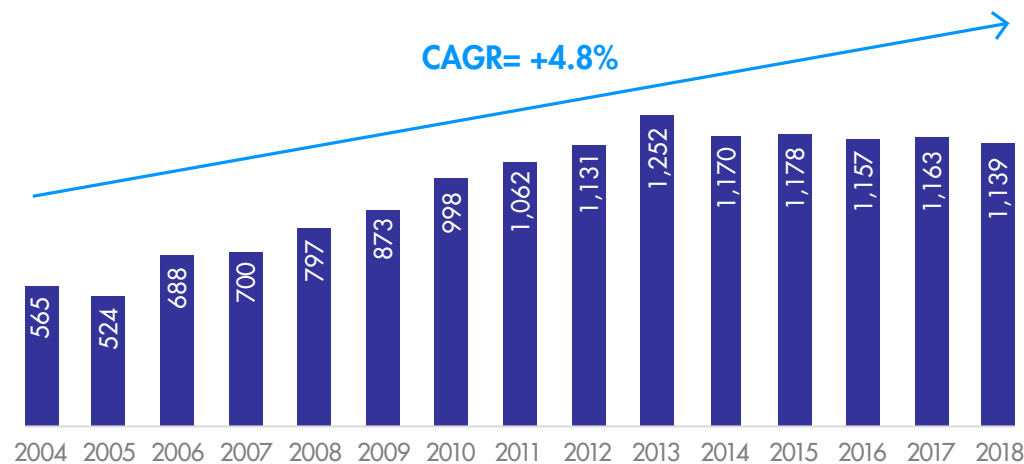


Figure 1: ICT Sector GDP Contribution | USD Million



Source: Central Administration of Statistics, National Accounts (2004 – 2018)

¹ Central Administration of Statistics, National Accounts (2004 – 2018)

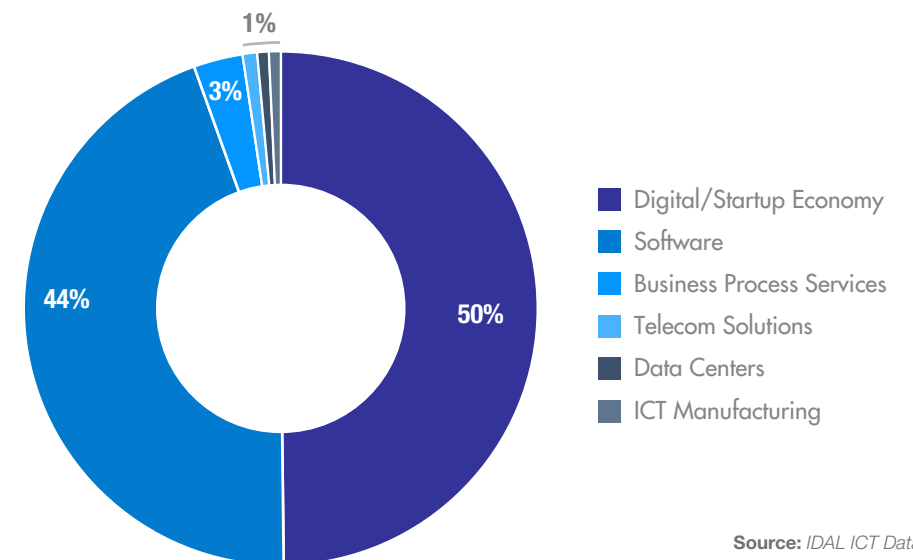
² Strategy&

02. SECTOR COMPOSITION

The ICT sector includes ICT Services and Manufacturing, Hardware Retail, and Telecommunications. This report focuses specifically on ICT Services and Manufacturing, which represents the most productive component of the sector. IDAL's ICT Database, revised in 2019, identified around 550 companies involved in this component, which includes prominent multinationals as well.

They are broken down into the following sub-sectors: Digital/Startup Economy (which includes technology-enabled startups operating in different verticals), Software, Business Process Services, Telecom Solutions, Data Centers, and ICT Manufacturing (Figure 2). The majority of firms fall under the Digital Economy (50%) and Software (44%) sub-sectors.

Figure 2: Distribution of Lebanese ICT Services & Manufacturing Companies by Sub-Sector | %

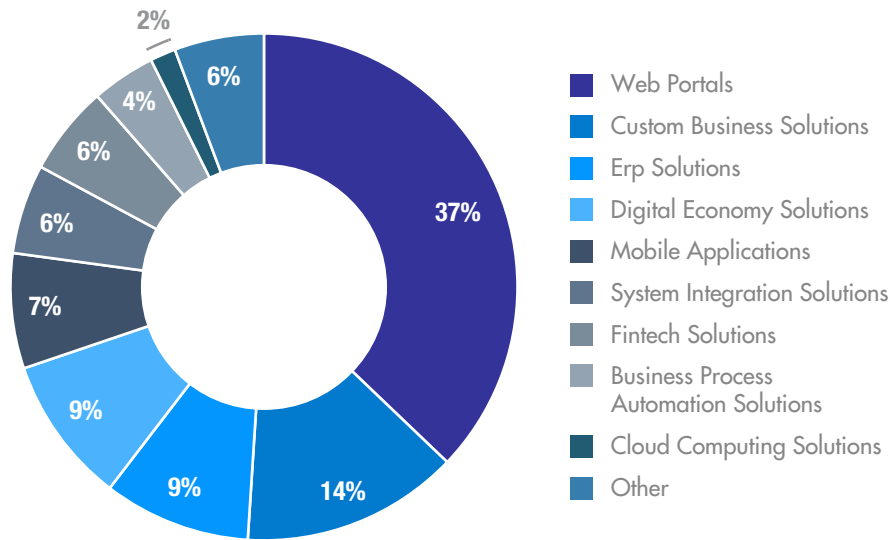


Source: IDAL ICT Database 2019

Looking further at the breakdown by company activity or area of expertise, a variety of services are being offered ranging from basic IT support to more complex technology solutions.

Under the Software sub-sector, the most common activities are web portal development (37% of Software companies offer this service), custom business solutions (14%), ERP solutions (9%), digital economy solutions (9%), and mobile application development (7%) (Figure 3).

Figure 3: Distribution of Software Companies by Activity | %

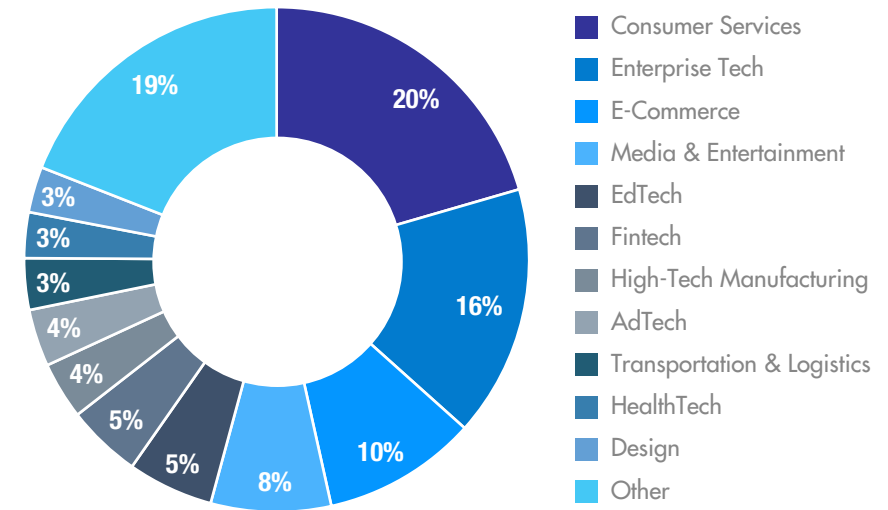


Source: IDAL ICT Database 2019

Under the Digital/Startup Economy sub-sector, which encompasses technology-enabled early to growth-stage startups, the most common activities are in the Consumer Services vertical, involving the development of various types of platforms

for daily use such as freelancer matching and social platforms, EnterpriseTech, E-Commerce, Media & Entertainment and EdTech (Figure 4).

Figure 4: Distribution of Digital/Startup Economy Companies by Vertical | %

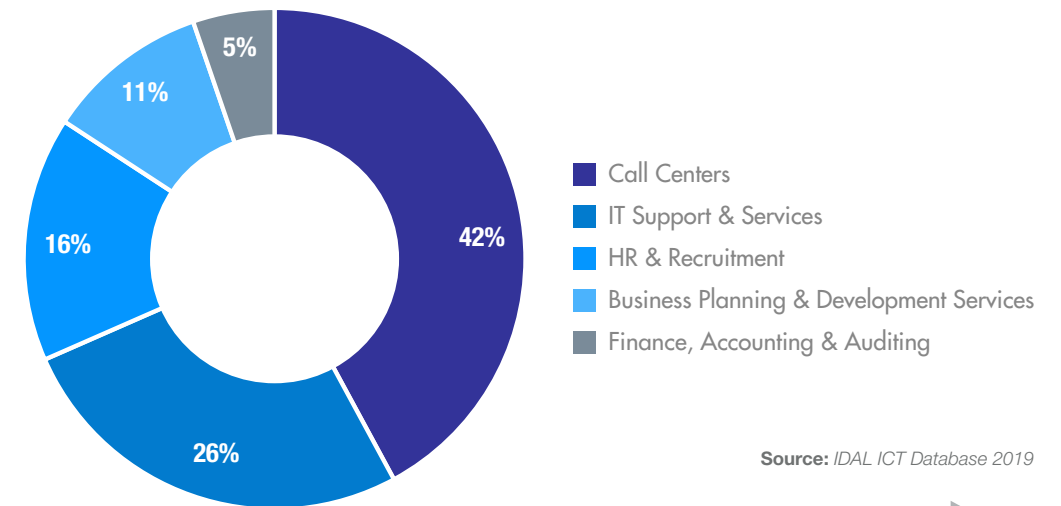


Source: IDAL ICT Database 2019

Finally, the Business Process Services sub-sector continues to be dominated by Call Centers (42% of all related companies) which cater to an array of industries including banking, FMCG, retail and healthcare, followed by outsourcing companies involved in IT Support & Services (26%) and Human Resources &

Recruitment (16%), among others. Given Lebanon's highly skilled workforce, the outsourcing sector represents a huge growth potential for businesses willing to offer back office support and advanced IT services to international clients (See Outsourcing Sector Factbook) (Figure 5).

Figure 5: Distribution of Business Process Services Companies by Activity | %



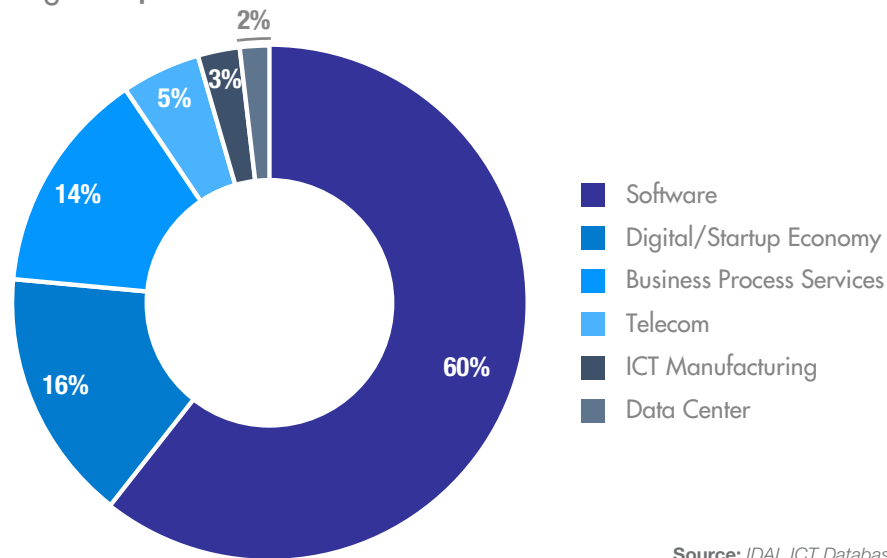
Source: IDAL ICT Database 2019

03. WORKFORCE COMPOSITION

The ICT Services and Manufacturing segment is estimated to employ around 10,700 people, a large majority of which are skilled professionals. The Software sub-sector remains the largest employer,

with 6,485 employees or 60% of the total (Table 1). This is followed by the Digital/Startup Economy segment, consisting of startups, which employs around 1,700 people or 16% of the total (Figure 6).

Figure 6: Estimated Workforce Distribution in the ICT Services & Manufacturing Segment | %



Source: IDAL ICT Database 2019

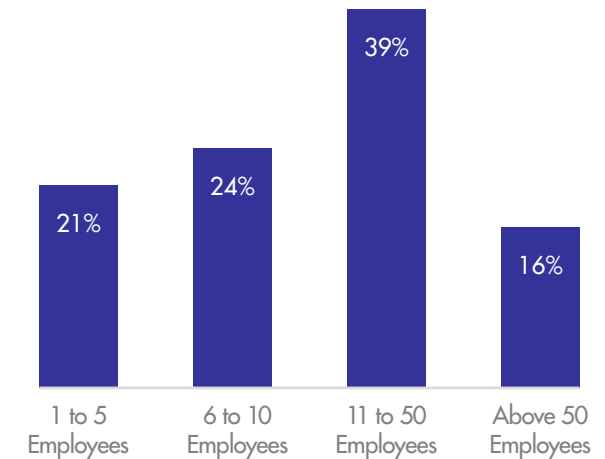
Table 1: Estimated Number of Employees by Sub-Sector in the ICT Services & Manufacturing Segment

SUB-SECTOR	ESTIMATED NUMBER OF EMPLOYEES
Software	6,485
Digital/Startup Economy	1,699
Business Process Services	1,507
Telecom Services	531
ICT Manufacturing	282
Data Centers	198
TOTAL	10,702

Source: DAL ICT Database, Estimate

The vast majority of ICT companies remain SMEs, with 63% of companies employing between 6 and 50 people (Figure 7).

Figure 7: Distribution of ICT Services & Manufacturing Companies by Employment Range | %



Source: IDAL ICT Database 2019

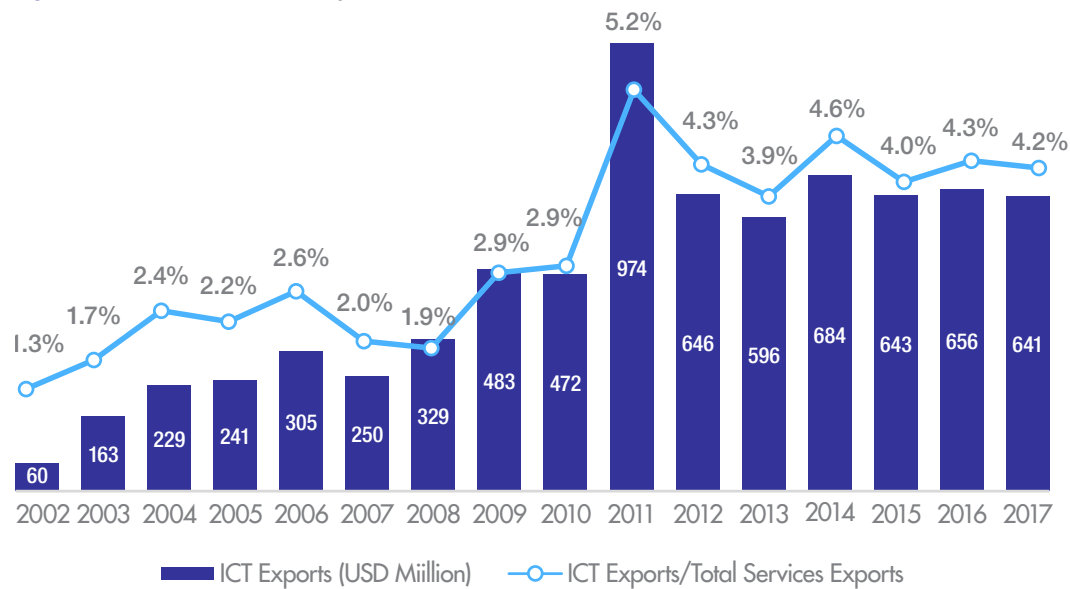


04. EXPORT TRENDS

Lebanese ICT companies are highly export-oriented. ICT services exports have more than doubled over the last decade, growing from USD 329 million to USD 640 million between 2002 and 2017, the equivalent of a 6.9% CAGR (Figure 8). This noticeable growth was triggered in part by various government

initiatives, including investments in ICT infrastructure as well as new funding mechanisms for the digital economy, such as Circular 331 of the Central Bank. After a major spike in 2011, ICT exports have remained relatively stable hovering at around USD 600 million.

Figure 8: ICT Services Exports | 2002-2017

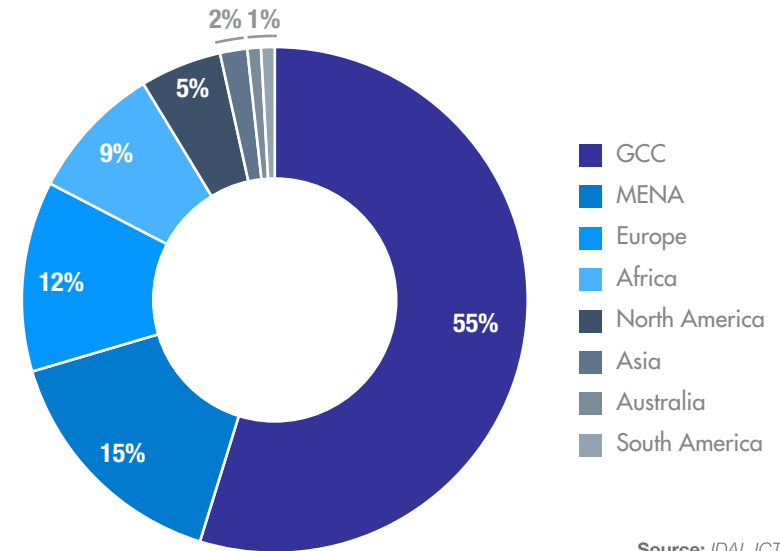


Source: World Bank

The GCC remains the largest market for Lebanese ICT companies, with 55% of companies indicating that they export their products and services to this region. This is explained by the common cultural and lingual affinities between Lebanon and Gulf countries, the size of GCC

market where an increasingly digitized society is fueling demand, and Lebanon's creative ability to adapt new technologies to local needs and cultures. The GCC is followed by the rest of MENA, Europe and Africa (Figure 9).

Figure 9: Existing ICT Export Markets | % of Companies



Source: IDAL ICT Export Survey 2019

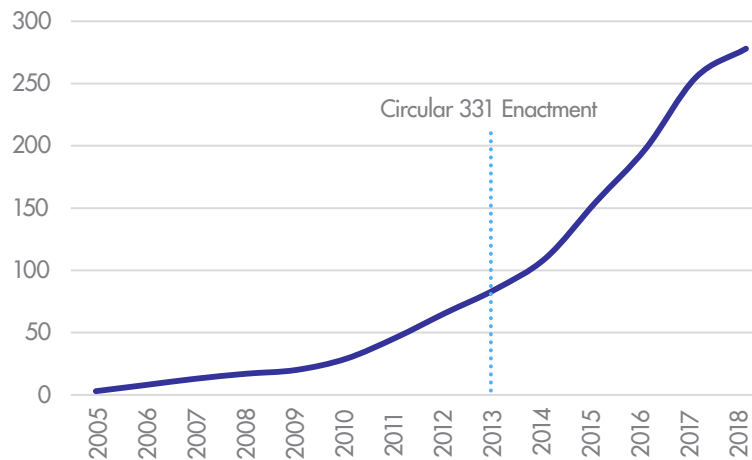


05. INVESTMENT TRENDS

Lebanon boasts a track record of successful local and international companies operating primarily out of Beirut and serving clients across the region and globe. Lebanese ICT companies have proven to be highly reliable thanks to a skilled and cost-competitive workforce, and many have been established over the last decade in

the Software sub-sector notably. As of 2013, following the enactment of Circular 331 by the Central Bank of Lebanon which provided fresh funding for the startup ecosystem, innovative startups have been emerging and are introducing new digital services to an increasingly tech-oriented clientele (Figure 10).

Figure 10: Cumulative Number of Lebanese Startups

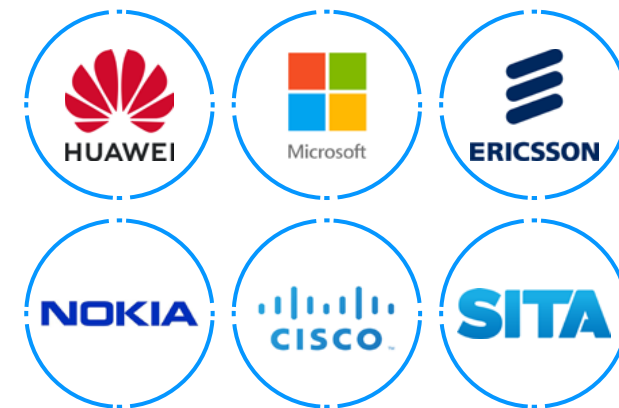


Source: IDAL ICT Database 2019

Multinational corporations also form a significant part of Lebanon's ICT environment. Prominent international ICT firms have set up shop within the

Lebanese market and are operating through their subsidiaries in Beirut. Some are also using Lebanon as a back office for their regional operations.

ICT TRACK RECORD - MULTINATIONALS



ICT TRACK RECORD - STARTUPS



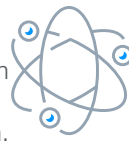
LEBANON'S COMPETITIVE ADVANTAGES

01. TALENTED & COST-COMPETITIVE WORKFORCE

Lebanon ranks **10th** among 141 nations in the ease of finding skilled employees and **23rd** in the digital skills among the active population.³



Lebanon also ranks **18th** worldwide for the Quality of its Higher Educational System and **4th** for the Quality its Math and Sciences education.



The average Lebanese software engineer speaks **3** languages (Arabic, English & French), and is adaptable, solution-oriented and highly creative.⁴



The average Lebanese software engineers is **27%** less costly than in GCC countries and **55%** less than in selected developed economies.⁵



02. STRONG SUPPORT NETWORK

Lebanon is home to a thriving technology ecosystem which comprises dozens of incubators, accelerators, and mentorship and training institutions, one of the highest concentration per capita in any MENA country:

11 INCUBATORS AND ACCELERATORS



10 CO-WORKING SPACES



OVER 30 MENTORSHIP AND TRAINING INSTITUTIONS



SEVERAL BUSINESS PARKS AND INNOVATION CLUSTERS

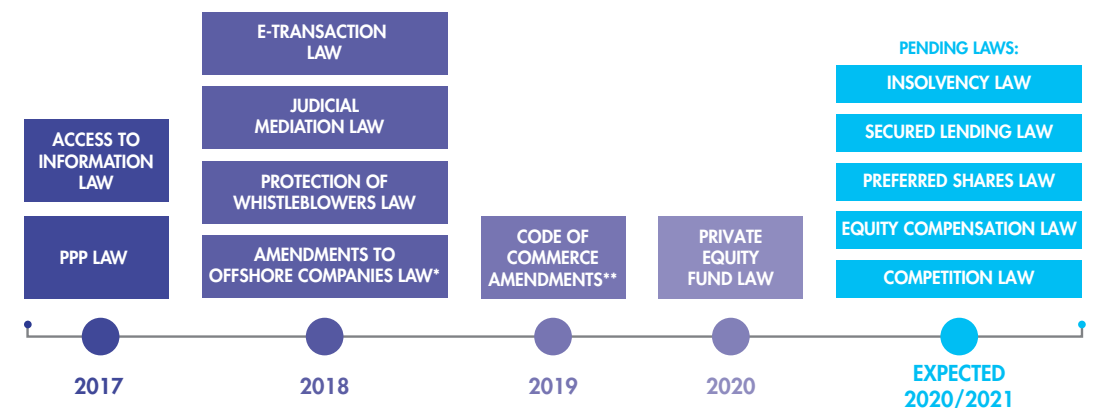


03. BUSINESS-FRIENDLY REGULATIONS

Major legislative reforms are being implemented to improve the business framework in the country. Some of these include the E-Transactions & Data Protection Law, the Judicial Mediation

Law, in addition to a series of amendments to the Code of Commerce. Similar laws are still in the pipeline awaiting Parliament approval.

RECENT BUSINESS-ENABLER LAWS APPROVED BY PARLIAMENT



*Amendments include reducing the minimum number of shareholders in an offshore company to one instead of three shareholders.

**Amendments include reducing the minimum number of shareholders in a Limited Liability Company (SARL) to one instead of three shareholders.

³ World Economic Forum, Global Competitiveness Report 2019
⁴ World Economic Forum, Global Competitiveness Report 2018
⁵ Payscale

INVESTMENT OPPORTUNITIES

04. ACCESS TO FINANCE

▶ The government, private sector, and international organizations offer various financing schemes for SMEs operating in the technology sector, including equity and grant financing, tax incentives as well as loan guarantees.

▶ There are over **10 venture capital funds** in Lebanon, many of which have emerged following the enactment of Circular 331 by the Central Bank in 2013 which released up to USD 650 million in funds for the ICT sector.



▶ Kafalat provides financial guarantees for loans of up to USD 400,000 granted by commercial banks to eligible SMEs operating in the ICT sector.

www.kafalat.com.lb

▶ The Investment Development Authority of Lebanon (IDAL) offers tax breaks on corporate income tax for up to 10 years, as well as other incentives to local and foreign companies operating in the ICT sector and meeting specific investments requirements.

www.investinlebanon.gov.lb

05. ENABLING INFRASTRUCTURE

▶ Companies operating out of Lebanon can benefit from an adequate ICT infrastructure, specifically internet which has witnessed various investments over the last decade and will continue to do so in the future.

▶ Internet penetration in Lebanon reached 94% in 2019.⁶

▶ Internet speeds have improved drastically over the last decade:

- ▶ Fixed broadband download speeds stand at 8 Mbps
- ▶ Mobile broadband download speeds stand at 45 Mbps⁷

▶ The fiber-optic network is currently under deployment and is expected to be completed across the entire Lebanese territory by 2022.

The ICT sector in Lebanon has demonstrated over the years a strong capacity for growth and a unique resilience in the face of regional economic uncertainties. Its export-oriented nature, low capital requirements, and robust regional and international demand make it an ideal sector for investment. Companies looking to set up new projects in Lebanon can take advantage of the country's many resources, including its skilled and cost-competitive workforce, to set up back offices that cater for clients around the globe. Indeed, Lebanon's competitive

edge lies in its ability to produce high added-value solutions at a relatively affordable cost.

With this in mind, a variety of opportunities exist across a broad spectrum of ICT activities. These stem in part from global trends which have been fueling local demand and spurring IT outsourcing, such as Cloud Computing and Artificial Intelligence, as well as from areas where Lebanon has traditionally specialized itself in with the support of domestic firms, such as FinTech, EdTech and HealthTech.



⁶ www.mideastmedia.org

⁷ www.speedtest.net

01. GLOBAL/REGIONAL OPPORTUNITIES FUELING IT OUTSOURCING

CLOUD COMPUTING

- ▶ **Cloud computing is a major market within the ICT sector**, and its adoption by businesses worldwide has quickly become mainstream. In 2018, global revenues stood at USD 197 billion and are expected to continue rising at an annual rate of 12.5% to reach USD 355 billion by 2022. By then, 60% of organizations will rely on cloud-managed services developed by external providers, doubling the share in 2018 and leaving room for ample investment opportunities.
- ▶ **Software as a Service (SaaS)** will remain the largest market segment due to the scalability of subscription-based software. It is expected to grow from USD 86 billion to USD 151 billion between 2018 and 2022.
- ▶ **Infrastructure as a Service (IaaS)** is another important segment, expected to reach USD 74 billion by 2022. IaaS will grow at 24% annually over the next five years, the fastest among all segments.
- ▶ Other notable segments of cloud computing include cloud-based business process services (**Business Process as a Service or BPaaS**), cloud application infrastructure services (**Platform as a Service or PaaS**), and cloud management and security services.

Source: Gartner



ARTIFICIAL INTELLIGENCE

- ▶ **AI is revolutionizing the way individual consumers and businesses interact with various forms of technology applications.** Organizations are making use of AI to extract valuable insights from data to provide innovative products and improve customer experience, thereby increasing efficiency and revenues. The global AI market size was valued at **USD 24.9 billion in 2018** and is anticipated to expand at an impressive CAGR of 46.2% from 2019 to 2025.
- ▶ **Opportunities in AI are on the rise** thanks to its rapid adoption by end-use industries such as retail, healthcare, automotive, and manufacturing. Lucrative investments are arising in segments such as machine and deep learning and natural language processing (NLP), both of which are expected to dominate the market in terms of revenue.
- ▶ **Cognitive applications** (including tagging, categorization, clustering, filtering, hypothesis generation, question answering, alerting, navigation, and visualization) and **AI platforms**, which facilitate the development of advisory, intelligent, and cognitively-enabled solutions, are also on demand.

Source: Grand View Research



ROBOTIC PROCESS AUTOMATION

- ▶ RPA offers a proven solution for companies that are constrained by challenges and inefficiencies related to legacy business systems.
- ▶ Today, the industry is growing at an unprecedented rate as businesses seek to increase productivity through automation. The global RPA market size is expected to reach USD 11 billion by 2027, expanding at an annual rate of 34% from 2020 to 2027.
- ▶ The major adopters of RPA technologies include **banking and insurance institutions, telecommunications companies, and utility companies**. These organizations traditionally have many legacy systems and choose RPA solutions to ensure full integration functionality.
- ▶ Opportunities can be found across two main segments: **Service and Software**. The service segment is projected to continue dominating the RPA market, expanding at a CAGR of 35% from 2020 to 2027.

Source: Grand View Research



02. OPPORTUNITIES DRIVEN BY LOCAL SPECIALTIES

FINTECH

- ▶ **Market Overview:** The FinTech market is a prominent one in the MENA region, and Lebanon has a strong foothold in it compared to its relatively small size. The Lebanese banking sector has been at the forefront of FinTech growth, facilitating funding to new startups and partnering with innovative ones to develop digital solutions for their business operations. That said, while the sector is quickly developing, it remains nascent with the majority of new FinTech deals being at the early stage.
- ▶ **Existing Companies:** Today, Lebanon is home to 28 companies, including startups and SMEs, involved in FinTech-related activities. This represents 9% of total MENA FinTech companies, the thirteenth largest share after the UAE and Egypt.
- ▶ **Opportunities:** As Lebanon moves towards greater deregulation in the FinTech realm under the auspices of the Central Bank of Lebanon, more opportunities are expected to unfold. Payment processing applications will continue to dominate the market. Other areas such as wealth management, capital markets technologies, InsurTech and Blockchain will also revolutionize the way digital consumers and businesses manage their finances.

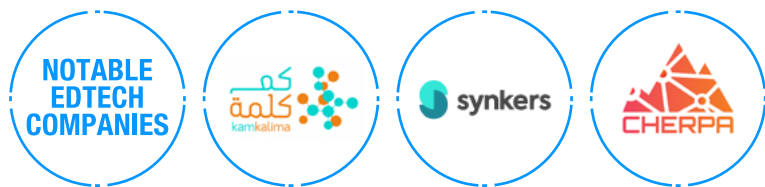
Source: IDAL ICT Database 2019



EDTECH

- ▶ **Market Overview:** EdTech is a highly promising industry in Lebanon which has been growing thanks to the country's renowned educational sector, one of the best in region. Lebanese EdTech companies are relying increasingly on innovative and advanced technologies such as AI and robotics and integrating them into the classroom.
- ▶ **Existing Companies:** Today, there are 16 EdTech startups, a number of which have gained global recognition for their solutions.
- ▶ **Opportunities:** There is a growing appetite today for Arabic educational content, notably in the GCC and rest of MENA, where a booming student population exists.

Source: IDAL ICT Database 2019



HEALTHTECH

- ▶ **Market Overview:** Lebanon is a leading healthcare hub in the Arab world, headed by dozens of prominent private and public hospitals. These institutions are fueling the sector's digitization. Regionally, the first generation of HealthTech entrepreneurs is on the rise paving the way for a vast range of entrepreneurial opportunities.
- ▶ **Existing Companies:** Lebanon is home to around 10 HealthTech startups which have developed pioneering and award-winning products.
- ▶ **Opportunities:** The future of the healthcare sector will have virtual and physical patient engagement at its core, allowing proactive reach for doctors when needed as well as convenience for patients. In particular, cloud-based practices and clinical management systems will witness a growing demand.

Source: IDAL ICT Database 2019



REGULATORY FRAMEWORK

Recognizing the impact of the legal environment on the performance of the ICT sector, the government has placed a special focus on reforming and modernizing ICT-related laws. The main regulations governing the sector are listed below.

TELECOMMUNICATIONS LAW

Law No. 431 was issued in 2002 to provide the governance framework needed to organize the telecommunications services sector and set the rules for its transfer to the private sector. The Telecommunications Regulatory Authority (TRA) was subsequently formed to regulate the liberalization of the sector, and ensure the creation of a competitive environment.

INTELLECTUAL PROPERTY LAW

The Intellectual Property Law (IP) was drafted by the Ministry of Economy and Trade (MoET), and passed as a law in 1999. Provisions under the law cover patents, industrial designs, trademarks, copyrights, unfair competition, & penalties for infringement.

INVESTMENT LAW NO. 360

IDAL offers companies engaged in the ICT sector with a set of incentives and facilitation services as per Investment Law No. 360. Companies can benefit from up to 100% exemption on corporate income tax over a period of 10 years in addition to other fiscal incentives, provided that they meet certain requirements in terms of investment size and employment generation.

E-COMMERCE BASKET OF LAWS

The Ministry of Economy and Trade drafted and presented to Parliament a basket of laws in support of the ICT sector. This basket includes amendments as well as new laws destined to enable e-commerce in the country. Laws cover the fields of e-transactions (law adopted in 2018), e-payment, consumer protection, privacy, copyright, and cyber-crimes.

USEFUL ADDRESSES & CONTACTS

Association of the Lebanese
Software Industry (ALSI)
www.alsionline.org

Beirut Digital District (BDD)
www.beirutdigitaldistrict.com

Berytech
www.beryttech.org

Investment Development
Authority of Lebanon (IDAL)
www.investinlebanon.gov.lb

Kafalat
www.kafalat.com.lb

Lebanon Softshore Cluster
www.lebanonsoftshore.com

Ministry of Economy and Trade
www.economy.gov.lb

Ministry of Telecommunications
www.mpt.gov.lb

OGERO
www.ogero.gov.lb

Office of the Minister of State for
Administrative Reform
www.omsar.gov.lb

Presidency of the Council of
Ministers, National ICT Strategy
Coordination Unit
www.ict.pcm.gov.lb

Professional Computer
Association of Lebanon (PCA)
www.pca.org.lb

Telecommunications Regulatory
Authority (TRA)
www.tra.gov.lb



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