THE ROLE OF STARTUPS IN PROMOTING THE DEVELOPMENT OF SMART CITIES – DUBAI AS A MODEL

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ARTICLE INFO	ABSTRACT
	Objective: The objective of this study is to learn about the role of start-ups in promoting the development of the smart city of Dubai, since these companies are always seeking innovative solutions to the challenges facing cities and rely on the latest methods and software used, thus helping cities to achieve the indicators that guarantee them important rank among other smart cities. **Theoretical Framework:** In this study, the basic concepts of the variables of the study were addressed by identifying the concept of start-ups, their characteristics and their importance in general, as well as by highlighting the subject of smart cities by listing some definitions and mentioning their advantages and dimensions. To then link the two variables by clarifying the relationship between startups and smart cities. **Method:** The methodology adopted for this research includes a sample of the most important start-up companies in Dubai selected from STARTUPRANKING, and the services provided by each company and its area of operation have been identified. To then determine the impact of the services provided on any indicators on which cities rely to become smarter (smart governance, smart transport, smart energy, smart technology, smart infrastructure, smart health, smart buildings and intelligent populations). Through which the role of these companies in the development of smart cities is determined. **Results and Discussion:** The results obtained revealed that Start-ups promote the development of cities by contributing to the challenges facing cities, communities and individuals by: - Ensuring a clean environment and smart transport systems that help to facilitate the movement of citizens and tourists through the use of telephones and at the lowest cost; - Strengthening cyber security to protect digital systems from threats; - Developing programs and techniques used in the educational sector, and focusing on developing the capabilities of individuals to ensure optimal use of technology; - Finding energy and environmental solutions to ensure optimum use of available resources. **Originality/Value:** This study sheds light on the importance of modern technology-based start-ups in promoting the development of smart cities. Dubai has been chosen as a model for a leading and developing Arab city that ranks first globally compared to other smart cities, and can be used as a successful experiment. In addition, the importance of both start-ups and smart cities, which are the pillars for the economic development of countries, they rely on advanced technology and the swift provision of services, ultimately facilitating life and enhancing the standard of living for their citizens. Doi: https://doi.org/10.26668/businessreview/2024.v9i5.4735

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O PAPEL DAS STARTUPS NA PROMOÇÃO DO DESENVOLVIMENTO DE CIDADES INTELIGENTES – DUBAI COMO MODELO

RESUMO

Objetivo: O objetivo deste estudo é conhecer o papel das start-ups na promoção do desenvolvimento da cidade inteligente de Dubai, uma vez que essas empresas estão sempre buscando soluções inovadoras para os desafios enfrentados pelas cidades e contam com os mais recentes métodos e softwares usados, ajudando assim as cidades a atingir os indicadores que lhes garantem uma posição importante entre outras cidades inteligentes.

Estrutura Teórica: Neste estudo, os conceitos básicos das variáveis da pesquisa foram abordados identificando o conceito de start-ups, suas características e sua importância em geral, bem como destacando o tema das cidades inteligentes, listando algumas definições e mencionando suas vantagens e dimensões. Em seguida, associar as duas variáveis, esclarecendo a relação entre startups e cidades inteligentes.

Método: A metodologia adotada para esta pesquisa inclui uma amostra das empresas iniciantes mais importantes de Dubai selecionadas do STARTUPRANKING, e os serviços prestados por cada empresa e sua área de operação foram identificados. Em seguida, determinamos o impacto dos serviços prestados em quaisquer indicadores dos quais as cidades dependem para se tornarem mais inteligentes (governança inteligente, transporte inteligente, energia inteligente, tecnologia inteligente, infraestrutura inteligente, saúde inteligente, edifícios inteligentes e populações inteligentes). Com isso, é possível determinar o papel dessas empresas no desenvolvimento de cidades inteligentes.

Resultados e Discussão: Os resultados obtidos revelaram que as start-ups promovem o desenvolvimento das cidades ao contribuir para os desafios enfrentados pelas cidades, comunidades e indivíduos:
- Garantir um ambiente limpo e sistemas de transporte inteligentes que ajudem a facilitar o deslocamento de cidadãos e turistas por meio do uso de telefones e com o menor custo;
- Fortalecimento da segurança cibernética para proteger os sistemas digitais contra ameaças;
- Desenvolver programas e técnicas usados no setor educacional e concentrar-se no desenvolvimento das capacidades dos indivíduos para garantir o uso ideal da tecnologia;
- Encontrar soluções energéticas e ambientais para garantir o uso ideal dos recursos disponíveis.

Originalidade/Valor: Este estudo esclarece a importância das start-ups modernas de base tecnológica na promoção do desenvolvimento de cidades inteligentes. Dubai foi escolhida como modelo de uma cidade árabe líder e em desenvolvimento, que ocupa o primeiro lugar no ranking mundial em comparação com outras cidades inteligentes, e pode ser usada como um experimento bem-sucedido. Além disso, a importância das startups e das cidades inteligentes, que são os pilares do desenvolvimento econômico dos países, depende da tecnologia avançada e da rápida prestação de serviços, o que acaba facilitando a vida e melhorando o padrão de vida dos cidadãos.

Palavras-chave: Startups, Cidades Inteligentes, IMD2024, Dubai City.

EL PAPEL DE LAS STARTUPS EN EL DESARROLLO DE LAS CIUDADES INTELIGENTES – DUBAI COMO MODELO

RESUMEN

Objetivo: El objetivo de este estudio es conocer el papel de las start-ups en la promoción del desarrollo de la ciudad inteligente de Dubai, ya que estas empresas siempre están buscando soluciones innovadoras a los retos a los que se enfrentan las ciudades y se basan en los últimos métodos y software utilizados, ayudando así a las ciudades a alcanzar los indicadores que les garanticen un rango importante entre otras ciudades inteligentes.

Marco Teórico: En este estudio se abordaron los conceptos básicos de las variables del estudio identificando el concepto de start-ups, sus características y su importancia en general, así como destacando el tema de las smart cities enumerando algunas definiciones y mencionando sus ventajas y dimensiones. Para luego vincular las dos variables aclarando la relación entre startups y ciudades inteligentes.

Metodología: La metodología adoptada para esta investigación incluye una muestra de las startups más importantes de Dubái seleccionadas a partir de STARTUPRANKING, y se han identificado los servicios prestados por cada empresa y su área de actuación. Para, a continuación, determinar el impacto de los servicios prestados en cualquiera de los indicadores en los que se basan las ciudades para ser más inteligentes (gobernanza inteligente, transporte inteligente, energía inteligente, tecnología inteligente, infraestructuras inteligentes, sanidad inteligente, edificios inteligentes y poblaciones inteligentes). A través de los cuales se determina el papel de estas empresas en el desarrollo de ciudades inteligentes.

Resultados y Discusión: Los resultados obtenidos revelaron que las Start-ups promueven el desarrollo de las ciudades contribuyendo a los retos a los que se enfrentan las ciudades, las comunidades y los individuos mediante:
- Garantizando un medio ambiente limpio y sistemas de transporte inteligentes que ayuden a facilitar el desplazamiento de ciudadanos y turistas mediante el uso de teléfonos y al menor coste;

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- Reforzando la ciberseguridad para proteger los sistemas digitales de las amenazas;
- Desarrollar programas y técnicas utilizados en el sector educativo, y centrarse en el desarrollo de las capacidades de las personas para garantizar un uso óptimo de la tecnología;
- Encontrar soluciones energéticas y medioambientales para garantizar un uso óptimo de los recursos disponibles.
Originalidad/Valor: Este estudio arroja luz sobre la importancia de las empresas emergentes de base tecnológica moderna para promover el desarrollo de ciudades inteligentes. Dubai ha sido elegida como modelo de ciudad árabe líder y en desarrollo que ocupa el primer puesto mundial en comparación con otras ciudades inteligentes, y puede utilizarse como experimento de éxito. Además, la importancia tanto de las startups como de las ciudades inteligentes, que son los pilares para el desarrollo económico de los países, se basan en la tecnología avanzada y en la rápida prestación de servicios, lo que en última instancia facilita la vida y mejora el nivel de vida de sus ciudadanos.

Palabras clave: Startups, Ciudades Inteligentes, IMD2024, Ciudad de Dubai.

1 INTRODUCTION

In recent years, the world has witnessed a clear transformation and tangible development in the economies of all countries, both developed and developing. These countries have focused on the use of information technology and the Internet, as well as the adoption of creativity and innovation in various fields, in order to improve infrastructure services, raise the standard of living of the population, and promote the country. Smart cities have emerged as a vital model for this transformation in many countries.

Startups also play an important role in transforming existing cities into smart cities or creating new smart cities. They stem from unique innovative ideas that are flexible, fast-growing, and adaptable, relying on state-of-the-art technology and advanced solutions to address the challenges faced by cities.

Dubai stands out as one of the most intelligent Arab and global countries in adopting the concept of smart cities. It intensifies efforts between the government, the private sector, and startups to achieve the visions and goals that have been set.

Based on the above, the main problems we aim to address are:

How do start-ups contribute to the development of the smart city of Dubai?

The main problem can be further divided into the following sub-questions:

1. what is the status of startups in Dubai's intelligent Arab and international city?

2. what is the status of Dubai as an intelligent Arab and international city?

3. in what areas do the most important startups contribute to the development of Dubai as a smart city?

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1.1 SIGNIFICANCE OF THE STUDY

The importance of this study lies in recognizing the significance of both start-ups and smart cities as fundamental pillars for the economic development of countries. They rely on advanced technology and the swift provision of services, ultimately facilitating life and enhancing the standard of living for their citizens.

1.2 OBJECTIVES OF THE RESEARCH

This study aims to identify and explore the following aspects:

- **startups**: their importance, characteristics, and role in economic development;
- **smart cities:** their significance, advantages, and key pillars;
- **the relationship between startups and smart cities**: how startups contribute to the development and transformation of smart cities.

The most significant startups in Dubai City and the services they provide.

1.3 SEARCHMETHODOLOGY

To capture all the variables of this study, the descriptive approach was used to describe the variables of the theoretical study, and the analytical approach by analysing the statistics of startups and the smart position of Dubai City.

2 GENERALS ON STARTUPS

2.1 DEFINITION OF STARTUPS

The definitions provided to startups have been multiple, including:

- **Larousse's dictionary** defined it as innovative young companies, especially in the new technology sector[1];
- as **Paul Graham** defined it as the company that was created with the primary objective of growth, it does not matter how modern itis to create or use technology and risk as much as "growth" because everything else is linked to startups will grow[2];

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[1] Fetni, S. & Barhoum, H. (2022). Start-ups and business accelerators in Algeria: financing and marketing. *Valahian journal of economicstudies*, *13*(27), Issue 2, p. 20.
[2] Paul Graham, 2012.

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- **Amy Fontinelle** considers that the startup is a newly developed company, offering a new competitive service or product on the market[3];

These tariffs share the fact that the startup is a new organization that seeks to grow continuously through the provision of innovative, technology-based products.

2.2 CHARACTERISTICS OF STARTUPS

What distinguishes firms from other firms are:[4]

- they are newly young startups seeking to develop and grow on a continuous basis;
- it is fast growing: this is the goal for which was established, which increases productivity and revenues and minimizes costs, thereby raising profitability;
- they rely on advanced technology and technology.

Startups are therefore characterized by their rapid response to changes, because they are based on creativity, intelligence and modern technology.

2.3 THE IMPORTANCE OF STARTUPS

Startups are of great importance and can be summarized as follows:[5]

- **job creation:** startups are characterized by rapid growth, leading to increase productivity and their expansion in a short time, which will inevitably lead to the creation of new jobs;
- **increased production:** Studies have shown that modern start-ups are more productive than other firms because of their high technology use;
- **improving the lives of members of society:** They depend on stimulating people to innovate and transform ideas into companies that contribute to the development of society and change the way of life;

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[3] Mekhnache, Y. (2024). *The role of modern financing mechanisms in dealing with financial imbalances of start-ups: domestic and foreign experiences*. (Ph.D. Thesis on Foundation Finance). Faculty of Economics, Commerce and Management Sciences, Setif 1, Algiers, p. 4.

[4]. GazalaL'Amish. (2023, March). Startups and Stimulation of Youth Employment. *Journal of Legal and Social Sciences*, University of the Gulf, Algiers, *VIII*(1), 1019.

[5]. Bouzerb, N. & Khawald, A. (2021). *Financing of startups in Algeria Between Reality and Hope - An Analytical Study, An International Group Book entitled The Problem of Financing startups in Algeria between Traditional and New Methods*. Faculty of Economics, Commerce and Management Sciences, University of Jigil, Algeria. p. 362.

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- **creating new markets:** As startups depend on rapid growth, innovation in products and the use of technology, this creates markets for previously non-existent or competitive products in global markets that promote the economy;
- **contribution to research and development:** by encouraging students and researchers to transform scientific research outputs using advanced techniques and knowledge into projects that contribute to the country ' s development.

3 OVERVIEW OF SMART CITIES

In view of the many problems facing human beings in traditional cities, the difficulty of mobility, overcrowding and the slow pace of life, it has been necessary to move towards the development of these cities and to facilitate human life through the introduction of information and communication technology and the Internet into the old infrastructure. That's where the smart cities came from.

3.1 DEFINITION OF SMART CITIES

The definitions offered to smart cities varied according to the perspective of the thinker, researcher or body that provided the definition. They were all viewed from a given perspective. The term smart cities were the most comprehensive compared to the rest of the labels. The most important definitions can be described as follows:

- **the International Telecommunication Union (ITU)** has defined it as a city that relies on technology and technology to facilitate life and services for current and future individuals in various aspects of life;[6]
- as defined by **the European Union** as cities with three main components combined (city, industry and citizens) for urban improvement throughts focus on key aspects of sustainable development.[7]

From the above, it is clear to us that smart cities are based on technology and are active in them: citizens, industry and the city, whose goal is to facilitate living and ensure the sustainability of present and future generations.

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[6] Makhlouf, O. (2020). The Need for Smart Cities to Achieve Sustainable Development: Opportunities and Challenges. *Construction and Building Journal*, *4*(01).

[7] Mesabih, F. N. (2022, December). Smart Cities: Towards a New Perspective on Sustainable Development 2030. *Algerian and Comparative Public Law Journal*, *VIII*(02),789.

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3.2   THE ADVANTAGES OF SMART CITIES

The transition to smart cities and the identification of the development of life in traditional cities have many advantages, the most important of which are summarized in:[8]
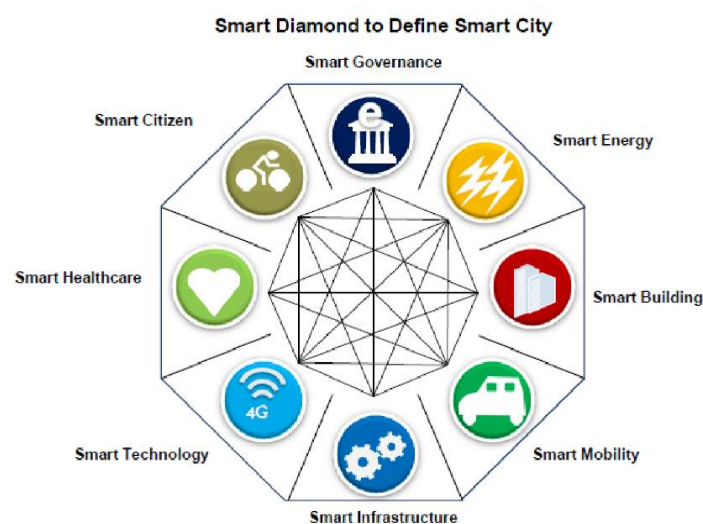
- smart cities provide a clean, pollution-free environment for present and future populations;
- to facilitate the movement of citizens through the use of numerous applications of various means of transport at the lowest cost;
- to provide smart buildings based on intelligent energy systems; Improving health sector services and quality of education sector outputs;
- to provide protection and internal security through the use of electronic systems that speed up the reporting process.

3.3 SMART CITY DIMENSIONS

Can be illustrated by the figure below for a smart diamond consisting of eight key elements:

Figure 1

Smart diamond to define smart city

Source: Khaund (2013, p. 7).

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[8] Bouamusha, H. (2022). Singapore ' s experience in smart cities. *Economic Research Journal*, *17*(02), 185.

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Through the figure above, it is clear to us that smart cities are based on the following dimensions:

- **smart governance:** It means that applications and tools based on technological infrastructure are accessible to all, so that the city's administration is properly managed;

- **smart transport:** to improve the quality of transport services to ensure the safety of the population and to facilitate their movement using applications, and to rationalize the use of transport through the promotion of walking and the use of bicycles and public transport to preserve the environment from pollution.

- **smart energy**: through the use of smart networks, smart meters and the storage of smart energy;[9]

- **smart technology:** use of fourth-generation technology communication, free Wi-Fi Internet, speed of downloading data;

- **smart infrastructure:** digital control of infrastructure, digital management of water and waste...;

- **smart health:** through the use of smart medical devices, smart health-care techniques and electronic health systems;[10]

- **smart buildings:** buildings that support sustainable development requirements have the advantage of using renewable energies to rationalize energy consumption, control temperatures and lights, and protect the environment;

- **the intelligent population:** In other words, the intelligent inhabitants of the city have high educational skills that allow them to understand the techniques used, thus strengthening the relationship of cooperation between citizens and decisionmakers in the city.[11]

4 THE RELATIONSHIP OF START-UPS TO SMART CITIES

Modern smart cities rely heavily on innovative ways and technological solutions. Start-ups play an important role in implementing smart strategies in cities and can contribute significantly to the development of the techniques and programmes used, there by achieving

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[9] Noui, A. B. (2021, December) Smart Cities: Global and Arab Achievements and Experiences. *Social Empowerment Journal*, *03*(04), 22.
[10].Khaund, K. (2013, Nov 20). Smart Cities – From Concept to Reality, An intrinsic union of connectivity. *Sustainability and Profitability*, 8.
[11] Mesabih, op. cit., p. 791.

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their goals of efficiency, sustainability and improving the quality of life of the population. These companies have evolved through the development of technical solutions to improve transport systems, the implementation of data control systems to promote the environment and water management, the establishment of models for the optimal use of resources, and the establishment of telephone applications to improve interaction between the population and authorities. It therefore promotes inclusive development in smart cities through the delivery and delivery of services to all segments of society to make them more sustainable and efficient.

Cooperation between start-ups and the public sector has been instrumental in identifying new paths for development. The agility and technological advancements of Start-ups can expedite the implementation of innovative solutions. When supported by the government, these start-ups create an enabling environment for innovation and accelerate economic growth.

The relationship between start-ups and smart cities, based on smart governments, is characterized by reciprocal interaction. This interaction contributes to the progress of cities towards sustainability and technological development.

5 THE REALITY OF START-UPS AND THEIR CONTRIBUTION TO THE DEVELOPMENT OF THE SMART CITY OF DUBAI:

5.1 THE REALITY OF START-UPS IN THE UNITED ARAB EMIRATES

The United Arab Emirates, encompassing all its cities, holds a prominent position in terms of economic and commercial significance, as well as its overall development and progress across various sectors. One sector that receives significant attention is the Start-ups sector, which plays a crucial role in the technological advancement of the country. Due to the substantial interest in this sector, the number of start-ups has consistently grown over time. The following table presents a global overview of the number and status of these companies:

Table 1

Global overview of the number and status of these companies

Rank	State	N° of Startups
1	United States	79.679
2	India	16.737
3	United Kingdom	7.227
4	Canada	3.946
5	Australia	2.883

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6	Indonesia	2.625
7	Germany	2.488
8	France	1.679
9	Spain	1.511
10	United Arab Emirates	1.242
11	Brazil	1.213
12	Singapore	1.196
13	Netherlands	1.134
14	Israel	992
15	Italy	972
16	Switzerland	826
17	Nigeria	819
18	Algeria	815
19	Sweden	737
20	Peru	707

Source: https://www.startupranking.com/countries

According to the table provided, the United Arab Emirates is ranked first among Arabic countries and tenth globally in terms of the number of start-ups, with a total of 1242. Among the cities within the United Arab Emirates, Dubai boasts the highest number of such companies, securing the top position among the seven cities considered. The ranking of countries and cities is based on Startup Ranking, which utilizes the SR Score as a ranking metric. This score takes into account the online presence and social impact of the start-up company, reflecting its significance in the digital space.

This rank demonstrates the efforts made by the State to increase the number of start-up companies, which have an important role to play in overcoming challenges and developing technologies used in cities. This contributes to the achievement of their strategic objectives, the advancement of the economy, the promotion of development and the contribution to the development of countries.

This type of company has special characteristics, the most important of which are its rapid growth, flexibility and technological progress.

5.2 DUBAI CITY'S GLOBAL POSITION IN THE SMART CITIES INDEX 2024

The city of Dubai is at the forefront of the Arab States as a smart city that forms the basis of smart initiatives and strategies. Technical innovation is the main engine that provides citizens with access to various services. The transformation of Dubai into a smart city is the result of the successful implementation of e-government initiatives. This new trend in the management of Dubai has transformed the majority of its facilities into intelligent institutions

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that rely on smart applications. This transformation has also covered all aspects of the life of the citizen in the home, clinic, neighborhoods, transportation and others, ensuring that the environment and well-being of present and future generations are preserved.[12]

The Dubai Plan 2021 aimed to make the Principality smart and sustainable through the strategy of converting 1,000 government services into electronic services for the following key sectors: transport, infrastructure, communications, financial services, city planning and electricity. The next table shows the status of Dubai as a smart city.

Table 2

Status of Dubai as a smart city

City	Smart cityRink 2024	Smart cityRink 2023	Smart cityRink 2021	Smart cityRink 2020	Smart cityRink 2019
Zurich	1	1	1	1	1
Oslo	2	2	2	2	2
Canberra	3	3	/	/	/
Geneva	4	9	6	8	7
Singapore	5	7	7	7	10
Copenhagen	6	4	5	3	4
Lausanne	7	5	4	/	/
London	8	6	3	10	3
Helsinki	9	8	9	5	6
Abu Dhabi	10	13	12	14	16
Stokholm	11	10	11	9	9
Dubai	12	17	14	19	13
Beijing	13	12	17	22	30
Hamburg	14	11	8	6	/
Prague	15	14	10	4	8
Taipei City	16	29	25	23	24
Seoul	17	16	18	20	23
Amsterdam	18	15	13	11	11
Shanghai	19	25	32	42	37
Hong Kong	20	19	33	34	38

Source: IMD Smart city index 2023, https://imd.cld.bz/IMD-Smart-City-Index-Report-20231/14/ IMD Smart city index 2024, https://www.imd.org/smart-city-observatory /home/rankings/#_tab_Rank

The city of Dubai ranked second in the Arab world after Abu Dhabi as the smartest city in 2024 and twelfth in the world out of 142 cities listed in the Smart City Index IMD 2024, one of the world ' s most important indicators that assess the intelligence of cities around the world in accordance with internationally recognized global standards since 2019. It depends not on the techniques themselves but on the development, prosperity, improvement in their lives and solutions to the problems they face in their cities. Since 2019, Dubai has been among the 20 most intelligent cities around the world.

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[12] Ben-Noui, op. cit., p. 28.

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All of this shows Dubai's adoption of modern technology to promote all sectors and improve smart city indicators in order to achieve the goals set and implement the plans designed to reach the most developed and intelligent city.

5.3 CONTRIBUTION OF START-UP COMPANIES TO THE DEVELOPMENT OF THE SMART CITY OF DUBAI

Dubai is emerging in a world where innovation is accelerating and ideas are competing. With increasing interest in entrepreneurship and the development of technological infrastructure, Start-ups in Dubai are moving steadily towards success and identifying new paths in various industries.

Dubai currently has a variety of start-up companies active in various areas, the most important of which are the following:

Table 3

Start-up companies active in various areas

The smart city index	Services	Name of Startup	Rank
Services that facilitate individuals ' lives	A front that aims to increase the sale of food by offering it in the best way possible. Services: digital lists, Internet demand, electronic payment, order management	My Menu	1
Electronic commerce	Electronic shopping platform that provides: Internet shopping, low-priced products, fast and secure delivery.	Cartlow	2
Economy, promoting entrepreneurship and attracting investors	A leading Arab platform for entrepreneurship and investment provides: Collection and analysis of data on Start-ups, investment opportunities, marketing and product advertising for start-ups, training programmes to develop and enhance the success of start-ups	Magnitt	3
Smart and advanced education	Technology platform that provides: Establishment of courses, marketing and electronic sale of courses, distance education	Gurucan	4
Enhancing the green environment and	In the field of the sale of plants: Selling it online, helping care for each plant provided, organizing	Plantshop.me	5

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improving the quality of life	**awareness programs to preserve the environment**		
Smart health and services for the individual	**Provides the best specialized and qualified health-care services and various medical services at home**	**AIMS Healthcare**	6
Lighting and smart energy	**Leading company in retailing office equipment and specialized technology products (infrared windows, thermal cameras, frequency converters, projectors) with guaranteed low price**	**Dubai Machine.com**	7
Modern and advanced technology	**A site that specializes in introducing everything new in the world of technology, the world of hardware, the world of videogames...**	**HDR247**	8
Facilitation of movement of persons	**Electronic 24-hour parking platform using a telephone application with the possibility of using artificial intelligence techniques to improve services**	**Finalrentals.com**	9

Source: https://www.startupranking.com/top/dubayy

One of the most important startups in Dubai was listed in the table above, according to the location of Startup Ranking. The fields of operation of these companies have been diversified so as to identify the contribution of each type to the improvement of a smart city indicator (economics, education, health, environment, mobility, technology, trade and livelihood).

Since the city of Dubai has taken up the challenge to become the smartest city, efforts have been made and efforts have been made by leading companies in the field of modern and advanced technology, which depend on creativity in the face of challenges and problems, through which they seek to strengthen the factors and principles that guarantee their progress.

What has been mentioned is only a sample of the role and importance of start-ups in Dubai, so the large number of these companies are working together to ensure development and intelligence indicators, thereby promoting cities and nations and increasing their development and paper work through the use of technology for all that is useful. This is working to develop individuals, improve their lives and change their way of life for the better - and this is the current goal of smart cities.

6 CONCLUSION

The city of Dubai is one of the most important Arab cities that strives to develop through the use of advanced technologies and software and the reliance on innovation and modern

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technology in various fields in order to reach the smartest city in the world. Start-ups also rely on creativity, innovation and aberration in finding solutions, overcoming obstacles to corporate advancement and ensuring their continued growth. The relationship between start-ups and smart cities is complementary; each party gives the second what it needs to promote the economy and the country ' s growth.

6.1 AMONG THE MOST IMPORTANT FINDINGS OF THIS STUDY ARE

- start-ups have special characteristics as a result of their growth, development and reliance on modern technology;
- in order for the city to be classified as smart, it must meet certain conditions and indicators;
- the most important indicators through which smart cities are classified and arranged are smart economy, smart government, living and people, smart transport, smart energy and smart environment;
- the need to strengthen cooperation between the public sector and the private sector in order to reflect programmes designed to reach the best intelligent city;
- start-ups promote the development of cities by contributing to the challenges facing cities, communities and individuals by:
  - ensuring a clean environment and smart transport systems that help to facilitate the movement of citizens and tourists through the use of telephones and at the lowest cost;
  - strengthening cyber security to protect digital systems from threats;
  - developing programmes and techniques used in the educational sector, and focusing on developing the capabilities of individuals to ensure optimal use of technology;
  - finding energy and environmental solutions to ensure optimum use of available resources.

6.2 THE STUDY THEREFORE RECOMMENDED THAT

- intensify efforts to move from traditional to intelligent cities;
- to provide material support for the advancement of all sectors and the development of their potential;

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- universalization of modern technologies, programs and media and communication technologies;

- care for the health, education and education of members of society, as itis the intelligent individual who is involved in the transition to intelligent cities;

- the need for cooperation between the government and private sectors;

- the need to adapt laws and legislation to reduce the burden on innovative entrepreneurs and to focus on financing their investments;

- care to provide an appropriate business environment and supporting infrastructure for the establishment of start-ups, and to attract entrepreneurs and investors to invest in the country;

- providing support and escorts to start-ups such as business incubators;

- the need to facilitate procedures for the establishment of start-up companies and to ease their fiscal burden.

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