Sustainability Report

Telecommunications and Digital
Government Regulatory Authority (TDRA)

November 2021

هيئة تنظيم الاتصالات والحكومة الرقمية
**TELECOMMUNICATIONS AND DIGITAL
GOVERNMENT REGULATORY AUTHORITY**

Table of
Content

About
TDRA

The UAE Telecommunications and Digital Government Regulatory Authority was established under Federal Decree-Law No. 3 of 2003 (Telecommunications Law) on the regulation of the telecommunications sector in the UAE. Since its inception, TDRA has exceeded expectations by achieving its goals in a record time.

The role of TDRA revolves around two areas:

1- Regulating the telecommunications sector,
2- And enabling government entities in the field of digital transformation.

TDRA has been entrusted with many responsibilities related to the ICT sector and inside and outside the UAE. TDRA is also responsible for representing the UAE in many international forums, as it was elected to a seat in the ITU Council of the United Nations for the years 2006-2010. TDRA is a member of the Arab Regulators Network of Telecommunications and Information Technologies (Aregnet)

Gulf Cooperation Council. Among the objectives that the Authority seeks to achieve when exercising its competencies in accordance with the provisions of the law are:

Ensure the provision of telecommunications services throughout the country to meet the needs of those who wish to make use of such services.

Develop the level of service provided by the telecommunications sector in order to achieve the interests of subscribers.

Ensure that licensees adhere to quality standards of performance and to the terms and conditions stipulated in the licenses granted to them.

Encourage, promote, and develop the ICT industry in the country.

Develop and modernize the telecommunications system in the country through training, enabling and establishing related educational institutions, and obtaining the latest ICT devices, equipment, and facilities.

Develop and ensure the implementation of the mGovernment initiatives' programs, and enhancing the use of ICT in government entities.

Develop related policies and standards, and follow-up on government entities commitment to these standards.

Prepare an attractive electronic governmental environment in the country.

Formulate and implement a national mGovernment plan.

Achieve the objectives of the mGovernment Services Index, one of the national agenda indicators emanating from the UAE Vision 2021.

Assist government entities to develop their smart transformation programs.

Enhance e-presence of the government in the UAE through the official portals.

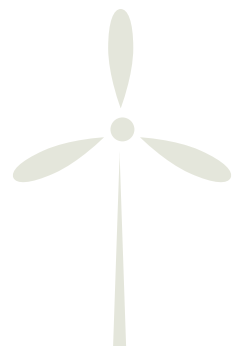Promote e-participation in coordination with relevant government entities.

Vision

The UAE is a global leading country in ICT

Mission

We strive to be a leading ICT sector organization in the United Arab Emirates, committed to maintaining positive competition to protect the interests of subscribers, and promoting the electronic transformation of federal entities and their services, by relying on national competencies to apply best international standards and practices in supervision of the sector and encourage innovation and investment.

Corporate Values

- **Leadership:** We nurture innovation and creativity, assume leadership and effectively influence the support and development of the Sector.

- **Customer Happiness:** We strive to improve our customers' happiness through our commitment to the continuous improvement and development of the quality of our services.

- **Empowerment:** We endeavor to empower our employees in decision-making and participation in achieving our goals within inspiring work environment.

- **Collaboration and Interaction:** We work constructively with the concerned to develop and implement work mechanisms (internally and externally).

- **Commitment:** We are committed towards our responsibilities to the UAE in providing best available technologies for the Sector.

- **Sustainability:** We endeavor to have a positive influence on all stakeholders by maintaining a sustainable business model.

Director General Message

ICT has become a major factor in driving development in various vital sectors. It represents the cornerstone of plans, projects and sustainability strategies in the UAE, due to its importance in the process of digital transformation towards a future based on the Fourth Industrial Revolution and the digital knowledge economy and society.

Digital transformation, which is part of TDRA's strategic tasks, is in itself an endeavor towards sustainability, as it means, among many others, saving hundreds of millions of papers by switching to paperless transactions, and it also means reducing thousands of trips to workplaces and service centers, which result in reduction of carbon dioxide and greenhouse gas emissions, and mitigation of global warming.

Based on the exceptional importance of sustainability, TDRA strives to ensure the sustainability of the ICT sector for future generations by including sustainability as a main value and constantly integrating it into the business model.

TDRA is also committed to the directives of the UAE Government towards ensuring the continuity of sustainable development, seeking to protect the environment and achieving a balance between economic and social development. TDRA also seeks to achieve the objectives of the National Agenda for the UAE Vision 2021, which provides for achieving a sustainable environment in terms of air quality, preserving water resources, increasing reliance on clean energy and applying green development.

Today, we in the UAE are proud of our achievements in the field of sustainability, as residents of the UAE can benefit from more than 10,000 smart services, using the UAE Pass, digital signature, and digital Vault, and the best is yet to come.

Eng.
Majed Sultan Al Mesmar
Director General

Strategic Directions

MOHAMMED BIN RASHID GOVERNMENT EXCELLENCE AWARD

VISION 2021 UNITED ARAB EMIRATES

UNDESA

National Program for Happiness and Positivity — Happy UAE

mgovernment

E-GOVERNMENT SURVEY 2016

WORLD ECONOMIC FORUM — The Global Competitiveness Report 2016-2017

ITU

WSIS FORUM

OECD

Strategic Objectives

Developing a fair regulatory environment for the ICT sector in UAE to promote competitiveness and effective sustainability

Strategic synergy of TDRA with national UAE strategies and trends

Improving the quality of services provided in the ICT sector in the UAE to keep abreast with the latest developments in the telecommunications sector

Fostering a culture of innovation in the corporate work environment

Leadership in the digital infrastructure of the UAE

Ensuring the provision of all administrative services in accordance with standards of quality, efficiency and transparency

Enhancing a smart lifestyle in the UAE
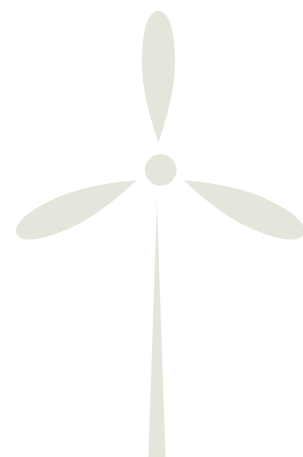
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Strategic synergy
Of TDRA with national UAE strategies and trends

OBJECTIVE	Developing a fair regulatory environment for the ICT sector in UAE to promote competitiveness and effective sustainability	Improving the quality of services provided in the ICT sector in the UAE to keep abreast with the latest developments in the telecommunications sector	Leadership in the smart technical infrastructure in the UAE	Enhancing a smart lifestyle in the UAE	Ensuring that all administrative services are in accordance with standards of quality, efficiency and transparency	Fostering a culture of innovation in the corporate work environment
SYNERGY WITH STRATEGIES						
UAE Strategy 2021	✔	✔	✔	✔	✔	✔
Future Foresight Strategy	✔	✔	✔	✔	✔	✔
Innovation Strategy	✔	✔	✔	✔	✔	✔
Happiness & Wellbeing Strategy	✔	✔	✔	✔	✔	
Cybersecurity Strategy	✔	✔	✔		✔	
Youth Strategy					✔	
Sustainability Strategy	✔	✔	✔	✔	✔	✔
Advanced Skills Strategy	✔	✔	✔	✔	✔	✔
Emirates Blockchain Strategy 2021			✔	✔		
UAE Soft Power Strategy		✔	✔	✔		✔
UAE Strategy for the Fourth Industrial Revolution		✔	✔	✔		
UAE Strategy for Artificial Intelligence	✔	✔	✔	✔		
National Literacy strategy					✔	
National Strategy for the Year of Giving					✔	
National Tolerance Program		✔			✔	
The National Employment Strategy 2031		✔		✔		
The National Policy for Empowering People of Determination		✔			✔	✔
National strategy for advanced innovation	✔	✔		✔	✔	✔

Global Certifications

ISO9001:2015
Quality Management System

ISO14001:2015
Environment Management System

ISO45001:2018
Occupational health and safety management systems

ISO22301:2019
Business Continuity Management System

ISO31000:2018
Risks management System

ISO20000-1:2018
Information Technology Service Management

ISO27001:2013
Information Security Management System

ISO10002:2018
Customer Satisfaction Complaints Handling

ISO10001:2018
Customer Satisfaction Code of Conduct

ISO10003:2018
Customer Satisfaction Disputes Resolution

ISO18295-1:2017
Customer Contact Centers

ISO10015:2019
Competence Management and People Development

ISO30405:2016
Guidelines on Recruitment

ISO30408:2016
Guidelines on Human Governance

ISO30408:2016
Guidelines on Human Governance

ISO55001:2014
Assets Management System

ISO50001:2011
Energy Management System

ISO20400:2019
Procurement Sustainability System

ISO17020:2012
Inspection Management System

ISO 17025:2017
Competence of testing and calibration laboratories

ISO17065:2012
Conformity Assessment

ISO21500:2012
Project Management System

BS13500:2013
Delivering effective governance of organizations

TS16555-1:2013
Innovation Management System

BS95009:2019
Public Sector Procurement

PAS7070:2016
Benchmarking Management System

BS45005:2020
Safe working during the COVID-19 pandemic

BS 8900-1
Managing sustainable development of organizations

Governance Structure

BOARD OF DIRECTORS

Chairman, TDRA Board of Directors

H.E. Talal Humaid Belhoul

Board Members	
H.E. Ahmed Alneyadi	H.E. Noura Mohammad Al Marzouqi
H.E. Walid Falah Al Mansoorie	H.E. Dr. Mohammad Hamad AlKuwaiti
H.E. Rashed Mohamed Al Mutawaa	H.E. Shamsa Jaber Al Falasi
H.E. Saeed bin Abid Al Muhairi	Raed Abdulla Musallam Al Jneibi

Board of Directors
and Board of Committees

Corporate Governance

>

Behaviour & Ethics	Stakeholder Engagement	Decision Making & Planning	Organizational Structure & Processes	Board Processes, Policies & Infrastructure
Capacity Building	Lines of Defense	Disclosure & Transparency	Sustiainability	

>

Mission & Strategy Statement	Risk Management Model	Policies, Procedure & Process Ownership		Governance Training
Core Values	Code of Ethics	Delegation Authority		Corporate Social Responsibility

> **Inform Decision-Making to Achieve Business Objectives**

Sustainability

As a work culture

Sustainability at TDRA is a part of our work culture, as we restlessly strive to make a positive impact on our community by providing a sustainable work environment that motivates innovation and creativity within TDRA departments and sections, and launching relevant Corporate Social Responsibility campaigns.

Future Foresight
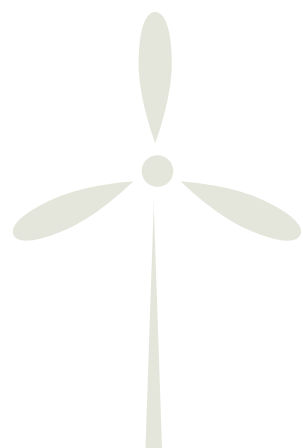Strategic Objectives
Projects

Resources and Properties
Business Continuity
Innovation
Corporate Sustainability

Strategic Plan

Quality Systems

Governance

Risk Classification Criteria

Board of Directors
External Auditors
Internal Audit
ISO Robot

Finance Management
Regulation & Commitment
Reputation & Society
Business Continuity
Employee Satisfaction

TDRA Sustainability Policy

Our sustainability policy focuses on enhancing sustainable development through our pursued projects, processes and services by:

- Developing laws, legislations and regulations, as required, to ensure sustainability of the ICT, mGovernment and cybersecurity sectors in the UAE.
- Ensuring continuous engagement of all relevant stakeholders affected by TDRA's business.
- Providing proactive, accessible and effective services and focusing on customer happiness with services provided by licensees.
- Maintaining a respectful, safe and healthy work environment for TDRA staff.
- Enabling and developing employees towards using innovative ways to support TDRA's activities economically, socially and environmentally.

Sustainable Development Goals & UAE National Agenda

The Sustainable Development Goals (SDGs) are a set of social, economic and environmental goals that the international community has committed to achieve by 2030. The SDG framework consists of 17 goals, of which TDRA contributes in 10 through various initiatives. Our impact on the goals was analyzed through a matrix that shows our main area of contribution:

- We ensure the health and safety to our stakeholders by developing policies and procedures in line with best practices.
- We promote health and well-being through initiatives for our employees and customers.
- TDRA's ICT Fund has launched "BETHA program" that aims to enhance the national education sector by supporting UAE academically distinguished cadres to drive the country's education in ICT related disciplines, in order to meet the sector's annually growing needs, as well as the increasing demand for ICT specialized national human resources.
- Women represent 40% of TDRA's workforce and we are constantly working toward increasing this percentage as per our wise leadership directions.
- TDRA's laws and regulations support equality and give women all their rights.
- TDRA strives to use energy in the most efficient, cost-effective, and environmentally responsible manner possible. We are committed to reducing Greenhouse gases (GHG) and Carbon Dioxide (CO_2) emissions via proportionally reducing energy consumption, while demonstrating commitment to a sustainable infrastructure by using efficient load feeders and smart monitoring systems, maximizing energy performance, lowering operating expenses, and increasing shareholder value by the efficient, active and responsible energy consumption management.

Matrix of Institutional
# Sustainability Priorities

TDRA Materiality Matrix

Health And Safety	Harmful Radiation	Green Building
Equality	Training & Development	Carbon Emission
Governance & Compliance	Customer Experience	E-waste
Consumer Protection	Building Capabilities	Supporting Community

Emiratization Youth	Coverage	Water Consumption
Empowerment	Innovation & R&D	Electricity Consumption
Data Security & Protection	Ethical Behavior	
	Human Rights	
	Disaster Response	

Importance To Stakeholders

In order to identify and evaluate potential environmental, social and governance issues that could affect TDRA and its stakeholders, we conducted a relevance study to identify the views of TDRA and the stakeholders based on relevance.

Note:

The vertical axis shows the views of the stakeholders and the horizontal axis shows the views of TDRA

Empowerment Strategy
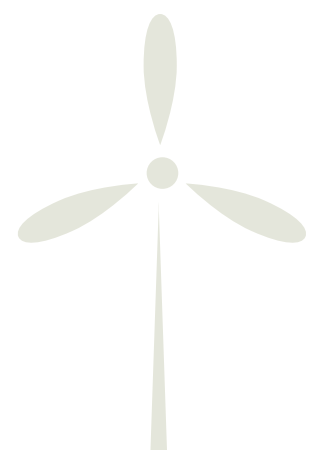
The National Youth Empowerment Strategy is a two-pronged approach aimed at: defining overall strategic priorities for the youth sector, and partnering with relevant government ministries to identify and address the needs, challenges, and opportunities facing youth.

Advanced Skills Strategy

The strategy targets three categories of audience: students in schools and universities, higher education graduates and experienced employees.

Emirates Blockchain Strategy 2021

The strategy aims to leverage blockchain technology to transform 50% of government transactions into the blockchain platform by 2021.

UAE Centennial 2071

The plan aims at investing in the future generations, by preparing them with the skills and knowledge needed to face rapid changes and to make the UAE the best country in the world by the next centennial in 2071.

Sustainable Workplace

The Building Management Section works to ensure the provision of all administrative services in accordance with standards of quality, efficiency and transparency, and to establish a culture of innovation in the institutional workplace, in line with the 5th and 6th strategic goals of the UAE Vision 2021. The section focuses on three main enablers to achieve this goal, namely:

Growth in sustainability   **Smart transformation**   **Innovation**

BM Section developed its maintenance plan of buildings, equipment, resources to achieve TDRA's strategy in providing best services and to ensure that assets are maintained and properly use.

Building Management Section Operational Objectives and Results:

Objectives:

Reducing data center energy waste

Completion of asset maintenance according to plans: 100% of assets have been maintained.

Reducing carbon dioxide emissions

Reducing work accidents: no accidents were reported in 2021

Results of Annual Indicators

KPI	Activity	2018	2019	2020	2021
Reduction in repair costs	Buildings and offices management	18.00%	20.93%	23.33%	29.87%
Reduction in energy consumption	Compliance with the energy resources management standards	6.86%	22.00%	11.15%	16.24%
Percentage of clean electric energy produced in Jebel Ali project	Solar panels project/Jebel Ali	7.93%	14.77%	3.98%	47.17%
Reduction in carbon dioxide	Energy resource management in compliance with ISO 50001 and LEED EB standards:	6.00%	18.00%	14.00%	14.00%
The percentage of noise level of TDRA's buildings within the standards of Dubai Municipality and OSHA	Health, Safety and Environment Management	100%	100%	100%	100%

KPI	Annual Results				
	2018	2019	2020	2021	Total
Reduction in repair costs	4,733,762	5,840,905	7,383,858	9,977,165	**27,935,691**
Reduction in energy consumption	388,539	1,091,424	608,286	845,507	**2,932,756**
Percentage of clean electric energy produced in Jebel Ali project	32,281	69,675	8,076	246,297	**356,329**
Reduction in Co2 Footprint Level (Ton-Year)	164,798	329,741	658,768	1,316,184	**2,632,369**
The percentage of noise level of TDRA's buildings within the standards of Dubai Municipality and OSHA	100%	100%	100%	100%	**100%**
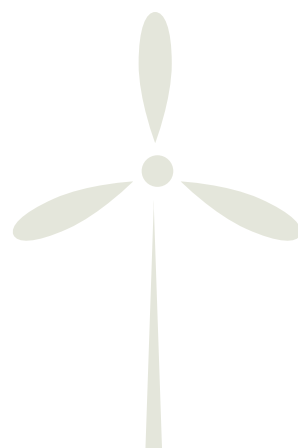
# Main Operational Assets Efficiency Index of TDRA Buildings

	2018	2019	2020	2021	2022
Dubai Bldg (A)	0.94%	1.16%	1.59%	1.36%	0.99%
Jabel Ali Bldg (C)	0.18%	0.24%	0.25%	0.44%	0.18%
Abu Dhabi Bldg (D)	0.96%	2.01%	1.06%	0.46%	0.24%
Asset efficiency Index%	2.08%	3.41%	2.90%	2.26%	1.41%

Waste Recycling Efficiency Index of TDRA Buildings

Year	Abu Dhabi BLDG	Dubai BLDG	Total	Recycling %
2018	3.01	5.88	8.89	3.5%
2019	3.14	4.87	8.01	3.25%
2020	0.65	4.38	5.02	2.6%
2021	2.05	2.64	4.69	7.00%

Total General Waste in TDRA Buildings (tons/year)

Year	Abu Dhabi BLDG	Dubai BLDG	Total
2018	20.1	233.6	254.3
2019	14.1	232	246.1
2020	8.06	184.8	192.85
2021	13.37	49.24	62.61
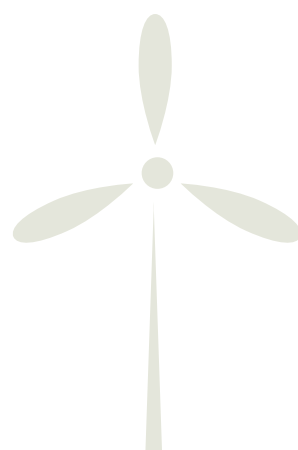
Continuous improvement, benchmarking, and development

TDRA buildings designed to save electricity and water by 20%

Percentage of the re-cooled fresh air to the amount of refrigerated air incoming to the building is 10% from the total

Sustainability Framework:

In compliance with the UAE's strategy to sustain environment, conserve natural resources and reduce the impact of the carbon footprint and global warming, TDRA has implemented the highest international standards for Green Buildings, and received the certification of «LEED Gold» for Dubai and Abu Dhabi buildings by the USGB. Worth mentioning that the UAE is one of the eight members of the board worldwide.

The Rate of Electric Power Generated from Solar Panels (Kw/Year)

40% Water gains=Treated Water Plants
Total amount reguired (6-7)Cu.m/daily

28% Saving (Abu Dhabi)
24% Saving (Dubai)

Reduction in Carbon Footprint
Level=900 ton/year

Compliance with ISO 14001 EMS, OHS 45001 & 45005, SAHD & FAHR Code of Practices

Eco Vitality

Natural Enviroment

Health & Safety

Sustainability
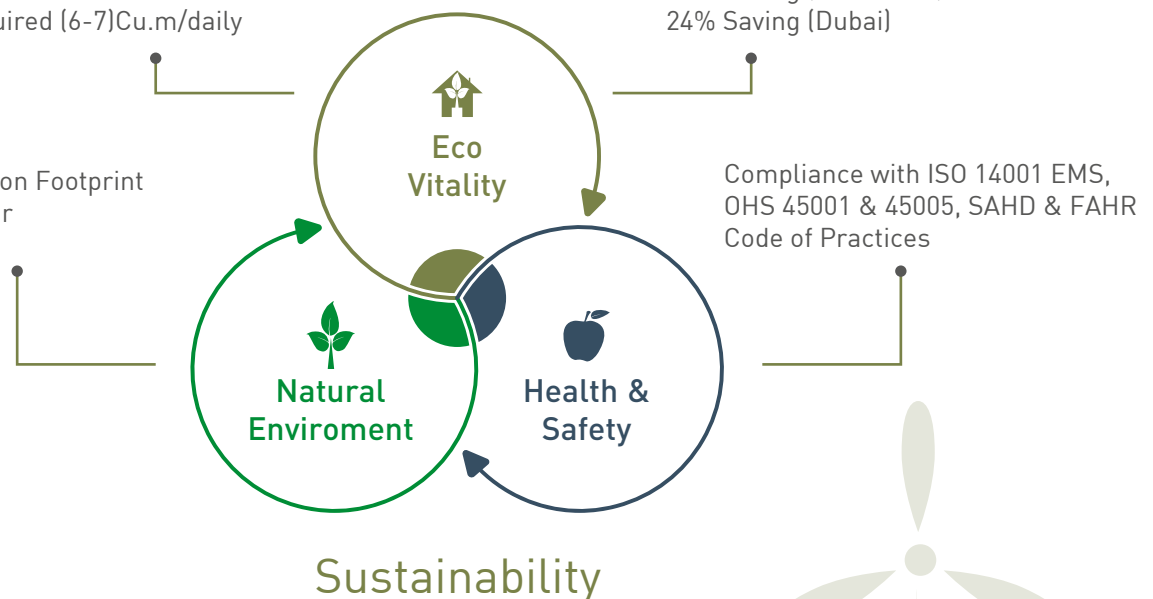
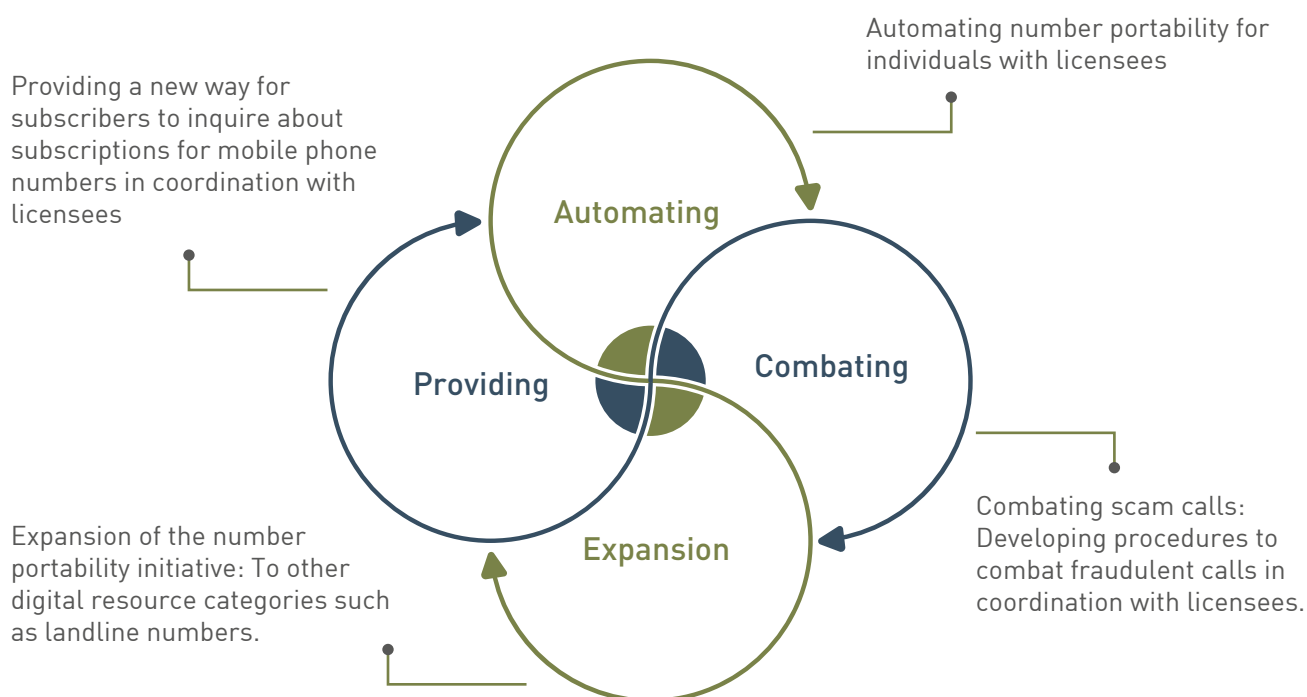## The Section has the following tasks:

Number portability management: Supervising number portability services between licensees and following up the adherence of all parties to TDRA's instructions.

Number resource management: Allocating number resources to licensees.

The Section's innovative initiatives are:

Providing a new way for subscribers to inquire about subscriptions for mobile phone numbers in coordination with licensees

Automating number portability for individuals with licensees

Combating scam calls: Developing procedures to combat fraudulent calls in coordination with licensees.

Expansion of the number portability initiative: To other digital resource categories such as landline numbers.

Automating

Providing

Combating

Expansion

The Section's tasks are:

- Telecom providers' services management: Coordination procedures for regulating a range of licensees' services, including regulatory procedures for accessing public lands for the purpose of building mobile network sites, and regulatory procedures for SPAM marketing text messages via mobile phones.

- IoT services management: Organizing Internet of Things services in the country to develop the ecosystem of IoT services in a coordinated, coherent and secure manner, in accordance with the requirements and standards issued by TDRA.

- Policies compliance monitoring: Checking licensees' compliance with the registration requirements of mobile subscribers in accordance with the policies and instructions issued by TDRA.

- Network Coverage: Conducting a field survey to test, measure and analyze the quality of telecommunication networks in the country and simulate the experience of users, and thus identify aspects of improvement in networks and coverage in coordination with telecom service operators in the country.
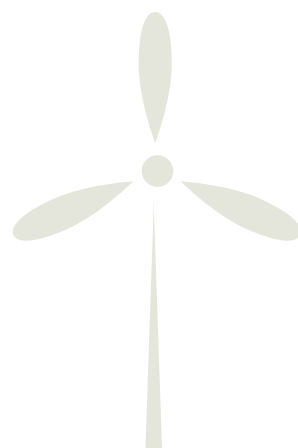
The Section's innovative initiatives are :

Blocking Spam marketing SMS: An initiative to block unwanted marketing messages via mobile phone.

Advanced analysis program for data and indicators of the telecommunications sector.

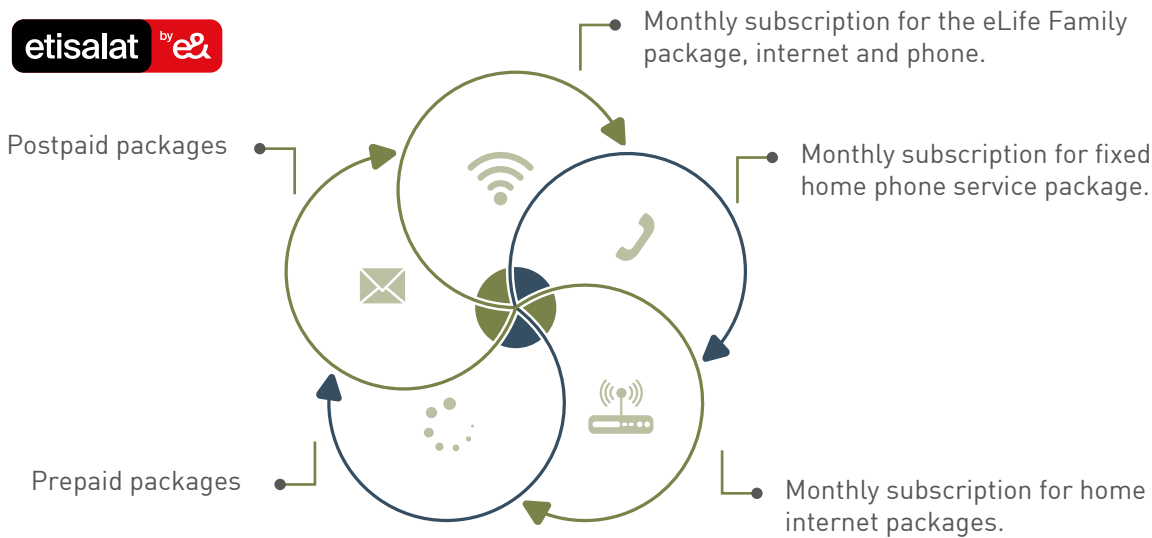**Benchmarking the quality of mobile and smart phone networks and services.**
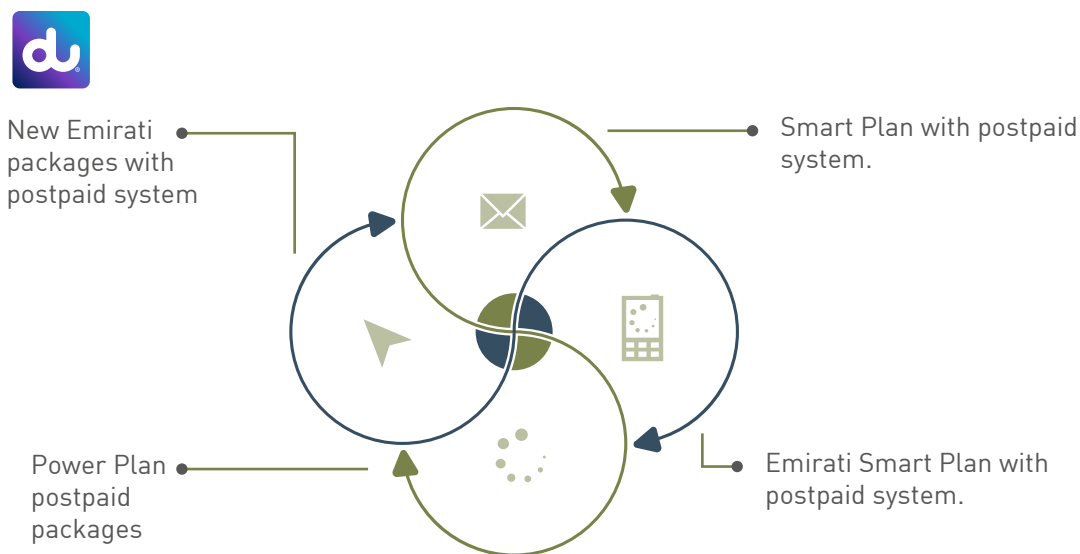
The Section works in cooperation with licensees to provide discounts on a range of packages and services to support the effective integration of People of Determination into society:

People of determination benefits:
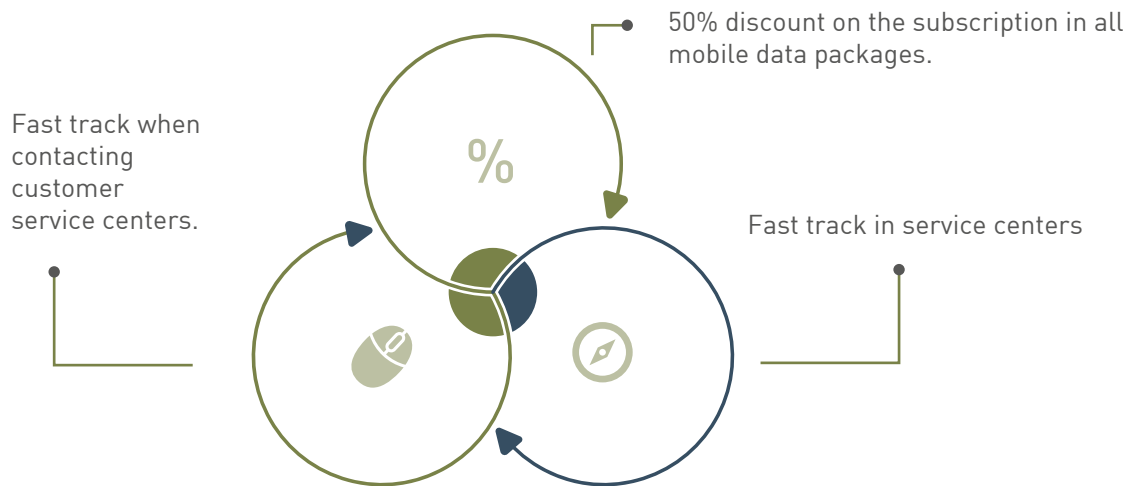### Etisalat: Etisalat by e& offers a 50% discount on:

Postpaid packages

Monthly subscription for the eLife Family package, internet and phone.

Monthly subscription for fixed home phone service package.

Prepaid packages

Monthly subscription for home internet packages.

Du: Du offers a 50% discount on:

New Emirati packages with postpaid system

Smart Plan with postpaid system.

Power Plan postpaid packages

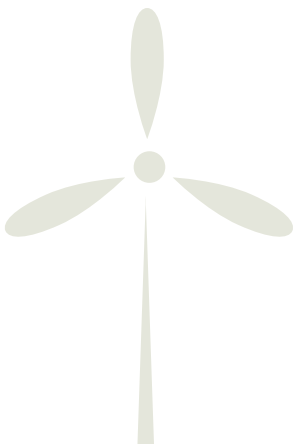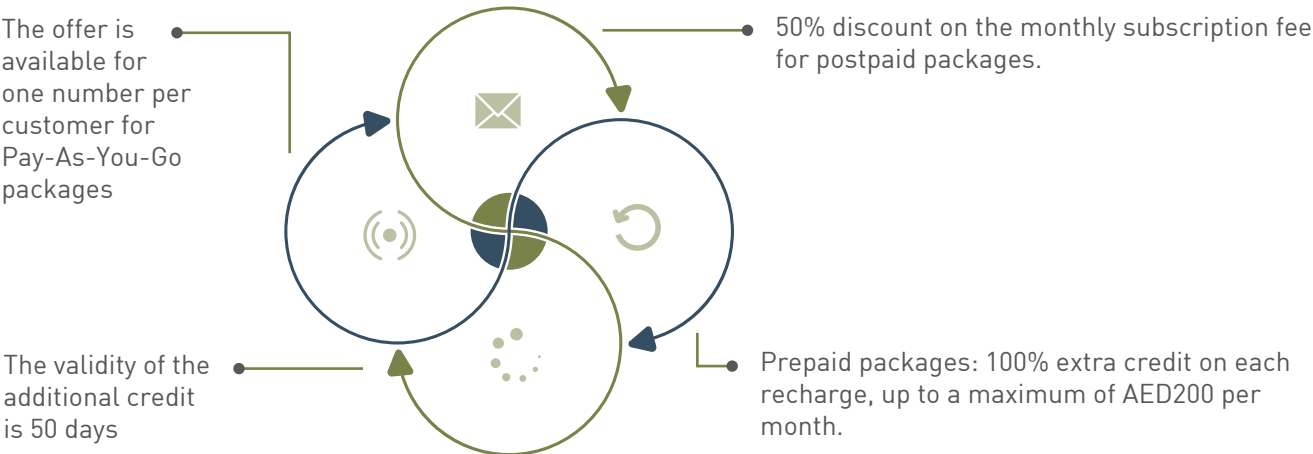Emirati Smart Plan with postpaid system.

The Section also cooperates with the Family Development Foundation to provide facilities and discounts in the telecommunications sector for senior citizens to improve their well-being:

Etisalat: Etisalat by e& provides the following:

etisalat by e&

50% discount on the subscription in all mobile data packages.

Fast track when contacting customer service centers.

Fast track in service centers

%

Du: Du offers the following:

du

The offer is available for one number per customer for Pay-As-You-Go packages

50% discount on the monthly subscription fee for postpaid packages.

The validity of the additional credit is 50 days

Prepaid packages: 100% extra credit on each recharge, up to a maximum of AED200 per month.

Spectrum Management Affairs
Department

Impact of the RF Monitoring Center on Sustainability:

Reducing the use of mobile stations

Reducing carbon emissions by 20 tons in 2021.

Saving 855 man-hours of employee time.

Saving an amount of AED352,830 from the operational cost of monitoring and control operations.

The impact of the Spectrum Authorization System development:

Reducing the time of service provision process:

	Before	After
New authorization	21 days	4.9 days
Renew authorization	24 days	0.9 days
Amend authorization	16 days	2.3 days
Cancel authorization	1 day	0 day

Reducing the operational cost: the operational cost of the service decreased by AED2,741,059 in 2021

Reducing working hours: saving 6,288 working hours in 2021

Sustainability of the telecommunications

Infrastructure in the UAE

The frequency spectrum is a natural and rare resource, and TDRA has been assigned to manage it with the aim of sustaining this resource to cover the national needs of frequencies, including maintaining sufficient frequencies to cover the future technology.

Continuity of spectrum management business

The department maintained 100% business continuity in 2021

Activating the joint service initiative with Dubai Maritime Authority

Issuing 8,232 wireless services authorizations for various sectors in the UAE in 2021
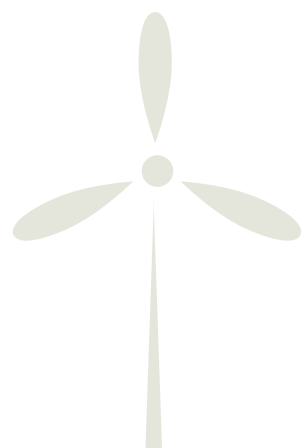
The allocated frequencies contributed to the sustainability and continuity of the vital sectors in the country.

The ability to cover the additional requirements received from government entities, companies and customers by 100%

Resolved 168 harmful interference that caused disruption or interruption of the work of some sectors in the UAE.

# Digital Government

Key Initiatives

Sectors Initiatives

FEDNET

متجر الخدمات الرقمية
DIGITAL SERVICES MARKETPLACE

E-SEAL

التحقق الرقمي
UAE VERIFY

CERT
ae
Computer Emergency Response Team

الهوية الرقمية
UAE PASS

سفراء الأمن الإلكتروني

.aeDA
إدارة أسماء نطاق الإنترنت
DOMAIN ADMINSTRATION

Innovation & Engagement Initiatives

HACKATHON
UAE
Data for Happiness

U.AE
United Arab Emirates

Bayanat.ae

TDRA
VIRTUAL CAMP

Sharik.ae

SDGs Buzz

TDRA
الأكاديمية الافتراضية
VIRTUAL ACADEMY

Legislations

Federal Decree by Law No. 46 of 2021 on Electronic Transactions and Trust Services.

Qiyas
قياس

Tool created to access the level of digitalization of government servies offered to the public. Federal government are assesses on the their adherence to the Smart Gov Standard.
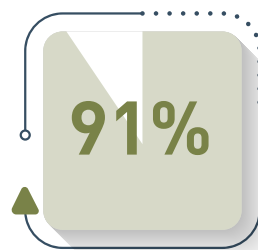
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Federal Entities

2120

Servies Assessed

7
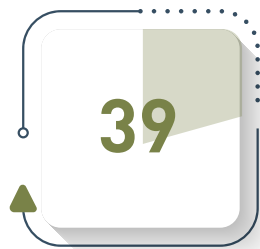
Number of KPIS measured

99%

**Transformation of Priority Servies**

91%

Quality of Federal Websites

87%
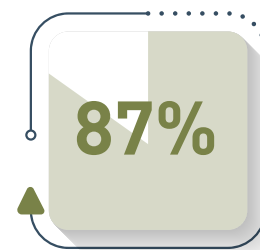
Quality of Priority Servies

FedNet and cloud infrastructure services
Sustainable integration of government digital services
FedNet and Government Service Bus (GSB)

As part of its role in supporting government entities' smart transformation, TDRA has developed the necessary infrastructure for sustainable integration of government services through an electronic network at the federal level - The Federal Electronic Network (FedNet)- to integrate more than 50 government entities.
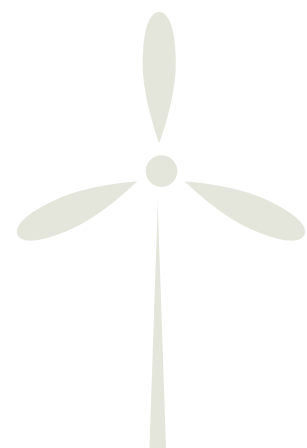
FedNet provides the requirements for secure networking between government entities at the federal and local levels, allowing them to publish their services to one another or utilize government services provided by another linked entity. The infrastructure has also been prepared to address emergency cases by providing backup sites to work automatically or in connection with other sites, to ensure continued operation and availability of government services around the clock. Number of entities on boarded to FedNet until the end of 2021 is 104 entities.

The Government Service Bus (GSB) supports system integration between federal entities, allowing data transfer between government entities and enabling them to provide an integrated service to customers, thus contributing to improving the quality of life. Number of entities on boarded to GSB until the end of 2021 reached 170 government and private entities, and the number of services available on GSB reached 359 unique services.

The number of transactions on GSB reached 117.4 million transactions during 2020, the number of transactions in 2021 reached 346.4 million transactions, which means 195% increase in the number of transactions on GSB during 2021 compared to 2020. GSB, through "Mabrouk Ma Yak" initiative, has contributed to reducing carbon emissions by more than 437,229 kilograms of carbon dioxide in 2021, as the number of transactions on "Mabrouk Ma Yak" service reached 18,977 transactions in 2021. (average 23.04 kg CO_2 per transaction).

**The number of entities integrated with FedNet: 104 entities**
Number of services integrated with GSB: 359 services

Enabling government services towards digital transformation

Highly efficient cloud computing

With respect to the technological infrastructure, TDRA has provided a high-performance secure platform for cloud infrastructure services containing scalable computing and storage resources ready to use as needed. In addition to achieving significant money-saving resulting from the decreased unit cost price based on the principle of economies of scale. Automation of cloud services (so as to be ready and available on demand) would support the efforts of government organizations in the area of innovation through the rapid launch of innovative technological services and meeting delivery dates without wasting time on logistics related to hardware, storage or hosting spaces.

The platform serves as a key enabler to deliver government services and support FedNet by a secure virtual infrastructure. Through this automated platform, federal entities using the service can access computing and storage resources on demand and finalize tuning/configuration to launch applications in a standard time. This had a significant impact on entities by shortening the infrastructure readiness time - from months to a few hours - as well as the period for launching applications.
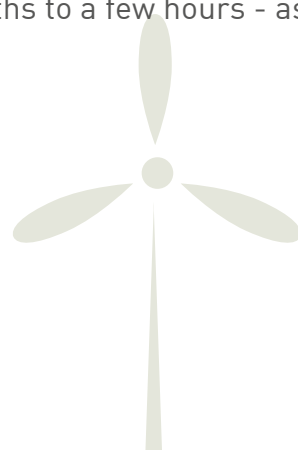
TDRA's efforts - represented by supporting the adoption of virtual computing by operating 4,867 virtual servers for federal entities on 255 physical servers, which constitute the current capacity of the cloud infrastructure platform - contributed to raising computing efficiency by 1,500%.

The adoption of virtual computing and the provision of the unified platform also contributed to saving energy consumption amounting to more than 254 kilowatt-hours, which is equivalent to AED 576,391 per month, which led to a decrease in the emission of 182,880 kilograms of carbon dioxide per month, which would have required planting 8,708 trees to contain this emissions.

Total virtual servers: 4867 virtual servers
Number of entities benefiting from the service: 47 entities

High performance internet gateway

In order to keep pace with the growing needs for Internet data packages necessary to provide government services with high quality, the " High performance internet gateway" was equipped to provide Internet service to more than 35 federal entities.

This service provides high-performance standard service levels for all online government services, in addition to flexibility, speed to provide big data packages for the most used applications, the use of multi-routing Internet Protocol to provide service from more than one operator at the same time to respond to emergency situations, in addition to achieving significant financial savings in the cost of Internet connection service based on the principle of economies of scale.

The quality of Internet connection service is a priority for the provision of smart government services available around the clock and able to absorb any increase in usage rates without downtime or slowdown. The data capacity of the portal reached 3000 megabytes (3 gigabits) in 2021, meeting the needs of more than 40 federal entities, and achieving financial savings amounting to more than AED 11.5 million in 2021 as a result of the savings of the portal.

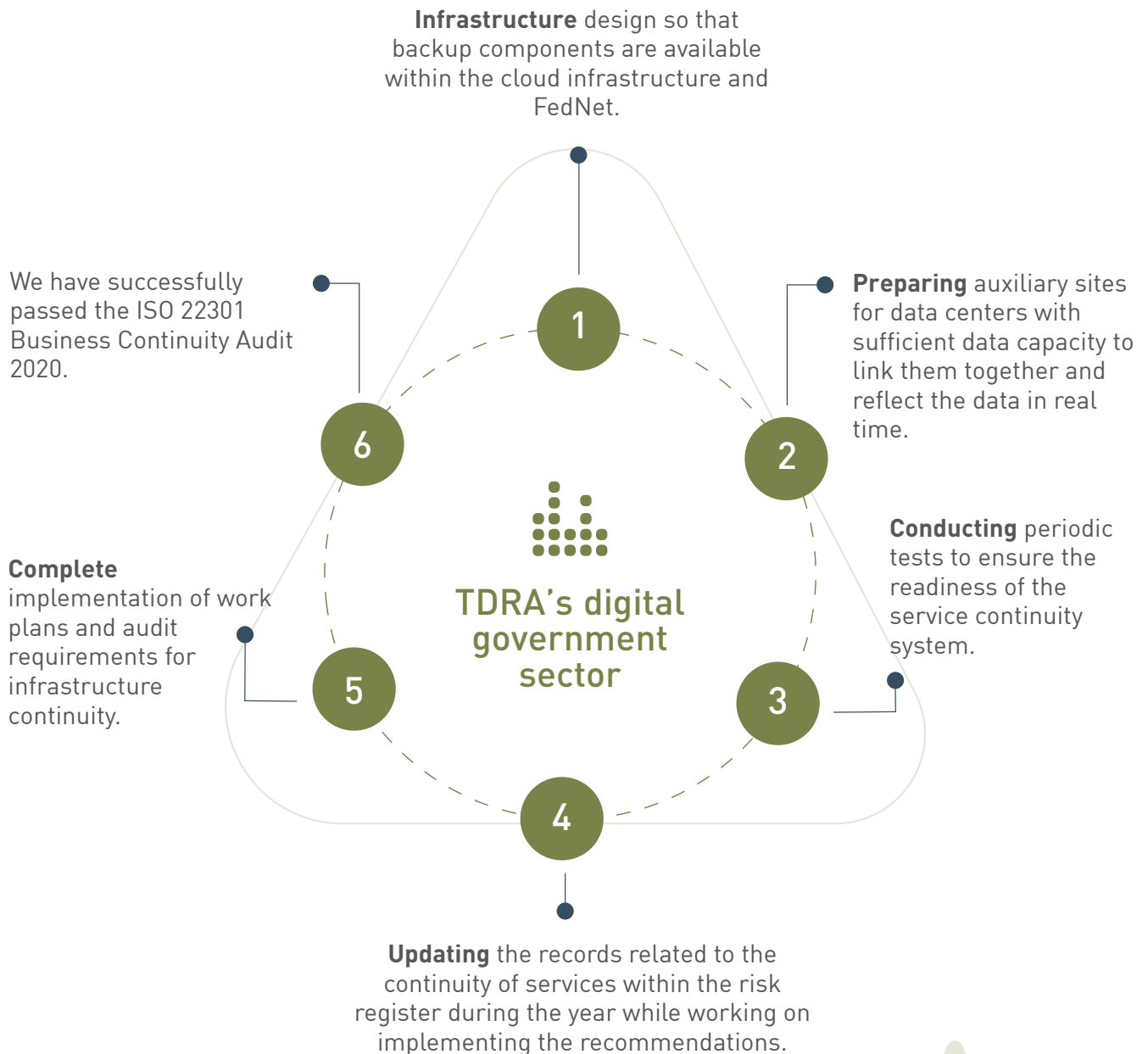## Sustainable enablement towards digital transformation

TDRA has provided a set of applications to support the work of government entities, such as e-mail, communication and technical sharing services, in addition to a cybersecurity platform that serves as a first line of defense, the First Electronic Defense Line (FEDL), to protect the networks and systems of federal entities from the risks of cyber attacks.
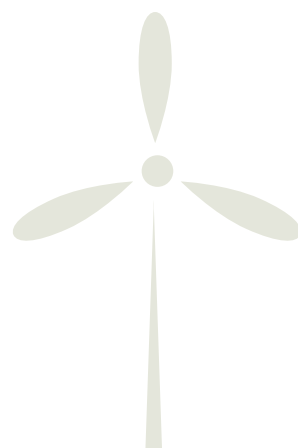
Service continuity

The services provided by TDRA's digital government sector are of great importance to a large proportion of federal entities, as FedNet and cloud services play a key role in the service integration between government entities and support the infrastructure of federal digital services. Therefore, all measures have been taken to ensure the highest levels of service continuity as follows:

Infrastructure design so that backup components are available within the cloud infrastructure and FedNet.

1

Preparing auxiliary sites for data centers with sufficient data capacity to link them together and reflect the data in real time.

2

Conducting periodic tests to ensure the readiness of the service continuity system.

3

We have successfully passed the ISO 22301 Business Continuity Audit 2020.

6

TDRA's digital government sector

Complete implementation of work plans and audit requirements for infrastructure continuity.

5

4

Updating the records related to the continuity of services within the risk register during the year while working on implementing the recommendations.

36

TDRA Virtual Academy

TDRA Virtual Academy proudly continues to embrace new technologies, in line with the wise leadership directives. The Academy was established in 2013 to support digital transformation, promote a culture of e-learning and promote the growth of the ICT sector.

Virtual Camp

One of the largest and most dynamic initiatives, TDRA Virtual Camp is a virtual camp created for children and teens between the ages of 6-17, with the aim of enhancing their technical skills.

UAE Hackathon

The UAE Hackathon is the largest competitive innovation event at the national level. It reflects TDRA's efforts to spread the culture of digital transformation in the country. This project provides an opportunity for different segments of society including university and high school students, entrepreneurs, employees and IT experts to use open data as a tool to explore solutions on specific topics and challenges in the hackathon.

UAE Verify

A digital platform that allows instant verification of the "trusted digital documents". The platform verifies the authenticity, integrity and validity of the document from the official source.

Digital Vault

It allows individuals to request their digital official documents, link them to their UAE Pass, and share them with service providers instantly.

UAE Pass

UAE Pass is the first national digital identity for citizens, residents and visitors that enables them to access many services across various sectors in the UAE, and allows them to digitally sign and authenticate documents. It also enables users to request and use a digital copy of the documents issued to them to access the services.