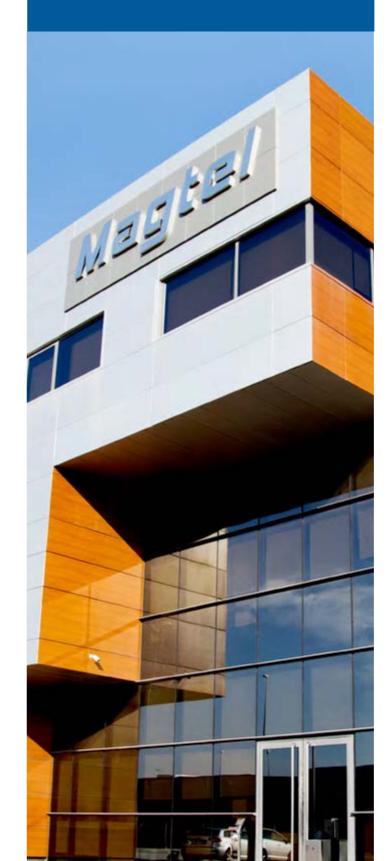
2020
ANNUAL REPORT

Magtel



# > Table of contents



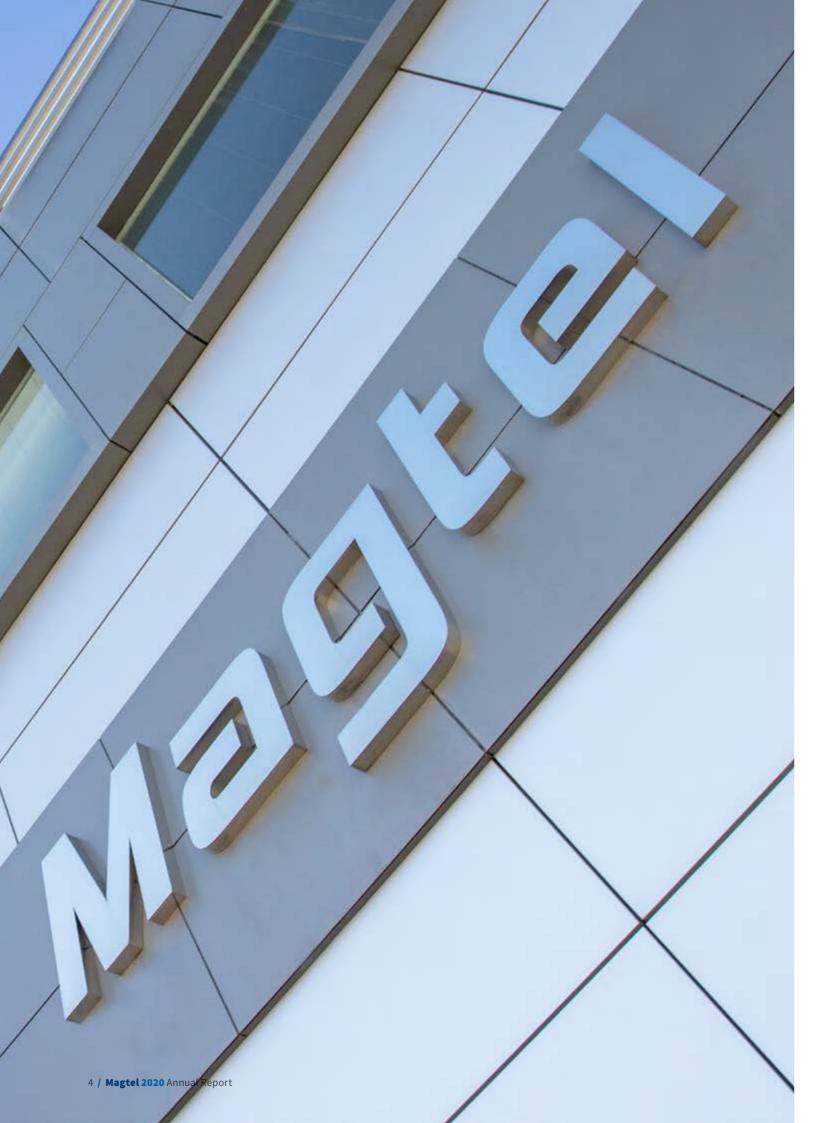
>	Letter from the Chairman	5
>	Our History	6
>	We are Magtel	8
>	Our company in figures	10
>	Our Principles of Action	12
>	Magtel's philosophy	14
>	Engineering and EPC Division	16
>	Installations Division	22
>	Civil Engineering Division	28
	Digital Transformation nd BPO Divisionl	36
>	R&D&i Division	42
>	Essentials	48
>	Our Offices	<b>54</b>

#### Annual Report Magtel 2020

Published Magtel Parque Empresarial Las Quemadas c/ Gabriel Ramos Bejarano, 114 14014 – Córdoba (España) T. 902 411 415

#### comunicacion@magtel.es

Text and design: Communications Department





# **Letter from the Chairman**

t is my pleasure to present this Activity Report for 2020, one of the most complex and most challenging years in living memory. Because if responding to an unknown situation with no previous references is always difficult, doing so with the responsibility of providing essential services, as our activities are, requires leadership: that of the 770 professionals who, day after day, make Magtel what it is.

At the close of 2019, when we celebrated our 30th anniversary, we also started out on a new stage with the 2020-2025 Strategic Plan as our focus of action. A plan aimed at bolstering the company as a business leader in technological transformation, in a new phase of this fourth industrial revolution, and in energy transition, boosted by the social awareness that decarbonising the economy is essential to combating climate change.

In March, we were hit by this unexpected and devastating public health crisis, which brought economic activity to a dramatic halt, except, of course, for essential activities; but I would like to stress that it is people who are essential, people like our Magtel professionals, united in their common effort to overcome the situation, who were essential from the very first minute.

And this unity was the key to getting through and finally closing the year, one that was a challenge in all meanings of the word: from organisation to execution, restructuring process and maintaining and extending our goals.

In short, a year whose balance is contained in this Report, one which describes who we are, what we did and how we did it. An Annual Report which, once again sets our course for the future. In this case, towards the horizon of the permanent transformation, change and uncertainty opened up by the pandemic. A different world, in which companies will be more important than ever for the recovery, cohesion and progress of our society. We will always be there.

MARIO LÓPEZ MAGDALENO MAGTEL CHAIRMAN



# Our History



1990

#### ¡We set off on our journey!

- ▶ Founded in Posadas (Cordoba)
- We are subcontracted by Abengoa and Telefónica



1991

- ▶ We open our first phone shop
- ▶ Sales of the first handset



1992

We all work at the Seville Universal Exhibition!



1993

▶ **Crisis:** Search for new clients and new horizons



····• 1994

New clients:Alcatel, Radiotrónica, Cablinsa



1995

- ▶ Major fibre optics project: **Enagás**
- ▶ Roll out in the towns of Dos Hermanas (Seville) and Ciudad Real



1996

▶ We take part in the switch from analogue to digital for our client **Telefónica** 



1997

- ▶ We gain another major client: **Renfe**
- We buy the first fibre optic sets and reflectometer
- ▶ We obtain ISO 9001 certification



1998

- ▶ We lay down 5,000 km of fibre-optic cable for Renfe
- ► We add new clients after the deregulation of the telecommunications market: **Supercable** and **Uni2**



1999

- **▶** We open new branches
- ▶ Opening of offices in Cordoba and Seville



2000

▶ We take part in the development of industrial estates for two of our large clients: **Supercable** and **Telefónica** 



2001

- We obtain EFQM validation in Communications and Security
- Major fibre optic cable roll out on the AVE high speed rail lines:
  - > Madrid Barcelona
  - > Zaragoza Huesca



2002

We win an award!

- Excellence in Business prize from the Government of Andalusia
- Recognition by the Association of Telecommunications Engineers
- ▶ Cordobans of the year



··· **2003** 

▶ Incorporation of radio and mobile telephony in our client portfolio: **Retevisión** 



2004

- ► We work with the main mobile operators: Movistar, Vodafone, Amena, Orange and Yoigo
- ▶ We are technologists for: **Siemens**, **Nokia** and **Ericsson**



···• **2005** 

- ▶ We refurbish the Retevisión centres
- ► We enter the energy sector with **Endesa** as a new client



2006

#### We gain even greater client loyalty!

- ▶ Opening of the polyethylene pipe plant with 14 production lines
- ▶ Start of the **Renewables Division**



2007

- ▶ **The Water Division** is created, developing quality projects, large infrastructures, building and civil engineering works
- ▶ We build our first solar power plant



····· 2008

- ▶ Internationalisation: first radio link installation in Panama for Ericsson
- ► Commissioning of **El Molino** and **La Castilleja**
- Creation of the **Systems Division**, developing:
- > Government of Andalusia Corporate Network
- > Thirteen information points in Andalusian marinas
- > Solar power plant control and automation systems



2009

- ▶ New services in biotechnology, railways, energy, environment and ICT
- ▶ Foundation of the **Magtel USA Inc.** company, to develop solar power projects in Texas (USA)



2010

- ► Creation of our **Advanced Communications Division**
- Building starts on our first solar thermal power plant



2011

- ▶ Start of our project as a neutral Andalusian operator, declared a Business Investment of Strategic Interest for Andalusia
- New surveys in Libya, Colombia and Chile
- ▶ Opening of the Moroccan branch



2012

- ▶ Unification of the different Magtel companies in a single, much more powerful company: Magtel Operaciones
- Commissioning of the La Africana solar thermal power plant
- Opening of the **Peruvian branch**
- Outsourcing of Ono work



·· 2013

▶ Start of fibre to the home (FTTH)



··• **2014** 

Dening of the Paraguayan branch



· 2015

• Opening of the **Portuguese branch** 



· 2016

▶ Development of over **1,700 MW** of photovoltaic energy



··• 2017

► Commissioning of the 'Rehab no Dig' trenchless renovation service



·• 2018

► Creation of our **Mining Division** 



··• 2019

▶ Towards full digital transformation



**▶** Keep reading!

6 / Magtel 2020 Annual Report / 7







INFRASTRUCTURE



RAILWAYS





SUSTAINABILITY

# We are Magtel

Over 30 years of innovation and technology at the service of our clients

#### **Board of Directors**

- ▶ Mario López Magdaleno
- ▶ Isidro López Magdaleno
- ▶ Juan Luis López Magdaleno
- ▶ Antonio Manuel López Magdaleno
- ▶ José Carlos López Magdaleno
- ▶ Auxiliadora López Magdaleno

#### **Business Unit** Management

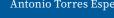
Martín Salgado Devincenzi



Luis de las Heras Carmona



**Installations Division** Antonio Torres Espejo





Digital Transformation and BPO Division Fernando Olivencia Polo



**Civil Engineering Division** Enrique Rodríguez Gómez



R&D&I Division David Díaz Pulido



**Engineering and EPC Division** 

Manuel García Lláser



**Advanced Communications Division** 

Leopoldo Álvarez Baragaña Rodríguez



**Renewables Division** 

Juan Manuel Agudo Moreno

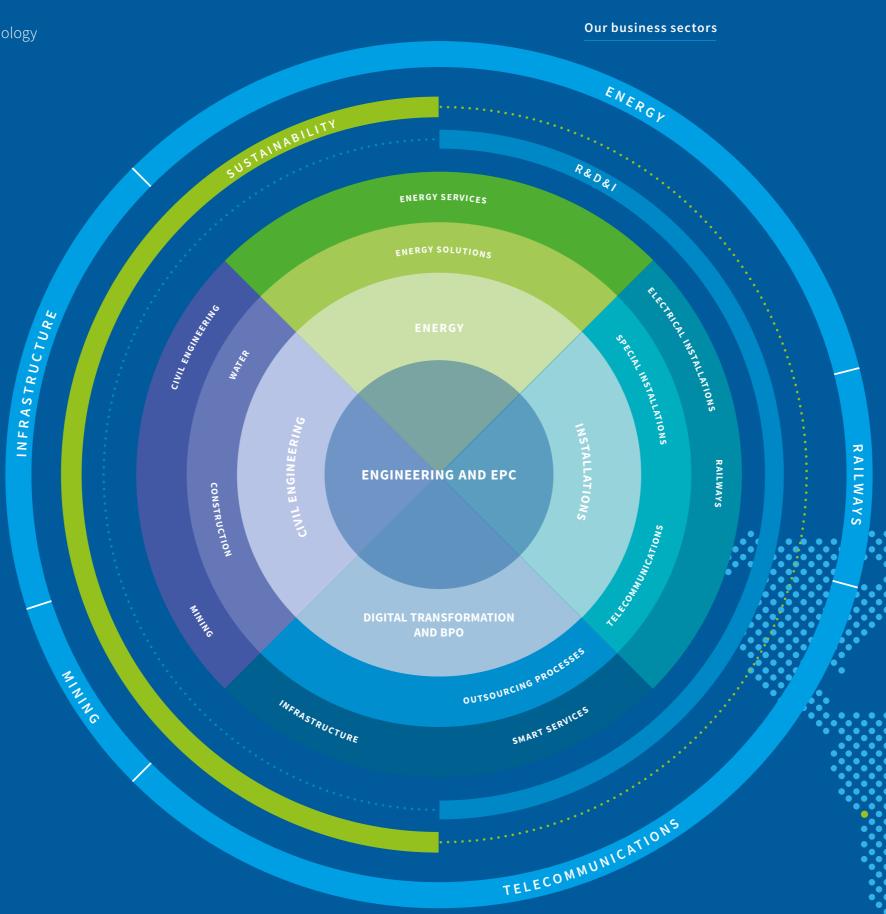


**Hydraulics and Environment Division** Arturo Buenaventura Pouyfaucon



**Business Development** 

Juan Antonio Cuesta Cañas



Universal values for all our activity

#### Spain

#### International ▶ Paraguay

▶ Peru ▶ Portugal

▶ Morocco

- ▶ Madrid
- ▶ Andalucia
- » Almeria
- » Cadiz
- » Cordoba
- » Granada
- » Huelva
- » Jaen
- » Malaga » Seville
- ▶ Extremadura
  - » Badajoz
- » Caceres

# > Our company in figures

Investment R&D&I

PERIOD 2008 - 2020

13,45



24,5%

ENERGY

22,2%

ENVIRONMENT

40,2%

13,1%

CONSTRUCTION

#### **OUR TEAM**





+770

+1.300





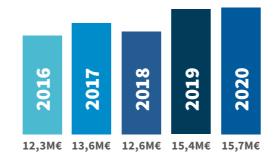
30 - 45 YEARS

< 30 YEARS

31,7%

>45 YEARS

#### **CHANGE IN EBITDA**



#### ▶ What is it and what is it for?

It is a financial indicator, an acronym for earnings before interest, tax, depreciation and amortisation. It indicates a company's capacity to generate profits or financial resources, focussing solely on business activity and operation. It is widely used in all markets to value companies and analyse their solvency.



# > Our principles of action



#### Our Mission

Providing infrastructures with state-ofthe-art technological systems to contribute to greater efficiency in the use of natural resources and bring about improvements in quality of life for the society of today and tomorrow.

#### ▶ What is our vision?

Offering value-added services that improve competitiveness, developing sustainability-based economic models.

Achieving development that balances people and the environment, ensuring a cleaner, more comfortable world for future generations.

#### Our corporate culture

Promoting a collaborative, cooperative working culture that puts people at the centre of human and corporate commitment.

Constantly seeking innovation and talent.

Clearly expressing who we are and what we want to convey to create a shared positioning and contribute to the company's aspirations of excellence.

#### Our Values

#### **▶** The people

People are the heart of the company and we strive to ensure that continual improvement in their professional well-being leads to the best outcomes for all our projects, because their personal growth represents business growth for all.

#### > Our social commitment

As a goal, social commitment is inseparable from our raison d'être because it generates value for society wherever we operate as a company. As a goal, social commitment is inseparable from our raison d'être because it generates value for society wherever we operate as a company. Through the Magtel Foundation, we work to promote equality of opportunity, social and work integration, improvements in quality of life for disadvantaged sectors of society and the promotion of development in all its aspects.

#### **▶** Ethics and responsibility

Ethics and responsibility are essential to implementing our mission, expressing our vision and developing our corporate culture with professionalism and caring for people and their needs.

#### **▶** Transparency

Transparency is a fundamental requirement as a principle of the company's behaviour. We provide full, accurate information that provides a true image of our business activities, carried out with strict legal compliance wherever they are executed and adapted to the particularities of each region

#### ▶ Health and safety

By giving maximum attention to the health and safety we provide for our professionals, we ensure our work is conducted in safe and healthy conditions and environments.

#### **▶** Sustainability

Optimising the natural resource use and maximum respect for the environment are essential for economic sustainability, our business model and the design of our infrastructure.

#### Innovation

Innovation is a characteristic common to all our processes, procedures and project execution. Through it, we seek out business leadership in the company's projects and the services we provide.

#### **Excellence**

And through all of the above, we aim to provide services that are constantly improving and more competitive in terms of the company's business and for all the people who are a part of it.







# > Magtel's philosophy

#### > Zero accident rate

#### » Our goal is occupational health and safety

We see safety culture as a commitment by each and every member of the company and a constant factor in our organisation, thereby promoting common awareness of our professionals' health and safety.

#### > Certified quality

#### » Management systems implemented in Magtel

- > Quality Management System (ISO 9001)
- > Environmental Management System (ISO 14001)
- > Occupational Health and Safety System (ISO 45001)
- > R&D&I Management System (UNE 166002)
- > Information Security Management System (ISO 27001)
- > Halal certified, by the Halal Institute
- > Energy Management System (ISO 50001)
- > Quality System (PECAL/AQAP 2110)

### > Continual improvement in our competencies

The Magtel Training Department implements annual training plans to improve the competencies of all the professionals in the company. Placing special emphasis on improving digital competencies, on average each year the plan provides around **400 training actions** and over **80,000 hours of training**.

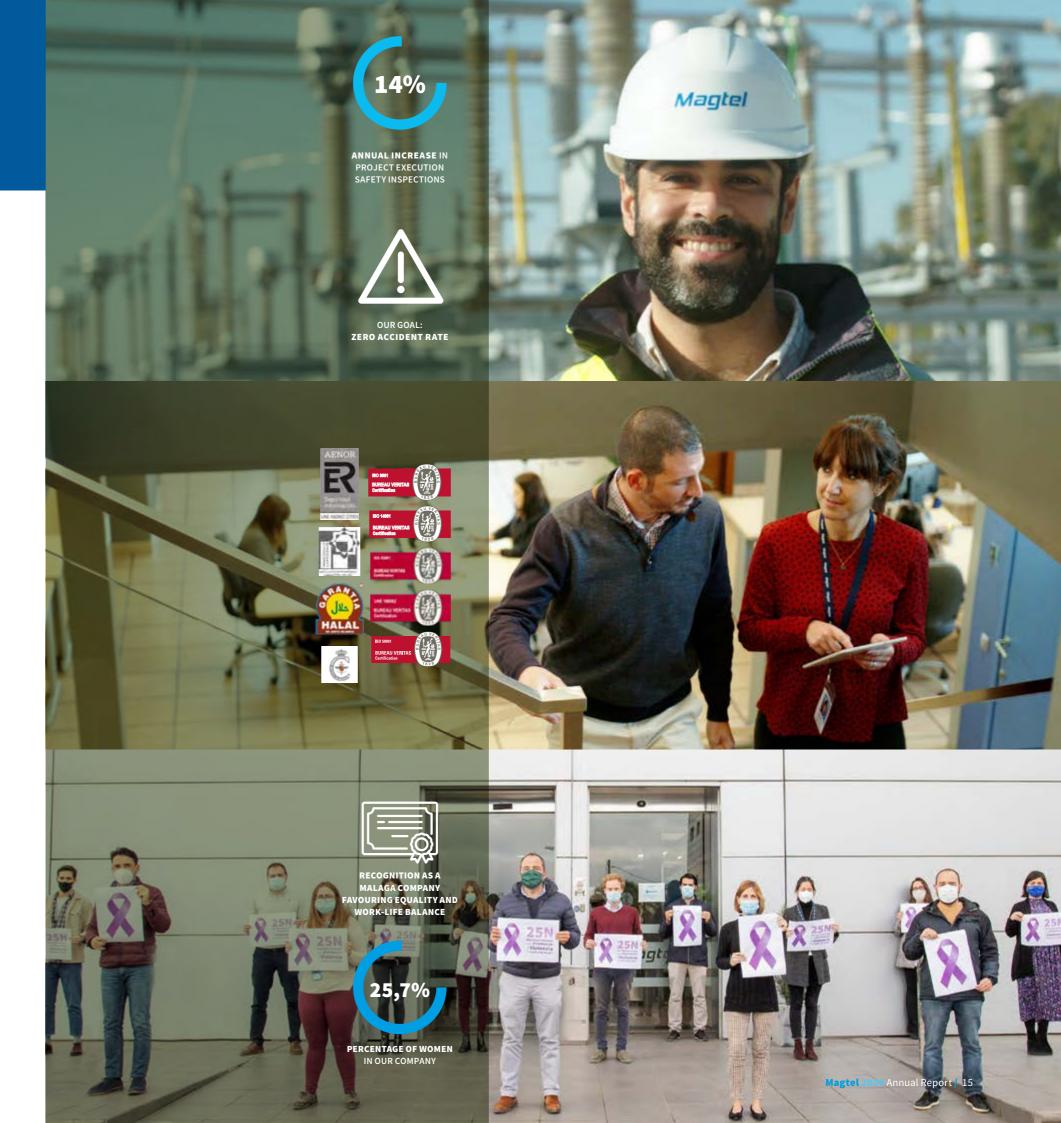
#### > Investing in an equal environment

Magtel has steadily taken on more women, who now make up **25.71%** of our workforce. Furthermore, in 2020, Malaga City Council awarded us the seal of "Empresa malagueña igualitaria y conciliadora" (Malaga company favouring equality and work-life balance). The activities carried out in the company over the year were our best calling card for obtaining this significant recognition.

#### > Social commitment

In Magtel, we believe the company should contribute to society, so our activities are aligned with the United Nation's 17 Sustainable Development Goals for 2030. At Magtel we develop a social, caring and sustainable business culture.

In addition, through the Magtel Foundation, we promote initiatives for developing and improving the quality of people's lives and our environment, through actions aimed at social and work integration, social and technological innovation and social action. Always based on our principles of sustainable development and environmental protection.





#### > Professional services

- **▶** ENERGY SOLUTIONS
- ▶ PHOTOVOLTAIC
- ▶ SOLAR THERMAL
- ▶ RENEWABLE DESALINATION
- ▶ PUMPED-STORAGE HYDROELECTRIC PLANTS

#### **▶** ELECTRICAL INFRASTRUCTURES

- ▶ HIGH VOLTAGE
- ▶ ELECTRICAL SUBSTATIONS

#### **▶** ENERGY SERVICES

- ▶ OPERATION AND MAINTENANCE
- ▶ SELF-CONSUMPTION

> Trust in us:





















#### > WORKING THROUGHOUT THE VALUE CHAIN

#### > PROJECT ENGINEERING

- ▶ Advice
- ▶ Consultancy and viability analysis
- ▶ Development

#### > ENGINEERING AND CONSTRUCTION

- ▶ Management Planning Control
- ▶ Certified management systems
- ▶ Health and safety
- ▶ Inspection and automatic control
- **▶** Commissioning

#### > OPERATION AND MAINTENANCE

- ▶ Control and supervision
- ▶ Monitoring and control
- ▶ Predictive analysis
- ▶ Optimisation
- ▶ Inspection







#### **RENEWABLE DESALINATION**

- At Magtel we believe the future solution for current water deficit problems, predicted to worsen due to climate change, lies in:
  - > Seawater desalination using renewable energies through reverse osmosis technology.
  - > Wastewater regeneration.
- Desalination contributes to a more efficient and environmentally friendly water management model, based on regulated use of natural resources.



GUARANTEED SUPPLY OF WATER FOR CONSUMPTION



RECOVERING LAND FOR AGRICULTURE



CONTRIBUTING TO THE PROTECTION AND CONSERVATION OF ECOSYSTEMS



SMART WATER
MANAGEMENT SYSTEM



DEVELOPMENT AND A

JUST TRANSITION



CONTRIBUTING TO ACHIEVING THE DEMOGRAPHIC CHALLENGE GOALS

#### **SOLAR THERMAL POWER**

- As a contractor of turnkey EPC projects, Magtel offers extensive experience in engineering, construction and O&M for solar thermal plants at the service of its clients.
- Our main past projects:

#### > La Africana:

- » 50 MW
- » Thermal storage system and cylindrical-parabolic technology to capture sunlight
- » Savings of 98,000 t of CO2 per year
- » Investment of €387 M

#### > InPower + Solar Blue

- » R&D&I project
- » Thermal/solar cogeneration system using selective light filters

#### OUR EXPERIENCE





**+2.400MW**DEVELOPMENT

DETAILED ENGINEERING

+40
PROJECTS IN

DEVELOPMENT

+450

INSTALLED POWER

 OPERATION AND MAINTENANCE

**+25**PROJECTS

MANAGED

+300

MANAGED

#### **PHOTOVOLTAIC**

- Our experience makes us a leading company in renewable energies in the south of Europe.
- In recent years we have carried out over 50 projects, producing over 2,400 MW of energy.
- ▶ We have built over 30 projects, exceeding 450 MW of installed power.

#### > PUMPED STORAGE

- The transition to climate neutrality requires a profound transformation in the energy system, which basically means feeding it with renewable resources. However, the variable, random nature of certain energy sources means a range of tools is required to provide flexibility for the system.
- Pumped-storage hydroelectric plants give energy systems this flexibility and are essential to achieving climate neutrality: they will permit the comprehensive integration of renewable energies, which use intermittent primary energy sources, permitting their full use and smoothing out imbalances between manageable and non-manageable energies.

18 / Magtel 2020 Annual Report / 19

#### > ELECTRICAL INFRASTRUCTURES

#### ▶ High tension lines:

- > Logrosán (Cáceres)
  - » 45 kV
  - » Overhead power line
  - » Reinforcement and foundations
  - » Hanging the conductor
  - » Installing bird life protection

#### > Burgos:

- » 15 kV
- » Adapting four sections of medium-voltage lines to the stipulations of the current bird life protection decree, installing the elements needed for compliance
- > Hinojosa del Valle (Badajoz)
  - » 30 kV
  - » Mixed (overhead-underground) power transmission line from the Hinojosa del Valle solar power plant
- > Burguillos San Jorge Lines
  - » 66 kV
  - » Overhead transmission line from the Burguillos San Jorge solar power plant
  - » Reinforcement and foundations
  - » Hanging the conductor
  - » Installing bird life protection
- > Las Naranjillas (Carmona, Seville)
  - » 132 kV
  - » Overhead high-tension line
  - » Reinforcement and foundations
  - » Hanging the conductor
- ▶ 'La Pastora' collector substation (Carmona, Seville)
  - > Four-position collector substation, consisting of three 132-kV transmission lines from nearby solar power plants, and a single 132-kV joint transmission line to the 'Los Alcores' substation.
  - > Execution involved:
    - » Stabilising the land
    - » Earthmoving
    - » Foundations
    - » Assembling the structure and switchgear
    - $\ \ \, \text{$>$} \, \, \text{Control and power wiring}$
    - » Control building
    - $\ \ \, \text{\it Roads and perimeter fencing} \,$

#### SELF-CONSUMPTION

- We install self-consumption solar facilities through the following services:
- > Design
- > Structure and module assembly
- > Wiring, testing and commissioning
- ▶ Key projects in 2020 include:
  - > Andalusian Construction Innovation Centre in Rabanales 21
  - » Installation of a 6 kW self-consumption solar energy facility
  - > Nursing home in Arjonilla (Jaen)
  - » Installation of a 25 kW self-consumption solar energy facility
  - » Promoted by the Arjonilla town council (Jaen)

#### > OPERATION AND MAINTENANCE

- ▶ Magtel ensures the smooth operation of infrastructures through its comprehensive operation and maintenance services, involving:
  - > Preventive maintenance
  - > Predictive maintenance
  - > Corrective maintenance
  - > Monthly profitability reports
  - > Photo reports
  - > Electrical panel thermograms
- > Module and inverter thermograms
- > I-V curve analysis
- > Cleaning for reverse osmosis water modules
- > Six-monthly herbicide treatment
- > Monitoring from the control centre
- > On-site or ARC security







# > Installations **Division** Unstoppable in our diversification espite the COVID-19 pandemic, in 2020 we managed to consolidate our main business lines, both in FTTH fibre-optic network engineering and roll-out and in their installation and maintenance for clients. In doing so, the Division strengthened the loyalty of the main operators in the country through the creation, construction and maintenance of their fibre-optic network infrastructure. Specifically, this year saw the design and construction of 138,000 homes and over 233,000 installations for clients. Furthermore, the focus for the future of telecommunications is still 5G services. In addition, we are strengthening our new business areas, such as radio transmission system installation and maintenance, renewable energy plant engineering and electrical and special installations in special buildings and large-We are also boosting a new department dedicated to bids for special buildings, and a new area for the study and execution of energy self-consumption facilities for large accounts, SMEs and private users, both directly and through distributors. 22 / Magtel 2020 Annual Report

#### > Professional services

#### **▶** TELECOMMUNICATIONS

- ▶ 5G SERVICES
- ▶ FIBRE-OPTIC ROLL-OUT
- ▶ TELECOMMUNICATIONS BASE STATIONS
- ▶ TECHNICAL BUILDINGS
- ▶ BUILDING INSTALLATION AND MAINTENANCE
- ▶ NETWORK OPERATION AND MAINTENANCE

#### **▶** SPECIAL INSTALLATIONS

- ▶ ELECTRICAL INSTALLATIONS IN SPECIAL FACILITIES
- ▶ AUTOMATION, DOMOTICS AND SECURITY

#### **▶** RAILWAYS

- ▶ RAILWAY SYSTEM ENGINEERING AND DESIGN
- ▶ CONSTRUCTION AND MAINTENANCE
- ▶ SECURITY SYSTEMS
- ▶ SIGNALLING AND COMMUNICATION

#### **▶** ELECTRICAL INSTALLATIONS

- ▶ HIGH VOLTAGE
- ▶ LOW AND MEDIUM VOLTAGE
- ▶ CONVERTER STATIONS
- ▶ ELECTRICAL SUBSTATIONS

#### > Trust in us:









#### TELECOMMUNICATIONS:

#### ▶ Roll-out of FTTH networks for Orange

- > In Andalusia, Extremadura, Castile-La Mancha and Madrid
- > Engineering and installation of FTTH networks
- > Design and construction of 138,000 homes mainly for cities with low population density
- > Obtaining licences, designing and registering as-built plans, cable installation, fibre-optic connections and commissioning
- ▶ Framework contract for executing fibre-optic connections for the ADIF railway administration company throughout Spain
- > Client: Reintel
- > Installation and civil engineering works for fibre-optic networks
- ▶ Turnkey projects for laying fibre-optic cable in conduits
- > Client: Lyntia Netwok
- > Project for telephone exchange access using subducts, as stated in the framework agreement



# ▶ Installation and civil engineering works for fibre-optic networks

- > Clients: Acciona, Tradia Telecom
- > Nationwide
- > Fibre-optic installation, civil engineering works, connections and measurements

# ▶ Installation and maintenance for Orange customers

- > In Andalusia and Madrid
- > Installation of customers' FTTH and ADSL, wiring, testing and commissioning of telephone, Internet and television installations
- > Around 68,000 installations carried out

# ▶ Installation and maintenance for MásMóvil customers

- > In Andalusia, Extremadura, Canary Islands and Castile-La Mancha
- > Installation of customers' FTTH and ADSL, wiring, testing and commissioning of telephone, Internet and television installations
- > Around 165,000 installations carried out

#### ▶ Installation, conservation and roll out in Vodafone civil engineering works for Vodafone-ONO

- > In Andalusia and Extremadura
- > Conservation and roll-out of hybrid fiber-coaxial (HFC) and fibre-optic networks
- > Installation of fibre-optic networks for companies and organisations
- > Roll-out of new FTTH and CTV networks

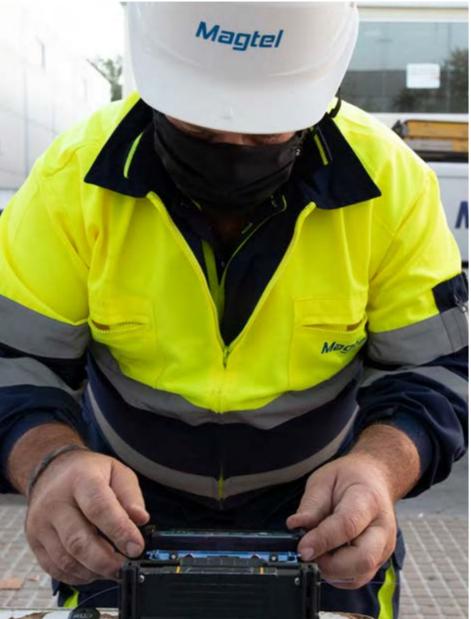
#### ▶ Outsourced plant maintenance for Orange

- > In Andalusia and Madrid
- > Technical support for incidents in the Orange fibre-optic network.
- > Extension of transformer substations due to saturation
- > Maintenance for over a million homes

#### ▶ Telecommunications base stations

- > Installation and maintenance of radio transmission systems and infrastructure and energy for Orange and Huawei base stations
- ${\color{blue} \gt \, In \, And alusia \, and \, Extremadura}$
- > Installation of new equipment and antennas
- > Integration of equipment and antennas, clearings, HVAC, adapting power equipment, wiring, etc.
- > Preparatory work for 5G roll-out











#### **ELECTRICAL INSTALLATIONS:**

- ▶ Installation and maintenance of power lines
- > Clientes: Iberdrola, Adif, Endesa Energía, Ghiasa, CHG, Penibética de Cervezas, Retevisión, Guamar, Acisa, etc., for up to a total 30 customers
- > In Andalusia and Extremadura:
- » Installation of low-, medium- and high-tension lines
- » Electrical panels
- » Preventive and corrective maintenance
- » Control reports
- » Transformer substations, etc.
- ▶ Engineering for lines, substations and the construction of wind, solar and solar thermal power plants, combined cycles, waterfalls and other actions for renewable energies
  - > Drawing up construction documents to meet legal requirements for new solar power plants:
  - » Basic and detailed engineering for solar power plants, electrical system, layout, blueprints, integration, optimisation, etc.
  - $\,>\,$  Technical office in the execution of solar power plants, evacuation lines and substations.

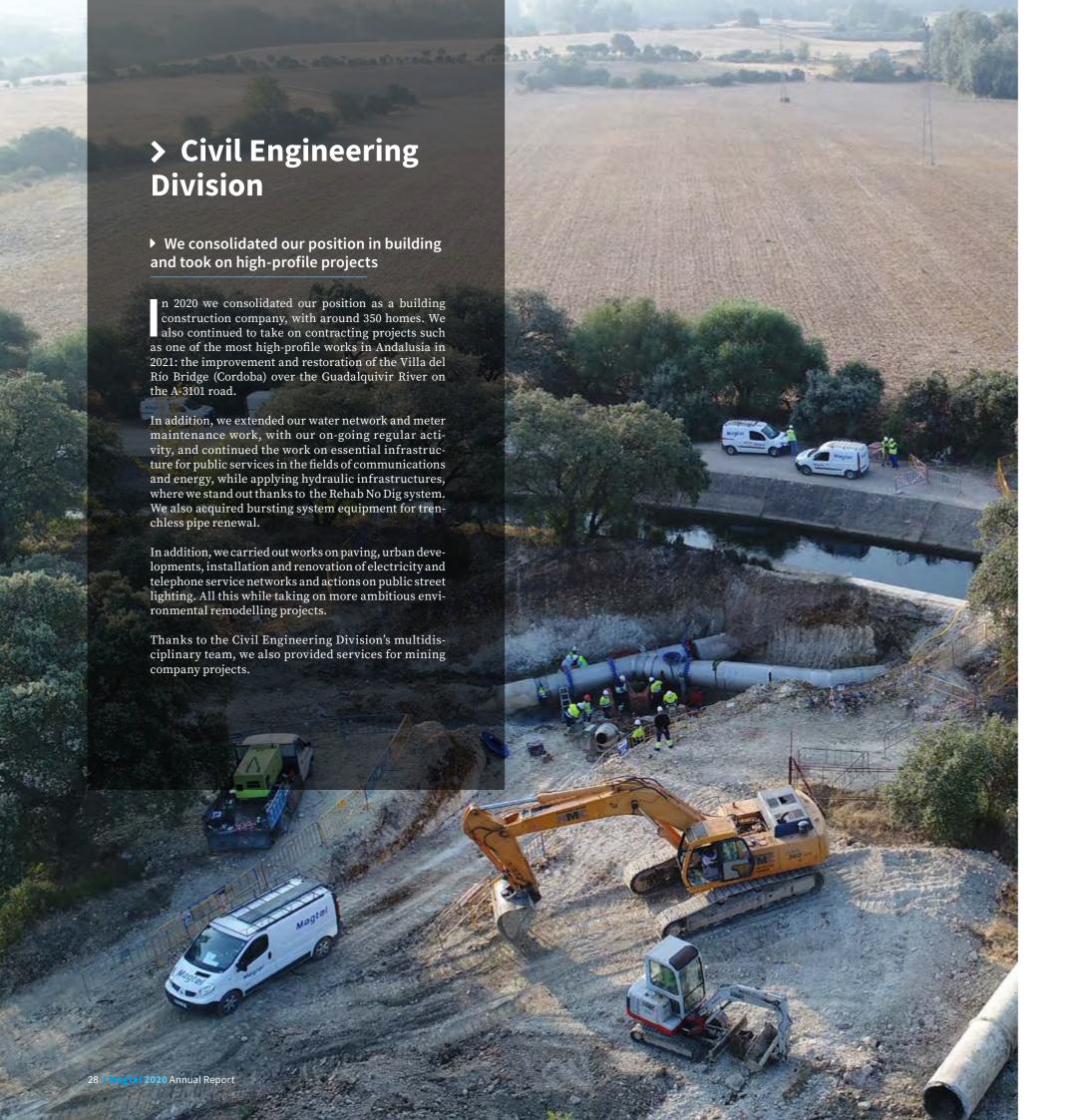
#### > SPECIAL INSTALLATIONS:

- ▶ Hotel IKOS Estepona (Malaga)
  - > Magtel-Rahijoint-venture
- > Medium-and low-tension electrical installations
- > Communication
- > Special services
- ▶ Hotel Almenara in Sotogrande (Cadiz)
- ▶ Client: Construcciones Sánchez Domínguez-Sando
- ▶ Electrical and special installations in a luxury resort:
- > Electrical installation, wiring, supply and assembly of luminaries and mechanisms
- > Structured wiring for IT
- > Interior lighting for rooms
- > Domotics and automation
- > Programmable logic controller (PLC) for each room, enabling automation of lighting and air-conditioning, improving comfort for guests
- ▶ Malaga Oceanographic Centre
- ▶ Client: Construcciones Sánchez Domínguez-Sando
- Electrical installation, and a number of special installations, specifically:
- > Fire detection to PA system
- > CCTV and intrusion detection for security control, structured wiring and fibre-optics









#### > Professionals services

#### **▶** WATER

- ▶ COMPLETE WATER CYCLE
- ▶ DESALINATION
- ▶ DRINKING WATER TREATMENT
- ▶ WASTEWATER TREATMENT
- ▶ LARGE INFRASTRUCTURES

#### **▶ CIVIL ENGINEERING**

- ▶ URBAN INFRASTRUCTURES
- ▶ INTERURBAN INFRASTRUCTURES
- ▶ URBAN DEVELOPMENT AND ACCESSIBILITY

#### **▶** CONSTRUCTION

- **BUILDING CONSTRUCTION**
- ▶ ENERGY EFFICIENCY

#### **▶** MINING

- ▶ EXPLORATORY PROBE HOLES
- ▶ SURFACE PROBE HOLES
- ▶ WASTE MANAGEMENT
- ▶ AUXILIARY SERVICES

#### > Trust in us:





























#### > URBAN INFRASTRUCTURES:

- ▶ Maintenance of the Emacsa (Empresa Municipal de Aguas de Córdoba) municipal company networks
- Locations:
  - > Cordoba city
- > Encinares de Alcolea (Cordoba)
- ▶ Repair and renovation of supply networks in the Ciudad Jardín district
- > Renovation of the supply network
- > Replacement of old pipelines
- > Bursting and relining techniques on over 4 km of pipelines
- ▶ Repair and renovation of supply networks in the El Higuerón district
- > Renovation of the supply network
  - » Replacement of old pipelines
  - » Over 1.5 km of pipeline rehabilitated
- Awarded the first phase of the supply network renovation project in the Cerro Muriano district
- ▶ Pipeline renovation using the trenchless 'Rehab no Dig' system
  - > 1.5 km of sewer system collectors in the Centre, East and Southeast districts.
- > 630 m of sewers in the road Avenida del Brillante
- Operations at the 'La Golondrina' WWTP
- > Repair of the wastewater tank
- > Leak repair and modifications to the industrial water-to-dewatering pipeline
- > Construction of ramps for sand traps
- Repair of the foam collection box in the Cerro Muriano WWTP clarifier
- ▶ Repair and improvement of the Pulsator clarifiers at the Guadanuño WWTP
- Other services:
  - > Repair service
  - > Electrical workshop for the revision, repair and execution of electrical installations integrated into drinking water and wastewater treatment infrastructures
- > Boiler work for supply and treatment facilities
- > Repair and attachment of stainless-steel grills on ornamental fountains

- Maintenance of the Emasesa (Empresa Metropolitana de Abastecimiento y Saneamiento de Aguas de Sevilla) metropolitan company
- ▶ Maintenance and control of treatment spillways, checking, calibration and programming of wastewater discharge reading devices
- ▶ Connections to supply and sewer networks, supply cancellations
- ▶ Complementary work:
  - > Installing meter batteries
  - > Façade meter readings
- > Grease trap and under-passes
- Execution of connections and operation of the Emasesa meter system
- Installation, replacement and revision of the meter system and complementary remote meter reading installations:
  - > Inspections and elimination of fraud
  - > Meter warehouse management
- Other networks:
  - $\,>\,$  Renovation of the Peñaflor networks, promoted by the town council

#### > SPECIAL INFRASTRUCTURES:

- ▶ Rehabilitation and improvement of the Villa del Río iron bridge, (Cordoba)
  - > Dismantling of the existing bridge, three arch spans on the lower board
- > Reinforcement of the arches
- > Adaptation and resizing of the structure
- > Extension of the existing platform over the masonry and metal part of the bridge to increase the road surface capacity
- > Repair work on the masonry structure
- ▶ Execution of works in El Cabril, (Cordoba)
- > Project executed for Enresa (Empresa Nacional de Residuos Radiactivos, S.A.)
- > Improvements to the waterproofing of cell number 29 for low and very low-activity waste in the controlled radiation zone by:
- » Reinforcing and repair of the HDPE geomembranes
- » Welding extruded or double-channel sheets





#### > CIVIL ENGINEERING:

- Urban rehabilitation operations:
- ▶ Remodelling of the areas around the Antonio Fermández Grilo and Aladreros squares and the Pintor Cuenca Muñoz street, (Cordoba)
- > Demolition and raising of pavements
- > Execution of new pavement
- > Installation and renovation of the electricity, telephone, water supply and sewer networks
- > Adaptation of the sewer system by relocating the gutters
- > Installation of the new supply networks and connections for the new drip irrigation and drinking fountain facilities
- > New public lighting network using efficient LED luminaires
- > Urban and landscape integration
- > Urban furniture
- ▶ Remodelling of the Díaz Huertas street in the El Naranjo district, (Cordoba)
- > Demolition and raising of pavements
- > Execution of new pavement
- > Installation of a new drip irrigation system
- Remodelling of the space between the blocks in the Manuel Sagrado complex Phase I (Cordoba)
- > Demolition and raising of pavements
- > Execution of new pavement
- > Renovation of the sewer networks
- > New public lighting network using efficient LED luminaires
- > Paving of car parks
- ▶ Reorganisation of the crossroads between the roads Avenida Manuel del Valle and Avenida Pueblo Saharaui (Seville)
- > Improved accessibility by placing a split roundabout with traffic lights, maintaining the continuity of the road Avenida Alcalde Manuel del Valle
- > New sewer network
- > New water supply network
- > New public lighting network
- > Traffic lights
- > Rerouting the Endesa, Ono and Telefónica networks
- > Paving for pavements, road lanes and cycle lanes

- Remodelling of the park in the road Avenida Pueblo Saharaui (Seville)
- > Urban development
- > Automatic efficient irrigation network
- > Emasesa supply and sewer networks
- > Public lighting
- > Urban furniture
- > Planting of species chosen by the Town Council Parks and Gardens Department
- ▶ Rehabilitation of the pedestrian walkway in the road Calle Bollullos over the railway line (Seville)
  - > Redevelopment for the walkway access points
  - > Frame reinforcement
  - > Execution and sealing of expansion joints
  - > Surface treatment of the prefabricated concrete sections and railings
  - > Fibreglass-reinforced polymer wall

#### > MINING:

- ▶ Surface exploratory probe hole work and auxiliary services for the Tharsis mine (Huelva)
- ▶ Drilling of probe holes in the wire-line system to retrieve mineral cores and extract soil samples, and in air hole systems for slag heaps, up to 800 metres in depth
- Auxiliary works:
- > Earthmoving for the entrance to the probe site
- > Horizontal adaptation of the site for installing the drilling machines
- > Execution of setting basins for supplying water for cooling bore holes and storing sludge and inert material
- > Water supply for cooling bore holes
- > Removal of inert material and mineral sludge for collecting in suitable general basins
- > Adaptation of the tracks, berms, ditches and slopes in the mine.



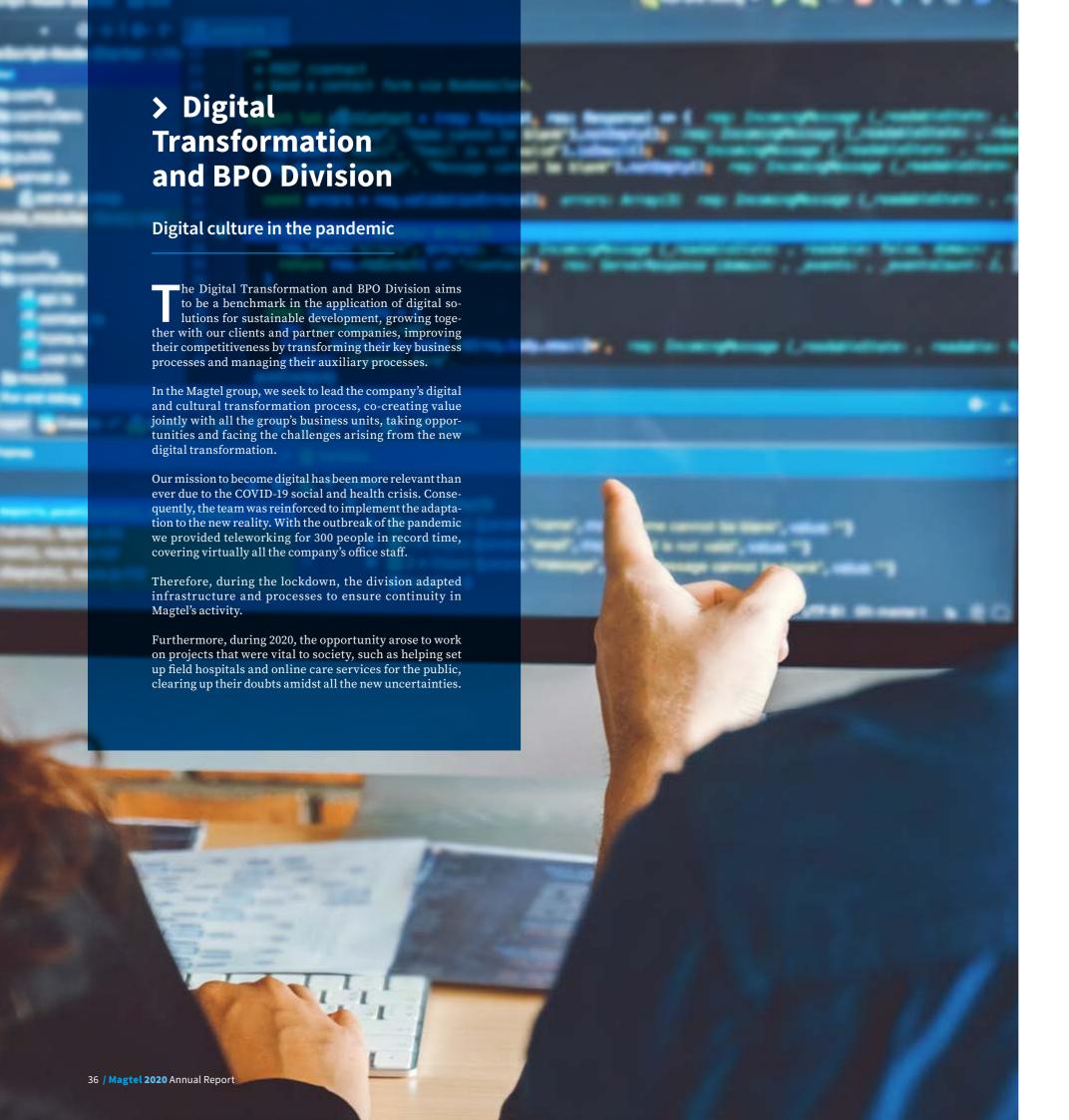




#### > CONSTRUCTION:

- ▶ Rehabilitation and reform of the Cordoba Municipal Archive
- > Repair of the walls
- > Replacement of the floors and finishing work
- > Restoration of valuable heritage elements
- > Implementation of new installations, in particular the OxyReduct fire-extinguishing system using inerting with nitrogen to protect historical documents
- ► Complete construction of buildings, executing the following works:
- > Earthmoving and foundations
- > Structure
- > Masonry
- > Installations
  - » Electrical
  - » HVAC
  - » Plumbing
  - » Drains
  - » Energy efficiency
- > Waterproofing and roofing
- > External cladding
- > Development work
- ▶ In the following projects:
- > Construction of 25 terraced houses 'Brillante-Arruzafa', including garages, store rooms and swimming pool (Cordoba)
- > Construction of 56 councils houses in *La Huerta de Santa Isabel*, including garages, store rooms and swimming pool (Cordoba)
- > Construction of 23 councils houses in *La Carrera del Caballo*, including garages and swimming pool (Cordoba)
- > Construction of 166 homes and business premises in *La Ciudad Jardin de Poniente*, including garages, store rooms and swimming pool (Cordoba)





#### > Professionals services

#### **▶** OUTSOURCING PROCESSES

- ▶ ADMINISTRATIVE PROCESSES
- ▶ COMMERCIAL PROCESSES
- ▶ PROJECT OFFICE
- AUDITING
- ▶ TECHNICAL SUPPORT
- ▶ ENGINEERING

#### **▶ INFRASTRUCTURE**

- ▶ CORPORATE NETWORKS
- ▶ DATA PROCESSING CENTRE
- ▶ CONTROL CENTRE
- ▶ CONTROL SYSTEMS

#### **▶** SMART SERVICES

- ▶ PROCESS REENGINEERING AND AUTOMATION
- ▶ ARTIFICIAL INTELLIGENCE AND AUTOMATIC LEARNING
- ▶ INTERNET OF THINGS
- ▶ ENERGY EFFICIENCY

#### > Trust in us:









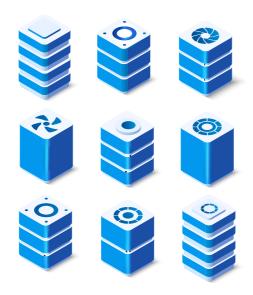




#### > OUTSOURCING PROCESSES

- ▶ Level 2 citizens' remote support service
- Client: Sandetel
- ▶ Professional services for level 2 operations in a remote support unit in a citizens' support and information service for several Government of Andalusia bodies:
- > Advancedtaxinformation and support services
- > Government of Andalusia general administrative information services
- > 'Housing Info' citizens' support service
- > 'Consumer Info' citizens' support service
- > Functional support service for all kinds of citizens' needs in relation to the use of the Electronic Administration
- Operational support service for the Government of Andalusia Corporate Telecommunications Network
- Client: Sandetel
  - > Organisational relations management
  - > Telecommunications technical office
  - > Supplier management
  - > Service and quality level management
  - > Engineering management
  - > Service provision management
- > Field support management
- > Work-post service management
- > Nerea network management > Streaming and gateway service management
- ▶ Field operations support service for the Government of Andalusia Corporate Telecommunications Network
- ▶ Client: Sandetel
- > Project office: management and coordination, communications, OHS technical support, supplies
- > Field interventions: technical support, redesign and inspections, service migration, technical support, faults and incidents, maintenance in the client's offices.
- > Wiring and installations
- > Logistics service
- > Warehouse management

- ▶ Electronic Administration platform management service
- ▶ Client: Malaga Provincial Council
- ▶ Enquiry and incident resolution support for systems and applications in the Electronic Administration platform
- ▶ External and internal user support service regarding use of the electronic office and the HELP procedure platform
- Client: Cordoba City Council
- ▶ Channelling support to users of the electronics procedure platform, and to third parties accessing it via electronic offices
- ▶ Auditing and free-to-air signal quality measurement services
- ▶ Client: Sandetel
- > Free-to-air service signal quality measurement to check coverage of the existing free-to-air
- > Troubleshooting for incidents in service emission/reception
- > Audits of installed infrastructure sites







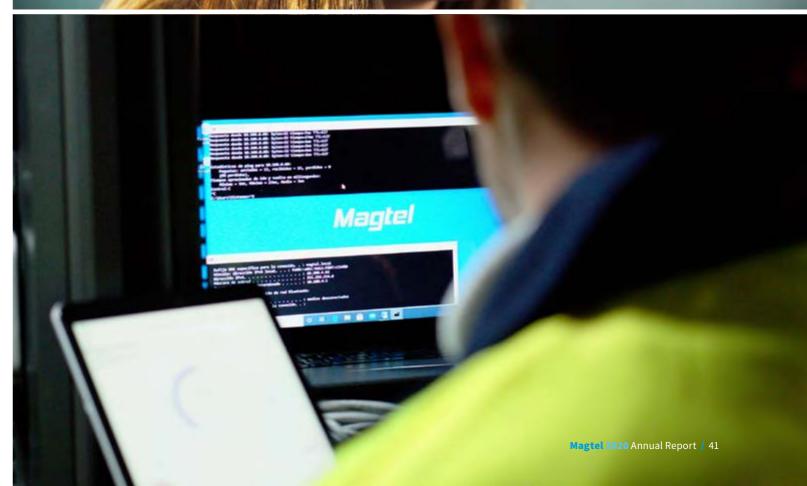
#### INFRAESTRUCTURE

- ▶ Supply of a CRAC system for the DPC in the Jaen 061 Health Response and Provincial Service buil-
- Client: Public Health Emergency CompanyProvision of a new CRAC system for the correct operation of the DPC
- ▶ Renovation of two air processing units (APU) with the aim of improving the CRAC system in the ZOCO DPC
- ▶ Client: Sandetel
- Dismantling of the existing air processing units and auxiliary installations
   Supply and installation of two APUs and integration in the APU PLC.
- > Testing and commissioning of the new APUs in the ZOCO DPC











#### > Professionals services

- **▶** ENERGY
- ▶ BIOMASS AND BIOGAS
- ▶ ELECTRICAL ENERGY AND STORAGE
- ▶ THERMAL ENERGY AND STORAGE
- **▶** ICT
- ▶ INFORMATION TECHNOLOGY
- INDUSTRY 4.0
- ▶ TELECOMMUNICATIONS
- **▶** ENGINEERING AND ENVIRONMENT
- ▶ ENVIRONMENT AND RAW MATERIALS
- ▶ CIVIL ENGINEERING AND SUSTAINABLE CONSTRUCTION
- **>** Co funding/collaborating organisation:



















#### > ENERGY

- ► SOLARSCO2OL (SOLAR based CO₂ Operating low-cost plants)
- Pilot plant based on energy storage using high-temperature molten salts to generate energy with a supercritical CO2 turbine, and developing new industrial equipment, to reduce the cost of energy to concentrated solar power (CSP) plants.
- The plant consists of three independent systems:
  - > Supercritical CO2 cycle
- > Molten salt cycle with electrical heater
- > Cooling system

#### • Objectives:

- > Becoming the first sCO2 medium-tension plant in the EU to demonstrate the potential of sCO2 for obtaining cheaper and flexible CSP
- > Strengthening the EU's industrial leadership in the CSP and turbomachinery sectors
- ▶ SIES2020 (Smart Integrated Energy System)
- ▶ This will help develop a virtual power plant (VPP) to add renewable energy generation systems, storage systems, hydrogen and heat
- Objectives:
- > Reinforcing the transition from a centralised energy network to a low-carbon, decentralised smart integrated energy system (SIES).
- > Boosting use of technological solutions that enable and place consumers' needs at the centre of the system.
- > Developing advanced control systems administered by IoT platforms (VPPs)

#### ▶ InPower

- Development and integration of new solutions for CSP technology using innovative materials to increase efficiency while reducing the cost of energy production
- Objectives:
- > Up to a three-fold increase in thermal capacity compared to standard thermal energy storage (TES) materials, depending on the heat transfer liquid (HTF)
- > Reduction in the size of the thermal storage system

#### ▶ Hitsolar

- ▶ Renewable solution for generating electricity, local heat and self-consumption in buildings
- Integration of three of the most relevant technologies into building energy management:
- > Integration of renewables
- > IoT platforms together with delocalised management (the Cloud)
- > Data analysis-based predictive control
- Dijectives:
- > Integration of electricity and heat production in a single element (solar panel)
- > Improving usage and integration of renewable energies
- > Optimisation of energy generation and storage

#### Solar Blue

- ▶ Thermal and photovoltaic cogeneration system
- Objectives:
  - > Provision of storage or manageability in the photovoltaic field
  - > Industrial applications such as thermal desalination processes

#### Dragon

- ▶ Hybrid storage system that combines high power and energy densities for electric mobility, aerospace and self-consumption installations
- Objectives:
  - > Increased energy density and power, and greater flexibility for solutions in electrical mobility, aerospace applications and self-consumption
  - > Developing use cases in the field of energy storage through technology hybridisation for greater flexibility and cost reduction





#### > ICT

#### Servicechain

▶ Blockchain technology application to managing digital identity, reliability, online confidence and traceability in transactions involving goods and services

#### Objectives:

- > Researching and creating blockchain technology for business use
- > Minimising associated risks
- > Designing three demonstrations of future applications in energy, Industry 4.0 and smart cities

#### ▶ TEC-MED

- ▶ Development of an ethical-social transcultural model for dependent populations in the Mediterranean basin
- ▶ Objectives:
- > Improving and adapting social care policies that tackle the issue of ageing population
- > Designing a new organisational model to support cooperation and association between public institutions and actors in social care
- > Improving the quality social services

#### ▶ Frail

- ▶ Modular platform that carries out actions in relation to frailty and the risks of ageing through ICT
- ▶ Objectives:
  - > Promoting remote, real-time health care
- > Active communication between users and
- > Promoting physical exercise among the elderly

#### Magwater

- ▶ Solution to improve both the cost and results of production process based on the lean manufacturing paradigm, using intensive technology application to gather and analyse data to support decision-making ▶ Objectives:
  - > Developing an automated plant for assembling, testing and standardising water meters for domestic use

#### **▶** Optimum

Distributed control system using IoT communications for Industry 4.0

#### Objectives:

- > Developing smarter and more environmentally-friendly industrial plants using interconnected production lines
- > Applying the principles of Industry 4.0:
  - » Automation
  - » Digitalisation
  - » Artificial intelligence

#### > ENGINEERING AND ENVIRONMENT

#### ▶ Fiberclean

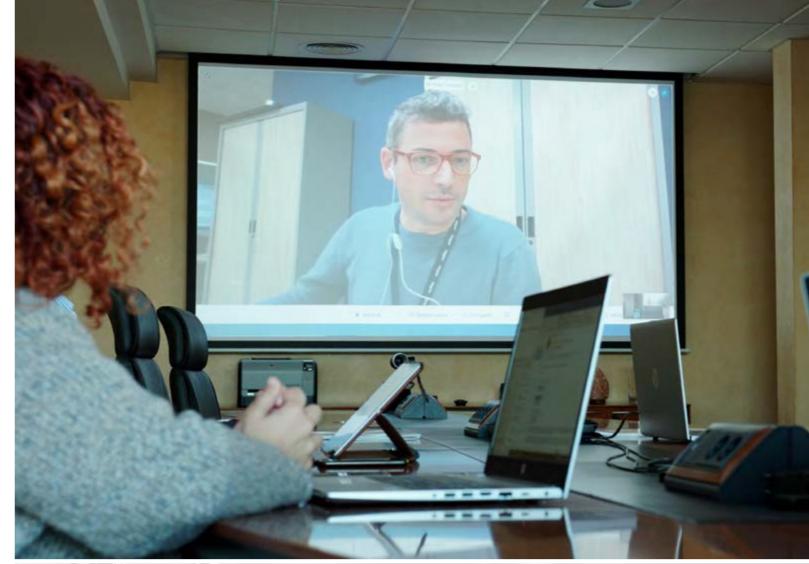
- ▶ Development of solutions for detecting and reducing microfibres in the complete water cycle
- Dbjectives:
  - > Reducing or eliminating microfibres throughout the textile value chain by using different technologies in:
  - » Developing new fibres and fabrics
  - » Efficient minimisation systems in fabric finishing and washing processes

#### ▶ Life Green Sewer

- ▶ Pilot project for the implementation of a new wastewater treatment system that permits recovery of energy and resources
- Objectives:
- > Lower treatment costs
- > Biogas production and reductions in energy use of up to 70%.
- > Reuse of 80% of treated water and recovery of nutrients
- > At least 60% reduction in sludge production
- > Improved air quality

#### ▶ Resiltrack

- ▶ Development of solutions based on building information modelling (BIM) for assessing railway infrastructure resilience to climate change
- Objectives:
- > Assessing the impact of adverse weather conditions on the structure in real time
- > Researching new smart maintenance methodologies
- > Predicting behaviour to act where necessary







# ESSENTIALS



#### ▶ A telematic motor

> We adapted to teleworking in record time thanks to our technological development

Magtel reacted rapidly after the state of emergency was declared and teleworking was provided for over 300 professionals, thanks to the company's digitalisation.

In record time, we managed to adapt to the new situation, enabling almost all office workers to continue their work from home after the Government adopted measures to tackle the health situation.

The Digital Transformation and BPO Division, together with the IT and OHS departments, rolled out teleworking for all the company's office staff as a safety measure.

As well as facilitating remote access, tools were provided that improved teamwork and increased proximity.



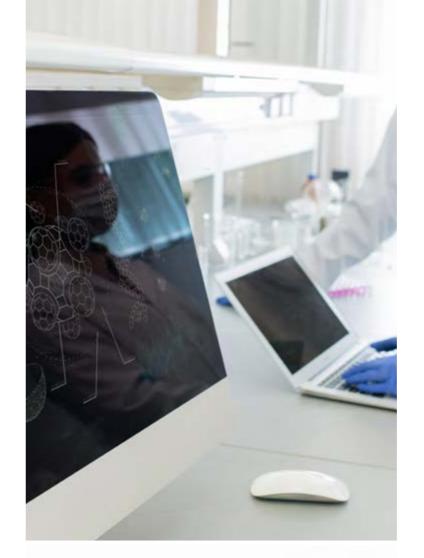
# ► Connections that are more necessary than ever

> We stayed connected thanks to the roll-out of fibre-optics and digital transformation

The COVID-19 crisis demonstrated the need for company digitalisation to tackle a previously unthinkable situation.

Firstly, digital transformation, which the company has been investing in for years as an inherent, cross-cutting part of our areas of action and business lines, allowed us to continue our activity during the crisis.

Secondly, our fibre-optic roll-out brigade have shown their value as an essential service for the public, continuing their work even at the moments of greatest uncertainty, complying with safety measures as they were established, making communication possible through state-of-the-art technology.



#### **▶** Field support in the health emergency

 We carried out vital projects in field hospitals and online care for the public

Through our Digital Transformation and BPO Division, the opportunity arose to work on projects that were vital to society, such as setting up field hospitals and online care for the public, clearing up their doubts regarding the new situation.

From March, we provided support to the SAS for activating services in emergency hospital sites, in line with the contingency plans established by the Government of Andalusia.

Magtel personnel's technical support in telecommunications has helped in the commissioning of COVID-19 testing centres, nursing homes, medicalised hotels and emergency hospitals.

# ► Fault repair and maintenance in urban infrastructures

> We carried out essential work to guarantee basic services for the public

The Civil Engineering Division kept on working to ensure all essential services for the public continued operating at full capacity, regardless of the situation.

This was the case of our urban infrastructure renovation and maintenance services, which include sewer and water supply systems, where we worked unceasingly.

We also continued our actions in other infrastructure works essential for providing public services, in areas such as communications and energy.



# ► We pave the way for getting energy to where it is needed

> Installation of medium- and high-tension lines

Another of the essential sectors in which Magtel continued working was energy. As a result, we continued to install medium- and high-tension lines throughout Spain, thereby maintaining this essential activity.

At Magtel, we participate actively in developing clean energies and going the extra mile to become an active agent in the energy transition.

Our main goals in this field are generating green energy, developing sustainable solutions to combat the water deficit and storing excess energy, providing stability and facilitating the penetration of renewable energies.



#### ▶ A positive year despite the pandemic

> We continued to make progress in our challenges and goals

Despite the outbreak of the pandemic, 2020 was a positive year. Because much of the company's business involves essential activities, we did not have to stop work and thanks to the company's digitalisation, teleworking was quickly rolled out, so we could advance in most of our projects.

Occasionally, we had to slow down due to the situation, but we continued to adapt to the new circumstances. Being a technology-based company proved a major advantage to maintaining our established business plan.

Consequently, for 2021, we hope to continue along the same lines and achieve our goals, while also hoping that COVID-19 becomes ever less widespread until it eventually becomes irrelevant.







# > Our offices







# > info@magtel.es (f) (m) (D) (0) >











#### ANDALUCÍA

#### > Almería c/Sierra de Lújar nº 6,

04240 Viator, Almería

> (Formación) c/Inglés, nº 6 04008 Almería info.almeria@magtel.es

#### > Cádiz

Pol. Industrial El Palmar c/ Matías Balsera, nº 14 11500 El Puerto de Santa María, Cádiz T. +34 956 309 821 info.cadiz@magtel.es

#### > Córdoba

P.E. Las Quemadas c/ Gabriel Ramos Bejarano, nº 114, 14014 Córdoba T. +34 957 429 060 info.cordoba@magtel.es

> P.I. San Carlos ctra, Madrid - Cádiz Km 398, 14015 Córdoba T. +34 957 326 466 info.cordoba@magtel.es

> P.E. Las Quemadas c/Imprenta de la Alborada, nº 114, 14014 Córdoba T. +34 957 429 060 info.cordoba@magtel.es

> (Formación) P.E. Las Quemadas c/Imprenta de la Alborada, nº 109, 14014 Córdoba T. +34 957 429 060 formacion.cordoba@magtel.es

#### > Sevilla

Parque Aeronáutico Aerópolis c/Juan Olivert, nº 9 41309 La Rinconada, Sevilla T. +34 955 337 633 F. +34 955 337 632 info.sevilla@magtel.es

> Centro de empresas Pabellón de Italia c/Isaac Newton, no 4 41092 Sevilla info.sevilla@magtel.es

> Avda. Edificio Centris II, Glorieta Aníbal González, Módulo 110, 41940 Tomares, Sevilla info.sevilla@magtel.es

#### > Granada

P.I. Sierra Elvira c/Raja Santa, Naves 3 y 4 18230 Atarfe, Granada T. +34 958 439 492 info.granada@magtel.es

#### > Huelva

P.E. La Raya c/Industria, nº 21 21110 Aljaraque, Huelva info.huelva@magtel.es

> (Formación) Colegio Montessori avda. Manuel Siurot, nº 46, 21002 Huelva T. +34 959 154 055 formacion.huelva@magtel.es

#### > Jaén

P.I. La Zarzuela. Nave 1, 23700 Linares, Jaén

#### > Málaga

P.I. La Huertecilla c/Estado, nº 16-18 29196 Málaga T. +34 952 179 901 info.malaga@magtel.es

> (Formación) Parque Tecnológico de Andalucía c/ Iván Paulov, nº 8 29590 Málaga formacion.malaga@magtel.es

> (Formación) avda. Gregorio Diego, nº 16 29004 Málaga formacion.malaga@magtel.es

#### MADRID

> c/ Velázquez, nº 106 1<sup>a</sup> planta, 28006 Madrid T. +34 910 574 185 info.madrid@magtel.es

> c/de la Plata, nº 4 28850 Torrejón de Ardoz, Madrid T. +34 910 861 042 info.madrid@magtel.es

> Parque Empresarial de la Carpetania avda. Leonardo Da Vinci, s/n, 28906 Getafe, Madrid info.madrid@magtel.es

> (Formación) c/ de Aragón nº 21-23 21913 Leganés, Madrid formacion.madrid@magtel.es

#### **EXTREMADURA**

#### > Badajoz

Pol. Industrial Dehesa del Rev Parque Isaac Newton no 2, nave 81, 06810 Calamonte, Badajoz T. +34 924 324 915 info.badajoz@magtel.es

#### > Plasencia

c/Pedro Henlein, no 38 10600 Plasencia T. +34 927 904 549 info.caceres@magtel.es

#### > INTERNATIONAL

#### > Paraguay

(Asunción) c/Luis Alberto Herrera, nº 195 **Edificio Inter Express** Asunción, Paraguay T. +595 21 497 197 info.paraguay@magtel.es

#### > Perú

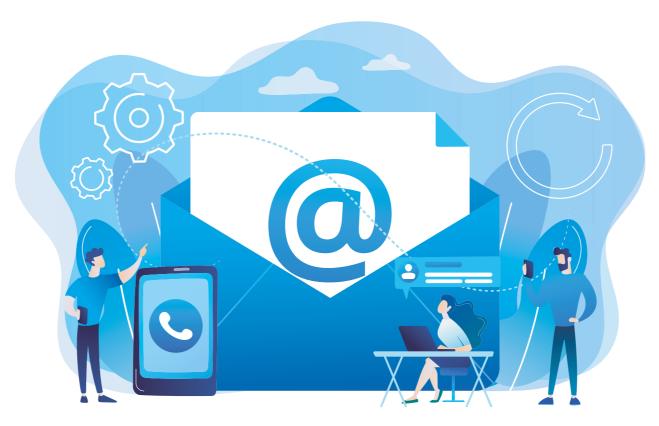
(Lima) avda. Canaval y Moreyra, nº 385, Distrito de San Isidro, Lima T. +51 1 200 2100 info.peru@magtel.es

#### > Portugal

(Lisboa) rua Latino Coelho, nº 87 1050-134 Lisboa info.lisboa@magtel.es

#### > Marruecos

(Tánger) Centre NREA 183, Avenue Prince Heritier Nº Oficina 25, Planta Baja 90000 Tánger, Marruecos info.marruecos@magtel.es



54 / Magtel 2020 Annual Report Magtel 2020 Annual Report / 55



#### **2020 ANNUAL REPORT**



magtel.es