



5G

5

Being a facilitator of social progress



Being a facilitator of social progress

2020 main highlights



Creation of
cellnex
foundation



Cellnex works to
bring connectivity to rural areas



Identify the SDGs and their specific targets to which the company can best contribute.



Solidarity Euro Project launch globally under the name of Solidary Gift.

Inclusive connectivity Casa Bloc

Quality education and digitalization



Internal Task Force in Cellnex for sharing knowledge and best practices on EMF issues.

2021 main challenges



Boost digital skills and develop educational and social projects adapted to the challenges of digital world.



Calculate the return of investment associated with the innovation / R&D projects linked to SDGs by 2023.



Generate materials to explain the progress and effects of 5G on society through EMF Internal Task Force.



Cellnex commitment with Covid-19

Cellnex's Covid-19 Relief Initiative

Cellnex has endowed a fund of **10 million EUR** over 2020-2021 to face Covid-19 crisis.

5 million EUR for cellular immunotherapy project

5 million EUR EUR to social action projects with NGOs to assist people and groups in vulnerable situations

Social contribution

Cellnex is strongly committed to contributing to society, working together with charities, financing projects, volunteering, etc. In this regard, many projects by Cellnex aim to make its knowledge and technology available to society.

Owing to the large number of social projects that Cellnex develops in each of the areas in which it operates, Cellnex has been working for a long time to establish its own foundation to organise and give visibility to all the social initiatives developed by the company.

Cellnex's COVID-19 Relief Initiative

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As in previous years, Cellnex showed its commitment to the welfare of society through several donations. However, because of the public health crisis caused by the COVID-19 pandemic and aware of the scale of this disruption worldwide, Cellnex took some unprecedented decisions in 2020. The company set up several collaborative projects in the countries where it operates under the "Cellnex's COVID-19 Relief Initiative" by donating €10 million over 2020-2021.

On the one hand, Cellnex is providing five million EUR over two years to fund a research project involving cutting-edge European research teams in the field of immunotherapy to detect and obtain T-cells that fight the SARS-CoV-2 infection.

Five million euros for a cellular immunotherapy project to tackle COVID-19



This will be a multicentre project involving five cutting-edge European research teams in the field of immunotherapy.

The project is led by the Clínic-IDIBAPS Hospital together with the Banc de Sang i Teixits [Blood and Tissue Bank] (both in Barcelona), and also involves the IISGM-Hospital Universitario Gregorio Marañón of Madrid, the IRST-IRCCS of Meldola, the INSERM-U1183 of Montpellier and the IRCCS Ospedale San Raffaele from Milan.

The project aims to provide a better understanding of how the immune response to SARS-CoV-2 works and to propose new treatments based on the body's cellular response to COVID-19 by using T-lymphocyte cells, which are part of the immune system and are formed from stem cells in the bone marrow.

The field of passive immunisation by administering specific antibodies for curative and/or preventive purposes is one of the alternatives to vaccines to beat the disease, in this case using T-lymphocytes extracted from recovered COVID-19 patients.



The other 5 million out of the total 10 million EUR for the fight against COVID-19 have been allocated to social action projects with non-governmental organisations to assist people and groups in vulnerable situations, funding the purchase of protection equipment for healthcare staff as well as providing resources for the most vulnerable groups.

Boosting our talent, being diverse and inclusive



Bridging the digital divide with Emmaüs Connect



Within the project “Cellnex’s COVID-19 Relief Initiative”, Cellnex France has signed a partnership with Emmaüs Connect, which works for the digital inclusion of people, over the next two years. The partnership aims to continue and relaunch activities such as training, labour support or access to computers, which were impacted during the COVID-19 health crisis. It also includes actions in place to promote the Cellnex France employees to participate as volunteers carrying out installations, training, etc. Moreover, Cellnex is helping to find two locations to carry out the entity’s activity.



In this way, Cellnex France is helping to reduce this digital divide and minimise the health, economic and social impact of the COVID-19.

Moreover, the company is working actively with various hospitals and on a technological project to develop, produce and provide a mechanical ventilation system for ICUs. In this connection, the project focuses on producing the Leitat 1 field ventilator, manufactured using industrial 3D printers in the incubator of the Barcelona Free Trade Zone Consortium, type-approved in a clinical study by the Spanish Medicines Agency and tested and functioning in Catalan ICUs.

Cellnex has played an active role in this collaboration, since it has not only supported the project financially, but also a team of company engineers specialised in Internet of Things has participated in the challenge of finding a solution that would ensure the safety and efficiency required for type-approval while gathering data from the ventilator in real time and sending it for analysis via an application.

Cellnex works to
**bring connectivity
to rural areas**

Social projects

Access to communications

The COVID-19 crisis has underscored more than ever how vital it is for everyone to have access to a good connectivity and digital tools to remain connected to the rest of the world in this digital society. The lack of these elements only accentuates the isolation and sense of exclusion of people in difficulty.

Faced with this scenario, Cellnex, as a telecommunication infrastructures operator, works to bring connectivity even to rural areas without incurring high costs through 5G.

Zero-Emissions Rural Site



The project arose by studying communication between vehicles at Cellnex's Mobility Lab (located in the Castellolí Parcmotor circuit, in Barcelona) to increase road safety after Cellnex engineers identified difficulties in transporting energy, therefore the deployment of all this technology in rural areas required an ad hoc energy solution.

Servicing the circuit has made it possible to learn to be much more efficient in energy generation and consumption and extrapolate it to new business opportunities or roll out networks in rural areas in a much simpler way. In this regard, with the micro-environment information provided by each station supported by external data and weather information, Cellnex was able to manage the charging stations individually, without the need for operators. Mini weather stations data is merged with other site information and provides valuable real-time data to AI (Artificial Intelligence) algorithms and machine learning and being able to make predictions concerning energy generation or consumption.



Such a technology would allow connectivity on the road and serve populations that are practically technologically isolated. Areas without road coverage, normally coincided with municipalities with fewer than 20,000 inhabitants. Therefore, this project would boost activity in the area and keep them from being disconnected.

There are other projects in Spain to bring connectivity to rural areas, such as in Matanza de Soria (Soria) where Cellnex Telecom, Nokia and Quobis, in cooperation with MásMóvil, have developed the 5G-Lean project. The system uses a simpler, more lightweight and economical telecommunications infrastructure using state-of-the-art antennas to provide service efficiently to areas of special interest with a model that is easy to install and to roll out.

Cellnex made contact with the local representatives responsible for the articles regarding poor mobile coverage in Windgap, County Kilkenny, and the Ballinskelligs area, County Kerry to explore possibility of deploying infrastructure to resolve the coverage requirements. With support and interaction from/with the local community suitable sites were identified to provide the required coverage and planning permission applications have been generated and submitted.

[Laurence Stratton, Head of Operations](#)
[Cellnex Ireland](#)

Similarly, in Guadalema de los Quintero, a district of the municipality of Utrera (Seville), Cellnex has rolled out a 5G Fixed Wireless Access (FWA) solution which would be equivalent to a high-speed fibre connection, but via the mobile network.

The project is part of the Red.es 5G pilots in Andalusia led by Vodafone. The project includes 32 use cases in different areas such as digital transformation, agriculture or healthcare. Cellnex collaborates in four specific projects related to 5G, Fixed Wireless Access, crowd security and autonomous harvesting.

Network with Irish local communities



Cellnex Ireland has identified low connectivity areas (black spots) and is working together with the local community to improve the connectivity of the area, such as in Co Kerry or Kilkenny. To this end, Cellnex Ireland's sites are being used in the implementation of the National Broadband Plan and supporting the roll-out of Business Connection Points (BCPs) to deliver free high-speed internet access in some of the most isolated and rural communities in the country.

During 2020, Cellnex Telecom invested over €10m in new telecommunications infrastructure with the remaining additional investment during the year on the enhancement of existing sites, supporting the delivery of improved mobile and wireless broadband coverage to over 100 communities as workers and families struggle with working and schooling from home due to the COVID-19 pandemic.

In addition to promoting the connectivity of the territories, Cellnex wants to connect people, especially people and collectives at risk of social exclusion. One of the most important projects in this area is one that provides connectivity to social housing.

Providing connectivity to social housing at Casa Bloc



Cellnex Telecom and Hàbitat3 Foundation provide Internet of Things (IoT) connectivity and sensorisation technology at Llar Casa Bloc, a social housing project built between 1932 and 1936 located in the city of Barcelona. The Fundació Hàbitat3 is an organisation that manages social rental housing.



Cellnex's participation in this project involves providing connectivity infrastructure, installing home electricity meters, hot and cold-water meters, heating systems and temperature, humidity and CO2 sensors. Moreover, all homes will have Internet connection (wi-fi) and reading tablets to display consumption. All of this will allow residents to monitor their energy consumption and improve comfort in these houses.

The Casa Bloc residence will house 17 social rental housing units home to around 45 people with mental health problems and / or addictions, homeless persons, or those in a situation of residential exclusion.

Quality education and digitalisation

Quality education is one of the biggest global challenges. 103 million young people around the world lack basic literacy skills, more than 60% of whom are women according to the study SDG 4: the role of companies in achieving quality education drawn up by PwC and Seres Foundation.

According to this study, the technology sector is among those most intensely affected by the talent deficit problem. In this context, companies must take on the commitment to develop solutions to improve education from their great capacity for transformation and collaboration with other actors.

In this regard, Cellnex not only promotes internal training, contributing its knowledge and skills, but also supports academic institutions and public administrations to offer quality education for all.

Collaboration with ESADE Foundation

Cellnex has signed a collaboration agreement with the ESADE Foundation, linked to one of the most prestigious business schools in Europe, to contribute to its Scholarship Fund to cover the scholarships of two ESADE students during the academic years from 2020-21 to 2023-2024.

Cellnex collaborated with institutions to offer

quality
education

Boosting our talent, being diverse and inclusive

The incorporation of Cellnex into this program responds to the company's commitment to collaborate with the progress of society by training young people. With the "Cellnex scholarship", the company joins the effort made by ESADE to promote equal opportunities and inclusion, eliminating any economic barrier in access to training for young people.

Collaboration with the BEST Foundation

Cellnex made a commitment to the Barcelona Engineering and Economic Studies project this year as a sponsor company of the BEST Foundation. This new inter-university degree offered by the Polytechnic University of Catalonia (UPC), Pompeu Fabra University (UPF), Barcelona Global, and FemCat aims to train highly skilled engineers to address the challenges of a continuously changing society and equip professionals who are interested in business leadership. Cellnex will sponsor two students in a four-year commitment.

IESE

Cellnex has been an IESE sponsor company since 2017 and is involved in various projects run by the Public Sector-Private Sector Centre of the Business School.

Volunteers and Youth Challenge



During the academic year 2019-2020 a group of 66 volunteers participated as coaches in Youth Challenge, an initiative with young people at very high risk of social exclusion in Barcelona that aims to reduce school dropout rates and promote youth employability.



The Cellnex volunteers were responsible for running a mentoring process, offering students a direct connection to the world of work to encourage them to continue studying and increase their employability

through 800 hours of training and mentoring and other activities such as visits to teaching centres, lectures or workshops. They also took part in mentoring sessions focused on improving self-esteem, looking to the future and fostering STEM (science, technology, engineering and maths) vocations.



Following the success of this edition, in which 89% of students declared that the coach helped them to continue studying and 100% of the volunteers would repeat, the programme will be extended to Madrid and Rome and an online option made available.

Furthermore, during 2020, Cellnex supported university talent by taking part in four parallel OnCampus entrepreneurship programmes hosted by four universities: UAB in Barcelona, UdL in Lleida, URV in Tarragona and UdG in Girona. The initiative is coordinated in collaboration with Catalan universities and research centres.

The training is designed for early-stage technological projects with the main objective of validating their market application together with industry experts, such as Cellnex, using Lean Launchpad methodology.

Enterprise Challenge 2020

Cellnex participated in the initiative, sponsoring the project of four students in the annual Enterprise Challenge organised by the BEST (Barcelona Education in Science and Technology) Foundation, which fosters Open Innovation through collaboration between companies and universities.



To that end, Cellnex selected four degree students that created an application in a short time to optimise waiting times for non-critical patients in overstretched and overcrowded A&E departments. The team sponsored by Cellnex won the first prize, obtaining 88 of the 100 points available.

Moreover, Cellnex is working together with MasMóvil on a project to install a test 5G mobile network at IESE Business School. The prototypes deployed by Cellnex will integrate 5G, Edge Computing and Augmented Reality.

This project will revolutionise the educational experience on the campus using VR to broadcast a session recorded in 360 degrees with 4K resolution to thousands of 5G mobiles, creating new learning experiences combined with virtual objects, or designing real-time simulations for work teams.

Other initiatives

As part of its social commitment, Cellnex promotes other projects in collaboration with different organisations such as Seres Foundation, Cancer Fund for Children or Best Foundations.

One of the main initiatives in this regard is the “Solidarity Euro”, a Project initiated in Spain and then launched globally under the name of Solidarity Gift. In this project, Cellnex Telecom collaborators are invited to donate one EUR (or equivalent) per month from their payroll. After two years, participants can propose social projects in their countries to which they would like the accumulated money raised to be donated. A campaign will be organised to select which of the various projects proposed in the business unit will receive the money raised. The initiative has now been upgraded with a Matching Gift in which Cellnex will match the contribution made by employees.

In 2020, employees of Corporate and Cellnex Spain made more than 600 donations. Cellnex donated the same amount collected by employees indistinctly to three foundations with which it works in Spain: Banco de Alimentos [Food Bank], Fundació Juvanteny and Fundació Madrina.

This initiative raises funds to help social causes with micro-donations of one EUR a month from volunteer employees, something that would be impossible if done individually.

Beyond this initiative, some countries collaborate with international and local organisations, increasing their commitment to society and promoting a more sustainable and inclusive environment.

Solidarity euro project launched globally under the name

Solidarity Gift



Collaboration with Irish charities



Cancer Fund for Children and Barnardo's were the preferred charities chosen by the entire staff of Cellnex Ireland for the company to support in 2020.

Cancer Fund for Children are a team of specialists that provide a range of practical, financial and emotional support to families affected by cancer, at home, on the hospital ward and in the community while Barnardo's supports children whose wellbeing is under threat, by working with them, their families and communities and by campaigning for the rights of children.

To celebrate one year in business in Ireland, the company shared a webinar with its stakeholders to give an overview about Cellnex Ireland's plans. As part of the event, Cellnex Ireland made a donation on behalf of every attendee at the webinar to these charities.

Seres Foundation

The company worked with the Seres Foundation, whose stated aim is to "Build a healthier, stronger society with competitive businesses that can stand the test of time". The foundation aims to foster and promote strategic business actions that contribute to an overall improvement in the social situation. Cellnex has signed an agreement pledging to work with the Seres Foundation, disseminate their joint work, share knowledge on good practices in social matters, and attend meetings with partners and other social entities.

Barcelona Climate Plan

Participation in co-producing the Barcelona Climate Plan with Barcelona City Council, which sets down all ongoing and planned actions related to climate change in the city. Cellnex draws up proposals within the company and takes part in the debate on the proposals submitted by all participants.

TV3 Telethon

Cellnex has been taking part in the TV3 Telethon for more than 10 years. The Telethon Foundation aims to foster and promote biomedical research into and social awareness of diseases for which no cure has been found. The money raised is used to research new methods of prevention, diagnosis and treatment for minority diseases.

In 2020, due to the exceptional situation, and in view of the need for progress in research into COVID-19, the Board of the Foundation took the exceptional decision to change the theme that was planned for La Marató 2020 and dedicate it instead to COVID-19, moving the edition on mental disorders to 2021.

The Cellnex Foundation is the soul of Cellnex, born with the purpose of generating a positive return to society hand in hand with our volunteers, who are a fundamental pillar of the Foundation. It is time for "growing together" by building a more sustainable society that we can be proud of.

Àngels Uceró García,
Management System Director
Cellnex Telecom

The Cellnex Foundation

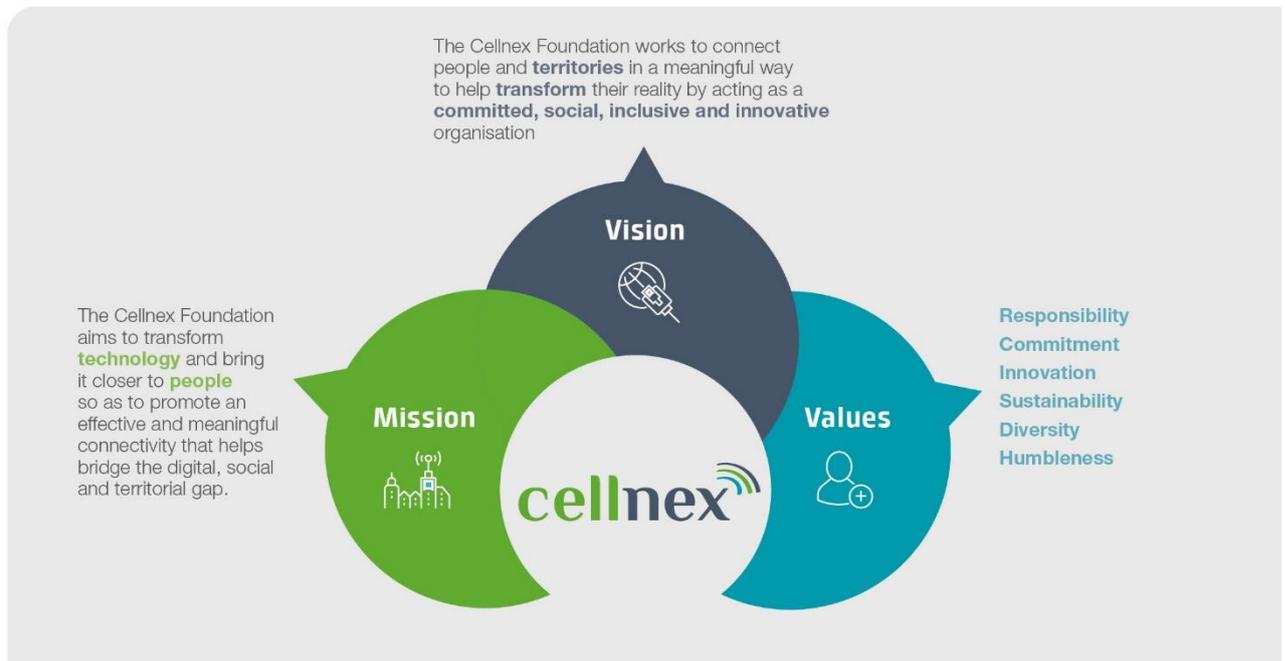
In December 2020, the Board of Directors approved the creation of the Cellnex Foundation, in response to the firm desire of Cellnex Telecom to take a further step towards contributing to an environment that is better connected and socially responsible as a comprehensive initiative to complement the Corporate Social Responsibility of the company.

This complementarity and coordination are carried out by means of a flexible structure adapted to the needs of the environment and the scope of the foundation. The aim is to align actions and take advantage of synergies and resources.

The Cellnex Foundation is born with the clear mission of being a dynamic tool at the service of people with a view of making a significant contribution to transforming realities:

- Leveraging the knowledge generated and resources available in the corporation, aimed at fostering positive changes to the lives of people and the environment in a stronger and more direct manner, especially with and for people in a situation of special social vulnerability.
- Using connectivity effectively as a key component for intervention, working to improve the inclusion of people in a growingly connected environment so that nobody is left "disconnected" based on a principle of social equity, while also working actively to build sustainable actions at all levels that have a positive impact on the lives of people and on the environment.

The Cellnex Foundation was created as a social foundation and places people in different conditions and in vulnerable situations at the central of its activities.



The Cellnex Foundation articulates its model of social contribution around four pillars:

- Flagship programme: The main programme led by the Foundation and focused on rural/special environments to meet the challenges arising from the digital, social and territorial gap to help improve social and territorial cohesion and quality of life.



- Joint programmes: Projects carried out in collaboration with strategic actors to promote joint actions with an impact on the ground and coherent with our foundational framework.
- Corporate volunteering: Project focused on involving employees and former collaborators of Cellnex in corporate volunteering initiatives that benefit people and the environment and are aligned with the Foundation's strategic lines. It is considered a main pillar of Cellnex's contribution model Corporate Volunteer program will focus on education, employability and access to technology programs. The Foundation will continue with Youth Challenge in Spain and Italy and will launch other specific activities in Cellnex countries.
- Eventual funding: Programme for the eventual funding of external projects carried out by other entities, with a system of indicators to select projects based on their impact and aligned with the Foundation's mission.

The Foundation has the purpose of promoting actions aimed at people and entities through technology and telecommunications, such as innovation, connectivity, reducing the digital gap, mobility and the Internet of Things -IoT -, among other. To this end, the Foundation will focus on the challenges arising from the three gaps: Digital gap, Territorial gap, and Social gap. From these three identified gaps, four fields of intervention have been established:



- Technological solutions to improve quality of life and sustainability: programmes to provide digital tools and resources and offer new services to people, social organisations and SMEs with a social, territorial and environmental approach to improve their work while contributing to preserve the environment effectively and sustainably. The gaps involved are Territorial and Digital.
- Digital capacity-building: capacity-building actions aimed especially at disadvantaged groups so they can improve their digital skills, boost their confidence, their relational skills and employability. The gaps involved are Digital and Social.
- Tackling social inequality: measures that contribute to relieve situations of social and inequality by supporting and following highly complex local environments. The gaps involved are Social and Territorial.
- Promoting talent and innovation: programmes and actions focusing on using knowledge and talent to serve innovative social needs and contribute to improving the quality of life and boosting professional careers to STEM. The gaps involved are Digital and Social.

The challenge of digitally and effectively connecting people and territories contributing to the achievement of following SDGs:



The Cellnex Foundation plans to formalise its statutes and begin its activities in the first quarter of 2021.

Managing the impact of our infrastructures

Cellnex's infrastructures consist of towers located throughout the territories in which Cellnex operates. The greatest impact of these towers is visual, since they can hardly be integrated into nature. Even so, as fixed structures occupying little space, it is possible for other economic activities to develop around them, for example agriculture.

However, one of the concerns of society is the possible impact of electromagnetic emissions caused by the towers. In this regard, the European Commission adopted an Implementing Regulation on physical and technical characteristics of small-area wireless access points, specifically their volume, weight, visual impact and emission power. Since Cellnex follows all the existing recommendations, the roll-out of 5G networks will not have a negative effect on people's health.

5G: The fifth generation of mobile telecommunication systems

The GSMA estimates that in 2025 there will be around 24.6 billion connected devices (in 2019 the same source estimates 12 billion), which implies that, on the one hand, there will be a growing demand for mobile data which Cellnex estimates will grow by 600% over the next five years, and on the other hand, the need to connect an increasing number of devices and objects, which Cellnex estimates will grow to about one million connected devices per square kilometre.

In this way, the 5G, or "fifth generation" of telecommunication systems, will be one of the most critical building blocks of the digital economy and society in the next decade, both in Europe and in the world.

The wide-scale deployment of 5G communication networks and the use cases activated by 5G could generate a significant economic and social value for society. An IHS Markit study estimates that \$13.2 trillion in global economic value will be made possible by 2035, generating 22.3 million jobs in the 5G global value chain alone.

In this context, Cellnex is a key player in the development and implementation of 5G networks, as it operates upstream in the supply chain, providing the enabling infrastructure, with particular attention to the aspects of sustainability and futureproof development of technological solutions for the services that will constitute the ecosystem of reference for the digitalisation of industrial processes and services, both in the public and private sectors.

In short, as a leader in telecommunication infrastructures in Europe, Cellnex plays an essential role in the deployment of 5G in Europe and therefore in economic development. 5G could be a catalyst for socio-economic growth and will bring a whole series of new use cases, applications and services that current technologies cannot provide, thanks to its new features:

Cellnex is a
key player
In the development and
implementation of
5G

- Enhanced mobile broadband, providing a higher network speed. Data transmission will reach speeds of up to 10 Gbps, allowing ultra-fast content download or quality video streaming.
- Ultra-reliable low-latency communication, improving bandwidth, improving the coverage of mobile phones in areas where it is currently difficult, such as underground railway networks.
- Massive machine type communication, making it possible to connect more devices. Connectivity of devices will be optimised, making it easier for everyone to be connected at their optimal level regardless of the number of devices in the area, for example in crowded events.

Moreover, 5G can help to optimise and develop other technologies by boosting networks and Internet architectures in emerging areas such as Machine-to-Machine (M2M) communication and the Internet of Things (IoT).

The introduction of 5G will also lead to more versatile equipment, which, compared to previous generations of communication systems, will allow scalability and reliability suitable for serving in varied operating contexts.

These characteristics of versatility and flexibility of the new networks will bring undoubted advantages in terms of efficiency and resilience of the networks, called upon to manage not only traditional communications between individuals, but also enormous volumes of communications of objects in the industrial field, and in all sectors of services.

It should be emphasised that 5G also has other lesser-known advantages but which certainly have great socio-economic impact, such as reduced energy consumption (in base stations and terminals) compared to previous technologies (for example the battery life of IoT devices will last up to 10 years). Therefore, rapid take-up of the new terminals will help to significantly reduce the carbon footprint.

In the field of transport, connectivity between vehicles and elements of the surrounding area will also help to optimise transport and consequently reduce CO2 emissions.

It is also worth noting the role that 5G plays in the health field, even more so in the COVID-19 pandemic. 5G can help in hospital management, allowing fast data analysis and the use of robotics in healthcare settings. Also, in the field of e-Health, 5G can allow easier, more streamlined and secure technological communication between health workers and patients.

The European Commission adopted a 5G Action Plan for Europe in 2016 to ensure early deployment of 5G infrastructure in Europe to start launching 5G services in all EU Member States by the end of 2020 at the latest, followed by a rapid build-up to ensure uninterrupted 5G coverage in urban areas and along main transport routes by 2025.

Cellnex is aware of the policies, procedures, decisions and working documents of the European Union on 5G deployment in this regard. Furthermore, Cellnex plays a proactive role in providing information to the local administrations of the countries in which it operates. For example, in Spain, Cellnex Telecom considers it particularly important to have a National 5G Plan that helps guide the transition towards 5G, a process that will affect a large number of economic and productive sectors in Spain across the board.

5G will have a significant impact on the industrial and service fabric, becoming a crucial factor for the competitiveness and digitalisation of society, on an unprecedented scale in terms of innovation in industrial processes and innovation in service delivery processes to businesses and communities, both public and private.

To this end, Cellnex is also working with experts and its stakeholders and suppliers to bring 5G on stream in their services.

The company is conscious of the concern of some sectors of society regarding the impact of electromagnetic emissions from 5G. Cellnex wants to ensure that 5G is a safe technology and that its services comply with the regulations and recommendations set out by European and local legislation in this area.

The paradigm shift deriving from the adoption of the new generation of wireless communications is a fundamental stimulus for the entire communication chain, required to expand not only the amount but also the type of infrastructural assets to be offered to operators, especially in the light of the introduction of new network features such as edge computing or architecture virtualisation.

Speed up Britain



Cellnex UK is a founding member of 'Speed up Britain', a cross-industry lobbying campaign to make improvements to the Electronic Communications Code to enable faster and lower-cost deployment of new towers and equipment to support the 5G roll-out.

5G Catalunya



The project comprises seven use cases based on 5G technology, and aims to develop holographic solutions for the education sector; autonomous and connected transport vehicles for industrial environments; immersive remote shopping experiences in urban markets; and the optimisation of mobility, control and management of radio network with large numbers of people, inter alia. It will also facilitate the development of state-of-the-art 5G networks for the management of citizen security and emergencies in Barcelona, as well as the application of 5G in remote television broadcasts through mobile devices.

Electromagnetic emissions

In 2018 the European Commission published the European Electronic Communication Code, which calls for consistency and predictability throughout the Union regarding the way the use of radio spectrum is authorised while protecting public health whilst ensuring more consistent deployment conditions for 5G across the Union.

According to the European Electronic Communication Code, exposure to electromagnetic fields caused by wireless communications equipment is subject to limits defined in a Council Recommendation. These limits are set according to the guidelines issued by the International Commission on Non-Ionizing Radiation Protection. In this regard, Cellnex Telecom complies with these defined limits, both for workers and general public.

Moreover, Cellnex complies with the local legislation applicable to electromagnetic emission in each country in which it operates. For example, in Spain Cellnex complies with Royal Decree 299/2016 on the protection of the health and safety of workers against the risks related to exposure to electromagnetic fields, and Royal Decree 1066/2001 approving the Regulation establishing the conditions for the protection of the public radioelectric domain, restrictions on radioelectric emissions and health protection measures against radioelectric emissions.

To show its commitment to society with regard to the possible electromagnetic impact of its towers, Cellnex works together with expert groups for research on electromagnetic emission and its impact on the environment and people's health. Cellnex also takes part in activities related to assessing, managing and communicating the possible health risks of exposure.

Cellnex complies with the
**electromagnetic
emission legislation**

As a neutral infrastructure provider and system relevant company, we contribute to the provisioning of efficient and high-quality mobile networks for Switzerland. We also contribute with our extensive experience and knowhow in the field of EMF protection, by participating in national working groups, in the industry association, and by funding research in this specialist area. In addition, we are closely cooperating with all three MNO's in Switzerland with regards to the strict EMF requirements and complex and lengthy permitting procedures

Roger Schaller, Country Head of People
Cellnex Switzerland

Collaboration between Cellnex Spain and DigitalES



Cellnex works with DigitalES, the Spanish Association for Digitisation, which performs activities related to radio emissions. This work involves examining issues of legal compliance and proposals for improvement, based on the recommendations of the International Electrotechnical Commission (IEC), in addition to studying 5G emissions.

Collaboration between Cellnex Ireland, IBEC and EPA



In Ireland, Cellnex works with with IBEC (Irish Business and Employers Confederation) to produce a 5G FAQ's leaflet as well as a COVID-19 and 5G factsheet. Cellnex Ireland also has assisted the EPA (Environment Protection Agency) in producing a public 5G factsheet.

Collaboration between Cellnex Italia and Asstel



In Italy, Cellnex works with Asstel, a branch dedicated to the whole TLC ecosystem within the Italian Association of industrial enterprises (CONFINDUSTRIA). Asstel has always been very vocal in advocacy for the sector on all industrial and political issues towards all stakeholders (NRA, Parliament, Local Administrations) along the debate on the development of digitalization. Since 2018 a strong institutional and communication effort has been carried out on EMF and 5G. With the engagement of valued academic institutions, extensive research has been carried out thanks to the cooperation with Universities, Public and Private Health research Institutes, Engineering, Economic Studies, with the goal of setting the debate on robust terms and be able to react to negative criticism on solid grounds on multidisciplinary aspects.

The Swiss Research Foundation for Electricity and Mobile Communication



Cellnex Switzerland supports "Forschungsstiftung Strom und Mobilkommunikation (FSM)". The Swiss Research Foundation for Electricity and Mobile Communication (FSM) is a non-profit-making foundation for promoting scientific research into the opportunities and risks of radio and electric power technologies that produce and use electromagnetic fields. Further aims of the FSM are the publication of the results of this research in scientific bodies and the dissemination of the research findings and specialist knowledge about electromagnetic fields within the broader community.

Furthermore, Cellnex Switzerland is a member of a working group related to mobile communications and radiation created by the Department of the Environment, Transport, Energy and Communications (DETEC) in Switzerland. As a member, Cellnex contribute to shape the future development of the mobile network in the country.

Cellnex also participates in the working groups on EMF in the following international associations, of which it is a member:

- ETSI (European Telecommunications Standards Institute)
- GSMA (GSM Association)
- SCF (Small Cell Forum)
- UIT (International Telecommunication Union)
- EWIA (European Wireless Infrastructure Association) - The EMF Working Group will be constituted in 2021 and will be led by Cellnex.

In 2020, Cellnex has set up an internal Task Force, a multidisciplinary group that coordinates the Cellnex approach to EMF issues with the vision of:

- Being an internal forum to exchange knowledge and best practices.
- Monitoring international, European Union and national developments.
- Coordinating the Technical and Regulatory approaches.
- Working on an eventual EMF strategy.

Internal task force in Cellnex for
**sharing knowledge
and best practices
on EMF issues**

The EMF Task Force has representatives from different functional areas and from all the countries in which Cellnex operates.

The working group strives to involve and engage the stakeholders (MNO's, public administrations, sector associations, business associations) in each country. To this end, the EMF Task Force collaborates with telecom sector associations at national and international level, supports initiatives such as "Speed up Britain" and "Chance5G, participates in events, webinars and training sessions and drafts and distributes a report in this regard.