

Press Dossier

Televes, S.A.U.

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1. Who is Televes?

Televes is a leading global company focusing on the design, development and manufacture of solutions that convert the telecommunications infrastructures of buildings and homes into multiservice digital platforms. Headquarters are located in Santiago de Compostela (Spain), where the company was founded in 1958. At present, Televes is the main firm within a larger Televes Corporation, formedby 22 technological, industrial and commercial companies, more than 800 employees and +80 invention patents.

Televes has eleven international subsidiaries in Portugal, France, UK, Italy, Germany, USA, Poland, Scandinavia, Russia, UAE and China, and distributes its products to more than 100 countries on five continents through an extensive network of distributors. With more than 60 years of experience, Televes has launched more than 1,500 different products, an achievement only possible for a company with a real *passion for manufacturing*. The company produces at its own facilities to ensure the highest quality and control. To achieve this, it has been a pioneer in the implementation of automated robotized lines and has its own testing and quality control laboratories. Therefore, the brand's products display the *European Technology Made in Europe* stamp.

An innate desire to stay at the forefront of technology, offering the best products and solutions, has guided the evolution of Televes throughout its history. The company began its journey as an antenna manufacturer, until it consolidated its position as an international reference in solutions for the reception and distribution of radio-television signals. The progressive evolution of the market made it necessary to direct the technological specialization towards complementary areas, such as the extension of coverage of Digital Terrestrial Television (DTT), professional measuring equipment or new technologies for the distribution of audiovisual services. In search of maximum efficiency, specific companies were created to serve the different sectors and niche markets. This is how the concept of Televes Corporation was born in 1989.

Since then, the company has continued its growth and internationalization, keeping its distinctive hallmarks, among which innovation, proximity to the customer and vanguard manufacturing occupy prominent places. Recently, Televes Corporation has taken a leap forward in its diversification, positioning itself as a facilitator, through the telecommunications infrastructures deployed in buildings and homes, of value-added services, mainly advanced e-Health, energy efficiency and professional LED lighting for public and industrial developments, advance fiber optic data networks for the Hospitality sector to offer personalized audiovisual services to users, optical transport for large Operator and DataCenter fiber networks, or cybersecurity and aerospace. This evolution is aligned with the criteria set forth by the European Digital Agenda and Horizon program, the EU Framework for Research and Innovation.



2. Mission

Televes understands its presence in the market through its commitment to technological development and its own manufacture of products and solutions, so that the infrastructures of the buildings offer its users all present and future security, entertainment, well-being and health services.

3. Corporate Values

Throughout its broad experience, Televes has established a solid corporate reputation based on the values that define the company's identity:

- Technological development, which allows it to remain in the international vanguard in a highly competitive sector that is intensive in technology.
- **Quality**, as a distinguishing mark that the market recognises and identifies with the Televes name.
- **Commitment to customers,** to whom the company permanently offers support and training for the deployiment of the new technologies.
- **International vocation,** as corresponds to a company capable of competing in a globalised world.
- Leadership in the development of technology linked to the telecommunication infrastructures, a vocation that has accompanied Televes since its origins.
- Alignment with the European Digital Agenda and Horizon 2020, EU research and innovation programs.
- **Excellence in human resources:** the Televes team is characterised for being highly skilled and for its capacity for constant progress.
- Commitment to sustainable development and the protection of the environment.
- Commitment to its roots, reflected in the Televes corporate social responsibility policy.
- **Technology for an inclusive society**: Televes is committed to making technology a factor of well-being, progress and social cohesion.



4. Strategic Vision

One of the keys to the success of Televes is the focus of its business in the strategic vision supported by solid mainstays:

4.1. European Technology Made in Europe

At the beginning, as a pioneering company in the production of equipment to receive radio-television signals, Televes was forced to develop and manufacture most of the components for its products. This need for self- sufficiency led to one of the virtues that distinguishes the company today: a passion for manufacturing. When most companies in the sector opt to subcontract the manufacturing processes in search of cost savings, Televes continues loyal to its industrial tradition. Controlling the entire production process on its *home turf*, from the design to the after sales service, enablesthe company to develop the products more swiftly and with greater guaranteesof quality and reliability, as well as protecting the intellectual capital developed. This is the conviction contained in the slogan *European Technology Made in Europe*, which the markets associate with the Televes name as a synonym for quality, reliability and avantgarde technology.

4.2. Prominence in Technological Advancement

If there is something that has characterised Televes over its 60 years of history, it is without a doubt the vision and technological capacity to play an active role in all the decisive projects in the history of television. In the same way as the company played a leading role in the switch from black and whiteto colour, or in introducing private and regional channels in Spain, it currently participates in the main projects and initiatives aimed at promoting the development of digital terrestrial television (DTT), ultra high definition (UHD / 4K) and the formats for the television of the future.

Televes is present in the process for making decisions of special significance related to the telecommunications sector. This is the case of the European Digital Video Broadcasting (DVB) project, a global forum that has the aim of developing the standards of the digital television, and in which the company has participated as a numbered member since 1995. Parallel to this, Televes plays a part in the Eureka programme and ADTT (Advanced Digital Television Technology), for the development of reception and broadcast systems for digital and high definition television.



4.3. Vocation for Research and Development

Televes' capacity to lead the technological change in the world of telecommunications is directly associated with its strong investment in Research, Development and Innovation (R&D&I). The R&D unit, was created in 1971 and now provides work to more than 80 professionals, mainly Telecommunications and Industrial engineers and Physics graduates. This workforce provides Televes an extraordinary technological independence, which is reflected in an exceptional figure: 80% of the more than 1,500 products included in the Televes catalogue have been entirely developed using own technology, and the company holds over 80 invention patents.

4.4. Quality as a Hallmark

Televes' philoshophy is: "Quality is not controlled, it is produced". The company is a pioneer in this respect, as it was back in 1977 that the official laboratories for quality certification came into operation, including radiofrequency measuring, CE marking and aerial measuring, among other references. The Corporation made further progress in 1994, with the creationof Ladetel, a wholly owned certification laboratory in the field of electronics and telecommunications to European Union requirements. Since that year, Televes has been working under the certification of standards ISO9001, EN 29001, UNE 6601 and ISO14001 and ISO45001.

4.5. Commitment to its Roots

Throughout its experience, Televes has shown its capacity to make the development of an efficient and competitive business model compatible with the respect for the environment and the contribution to economic and social development in the area in which it carries out its activity.

The company's commitment to keep the manufacture of its products at its own facilities is understood not only from its quality policy, but also as a will to contribute to the creation of wealth and quality employment in the geographical areas in which the company is based, without the need torenounce becoming a technological reference and a global commercial player.

In the vision of Televes, cultivating knowledge is not only one of the roots of the company but it is also part of its unavoidable commitment with its surroundings. For this reason, throughout its experience Televes has developed close collaboration with university centers. This cooperation is directly extended to the Technical College of Telecommunications Engineers at Vigo University; the Faculties of Physics and Economics at Santiago de Compostela University, and the Faculty of Computer Science at A Coruña University. The company also develops a great number of educational initiatives for the telecommunication professionals throughout the markets in which it operates.



4.6. A Vision for Digital Transformation

Without neglecting the more traditional distribution of radio-television signals, which constitutes its core business, Televes is evolving towards the profile of service facilitator on telecommunication infrastructures deployed in cities, buildings and homes. These range from access to information and entertainment platforms, to social-health services, as well as projects in the hospital environment, data networks and integral solutions for the Hospitality sector.

There is an unrelentless drive to unveil technologies that place Televes at the heart of incipient developments. The greatest and latest example is the commitment to develop TForce: an SMD manufacturing technique based on MMIC technology, which overcomes the limitations of silicon componentry and allows the company to obtain integrated circuits that operate in the microwave frequency band. This truly means a leap forward that places the company ahead of its competitors. The same philosophy drives the commitment of Televes Corporation for the Industry 4.0 model. For this purpose, Corp4Future project foresees an investment of 23 million euros in four years, to place the company in a privileged position to continue developing its growth and diversification process, accessing new technology-intensive and highly competitive sectors, such as aeronautics, the automotive industry and smart cities.



5. The Corporation

The development of the parent company has led to the setting up of a multinational and multidisciplinary business gruop called Televes Corporation. The vocation for technological development, cutting-edge manufacturing and passion for quality are the hallmarks of all integrated firms. From the point of view of the business, the activity of the Corporation is structured around major sector areas:

- Telecommunication and TV Infrastructures. It is the traditional core business of the company, whose initial activity was the manufactureof antennas, becoming a pioneer and a key player in the birth of television in Spain. Since then Televes has evolved with the advancing technology, and have become an international leader in design, development and manufacturing of equipment for the transmission, capturing and distribution of radio-television signals.
- **Hospitality.** It is an activity with increasing prominence. Televes Corporation develops comprehensive projects, aligned with the requirements set forth by hotels, buildings and public spaces, for the integration of customized television services, permanent connection to the internet or to added-value audiovisual contents, digital signage, security systems, management tools, and energy efficient solutions.
- Advanced e-Health. The focus on the social and health care industry is
 the result of the commitment of Televes Corporation to evolve into a
 telecommunication network-based service facilitator in buildings and
 homes, in alignment with the criteria set forth by Digital Agenda in Europe,
 which prioritizes areas with pressing social needs. As a result, the
 Corporation features the CareLife solution, which implements ubiquitous
 remote assistance based on smart technology that is capable of learning
 from the user's routines, reporting to the carer when deviations occur,
 creating a safe environment and preserving privacy. Televes Corporation
 also participates in international R&D projects, such as Smart Assist and
 ACTIVAGE, applying Big Data and Internet of Things to the development
 of solutions that foster the independence and the quality of life of the
 elderly.
- Professional LED Lighting. The expertise of the Corporation in both electronic technology and metal structure manufacturing was the catalyst in the launch of a full range of outdoor and indoor LED lighting solutions. Televes luminaires allow for energy savings of up to 80%, as compared to conventional lighting systems. They also stand out for first-class engineering and excellent thermal management, ensuring extended product life without any maintenance.
- **Optical Transport.** We are immersed in the transformation of large high-capacity fiber networks, with exponential increases in the demand for bandwidth, with the need for transmissions in real time and with low latency, guaranteeing a maximum degree of reliability and security. As manufacturers of cutting-edge technology, we look for innovative solutions that know how to combine the maximum technological benefits with the profitability of the required investments. In its Optical Transport

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area, Televes combines both technological products and solutions as well as comprehensive services for all those secure, high-capacity backbone networks that represent the neuralgic points for high-bandwidth data transmission between nodes for -critical environments, metropolitan networks, long-distance nodes, etc.

Televes Corporation is formed by 22 firms, who take advantage of their high technological specialization to create synergies in the design, development, manufacture and commercialization of products and solutions. Noteworthy are the following firms:

- **TRedess.** Specialised in the design, development and manufacture of broadcast and transmission equipment and gap-fillers for digital television coverage. It has been chosen by great operators in Europe to deploy DTT network. (Web TRedess).
- **Gsertel.** It develops portable signal measurement equipment for professional radio-television installers, as the FSM and H ranges. (<u>Web Gsertel</u>).
- GCE (Gallega de Circuitos Electrónicos). It has the mission of the research, design, manufacture and commercialisation of printed circuits, equipment, systems and services linked to electronics and engineering. (Web GCE).
- **Gainsa (Gallega de Informática).** Provides information technology services and manages communication networks for all the Corporation's companies. (Web Gainsa).
- **ISF** (**Ingeniería de Sistemas de Funcionamiento**). Designs, develops, builds and commissions automatic and robotised production lines. It is also responsible for the maintenance of the Corporation's machines and industrial installations.
- **Gamelsa (Gallega de Mecanizados Electrónicos).** Specialised in the development and manufacture of mechanical components and in the treatment of metallic surfaces. (<u>Web Gamelsa</u>).
- Ladetel. Approved laboratory for the certification of electronic devices.
- **Maxwell** Specialized in the design and development of highly innovative and advanced solutions for electronic applications in the digital, RF and microwave fields, taking advantage of the simulation capabilities of the most advanced EDA tools.
- **Televes Enterprise Solutions.** Subsidiary established in Miami, United States to promote the Hospitality area in the American market and LATAM.



6. Multinational Structure

Foreign markets have been a key factor for the expansion of the company. Televes Corporation currently has manufacturing facilities in Spain and Portugal and also has subsidiaries in France, Germany, the United Kingdom, Italy, Poland, Russia, Scandinavia, the United States of America, China and the Arab Emirates. More than 60% of turnover comes from exports.

The structure of strategic distribution relationships enable Televes Corporation to reach more than 100 international markets. In addition to this, the establishing of commercial relations with large television operators worldwide places Televes in a privileged position in the international telecommunications market.

7. Televes Corporation in Figures

Televes Corporation (year 2021):

Turnover: 204 million €Investment: 7,2% ROI

• Staff: + 800 employees

Firms: +20 subsidiary companies

Patents: + 80



8. Background: Milestones

- 1958. Foundation of Televes.
- **1960.** Televes launches the duralumin aerials onto the market.
- **1965.** Manufacture of aluminium tube by radiofrequency, for the first time in Spain.
- **1983.** Televes, the first company in its sector in the world to incorporate Surface Mount Device (SMD) technology.
- **1985.** Development of the CAD system for the design of high frequency printed circuits.
- **1987.** Start of robotisation. In alliance with IBM, the first SCARA robots enter Televes.
- **1988.** Commercialisation of the first amplifier for MATV with printed lines.

Incorporation of the Stripline technology.

Televes designs and launches onto the market the first multi-satellite reception system.

- **1990.** Televes launches the SAT90, which enables the reception of TV-Sat on collective aerials.
- **1992.** Launch onto the market of a flexible, intelligent and compact system for the reception of TV-Sat, eliminating the need for single-channel amplification. The STAR 94 is created.
- **1994.** Televes incorporates a new philosophy: the so-called randomised aerials, valid for both collective and individual installations. ISO 9001 certification by AENOR.
- 1995. Televes becomes part of DVB.
 - Start of the Project for Monitoring the **Robotised Plant.** In collaboration with the I.E.A. of the University Vigo, the Communications Server was developed
 - In collaboration with IBM and Gainsa the first Client-Server application was developed using the object-oriented technology Visualage.
- **1996. EMC Project:** Televes develops moulds in order to comply with European regulations, achieved using the clamp system.
 - Televes presents the first Transparent Digital Transmodulator for 19" rack at MATELEC.



• **1997.** Launch onto the market of the first amplifier with configurable bandwidth.

Televes launches onto the market the **Transparent Digital Transmodulator.**

The company globally integrates R&D within all processes.

1998. Televes joins the DIGITAG project and the TELECOM I+D organisation.

Televes becomes a member of **CEDOM**.

- **1999.** Launch onto the market of the first available Digital Terrestrial Television processing equipment and its adaptation to collective distribution networks (ICT).
- **2000.** Televes launches onto the market a new aerial for DTT with an impulse noise reduction device (MRD).

Launch onto the market of the first communication platform for all kinds of buildings, designed for the home: **COAXCOM**.

Presentation of the first processor for digital cable networks.

- 2002. Televes launches a COFDM-PAL for SFN networks.
 Presentation of MIRA: indoor aerial designed specifically for DTT.
 Televes launches onto the British market the Attic-Box system, specially designed for the new SKY receiver.
- 2003. The company obtains the European patent "Connector for coaxial cable".

Launch of the first field strength meter entirely developed by the Televes Corporation: the **FSM range** is created.

- **2004. Zas** is created: the DTT receiver developed and manufactured by Televes.
- 2005. The Televes Integra system for collective installations is presented at MATELEC.
- 2006. Televes manufactures and commercialises over two million ZAS adaptors and 200,000 UHF modules, from the start of the campaign for the introduction of the DTT.
- 2007. The DAT 45 digital aerial reaches one million units commercialised. Launch of the new DAT digital aerial and new metering devices.

New home amplifier in the *Cocodrilo* series.

• 2008. New aluminium OFFSET 90 satellite dish.

Launch of the **Diginova** aerial, specifically designed to receive DTT in individual homes.

Launch of the revolutionary **H45** portable field strength meter, which incorporates digital processing as a world exclusive in a device of these characteristics.



- **2009.** Launch of the new **DAT HD**: the aerial designed for DTT and the future high definition television (HDTV). As a great exclusive, it incorporates the Boss Tech system, which automatically adjusts the signal's output level, making it a real intelligent aerial.
- **2010.** Launch of the **Polish subsidiary** of Televes Corporation, as a strategic platform to provide the company with enhanced access to the markets of Central and Eastern Europe.
- **2011.** Set in motion of **NP100** project, to launch a hundred products in 18 months. This initiative aims to reinforce the company's leadership by winning market share, boosting internationalisation and motivating the whole human team.
- **2012.** Creation of the **General Manager** Office, which will enhance Televes Corporation's synergies and technological diversification. Strong commitment to the Optical Fiber, with the development of the full range of equipment to work with this technology. Launch of **T.12** single-channel amplifiers, ready for the digital dividend (relocation of DTT channels to facilitate their coexistence with 4G mobile technology).
- **2013.** Impulse to the international profile of Televes: exports exceed 50% of the total turnover of the Corporation. Televes, chosen in the **United Kingdom** for the supply of LTE filters, capable of avoiding affectations of the signals of 4G/LTE in DTT. Presentation at the German fair ANGA Cable of the **Connected Home** concept.
- **2014.** Implementation of the 10th international subsidiary, in **Russia**. Presentation of CareLife, a solution that represents the entrance of Televes Corporation in the business of Social Health services. Launch of a full range of equipment with the **DD Guaranteed** seal and an installer's guide to ensure the proper adaptation of the television reception facilities to the digital dividend in Spain.
- **2015.** Reordering and optimization of the R&D assets of the corporation at the **Televes Technology Center**. Boost of the **Data Network** business line.
 - Investment in manufacturing technology under **Industry 4.0** paradigm.
- 2016. Televes becomes the first company in its sector to adopt MMIC (Monolithic Microwave Integrated Circuits) technology, under its own **TForce** solution for the development and assembly of components. This means a real technological revolution.
 - Start-up of the R&D international projects Smart Assist and ACTIVAGE, addressed to the social health sector and based on Internet of Things (IoT) and Big Data Analytics technologies.

Televes Scandinavia is born, as the 11th international branch.



- 2017. Launch of Corp4Future project, with an investment of 23 million euros and a development period of four years. Its objective is to drive the evolution of the company towards an Industry 4.0 ecosystem. It will boost the competitiveness of processes and logistics efficiency through new technologies and manufacturing methods, such as augmented reality, collaborative robotics and IoT, strengthening the Corporation's ability to maintain leadership in its traditional markets and improve its positioning in innovative areas, such as social health services, energy efficiency, smart cities or aeronautics.
- 2018. Start-up of an Ultra High Definition (UHD / 4K) channel in tests on Digital Terrestrial Television (DTT) for the Santiago de Compostela area. It is a pioneering project that places Galicia at the forefront of the development of television technology. In collaboration with RTVE and Cellnex Telecom.
- 2019. Obtaining the ENEC certification for AtmosLED luminaires, which means an important support for the Professional Lighting business unit. Participation in the Galician Skyway Civil UAVs Initiative project, led by Boeing and with the support of the Galician Regional Govenment. It means the company's entry into the aeronautical sector. Televes provides its experience and technology for the development of solutions in the areas of signal reception and communications, digital processing and cybersecurity. Incorporation as a founding member of the non-profit association DATAlife, with the aim of boosting the value of Galicia as a European reference bio-region acting as a strategic lever for innovation and business competition in three strategic foci: bio-resources, sustainability and health.
- 2020. Year marked by the global COVID-19 pandemic, our activity continued to advance with the consolidation of Televes Corporation communication and the launch of its social media channels. The corporation continues its international expansion of subsidiaries with the opening of Televes Enterprise Solutions, located in Miami and dedicated to the Hospitality sector for the American continent. Regarding Televes, our business area diversification also progressed, with the successful completion of the ACTIVAGE advanced telecare project, as well as the launch of Cromalux in professional LED lighting, or the achievement of numerous infrastructure network projects in hotels and hospitality sector.
- 2022. The new Optical Transport business area is established to develop the European market for large fiber optic networks for Operators and for DataCenters.